
The National Interagency Complex Incident Management Organization Study

Findings and Recommendations

November 2004

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EXECUTIVE SUMMARY

This Report's Recommendations Set a Foundation for Future Success

A thorough investigation of the issues surrounding complex incident management brought this report's interagency National Incident Management Team to a significant understanding of incident management team issues and the complex environment that influences incident management.

When examining complex systems, no one simple solution will ever fully address the variety of issues that beset incident management.

Therefore, the recommendations in this report—some of which may initially seem unrelated to incident management—serve as a comprehensive foundation for future success.

These recommendations—together with their recommended Organizational Option—will serve as a framework for the success and effectiveness of both incident management and aggressive landscape-scale vegetation management into the future.

Nine Key Implementation Recommendations to Ensure Success

The success of this study's recommended option is predicated on planning and executing an aggressive landscape-scale vegetative management program and implementing the following nine key recommendations (below). By doing so, we will improve the management of complex incidents while simultaneously helping to maintain the availability of resource and wildland fire personnel to accomplish the local units' responsibilities.

Improved Capacity and Capability: Change federal agency policy to require employee participation on/or in support of incident management. Develop incident management positive requirements for selection of unit-level agency administrators.

Type 3 Incident Management Teams: Significantly increase the number of interagency Type 3 Incident Management Teams.

Training: Streamline the NWCG fire training and qualifications program to reduce redundancy and to more effectively focus on the needs of the various positions.

National Multi-Agency Coordinating Group Incident Management Team Management: The National MAC becomes responsible for the standardization and mobilization of Type 1 and Type 2 Incident Management Teams.

Legal Authorities: Given the adoption of both the National Response Plan and the National Incident Management System (NIMS), local, state, and federal agencies across America will be trained in a common system of incident management. The underlying legal authorities need to be adopted to allow the effective implementation of incident management at and across all levels of government.

Non-Traditional Partnerships: Actively seek partnerships with other federal agencies (i.e. Environmental Protection Agency, U.S. Coast Guard, Federal Emergency Management Agency) to improve capacity for the development and utilization of both fire and non-fire incident management personnel.

Improved Hiring Authority: Reduce dependency on retirees and improve the temporary emergency hiring authorities.

Standardized Contracts: Use the following to improve efficiencies in wildland fire management: standardized pay rates, contracts, performance standards, and common definitions of inherent government functions.

Complex Incident Management: Develop a new model for managing complex incidents. The current model of adding more and more resources should be replaced with a system that utilizes social values, significant resource values, and cost benefits in the decision making process. Incorporation of modules that allow the expansion of personnel and equipment in a cost effective manner should be utilized when the investments are effective and necessary.

| Key Recommendation | Agency Responsible for Implementation |
|----------------------------------|---|
| Improved Capacity and Capability | Wildland Fire Leadership Council and Agencies |
| Type 3 Incident Management Teams | National Wildfire Coordinating Group and National Fire and Aviation Executive Board |
| Training | National Wildfire Coordinating Group |
| NMAC IMT Management | National Fire and Aviation Executive Board |
| Legal Authorities | Agencies or Wildland Fire Leadership Council |
| Non-Traditional Partnerships | National Fire and Aviation Executive Board |
| Improved Hiring Authority | Wildland Fire Leadership Council and Agencies |
| Standardized Contracts | National Wildfire Coordinating Group |
| Complex Incident Management | National Wildfire Coordinating Group, Wildland Fire Leadership Council, Agencies |

The Recommended Organizational Option

Implement a small, permanent professional incident management organization focused on leadership, safety, cost efficiency, and training.

This organization would be led by a well-trained and focused cadre of professional incident managers with complex incident management as the primary focus of their positions. While a range of methods is available to accomplish this goal, the essential components required for success include:

- A strong core of fulltime Command and General Staff available year round for incident management.
- Having clearly-defined consistent performance expectations and utilization standards for these incident management positions.
- Seven teams of Command and General Staff stationed across the country near major jetports associated with geographic area coordination centers.
- The geographic area serving a significant role during low incident periods for utilizing these teams to manage the agencies' other needs, including: training, quality assurance activities, complex landscape fuel projects or other resource management work.
- Developing a monitoring plan to analyze the program's effectiveness and efficiencies to determine the need to continue, increase or decrease the program.

An "Interagency Implementation Strategy" will also be required to address specific aspects of this recommended organizational option, including: chain-of-command, pay/grade structure, methods for including state/local government participation, duty stations, and administrative support structure.

Success Under this Proposed Organization Option Should Result In:

- Additional leadership to accomplish large-scale vegetation management work.
- Improved initial attack and extended attack.
- A safer and more cost-effective complex incident management program.
- Improved availability of fire management leadership:
 - On the local units and at the state/regional/national levels.
 - Relating to complex incident management.
 - Relating to the agencies' natural resource management work.
 - Relating to non-fire ("all-risk") incident support.

Background

This report is the culmination of work and analysis performed by the interagency National Incident Management Options Team, chartered by the National Wildfire Coordinating Group (NWCG). This team has representatives from: the USDA Forest Service, National Park Service, Bureau of Land Management, U.S. Fire Administration, and Alaska Division of Forestry.

In 1999 the Chief of the Forest Service commissioned a review team to examine issues concerning the agency's fire management program. This report, completed in 2000, concluded that the agency should create a "*National Large Incident Management Organization to more effectively, efficiently and successfully position itself for the future.*"

The report's recommendations generated much agency discussion, but did not result in changes to resolve its primary issues of concern. In 2003 the NWCG chartered the interagency National Incident Management Options Team to:

- Examine organizational alternatives that will balance both local resource management work and complex incident management responsibilities.
- Review the original 2000 report "*An Agency Strategy for Fire Management*" and evaluate alternative implementation strategies for a National Incident Management Organization (NIMO).
- Develop recommendations and evaluate their ramifications, impacts, feasibility, cost and effectiveness.
- Develop specific implementation options available to the interagency fire community.
- Ensure that these recommendations and implementation options meet overall agency resource goals and objectives, the Federal Wildland Fire Management Policy, and the National Fire Plan.

Several Incident Management Options Analyzed and Considered

During its review and analysis process, the National Incident Management Options (NIMO) Team analyzed several incident management options by cost, ability to implement, and affect on the various issues and concerns identified both in previous reports and from current reviewer feedback.

Through this extensive study, the Management Options Team determined that these proposed NIMO options would not:

- Be affordable—based on the current funding levels and structure.
- Increase the capacity at the local unit level to complete today's—and tomorrow's—necessary natural resource work needs without significant additional investments.
- Significantly reduce the reliance on the agencies' "militia."

- Provide a career path for employees interested in working in large incident management. With teams being comprised of full time Incident Management Team personnel, a gap would develop between large incident management skills at the local level and the full time teams.

The Management Options Team concluded that implementation of a full NIMO option would not be feasible.

The team further determined, however, that hiring and developing a small number of employees with large incident management as their primary responsibility *would* result in significant benefits.

DRAFT

I Introduction

“Drought, excessive fuel hazards, and human movement into the wildlands continue to threaten the nation’s communities and forests—driving costs even higher. The 2002 fire season is more than a wake-up call. It is a painful reminder of the magnitude of the problem and the dire need for action.”

Wildfire Suppression: Strategies for Containing Costs
A Report by a Panel of the National Academy for Public Administration
September 2002

An Agency Strategy for Fire Management

In 1999 the Chief of the Forest Service commissioned a review team to examine several issues concerning the agency’s fire management program. The report from this effort, *An Agency Strategy for Fire Management*—known informally as “*The Jacob’s Report*”—was completed in January 2000.

This report recommended that the Forest Service create a “National Large Incident Management Organization” to

more effectively and efficiently posture itself for the future. It recommended that a National Large Incident Management Organization provide “*a highly trained, experienced, dedicated, demand-oriented, pro-active service to line officers in need of large incident management assistance.*” Very little follow-up occurred, however, until early 2003—after the severe 2002 wildland fire season’s impacts.

NWCG Charters Incident Management Organization Options Team

In January 2003, The National Wildfire Coordinating Group (NWCG) chartered an interagency National Incident Management Options (NIMO) Team to:

- Examine organizational alternatives that will balance both local resource management work and complex incident management responsibilities.

- Review the 2000 report *An Agency Strategy for Fire Management* (“Jacob’s Report”) and evaluate alternative implementation strategies for its suggested National Incident Management Organization.

- Develop recommendations and evaluate their ramifications, impacts, feasibility, costs and effectiveness.
- Develop specific implementation options available to the interagency (the various traditional federal wildland fire agencies) fire community.

- Ensure that these recommendations and implementation options meet overall agency resource goals and objectives, the Federal Wildland Fire Management Policy, and the National Fire Plan.

This team has representatives from: the USDA Forest Service, National Park Service, Bureau of Land Management, U.S. Fire Administration, and Alaska Division of Forestry.

Wildland Fire Agencies' Task Becoming Increasingly Complex

Millions of acres of our nation's wildlands are in an unsustainable condition resulting in a high risk of ecological change.

This situation, combined with a century of fire suppression, has resulted in the gradual accumulation of high levels of burnable biomass. While this problem is nationwide in scope, the western states currently have the greatest amount of hazardous fuel.

The 2001 federal interagency *Review and Update of the 1995 Federal Wildland Fire Management Policy* report concluded that the condition of fire-adapted ecosystems continues to deteriorate where fire is excluded and fuel loads continue to accumulate. In addition, *Managing the Impacts of Wildfire on Communities and the Environment: A report to the President in*

Response to the Wildfires of 2000 (known as the "National Fire Plan") recommends actions to:

- Respond to severe fire;
- Reduce the impacts of fire on rural communities and the environment;
- Ensure the availability of sufficient firefighting resources—including greater coordination and increased funding for federal fire management activities.

Multiple Significant Factors Have Propelled Incident Management Team Evolution

Over the past several years we have seen a tremendous increase in expectations—both internally and externally—placed upon our Incident Management Teams. Key fire management complexities that have propelled this evolution of today’s Incident Management Teams include:

- Wildland fires affecting communities (urban-interface mix).
- Increased Legislative oversight.
- Increase in hazardous fuel buildup.
- Drought and longer-duration wildland fires.
- Cost containment expectations.
- Multi-jurisdictional wildland fires.
- Large-scale mobilization and demobilization.
- Federal agencies requirement to respond to non-fire incidents under the National Response Plan.
- Complex aviation operations—often over populated areas.
- Extensive use of data technology (information technology, remote sensing, global positioning systems, fire behavior forecasting, general use of computers for many applications on incidents).
- Human resource and labor union issues.
- Intense media interest.
- Hazardous materials regulations, Occupational Safety and Health regulations, health and safety issues.
- Environmental concerns.
- Protection of both threatened and endangered species as well as cultural and historical resources.
- Major use of contract resources.
- Increased security requirements.

Wildland Fire Complexity Increases as Experienced, Large Incident Support Workforce Decreases

Over the past 30 years, the size and composition of our Incident Management Teams has changed dramatically as they respond to increasing expectations.

These larger and more complex fires of longer duration—coupled with our local land units’ diminished capacities to support these large operations—has resulted in the necessary development of larger Incident Management Teams with more specialized capabilities. Today, our Type 1 Incident

Management Teams have the capacity to manage the most complex wildland fire incidents—potentially involving more than 2,000 people and hundreds of pieces of equipment.

At the same time the Incident Management Teams have been required to increase, the federal agencies have experienced major workforce reductions in all programs that provide the supplemental incident management workforce.

Fewer Incident Classifications in Future

Large incident management is currently identified by six different classifications. Type 5 is the smallest of single incidents. Type 1 is the most complex single incident. A group of incidents can be assembled into an Area Command. These are the six different complexity levels of incident management. In addition to these six levels, traditional practices have developed in dealing with large incidents, especially large wildland incidents. One of these traditional practices involves application of crews or equipment along the entire perimeter.

The future may hold fewer classifications of incident management types and more focus on specific point control than perimeter control, as well as advanced methods to identify and mitigate risk. The future of incident management may also focus on fewer “types” of incidents, and more attention to enhanced leadership, risk management, and cost efficiency.

In addition to this general increase in fire complexity, the increases in the number of large fires is severely taxing available resources. Huge, expensive, and long-lasting wildland fires have become a reality in every portion of the American West, particularly since 2000. While large fires comprise only 2% of wildland fires, nearly 80% of the federal agencies’ suppression funds are expended on them.

With the current escalating fire-prone conditions of our forests and rangelands, together with the predictions of long-term drought conditions, the incidence and severity of large fires will most likely increase until major accomplishments occur in landscape fuel management.

The same skilled people needed to manage our current and future incidents also have fulltime jobs on their home units. During an increasingly longer portion of the year, the competing interests of incident support and critical work at home create escalating tension for employees and supervisors.

