

PLANNING:

Strategic Application of Resources

During the Columbia Shuttle Recovery, 20 member search teams were assigned to Divisions with the task of searching for shuttle debris within two nautical miles from the centerline of the Columbia flight path. Search and rescue experts were assigned with each of the strike teams to assist the searchers in effectively using the search grid system. This statistically designed grid search consisted of 100% coverage of an area with at least a 75% probability of detection target. Technical specialists begin the process by physically identifying the grid to be searched on the ground after which they identified and contacted landowners to receive permission to search on their land. These specialists then identified the necessary access routes to the grid site. The grid method is conducted by searchers lining up next to each other and walking in a line covering the area directly in front of them. Recovery and decontamination teams were also assigned to each Division* and were then called upon as debris was located. Because of the potential toxic and pyrotechnic material component of the debris, these Environmental Protection Agency (EPA) contractors would then identify and recover the items which were then catalogued for NASA evaluation.

Lesson Learned: A unique and specialized all risk assignment requires the extensive dynamic and strategic preplanning in the search areas before search and recovery resources could be assigned. It was imperative that the technical specialists projected resource needs days ahead of search and recovery team assignments to facilitate pre-search contact of private land owners, determining access routes, and laying out the search grids. Any glitch in the preplanning process altered how and where resources could be deployed.

**Use of ICS terminology of "Divisions" for this incident was incorrect and should have instead been identified as "Groups" because the mission was functional, not geographical in scope. The various teams were performing their specific functions in different geographical areas each day. Components of each division were not assigned, mapped, or tracked as they would be in a wildfire incident by physical location, but by the group or type of skill resource they provided and their deployment availability to the recovery efforts.*

Value of Contingency Planning

An Incident Management Team (IMT) worked closely with the Oregon Department of Forestry and the Deschutes County Fire and Sheriff's Offices on a July 2003 incident. Although the fire remained within U.S. Forest Service lands throughout the incident, the County initiated early contingency planning. Being very progressive in wildland fire preparation, Deschutes County had previously conducted numerous practice evacuations of large incidents. These simulations proved extremely helpful as contingency planning went very smoothly for this incident.

Lesson Learned: Deschutes County learned the value of performing live dry run evacuations after experiencing major wildland urban interface fires over the past several years. They have completed detailed contingency plans for six major subdivisions and communities on the edge of the forest boundary. On one recent dry run, they evacuated 5,000 residents in two hours. Counties and other jurisdictions should be encouraged to conduct practice simulations coordinated with all potentially involved government agencies. These practice evacuations are invaluable, not only to iron out bugs in response planning, but they also allow the various agency counterparts to interact with each other on a personal level before a real incident occurs. For more information on Deschutes County wildland fire mitigation projects go to: <http://impact.deschutes.org>.

Population Protection Plans Effective

A population urban interface plan developed by Missoula County, Montana is now in use by 56 counties in this state. The “Population Protection Plan” is a planning document whose use can be implemented by Incident Management Teams (IMT) and affected local communities during urban interface wildfires. The plan consists of four primary elements: Fire Suppression, Evacuation Process, Access Management, and Structural Protection Plan.

The **Fire Suppression** component keeps primary resources focused on suppression and is combined with the use of independent advance reconnaissance parties to locate defensible spaces. A portion of the suppression resources are held in staging and then dispatched to these newly identified defensible interface positions.

The **Evacuation Process** portion of the plan includes the emergency implementation procedure guidelines, non-compliance response guidelines, and is combined with pre-planned evacuation routes that identify roadblocks and other traffic control points. Resource locations for those being dislocated such as

In the **Access Management** component, access criteria are developed and then bulletin boards, public service announcements, and other signage are utilized to explain access restrictions. Restricted access may also include the use of pilot cars and limits on general access hours to the affected areas.

