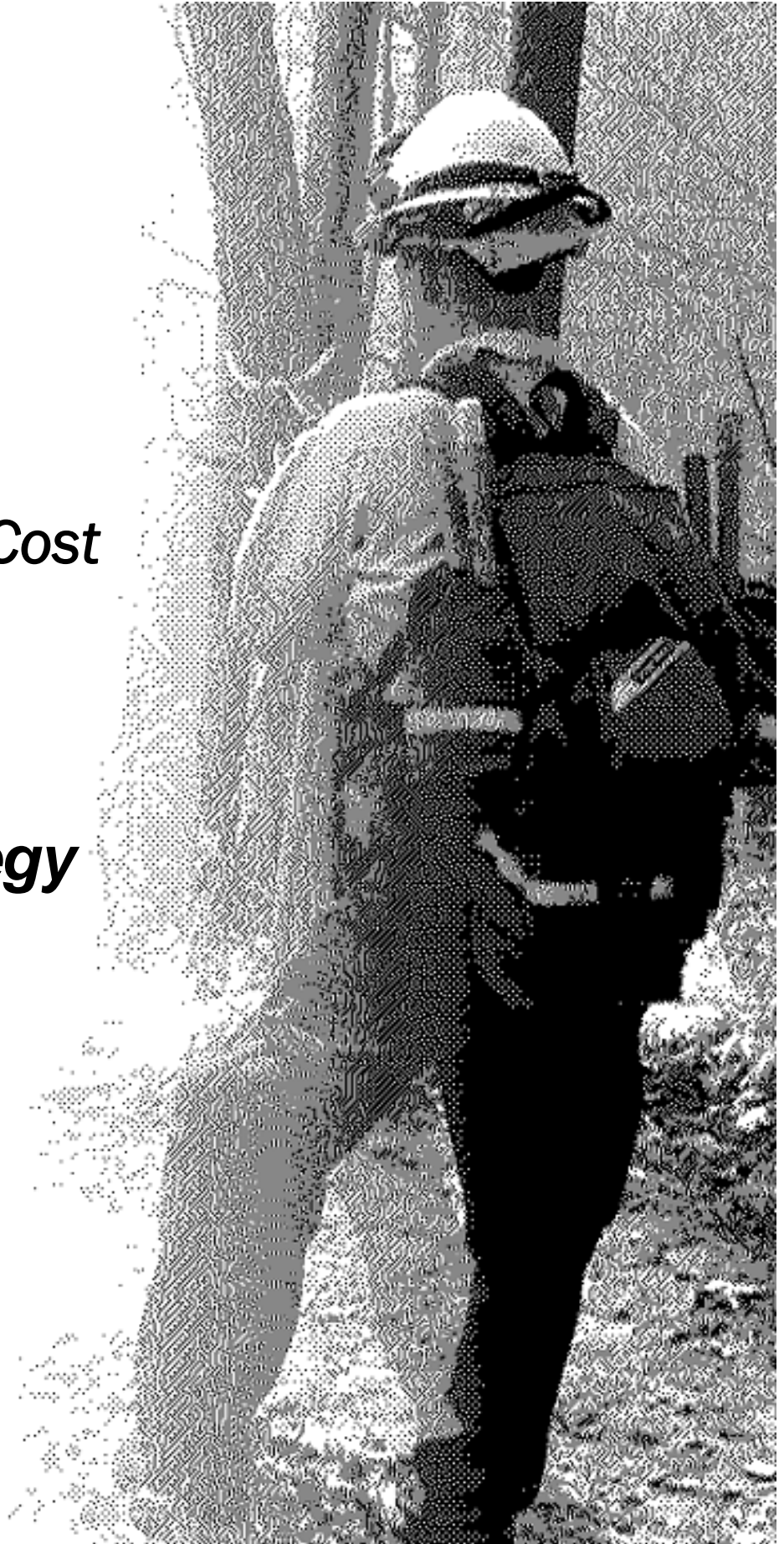




Accountable Cost Management

Proposed FY 08 Strategy

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Executive Summary

The Forest Service is facing a financial crisis, brought on by the phenomenal increase in the cost of fire suppression in the last several years and exacerbated by the funding mechanisms used. Compounding this difficult situation is the general perception that fire suppression expenses will continue to outstrip allocations, regardless of steps taken. The goal for FY08 Fire Accountable Cost Management (ACM) Strategy is to chart the way for USFS suppression expenditures (WFSU) for this fiscal year to be no higher than the allocation of \$1.18 billion.