This dilemma, compounded with the changing demographics of our aging workforce, is setting the stage for future gaps in experience and incident management leadership. Based on a General Accounting Office (GAO) study conducted in 2001, approximately 30% of the workforce will be eligible for retirement by 2006.

II Why Change is Needed

“There is a sense . . . that the time has come for a real change—for not just tinkering around the edges, but for something much more fundamental. We need a model fitting into the 21st Century, a model that will facilitate more flexible management . . .”

Paul Volker, Former Undersecretary, Department of Treasury
Address to Council for Excellence in Government
July 17, 2002

As Experienced, Large Fire Support Workforce Decreases – Wildland Fire Risk to Public and Private Lands Increases

During the last decade, various internal reviews and reports by land management agencies, Congressional subcommittees, the General Accounting Office, Office of Management and Budget, and the National Academy of Public Administration *all* confirm:

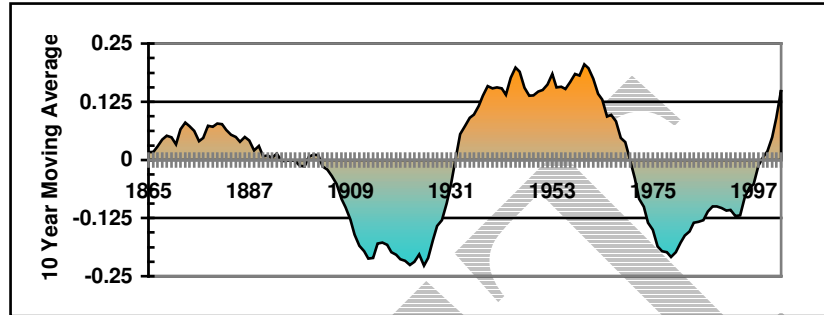
- Public and private lands are at risk from wildland fire. The cost to protect these lands from wildland fire is rising.
- Major cultural and demographic changes in workforce and programmatic changes in the wildland agencies have resulted in a reduction in agency workforce participation on large federal incident management teams.
- Drought and excessive fuel hazards continue to threaten the nation’s communities, forests and rangelands.
- The competing workload of simultaneously meeting both fire program management and resource management objectives on home units—while also responding to the needs of complex incident management—has brought the wildland agencies to a strategic crossroads.
- Climatic changes and predictions for continued drought conditions set the stage for increased and more severe wildland fires. (*See chart next page.*)

High Demand for Incident Management Teams Continues to Escalate

Suppression costs for complex incidents assigned to interagency wildland fire Incident Management Teams have reached hundreds of millions of dollars spent each year. During several recent years, federal suppression costs have even exceeded one billion dollars.

Incident Management Teams are also becoming more involved with non-traditional incident management activity. During the past ten years, an average of nine non-fire incidents requiring the involvement of our traditional wildland fire Incident Management Teams have occurred per year.

Furthermore, the annual use of individual interagency Incident Management Teams has increased from 2.5 assignments (pre 1994); to 4.0 assignments (1994 to 2002); to 5.3 assignments in 2003. From 1994 through 2003, Area Command Teams averaged two assignments per year.



This U.S. Geological Survey chart of the “Atlantic Multi-Decadal Oscillation as an Indicator of Drought Trend” indicates that the United States is in the early stages of a significant drought cycle. Years above the line (1998 to present) are drought years.

This information was included in the 2004 Large Fire Suppression Costs Strategies for Cost Management report.

In addition, the number of overhead to support these teams has reached an unsustainable level.

“We have a long-term problem on how we are going to sustain this ‘all-risk’ [non-fire] Incident Management Team response and effort into the future. The concern is not with our firefighters. It is with our fire managers. It takes a long time to develop this workforce. How are we going to sustain these teams to meet all these demands—including pay?”

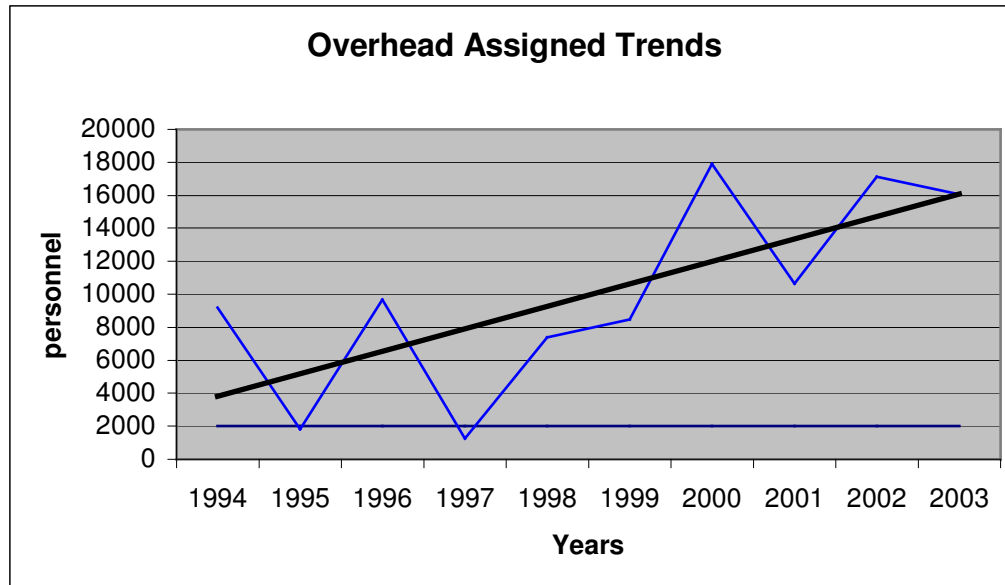
**Rex Mann, National Area Commander
Speaking at the interagency follow-up to the
Columbia Space Shuttle Search and Recovery Incident.
Lufkin (Texas) Disaster Field Office, April 23, 2003**

For example, according to annual statistics compiled by the National Interagency Coordination Center (NICC), total 2002-year overhead requests exceeded 32,000. Of these requests, 17,000 were filled and 15,000—of which 2,100 were critical positions—were unfilled or cancelled.

Several Factors Impacting Employee Availability

Several factors are impacting employee availability for incident management assignments:

- The personnel who support large incident management are oftentimes also required to support initial and extended attack and critical resource management activities at their local units.
- Demographic trends such as an aging workforce, two-career families, changing career interests, and various other issues have reduced the number of personnel available for fire management activities.
- The reduction of non-fire personnel within the Forest Service has reduced this group's numbers working at the field level by as many as 10,000.



Steady Increase Shown in Overhead Assignments to Incidents.

- Predicted retirements over the next five years will create shortages in the militia support workforce.
- The traditional expectation that all personnel will participate in fire or other emergency response no longer exists. This requirement, however, is still found in agency manuals.
- The number of people willing to travel frequently—on demand—to unknown locations for extended time periods in sometimes uncomfortable environmental settings is decreasing.
- The current, existing workforce—along with its skill-mix—is insufficient to address increased fire management complexities and demand for increased resource management priorities.

Lack of Personnel is Impacting Incident Management Teams

During the past 15 years, primarily due to retirements and lack of available personnel, the number of interagency Type 2 Incident Management Teams has dropped by almost 50%. National Type 1 Incident Management Teams have decreased 12%.

A 2003 survey of Area Command, Type 1 and Type 2 Incident Management Teams indicated that 92% of team members would need to be replaced over the next five years due to tenure policies, retirements, as well as an inability or unwillingness to participate. There are also indications that the candidate pool to replace these team members is insufficient. While the National Fire Plan has increased the number of fire management employees, many are seasonal and most employees will not be qualified for Command and General Staff positions for at least another decade.

Interagency IMT and Area Command Composition

National Interagency Incident Management Teams:

- 57% U.S. Forest Service.
- 18% The Department of the Interior.
- 25% state, local government and private wildland fire services.

Composition of Type 1 and Type 2 Incident Management Teams:

- 47% fire personnel.
- 53% other functional areas including retirees.

National Interagency Area Command Teams:

- 72% U.S. Forest Service.
- 22% The Department of the Interior.
- 6% state.

Current IMT Structure

The current combined total of 52 interagency Type 1 and 2 Incident Management Teams carry as many as 3,000 positions on their standing teams, with 30-60 people per team. Area Command Teams carry four persons per team.

When all the interagency Type 1 and Type 2 Incident Management Teams are assigned at the same time, they would need to fill as many as 9,000 additional miscellaneous management or supervisory positions (approximately 60-180 per team—depending on complexity).

Increased reliance on contract resources has added a need for contract specialists to work with Incident Management Teams. These positions are already in short supply—often times causing a shortage of people available to support the fire and resource management need.

Where Have All The Firefighters Gone?

From the February 2001 *Where Have all the Firefighters Gone?* by the Brookings Institution for the National Wildfire Coordinating Group:

- Availability and interest in fire assignments is driven by a number of factors, including workload priorities and loss of personnel.
- Fire is still respected and admired . . . but most people don't have time to participate.
- Non-fire functions have created other niches. These local programs and projects take precedence over national concerns.
- Time for family and social life is important to personnel and there is no monetary incentive to work on incidents.

Non-traditional Federal Agency Participation

Several federal agencies are now establishing Incident Management Teams to manage events, incidents, and support functions within their responsibilities and authorities. The following agencies were surveyed to find the status of these Incident Management Teams and their availability and qualifications for use on wildland fire incidents:

The U.S. Department of Agriculture

- Within two years, the USDA plans to have eight Incident Management Teams made up of Command and General Staff.

U.S. Army Corps of Engineers

- The U.S. Army Corps of Engineers currently has functional support teams. They do not plan on establishing full Incident Management Teams.

National Disaster Medical System (NDMS)

- NDMS is uncertain of the structure or number of teams they will have in the future.

Environmental Protection Agency (EPA)

- EPA plans to have ten 20-person Incident Management Teams by 2005.

The U.S. Department of Agriculture's Incident Management Teams will primarily be used by APHIS (Animal, Plant and Health Investigation Service) to respond to their incidents. The Corps of Engineers, NDMS and FEMA's Incident Management Teams (or support organizations) will be responding to emergency support functions and provide assistance to state and locally-responsible agencies. EPA and U.S. Coast Guard Incident Management Teams will manage incidents under their responsibilities.

The U.S. Coast Guard is the only agency with available, established Incident Management Teams willing to have them assigned to

Current Traditional IMT Availability (2004)

- 17 Interagency Type 1 Incident Management Teams
- 35 Interagency Type 2 Incident Management Teams
- 22 State Incident Management Teams
- 7 Fire Use Management Teams
- 4 Interagency Area Command Teams

Federal Emergency Management Agency (FEMA)

- FEMA has four 12-person support teams that provide and manage assets at incidents.

U.S. Coast Guard (USCG)

- The USCG has five 14-person Incident Management Teams.

Pre-set rules of engagement and use should be established with other non-wildland fire federal Incident Management Teams for their use where applicable to support wildland fire activity.

wildland fire incidents. If they had available and qualified individuals, all six agencies would be willing to support wildland fire incidents with single overhead requests. All agencies are using employees who are doing Incident Management Teams or support functions as a collateral duty.

Many of these agency's personnel who are involved in response activities are trained to NWCG standards in Command and General Staff and many Unit Leader positions. The wildland fire community should develop agreements to utilize the employees who are trained to NWCG standards.

Unit Consolidations Have Reduced Local Fire Leadership Positions

During the last decade many field units made significant organizational changes. These actions have reduced the number of experienced fire leadership field positions.

A Pacific Southwest Region study revealed a net loss of 21% of unit-level leadership positions (Fire Management Officer and Assistant Fire Management Officers) occurred as a direct result of this unit consolidation process. Other geographic areas estimate these field-level leadership position losses have reached as high as 50% of this workforce.

This loss of field leadership capacity has reduced the federal agencies capability to manage large incidents and to provide

local leadership for initial and extended attack. These fire leadership gaps occur at the most critical times—when leadership resources are most needed.

Cost efficiency and safety issues often result during these gaps in local fire leadership. The Accident Investigation Factual Report (USDA FS, 0351-2M48-MTDC) documents this situation as a factor contributing to the fatalities on the 2003 Cramer Fire. (*Finding 38: Leadership on the Cramer Fire was inadequate to provide for safe and effective suppression operations.*)

Training Program Not Keeping Pace with Skill Gaps and Future Employee Development

The agencies' current training system model is failing to meet the needs of current and future complex incident management employee development.

Oftentimes, employees are not available to attend requisite training for position qualification. In addition, lower-level classes are most often filled (many have waiting lists), while senior-level training classes are often cancelled or receive minimal attendance. This situation is creating a skill gap of employees prepared to assume senior incident leadership roles.

Consequently, the availability of qualified and experienced instructors to train future Incident Management Team members

is also being lost. Considering the increasing state and local government incident management needs, the impacts from this shortfall will be even more severe.

