



May 31, 2011

Joint Fire Science Program Investment Strategy

In response to recommendations from an independent program review conducted in 2008/2009, the Joint Fire Science Program (JFSP) Governing Board developed a five-year investment strategy to guide future program actions. The strategy articulates how the program intends to balance investments in short-term and long-term science, applied and fundamental science, science delivery and adoption, and program performance and outcome evaluation.

Investment Topics	Investment Goal
Science	65%
Lines of work	40%
Emerging management needs	15%
New science initiative	5%
Long-term trends - remeasurement	5%
Science delivery and adoption	25%
Program administration & evaluation	10%

It is important to recognize that research and information needs of fire and fuels managers are woven into all four science categories. This strategy reflects an increased emphasis on science delivery and adoption, program evaluation, and long-term science, all in response to specific recommendations in the 2008/2009 program review.

Lines of work

Lines of work are developed to address complex management problems that require coordinated, multi-year investments to develop useful solutions. A mix of fundamental and applied studies may be employed as appropriate. The investment strategy for a line of work is developed through problem framing with managers and subsequent science planning processes.

JFSP is currently engaged in three lines of work:

- *Software system integration* – JFSP is funding development of a web-based, service-oriented framework architecture for fuels treatment planning as an example and potential stepping stone towards a larger inter-connected system-of-systems framework for wildland fire. This data and software integration framework, currently known as the Interagency Fuels Treatment Decision Support System (IFT-DSS), is scheduled for completion and potential transition to an operational system in 2012.
- *Smoke and emissions* – JFSP is using a recently completed Smoke Science Plan to guide investments over the next five years in four thematic areas: emissions inventory, smoke model validation, smoke and human populations, and climate change and smoke. Funded work includes new research, integration and synthesis, and knowledge exchange activities.
- *Fuel treatment effectiveness and effects* – JFSP has invested heavily in research evaluating fuel treatment effectiveness and effects, and is currently investing in fuel treatment guides

for managers, WUI treatment effectiveness, lifecycle fuel treatment regimes, insect and wind effects on fuel profiles, and climate change effects on fuel treatment effectiveness. Future work will continue to build knowledge in these and related areas.

Roundtable and science planning will begin in 2011 for two new lines-of-work, fire effects and fire behavior, in anticipation that the software system integration line-of-work will wind down in 2012.

Emerging management needs

JFSP will continue to solicit and fund proposals that are responsive to the emerging needs of fire and fuel managers. Results from individual projects are expected to be immediately useful when the project is complete in two to four years. The program is currently investing in these topics:

- Arid land revegetation
- Compatibility of fire and fuel treatments with T&E species
- Fire prevention effectiveness
- Managing fire in deep, organic soils
- Climate change effects on fire regimes and ecosystems
- Influences on human behavior in the WUI

New science initiative

JFSP periodically issues a “New Science Initiative” to fund innovative ideas in topics of current interest. The purpose is to stimulate new thinking and creative approaches that could lead to science breakthroughs needed to support future fire and fuels management. Ten studies have been funded under this initiative in the areas of fire ecology and social science.

Long-term trends - remeasurement

JFSP funds remeasurement of previously established field experiments, and remeasurement of plots and surveys in areas burned by a recent fire. The intent is to extend the usefulness of previous investments and capture unique opportunities provided by unplanned events.

Science delivery and adoption

JFSP invests heavily in the national network of regional knowledge exchange consortia intended to significantly increase the pace of science delivery and adoption. Eight consortia are underway, and six more are in a planning phase. JFSP will continue producing the JFSP publication series (Digests, Briefs, and Syntheses), actively managing the JFSP website, and organizing roundtables, roadshows, and other forms of client interaction.

Interagency collaboration

The JFSP Governing Board invests in science and science delivery 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.

An Interagency Research, Development & Applications Partnership

