NWCG Wildland Fire Risk and Complexity Assessment, PMS 236

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

Instructions:

Agency administrators are responsible for assignment of the appropriate level of management, supervision, and staffing to every wildfire according to the level of complexity. Incident commanders and agency administrators should coordinate on all Parts of the Wildland Fire Risk and Complexity Assessment.

- Part A and B: Complete for all incidents.
- Part C: Complete if the fire exceeds initial attack or will be managed to accomplish resource management objectives.
- Part D: Complete if the recommended organization in Part C is a CIMT. Agency administrators and incident commanders should discuss the need to increase or reduce capacity/positions.
- Part E: Determine Incident Complexity Level using the Indicators of Incident Complexity. The Incident Complexity Level is used to determine the Recommended Organization.

Part A: Firefighter Safety Assessment

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

Evaluate these items	Concerns, mitigations, notes
Lookouts, Communication, Escape Routes, and Safety Zones (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 rate of spread (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 selected for each column.	0	0	0	

Relative Risk Rating (select 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 Assessment

Relative Risk Rating (From Part B)					Notes/Mitigation
Select the Relative Risk Rating (from Part B).	N/A ☐	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 manage the incident adequately and safely and rank this element N/A (current existing organization doesn't have functional concerns), 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 emergency medical services (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 ☐	
Score (each "Low" = 1 point, each "Moderate" = 2 points, each "High" = 3 points)	0	0	0	0	***Total Score*** 0

Recommended Organization (select one):

Type 5 ◯	Total Score 0 - 3 (*Majority of items rated as N/A; a few items may be rated in other categories.)*
Type 4 ◯	Total Score 4 - 8 *(Majority of items rated as Low, with some items rated as N/A, and a few items rated as Moderate or High.)*
Type 3 ◯	Total Score 9 - 14 *(Majority of items rated as Moderate, with a few items rated in other categories.)*
CIMT ◯	Total Score 15+ *(Majority of items rated as High with a few items rated as Moderate. Use Part D: Functional Complexity to document the need to increase or reduce capacity/positions.)*

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.

Part D: Functional Complexity

				Notes/Mitigation
D1. Functional Complexity – Command **Evaluate the need to increase organizational structure of the command staff to manage the incident adequately and safely, and rank the element as low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Considerations may include but are not limited to unified command with a large number of jurisdictions involved; elected/appointed governing officials, political organizations, and stakeholders require a high level of coordination and communication; extensive community relations; incident personnel overextended mentally and/or physically; remote access and rugged terrain; multiple safety concerns noted in Part A require additional staff to mitigate; performance of firefighting resources affected by cumulative fatigue; pandemic/infectious disease-related issues; ineffective communications; law enforcement needs; evacuated/relocated populations; legislative affairs concerns; extensive cultural factors.	**L** ☐	**M** ☐	**H** ☐	

				Notes/Mitigation
D2. Functional Complexity – Planning **Evaluate the need to increase organizational structure of the planning staff to manage the incident adequately and safely, and rank the element as low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Continual need for long-term strategic risk complexity assessment; complex operational risk management mitigation; incident action plans, briefings, etc., missing, or poorly prepared; extensive number of responders; large electronic documentation package; multiple virtual or remote meetings/briefings to coordinate; complex mapping or situation products required; difficulty obtaining air travel or other demobilization challenges; high volume of extension requests; and/or multiple or complex situation summary reports.	**L** ☐	**M** ☐	**H** ☐	
D3. Functional Complexity – Operations/Air Operations **Evaluate the need to increase organizational structure of the operations/air operations staff to manage the incident adequately and safely, and rank the element as low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Urban interface/intermix requirements; extensive equipment needs; remote access and rugged terrain; supervision requirements to reduce span of control; worked multiple operational periods without achieving initial objectives; unexploded ordnance; environmental/cultural/social/historical concerns; large amount of hazard trees; large initial attack response area; extensive fire area; night operations; substantial air operation and aerial supervision which is not properly staffed; airspace conflicts or impacts to air operations; multiple/overlapping Temporary Flight Restrictions (TFRs); military mobilization; and/or national guard personnel and aircraft mobilization.	**L** ☐	**M** ☐	**H** ☐	
D4. Functional Complexity – Finance **Evaluate the need to increase organizational structure of the finance staff to manage the incident adequately and safely, and rank the element as low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Large volume of personnel and equipment time; significant amount of incident responders are contractors; complicated cost share methodology with multiple jurisdictions; complexing, merging, or multiple incidents; no preestablished or extensive land use agreements; understaffed or no buying team; large scale or long-term financial issues; large finance package; electronic records management; administering or establishing numerous complex contracts; established patterns of injuries/illnesses or tort claims; and/or distributed responders over long distances or remote camps without internet/cell connectivity.	**L** ☐	**M** ☐	**H** ☐	
D5. Functional Complexity – Logistics **Evaluate the need to increase organizational structure of the logistics staff to manage the incident adequately and safely, and rank the element as low (adequate), moderate (some additional support needed), or high (current capability inadequate).** Large number of personnel; multiple bases/camps; remote access; significant need for law enforcement and security; access to emergency medical services (EMS) support; heavy commitment of local resources for logistical support; ability of local businesses to sustain logistical support; telecommunications difficulties; ordering from multiple agencies dispatch centers; supply chain challenges; facilities requirements; and/or remote areas that challenge support needs.	**L** ☐	**M** ☐	**H** ☐	

Name of Incident:_____ Unit(s):_____

Date/Time:_____ Agency Administrator or Designee:_____

Signature of Preparer:_____

Part E: Incident Complexity Level

Definition: The incident level established by completing an incident complexity analysis considering the level of difficulty, severity, or overall resistance the incident or event presents to incident management or support personnel as they work to manage it; a categorization that helps leaders compare one type of incident or event to another.

Incident Complexity Level		Organization	
Type 5	○	Type 5	○
Type 4	○	Type 4	○
Type 3	○	Type 3	○
Type 2 Type 1	○ ○	CIMT	○

Name of Incident:_____ Unit(s):_____

Date/Time:_____ Agency Administrator or Designee:_____

Signature of Preparer:_____

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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 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. • Resources vary from two to six firefighters. • 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 may be needed. • Resources may require limited logistical support. • Formal incident planning process not needed. • Written 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 Incident Command System (ICS) leader position. • Task Forces or Strike Teams may be used to reduce span of control to an acceptable level. • Command staff positions normally not filled to reduce workload or span of control. • General staff position(s) normally not 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 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 may be filled to reduce workload or span of control. • General staff position(s) may be 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 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. • Department of Defense (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. • Complex incident and operational risk management mitigation is required. • Formal Incident Planning Process is initiated and followed. • Continual need for long-term strategic risk complexity assessment. • Written 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.

The *NWCG Wildland Fire Risk and Complexity Assessment*, PMS 236, is developed and maintained by the Incident and Position Standards Committee (IPSC), an entity of the National Wildfire Coordinating Group (NWCG). This publication is available electronically at https://www.nwcg.gov/publications/pms236. Publication date: May 2026