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MEMORANDUM

Reference: NWCG#015-2013

To: NWCG Executive Board

From: NWCG Chair

Date: December 17, 2013

Subject: Adoption and Release of the Risk and Complexity Assessment

Historically, the Complexity Analysis (CA) and the Organizational Needs Assessment (ONA) have been used by NWCG member agencies to determine incident complexity and what level of incident management organization is needed. Because two different tools were in use, and because neither tool adequately addressed the full range of incident management objectives (i.e. full suppression to incidents managed for resource benefit), NWCG identified a need to re-evaluate how incident complexity and organizational needs are determined.

In May 2012, the National Wildfire Coordinating Group (NWCG) tasked the Operations and Workforce Development Committee (OWDC) with evaluating the Organizational Needs Assessment and Complexity Analysis to determine if the two processes could be combined into a single process. This tasking was subsequently included as one of the tasks in the Evolving Incident Management (EIM) Strategic Implementation Plan to ensure changes to the CA/ONA were in alignment with how IMTs would be managed in the future.

The OWDC determined that a single process could be developed, and created the Risk and Complexity Assessment (RCA) as a result of that tasking.

The Risk and Complexity Assessment was developed by a group of national and field-level personnel and field-tested during the 2013 fire season, and is based on elements of the previously used Organizational Needs Assessment and Complexity Analysis.

The RCA is designed to quickly and easily evaluate the risk and complexity of a given incident and recommend a management organization. The RCA also provides users with the ability to make notes and document mitigations for elements identified as moderate or high complexity/risk, and provides the ability to document decisions. Common complexity indicators for wildland fire incidents are also provided to assist incident commanders and fire managers. The RCA is designed so that it may be completed on paper, and the information may be easily transferred into WFDSS.

The current release of the RCA recommends incident management organizations based on 5 incident types (Type 5 through Type 1). When the NWCG Evolving Incident Management effort fully transitions to 3 levels of incident management organization: initial attack (Type 5/4), extended attack (Type 3), and complex (Type 2/1), the RCA will be updated.

The NWCG Risk and Complexity Assessment will replace the NWCG Complexity Analysis and NWCG Organizational Needs Assessment beginning in January, 2014. The Risk and Complexity Assessment will replace the Incident Complexity Analysis in the PMS 210 *Wildland Fire Incident Management Field Guide* at the next revision. The RCA is also available at: http://www.nwcg.gov/pms/pubs/pms210/

NWCG member agencies are encouraged to adopt and utilize the RCA when evaluating incident risk and complexity and determining the appropriate level of incident management organization.

Attachment: Wildland Fire Risk and Complexity Assessment

cc: NWCG PMU Staff; Mark Jones, Chair, OWDC

Wildland Fire Risk and Complexity Assessment

The Wildland Fire Risk and Complexity Assessment should be used to evaluate firefighter safety issues, assess risk, and identify the appropriate incident management organization. Determining incident complexity is a subjective process based on examining a combination of indicators or factors. An incident's complexity can change over time; incident managers should periodically re-evaluate incident complexity to ensure that the incident is managed properly with the right resources.

Instructions:
Incident Commanders should complete Part A and Part B and relay this information to the Agency Administrator. If the fire exceeds initial attack or will be managed to accomplish resource management objectives, Incident Commanders should also complete Part C and provide the information to the Agency Administrator.

Part A: Firefighter Safety Assessment

Evaluate the following items, mitigate as necessary, and note any concerns, mitigations, or other information.

Evaluate these items	Concerns, mitigations, notes
LCES	
Fire Orders and Watch Out Situations	
Multiple operational periods have occurred without achieving initial objectives	
Incident personnel are overextended mentally and/or physically and are affected by cumulative fatigue.	
Communication is ineffective with tactical resources and/or dispatch.	
Operations are at the limit of span of control.	
Aviation operations are complex and/or aviation oversight is lacking.	
Logistical support for the incident is inadequate or difficult.	

