

CHAPTER 60

PREDICTIVE SERVICES

PREDICTIVE SERVICES OVERVIEW

Predictive Services is a decision support unit for federal, state and local land management agencies for operational management of and strategic planning for wildland fire management resources. Predictive Services accomplishes this through analysis of weather and climate, fuels, fire activity and behavior.

Intelligence gathering is a fundamental component of the national coordination system for federal, state and local land agencies. Intelligence coordination is accomplished through compiling reports from all levels of the firefighting organization as well as communicating with individual GACCs and local jurisdictions concerning their historic, current, and expected fire occurrence.

The products and services from both Predictive Services and the Intelligence section provide support for the proactive management of wildland fire with an eye toward safety, cost containment, efficiency and ecosystem health.

Wildland Fire Weather Forecasts

Wildland Fire Weather Forecasts are the responsibility of the National Weather Service.

Local dispatch centers will have protocols in place for monitoring, requesting, and disseminating fire weather forecasts, spot weather forecasts, fire weather watches, red flag warnings and other severe weather events (e.g., severe storm warnings, flash flood warnings, tornado warnings) to firefighters, incident commanders, and field-going personnel.

PREDICTIVE SERVICES PRODUCTS

7-Day Significant Fire Potential Outlook

The National 7-Day Significant Fire Potential Outlook is a composite of outlooks produced by each of the Geographic Area Predictive Services'. The 7-Day provides a week-long projection of fuel dryness, weather and fire potential. The 7-Day depicts a nationwide view of the significant fire potential for the next seven days with links to the individual Geographic Area 7-Day Outlooks. The system is database-driven and is updated periodically as each Geographic Area Predictive Services posts its outlook. Each Geographic Area Predictive Services will determine whether to routinely produce a morning or afternoon product. Issuance times for each Area's outlook can be found in their respective Geographic Area Mobilization Guide and/or National Weather Service/Predictive Services Annual Operating Plan. Geographic Areas are required to provide 7-Day Outlooks daily, except when the Geographic Area Predictive Services is not staffed. Forecasts will include the forecaster's name or other agreed upon identifier to facilitate coordination.

The National 7-Day Outlook, as well as individual Geographic Area 7-Day Outlooks can be found at:

<https://fsapps.nwcg.gov/psp/npsg/forecast#/outlooks?state=map>.

National Wildland Significant Fire Potential Outlook

The National Significant Wildland Fire Potential Outlook is prepared and distributed by NICC Predictive Services on the first day of each month. It is a composite of outlooks prepared by the individual Geographic Areas Predictive Services and National Discussions prepared by NICC Predictive Services. It provides fire managers with the information needed to make long-range decisions concerning resource staffing and allocation. The Outlook identifies areas where significant wildland fire activity is expected to be above or below normal levels.

The Outlook covers a four-month period, divided into four one-month sections. Maps for each period display areas of below normal, normal, and above normal significant wildland fire potential. A brief synopsis of the current and predicted national and GACC situation is included in the report. The Outlook begins with an executive summary which provides a brief synopsis of the past month's weather and a national overview of each of the outlook periods. The Past Weather and Drought section summarizes the weather of the past month and the evolution of any drought conditions to illustrate how fuels and fire conditions reached the current state. The Weather and Climate Outlooks section summarizes the broad climate patterns that will affect temperature and precipitation for the next four months. The Geographic Area Forecasts section provides brief but more specific weather, fuels and fire potential information for each of the Geographic Areas.

GACC monthly outlooks are mandatory. They provide greater detail than the national outlook issued by NICC. GACC monthly outlooks will adhere to the following protocols:

- GACC and NICC outlooks must be geospatially equivalent.
- GACC websites are required to link to the national outlook.
- GACCs are required to provide draft forecast maps, as well as narrative highlights for the outlook period to NICC no later than five business days before the end of each month.
- GACC monthly outlooks will be issued and posted to the web on the first business day of each month.
- Maps will show areas where above normal, normal and below normal significant fire potential are expected.
- A discussion of fuel conditions, climate outlooks and other pertinent information will be included in the outlooks.

