Chapter 9
FWS Specific Preparedness Information

Link to Redbook Chapter 9

9-1-4 Preparedness - The Program Preparedness component of Wildland Fire Management involves the process of planning and implementing activities prior to wildland fire ignitions. This process includes actions which are completed on a routine basis prior to each fire season as well as incremental actions conducted in response to increasing fire danger.

9-4-33 Preparedness Plan

9-5-1 Preparedness Level/Step-up Plans - Step-up Plans are developed for information in the Fire Danger Rating Operating Plan (See Chapter 9.B.). For Servicewide planning, the burning index (BI) will be the standard for making comparisons, etc. Another fire danger index other than the BI can be used if there is sufficient justification. All proposed indexes must be based on objective historic weather data appropriate for each refuge. The same staffing class percentile levels will be used (90th and 97th percentile breakpoints). Regional approval is needed for making the change.

Sample Step-up Plan - The Step-up Plan should consider the following elements:

- Personnel and personnel qualifications needed for each level. This would include initial attack, detection, and monitoring.
- Provisions for fire prevention and detection at high levels 4 and 5.
- Minimum initial attack response time criteria, numbers and types of equipment and personnel.
- If and when 7-day staffing is instituted.
- Daily tours of duty for personnel involved with suppression activities.
- Provisions for public safety.

Step-up Plan Funding - Subactivity 9141: Emergency Preparedness - Emergency preparedness actions carried out in response to an approved Step-Up Plan. During the wildland fire season there may be short-term weather events and increased human activity that increase the fire danger beyond what is normal. These types of occurrences cannot be planned or budgeted for as part of the normal fire season. Emergency preparedness planning may call for movement of additional firefighting resources into the area or lengthening the duty day to provide extended initial attack coverage. The duration of this type of event may be from one day to a maximum of two weeks, and may occur several times during the fire season. The triggering of emergency preparedness funding is documented in the refuge Step-Up Plan. It should be not be confused with severity funding which is justified by prolonged environmental problems. The decision to use emergency preparedness funds is made at the refuge level with approval of the Regional Fire Management Coordinator. Authorization for use of emergency preparedness funding will be found in an approved refuge Step-Up Plan when staffing classes reach level 4 or 5. If a refuge Step-Up Plan is not complete, the RFMC will establish interim guidance for initiating emergency preparedness. The frequency and use of emergency preparedness funding will be documented through the use of the following Region specific project numbers:

Region	Project Number
1	PE01
2	PE02
3	PE03
4	PE04
5	PE05
6	PE06
7	PE07
8	PE08

Appropriate Expenditures:

- Regular time for other than 9141 personnel, overtime and hazard or environmental premium pay for all personnel engaged in wildland fire management actions or support for these actions, or personnel involved in Step-Up Plan activities.
- Travel and transportation costs associated with Positioning initial attack personnel, organized crews, overhead teams and aircraft in response to an approved Step-Up Plan, and transportation of associated equipment and supplies.
- Emergency equipment leases/contracts to meet Step-Up Plan needs.
- Aircraft costs to meet Step-Up Plan needs.

Prohibited Uses: All other uses of 9141 Emergency Preparedness Funding are considered prohibited unless specific approval is received from the Branch of Fire Management.

9-12-29 Wildland Fire Cause Determination & Fire Trespass

Wildland fire trespass refers to the occurrence of unwanted and unplanned wildland fire on Fish and Wildlife Service (Service) lands where the source of ignition is tied to some type of human activity. Fire trespass is a legal/law enforcement activity and the appropriate Service and local law enforcement authorities should be contacted and standard criminal and/or civil investigative procedures and reports used. See the US Fish and Wildlife Service Fire Trespass Handbook for details.

Cause Determination - All fires must be thoroughly investigated (see Chapter 19.E.) to determine cause and whether negligence and/or criminal intent were factors. Cause determination must begin as soon as possible, since evidence is easily destroyed. Whether a fire is a natural start or human-caused must be determined in order to develop a successful fire investigation. The initial determination of the ignition as being human-caused usually results from an eyewitness report or with the arrival of the Initial Attack Incident Commander at the fire scene. If not, a trained fire investigator may be needed. It is important to protect the ignition site from disturbance to preserve any evidence and document all relevant information discovered.