While modifications in the funding mechanisms will require assistance from entities outside the control of the Forest Service, this strategy is focused on those changes that are possible within the jurisdiction of the agency. The Agency recognizes the impacts these changes could have on our partners and will do everything reasonable to mitigate those impacts.

Based on historical spending patterns, spending on large fires (just 2% of total fires) consumes over 85% of total WFSU funds. This strategy seeks to improve the total USFS WFSU situation by reducing expenditures on these few costly fires.

The strategy focuses on cost management, decision improvements and improved management actions, while delivering a principle based approach. We will implement new financial controls to administer available funds, strengthened management controls by and for administrators and incident commanders, and longer-run changes that will clarify policies affecting decisions and associated costs. Compromise will not occur in other key objectives, including protection of life and property.

The key doctrine in this cost management strategy is building transparent and focused accountability for key decisions.

The strategy also focuses on creating more options for decision makers, building a documented trail of decisions with guided actions and management controls. Expectations include more involved Chief's and Regional Forester level interaction, focused incident actions, documentation, and communication. Improvements also include the initiation of "Knowledge-Based Decision System" which provides an audit trail of decisions and "Fire Cost Management Protocols," which describe signals and triggers for action at the geographic, theater and unit levels. WFLC adopted implementation of changes in Federal Wildland Fire Policy (aka "AMR Strategy") will be encouraged. Additional controls will include, allocating WFSU to Regions, creating a budget for large fires with Type 1 and Type 2 Incident Management Teams (IMTs), and adjusting P-Code management. Improvements in operational management will include changes in the delegation of authority, adjustments to resource allocation / reallocation and improved use of decision support.

Mandatory and suggested actions are listed in order of priority as an appendix to this document.

I. The Issue

The purpose of this document is to outline a realistic plan to transition from *cost containment* to *accountable cost management*.

It is widely believed both internally and externally—that the financial needs of the Forest Service’s fire program are destined to consume an increasingly large percentage of the agency’s budget. Even the most optimistic projections for FY 2008 give the current \$1.18 billion fire suppression budget a 7% chance of being sufficient. Depending on the method of forecasting, fire expenses this year could climb as high as \$1.64 billion.

The fire adapted and fire dependent ecosystems that dominate the National Forests are increasingly more flammable and susceptible to fire. Forest health issues such as insects and disease, coupled with drought and climate change, have the potential to increase fuel loading to historic levels. Exacerbating the fuel build up, fire has been excluded from these systems because of fragmentation and human values. On days with high to extreme fire danger an ignition leaves little decision space for fire managers and the public.

The agency is at the mercy of the biggest causes of cost increases, namely climate change, the wildland urban interface and the buildup of fuels. Underscoring this perception are the changing (and often conflicting) governmental, political and public priorities, seemingly making it all but inevitable that without intervention the agency will continue its’ momentum toward financial insolvency.

The Forest Service’s fire suppression organization is widely regarded as world class. The autonomy of the forests, for example—useful for aggressively managing fires likely to escalate—often limits the sharing of risk or expense with other parts of the organization, which can in turn lead to duplication and inefficiency. Incident commanders work more or less independently, and have tended to operate unchallenged in their financial decisions. In the name of expediency, resources have often been assigned on a “first come / first served” basis until all assets are committed.

This type of response typified the strategy of overwhelming mass and tremendous force. To affect this action large numbers of hand crews and aviation assets were required. As few as ten years ago the combined interagency wildland fire organization was capable of fielding over a thousand crews. For a number of reasons crew strength is now less than five hundred¹. Heavy air tankers now number about half of what was available five (5) years ago and the numbers of contract helicopters have declined by a quarter². The reduction has been absorbed on the side of large fire management and not initial attack. These resource declines and the fuels increase coupled with extraordinary weather conditions require fire managers to adopt a doctrine of agility and focus, to deflect and direct and to not attempt to address many of these fires head on. This doctrine is not shared by the full spectrum of the wildland fire management community.