Fuel and Fire Behavior Advisories

Fuels and Fire Behavior Advisories are alerts issued as needed to address an exceptional or extreme circumstance that could threaten firefighter safety. Conditions that could be reasonably expected normally do not warrant a Fuels and Fire Behavior Advisory. Advisories will focus on fuel conditions and fire behavior that have long-term impacts, not atmospheric conditions that can change significantly over short periods of time and found in other products.

Advisories will highlight conditions that are currently ongoing and give specific examples that have been experienced in the field. Advisories should be tailored so that firefighters at all experience levels can recognize the situation and act accordingly. Advisories should be coordinated with neighboring administrative units to ensure that all areas with similar conditions are being addressed. All Advisories that extend beyond a single local administrative unit or will be posted on the National Advisory Map must be coordinated with the NICC and Geographic Area Coordination Center Predictive Services.

Each Advisory must include a map of the affected area. Only one Advisory may be active at any time over any area. If multiple Advisory conditions are present incorporate them into one Advisory. Advisories will remain in effect for 14 days from issuance. If the Advisory conditions continue beyond the 14 days a new Advisory will need to be issued to update conditions and circumstances with more timely information. Advisory templates can be found at:

<https://www.nifc.gov/nicc/predictive-services/fuels-fire-danger>

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The SACC Daily Outlook is a PDF document highlighting weather, climate and fuel conditions that pertain to the fire environment across the Southern Area. The outlook is to be posted to the SACC website no later than 0930 ET, Monday to Friday, with weekend updates generally expected at PL2 or higher, or as requested by the Center Manager. The Section-508-compliant outlook shall contain observational and forecast imagery with bulleted summaries that follow a template agreed upon by the Center Manager and Predictive Services meteorologists. All hazards of interest to the land management agencies shall be included in the document, including fire weather, tropical weather, severe weather, flooding potential, winter weather, coastal erosion and high wind events, or as determined by the meteorologist on duty. The Outlook does not replace or supersede NWS forecasts but is instead expected to provide a high-level overview of weather and hazards impacting the Southern Area over the next 1-2 weeks.

SACC TROPICAL BRIEFING

The SACC Tropical Briefing is a recorded presentation utilizing PowerPoint and Camtasia that shall be posted to the SACC website when tropical cyclones are expected to impact the Southern Area. The briefing shall be no more than 3-5 minutes long and is expected to provide a high-level overview of forecast trends and impacts on a regional basis. Site-specific information will continue to be provided by the local National Weather Service forecast office. Agencies may request additional briefings as needed.

FIRE DANGER GRAPHS

Fire danger graphs will be generated by Predictive Services, with their production prioritized by risk levels on the 7-Day Significant Fire Potential Outlook. When a Moderate or High Risk is issued, graphs will normally be produced daily. Low Risk PSAs shall be created as time allows. All Predictive Service Areas should be updated at least once per week, and requests can be made to produce graphs for an individual PSA by any user who contacts the Predictive Services meteorologists.

Incident Status Summary (ICS-209)

The Incident Status Summary (ICS-209) conforms to National Incident Management System (NIMS) policy. The ICS-209 is used to report large wildland fires and other significant events on lands under federal protection/ownership and is submitted to the GACC. Lands administered by states and other federal cooperators may also utilize this report.

The ICS-209 is submitted by the agency that has protection responsibility for the incident, regardless of who administers the land. If the protection agency is non-federal and chooses not to meet federal reporting standards, then the federal agency which has administrative jurisdiction will

submit the ICS-209. Geographic Area Intelligence Coordination staff will ensure that their local dispatch centers submit complete and accurate ICS-209 reports for any wildland fire meeting the requirements specified in the *When to Report Wildland Fire Incidents with an ICS-209* flowchart shown below.

Required Reporting of Wildland Fires

The NICC classifies large wildland fires as 100 acres or larger in timber or slash fuel models; and 300 acres or larger in grass or brush fuel models; or when a Complex, Type 1, or Type 2 Incident Management Team is assigned.

Wildland fires managed for complete perimeter control (full suppression) will submit an ICS-209 daily when that wildland fire meets large fire criteria by 0200 Mountain Time to report the previous day's activity until the incident is contained. Refer to GACC Mobilization Guides or agency policy for reporting requirements once containment is achieved.