Incident Management Training Needs Overhaul

The NWCG training and qualifications system is burdensome and slow. The Forest Service's additional training requirements and unique task book protocols also greatly slows its employees' qualification progression.

Training and development should focus on producing high-quality and high-performance individuals and teams.

The federal participation on Incident Management Teams is eroding. As our current highly-qualified personnel retire, the unfortunate impacts of this dilemma will only increase.

Current Team Rotation and Management System

No agency has accepted the authority or responsibility to require their agency—or Geographic Areas—to provide the needed number of personnel assigned to the incident management organizations.

The National Fire Plan

The current Type 1 Incident Management Team rotation and Geographic Area Coordination Center (GACC) management of Type 2 Incident Management Teams does not utilize these teams in the most efficient and cost effective manner:

- The current rotation policy does not necessarily send the closest team.
- When teams are “off call” the entire team is unavailable for single resource assignments. This reduces the single resource pool available for dispatch.
- The National Multi-Agency Coordinating Group lacks jurisdiction for Type 1 and Type 2 Incident Management Teams.
- Oversight and management requirements vary widely by Geographic Area.
- Team size varies greatly between Geographic Areas. Some of the larger teams have added personnel to help insure positions will be filled.
- Teams are job-sharing key positions, further reducing the number of available personnel to fill overhead requests.
- Entire teams are often sent to situations where short teams, or specific sections, would be more appropriate.

“Succession planning and management [or leadership succession] can help an organization become what it needs to be, rather than simply to recreate the existing organization. Leading organizations go beyond a succession planning approach that focuses on simply replacing individuals and engage in broad, integrated succession planning and management efforts that focus on strengthening both current and future organizational capacity. As part of this broad approach, these organizations identify, develop, and select successors who are the right people, with the right skills at the right time for leadership and other key positions.”

J. Christopher Mihm, Director, Strategic Issues, U.S. General Accounting Office
 Before the Subcommittee on Civil Service and Agency Organization, Committee on Government Reform
 House of Representatives, October 1, 2003

Prior reports all emphasize need to improve the complex wildland fire management organization system:

- *The USDA Forest Service An Agency Strategy for Fire Management: A Report from the National Management Review Team (Jacobs’ Report):* “Without making a significant organizational change, the overall ability to manage large wildland fires will be compromised.”
- *Policy Implications of Large Fire Management: A Strategic Assessment of Factors Influencing Costs – A report by the Strategic Overview of Large Fire Costs Team (Rains Report):* “The answer seems so simple: act now, establish wildland fire management as a top priority and begin to implement the recommendations that will ensure we meet our role and responsibility in protecting lives and property from wildland fires.”
- *Interagency Management Review Team, South Canyon Fire:* “Continued commitment on the part of both management and individuals is key to continued improvements. Each must regularly renew their commitment and become responsible and accountable for their actions.”
- *The Federal Wildland Fire Policy 1995 and II 2001:* “Finding sufficient personnel within agencies to meet annual fire season staffing . . . has been increasing difficult. An anticipated increase in retirements of fire managers raises a serious question about how agencies will conduct their fire management mission.”
- *Additional Actions Required to Better Identify and Prioritize Lands Needing Fuel Reduction – GAO-03-805:* “A number of factors, including weather and diversion of resources to fire suppression have hindered the Forest Service’s and Interior’s ability to complete their annual fuels reduction workloads.”
- *Wildfire Suppression: Strategies for Containing Costs, National Academy of Public Administration (2002):* “. . . fire programs could benefit from developing additional locally committed Type 3 organizations consisting of federal and local firefighters who are not committed to serving on Type 1 or 2 teams.”
- *Large Fire Suppression Costs Strategies for Cost Management. (2004):* “. . . The catastrophic fires that have occurred in the past five years provide a sobering look at the impacts on public health and safety. Jobs have been lost, businesses and schools were interrupted, infrastructure and environmental damage occurred. Lives, property and natural resources were seriously threatened and often destroyed.”
- *Study of the Implementation of the Federal Wildland Fire Policy, National Academy of Public Administration (2000):* “The current methods of meeting human resource needs for fighting wildland fires (using professional leadership drawn from a volunteer fire “militia”) may not be sustainable in the future.”

III Recommendations

The success of this report's proposed option is predicated on two imperative actions: 1) Planning and executing a larger and more aggressive vegetative management program; and 2) Implementing the report's nine key recommendations.

Setting a Foundation for Future Success

A thorough investigation of the issues surrounding complex incident management brought this report's interagency National Incident Management Team to a significant understanding of incident management team issues and the complex environment that influences incident management.

When examining complex systems, no one simple solution will ever fully address the variety of issues that beset incident management.

Therefore, the recommendations in this report—some of which may initially seem unrelated to incident management—serve as a comprehensive foundation for future success.

These recommendations—together with their recommended Organizational Option—will serve as a framework for the success and effectiveness of both incident management and aggressive landscape-scale vegetation management into the future.

Nine Key Implementation Recommendations to Ensure Success

Planning and implementing an aggressive landscape-scale vegetative management program is the foundation for all of this report's recommendations. The success of this study's recommended option is predicated on the implementation of the following nine key recommendations to improve the management of complex incidents while also helping to maintain the availability of resource and wildland fire personnel to accomplish the local units' responsibilities:

Improved Capacity and Capability: Federal agency policy should be changed to *require* employee participation on/or support of incident management. To improve integration of wildland

fire into the agencies' business and to insure that adequate personnel are available for the future, a significant increase in personnel available for incident management is needed. Processes should

be developed that allow differing levels of commitment and assurances of longevity and location for assignments. Agencies should require agency administrators to have wildfire leadership training. Incident management experience will be viewed as a key factor in selection considerations for unit-level agency administrator positions.

Type 3 IMTs: Significantly increase the number of interagency Type 3 Incident Management Teams. NWCG should develop standardized expectations and qualifications for these Type 3 teams. Local agencies should develop and manage sub-geographically responsive interagency Type 3 teams—using all aspects of local government. These teams will be used for improved, rapid initial and extended attack activities.

Training: Streamline the NWCG fire training and qualifications program to more effectively focus on the needs of the various positions while reducing redundancy and increasing training efficiency. Review the current training standards, requirements and delivery processes including distance learning to determine how they can be accelerated without compromising safety and the development of necessary skills.

NMAC IMT Management: The National Multi-Agency Coordinating Group should assume the responsibility for standardization of Type 1 and Type 2 Incident Management Teams. To improve

efficiency and overall team utilization, the mobilization of these teams will also become the responsibility of the national MAC based on a system developed with the national and Geographic Area MACs.

Legal Authorities: Given the adoption of both the National Response Plan and the National Incident Management System (NIMS), local, state, and federal agencies across America will be trained in a common system of incident management. In addition to providing a common system of incident management, the underlying legal authorities need to be adopted to allow the effective implementation of incident management at and across all levels of government.

Non-Traditional Partnerships: Actively seek partnerships with other federal agencies (i.e. EPA, Coast Guard, FEMA) to improve capacity for the development and utilization of incident management personnel for fire and non-fire incidents.

Improved Hiring Authority: Develop a system (i.e. FEMA's Disaster Assistance Employees) to more effectively utilize retirees to aid the development of agency employees in managing complex incidents. The long-term intent is to reduce the reliance on retirees while developing the needed skills to fulfill critical positions that exist today—and are expected to increase over the next few

years. To assure availability and appropriate training opportunities are maximized, the current “AD” employment system needs improvement.

Standardized Contracts: Standardize pay rates, contracts, performance standards and common definitions of inherent government functions should be used to improve efficiencies in wildland fire management. These standardizations will significantly improve the utilization and management of private wildland fire service contracts.

Complex Incident Management: Develop a new model for managing complex incidents. The current model of adding more and more resources should be replaced with a system that utilizes social values, significant resource values, and cost benefits in the decision making processes. This system should incorporate the utilization of modules that allow the expansion of personnel and equipment in a cost effective manner when determined that the investments are effective and necessary. Suppression strategies should shift away from the 100%-perimeter control to “point-of-control” efforts that prioritize and protect the greatest values-at-risk.

| Key Recommendation | Agency Responsible for Implementation |
|----------------------------------|---|
| Improved Capacity and Capability | Wildland Fire Leadership Council and Agencies |
| Type 3 Incident Management Teams | National Wildfire Coordinating Group and National Fire and Aviation Executive Board |
| Training | National Wildfire Coordinating Group |
| NMAC IMT Management | National Fire and Aviation Executive Board |
| Legal Authorities | Agencies or Wildland Fire Leadership Council |
| Non-Traditional Partnerships | National Fire and Aviation Executive Board |
| Improved Hiring Authority | Wildland Fire Leadership Council and Agencies |
| Standardized Contracts | National Wildfire Coordinating Group |
| Complex Incident Management | National Wildfire Coordinating Group, Wildland Fire Leadership Council, Agencies |

The Recommended Organizational Option

Implement a small, permanent professional incident management organization focused on leadership, safety, cost efficiency, and training.

This organization would be led by a well-trained and focused cadre of professional incident managers with complex incident management as the primary focus of their positions. While a range of methods is available to accomplish this goal, the essential components required for success include:

- A strong central core of fulltime Command and General Staff available year round for incident management.
- Having clearly-defined consistent performance expectations and utilization standards for these incident management positions.
- Seven teams of seven Command and General Staff positions stationed across the country near major jetports associated with geographic coordination centers.
- The geographic area serving a significant role during low incident periods for utilizing these teams to manage the agencies' other needs, including: training, quality assurance activities, complex landscape fuel projects or other resource management work.
- Partnering with research to develop a monitoring plan to analyze the program's effectiveness and efficiencies to determine the need to continue, increase or decrease the program.

The agencies will also need to address specific aspects of this recommended organizational option, including: chain-of-command, pay/grade structure, methods for including state and local government participation, duty stations, and administrative support structure.

The Recommended Organizational Option Implementation Strategy

Under a National Incident Management Organization (NIMO), local emergency response agencies redeem their role by supporting and sustaining an incident management organization to the full extent of their ability. The National Response Plan and National Incident Management System (NIMS) provide a context for enhanced support to complex incident management. Small numbers of national experts travel to support local emergencies.

The National Response Plan, National Incident Management System, the Resource Ordering Status System (ROSS), and the Interagency Qualifications and Certification System (IQCS) all provide supporting tools to allow maximum local support and minimize nationally-mobilized miscellaneous overhead support. Efficiency in mobilization is a keystone of the National Incident Management Organization.

Seven National Incident Management Organization Teams to Serve As Prototype

Under the Recommended Option, seven teams of Command and General Staff (Incident Commander, Planning Section Chief, Logistics Section Chief, Safety Officer, Information Officer, Operations Section Chief(s), and/or Finance Section Chief) form the initial National Incident Management Organization prototype. These seven teams do not have additional standing overhead team members devoted to the Command and General Sub-Staff positions.

A strong central core of fulltime Command and General Staff lead these teams, assembled to deal with the local situation. Non-traditional local partners from across the spectrum of skilled participants contribute to responses. These seven teams are excellent leaders and trainers. They ensure leadership succession. In addition, trainees serve as a significant focus area of these teams.

This strong central core of full-time Command and General Staff are available year round for incident management. Like hotshot crews, smokejumpers, and other fire and aviation management experts, they are experts in their “niche”. They provide leadership to incidents that consume thousands of acres, threaten community and resource values, and expose firefighters and the public to risks. They are also experts in providing more efficient leadership. While they contribute in a variety of other natural resource management arenas, the focus of their work is complex incident management. They are ready to be mobilized immediately for a long duration of time. They focus on leadership, safety, and efficiency.

Besides their complex incident management duties and involvement, these seven teams have significant “off-season” work. They are engaged in training, quality assurance activities, fuels management, fuels implementation, ad-hoc fire management and resource management work, NWCG issues, cost containment, and leadership development.

The teams are stationed near major jetports associated with Geographic Area Coordination Centers in: Atlanta, GA (SE); Albuquerque, NM (SW); Denver, CO (RM); Salt Lake City, UT (GB); Missoula, MT (NR); Portland, OR (NW); and Sacramento, CA (PSW). The Geographic Area also has a significant role in the off-season work of these teams.

Responsibilities

As experts, the personnel on these seven teams:

- Have significant influence with local agency administrators in determining the most cost effective means of management.
- Enhance the ability of local agency administrators to understand appropriate risk mitigation measures.
- Serve as trainers and assure appropriate quality of performance in individual incident positions.
- Are selected from a pool of individuals who apply to these positions.
- Have consistent performance standards.
- Participate for a term not to exceed five years. During this time, they have a defined grade/pay structure that takes into account the complexity of their national duties. They spend significant time interacting with national headquarters experts. Performance is determined through interaction of both regional supervisors and national headquarters experts.

After a significant tour of duty in this organization, individuals would carry their expertise back to local areas, national forests, parks, districts, and state forests. They would resume a significant role—now with additional expertise—in the fire management and natural resource management work of public lands.