Part B: Relative Risk Assessment

Values				Notes/Mitigation
B1. Infrastructure/Natural/Cultural Concerns **Based on the number and kinds of values to be protected, and the difficulty to protect them, rank this element low, moderate, or high.** Considerations: key resources potentially affected by the fire such as urban interface, structures, critical municipal watershed, commercial timber, developments, recreational facilities, power/pipelines, communication sites, highways, potential for evacuation, unique natural resources, special-designation areas, T&E species habitat, cultural sites, and wilderness.	**L**	**M**	**H**	
B2. Proximity and Threat of Fire to Values **Evaluate the potential threat to values based on their proximity to the fire, and rank this element low, moderate, or high.**	**L**	**M**	**H**	
B3.Social/Economic Concerns **Evaluate the potential impacts of the fire to social and/or economic concerns, and rank this element low, moderate, or high.** Considerations: impacts to social or economic concerns of an individual, business, community or other stakeholder; other fire management jurisdictions; tribal subsistence or gathering of natural resources; air quality regulatory requirements; public tolerance of smoke; and restrictions and/or closures in effect or being considered.	**L**	**M**	**H**	
Hazards				**Notes/Mitigation**
B4. Fuel Conditions **Consider fuel conditions ahead of the fire and rank this element low, moderate, or high.** Evaluate fuel conditions that exhibit high ROS and intensity for your area, such as those caused by invasive species or insect/disease outbreaks; continuity of fuels; low fuel moisture	**L**	**M**	**H**	
B5. Fire Behavior **Evaluate the current fire behavior and rank this element low, moderate, or high.** Considerations: intensity; rates of spread; crowning; profuse or long-range spotting.	**L**	**M**	**H**	
B6. Potential Fire Growth **Evaluate the potential fire growth, and rank this element low, moderate, or high.** Considerations: Potential exists for extreme fire behavior (fuel moisture, continuity, winds, etc.); weather forecast indicating no significant relief or worsening conditions; resistance to control.	**L**	**M**	**H**	
Probability				**Notes/Mitigation**
B7. Time of Season **Evaluate the potential for a long-duration fire and rank this element low, moderate, or high.** Considerations: time remaining until a season ending event.	**L**	**M**	**H**	
B8. Barriers to Fire Spread **If many natural and/or human-made barriers are present and limiting fire spread, rank this element low. If some barriers are present and limiting fire spread, rank this element moderate. If no barriers are present, rank this element high.**	**L**	**M**	**H**	
B9. Seasonal Severity **Evaluate fire danger indices and rank this element low/moderate, high, or very high/extreme.** Considerations: energy release component (ERC); drought status; live and dead fuel moistures; fire danger indices; adjective fire danger rating; preparedness level.	**L/ M**	**H**	**VH /E**	
Enter the number of items circled for each column.				

Relative Risk Rating (circle one):

Low	Majority of items are "Low", with a few items rated as "Moderate" and/or "High".
Moderate	Majority of items are "Moderate", with a few items rated as "Low" and/or "High".
High	Majority of items are "High"; A few items may be rated as ""Low" or "Moderate".

Part C: Organization

Relative Risk Rating (From Part B)				
Circle the Relative Risk Rating (from Part B).		**L**	**M**	**H**