Even though in recent years phenomenal efforts have been made to reduce costs and improve effectiveness, these refinements have neither kept pace with changes in the fire

¹ The hand crew numbers have been AD crews generally supplied by the BIA and the States. Better economic conditions, reductions in state budgets and other factors have precipitated this decline.

² The decrease in large air tankers has been due to air worthiness and safety issues and the decline in helicopters is primarily related to the oil industry boom.

environment nor brought expenditures within budget. While many improvements are yet possible at the level of operations and procedures, the most powerful changes will occur as the agency makes a serious commitment to developing a unified approach to fire and land management. To do so will return the ecosystem to the center of the agency's considerations—ahead of meeting targets, reacting to political pressures or even dealing with financial urgencies.

This document will show it is possible to both safely meet objectives and live within the budget. To do so we must focus on four concerns:

- (1) Financial decision making procedures lack accountability;
- (2) Intelligence within the agency is “locked in,” unavailable or not transcended throughout the organization to empower more strategic choices;
- (3) Decisions made are often not day lighted or documented to assist in future refinement of the fire program; and
- (4) Actions are conducted within a highly decentralized strategic framework where “overwhelming mass” is generally viewed as the fundamental doctrine of fire suppression and where the new parameters of “speed, agility, and focus” are viewed as higher risk strategies.

The strategy outlined here addresses these four major concerns. It establishes accountability by creating Regional and large fire-suppression budgets, unlocks the agency's intelligence by developing upstream views of strategic decisions, documentation of the decisions and creating an audit trail. New procedures will be relevant and friendly against the backdrop of the ecosystem needs. In addition to this core strategy, the plan offers recommendations for significantly improving the chances of managing fires in ways that are safe, within budget and accountable. Current annual savings forecasted from the implementation of management controls and efficiencies already established are estimated between 170 and 270 million dollars, based on projections of a median range of \$1.35 billion to \$1.45 billion in fire expenditures. Taking a more aggressive approach and adopting the additional cost control measures proposed in this plan could bring an additional savings of more than \$200 million.

Implementation will require more than adherence to a collection of new policies; a significant change in culture and organizational behavior will be needed. These kinds of shifts are almost always the most difficult. The agency must believe that change really is possible and that the results of this change will have a profoundly beneficial impact.

In order for this strategy to succeed, leadership will need to ensure all employees understand fire and its' impacts, and must work to place fire on the landscape as an important tool for ecosystem stewardship. By leading with principle and conviction, Line and Fire can create a unified platform for a new standard of trust and efficiency across all levels of the agency.

II. Objectives

The strategy's objectives are simple: establish or increase collaborative management, instituting national input and guidance to certain fires, conserve resources from the start of fire season and apply a more national perspective to resource allocation and cost management.

The strategy seeks to:

- Constrain USFS WFSU spending to \$1.18 billion;
- Maintain public trust in both our fire management work as well as our natural resource management mission;
- Sustain the goals of the Federal Wildland Fire policy, the National Fire Plan, the Ten Year Implementation Plan, and HFRA;
- Adopt a more risk informed fire management strategy;
- Adopt a mindful management system and knowledge based system for WFSU expenditures; and
- Acknowledge the variable impacts of fire, both good and bad, on people and resources.

III. Background and Current Situation

Large fire management continues to evolve, as does the complexity, intensity and political ramifications of fire itself. Most fires (and most fire days) are routinely and safely managed with 97 percent of all Forest Service fires extinguished on initial attack. Problem fires, or those of national significance, occur on a relatively infrequent basis with just two to three percent of fires accounting for 85 percent of the USFS fire suppression expenditures.

Along with the challenge of ever-increasing intensity and complexity of fires, the Agency continues to face fiscal difficulties. Suppression expenditures increase each year (Figure 1), causing the 10-year rolling average for suppression appropriations to grow, adversely affecting other program areas and creating a financial crisis for the agency. Total suppression costs for the U.S. Forest Service in 2007 hit a record level at \$1.4 billion; and the year-to-date expenditures in 2008 has already exceeded last year's by over \$146 million. Figure 1 below shows the relationship of expenditures to appropriations over the last ten years; as is apparent, the trend of appropriations continues upward as the rolling average of expenditures increases.

