4.19) Develop a Landscape-Scale Framework for Interagency Wildland Fuels Management Planning

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INTRODUCTION

This project is focused on developing and testing an approach to incorporate wildland fuels information management into an interagency, landscape-scale planning framework. The project area includes six major watersheds (Kaweah, Kern, Kings, Caliente, Mojave, and Tule watersheds) covering an area of about 4.7 million acres. The major stakeholder agencies include: Sequoia and Kings Canyon National Parks, Sequoia National Forest, Bureau of Land Management – Bakersfield District, California Department of Forestry – Tulare Ranger Unit, and Kern County Fire Department.

A spatial and attribute information system is being created for coordinated fuels management planning within an integrated Geographic Information System (GIS) framework. The primary goals are to reduce fiscal costs to both government agencies and the public and to improve attainment of ecological and hazard reduction goals across jurisdictional boundaries. The project focuses on utilizing geographic information and related technologies including the Internet to overcome institutional and organizational barriers to interagency fuels management within very large, diverse ecosystems. The proposed framework will be both consistent and dynamic to meet the varied long-range ecological, fire hazard, and risk reduction goals of all impacted agencies. Common geographic data is being developed including comprehensive planning maps and analyses that prioritize areas for treatment based on value, hazard, and risk criteria. This framework will develop and test procedures to manage and update complex spatial information and to institutionalize the coordinated planning efforts. This is a funded two-year project by the Joint Fire Sciences Program.

PROJECT OBJECTIVES

- The most important seamless data is developed and complies with National Spatial Data Infrastructure requirements.
- Data is readily accessible and available.
- Standard business processes that optimize long-term interagency information collaboration are implemented and effectively communicated.
- Interagency consensus is reached regarding analysis methods and procedures.
- Develop/Implement Analysis Methods and Procedures.
- Project Plan is managed as a dynamic and useful guide for meeting the goals of Southern Sierra Geographic Information Cooperative (SSGIC).
- An interagency collaboration system based on web technologies is developed.
- Project meets the requirements of the Joint Fire Sciences Program.
- Written protocols and guidelines are drafted to facilitate Project replication.
- Use a fuels analysis to identify treatment areas (risk, hazard, and values) and develop a multi-year fuel treatment plan

SUMMARY OF METHODS

A Cooperative Agreement has been developed and will be signed by all major stakeholders. A goal-driven project plan has been developed that describes specific goals and links specific tasks/strategies required to achieve individual goals. The project plan contains a detailed budget strategy and roadmap for accomplishing individual goals.

A Web-based File Transfer Protocol (FTP) data clearinghouse will be established including deployment of host hardware/software at a designated clearinghouse location. A detailed long-term Web strategy will be developed and implemented including Internet-based mapping. Long-term business processes for optimizing interagency GIS coordination will be established by the end of the project.

Data development priorities will be established, prioritized, and developed. Federal Geographic Data Committee (FGDC) compliant metadata will be completed for all major data. Data utilization tools will be developed, as needed, to optimize use and management of data. Interagency GIS analysis models (e.g. Hazard, Value, and Risk) will be developed and implemented. Interagency Fuels Management Plans will be developed based on completed analyses.

WORK ACCOMPLISHED IN 2000

Significant work was completed during the 2000 calendar year. A formal interagency agreement has been drafted and approved by the DOI solicitor. Final approval from agency participants is pending. This agreement will formalize SSGIC interagency relationships and provide a mechanism for the NPS to distribute funds to stakeholder agencies, if necessary.

A detailed goal-driven action plan was completed. This is a dynamic planning document that will be updated as the need arises. Milestones or deliverables for each activity/task were developed to measure project progress and provide accountability standards to the Joint Fires Sciences Program. Four interagency project groups were established: 1) Project Management, Lead - Dorothy Albright, 2) Data Development, Lead – Pat Lineback, 3) Analysis Methods and Procedures, Lead – Jeff Manley, 4) Interagency Fuels Planning, Lead – Aaron Gelobter. The implementation of the action plan was started with the following progress.

