

CHAPTER 60 - PREDICTIVE SERVICES

PREDICTIVE SERVICES OVERVIEW

Predictive Services is a decision support unit to the federal, state, and local wildland fire agencies for operational management and strategic planning fire firefighting resources. This is accomplished through the collection, analysis, and dissemination of information regarding fire activity, resource status, weather, fuels, and assessments of fire danger and fire potential.

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 the predictive services 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.

NATIONAL 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 *Standards for Resource Mobilization* 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.

GBCC product is a color-coded week-long forecast of fire potential, based on projected fuels dryness and weather conditions. Firefighting resources information is also included. This product will be issued daily during fire season.

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

NATIONAL WILDLAND SIGNIFICANT FIRE POTENTIAL OUTLOOK

See National Interagency Standards for Resource Mobilization

Great Basin Predictive Services Products

Fire Potential Impact Map

Graphical guidance regarding short term fire weather impacts for the GBCC. Includes potential for lightning,

critical winds, and wetting rains. This product will be issued daily during fire season.

Monthly and Seasonal Outlook for the Geographic Area

A long-term outlook that combines recent and future climatic conditions, and expected fuel conditions, to produce a fire potential outlook for the upcoming four-month period. This product is issued monthly throughout the year, and available both in electronic copy and video format in the Outlooks section of the Predictive Services webpage.

GBCC Outlook: <https://gacc.nifc.gov/gbcc/predictive/docs/monthly.pdf>

National Outlook: <https://gacc.nifc.gov/gbcc/outlooks.php>

FUEL AND FIRE BEHAVIOR ADVISORY *See National Interagency Standards for Resource Mobilization*

Great Basin Fuels and Fire Behavior Advisory

The GBCC Predictive Services staff, along with agency input, will be the focal point for the issuance of any fuels/fire behavior advisories within the Great Basin. A GACC Meteorologist will coordinate with the GBCG and/or agencies to carefully consider both the content and intended audience of the messages.

Within the local area when a single agency, unit, or county issue an advisory, it is recommended they utilize the standard template for Fuel and Fire Behavior Advisories for consistency. The local dispatch center will coordinate with the GBCC Predictive Services Unit.

INCIDENT STATUS SUMMARY (ICS-209) *See National Interagency Standards for Resource Mobilization*

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.

Required Reporting of Wildland Fires

Any incident within the Great Basin that meets the reporting criteria will have an Incident Status Summary ICS-209 completed and submitted electronically via the Wildland Fire Application Portal (FAMAuth) ICS-209 application.

Initial reporting criteria include but are not limited to; fire size of 100 timber/slash, 300 grass/brush, ordering, assigning of national resources, any significant events or incident managed under a strategy other than Full Suppression AND is likely to remain active for a period greater than 72 hours.

If the incident is contained in the first burning period, a completed Final report may be submitted into the ICS-209 application in lieu of an Initial report, with notification to GBCC Intelligence desk. However, the incident will not appear on the IMSR for an initial Final Report. If the agency administrator wishes the fire to appear on the IMSR there must be an Initial Report and then the next reporting day, a Final Report.

A final ICS-209 will be submitted once the incident is contained or controlled AND national resources are no longer assigned to the incident. 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.

Reports are due by 1900 hours daily local time, although earlier submission times may be established during those periods when the GBMAC support is active. Local centers will call GBCC by 1900 if a later submission time is necessary. The ICS-209 User's Guide is available for display/downloading.

https://gacc.nifc.gov/predictive_services/intelligence/niop/programs/sit_209/Help/index.htm

Users should familiarize themselves with the definitions and instructions within the user's guide before attempting to enter information into the ICS-209 application.

It is the responsibility of the CIMT or Type 3 IMT to complete the ICS-209 when the team is in place. For all other incidents, the agency duty office or IC in command will ensure complete and accurate ICS-209 is completed and submitted to the local dispatch center for electronic submitted reports.

See *ICS-209 User's Guide* page 13, for reporting requirements and format.

ICS-209 Reporting Criteria Definitions

Full Suppression

Full Suppression implies a strategy to "put the fire out," as efficiently and effectively as possible, while providing for firefighter and public safety. To complete a fireline around a fire to halt fire spread and cool down all hot spots that are immediate threat to control line or outside the perimeter, until the lines can reasonably be expected to hold under foreseeable conditions. Synonymous with "Full Perimeter Containment" and "Control."

Monitoring

Monitoring the fire is the orderly collection, analysis, and interpretation of environmental data to evaluate management's progress toward meeting objectives, and to identify changes in natural systems particularly with regards to fuels, topography, weather, fire behavior, fire effects, smoke, and fire location. This may be done onsite, from a nearby or distant vantage point in person, for example, the work done by Fire Effects Monitor (FEMO) or Field Observer (FOBS) positions or by using a sensor, or through remote sensing (aircraft or satellite).

Confine

A wildfire response strategy of restricting a wildfire to a defined area, primarily using natural barriers that are expected to restrict the spread of the wildfire under the prevailing and forecasted weather conditions. Some response action may be required to augment or connect natural barriers (e.g. line construction, burn-out, bucket drops, etc.).