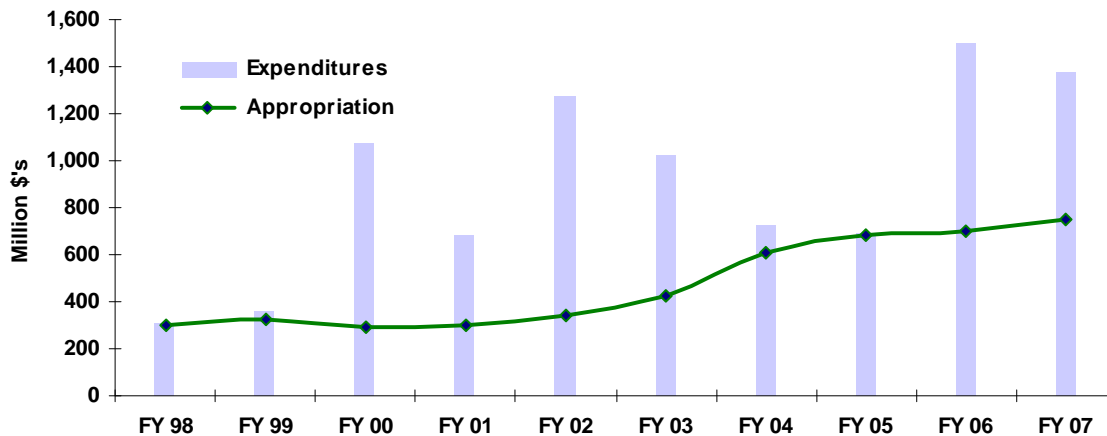


Figure 1: 10 years of Appropriations vs. Expenditures

The significance of increasing suppression expenditures is the impact on other agency programs. The Forest Service, like all other federal agencies, is held to a constrained budget. This means increases in suppression allocations must be offset by reductions in other program areas.

While the advent of the National Fire Plan in 2000 provided an influx of financial support, the gains were rapidly offset by the decision to place fire suppression funding within the constrained budget. Reviews of activity since then show that the combination of fuels accumulation, worsening drought and global climate change, growth in the wildland-urban interface, and rising public demand for protection of habitat and property have opened a new era of expectation for the Forest Service.

Once a wildfire escapes initial attack control efforts, it quickly escalates through extended attack to an event far more intricate than one requiring more than simple management. Factor in the challenges of managing multiple fires (complexes) under one management system, long-duration fires (campaigns) and multiple jurisdictional concerns, and the incident quickly develops into a complex management situation. The decision space, ultimate management control and fiduciary responsibility rest across all levels of the organization and begin at the onset of a fire. The quality of decisions early in a fire often determines the level of resource-use efficiency and fiscal management over the course of the event.

Currently fire suppression expenditures are managed in a decentralized system. The national cost is simply a summation of individual costs of more than 120 individual units. This strategy aims for a more comprehensive approach to cost management by applying a national perspective and subsequent oversight.

All of these factors point to the need to institute collaborative management to provide oversight and accountability across the agency. Because of the already-strained financial environment and the need for integrated communications and shared decision making, developing a new way of working will require particular care.

IV. Principles/Doctrine

Leaders will take an *upstream view of downstream consequences*. In other words, managers will ascertain how actions and decisions undertaken now will impact consequences later. As good leaders realize, actions that appear to be innocuous often result in negative outcomes, and vice-versa. Leaders in the agency increasingly need to be alert to the upstream decision points and intervene as necessary for the benefit of the largest context possible—“the greatest good of the greatest number in the long run.”

Leaders will commit to an approach designed to enable them to move toward something more akin to doctrine than to prescriptive and routine decision-making, as the more common path of following checklists and current procedures alone does not always yield the desired outcomes.

Leaders will commit to a more strategic national framework of decisions. This is an approach which will utilize perspective from the Chiefs level to help frame the allocation of scarce resources within the context of national priorities. Forest Service positions on national issues will be available to Regions and to the Forest Service representative at the National Multi Agency Coordination group.