Wildland fires managed under a Monitor, Confine, or Point Zone Protection management strategy will submit an ICS-209 following the guidelines outlined below in the *When to Report Wildland Fire Incidents with an ICS-209*. For incidents that require daily reporting, ICS-209s should be submitted daily by 0200 Mountain Time to report the previous day's activity. For incidents that require weekly reporting, ICS-209s should be submitted weekly by Friday at 0200 Mountain Time.

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Any incident within the Southern Area that meets the reporting criteria will have an Incident Status Summary (ICS-209) completed and submitted electronically via the Wildland Fire Application Portal (FAMAuth) SIT-209 Application (<https://famauth.wildfire.gov>) at earliest completion.

In addition to the national criteria, ICS-209s are required on any Southern Area incidents in which a significant event occurs including, but not limited to:

- *Structure(s) are destroyed*
- *Significant accident, injury, and/or fatality*

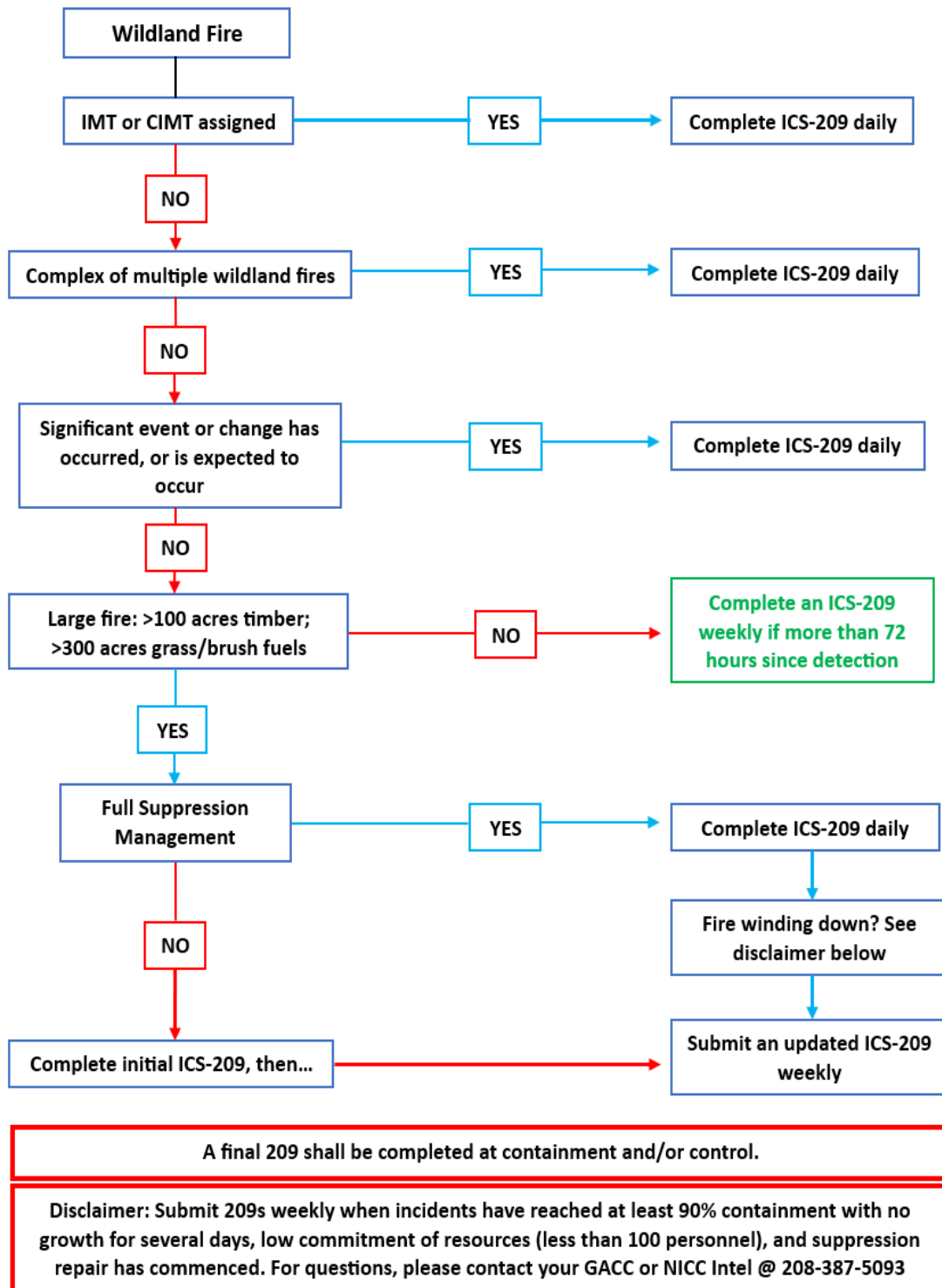
An ICS-209 will be submitted daily until the incident is contained.