The **Structural Protection Plan** considers the use of both traditional and progressive tactics such as engine task forces, large volume sprinkler systems, house wraps, foam and gel applications, and night operations to suppress ember blizzards that can potentially ignite wildland urban interface structures.

For a copy of the plan format and additional information click on:
<http://www.wildfirelessons.net/Library.htm#WUI>

Safety Objective Becomes Paramount

On a 2002 Type 3 incident, the first and paramount objective of the initial attack incident commander upon arrival became safely removing the already on scene local personnel who were suppressing the fire without proper wildfire training and personal protective equipment (PPE). When the wildland fire trained resources arrived, 30 Marines from a local base and the local volunteer fire department were already on scene. Neither the Marines, nor the local fire department, were properly trained or equipped to handle this type of incident. After the incident the IC contacted the local Marine Corps commander and arranged for wildland fire and ICS training as well as technical support in securing PPE for the local Marines. The County Emergency Services office was also contacted to arrange for training and proper wildland fire PPE for the local volunteer fire department. As a result, a situation that at one time presented a serious safety liability became a means of establishing additional initial attack resources in this locale at minimal cost.

Briefing Operational Resources at Check in

Crews and other operational resources checking in after the regularly scheduled day and night shift briefings can miss critical information prior to assignment to the fireline. To solve this communication lapse, one Incident Management Team (IMT) has altered their check in procedures for operational resources. As part of this team's check in procedure, new resources are automatically routed through key personnel in a manner similar to the one currently established for the demobilization process. This check in routing entails line personnel receiving an Incident Action Plan from the Plans Section, gear and radios from Logistics, and an operations briefing from either the Staging Area Manager or a Safety Officer. This revised procedure was found to be so effective in preventing check in lapses that this IMT decided to utilize it for the remainder of their 2002 season assignments.

New Mapping Tool Available

FireMapper (Thermal-Imaging Radiometer) is available on request through the Geographical Area Coordination Centers in Northern and Southern California. (It can also be ordered for fires outside of California). This new technology measures the intensity and dynamics of fire fronts – properties that affect the rate of fire spread, smoke production, and forest damage – and makes fire information readily and widely available. This remote sensor platform is carried aboard a U.S. Forest Service owned aircraft. Once an incident is flown, the resulting map data can be posted to the Web and pulled down for use without the need for an interpreter. Dr. Phillip Riggan at the Riverside Fire Lab in California is lead on the project. To view FireMapper images from recent fires go to: <http://www.fireimaging.com>.

Tapping GIS Resources

If the host agency has GIS capabilities, a variety of local maps can be produced from data layers that will assist in the management of the incident. For example,

maps containing roads and trails, structures, power lines, helispots, vegetation types, and cultural resources can be generated. The real value of GIS, however, is its analysis capabilities to support decision-making. By using GIS you can determine the best site for an Incident Command Post (ICP), containment lines, escape routes and safety zones. For more information on firefighting and GIS go to: <http://www.esri.com/news/arcuser/0100/firetools.html>. For an article on how GIS provides critical support for wildfire response go to: <http://www.esri.com/news/arcuser/0101/geomac.html>

Setting Priorities for Staffing Divisions

When limited resources are encountered, either due to wildland fires early in the season or during Preparedness Level 4/5, the weather predictions for wind can help in prioritizing which divisions to staff and allocation of resources among the divisions.

Key Role of Incident Meteorologist

The incident meteorologist can be invaluable in the planning process especially when an area is experiencing severe drought conditions. Their predictions will aid in selecting the appropriate strategy and tactics to employ. Meteorological conditions on an incident can be influenced by local topography, substantially increasing spread rates during these drought conditions.

Incident Qualifications of State and Municipal Agencies

Standardized procedures are needed regarding how state and municipal resources will be used on incidents. These sources of personnel do not always carry proof of their ICS qualifications. A way of addressing this in California is for every resource to carry a "Fire Qualification Letter" signed by their Fire Chief that attests to their red card qualifications.