

2014

**IMPROVING COMMUNITY  
RESPONSE TO WILDFIRE:  
2013 FIRE SEASON FINDINGS  
REPORT**

**WEISER COMPLEX**

In 2013, the Fire Chasers Research Team at North Carolina State University developed a series of incident performance measures in collaboration with incident response and land management professionals. The goal of this effort was to provide metrics that can help improve interagency coordination and communication during complex, large scale wildfires. In the summer of 2013, data on these incident response outcomes were collected from 22 Type I and Type II wildland-urban interface fires in Idaho, Montana, Oregon, and Washington. This report summarizes the findings from the Weiser Complex in the areas of interagency network performance, incident management team performance, use of social media and incident learning and capacity building.

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## Weiser Complex: Incident Report

### Study Background

This report summarizes findings on incident response outcomes for the Weiser Complex that occurred in 2013. The report presents outcomes of the Weiser Complex compared to twenty-one other Type I and Type II incidents that occurred in Idaho, Montana, Oregon, Washington, and one pilot incident in Colorado, during the 2013 wildfire season. The goal of this report is to provide disaster, fire response, and land management agencies with feedback on the incident. This feedback is designed to help identify areas of strength, as well as prioritize areas for capacity building to improve incident response in the upcoming fire season. This report summarizes findings on the following areas: 1) interagency network performance; 2) incident management team performance; 3) use of social media; and 4) incident learning and capacity building. All findings are based on surveys completed by key personnel associated with the incident management team, host agency, and cooperating disaster response agencies on each incident. County and municipal elected officials in the affected area were also surveyed. Surveys were generally collected from Type I/Type II incident management team members immediately before they transitioned off the incident. Surveys with host agencies and county disaster response agencies were collected in October/ November of 2013. A total of 26 surveys were completed for the Weiser Complex (70 percent response rate).

### How Should I Interpret the Data in This Report?

Incidents differ in their complexity and more complex incidents can create more challenges. The information contained in this report is based solely on the survey data and indicators *do not* account for differences between incidents. This should be kept in mind when interpreting findings from a single incident in relation to the regional incident averages. Findings with lower response rates should also be interpreted with greater caution as there may be key perspectives that are missing. Recommended questions for reflection in interpreting the findings from this report include:

**In what areas did we excel during this incident? What strategies and actions did we take that may have contributed to this success? What actions can we take to make sure these practices and lessons are retained for future incidents?**

**In what areas were our ratings comparatively less positive? How do we make sense of those? Were there missed opportunities either *before* or *during* the incident that might have improved our outcomes in this area? Are there actions we can take *now* to help ensure future success in this area?**

### **Overview: A brief summary of the Weiser Complex**

Lightning ignited the Weiser Complex at midday on August 29<sup>th</sup>, 2013, on the Payette National Forest near Washington County, 20 miles northwest of Midvale. There was a joint Delegation of Authority on the incident between Payette National Forest and the Boise District of the Bureau of Land Management. Whalen's Type II Incident Management Team (IMT) managed the fire for one week before transitioning to Platz's Type III IMT and then to Corbitt's Type IV IMT. Almost a dozen representatives from Payette National Forest Supervisor's Office and the Weiser Ranger District were present on the incident along with half a dozen BLM representatives. Other cooperators included Washington County Civil Defense, Washington County Board of Commissioners, Weiser Mayor's Office, Midvale Mayor's Office, Midvale Fire Protection District, Weiser City Fire Department, Weiser Area Rural Fire District, Washington County Sheriff's Office, Idaho Department of Lands, Idaho Power, and the Idaho Department of Fish and Game.