A final ICS-209 will be submitted once the incident is contained or controlled, and national resources are no longer being ordered for or assigned to the incident. Note: An ICS-209 may be changed from "Final" status to "Update" status in the event the incident escapes containment. A final ICS-209 will be subsequently submitted upon re-containment.

It is the responsibility of the CIMT, Type 1 IMT and/or 2 IMT to complete and submit ICS-209s when they are in place on an incident. For all other incidents, the dispatch center will ensure complete and accurate ICS-209 information is gathered and electronically submitted.

If any significant changes occur overnight after submission of a 209 (large increase in acreage, change in complexity, increased threat to life/property, change in containment/control status, etc.), an update will be made to the GACC Intelligence Coordinator via phone or email at sac.mob@usda.gov.

When to Report Wildland Fire Incidents with an ICS-209



Non-Fire Incidents

An ICS-209 will be submitted for other events in which a significant commitment of wildland fire resources has occurred, or when a Complex, Type 1, or Type 2 Incident Management Team has been assigned.

Wildland fires within a complex should be aggregated and included in one ICS-209. A complex is two or more individual wildland fires located in the same general proximity, which are assigned to a single Incident Commander or Unified Command.

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Anytime an all-hazard incident has an incident management team assigned they will submit a daily 209 until the response has transitioned to recovery.

Prior to creating a complex incident in ICS-209, coordinate with the Intelligence Coordinator at SACC.

To maintain data management, reporting integrity, resource management, and cost accountability for individual wildland fire incidents within a parent complex and to facilitate the necessary data sharing between fire application systems through IRWIN, the following complex reporting business practices for ICS-209 and IRWIN must be followed.

- *The complex parent is a unique record and is not a converted wildland fire incident record.*
- *The complex parent record should be created in an IRWIN recognized CADE system, or as an individual ICS-209. The parent incident shall include the word “Complex” and not be named from an existing fire.*
- *Individual child incidents can be added to a complex within the 209 program as either preexisting ICS-209 incidents or as individual IRWIN incidents created from another IRWIN recognized application using the “Complex by Incident” button in block 7 of the 209 data entry screen. Finalize an existing ICS-209 child incident prior to associating the incident to the parent Complex.*
- *Incidents that do not have a unique IRWIN record cannot be added to the complex using the “Complex by Incident” button.*
- *If an incident is removed from the complex, it may resume ICS-209 reporting as an individual incident if appropriate, using normal ICS-209 reporting guidelines.*

Interagency Situation Report

GACC Intelligence staff will ensure that all dispatch centers within their geographic area submit Situation Reports through the SIT/209 Application at different frequencies throughout the year. The reporting period for this report is 0001 to 2400. At National Preparedness Level 2 the NICC Intelligence Coordination staff will retrieve situation reports from the SIT/209 Application by 0200 Mountain Time. Fires and acres shall be reported by protection responsibility.

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In addition to the national criteria, Situation Reports are required within the Southern Area, year-round, whenever fire activity occurs.

Centers will report all fire activity (including prescribed fires and for resource benefit) via the Wildland Fire Application Portal (FAMAuth) SIT-209 Application (<https://famauth.wildfire.gov>).