State and local agencies participate in this National Incident Management Organization through the use of Individual Participant Agreements (IPAs).

After an initial five-year period, a formal evaluation will evaluate whether to increase the number of these teams or to abandon this NIMO prototype effort.

Assignments and Commitments

During the national fire season (typically March through November), these seven teams respond to incident management needs. They are expected to excel in managing complex incidents. The complex incident management assignments are managed and determined by the National Multi-Agency Coordinating Group (NMAC).

During the peak national fire season (July and August), these teams are supplemented by traditional Type 1 and Type 2 Incident Management Teams.

These teams may work more within the model the Federal Emergency Management Agency has developed for the “Federal Coordinating Officer” (FCO). Thus, these teams will expect to be deployed during most of the year. Individual

assignment length will be determined by the needs of the incident. As long as complex incident management is needed, the team will be expected to provide incident leadership.

Estimated Costs and FTEs of Recommended Option

The estimated salary (cost-to-government) and overhead rate (rent, utilities, vehicles etc.) for the recommended organization option using 2004 salary rates:

| NIMO Teams | Annual Salary/Team | Overhead Rate (est. 30%) | Total FTEs | Total Cost |
|------------|--------------------|--------------------------|------------|----------------|
| 7 | \$806,500.00 | \$242,000.00 | 49 | \$7,339,500.00 |

[It is assumed that there will be transfer of station costs associated with the implementation of this recommended option. These costs are not included in the above calculations.]

(See Appendix B for cost per position rational.)

Success Under this Proposed Organization Option Should Result In:

- Additional leadership to accomplish large-scale vegetation management work.
- Improved initial attack and extended attack.
- A safer and more cost-effective complex incident management program.
- Improved availability of fire management leadership:
 - On the local units and at the state/regional/national levels.
 - Relating to complex incident management.
 - Relating to the agencies’ natural resource management work.
 - Relating to non-fire (“all-risk”) incident support.

Recommendation Analysis Process

National Interagency Complex Incident Management Organization Study Objectives

1. Develop and evaluate incident management organizational options to:
 - A. Meet natural, cultural, and resource management objectives on the local unit.
 - B. Meet the needs for complex wildland incident management including non-fire incidents.
 - C. Improve interagency cooperation in initial and extended attack and complex incident management.
2. Based on the evaluation of organizational options, develop a preferred strategic recommendation.
3. Improve the quality and effectiveness of fire management programs on the local unit.

Full Range of Options were Analyzed and Evaluated

During its analysis and review process, this report's NWCG-chartered National Incident Management Options (NIMO) Team analyzed a full-range of organizational options—from one “no action” option to a fully-staffed permanent Incident Management Team option: *(All five of the proposed organizational options are outlined and discussed in-depth in Appendix A.)*

1. Current Organization (No Action).
2. Enhanced Current Organization.
3. National Incident Management Organization – Teams staffed at approximately 30 members per team.
4. National Incident Management Organization – 10 Permanent Employees per team.
5. National Incident Management Organization – Type 1 Incident Management Teams.

All of the organizational management options (except for the “no action” alternative):

- Assume that throughout the calendar year a sustainable number of Type 1 and Type 2 Incident Management Teams and Area Command teams will be available for use for both wildfire and non-wildfire emergency use.
- Function within the confines of an increasingly—but not preeminent—non-wildfire emergency scenario. The federal wildland fire management agencies’ role is, when needed, to support these incidents while they continue to focus on their traditional resource management missions. Their role also includes teaching and instructing others in incident management.
- Support the commitment of additional resources—personnel and funding—to the complex incident management arena.
- Support a significantly enhanced priority for complex incident management in the natural resource management agencies through new policies.
- Manage cost containment objectives.
- Promote improved accountability for complex incident management and other related tasks.

Analysis Process Determined the Proposed NIMO Options Would Not Be Feasible

These organizational options were analyzed by cost, ability to implement, and their affect on the issues and concerns identified in various reports—as well as from this study’s reviewer input. Based on this extensive study and examination, the Management Options Team determined that the proposed NIMO options would not:

- Be affordable—based on the current funding levels and structure.
- Increase the capacity at the local level to complete today’s—and tomorrow’s—necessary natural resource work needs.
- Significantly reduce the reliance on the agencies’ “militia.”
- Provide a career path for employees interested in working in large incident management. With teams being comprised of full time IMT personnel, a gap would develop between large incident management skills at the local level and the full time teams.

The Management Options Team therefore concluded that implementation the proposed NIMO options would not be feasible. The team further determined, however, that hiring and developing a small number of employees with large incident management, as their primary responsibility *would* result in significant benefits.

IV Glossary

AA – The **Agency Administrator** is the unit manager with responsibility for the unit for a federal or state agency, or local government.

AD – Term or acronym for **Administratively Determined**, which is used to calculate pay-rate for various positions and skills while engaged in incident management.

All-Risk (Non-wildland fire response) – Any incident management response for all activities other than wildland fire.

APHIS – Animal, Plant, Health Investigation Service. A part of the Department of Agriculture responsible for plant and animal health as it affects public health and welfare.

Complex – A complex is two or more individual incidents located in the same general proximity assigned to a single Incident Commander or Unified Command to facilitate management.

Complex Incident Management (CIM) – Management of a complex or the management of a major incident that includes multiple operational periods and usually more than 1000 personnel assigned. CIM may include the establishment of branches on the incident.

Environmental Protection Agency (EPA) – Established in 1970, this agency's mission is to protect human health and the environment. It has 10 regional offices and more than a dozen labs across the United States.

Federal Wildland Fire Reserve Program – A program that would utilize trained and qualified personnel no longer in the federal service and willing to commit to availability for a prescribed period of time per year to meet emergency response position shortages. This model would be similar to the military reserve program.

FEMA – Federal Emergency Management Agency, one of the divisions of the Department of Homeland Security designated in the Federal Response Plan to provide leadership for national-level disasters.

Fire Program Management – Providing any of the following on an administrative unit: initial attack, extended attack, protection staffing, dispatch and coordination, seasonal severity planning, fuels management, aviation, fire prevention, detection, fire planning, WFS development, and fire program budgeting on an administrative unit.

FTE (Full Time Equivalent) – One FTE equals 260 workdays per year.

FUMT – Fire Use Management Teams provide skilled and mobile personnel to assist with the management of wildland fire use for cultural and resource benefits and prescribed fires.

GACCs – There are 11 **Geographic Area Coordination Centers** in the United States. The GACCs establish priorities, coordinate resource mobilization and serve as the Multi-Area Coordinating (MAC) function until Preparedness Level 4 is reached in the Geographic Area. Due to their high incident management activity levels, the California Geographic Area and the Great Basin Geographic Area each have two GACCs.

Geographic Areas – There are nine Geographic Areas in the United States, consistent with the nine Forest Service Regions. Their primary responsibility is to coordinate fire-related activities within the geographical area.

Geographic Area Coordinating Groups – Are comprised of representatives of federal and state agencies and local government that oversee and facilitate the implementation of interagency standards developed at the national and Geographic Areas. There are nine Geographic Area Coordinating Groups.

Homeland Security Presidential Directive 5 – A directive signed by the President that directs all Departments and Agencies to work together to enhance the ability of the United States to manage domestic incidents.

Homeland Security Presidential Directive 7 – A directive signed by the President that directs all Departments and Agencies to identify and prioritize United States critical infrastructure and key resources—and to protect these from terrorist attacks.

Homeland Security Presidential Directive 8 – A directive signed by the President that establishes policies to strengthen the preparedness of the United States to prevent and respond to threatened or actual: domestic terrorist attacks, major disasters, and other emergencies by requiring a national domestic all-hazard preparedness goal. This goal would establish mechanisms for improving delivery of federal preparedness assistance to state and local governments, and outline actions to strengthen preparedness capabilities of federal, state and local entities.

Incident Complexity – When complexity levels exceed initial response capabilities, the appropriate Incident Command System positions should be added commensurate with the complexity of the incident. Based on an Incident Complexity Analysis, the Agency Administrator selects the appropriate management structure to provide for safe and efficient incident operations. Typically, incident complexity ranges from a Type 5 (least complex) through Type 1 (most complex).

IPA – The **Intergovernmental Personnel Act** allows federal agencies to exchange employees with other state, federal, or local government agencies.

IMTs – Incident Management Teams are pre-identified within Geographic Areas—as well as nationally—to management complex incidents.

Interagency – As used in the context of this report, **interagency** has two meanings: 1) the traditional use, indicating the various federal wildland fire agencies; 2) the inclusion of state and local agencies—when interagency is used in the report’s implementation sections.

Land and Resource Management Objectives – The natural and cultural resources on public lands in the United States. Federal and state agencies are charged with protecting these resources, developing management plans, and implementing “best management practices” on these lands.

Large Fire – Wildland fires that are 300 acres in size and greater (C and D Fires).

Long/Short IMTs – Incident Management Teams are configured either as a short team with Command and General Staff, or as a long team with Command or General Staff and all unit/group leader positions filled. The National Mobilization Guide defines both configurations.

MAC – Multi-Agency Coordinating (or, in most instances, a **MAC Group**) exists full-time, but is generally formalized at Preparedness Level 4 or higher. Each Geographic Area has a MAC Group, as does the

National Interagency Fire Center. Representation on MAC Groups is from the federal, state, and local governments. MAC Groups set priorities and allocate or re-allocate scarce resources to incidents, utilizing the coordination system to mobilize or re-allocate resources.

NDMS – The **National Disaster Medical System** is one of the divisions of the Department of Homeland Security designated in the Federal Response Plan to provide leadership for national-level disasters in medical systems.

NIMO – **National Incident Management Organization**, also synonymous with the term Large Fire Suppression Organization. Theoretically, NIMO is an organization of full-time employees whose primary mission would be complex incident management.

NRP – The **National Response Plan**, managed by the Department of Homeland Security, has replaced the Federal Response Plan.

NWCG – The **National Wildfire Coordinating Group** is comprised of representatives of federal and state agencies who provide a formalized system through which agreements may be reached on substantive issues in fire management

Private Wildland Fire Services – Any private sector entity—including companies, organizations or individuals—who provide services under a contractual agreement.

Rehire – A person who has left the federal or state government who returns to work either through the Administratively Determined (AD) pay scale, or returns to the previous grade and earns the difference between the retirement annuity and the current pay scale.

Rehired Annuitant – A person who has left the federal government (through retirement) and returns at the previous grade and is paid the current pay scale with no penalty to the retirement annuity.

Service First – Presidential authority which authorizes the Bureau of Land Management and Forest Service to delegate duties, responsibilities and authorities—thereby allowing an employee of either agency the authority to act in full force and effect of the other agency.

Shoulder Season – That period of time from October 1st until June 1st of each calendar when the least utilization of Incident Management Teams occur. Approximately 25% of all mobilizations for the entire calendar year occur during this time frame. The peak time (75%) of IMT mobilization is June through September.

Type 3-5 Incident Management Organizations –

Organizations pre-identified for initial and extended attack operations, ranging from the Type 3 to Type 5 complexity incident. The Type 5 incident includes two to six personnel; a Type 4 complexity incident has an Incident Commander and either a single module to several resources; a Type 3 complexity incident has an Incident Commander, some or all command and general staff positions and resources that vary from several resources to several task forces/strike teams.

USGS – United States Coast Guard, one of the divisions of the Department of Homeland Security designated in the Federal Response Plan to provide leadership for hazardous chemical spills on waterways and the United States' portions of the seas.

Volunteer Militia System – Utilizing personnel with full or part-time positions other than full-time complex incident management in federal or state agencies to staff complex incident management organizations.

V Literature Review

- Bell, Enoch; Cleaves, David; Croft, Harry; Husari, Susan; Schuster, Ervin; Truesdale, Dennis. 1995. *Fire economics assessment report*. Unpublished report. Washington DC: Fire and Aviation Management, Forest Service, U.S. Department of Agriculture.
- Collaboration. 2001. *A collaborative approach for reducing wildland fire risks to communities and the environment: 10-year comprehensive strategy*. 2001 Congress directed the Secretaries of the Interior and Agriculture to work with the Governors to develop this strategy in the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291).
- Firescope, Fire Service; *Field Operations Guide, ICS 420-1*, Incident Command System Publication, 2001.
- Fire Program Solutions LLC; Carlton, Donald, Winner, Daniel; *Analysis of Agency versus Contractor Costs for Firefighters, Equipment, and Facilities*. 2001
- Forest Fire Protection Committee; National Association of State Foresters. 2000. *Costs containments on large fires: efficient utilization of wildland fire suppression resources*. Unpublished report.
- GAO April 2001; GAO-01-509 *Federal Employee Retirements: Expected Increase Over the Next 5 Years Illustrates Need for Workforce Planning*.
- GAO April 2004; GAO-04-426 *Biscuit Fire: Analysis of Fire Response, Resource Availability, and Personnel Certification Standards*.
- GAO March 9, 2000 GAO/T-GGD-00-77 *Human Capital: Managing Human Capital in the 21st Century*.
- Hyde, Allen; Brookings Institute, January 2001 *Where Have all the Firefighters Gone?* An NWCG Report based on interviews and data collaboration from wildland fire agencies on the aging and declining fire fighter workforce.
- Interagency Management Review Team. 1994. *Report of the South Canyon Fire*. Forest Service, U.S. Department of Agriculture.
- Large Fire Costs Team. 2000. *Policy implications of large fire management: A strategic assessment of factors influencing costs*. Unpublished Report, Strategic Overview, Forest Service, U.S. Department of Agriculture.
- National Management Review Team. 2000. *An agency strategy for fire management*. Unpublished report, Forest Service, U.S. Department of Agriculture.
- National Wildfire Coordinating Group. 1995. Proceedings of the *NWCG firefighter safety workshop*. Unpublished report.
- O'Toole, Randal. 2002. *Reforming the fire service: An analysis of federal fire budgets and incentives*. The Thoreau Institute, Bandon, OR.

