

Systems Application for Fire Management

By Scott Erickson

Information management and systems applications are no stranger to the interagency fire management community. By Park Service standards, astounding amounts of time and money have been invested to model and integrate information pertaining to wild-land fire management. The NPS Branch of Fire Management, established in 1979 by the Director, has aggressively pursued moving the Service to the state-of-the-art level in systems applications.

The Administrative Forest Fire Information Retrieval Management System (AFFIRMS) with 55 users Servicewide, is the principal fire management application in use by parks. Several other systems applications, adapted or developed for use by the Service, include National Fire Weather Data Library (NFWDL), NPS Fire Occurrence Data Library, Yosemite NP Pilot Geographic Information System Data Base, FIREFAMILY, PRESCRIBE, and others.

Exhibits 1 and 2 shown here briefly portray major databases and interactive/batch packages. The FIREPRO effort provided the major impetus for Serv-

ice-developed software and databases in order to integrate management information for decision purposes. Database work has scored major accomplishments in the last two years and further advances are in the offing.

It must be noted that all the applications (other than AFFIRMS) are resident on the USDA Fort Collins Computer Center Univac 1184. The Univac is a main-frame and currently utilized by Branch staff almost exclusively. This centralized access to applications has been a bottleneck to effective use by parks; so the Branch is obtaining Departmental approval to acquire a major minicomputer. All applications will be installed on the minicomputer, decentralizing access to fire management software applications. The current timetable calls for having the mini fully operational and available to park, regional, and national users by mid-1985. Several administrative and technical problems remain to be solved but the Branch of Fire Management is committed to providing state-of-the-art systems applications directly to end users.

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EXHIBIT 1

DATA BASES	WHAT IS IT?	SOURCE OF DATA	WHAT IS IT FOR?	LOCATION
National Fire Weather Data Library (NFWDL)*	National multi-agency collection of computerized historical weather data.	1300 hrs $\pm$ 1 hr fire weather observations; WS form D-9b.	Planning for fire suppression and prescribed fire use.	USDA, Fort Collins Computer Center (FCCC).
FIREPRO Inventories**	109 parks Servicewide inventories, of weather stations, equipment, engines, aircraft, prescribed burn plots, agreements, real property value estimates.	FIREPRO input forms.	Budget evaluation for fire suppression.	FCCC

* USFS developed program

** NPS developed program

EXHIBIT 2

INTERACTIVE PROGRAMS	WHAT IT DOES	LOCATION
Administrative Forest Fire Information Retrieval Management System (AFFIRMS)*	AFFIRMS has several functions: 1. Fire reporting network. 2. Message posting to other users. 3. NOAA link to provide next-day weather forecasts and special spot forecasts. 4. Calculation and output reports on fire danger. 5. Archiving of fire weather observations.	Computer Sharing Service, Denver, Colorado. Time-sharing contract.
BEHAVE*	Interactive design of site-specific fuel models and state-of-the-art fire prediction methods utilizing NFFL stylized models or user-designed models.	FCCC

BATCH PROGRAM	WHAT IT DOES	INPUT DATA	LOCATION
FIREPRO**	Ten statistical analysis programs to profile park, regional and national fire occurrence Also a park budgeting application for fire suppression program requirements.	NPS Fire Occurrence Data Library FIREPRO Inventories	FCCC