- *Daily Fire Statistics: Fire occurrence information will be reported by both protection responsibility and land ownership.*
- *Fire danger, preparedness level, wildfire, and prescribed fire activity occurring during the past 24 hours (reporting period is 0001 to 2400 local time), even if recorded in the 209 program it must be entered in the SIT Report program “Daily Fire Statistics” screen daily.*
- *Planned Rx: At Area and/or National Preparedness Levels 4 and 5, Centers will report all planned prescribed fires (all agencies). Though not required, it is strongly recommended that Centers report planned Rx fires at all PL’s. Any resource expected to be committed to the Rx fire are listed in the remarks block.*
- *Incident Priorities: Whenever a reporting center has multiple incidents for which ICS-209s are being submitted, this screen will be used to designate the local incident priorities. This information is used at SACC and NICC to identify area and national priorities.*
- *YTD Statistics: Centers should reconcile the year-to-date (YTD) numbers shown for their units in the SIT program with those from the official fire reports entered in the agency database(s) on a regular basis, preferably once a month at minimum. Do not use the daily statistics tab to catch up activity from previous days.*

RELATIONSHIP BETWEEN SIT REPORT AND 209 PROGRAM

There is no relationship between the 209 program and the SIT Report regarding acres reported. This means data entered in the 209 program will not automatically rollover into the SIT Report. If a wildland fire meets ICS-209 reporting criteria, all ICS 209 acres burned must also be manually entered each day in the SIT Report.

Acreage growth for ongoing ICS-209 fires should also be recorded in the SIT program “Daily Fire Statistics” tab for the associated protection unit as “0 fires for XX acres” with XX representing the amount of growth since the previous ICS-209 report.

Incident Management Situation Report

The National Incident Management Situation Report (IMSR) is issued at different frequencies throughout the year based on incident activity. During periods of light activity, the IMSR shall be issued weekly on Fridays. As activity increases, the IMSR shall be issued daily Monday through Friday. The IMSR shall be issued daily at National Preparedness Level 3 and above, or when incident activity and resource mobilization determine the need for a daily IMSR.

The IMSR is prepared by the NICC Intelligence Program staff from information and data derived from the SIT/209 Application. What is included in the IMSR can be found here.

Large full suppression wildland fires are typically reported in the IMSR until:

- The incident is contained.
- The incident has less than 100 personnel assigned.
- The incident is no longer demonstrating significant activity.

- The incident fails to submit an ICS-209 three (3) days in a row.

Wildland fires managed under a Monitor, Confine, or Point Zone strategy will initially be reported on the IMSR when the event exceeds 100 acres in timber or slash fuel models, 300 acres in grass or brush fuel models, or a Complex, Type 1, or Type 2 Incident Management Team is assigned. Large, long-duration fires will be reported in the IMSR until activity diminishes, and thereafter when significant activity occurs (i.e., acreage increase of 1,000 acres or more since last reported, significant resource commitment, a significant event occurs, etc.).

The Active Incident Resource Summary is updated daily in the IMSR. It includes the total count of fires and acres with resources assigned that have been reported in the SIT-209 program within the last seven days.

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SOUTHERN AREA INCIDENT MANAGEMENT REPORT

The Southern Area Incident Management Report (Morning Report) is produced daily (M-F) by the SACC Intelligence Unit. This product may also be produced on holidays and weekends depending on the Preparedness Level and incident activity. The purpose of the Morning Report is to provide an up-to-date summary of recent fire activity, resource availability and commitment.

Primarily, fire information will come from the SIT-209 application. However, fire activity that was not reported in SIT or 209 may also be included in the Morning Report in order to show a more complete representation of the current fire situation in the Southern Area. Sources for this information may include state fire report summaries and/or direct reports of information to the SACC Intelligence Unit from dispatch centers.

As noted above, ICS-209s must be submitted in a timely fashion in order to be relevant to decision-makers and others who use the Southern Area intelligence products. As such, only 209s that represent the current fire situation will be displayed in the Morning Report. For ICS-209 fires that are 100% contained or completed during IA, the initial ICS-209 must be submitted within three days of the fire's start date to be shown on the Morning Report.

A fully contained/completed fire will display on the Morning Report for one day. Any ongoing full suppression ICS-209s will be dropped from the Morning Report if updated information has not been received for two days.

Any ICS-209 fire meeting the above criteria will be shown on the Morning Report if it is greater than 100 acres (in any fuel type) and/or if structure(s) have been destroyed.

Note: ICS-209 reporting is not required in grass or brush fuel types until the fire has reached 300 acres in size. A center may choose to enter fires of any size in the ICS-209 system, but only fires reaching the guidelines in this chapter will be displayed in the SACC Intelligence products.