Pacific Southwest Region, 2003. *Strategic Decision and Assessment Oversight Review; Northern California Geographic Area; Lightning Event August 31 through September 8, 2003.*

Pacific Southwest Region, 2004. *Strategic Decision and Assessment Oversight Review; Southern California Geographic Fire Siege of 2003; Wildfire Incidents of October 21 through November 8, 2003.*

Panel of the National Academy of Public Administration. 2002. *Wildfire suppression: strategies for containing costs.* National Academy of Public Administration, Washington, DC.

Schuster, Ervin; Cleaves, David; Bell, Enoch. 1997. *Analysis of USDA Forest Service fire-related expenditures 1970-1995.* The Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

USDA Forest Service. 1995. *Course to the future: Positioning fire and aviation management.* Washington, DC: Fire and Aviation Management, Forest Service, U.S. Department of Agriculture.

USDA Forest Service. 1995. *Fire suppression costs on large fires; a review of The 1994 fire season.* Washington DC: Fire and Aviation Management, Forest Service, U.S. Department of Agriculture.

USDA Forest Service. 1996. *Land management considerations in fire-adapted ecosystems: Conceptual Guidelines.* Washington DC: Fire and Aviation Management, Forest Service, U.S. Department of Agriculture.

USDA Forest Service. 2003. *Chief's incident accountability report.* Washington DC, Forest Service, U.S. Department of Agriculture.

USDA Forest Service. 2003. *Accident Investigation Factual Report Cramer Fire Fatalities North Fork Ranger District Salmon Challis National Forest, Region 4, Salmon ID, July 22, 2003.* 5100 Fire, Dec, 20030351-2M48-MTDC.

USDI. 1981. *Proposal For organizational change – fire management* Executive Briefing, Alaska.

USDI/USDA. 1998. *Wildland firefighter safety awareness study: Phase III-implementing cultural changes for safety.* TriData Corporation, Virginia.

USDI, Workforce and Human Capital Planning. *Wildland Fire Human Capital Workforce Plan (FY 2004-FY 2009).* USDI/USDA/National Association of State Foresters. 2003. *Large Fire Cost Reduction Action Plan.*

Zimmerman, G. Thomas; *Wildland fire appropriate management responses: Examples of the range of options and costs.*

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VII Appendices

Documenting This Study's Initial NIMO Analysis

Documenting the Initial NIMO Analysis Process

Initially, the interagency National Incident Management Options Team developed and analyzed five potential organizational options.

This analysis included cost rationales for each of these options, salary cost assumptions and calculations, and a needs analysis.

An examination of the inadequacies of the current incident qualification and training system and an assessment of the current lack of incident management organization standards and oversight, all served as significant aspects of this analysis process.

A summary of this analysis—which helped facilitate the team's eventual arrival at its nine key recommendations and recommended organization option—is outlined in this Appendices section.

Appendix A – Analysis of the Five Alternative Organizational Options

Option 1: The Current Organization

The Current Organization Includes:

- 17 Type 1 “long” National Interagency Incident Management Teams sponsored by the nine Geographic Areas. These teams are on both a national and geographic rotation. The composition of these teams is approximately: 75% federal and 25% state, local and private wildland fire services.
- 35 Type 2 “long” Interagency Geographic Incident Management Teams sponsored by geographic or sub-Geographic Areas. These teams are on geographic rotation. The composition of these teams is the same as the Type 1 Teams (above).
- 7 “short” Interagency Fire Use Management Teams sponsored on a national rotation by the National Multi-Area Coordinating (MAC) Group.
- 4 National Area Command Teams of four people each sponsored by the National MAC Group on national rotation.

Team Composition

The long teams are comprised of an average 60 people, including trainees. The short teams average 10 people. All of these teams are staffed with employees who are part of the volunteer militia system and have other full time jobs with their agencies.

Selection Process

There is no standard team tenure or selection process for these Incident Management Teams.

Option 2: Enhanced Current Organization

Option 2 maintains the incident management team structure described in Option 1 but with the following number of IMTs:

- 65 total Incident Management Teams
- 20 Type 1 Incident Management Teams
- 45 Type 2 Incident Management Teams
- 5 Area Command Teams

Under this Enhanced Current Organization Option, the Fire Use Management Team workload would be absorbed within this broadened Incident Management Team structure—with the proper configuration responding to incident types.

The need for 65 Incident Management Teams and 5 Area Command Teams is based on the Incident Management Organization needs assessment findings (see Appendix C) and the following proposed agency policy changes:

- ❖ *Federal agencies require all employees to commit a minimum of three years—for 60 days per year—of their career to participate in incident management support. Agency Administrators will be held accountable for meeting this requirement through annual performance ratings (will be included as a critical element). Employees who want to continue with Incident Management Team participation will be supported by their agency and local Agency Administrator.*
- ❖ *Local Type 3 Incident Management Teams will be established. Improving and standardizing training and supervision requirements for these organizations will be necessary.*
- ❖ *Incident Management participation will be included in annual work planning for all employees—not just those with the three-year commitment.*

Option 3: NIMO – 50% Staffed

This option slightly reduces the number of existing Incident Management Teams to 45: 15 Type 1 and 30 Type 2 teams. The Area Command Teams remain constant at 5. The primary rationale for fewer teams: under permanent NIMO teams, there should be fewer transitions.

30 Incident Management Team members and all of Area Command would be NIMO employees, with the remainder of team positions filled with: volunteer militia, state and local government, and private wildland fire service employees. The four Area Command Team members would be NIMO employees.

The number of teams is based on the Incident Management Organization needs assessment findings (see Appendix C) and the proposed agency policy changes identified in Option 2.

Option 4: NIMO – 10 Permanent Employees Per Team

This option would have 60 Incident Management Teams: 40 Type 2 and 20 Type 1 Teams using the National Wildfire Coordinating Group “short team” configuration (10 people/teams) as permanent employees.

The remainder of the team positions would be filled with volunteer militia, state and local government, and private wildland fire service employees. The four Area Command Team members would be NIMO employees.

The number of teams is based on the Incident Management Organization needs assessment findings (see Appendix C) and the proposed agency policy changes identified in Option 2.

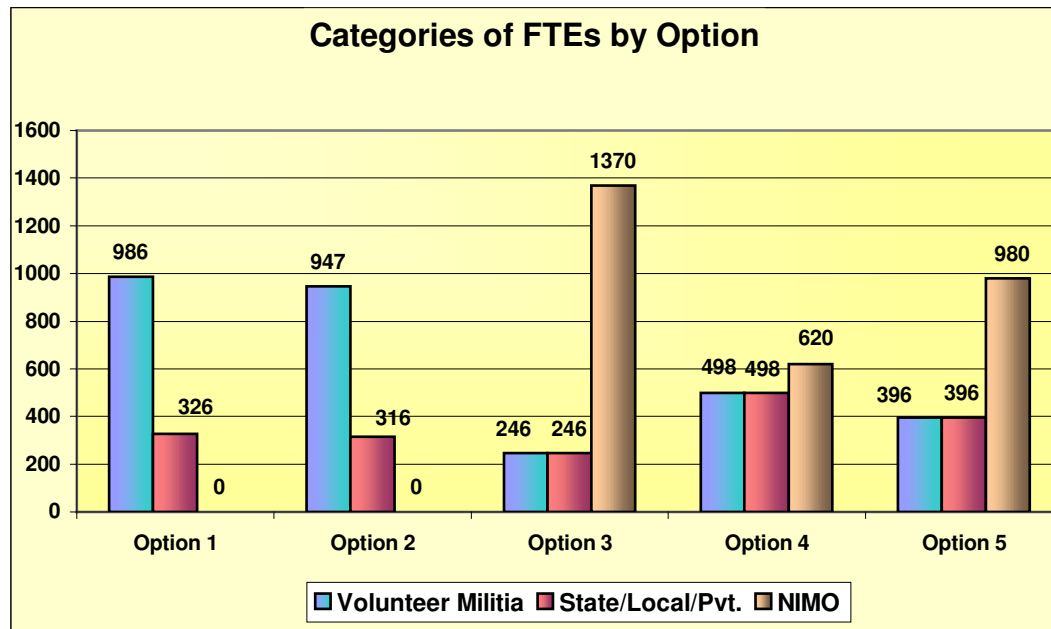
Option 5: NIMO – Type 1 Incident Management Teams

This option would have 60 Type 1 Incident Management Teams with 60 NIMO employees on each team. The four Area Command Team members would be NIMO employees.

Under this option, the Type 2 Incident Management Teams would be provided by the geographic areas and staffed by volunteer militia, state and local government, and private wildland fire service employees (60/team).

The number of teams is based on the Incident Management Organization needs assessment findings (see Appendix C) and the proposed agency policy changes identified in Option 2.

Staffing Comparison By Option



OPTIONS

| | Number of IMTs | Number of ACTs | Total FTE's | Volunteer Militia FTE's 60 days/person | Contract, State & Local Government FTE's | NIMO FTE's |
|---|----------------|----------------|-------------|--|--|------------|
| 1 | 52 | 4 | 1312 | 986 | 326 | 0 |
| 2 | 65 | 5 | 1263 | 947 | 316 | 0 |
| 3 | 45 | 5 | 1862 | 246 | 246 | 1370 |
| 4 | 60 | 5 | 1616 | 498 | 498 | 620 |
| 5 | 60 | 5 | 1772 | 396 | 396 | 980 |

The NIMO positions in Options 3, 4, and 5 provide additional flexibility to reduce the volunteer militia during non-peak Incident Management Team usage periods (October 1 to June 1).

Other Alternatives Examined and Dropped From This Analysis

Federal Wildland Fire Services Option

Dropped at the direction of the National Incident Management Options Team. This option was determined to be outside the authority of NWCG and did not fall within the objectives given to the Management Options Team.

provide a measurable increase in overhead positions beyond what they are providing today.

Development of a “Federal Wildland Reserve Program”

This alternative was dropped because of the potential conflict with the Federal Fire Retirement system. This option would require trained and qualified personnel no longer in the federal, state or local service willing to commit to availability for a prescribed period of time per year to meet emergency response position shortages. This model would be similar to the military reserve program.

Enhanced State, Local Government and Private Wildland Fire Services Option

Dropped at the direction of the National Incident Management Options Team. Even though this option could substantially reduce the use of volunteer militia, the Management Options Team determined that state, local government and private wildland fire services could not

Key elements of a “Federal Wildland Reserve Program”:

- These Incident Management Team “reservists” would commit for a period of three years and would be paid through the rehired annuitant authority and the AD program for state and local government during actual incident assignments and training.
- Currency would include a commitment to refresher training and physical fitness testing as appropriate prior to issuance of qualification card. This refresher would include agency policy changes, new procedures and new technology.
- Utilize IQCS and ROSS to develop and maintain daily available lists for incident response and training course execution.
- If normal agency resources are not available, this reserve program could respond—regardless of preparedness level—to any emergency. This program could also be utilized on long duration incidents to enable agency personnel to accomplish their workloads at the home units.

(This concept is in concert with the roles and responsibilities outlined in “*Homeland Security Presidential Directive HSPD-7 and 8.*”)

Key Assumptions Utilized Under this Option Analysis Process

- Modules staffed by agency rehires or the private wildland fire services may be used for selected non-wildland fire incidents. These same resources may help agencies such as FEMA, APHIS, NASA and the Department of Homeland Security for development of their own Incident Management Teams. This would enable agency personnel to stay home to pursue their regular jobs.
- Agency policy must be changed so that all employees are required to participate or support the incident management program.
- Working agreements will be used for Incident Management Team members to help evaluate performance for non-incident assignment work.
- Assist state and local government through the use of NFPA (National Fire Protection Association) or NWCG 310-1 qualification training standards to help provide qualified local employees in incident management.