Trespass Action Determination - Based upon investigation information and staff recommendations, a decision to pursue fire trespass is made and an case file initiated to document the case. If the status of the case changes at a later date, the investigative file

documentation should be amended to document the change(s). Information from the investigation will indicate whether to take criminal or civil action and cost recovery.

Cost Determination - All costs associated with a fire are to be determined by a qualified specialist who can assess damages and complete a damage appraisal report to accompany the fire trespass case.

- Suppression Costs
- Resource Damages
  - Emergency Stabilization (9142)
  - Burned Area Rehabilitation (9262)
  - Fire Suppression Damage Repair (9141)
- Major Facility Damages
- Other fire related costs
- Administrative/indirect costs include centralized data management, general administration, and other support functions performed jointly for which the amounts pertaining to specific fires cannot be determined accurately.

Collection - A Bill for Collection along with a billing document to report the debt as an accounts receivable is prepared by the collections staff at the local unit. The Bill for Collection should be itemized by major categories, such as Suppression, Rehabilitation, Damages, etc. A fire cost summary, which is a breakdown of major categories (personnel, equipment, aviation costs, retardant, etc.), and FMIS reports should be included as backup for the Bill for Collection.

9-12-37 Wildland Fire Mitigation/Prevention

Information on risk assessments and planning.
Risk Assessment and Mitigation Strategies
PMS 451 Wildfire Prevention Marketing Guide (1996)
PMS 452 Wildfire Prevention Event Management Guide (1996)
PMS 454 Wildfire Prevention and the Media (1998)
PMS 456 Wildfire Prevention Patrol Guide (1998)
PMS 457 Recreation Area Fire Prevention (1999)
PMS 458 Fire Communication and Education (1999)
PMS 459 Fire Education Exhibits and Displays (1999)

Information Systems

A significant array of computer applications, which provide analysis and decision support for fire manager/resource manager. Numerous other computer applications exist which have merit and can be used by refuges, but are not supported by the national office.

Fish And Wildlife Service Fire Management Information System - The Fire Management Branch has established a time-sharing computer facility for refuges and Regions access FIREBASE and FIRE OCCURRENCE computer application. A User's Guide for the Fish and Wildlife Service Fire Management Information System and assistance for users of the system can be obtained from the Fire Management Branch.

Weather Information Management System (WIMS) is a comprehensive system that helps you manage weather information. WIMS is the host for the National Fire Danger Rating System (NFDRS). WIMS accesses the National Interagency Fire Management Integrated Database (NIFMID). NIFMID is a relational database that contains historic fire weather and historic fire record information. WIMS and NIFMID run on the IBM mainframe computer at the USDA National Information Technology Center in Kansas City, and are available on a twenty-four hour basis. WIMS allows you to retrieve weather information by providing timely access to many weather information sources, efficient tools for managing data, data manipulation and display functions, and interactive communications environment. System access is user specific and requires a user identification and password. A WIMS user guide is located on the Internet at http://famweb.nwcg.gov. For questions concerning WIMS access please call the WIMS help desk at NIFC (208) 387-5290.

Remote Automated Weather Stations (RAWS) - There are nearly 1,500 interagency Remote Automated Weather Stations (RAWS) strategically located throughout the United States – mostly in the Western states. These stations monitor the weather. Weather data assists land management agencies with a variety of projects – monitoring air quality, rating fire danger, and providing information for research applications. More information on RAWS is located on the Internet at www.fs.fed.us/raws. Most of the stations owned by the wildland fire agencies are placed in locations where they can monitor fire danger. RAWS units collect, store, and forward data to a computer system at the National Interagency Fire Center (NIFC) in Boise, Idaho via the Geo-stationary Operational Environmental Satellite (GOES). The data is automatically forwarded to several other computer systems including the Weather Information Management System (WIMS) and the Western Regional Climate Center in Reno, Nevada. Fire managers use the data to predict fire behavior and monitor fuels; resource managers also use the data to monitor environmental conditions. Locations of RAWS stations can be searched online courtesy of the Western Regional Climate Center at http://www.wrcc.dri.edu.

