

JFSP Five-Year Investment Strategy

August 19, 2009

Background

The Joint Fire Science Program (JFSP) celebrated its ten-year anniversary in 2008. In part due to this milestone, and in part due to the maturing of the program, the JFSP Governing Board decided to focus energy on developing a strategy for future program investment. In essence, the Board decided it is time to take stock and chart an investment strategy for the next five years.

This process began with a Governing Board retreat in January, 2008 in San Francisco. The purpose of the retreat was for the Board to revisit the role of the Board, and to develop agreements that allow the Board to fulfill its role. The Board affirmed that one of its primary roles was to provide the program with a long-term strategic view to guide the future direction of the program. The intent was to develop a framework where program investments of time, energy and funding would integrate over time to achieve strategic goals.

The Board also decided to conduct an independent program review in 2008 in a similar fashion as the five-year program review that was completed in 2003. The review was conducted in the fall of 2008 and a final report was issued in January, 2009. Several of the review recommendations suggested a need to develop and articulate a longer term investment strategy, including:

1.4 Recommendation: Stable, predictable funding by both the USDA Forest Service and the Department of the Interior should be pursued to promote multi-year program stability and to maintain an interagency commitment to providing science support to management in all agencies. Leadership in both Interior and Forest Service should demonstrate their commitment to this program.

1.5 Recommendation: To improve the overall success of the program, the Governing Board should consider a realignment of the JFSP budget to put more funds towards increasing the science delivery and field acceptance by the program staff, rather than relying on principal investigators.

The Board decided to develop a five-year investment strategy in March 2009, and developed the framework for this strategy at the May 2009 Governing Board meeting in Portland.

Interagency collaboration

The JFSP Governing Board makes investment decisions for science and science delivery projects from an interagency perspective, and believes great value is added to all participating agencies from this approach. The Board intends to continue this interagency approach in all aspects of JFSP investments for the foreseeable future.

Goals

The JFSP plays a unique role in funding fire science. The JFSP Governing Board sees the potential for program funds to be targeted in under-served areas where there are not other funding sources, and for program funds to help catalyze research in areas where greater

investment is needed. For example, long-term field studies and science delivery and adoption programs are notoriously difficult to sustain, yet the 2008 program review identified both of these areas as needing more attention from JFSP. The JFSP Governing Board believes that:

- JFSP needs to continue to invest in short-term research to support immediate needs of fire and fuel managers
- JFSP should sustain investment in certain areas where research needs to be increased and integrated to address large regional and national issues
- JFSP should support long-term field experiments with a portion of the JFSP budget
- JFSP should selectively invest in fundamental science to stimulate research in areas where basic science work is needed to develop improved tools for managers
- JFSP should increase investment in science delivery and adoption by stimulating partnerships among interested institutions
- JFSP should maintain a broad suite of science delivery products, and continue to emphasize syntheses
- JFSP should increase efforts to ensure program investments are integrated into training programs
- JFSP should improve and integrate initiatives to determine fire and fuel manager's science needs across organizational levels, across agencies, and across the country
- JFSP should develop and maintain an effective program outcome tracking and performance monitoring system
- JFSP should maintain a strong emphasis on program accountability and efficiency

Program drivers

Science

Lines of work

Lines of work are developed to address complex management problems that require a coordinated, multi-year approach to develop useful solutions. A mix of fundamental and applied studies may be employed as appropriate. Criteria to guide select topics for lines of work are:

- The topic is of high priority to the fire and fuels management community and is within JFSP's mission
- The issue is enduring so that results obtained over 3-10 years will be relevant
- Research questions have sufficient complexity that a focused, long-term approach involving a sequence of research is required
- Topic has the need and potential to build towards a significant deliverable to improve management effectiveness

The investment strategy for a line of work is developed through problem framing with managers and scientists, and subsequent science planning processes. Problem framing occurs through a variety of client interactions, such as roundtables, workshops, field trips, surveys, or informal discussions. Science planning also takes a variety of forms, including literature surveys, workshops, field trips, or science syntheses; and identifies the questions and types of science that need to be addressed over time and milestones and products to gauge progress.

JFSP is currently engaged in three lines of work: software system integration, smoke and emissions, and fuel treatments. Planning is most mature for the software system integration line of work. This strategy calls for the Interagency Fuels Treatment Decision Support System (IFT-DSS) software development funded by JFSP to be concluded by the end of FY 2012, with some remaining training and transition activities to be funded in FY 12. An initial science plan for smoke and emissions line of work was completed in 2008, and a final science plan is scheduled for completion in September, 2010. Although JFSP has invested heavily in fuel treatment research since the beginning of the program, integrated science planning for the fuel treatment line of work has just been initiated and is scheduled for completion by August 1, 2010. These plans will provide the foundation necessary to determine the level and timeframes for investments in these lines of work.