Point or Zone Protection

A wildfire response strategy which protects specific assets or highly valued resources from the wildfire without directly halting the continued spread of the wildfire.

Criteria For Updating ICS-209

Full Suppression

Updated daily until contained or controlled and national resources are no longer being ordered for or assigned to the incident. If any significant changes occur overnight, a verbal update will be made to the GBCC by 0700 hours Mountain Time.

Monitor/Confine and Point or Zone Protection

Update will be reported weekly, by close of business on Thursdays. Alternatively, updates will be completed when a significant change event occurs, on the day of the activity.

Significant Change Event

A forecasted, planned, or experienced event that affects incident management or operations.

This includes but may not be limited to the following items:

- A critical fire weather event is forecast, such as a high Haines index, dry cold front, etc.; AND fire activity created by the event is expected to threaten, potentially threaten, or cause damage to the values at risk.
- Sufficient increase in acres or activity (such as smoke production) to create public health or nuisance concerns.
- The incident strategy is modified
- National resources are assigned or released
- An accident, injury or fatality occurs
- Loss of structures
- The incident is contained or out

INTERAGENCY SITUATION REPORT See *National Interagency Standards for Resource Mobilization*

Dispatch centers will report both wildfire and prescribed fire activity that occurred during the past 24 hours on their units in this field. The reporting period is 0001 to 2400 local time. If significant changes in fires/acres transpire after the report has been submitted, the updated information will be relayed to the Coordination Center by 0700 hours local time. Corrections of fires and/or acres, will be made on the Year-to-Date Statistics screen at the earliest possible reporting period. <https://iwfirp.nwccg.gov/>.

The *Interagency Situation Report User's Guide* is available on the GBCC website. https://gacc.nifc.gov/predictive_services/intelligence/niop/programs/sit_209/Help/index.htm

Great Basin Situation Report Schedule

May 15 through October 15

For all Great Basin dispatch centers, the Situation Report will be completed daily by close of business or 1900 hours local time every day the center is staffed. The dispatch center will call the Great Basin Intelligence Desk if a later submission time is necessary.

October 15 through May 15

The SIT Report will be submitted weekly, close of business on Thursday, at a minimum. Centers may choose to report fire information daily, during this time frame.

Should national or geographic area's Preparedness Level be elevated to 2 or higher, the SIT Report will be submitted daily.

INCIDENT MANAGEMENT SITUATION REPORT (IMSR)

The National Incident Management Situation Report (IMSR) is issued at different frequencies throughout the year due 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 at: <https://www.nifc.gov/nicc/incident-information/imsr>

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 and 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.

INCIDENT PRIORITIES

Great Basin Incident Prioritization

GBCC Intelligence section will use the Incident Prioritization Worksheet (IPW) supported by information contained within current ICS-209s to determine and establish incident priorities. When the GBMAC support is activated, the GBMAC Coordinator will utilize the Incident Prioritization Worksheet contained within the GBMAC Operating Plan to establish incident priorities. GBCC Intelligence Desk will report incident prioritization to the NICC.

Local Incident Priorities

Local dispatch centers will use this screen to assign their internal incident priorities. If there is a significant change in priorities once GBCC has closed for the day, a phone call will be placed to the GBCC on-call phone to facilitate relaying the information to NICC. This will enable NICC to effect the appropriate changes in the Incident Management Situation Report (IMSR) for the following day.

Non-Fire Incidents including Complex Fires

See National Interagency Standards for Resource Mobilization

GREAT BASIN PREDICTIVE SERVICE PRODUCTS

Great Basin Evening Summary Report

Evening Summary Report will be produced daily, and available on the GBCC website when more than one IMT has been mobilized within the geographic area, or PL 3 and above, or significant competition for resources exists. The summary can be found on the GBCC Intelligence webpage.

Great Basin NFDRS Fuel Charts

Current Fuel Charts of ERC, 100-hr and 1000-hr fuel levels are generated for all Predictive Service Areas, (PSAs) across the Great Basin, with comparisons to normal and record dry levels. These charts are produced daily during fire season in Fire Family Plus and can be found in the Fuels/Fire Danger section of the Predictive Services webpage.

Great Basin Critical Fuel Status

An interactive map indicates whether fuels are currently critical or not for fire potential and is updated regularly through the fire season with input from local units. This map can be found in the Fuels/Fire Danger section of the Predictive Services webpage.

Great Basin RAWS Point ERC Map

A color-coded map which indicates daily ERC values, percentiles, and trends for specific RAWS stations, and can be found in the Fuels/Fire Danger section of the Predictive Services webpage.

Great Basin Fire Potential Video Briefing

A video briefing, issued daily by 0900 MT, looking at a combination of current fuel and fire conditions, along with expected weather conditions, to determine significant fire potential across the Great Basin for the coming week. This video briefing is located on the Outlooks link of the Predictive Services header on the GBCC website. <https://gacc.nifc.gov/gbcc/outlooks.php>