The Fire Effects Information System (FEIS) is a computerized encyclopedia of scientific information describing the fire ecology of more than 1,000 plan and animal species and plant communities. Access to FEIS is available through the Internet at http://www.fire.org/perl/tools.cgi.

The broad area component of the **Wildland Fire Assessment System** (WFAS-MAPS) is generating National Maps of selected fire weather and fire danger components of the National Fire Danger Rating System (NFDRS). NFDRS computations are based on once-daily, mid-afternoon observations (2 p.m. LST) from the Fire Weather Network that is comprised of some 1,500 weather stations throughout the Conterminous United States and Alaska. Observations are reported to the Weather Information Management System (WIMS) where they are processed by NFDRS algorithms. Many of the stations are seasonal and do not report during the off season. WFAS queries WIMS each afternoon and generates maps from the days weather observations. Each afternoon Fire Weather Forecasters from the National Weather Service also view these local observations and issue trend forecasts for fire weather forecast zones. WIMS processes these forecasts into next-day index forecasts. Additional information is located on the Internet at http://www.fs.fed.us/land/wfas.

The Incident Qualifications and Certification System (IQCS) is the official wildland and prescribed fire system or record and serves as the official repository of incident management positions performance standards and their respective qualifications and certification requirements. The IQCS is used to track personnel information related to an individual's qualification and certification currency and history that includes information such as: positions, position performance, training, physical fitness status, and external warrants. It also includes training management functions such as: course offering descriptions, learning objectives, per-course requirements, class schedules, student registration and class participation information. Workforce analysis may be conducted utilizing IQCS to report the disposition, status, and deficiencies of positions throughout the incident response community. The application provides annual certification of employees for wildland and prescribed fire positions. Each Regional Fire Management Coordinator will have a designated IQCS contact person for the purpose of regional oversight.

Lightning Detection System (LDS) - Fish and Wildlife Service (FWS), National Interagency Fire Center (NIFC) has an Annual licensing contract with the Bureau of Land Management (BLM) for a pre-determined amount of Lightning User licenses. The User Licenses enables identified FWS Users access to the Bureau of Land Management (BLM) Lightning Detection System. FWS User licenses are updated each time this annual contract becomes due. Identified FWS users can access the site via internet at http://www.nifc.blm.gov A Username and Password is required to access the system. Near real time lightning data can be acquired once logged onto BLM Lightning. Users can generate custom maps for their specific purpose.

Preparedness Funding (9131) - In U.S. Fish and Wildlife Service Wildland Fire Business Management Handbook (underdevelopment)

Program Preparedness/Readiness Reviews - Pre-season fire preparedness/readiness reviews provide comprehensive operational evaluations on fire programs. These reviews are to be conducted annually prior to fire season. Involvement of line management and cooperators, where applicable, is critical. Reviews are designed to assist the local agency administrator in preparing for and operating during fire season. It also serves as a mechanism to identify deficiencies, recommend corrective actions and establish the need for follow up to corrective actions. Standards for preparedness reviews are documented in the **"Interagency Fire Preparedness Review Guide."** The guide is currently available on the Internet at :
http://www.fire.blm.gov/Standards/BLM_Preparedness_Checklists.htm

Readiness reviews consist of several major elements of which safety is the most important. These elements include the following:

- Management Direction and Consideration
- Fire Operations and Procedures
- Fire Business Management and Administrative Support
- Equipment
- Dispatch Operations
- Safety

- Facilities
- Training
- Organization and Staffing
- Planning
- Aviation Operations
- Prescribed Fire

Field units should use the readiness review process to make a self evaluation of program readiness.

Review teams may be assembled by the regional or national office to perform readiness reviews. These teams may include line and fire managers, fire and aviation operations specialists, dispatch and logistics specialists, fire business management specialists, and other technical experts as needed (i.e., safety & occupational health specialists, contracting officers). This expertise may be internal, interagency, or contract.