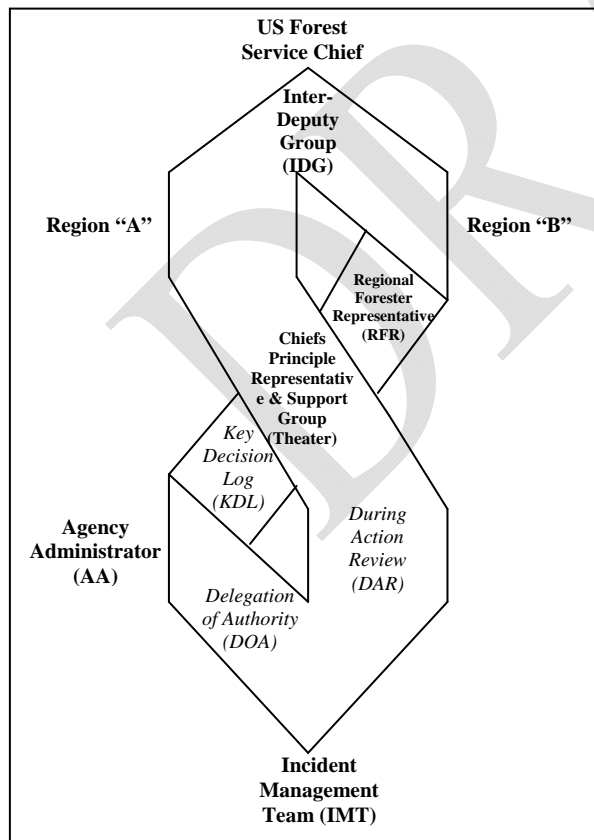
Leaders will commit to an organizational idea of utilizing “speed, agility, and focus” as our mantra as opposed to defaulting to “overwhelming mass”.

Leaders will implement “High Reliability Principles” (preoccupation with failure, sensitivity to operations (situational awareness), reluctance to simplify, deference to expertise, resilience) in our cost management philosophy for FY08.

V. The Knowledge-Based Decision System

The current system of financial control is aimed at cost containment rather than cost management. This approach tends to look backward in order to report on what happened, and misses management opportunities and important decision points. The fiscal challenges faced by the agency are at least in part because there is no true cost management system that offers a proactive way of managing fires. Individuals at various strata within the organization—and even individuals such as Incident Commanders from other organizations—make costly decisions that rarely engage parties at all levels. The consequences of these actions, therefore, are often not immediately seen at different levels of the organization, so there is no incentive to change well-established habits of spending suppression dollars.

Effective cost management systems have the ability to forecast in order to afford leadership the opportunity to intervene at critical moments. A useful system is proactive in fiscal preplanning, using tools and technology to jointly prepare before an incident. It enables administrators to manage budgets and provides an avenue for collaborative decision-making that is well documented for accountability. Engagement at multiple levels by



management, coherent cost apportionment and clear direction on the use of suppression funds are elements of such a highly functioning system.

This document proposes a Knowledge-Based Decision System for all of the reasons outlined above: it is mindful, analytical and well documented. Actions are day lighted, and consequences for behaviors are displayed openly and without prejudice. It is a system that replaces notions of powerlessness with a sense of purpose by following the two simple tenets, or principles noted above.

Figure 2: Knowledge-Based Decision System

The text italicized in the graph represents many of the actions that must be implemented to make this system successful. Below we have identified issues and provided solutions to take immediate action in shifting the paradigm in how fires are managed.

This system will require that decisions be made earlier and at the appropriate level in order to give the appropriate decision makers options. The current incident management system is steeped in tradition and practice. Strong processes developed over decades help to ensure that tired people in stressful situations respond in reliable and predictable ways. This can be a boon to efficiency and safety, provided the requirements of safe and efficient operations are clearly defined and understood. These powerful and well-known procedures, however, can also lead to undesired behavior patterns. When the system doesn't yield the results the user community desires, members begin to "game" the system, which can subvert its efficiency. As an example, Regions routinely monitor which incident management team is next in the queue to be deployed, and then time their orders to ensure the desired team is dispatched.

The new Knowledge-Based Management System can be viewed or applied as a "web of command," with clearly defined command and coordination functions and robust communications. This process is designed to improve interaction between line and staff while continuing the roles and responsibilities in the traditional chain of command to detect high-cost incidents as early as possible in order to improve decisions. It fosters a working environment that promotes open communication and empowers everyone at all levels to make shared decisions, encouraging the exchange of ideas and concerns between line and staff in all directions.