The Board intends that the program have no more than three active lines of work at any one time. However, it is desirable to start planning for a new line of work about a year before another line of work ends. Accordingly, the Board intends to identify and begin planning for a new line of work in 2010 so that substantial investments could begin as the software system integration line of work winds down. Candidate topics for a new line of work discussed to date are arid land revegetation and fire behavior. Other topics could emerge before a decision is made.

Emerging management needs

Research on emerging topics of direct interest to fire and fuel managers has been a primary focus of JFSP since the beginning of the program and remains central to the JFSP mission. JFSP will continue to solicit and fund proposals that are responsive to the needs of fire and fuel managers. Results from individual proposals are expected to be immediately useful when the project is complete in three to four years. Topics are determined through an annual cycle of need determination and evaluation with final decisions made by the JFSP Governing Board.

Fundamental science

Although the mission of JFSP is an applied science mission, it is often the case that advances in fundamental understanding are needed before improved decision support tools can be developed. In addition, JFSP is in a unique position to fund new science initiatives to stimulate new thinking in selected areas on a short-term basis. The JFSP Governing Board will fund proposals that advance fundamental science or test a new idea that has the potential to lead to improved applications.

Remeasurement

Long-term field studies are notoriously difficult to fund, although important relationships are often only revealed after long-term observation. Because of the nature of the program, JFSP is uniquely able to fund remeasurement opportunities through proposal solicitations. The JFSP Governing Board sees funding for remeasurement studies as an important component of the program in two cases: remeasurement of previously established field experiments, and opportunistic remeasurement of plots and surveys in areas burned by a recent fire. The Board will examine the need to fund remeasurement proposals on an annual basis. The intent is to extend the usefulness of previous investments and capture unique opportunities provided by unplanned events.

Science delivery and outreach

Demand for science delivery and adoption activities is strong and increasing. JFSP will continue producing the JFSP publication series (Digests, Briefs, Manager's Views, and Syntheses), actively managing the JFSP website, and organizing roundtables, roadshows, and other forms of client interactions. Particular attention will be given to science delivery for each of the JFSP lines of work, including development of communication plans as appropriate.

The Board intends to invest as needed to fully implement the JFSP Science Delivery Strategy. In addition, one of the primary recommendations from the program review is that JFSP increase funding for science delivery. Accordingly, JFSP is now developing a national network of regional fire science delivery consortia to significantly increase the pace of science delivery and adoption. The goal is to use the regional science delivery consortia to fully implement the JFSP Science Delivery Strategy.

The Board also intends to increase emphasis on integrating results from JFSP projects into fire and fuels training. Initial efforts will focus on linking JFSP syntheses to training courses. Additional opportunities may be identified as the redesigned fire training organization emerges (i.e., "corporate university").

Program administration

Program office

The Board intends to fund program administration at a level sufficient to efficiently administer the overall investment strategy and other program initiatives and guidance.

Program reporting and evaluation

The Board plans to invest in enhanced program outcome reporting and evaluation, and include results in annual performance reports. This will require retention of outside expertise to evaluate program outcomes and design improved tracking and reporting systems.

Investment goals

The Board developed broad investment goals for each major investment topic, as shown in the table below. The purpose is to show strategic intent that will be used to inform funding decisions rather than to have a set of precise numerical targets that will be rigorously implemented and monitored. The Board recognizes that the distinctions among these categories is not always clear.

Investment Topics	Investment Goal
Science	65%
Lines of work	35%
Emerging management needs	15%
Fundamental science	10%
Remeasurement	5%
Delivery & Outreach	25%
Science delivery/local regional outreach	20%
Synthesis	5%
Training	To be determined
Program Administration	10%
Program office	
Program evaluation	

Allocation changes over time

The Board will use the investment goals for strategic guidance over the next five years, and will review and adjust these goals on an annual basis. In addition, specific lines of work will fade in and out as work winds down in one area and starts up in another.

Budget history

The JFSP budget has fluctuated over time. For the first several years of the program the DOI and the FS each provided four million dollars in funding. These figures were doubled to eight million each starting in 2001 with the adoption of the National Fire Plan. DOI funding has varied from four to six million the last several years while FS funding has held steady at eight million.

JFSP Funding Trend