Normal Unit Strength (NUS) - Refuges that have a Fire Management Plan should also have a cache of firefighting tools and personal protective equipment (PPE) adequate to support all refuge initial attack staff. The numbers, types, and distribution of materials in caches will be dictated by the staffing, suppression strategy, fuels and fire history of the refuge. Cache equipment, other than capitalized property, is considered to be the station's Normal Unit Strength (NUS). It is the responsibility of the refuge to establish specific refuge and complex initial attack NUS levels. Requirements beyond the initial attack level will be supported through the regional and national fire cache system. Maintenance of NUS is the responsibility of the refuge. NUS is a maximum level of all items for initial attack fire suppression efforts, not for support of fires exceeding initial attack or prescribed fire activities. NUS will include personal protective equipment and safety items required by personnel for prescribed fire assignments. Personnel ordered for extended attack activities are not to be equipped from the refuge's NUS, but will either come equipped or equipped by a ground support facility. All refuges will develop a NUS list and have it approved by the RFMC. The list will become an attachment to the refuge's Fire Management Plan. Only those approved items may be replaced. The initial stocking of the cache with NUS items is a one-time expenditure of preparedness funds. If additional items are needed, they must be approved through the RFMC. All NUS items are to be maintained in such a way that they are not used for routine refuge operations. This may be accomplished by storing equipment in designated areas protected by a seal or in an individual locked enclosure. The inventory and location of these items should be included in the pre-attack plan. Excess and unneeded supplies and equipment should be transferred to other refuges or interagency caches.

Once a NUS level of equipment and PPE is established, routine replacement of lost, broken or worn out equipment should be through the normal GSA supply channel. Items can be ordered by using the National Stock Number found in the NWCG National Fire Equipment System Catalog, Part 1: Fire Supplies and Equipment, or through the GSA Wildfire Protection Equipment and Supplies catalog. GSA should be considered the first source of supply, but other sources can also be used.

Supporting Ongoing Fires - Ordering - During wildland and prescribed fire operations, support in the form of NUS supplies, other fire suppression equipment, crews and overhead can be ordered through the local interagency zone dispatch/coordination center. In most areas of the country, your order for supplies and/or equipment will not come directly from NIFC, but from the nearest fire cache operated by another Federal agency. Crews and overhead are brought in using the closest forces concept. Resource Order Forms are available that simplify tracking orders from initiation to receipt. These forms are color coded for overhead, crews, supplies and equipment. Fire Management Officers or Regional Fire Management Coordinators can assist in preparing requests.

Item	NUS Formula
Rations, Shelters, Hard Hats, Head Lamps, Goggles, Packs, Line Gear, First Aid Kits, Sleeping Bags, Water Bottles	1 per red-carded individual plus 20%
Tents	1 per red-carded individual
Aramid Pants, Aramid Shirts, Gloves	2 per red-carded individual plus 20% for each size issued
Shovels, Pulaskis, McLeods, Flaps, Fire Rakes (Hand Tools)	2 per red-carded individual plus 10% for each type of tool. Mix of tools is determined by station based on local needs.
Flight Helmets	6 per helicopter contract plus 2 spares. Stations w/o contract aircraft that frequently use helicopters for fire activities should obtain 4.
Back Pack Pumps	1 per 2 red-carded individual
Chain Saws, Portable Pumps, Fold-A-Tank	As approved by the RFMC depending on firefighting tactics.
Foam	15 gallons per engine
Hose - Portable Pump used for hose lays or any size engine	1.5 inch -900 feet 1 inch - 900 feet

Nozzles (1" and 1.5" - total)	2 - Portable Pump 4 - Light Engine 5 - Medium or Heavy Engine Plus 20% for total number of nozzles on engines, water and foam combined
Wyes, Tees, Wrenches, Relief Valves, Hose Clamps, etc.	2 - Portable Pump 2 - Light Engine 3 - Medium Engine 4 - Heavy Engine Plus 10% for each item listed as required in the inventory
Adapters and Reducers (Based on local and anticipated needs)	2 - Portable Pump 2 - Light Engine 4 - Medium Engine 5 - Heavy Engine Plus 10% for each item listed as required in the inventory.