The system in this plan strives to maintain the best parts of the current system while ensuring knowledgeable management actions are brought to bear. One goal is to establish a system that enables leadership to be appropriately engaged in time, level and space. The use of Chief's Principle Representatives and centralization of some assets are examples of successful implementation of this approach.

A number of steps must be implemented this year in order to improve upstream actions and decisions by management. Figure 2 shows the flow of the main components of the Knowledge Based Decision System.

VI. Management Actions for FY 2008

In the remainder of FY08 there is an account balance in WFSU of approximately \$750 million. There are about 30 national forests in 5 western Regions with a history of large fires. Efforts should be focused on these regions and these national forests to make immediate change if we are to stay within the constrained budget.

Cost management protocols are standards or principles which guide managers to quality decisions within the cost management system. The strategy has a number of the protocols in the actions, analysis and implementation of the actions. Included are the following:

- Clear communication of Leaders Intent
- A "During Action Review" process
- Documentation of key decisions
- Requirements for Long Term Implementation Plans;
- Improved Incident Management Team utilization;
- Clarification of Contracts and Agreements;
- Clear Structure Protection Direction;
- Updating Fire Management Plans; and

- Requirements for clear communications.

Each of these protocols is addressed in one or more places within this strategy. It is important to note, however, all of these are integral elements of a cost management system.

There are a number of attachments to this strategy including an action plan and its supporting documentation which will address these actions in much greater detail³.

Cost Management System Components:

(1) Regional Benchmarks

Provide a benchmark of suppression funds to the Regions for the remainder of Fiscal Year 2008. The Washington Office Budget staff in conjunction with Fire and Aviation staff is currently developing a benchmark. The benchmark serves as a first order approximation and expectation for performance. As the fire season progresses, it is expected there will be a need to negotiate changes to various regional benchmark. Of paramount importance is that decision makers document the rationale for making changes to regional benchmarks and record measures implemented to stay within the benchmark.

(2) Incident Reference Budgets

Develop a reference or benchmark budget to be implemented for each incident that is expected to exceed initial attack. On the priority forests, the budget structure would be developed pre-season (or pre-ignition in FY08) by the Region, forest and CPR based on National/Regional priorities, fire potential, historical costs, and values at risk for a general area. The decision process would include utilization and documentation of decision-support tools such as FSPRO, RAVAR and SCI. The budget will be initiated if a fire has an ICT I or II assigned. Budget expectations will be included in the delegation of authority to the team. The agency administrator with responsibility for the fire will be responsible for establishing and documenting changes to the budget. Budgets are intended to be interactive and time-limited, rather than WFSA end-point forecasts.

(3) Key Decision Log

Implement a web-based *Key Decision Log*. This would offer a more formalized process to encourage collaboration during decision-making, and would provide accountability for those decisions. Such a log will show not only what decision was made, but also what alternatives were considered, what factors played into the final decision, what the alternative actions would cost and the potential consequence across the full spectrum of the decision. The tool would stimulate collaborative thought about decisions under consideration, document the thought process itself and provide an audit trail to justify costs incurred. It would be web based so that it could be accessed and evaluated at all levels of the organization.

The Key Decision Log would also be used to document rationale for setting budgets for regions and large fires. Most importantly, the Key Decision Log would be used to document the necessary adjustments to all budgets as conditions and circumstances change.

(4) Regional Comptrollers

Designate a comptroller for each Region that is expected to have significant fire activity. The Regional Comptroller will be a representative designated by the Regional Forester. The comptroller is expected to advise the Region and keep personnel informed on national cost

³ Note: This Regional Forester review draft version does not include this detail.

management information and protocols, and share risk with the Agency Administrator, Regions and Forest when making costly financial decisions.

The Regional Comptroller will participate in negotiations and cost apportionment meetings.

(5) Predetermine Interest Areas

Use the Northern Region Strategic Fire Management plan matrix to identify areas of protection responsibility and share costs in areas where they overlap.

(6) Improved Cost Accountability

Establish job codes to track suppression efforts separate from rehab efforts. Line Officers would be required to monitor and report all expenditures after the containment date.