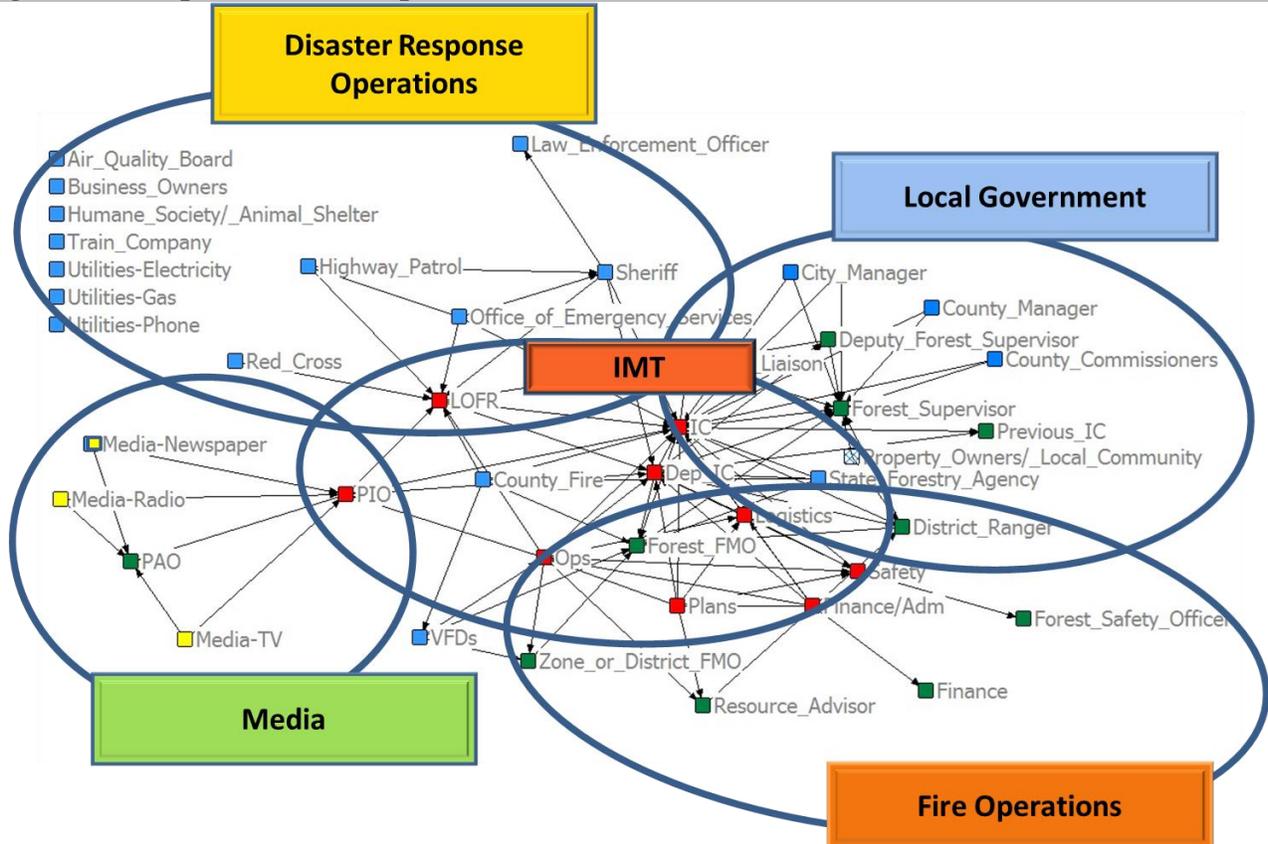
On August 30<sup>th</sup>, evacuations were ordered on Sturgil Mountain Lookout and threatened cattle were moved. The following day, mandatory evacuations were put in place as was an area closure for the southern part of the Weiser Ranger District. Authorities lifted mandatory evacuation notices by September 4<sup>th</sup>, but the area closure remained in effect for several days more. According to official reports, road closures were primarily ordered on Forest Service roads. Four residences, one commercial structure, and six outbuildings were threatened, and three outbuildings were destroyed by the fire. Values at risk on this incident included Mineral Town site, ranch easements, grazing allotments, multiple animal habitats, Idaho Power transmission lines, a Research Natural Area, Snake River goldenweed, timber, an historic cemetery, several creek drainages, the Mann Creek recreation corridor, and several campgrounds. Area closures on Forest Service lands impacted hunting grounds and other recreation areas as well as grazing allotments. According to the final ICS 209 Incident Report on the Weiser Complex, the fire burned a total of 29,457 acres and was fully contained as of September 15<sup>th</sup>.

## Incident Response Network Performance: Weiser Complex

### What Is an Incident Response Network?

Effective incident response to a complex wildfire event involves the coordination of multiple organizations and agencies with formal response responsibilities during the incident. This group of organizations and agencies can be referred to as the *incident response network*. This network typically includes the incident management team, fire management operations, disaster management operations, county and municipal government, and the media. Diagram 1 shows what this network might look like.