Implementation Difficulty					Notes/Mitigation
C1. Potential Fire Duration **Evaluate the estimated length of time that the fire may continue to burn if no action is taken and amount of season remaining. Rank this element low, moderate, or high.** Note: This will vary by geographic area.	**N/A**	**L**	**M**	**H**	
C2. Incident Strategies (Course of Action) **Evaluate the level of firefighter and aviation exposure required to successfully meet the current strategy and implement the course of action. Rank this element as low, moderate, or high.** Considerations: Availability of resources; likelihood that those resources will be effective; exposure of firefighters; reliance on aircraft to accomplish objectives; trigger points clear and defined.	**N/A**	**L**	**M**	**H**	
C3. Functional Concerns **Evaluate the need to increase organizational structure to adequately and safely manage the incident, and rank this element low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Considerations: Incident management functions (logistics, finance, operations, information, planning, safety, and/or specialized personnel/equipment) are inadequate and needed; access to EMS support, heavy commitment of local resources to logistical support; ability of local businesses to sustain logistical support; substantial air operation which is not properly staffed; worked multiple operational periods without achieving initial objectives; incident personnel overextended mentally and/or physically; Incident Action Plans, briefings, etc. missing or poorly prepared; performance of firefighting resources affected by cumulative fatigue; and ineffective communications.	**N/A**	**L**	**M**	**H**	
Socio/Political Concerns					**Notes/Mitigation**
C4. Objective Concerns **Evaluate the complexity of the incident objectives and rank this element low, moderate, or high.** Considerations: clarity; ability of current organization to accomplish; disagreement among cooperators; tactical/operational restrictions; complex objectives involving multiple focuses; objectives influenced by serious accidents or fatalities.	**N/A**	**L**	**M**	**H**	
C5. External Influences **Evaluate the effect external influences will have on how the fire is managed and rank this element low, moderate, or high.** Considerations: limited local resources available for initial attack; increasing media involvement, social/print/television media interest; controversial fire policy; threat to safety of visitors from fire and related operations; restrictions and/or closures in effect or being considered; pre-existing controversies/ relationships; smoke management problems; sensitive political concerns/interests.	**N/A**	**L**	**M**	**H**	
C6. Ownership Concerns **Evaluate the effect ownership/jurisdiction will have on how the fire is managed and rank this element low, moderate, or high.** Considerations: disagreements over policy, responsibility, and/or management response; fire burning or threatening more than one jurisdiction; potential for unified command; different or conflicting management objectives; potential for claims (damages); disputes over suppression responsibility.	**N/A**	**L**	**M**	**H**	
Enter the number of items circled for each column.					

Part C: Organization (continued)

Recommended Organization (circle one):

Type 5	Majority of items rated as "N/A"; a few items may be rated in other categories.
Type 4	Majority of items rated as "Low", with some items rated as "N/A", and a few items rated as "Moderate" or "High".
Type 3	Majority of items rated as "Moderate", with a few items rated in other categories.
Type 2	Majority of items rated as "Moderate", with a few items rated as "High".
Type 1	Majority of items rated as "High"; a few items may be rated in other categories.

Rationale:

Use this section to document the incident management organization for the fire. If the incident management organization is different than the Wildland Fire Risk and Complexity Assessment recommends, document why an alternative organization was selected. Use the "Notes/Mitigation" column to address mitigation actions for a specific element, and include these mitigations in the rationale.

Name of Incident:_____ Unit(s):_____

Date/Time:_____ Signature of Preparer:_____

Indicators of Incident Complexity

Common indicators may include the area (location) involved; threat to life, environment and property; political sensitivity, organizational complexity, jurisdictional boundaries, values at risk, and weather. Most indicators are common to all incidents, but some may be unique to a particular type of incident. The following are common contributing indicators for each of the five complexity types.

TYPE 5 INCIDENT COMPLEXITY INDICATORS

General Indicators	Span of Control Indicators
• Incident is typically terminated or concluded (objective met) within a short time once resources arrive on scene • For incidents managed for resource objectives, minimal staffing/oversight is required • One to five single resources may be needed • Formal Incident Planning Process not needed • Written Incident Action Plan (IAP) not needed • Minimal effects to population immediately surrounding the incident • Critical Infrastructure, or Key Resources, not adversely affected	• Incident Commander (IC) position filled • Single resources are directly supervised by the IC • Command Staff or General Staff positions not needed to reduce workload or span of control

TYPE 4 INCIDENT COMPLEXITY INDICATORS

General Indicators	Span of Control Indicators
• Incident objectives are typically met within one operational period once resources arrive on scene, but resources may remain on scene for multiple operational periods • Multiple resources (over 6) may be needed • Resources may require limited logistical support • Formal Incident Planning Process not needed • Written Incident Action Plan (IAP) not needed • Limited effects to population surrounding incident • Critical Infrastructure or Key Resources may be adversely affected, but mitigation measures are uncomplicated and can be implemented within one Operational Period • Elected and appointed governing officials, stakeholder groups, and political organizations require little or no interaction	• IC role filled • Resources either directly supervised by the IC or supervised through an ICS Leader position • Task Forces or Strike Teams may be used to reduce span of control to an acceptable level • Command Staff positions may be filled to reduce workload or span of control • General Staff position(s) may be filled to reduce workload or span of control