General Assumptions Common to All Organizational Options

- To efficiently use private wildland fire services personnel, NWCG federal agencies must develop a common definition of inherent government functions and standardize payment rates and contracts.
- All NIMO positions are funded and staffed for 260 days. All volunteer, state and local government and private wildland fire services positions are funded and planned based on 60 days of complex incident assignments.
- The cost of all positions is based on \$300 per 8 hour day + an average OH rate of 30%. (This rationale for this average can be found in Appendix B).
- For the purpose of this analysis, the qualification and certification system (NWCG 310-1) was used.
- Option 1 – the Current Organization serves as the baseline for measurement of costs, effectiveness and efficiency.
- Geographic or sub-Geographic Areas will establish Type 3 Interagency Management Teams.
- Use all available qualified incident management personnel, including state and local government, and all federal wildland fire agencies, in support of Type 3 to Type 1 organizations.
- “Volunteer militia” are used in all options. The cost of incident support with 100% NIMO employees was too cost prohibitive. Commitment to incident management support and training will be required. This would include recognizing potential fire management “stars” who would receive accelerated training, mentoring and job experience to advance rapidly within the fire program.
- To efficiently contract with private wildland fire services, agency attitudes and processes for contracting must dramatically change.
- All options (excluding the current Option 1) will involve agency policy changes and may require significant human resource commitments and multiple employee-union approvals.

The 7 Key Evaluation Criteria Used in Original Organizational Analysis

Evaluation Criteria were developed to analyze the alternatives. Each alternative was analyzed utilizing these criteria. After the analysis process was completed, it was determined that the identified alternatives did not adequately meet the identified objectives. Of particular concern: the high cost of the NIMO options and the inability of these options to maintain the availability of personnel for local resource work.

1. Study Objective 1A

The ability to improve the federal and state land management agencies local unit's natural and cultural resource management.

2. Study Objective 1B

The ability to improve accomplishment of agency objectives for complex incident management and non-fire incidents.

3. Study Objective 1C

The ability to improve interagency cooperation in initial and extended attack and complex incident management.

4. Study Objective 3

The ability to improve the quality and effectiveness of fire management programs on the local unit.

5. Safety

The ability to improve and manage safety and risk management.

6. Cost

The cost of implementation of each option compared to the current organization.

7. Fire Leadership, Training and Qualification

The ability to improve the development of fire leadership, training and qualification for both complex incident and fire program management development.

Issues, Concerns and Opportunities

The National Incident Management Options Team, in concert with field reviewers of this report, identified the following issues, concerns and opportunities.

- Personnel are needed for complex incident management at the same time they are needed at the

home unit for fire and land and resource management responsibilities.

- The current highly decentralized organizations and differing land and natural resource management agency cultures make it difficult to accept new organizational models.
- The lack of integration of fire management with other land and resource management activities.
- The linkage to the land and resource management mission is simply too important to divorce aspects of fire management and fire use from the agencies.
- The ability to maintain land and natural resource agency focus in wildland fire incidents.
- The increased complexity of local resource management and changing employee values has lead to the unavailability of qualified personnel for Incident Management Teams.
- The existing workforce and skills mix are insufficient to address changing fire management priorities and increased fire management complexities.
- The need for training efficiency and consistency and a certification system to meet complex incident management needs.
- The ability to provide the correct number of Incident Management Teams for an expanding number of incidents.
- There are increased accountability requirements of Incident Management Teams and Agency Administrators in the area of complex incident management.
- Wildland fire complexity is increasing due to accumulation of hazardous fuel across the country—coupled with an ever-increasing wildland-urban interface.
- The severity and complexity of wildland fires are increasing across the nation. Increasing large fires are an emerging issue.
- Complex wildland fire incidents have evolved into all-risk incidents (HazMat, evacuations, search and rescue, structure fires, etc.).
- Few career incentives encourage participation in complex incident management.
- Employees have childcare concerns, as well as other community interests, that impact their availability for complex incident management assignments.
- Incident management activities are not included in position descriptions or performance evaluations.
- Determining the authorities, responsibilities, liabilities, and reimbursements of an interagency National Incident Management Organization solution.

- The local ability to effectively supervise initial and extended attack.
- The ability to utilize local non-wildland fire agencies/services to support Incident Management Teams specifically for the Type 3 Incident Management Teams.
- The adaptability of agencies to accept organizational change.
- The conflicts of jurisdictional authorities and responsibilities in the interagency environment make it difficult for state and local government participation in complex incident management.
- The lack of integration of fire management with other land and resource management activities.
- Ensuring the safety of responders and the public.
- Fire suppression responsibility is becoming more and more complex, thus more costly. In response to

larger more complex incidents, suppression costs have trended upward sharply from the mid-90s to today.

- Accountability requirements of Incident Management Teams and Agency Administrators in the area of complex incident management are increasing.
- The Administration, Office of Management and Budget (OMB), General Accounting Office (GAO), and the public, all demand a more cost effective approach to fire management.
- The ability to provide qualified individuals to meet complex incident management needs.
- The need for training efficiency and consistency and a certification system to meet complex incident management needs.

Appendix B – Cost Rational of Each Option

Option 1

This option includes the current 52 interagency Type 1 and Type 2 Incident Management Teams. When on assignment, each Incident Management Team will have an average of 120 overhead. Also included are the current seven Fire Use Management Teams—each with ten overhead when on

assignment. There are also four Area Command Teams, with four people per team. Volunteer Militia (VM) comprise 75% of all teams. Private, State and Local Government (PSL) comprise the other 25%.

| | |
|-------------------------|--------------------|
| 90VM/team x 52 IMTs = | 4680 people |
| 30 PSL/team x 52 IMTs = | 1560 people |
| 3VM/team x 4 ACTs = | 12 people |
| 1 PSL/team x 4 ACT = | 4 people |
| 8 VM/team x 7 FUMTs = | 56 people |
| 2 PSL/team x 7 FUMTs = | 14 people |
| TOTAL | 6326 people |

10 year average = 329,280 IMT overhead days per year

*$\frac{329,280}{52} = 6332.3 \text{ days per year on assignment (average)}$
6180 people*

Costs and FTEs

Volunteer Militia

4748 people x 54 days x \$390/day = \$99.9mm

Private, State, and Local Government

1574 people x 54 days x \$390/day = \$33.2mm
\$133.1mm

Volunteer Militia

4748 x 54 days = 986 FTEs
260

Private, State, and Local Government

1574 x 54 days = 326 FTEs
260

Option 2

This option includes the 65 interagency Type 1 and Type 2 Incident Management Teams—of which 120 people comprise 75% Volunteer Militia (VM) and 25% Private, State, and Local Government (PSL) representatives. These 65 Incident Management Teams are based on the 2003 Incident

Management Organization Needs Analysis (Appendix C) that recommends incident overhead not being assigned more than 60-days per year. The workload includes seven Fire Use Management Teams. There are also five Area Command Teams with four people per team.

| | |
|-------------------------|--------------------|
| 90VM/team x 65 IMTs = | 5850 people |
| 30 PSL/team x 65 IMTs = | 1950 people |
| 3VM/team x 5ACTs = | 15 people |
| 1 PSL/team x 5ACT = | 5 people |
| TOTAL | 7820 people |

10 year average = 329,280 IMT overhead days per year

$\frac{329,280}{7820 \text{ people}} = 42 \text{ days per year on assignment}$

Costs and FTEs

Volunteer Militia
 5865 people x 42 days x \$390/day = \$96.0mm

Private, State, and Local Government
 1955 people x 42 days x \$500/day = \$32.0mm
\$128.0mm

Volunteer Militia
5865 x 42 days = 947 FTEs
 260

Private, State, and Local Government
1955 x 42 days = 316 FTEs
 260

Option 3

This option includes the 45 interagency Type 1 and Type 2 Incident Management Teams. Each Incident Management Team will have an average of 30 NIMO, 45 Volunteer Militia (VM) and 45 Private, State, and Local Government (PSL) overhead when on assignment. Option 1’s seven Fire Use Management Teams workload has been included. Option 3 also

has five Area Command Teams with 4 NIMO people per team. The 2003 needs analysis (Appendix C) displays an average of 196 Incident Management Team assignments per year. Twenty-five percent, or 49, of these assignments occur from October to May. These 49 assignments will be fully staffed by NIMO personnel.

| | |
|------------------------------|--------------------------|
| 30 NIMO/teams x 45 IMTs = | 1350 people |
| 45VM/team x 45 IMTs = | 2025 people x 75% = 1520 |
| 45 PSL/team x 45 IMTs = | 2025 people x 75% = 1520 |
| 4 NIMO/team x 5 ACTs = | 20 people |
| TOTAL | 4410 people |

*10 year average = 329,280 IMT overhead days per year
 49 assignments by 100% NIMO = 46 days/year
 147 assignments by 45 mixed IMTs = 56 days/each
 (NIMO employees assigned 102 days/year)*

Costs and FTEs

NIMO

260 days x \$390/day x 1370 people = \$139mm

Volunteer Militia

1520 people x 42 days x \$390/day = \$24.9mm

Private, State, and Local Government

1520 people x 42 days x \$390/day = \$24.9mm
\$186.7mm

NIMO = $\frac{260 \text{ days} \times 1370 \text{ people}}{260} = 1370 \text{ FTEs}$

Volunteer Militia

$\frac{1520 \times 42 \text{ days}}{260} = 246 \text{ FTEs}$

Private, State, and Local Government

$\frac{1520 \times 42 \text{ days}}{260} = 246 \text{ FTEs}$

Option 4

This option includes the 60 interagency Type 1 and Type 2 Incident Management Teams. When on assignment, each Incident Management Team will have an average of 10 NIMO, 55 Volunteer Militia (VM) and 55 Private, State, and Local Government (PSL) overhead. Option 1’s seven Fire Use Management Teams workload has also been included. Option 4

has five Area Command Teams with four NIMO people per team. Half of the 25% of assignments occur from October to May and will be staffed by NIMO personnel. The number of shoulder season assignments was reduced for NIMO personnel to keep their total days assigned below 120.

| | |
|------------------------------|--------------------------|
| 10 NIMO/teams x 60 IMTs = | 600 people |
| 55VM/team x 60 IMTs = | 3300 people x 80% = 2640 |
| 55 PSL/team x 60 IMTs = | 3300 people x 80% = 2640 |
| 4 NIMO/team x 5 ACTs = | 20 people |
| TOTAL | 5900 people |

*25 assignments by 100% NIMO = 70 days/year/person
171 assignments by 60 mixed IMTs = 49days/each
(NIMO employees assigned 119 days/year)*

| | |
|---|--|
| Costs and FTEs | |
| NIMO | 260 days x \$390/day x 620 people = \$62.9.0mm |
| Volunteer Militia | 2640 people x 49days x \$390/day = \$50.5mm |
| Private, State, and Local Government | 2640 people x 49days x \$390/day = <u>\$50.5mm</u> \$163.9mm |
| NIMO | <u>260 days x 620 people = 620 FTEs</u> 260 |
| Volunteer Militia | <u>2640 x 49 days = 498 FTEs</u> 260 |
| Private, State, and Local Government | <u>2640 x 49 days = 498 FTEs</u> 260 |

Option 5

This option includes 16 Incident Management Teams made up of 60 NIMO employees. Each of these 16 Incident Management Teams will have 30 Volunteer Militia (VM) and 30 Private, State, and Local Government (PSL) overhead. Forty-four Incident Management Teams will have 60 Volunteer Militia and 60 Private, State, and Local Government

overhead. The Fire Use Management Teams workload has also been included under this option. Option 5 also has five Area Command Teams, with four NIMO people per team. Twenty-five percent of all assignments occur from October to May and will be staffed by NIMO personnel only.

| | |
|-----------------------------|--------------------------|
| 60 NIMO/team x 16 IMTs = | 960 people |
| 30 VM/team x 16 IMTs = | 480 people x 75% = 360 |
| 30 PSL/Team x 16 IMTs = | 480 people x 75% = 360 |
| 60 VM/team x 44 IMTs = | 2640 people x 75% = 1980 |
| 60 PSL/team x 44 IMTs = | 2640 people x 75% = 1980 |
| 4 NIMO/team x 5 ACTs = | 20 people |
| TOTAL | 5660 people |

*49 assignments by 100% NIMO = 86 days/year/person
 147 assignments by 60 mixed IMTs = 44 days/each
 (NIMO employees assigned 130 days/year)*

| |
|---|
| Costs and FTEs |
| NIMO 260 days x \$390/day x 980 people = \$99.3mm |
| Volunteer Militia 2340 people x 44 days x \$390/day = \$40.1mm |
| Private, State, and Local Government 2340 people x 44 days x \$390/day = \$40.1mm \$179.5mm |
| NIMO <u>260 days x 980 people = 980 FTEs</u> 260 |
| Volunteer Militia <u>2340 x 44 days = 396 FTEs</u> 260 |
| Private, State, and Local Government <u>2340 x 44 days = 396 FTEs</u> 260 |