**Diagram 1. Sample Incident Response Network**



### What is network performance?

When working as part of an inter-connected network like the one shown in Diagram 1, the actions of any one agency within the network can affect others in the network. Consequently, incident outcomes are often the result of the *combined* management actions of the entire network, and the level of communication and coordination within it. Not all agencies are involved in all areas of incident response. However, problems in one area of the network can lead to problems in other areas. As a result, effective incident response is not about the performance of any single organization or agency, but is related to the performance of the *network as a whole* in the following areas:

- ❖ Interagency coordination & fire response
- ❖ Public information
- ❖ Road closures
- ❖ Evacuation and re-entry
- ❖ Sheltering & mass care
- ❖ Cost share

To learn more about network performance, we asked all agency and organizational leaders in the incident response network to rate how things went in each of these six areas. Respondents were asked their level of agreement with a set of statements. Options ranged from (1) “strongly disagree” to (5) “strongly agree.” Overall, network performance scores were high. Some areas are also worthy of additional attention prior to fire season 2014. For the twenty-two fires in our sample, overall network performance was the highest for interagency coordination and fire response (average = 4.44) and public information (4.34). On average, lower performance ratings were provided for cost share (3.87), evacuation (3.99), and sheltering/mass care (4.0). See Appendix A for specific questions asked in each category and average level of agreement for each.

**Network Performance: How did things go on the Weiser Complex?**

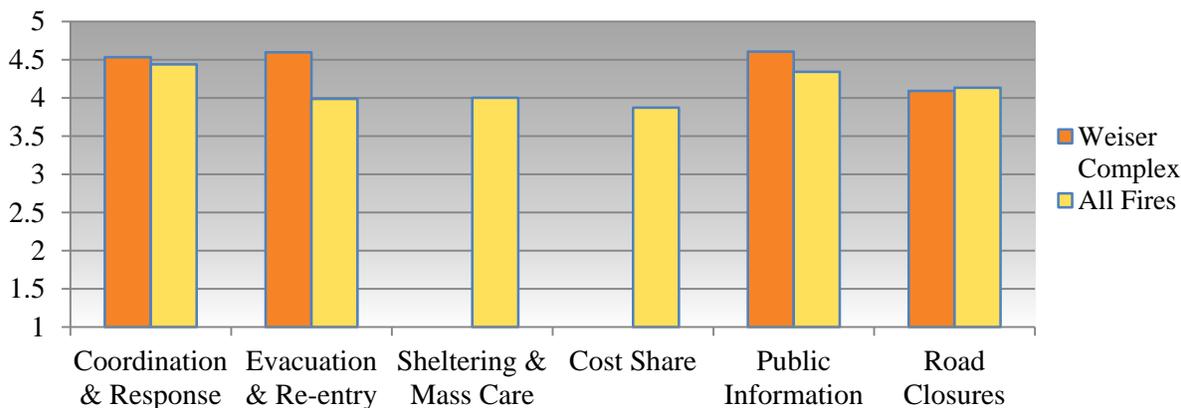
Figure 1 shows network performance ratings for the Weiser Complex in comparison to the average across all twenty-two fires in our sample. Weiser Complex network performance was relatively consistent with the averages across all fires in coordination and fire response and road closures, although official reports indicate that Weiser Complex road closures occurred primarily on Forest Service roads. Weiser Complex network performance was slightly higher than average for public information and evacuation and reentry. While road closures were identified as nearly equivalent to regional averages, respondents saw room for improvement in cooperating and fire management agencies maintaining a timely awareness of the status of road closures, and in providing a consistent message to the public about the status of road closures (see Appendix A for further details).

According to respondents, there were no cost share agreements and sheltering and mass care activities did not occur on the Weiser Complex. Consequently, we do not have data on this network performance factor for this incident.