(7) Theater Level Management Concept

Theater Level Management (TLM) will recognize fires and fire potential with no regard to predetermined agency boundaries—and as such, could receive a delegation from Regional Foresters or the Chief. The support group, which would be staffed by National Incident Management Organization (NIMO) teams this year, would work closely with the Forests, CPR(s), Region and the Washington Office to ensure a broader perspective is brought to bear on these situations. This work would begin immediately to ensure preseason actions are completed. Each NIMO team would be assigned to one of the five (5) pilot regions to assist in the development of localized cost protocols, strategic planning and preparations for the upcoming season as well as assist in the implementation during the season. This action would be the basis for the TLM. One step would be to identify the Forest most likely to experience this level of activity and to prepare strategies.

(8) Resource Conservation Recommendations

(A) Institute a Preliminary Resource List concept which will predetermine the number and types of resources available to a particular kind of incident based on location, fire danger and season. These would be the *maximum* number of resources that could be ordered without collaboration. Any resources above the Preliminary Resource List would require discussion and concurrence with the next level of the organization, such as the Regional Forester, Chief's Principal Representative.

(B) Require a decision level that is commensurate with the cost of activating scarce, high-cost resources such as foreign fire fighters, military assets, Modular Airborne Firefighting Systems (MAFFS) and Call-When-Needed (CWN) helicopters. Financially, activating these resources is high and the political costs of not ordering are also high, therefore the level of the decision should be high as well.

(C) Order Type 1 teams in configurations appropriate for management of the incident, and assign them for up to 21/28 days. Currently the default for ordering incident management teams is in the standard "long team" configuration for 14 days. Agency administrators often have a need for a smaller, more agile management unit. The recommendation is for Forest Service units to adopt the appropriate configuration as the standard or default. Compelling reasons for exception must be clearly articulated, and additional staffing needs would be met locally or through the resource ordering system.

(D) Continue to pursue the use of EU helicopters and minimize the use of CWN ships. Require decision-making authority to be commensurate with the high-cost level of CWN assets.

(E) Require more centralization of aviation assets. This would be complementary to the Theater-Level Management concept of operations.

(9) Incident Management Team Utilization Recommendations

(A) Make full use of the policy regarding length of assignment for IMTs. Extend the length of assignment for IMTs to 21 or 28 days, depending upon the expected fire duration. The longer assignment will reduce team transition costs. Each transition costs approximately \$250,000. Extending team assignments provides consistency during transition of line resources, and will conserve the use of teams so they are available to respond to other incidents. The two NIMO teams prevented 12 transitions in 2007.

(B) To facilitate an open dialogue, the Agency Administrator and Incident Commander would hold a Leader's Intent Meeting to develop a collaborative approach to determining leader's intent, decision-making, shared responsibility and oversight of incident management. Issues such as political pressures, cooperator expectations and role and other influences that effect objectives and strategies would be discussed. A thorough review of the Land Management Plan, Fire Management Plan and WFSA is important. Incident Commanders would be encouraged to provide input into development of strategies in the WFSA.

(C) Institute fatigue management protocols to ensure adequate rest for firefighters. These protocols would require Agency Administrator to engage in dialog with the incident commander(s) on shift lengths greater than fourteen (14) hours. The focus is fatigue management.

(D) Develop a "during action review" process that does not wait for the final evaluation to correct or change strategies and objectives. This review would be between the LO/IC. The review would not take place daily; rather it would be based on trigger points, availability, and need, but as a minimum would occur three times in two weeks

(E) Upstream actions for 2008 include the assignment of NIMO to Regions 1, 2, 4, 5 and 6 to assist in the implementation of the actions described in the strategy. Some of the preseason actions include the development of long term strategies, development of signal detection systems (triggers), and cost management protocols. These preseason activities would be complemented by the use of NIMO during the season as well. The NIMO teams will receive their delegation from the Inter-Deputy Group.

VII. Conclusion

Business changes are never easy, especially those that affect practices that have been established for a number of years. However, as cost of fire suppression continues to rise and the expenditure of fire suppression funds continues to impact the allocations of other Forest Service programs, it is easy come to the conclusion that current business practices do not serve the Agency. In order for the Forest Service to be successful, we must address upstream decisions must be addressed and there must be an accountable cost management system.

Effective use of the knowledge based approach discussed in this proposal will empower leaders to discharge their duties with confidence and conviction, resulting in economically, ecologically and politically sustainable actions.