Salary Cost Assumptions and Calculations

| Position | Equiv. Est Grade | Hourly | Cost to Gov | Daily | Cost to Gov Gov | Annual | Cost to Gov |
|----------|------------------|--------|-------------|-------|--------------------|--------|-------------|
| IC | GS-14 - 5 | 47 | 64 | 377 | 509 | 98383 | 132817 |
| C&G | GS-13 - 5 | 40 | 54 | 319 | 430 | 83170 | 112280 |
| UL | GS-12 - 5 | 34 | 45 | 268 | 362 | 69939 | 94418 |
| Trainees | GS-11 - 5 | 28 | 38 | 224 | 302 | 58353 | 78777 |

Sample Teams costs based on above:

PNW (t1)

| Position | Number | Hourly | Cost to Gov | Daily | Cost to Gov Gov | Annual | Cost to Gov |
|----------|--------|--------|-------------|-------|--------------------|---------|-------------|
| IC | 2 | 94 | 127 | 753 | 1017 | 196766 | 265634 |
| C&G | 20 | 797 | 1076 | 6376 | 8608 | 1663400 | 2245590 |
| UL | 57 | 1910 | 2579 | 15281 | 20629 | 3986523 | 5381806 |
| Trainee | 11 | 308 | 415 | 2460 | 3322 | 641883 | 866542 |
| total | 90 | | | | | | |
| Average | | | | 276 | 373 | | |

NWOR (t2)

| | | | | | | | |
|---------|----|------|------|------|-------|---------|---------|
| IC | 2 | 94 | 127 | 753 | 1017 | 196766 | 265634 |
| C&G | 10 | 399 | 538 | 3188 | 4304 | 831700 | 1122795 |
| UL | 31 | 1039 | 1402 | 8310 | 11219 | 2168109 | 2926947 |
| Trainee | 3 | 84 | 113 | 671 | 906 | 175059 | 236330 |
| Total | 46 | | | | | | |
| Average | | | | 281 | 379 | | |

NR (T1)

| | | | | | | | |
|-----|---|-----|-----|------|------|--------|--------|
| IC | 2 | 94 | 127 | 753 | 1017 | 196766 | 265634 |
| C&G | 8 | 319 | 430 | 2550 | 3443 | 665360 | 898236 |

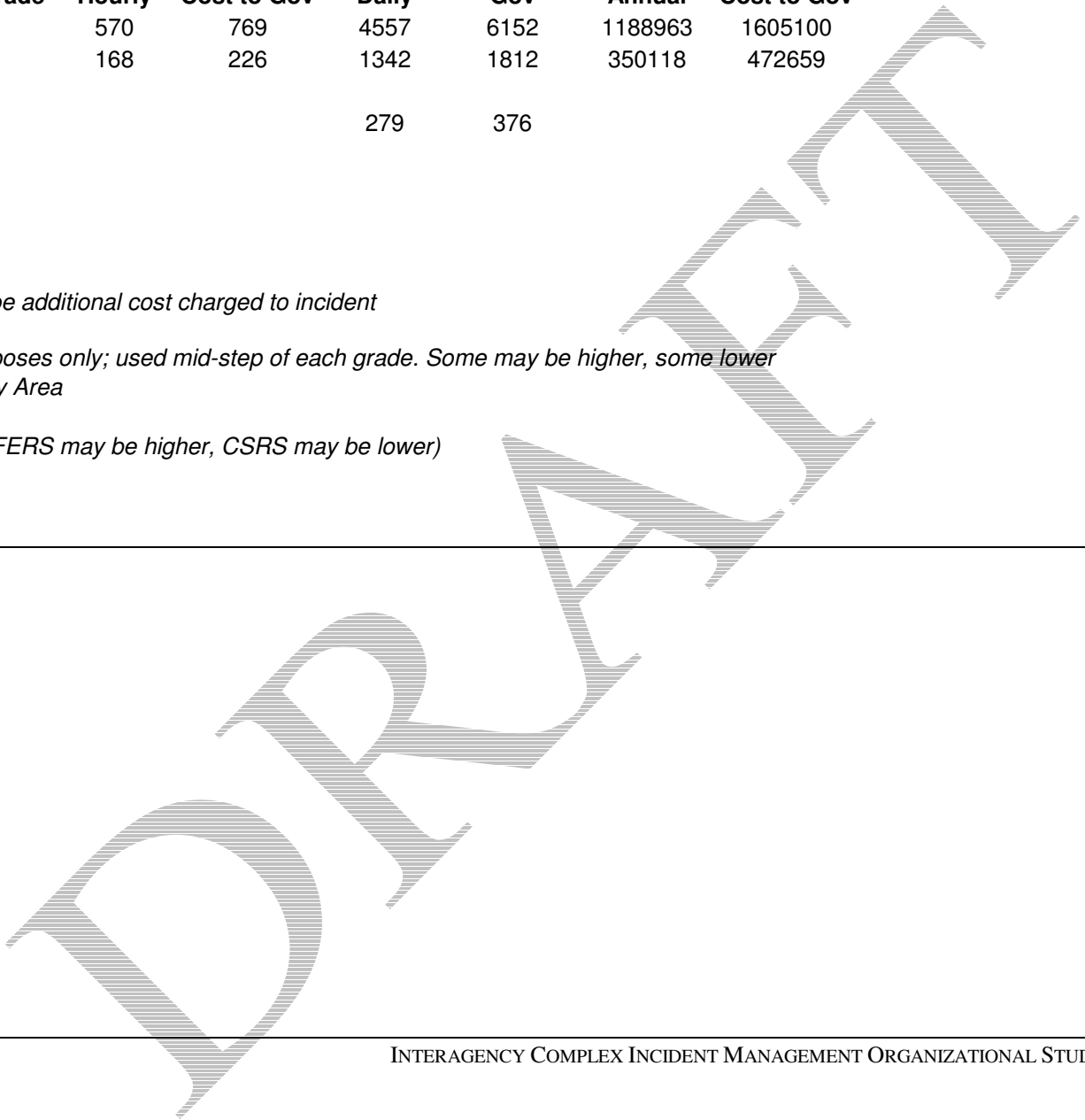
| Position | Equiv. Est Grade | Hourly | Cost to Gov | Daily | Cost to Gov | Annual | Cost to Gov |
|-----------------|-------------------------|---------------|--------------------|--------------|--------------------|---------------|--------------------|
| UL | 17 | 570 | 769 | 4557 | 6152 | 1188963 | 1605100 |
| Trainee | 6 | 168 | 226 | 1342 | 1812 | 350118 | 472659 |
| Total | 33 | | | | | | |
| Average | | | | 279 | 376 | | |

Assumptions:

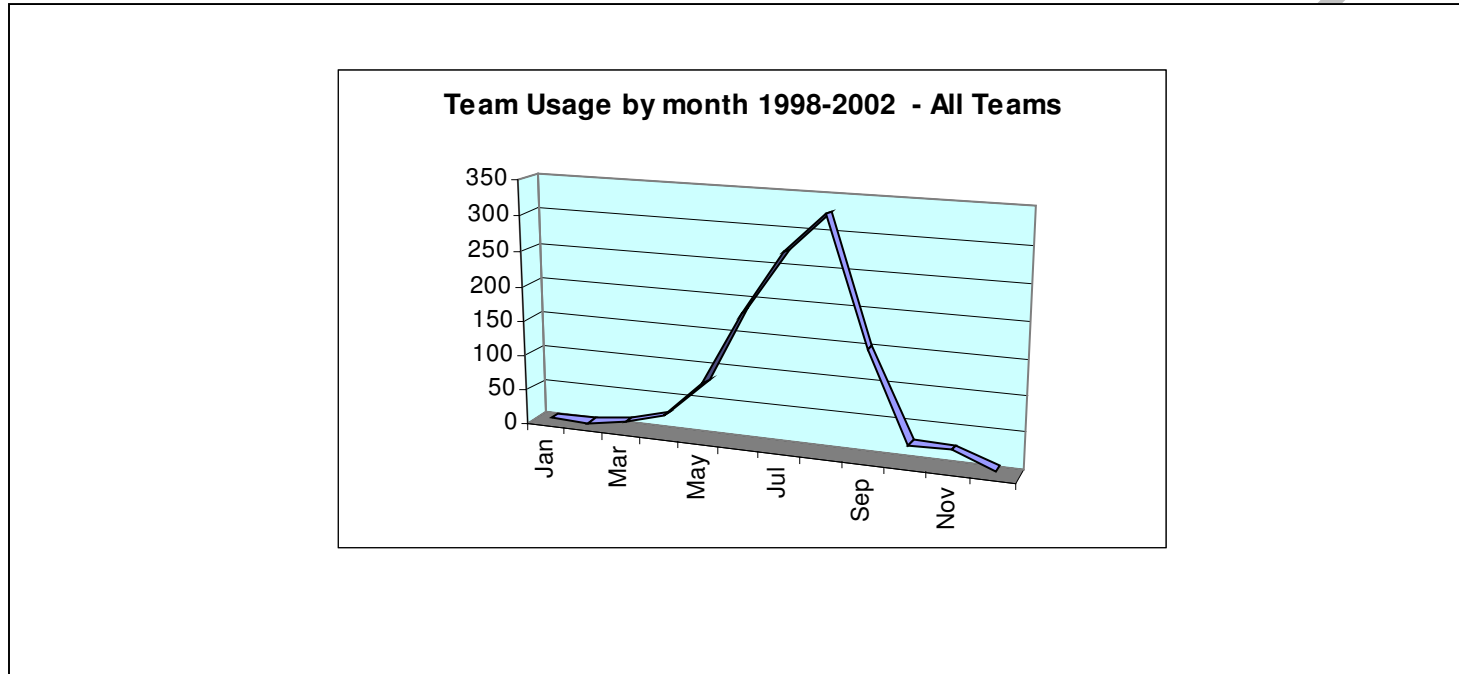
Daily rate = 8 hours/day; OT would be additional cost charged to incident

*Grade equivalencies for costing purposes only; used mid-step of each grade. Some may be higher, some lower
Used Denver/Boulder/Greely Locality Area*

Cost to government average 35% (FERS may be higher, CSRS may be lower)



Appendix C – Needs Analysis



Task Group Assembles Incident Management Team and Area Command Use Data for Needs Analysis Predictions

This report's National Incident Management Team Task Group gathered information on interagency Type 1 and 2 Incident Management Teams, Fire Management Use Incident Management Teams, and Area Command use from

1994 through 2003. From this analysis data, the Task Group then adjusted the number of teams needed to meet the average number of days that teams are assigned.

National Interagency Incident Management Team and Area Command Needs Analysis

In these tables: ▪ Time was added to assignments to cover travel and transition; ▪ 65 Incident Management Teams would meet the 60-day objective 8 of the past 10 years; ▪ 65 Incident Management Teams would also meet the minimum of 2 assignments per year 7 of the past 10 years (Enhanced Current Organization Option #2).

| | Type II IMT Wildland Fire | | | | | Type I IMT Wildland Fire | | | | | FMU IMT's | |
|-------|--------------------------------------|----------------------|---------------------------|--------------------|--------------------------|-------------------------------------|----------------------|-----------------------|---------------------|-------------------------|-------------------|----------------------|
| | <u>Total days</u> | <u>Total assign.</u> | <u>Ave days / assign.</u> | <u>Ave assign.</u> | <u>Ave days out/team</u> | <u>Total days</u> | <u>Total assign.</u> | <u>Av days assign</u> | <u>Aver assign.</u> | <u>Av days out/team</u> | <u>Total days</u> | <u>Total assign.</u> |
| 2003 | 2573 | 177 | 15 | 5.1 | 74 | 973 | 56 | 17 | 3.5 | 61 | 280 | 20 |
| 2002 | 1813 | 156 | 12 | 4.5 | 52 | 1348 | 86 | 16 | 5.4 | 84 | 210 | 15 |
| 2001 | 1534 | 131 | 12 | 3.7 | 44 | 614 | 38 | 16 | 2.4 | 38 | 140 | 10 |
| 2000 | 2445 | 193 | 13 | 5.5 | 70 | 1281 | 77 | 17 | 4.8 | 80 | 140 | 10 |
| 1999 | 1121 | 105 | 11 | 3 | 32 | 456 | 38 | 15 | 2.4 | 29 | 70 | 5 |
| 1998 | 723 | 73 | 10 | 2.1 | 21 | 417 | 26 | 16 | 1.6 | 26 | 98 | 7 |
| 1997 | 356 | 27 | 13 | 0.8 | 10 | 92 | 7 | 13 | 0.4 | 6 | 56 | 4 |
| 1996 | 2306 | 186 | 12 | 5.3 | 66 | 926 | 62 | 15 | 3.9 | 58 | 112 | 8 |
| 1995 | 707 | 58 | 12 | 1.2 | 20 | 96 | 8 | 12 | 0.5 | 6 | 14 | 1 |
| 1994 | 2654 | 207 | 13 | 5.9 | 76 | 1317 | 76 | 17 | 4.8 | 82 | 14 | 1 |
| <hr/> | | | | | | | | | | | | |
| | Type II IMT non Wildland Fire | | | | | Type I IMT non Wildland Fire | | | | | | |
| 2003 | 314 | 14 | 22 | 0.4 | 9 | 416 | 16 | 26 | 1 | 26 | | |
| 2002 | 59 | 3 | 20 | 0.1 | 2 | 0 | 0 | 0 | 0 | 0 | | |
| 2001 | 26 | 3 | 9 | 0.1 | 1 | 138 | 5 | 28 | 0.3 | 2 | | |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1999 | 29 | 3 | 10 | 0.1 | 1 | 29 | 4 | 7 | 0.3 | 2 | | |
| 1998 | 41 | 5 | 10 | 0.1 | 1 | 94 | 6 | 16 | 0.4 | 6 | | |
| 1997 | 58 | 4 | 15 | 0.1 | 2 | 13 | 1 | 13 | 0.1 | 1 | | |
| 1996 | 20 | 2 | 10 | 0.1 | 1 | 28 | 2 | 14 | 0.1 | 2 | | |
| 1995 | 99 | 8 | 12 | 0.2 | 3 | 64 | 4 | 16 | 0.3 | 4 | | |
| 1994 | 100 | 5 | 20 | 0.1 | 3 | 70 | 4 | 18 | 0.3 | 4 | | |