**KEY FINDINGS**

- Leveraging local resources to ensure timely dissemination of public information was identified by respondents as an area of success on the Weiser Complex
- Agencies maintaining a timely awareness of road closure status and communicating road closure status to the public were identified by respondents as areas for improvement on the Weiser Complex

**Figure 1. Average Network Performance by Activity: Weiser Complex**



**Incident Management Team Performance: Perspectives from host agencies and local cooperators**

On each incident, we asked representatives of local cooperating agencies, the Forest Service, and other host agencies to reflect on how well the incident management team communicated and coordinated with local host agencies and cooperators. Incident management teams (IMTs) were assessed across 19 areas outlined in Table 1 on the following page. The response options ranged from “No room for improvement” to “A lot of room for improvement,” and included “Don’t know” and “Not applicable” choices.

Across all twenty-two incidents, incident management teams were reported to perform the best in: 1) being accessible; 2) acknowledging cooperation; 3) sharing credit; and 4) serving as positive ambassadors in interactions with the local community. On average, scores were quite positive across all areas. However, host communities reported the greatest room for improvement for IMTs in the areas of: 1) obtaining local context information to inform fire operations; 2) incorporating information about local values at risk into fire management plans; and 3) engaging affected jurisdictions in planning and decision making from the beginning. The first column of Table 1 lists the average room for improvement for incident management teams across all fires. The second column displays average room for improvement for the Weiser Complex incident management team. For each item in Table 1, **lower numbers indicate less room for improvement**. The scale includes (0), indicating “no” room for improvement, (1) “a little,” (2) “some,” (3) “quite a bit,” and (4) “a lot.”

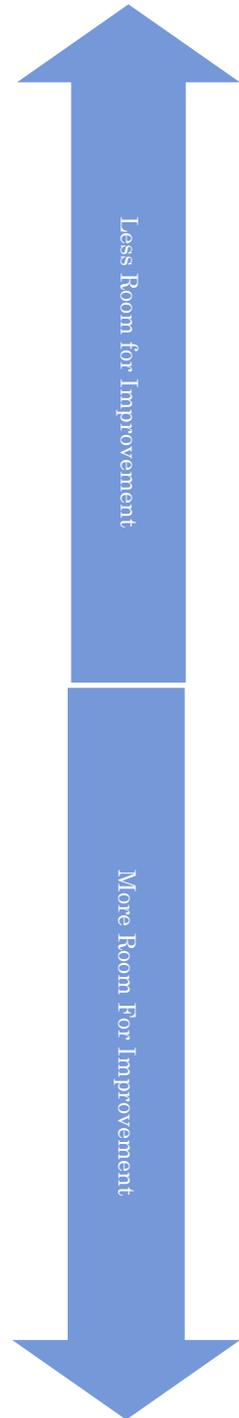
Average responses for Whalen’s Type II IMT on the Weiser Complex ranged from 1.1 to 1.6, indicating “a little” to “some” room for improvement. The team was rated less positively than the overall average in 18 of 19 areas on the Weiser Complex. On average, Whalen’s Type II IMT was rated most positively in terms of being accessible to local agencies and valuing local agencies’ input. Areas rated as having the greatest room for improvement included: 1) using the incident as a training opportunity to build local capacity, 2) engaging affected jurisdictions in planning and decision making from the beginning, 3) seeking to understand organizational culture, values, and capacities of involved agencies, and 4) obtaining local context information to inform operations.

### KEY FINDINGS

- Areas of relative strength for the IMT on the Weiser Complex included:
  - being accessible to local agencies
  - valuing local agencies input
- Areas the IMT may want to continue to focus on for improvement include:
  - using the incident as a training opportunity
  - engaging affected jurisdictions in planning and decision making
  - seeking to understand organizational culture, values, and capacities of local agencies
  - obtaining local context information to inform operations