TYPE 3 INCIDENT COMPLEXITY INDICATORS

General Indicators	Span of Control Indicators
• Incident typically extends into multiple operational periods • Incident objectives usually not met within the first or second operational period • Resources may need to remain at scene for multiple operational periods, requiring logistical support • Numerous kinds and types of resources may be required • Formal Incident Planning Process is initiated and followed • Written Incident Action Plan (IAP) needed for each Operational Period • Responders may range up to 200 total personnel • Incident may require an Incident Base to provide support • Population surrounding incident affected • Critical Infrastructure or Key Resources may be adversely affected and actions to mitigate effects may extend into multiple Operational Periods • Elected and appointed governing officials, stakeholder groups, and political organizations require some level of interaction	• IC role filled • Numerous resources supervised indirectly through the establishment and expansion of the Operations Section and its subordinate positions • Division Supervisors, Group Supervisors, Task Forces, and Strike Teams used to reduce span of control to an acceptable level • Command Staff positions filled to reduce workload or span of control • General Staff position(s) filled to reduce workload or span of control • ICS functional units may need to be filled to reduce workload

TYPE 2 INCIDENT COMPLEXITY INDICATORS

General Indicators	Span of Control Indicators
• Incident displays moderate resistance to stabilization or mitigation and will extend into multiple operational periods covering several days • Incident objectives usually not met within the first several Operational Periods • Resources may need to remain at scene for up to 7 days and require complete logistical support • Numerous kinds and types of resources may be required including many that will trigger a formal demobilization process • Formal Incident Planning Process is initiated and followed • Written Incident Action Plan (IAP) needed for each Operational Period • Responders may range from 200 to 500 total • Incident requires an Incident Base and several other ICS facilities to provide support • Population surrounding general incident area affected • Critical Infrastructure or Key Resources may be adversely affected, or possibly destroyed, and actions to mitigate effects may extend into multiple Operational Periods and require considerable coordination • Elected and appointed governing officials, stakeholder groups, and political organizations require a moderate level of interaction	• IC role filled • Large numbers of resources supervised indirectly through the expansion of the Operations Section and its subordinate positions • Branch Director position(s) may be filled for organizational or span of control purposes • Division Supervisors, Group Supervisors, Task Forces, and Strike Teams used to reduce span of control • All Command Staff positions filled • All General Staff positions filled • Most ICS functional units filled to reduce workload

TYPE 1 INCIDENT COMPLEXITY INDICATORS

General Indicators	Span of Control Indicators
• Incident displays high resistance to stabilization or mitigation and will extend into numerous operational periods covering several days to several weeks • Incident objectives usually not met within the first several Operational Periods • Resources may need to remain at scene for up to 14 days, require complete logistical support, and several possible personnel replacements • Numerous kinds and types of resources may be required, including many that will trigger a formal demobilization process • DOD assets, or other nontraditional agencies, may be involved in the response, requiring close coordination and support • Complex aviation operations involving multiple aircraft may be involved • Formal Incident Planning Process is initiated and followed. • Written Incident Action Plan (IAP) needed for each Operational Period • Responders may range from 500 to several thousand total • Incident requires an Incident Base and numerous other ICS facilities to provide support • Population surrounding the region or state where the incident occurred is affected • Numerous Critical Infrastructure or Key Resources adversely affected or destroyed. Actions to mitigate effects will extend into multiple Operational Periods spanning days or weeks and require long-term planning and considerable coordination • Elected and appointed governing officials, stakeholder groups, and political organizations require a high level of interaction	• IC role filled • Large numbers of resources supervised indirectly through the expansion of the Operations Section and its subordinate positions • Branch Director Position(s) may be filled for organizational or span of control purposes • Division Supervisors, Group Supervisors, Task Forces, and Strike Teams used to reduce span of control • All Command Staff positions filled and many include assistants • All General Staff positions filled and many include deputy positions • Most or all ICS functional units filled to reduce workload