Total use Type II IMT's

| | Total days | Total assign. | Ave days /Assign. | Ave assign. | Ave days out/team |
|------|------------|---------------|-------------------|-------------|-------------------|
| 2003 | 2887 | 191 | 15 | 5.5 | 82 |
| 2002 | 1872 | 159 | 12 | 4.5 | 53 |
| 2001 | 1560 | 134 | 12 | 3.8 | 45 |
| 2000 | 2445 | 193 | 13 | 5.5 | 70 |
| 1999 | 1150 | 108 | 11 | 3.1 | 33 |
| 1998 | 764 | 78 | 10 | 2.2 | 22 |
| 1997 | 414 | 31 | 13 | 0.9 | 12 |
| 1996 | 2326 | 188 | 12 | 5.4 | 66 |
| 1995 | 808 | 66 | 12 | 1.9 | 23 |
| 1994 | 2754 | 212 | 13 | 6.1 | 79 |

10 yr av **1698** **136** **12** **3.9** **49**

Total use Type I IMT's

| | Total days | Total assign. | Ave days /assign. | Ave assign. | Ave days out/team |
|------|------------|---------------|-------------------|-------------|-------------------|
| 2003 | 1389 | 72 | 19 | 4.5 | 87 |
| 2002 | 1348 | 86 | 16 | 5.4 | 84 |
| 2001 | 752 | 43 | 17 | 2.7 | 47 |
| 2000 | 1281 | 77 | 17 | 4.8 | 80 |
| 1999 | 485 | 42 | 12 | 2.6 | 30 |
| 1998 | 511 | 32 | 16 | 2 | 32 |
| 1997 | 105 | 8 | 13 | 0.5 | 7 |
| 1996 | 954 | 64 | 15 | 4 | 60 |
| 1995 | 160 | 12 | 13 | 0.8 | 10 |
| 1994 | 1387 | 80 | 17 | 5 | 87 |

837 **52** **16** **3.2** **52**

Total TI, TII and FMU IMT's

| | Total days | Total assign. |
|------|------------|---------------|
| 2003 | 4556 | 283 |
| 2002 | 3430 | 260 |
| 2001 | 2452 | 187 |
| 2000 | 3866 | 280 |
| 1999 | 1705 | 155 |
| 1998 | 1373 | 117 |
| 1997 | 575 | 43 |
| 1996 | 3392 | 260 |
| 1995 | 982 | 79 |
| 1994 | 4155 | 293 |

2649 **196**

Area Command Wildland Fire and non Willand Fire

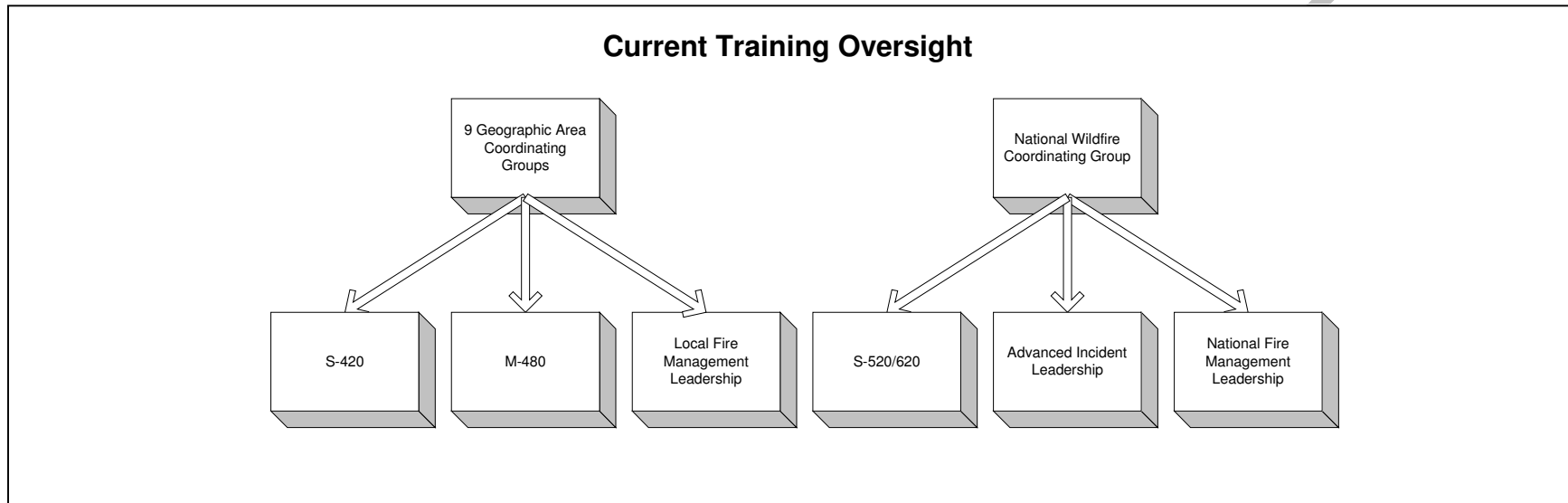
| | | | | | |
|------|-----|----|----|-----|----|
| 2003 | 263 | 10 | 26 | 2.5 | 66 |
| 2002 | 182 | 11 | 17 | 2.8 | 46 |
| 2001 | 46 | 3 | 15 | 0.8 | 12 |
| 2000 | 297 | 10 | 30 | 2.5 | 74 |
| 1999 | 58 | 2 | 29 | 0.5 | 15 |
| 1998 | 34 | 1 | 34 | 0.3 | 9 |
| 1997 | 42 | 3 | 14 | 0.8 | 11 |
| 1996 | 84 | 5 | 17 | 1.3 | 21 |
| 1995 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 113 | 6 | 19 | 1.5 | 28 |

111 **5** **20** **1.3** **28**

Efficiency Assumptions

1. With the development and emphasis on the local Type 3 team concept, it can be assumed that efficiencies will be gained and total yearly day-commitment to incidents will be reduced if the following standards are established and followed:
 - Type 1 and 2 interagency Incident Management Teams will be released and replaced by Type 3 teams when the complexities—both current and predicted—could be accomplished by a Type 3 team.
 - Type 2 teams will only be used when actual and predicted complexity indicates.
 - The training and rapid deployment of Type 3 teams is essential to the success rate of incident containment or efficient transition to a Type 1 or 2 team.
 - Type 3 teams will be developed from local municipal or county governments—taking fullest advantage of all personnel resources available to local government.
 - Type 3 teams are managed at the local interagency sub-geographic level.
 - The number of established Type 3 teams is commensurate with historical sub-geographic workload

Appendix D – Our Current Training System is Failing



The current NWCG 310-1 Incident Qualification System needs review and streamlining to improve the efficiencies in delivery, requirements, pre-requisites and experience.

The additional Forest Service training requirements and unique task book protocols greatly slows the qualification progression for Forest Service employees. This is contributing to the current erosion of Forest Service participation on Incident Management Teams. The impacts of this dilemma will increase as current highly-qualified Forest Service personnel retire.

Thus, the current training system is failing and will continue to fail to meet the needs for qualified incident management

personnel. To solve this problem the following actions must occur:

- Implement and prioritize standard training requirements by all agencies.
- Amend the current training program to reduce redundancy.
- Continue the use of qualified instructors from the ranks of retirees where needed to fill agency voids in agency instructors with background and experience.

- Repackage the training delivery system to increase the pace to meet training requirements.
 - Utilize a mentoring process to facilitate trainee completion.
 - Identify individuals for accelerated training and provide support and commitment to ensure this investment in training is realized.
 - Agencies must commit to make students and instructors available.
-

DRAFT

Appendix E – Addressing the Current Lack of Incident Management Organization Standards and Oversight

All incident management organization oversight and most standards establishment are determined by:

- Geographic Areas for interagency Type 1 Incident Management Teams.
- Geographic or sub-Geographic Areas for interagency Type 2 Incident Management Teams.
- The National Multi-Agency Coordinating Group for Area Command Teams.

No Common Linkage

The entire support and oversight system for interagency Type 1 and Type 2 Incident Management Teams, Area Command Teams, and the S-420, S-520, and S-620 training programs have no common link. Geographic Areas set different standards for Type I Incident Management Teams even though these teams are national resources. The same issue applies to Type 2 Incident Management Teams that are often used across geographic boundaries.

A significant amount of time and effort is spent by the agencies' employees to reconcile these issues. Even so,

these teams and classes all depend on common standards and the availability of people to be successful in meeting agency and public objectives of complex incident management.

No agency or Geographic Area has accepted the authority or responsibility to require providing the needed number of personnel assigned to incident management organizations.

Standards Vary Between Geographic Areas

The use of Administratively Determined (AD) hires in Command and General Staff positions, and the number of Operations Section Chiefs allowed on a team, are examples of standards that vary between Geographic Areas. Even so, each Geographic Area defends its standards as being: correct, the most cost-efficient, and safe.

Team Size and Makeup: A Continuing Issue

Team size and makeup is a continuing issue between the agencies and Incident Commanders. Incident Commanders do not have confidence in personnel availability to fill miscellaneous supervisory, management, and support

positions. Therefore, they expand their standing teams to meet all perceived needs for these miscellaneous positions.

No Incident Management Team Standards

Oftentimes, host Geographic Coordination Groups do not recognize out-of-geographic-area Incident Management Team standards or National MAC Group team standards direction.

For all levels of government to respond to both wildland fire and non-wildland fire incidents, the legal authorities and processes must be improved and made uniform—especially in light of *Homeland Security Presidential Directive Number 5*.

As additional non-wildland fire teams are formed and implemented by agencies, it will be to all these agencies' advantage to provide a consistent understanding of standards, qualifications, and certification on Incident Management Teams. Management of emergencies should be the same across all Incident Management Team use.

Failure to Evaluate National Needs and Accept Authority

There is no group responsible to evaluate the national needs for all types of incident management organizations. Likewise, no agency or Geographic Area has accepted the authority or responsibility to require providing the needed

number of personnel assigned to incident management organizations.

The interagency Type 1 and 2 Incident Management Teams are truly in place to meet the interagency needs of all Geographic Areas. They should therefore be uniform in operating procedures and policies.

To successfully achieve the goals outlined in all of this study's organizational options, the following must be accomplished:

- National MAC team oversight.
- National management of rotation to stay consistent with the new 60-day commitment policy.
- National coordination of the Type 2 Incident Management Teams to the 60-day commitment for these teams and miscellaneous overhead.

Efficiency of Teams, Processes, and Positions

Incident business processes have remained relatively unchanged for the past 20 years. Millions of dollars are spent on uncoordinated agency-specific, functionally-independent applications and processes.

As personnel or incidents transition and change, the lack of standardization of incident base information management tools interferes with the ability of Incident Management

Teams to reliably utilize and share the same data and software. In addition, there is incentive to provide tools that can be utilized by multiple agencies for post-incident activities (i.e. paying bills, processing time, upward reporting etc.).

The Incident Base Automation Strategic Planning Project (Incident Base Automation – Phase 2) will identify high-level needs for changes to—or elimination of—current

incident practices that may or may not be currently automated—as well as the interconnectivity requirements between the various incident management functions.

Implementation of this study’s recommendations (due in 2006) will improve efficiency and may affect the number and kind of positions required on Incident Management teams.

DRAFT