**TABLE 1. Weiser Complex Incident Management Team Room for Improvement**

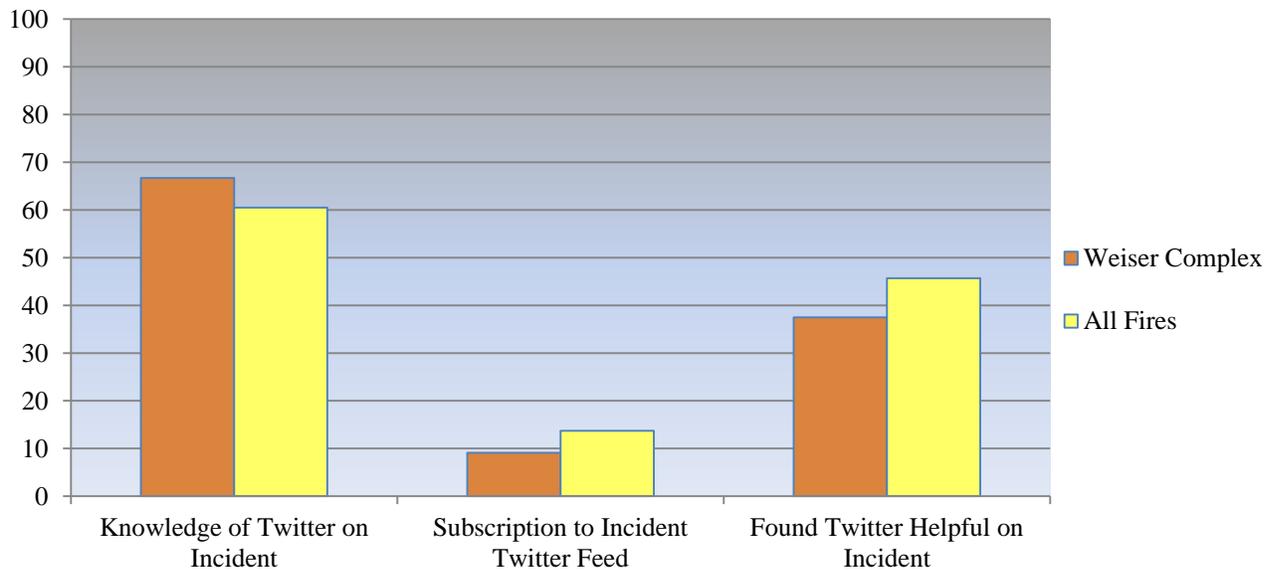
Area for improvement in working with Host Unit(s) and local cooperators	22 Incident Average Room for Improvement (0-4)	Weiser Complex Average Room for Improvement (0-4)
Being accessible to you	1	1.1
Valuing your agency’s input	1.2	1.1
Being helpful to cooperating agencies	1.1	1.2
Staying in their lane and not over-stepping their delegation of authority	1	1.2
Sharing credit with your agency	1	1.2
Serving as a positive ambassador in interactions with the local community	1	1.3
Being flexible in adapting their fire management strategy to account for local preferences	1.2	1.3
Valuing local knowledge and local input	1.2	1.3
Incorporating information about local values at risk (e.g., biological, archeological, cultural, recreational) into the management of the fire	1.3	1.4
Getting your agency information you needed to be effective	1.2	1.4
Acknowledging cooperation	1	1.4
Being sensitive to local community culture and political climate	1.25	1.5
Rapidly identifying key local players they needed to be communicating with during the incident	1.2	1.5
Clarifying roles and responsibilities	1.2	1.5
Including your agency in the dissemination of vital information during the incident	1.2	1.5
Obtaining local context (e.g., burn scars, trail systems, local weather patterns) to inform their operations	1.3	1.6
Seeking to understand organizational culture, values, and capacities of your agency	1.2	1.6
Engaging affected jurisdictions in planning and decision making from the beginning	1.3	1.6
Using the incident as a training opportunity to build local capacity	1.2	1.6



## Twitter Use

Social networking sites, such as Twitter, have become important tools for sharing information during various emergencies. Researchers are only beginning to study the implications of social media for risk communication and practitioners are often interested in best practices for using social media. As part of our survey, we asked local cooperators and Forest Service personnel whether they knew of an “official” Twitter feed associated with the wildfire incident, whether they subscribed to this feed, and whether or not they found the information on Twitter helpful. Figure 2 shows percentage of Twitter use for Weiser Complex compared to the average rate across twenty-one fires in our sample that reported on social media.

**Figure 2. Percent Social Media Use and Utility on the Weiser Complex**



Inciweb and several engaged but unofficial fire watchers tweeted information about the Weiser Complex. When compared to the 21 incident average, respondents from the Weiser Complex had more knowledge of Twitter, a lower percentage of subscribers to Twitter, and were less likely to find Twitter helpful.