1) Project Management – This group facilitated the development of a detailed multi-year action plan. A workshop was held to identify appropriate architectural design strategies for Internet-based mapping. A summary report was generated and is available. An NT server has been purchased including appropriate software such as ArcIMS that will enable Internet based mapping. The USGS Mapping Division in Denver will be providing overall management for the SSGIC server, but the SSGIC technical representatives will provide the actual management of data, map, and web services.
2) Data Development – An SSGIC data technician was hired in July 2000. Her name is Karen Holmstrom and she is a USFS employee stationed out of the Porterville Supervisors Office. She has started developing “seamless” data and metadata based on data development and analyses priorities established by an interagency data group. This group identified 21 data development priorities that would be acquired or developed for each of the six watersheds. The six major watersheds comprising the 4.7 million acres of the SSGIC include Kings, Kaweah, Kern, Tule, Caliente, and Mojave. See Attachment A. Data development priorities include: vegetation, land ownership, elevation, slope, aspect, hillshade, digital orthophoto quads, digital raster graphics, paid protection areas, state responsibility areas, air basin areas, power grid, fire history, wilderness boundaries, roads, hydrography, watersheds, fuels, canopy cover, and special management zones. A technical fuels working group was established that will be focused on development of seamless and accurate fuels and canopy layers using the best available data.
3) Analysis methods and procedures – In May 2000 a two-day workshop was conducted to identify analysis needs across watersheds. Each agency presented the kinds of analysis currently used for individual agency burn planning and identified new interagency analyses priorities. Terminology was standardized. A summary report was generated including a conceptual approach for identifying

hazard, risk, and value priorities. The SSGIC Technician has initiated collection of data needed to conduct analyses.

4) Interagency Fuels Planning – This group is comprised of fire managers and planners and need analyses results BEFORE they can identify treatment areas and priorities. An action plan was developed and will be implemented as analysis is completed. Future activities include identification of treatment areas and treatment activities, NEPA and CEQA compliance, development of a fuels treatment plan and finally, implementation of the interagency burn plans.

PRELIMINARY FINDINGS

One of the major challenges of this project has been maintaining effective interagency collaboration. The major stakeholders continue to have a high interest in this project, but there have been delays because of scheduling conflicts and an extreme fire season in 2000 that diverted attention from this project. The project is behind schedule and cannot be complete by 12/2001 as originally agreed to in the JFSP task order. We will be requesting an extension to this project for one year to end around 12/15/2002.

Commensurate with the slow progress of this project, we've learned that this project is much more complex than we originally envisioned. We have learned a dedicated project manager position could better facilitate the complex coordination and organizational requirements. Nevertheless, progress is being made, but at a slower pace than we would like.

Although no significant analyses have been completed, the conceptual frameworks for analyses have been developed and data development has begun. Surprisingly, acquiring consensus on the hazard, risk, and value analyses to be used for joint burn planning was straightforward. However, it is not yet known how different agency missions will impact a consensus process and development of joint burn plans once the fire managers begin looking at analyses.

By keeping stakeholder agencies involved in the decision process, we have seen an increase in interagency coordination and cooperation in several different ways. In July 2000, a presentation was made to the Sierra Federal Managers that were well received. In December 2000, a similar presentation was given to the Southern and Central Fire Management Officers (FMO). The FMO's were very supportive of the SSGIC and there was talk of eventually expanding this initiative further up the Sierra Nevada to include additional agencies and watersheds.

PROBLEMS ENCOUNTERED

As anticipated, interagency coordination does require significant effort and commitment by agency stakeholders to make this project successful. Coordinating activities and meetings is difficult and requires significantly more effort than traditional single agency meetings.

We've discovered how difficult it is to get state, local, and federal agencies to sign off on a formal SSGIC agreement. The issues appear to relate to different agency agreement guidelines, rather than the content of an agreement.

It was extraordinarily difficult to identify a host agency and location for the SSGIC Web server. Numerous options were explored before the USGS agreed to host and support the server and the SSGIC as part of the larger GEOMAC project. A formal agreement has been drafted (not yet finalized) between the USGS and the NPS to support the SSGIC for a three-year period.

2001 WORKPLAN

In 2001, we expect to have a fully functional SSGIC online with significant Internet accessible services including mapping services, data/metadata download and access, and web information services. In May

2001, the stakeholder agencies will meet to further develop and refine specific Web-based services to be provided by the SSGIC. Technical representatives from the stakeholder agencies will be trained to assist with the development and maintenance of the Web site.

We expect to have preliminary analyses completed in 2001 including FLAMMAP, Fire Occurrence Areas (FOA), and Fire Return Interval Departure. The data/metadata, as well as dynamic Internet map services will be made available via the SSGIC server.

The SSGIC interagency fuels group will conduct preliminary assessments of the analysis results and develop initial treatment area priorities in Fall 2001.

Southern Sierra Geographic Information Cooperative Area

Attachment A