### KEY FINDINGS

- Weiser Complex respondents were more aware of Twitter information resources than respondents across other incidents
- Weiser Complex respondents subscribed to Twitter information feeds with less frequency than respondents across other incidents
- Weiser Complex respondents did not find Twitter information sources as helpful as respondents across other incidents

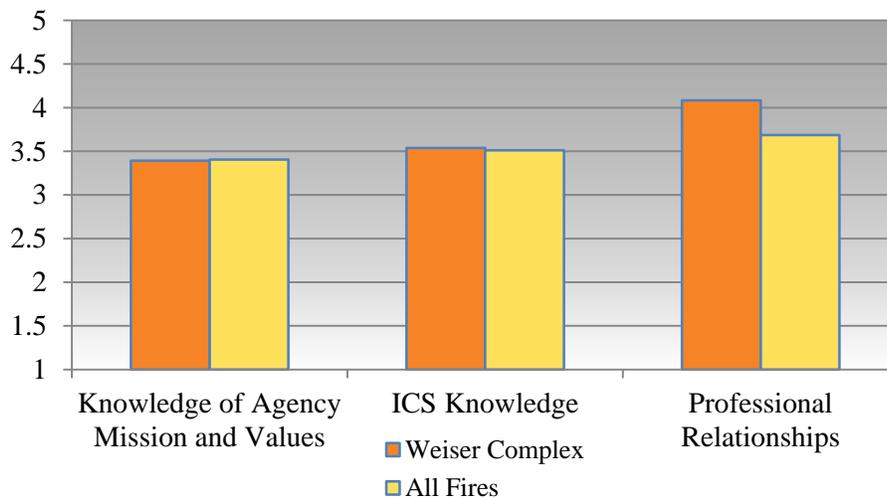
## **Moving Forward: Incident learning and capacity building**

The field of incident response prioritizes using every incident as an opportunity for learning and relationship building to improve capacity for responding to future events. To assess incident learning and capacity building, respondents were asked to report how personal outcomes were influenced by the incident in the areas of: 1) increased knowledge of other agencies' missions and values; 2) enhanced knowledge of the Incident Command System (ICS); and 3) increased familiarity and strengthened professional relationships within the local network. Respondents were asked to rate how each factor was affected by the incident, on a scale ranging from (1) "much worse" to (5) "much better", with (3) indicating "no change." See Appendix B for specific questions asked in each category and average level of agreement for each.

### **KEY FINDINGS**

- Over all the wildfire incidents we studied, evidence suggests that knowledge of agency missions and values, ICS knowledge, and professional relationships were perceived to have improved
- Weiser Complex respondents reported comparable scores than regional averages in knowledge of agency mission and values and ICS knowledge
- For the Weiser Complex, the greatest impact was on professional relationships, which was rated higher than average

**Figure 3. Incident Learning and Capacity Building from the Weiser Complex**



Across all the wildfire incidents we studied, evidence suggests that knowledge of other agency missions and values, ICS knowledge, and professional relationships were perceived to have improved. Across all incidents, local cooperators and host agencies reported the greatest improvements in the area of professional relationships, which included respondents reporting strengthened

professional relationships with leaders of cooperating agencies, stronger relationships within counties, and better knowledge of the capacities and constraints of cooperating agencies. The least improvement was shown in local cooperator and host agency knowledge of agency missions and values, which included knowledge of the mission and values of state land management agencies and the National Forest. In the middle range is knowledge of the Incident Command System, which includes familiarity with ICS, opportunities to gain additional training in an area of incident response, and understanding how to work with an IMT, including what the IMT can and cannot do to assist your county during an incident.

On the Weiser Complex, all responses varied between "no change" and "much better" for knowledge of agency missions and values, ICS knowledge, and professional relationships. Weiser Complex respondents reported scores comparable to the regional averages in knowledge of agency mission and values and ICS knowledge, and higher than average scores in professional relationships.

## APPENDIX A. Network Performance: Weiser Complex

Areas of Network Performance	22 Incident Average Level of Agreement (1-5)	Weiser Complex Average Level of Agreement (1-5)
<b>Coordination &amp; Fire Response</b>		
A coordinated set of fire management objectives were agreed upon among all affected jurisdictions	4.29	4.67
All concerned jurisdictions prioritized maintaining good communication across agencies	4.21	4.47
Credit for success and effort was shared among agencies during public meetings and media events	4.37	4.58
There was a general willingness across agencies to offer assistance to other agencies or jurisdictions	4.48	4.53
“Borrowed resources” were released in a timely fashion to minimize burden on the lending agency	4.38	4.43
Community values at risk from wildfire were readily identified	4.64	4.57
Efforts to protect community values were appropriate given available resources and risks to firefighter safety	4.59	4.52
The overall strategy taken in managing this fire was appropriate	4.40	4.44
Local resources were incorporated into the incident management operations	4.50	4.53
<b>Evacuation Performance</b>		
Cooperating agencies were able to use existing evacuation plans to quickly establish a coordinated evacuation strategy	3.82	4.40
Residents received timely notification of evacuation status using clear, pre-established language to distinguish between an evacuation warning and an evacuation notice	4.03	4.00
Evacuations were executed in a timely and orderly fashion	4.15	4.75
Cooperating agencies had a prepared plan for how re-entry into evacuated areas would be coordinated	4.05	4.14
Trigger points for when evacuated areas would be opened for re-entry were clearly communicated to the public	3.88	4.00
Re-entry was carried out in an organized and orderly fashion	4.15	3.86
<b>Sheltering &amp; Mass Care</b>		
Adequate sheltering options were prepared to house evacuees	4.16	NA
Sheltering options were clearly communicated to evacuees	4.01	NA
Donations for evacuees were well-coordinated	3.74	NA
Auxiliary care needs of evacuees (e.g., food, water, clothing, transportation, spiritual or mental health assistance) were adequately provided for	4.05	NA
Adequate sheltering options were made available to evacuate pets and livestock	3.88	NA
<b>Cost Share Performance</b>		
We used pre-agreed frameworks/principles to expedite cost share agreements	3.80	NA
The process through which cost share was decided upon was fair	3.86	NA
The resulting cost share agreement was fair	3.96	NA

**APPENDIX A. Network Performance: Weiser Complex (continued)**

<b>Areas of Network Performance</b>	<b>22 Incident Average Level of Agreement (1-5)</b>	<b>Weiser Complex Average Level of Agreement (1-5)</b>
<b>Public Information Performance</b>		
Public information was coordinated among cooperating agencies to ensure continuity of the message	4.35	4.47
Local resources were leveraged to ensure timely dissemination of public information	4.32	4.73
Social media was used effectively to provide timely public updates concerning the status of the fire	4.16	4.19
A system for communication with the media was put in place to ensure timely dissemination of public information	4.42	4.62
<b>Road Closure Performance</b>		
All cooperating and fire management agencies maintained a timely awareness of the status of road closures	4.25	4.05
Trigger points for making decisions about road closures were proactively communicated to the local community	4.05	4.11
A consistent message was provided to the public about the status of road closures	4.11	4.05

## APPENDIX B. Incident Learning and Capacity Building: Weiser Complex

Areas of Incident Learning and Capacity Building	22 Incident Average Reported Impact (1-5)	Weiser Complex Reported Impact (1-5)
<b>Knowledge of Agency Mission &amp; Values</b>		
Your understanding of the mission and values of state land management agencies (e.g., Oregon State Forestry, DNR/DNRC, Idaho Department of Lands, Fire/Timber Protective Associations, etc.) in your area	3.43	3.43
Your understanding of the mission and values of federal land management agencies (e.g., BLM, National Park Service, USFS, etc.) in your area	3.38	3.33
<b>Knowledge of ICS</b>		
Your understanding of what an incident management team can and cannot do to assist your county during an incident	3.44	3.47
Your familiarity with Incident Command Systems	3.48	3.40
Your knowledge of how to work effectively with an incident management team	3.67	3.60
Opportunities for you to gain additional training in an area of incident response	3.45	3.69
<b>Professional Relationships and Networks</b>		
The strength of working relationships within your county	3.76	4.25
The strength of working relationships between your county the local National Forest District	3.60	4.11
The strength of working relationships with National Forest Headquarters	3.42	3.89
Your knowledge of the capabilities and constraints of cooperating agencies in your area	3.73	4.00
Your knowledge of the capabilities and constraints of the local National Forest	3.58	3.89
Your professional networks with leaders of cooperating agencies in your area	3.89	4.21
Your knowledge of your local community	3.72	3.87

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