WILDLAND FIRE MANAGEMENT PLAN

IRON RIVER NATIONAL FISH HATCHERY

GREAT LAKES-BIG RIVERS REGION

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INTRODUCTION

This plan will establish a Fire Management Plan for Iron River National Fish Hatchery. As this plan is not generating new Federal actions that would affect the environment, it is deemed a categorical exclusion and requires no additional environmental documentation under the National Environmental Policy Act (NEPA). An informal Section 7 consultation will be conducted to ensure no adverse effects on Federally threatened or endangered (T&E) species. Based on past actions and associated reviews, sites subject to the National Historic Preservation Act (NHPA) are not likely present.

This plan is written as an operational guide for managing the hatchery's wildland fire program. It defines levels of protection needed to ensure safety, and protect facilities and resources, given current understanding of the complex relationships in natural ecosystems. It is written to comply with a service-wide requirement that units with burnable vegetation develop a fire management plan (620 DM 1).

This FMP outlines a program of full suppression of all wildland fires. There will be no prescribed fires or pile burning on the hatchery. Lands comprising the hatchery were originally acquired to protect the watersheds on the two principal streams (Johannes, et al, 1970, Sand, et al, 1990). This plan will provide guidance to wildland suppression agencies to protect hatchery water supplies while reducing the potential for fire related damage to the supporting watershed.

The hatchery has no personnel qualified for wildland fire suppression duties. Generally, the spring wildland fire season coincides with the most active part of the hatchery operational year. Suppression forces from the Wisconsin Department of Natural Resources (WIDNR) are the primary suppression providers. In addition, along the east side of the hatchery, the U.S. Forest Service will take suppression action in a one mile wide protection zone under agreement with the WIDNR.

Structural fire protection is provided by the Iron River Volunteer Fire Department located approximately 7 miles southwest of the hatchery.

COMPLIANCE WITH USFWS POLICY

The hatchery was proposed in 1962 and formally approved in 1966. Land acquisition began in 1976. Construction of hatchery facilities began in 1979 and operations began in 1982.

A management plan was prepared for the hatchery in 1995 as part of the Director's emphasis on management plans for hatcheries, and other facilities with wildlife resources. The FMP is supported by that management plan.

Authority and guidance for implementing this plan are found in:

- Protection Act of September 20, 1922 (42 Stat. 857; 16 U.S.C.594): authorizes the Secretary of the Interior to protect from fire, lands under the jurisdiction of the Department directly or in cooperation with other Federal agencies, states, or owners of timber.
- Economy Act of June 30, 1932: authorizes contracts for services with other Federal agencies.
- Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66, 67; 42 U.S.C. 1856, 1856a and b): authorizes reciprocal fire protection agreements with any fire organization for mutual aid with or without reimbursement and allows for emergency assistance in the vicinity of agency lands in suppressing fires when no agreement exists.
- Disaster Relief Act of May 22, 1974 (88 Stat. 143; 42 U.S.C. 5121): authorizes Federal agencies to assist state and local governments during emergency or major disaster by direction of the President.
- Federal Fire Prevention and Control Act of October 29, 1974 (88 Stat. 1535; 15 U.S.C.2201): provides for reimbursement to state or local fire services for costs of firefighting on federal property.
- Wildfire Suppression Assistance Act of 1989. (Pub.L. 100-428, as amended by Pub.L 101- 11, April 7, 1989).
- Departmental Manual (Interior), Part 620 DM, Chapter 1, Wildland Fire Management: General Policy and Procedures (April 10, 1998): defines Department of Interior fire management policies.
- Service Manual, Part 621, Fire Management (February 7, 2000): defines U.S. Fish and Wildlife Service fire management policies.
- National Environmental Policy Act of 1969: regulations implementing the National Environmental Policy Act (NEPA) encourages the combination of environmental comments with other agency documents to reduce duplication and paperwork (40 CFR 1500.4(o) and 1506.4).
- Clean Air Act (42 United State Code (USO) 7401 et seq.): requires states to attain and maintain the national ambient air quality standards adopted to protect health and welfare. This encourages states to implement smoke management programs to mitigate the public health and welfare impacts of Wildland and prescribed fires managed for resource benefit.
- Endangered Species Act of 1973.
- U.S. Fish & Wildlife Service Fire Management Handbook.

This plan meets NEPA / NHPA compliance and will be implemented in coordination with the Endangered Species Act of 1973, as amended, under the section 7 programmatic review

provisions, and will take appropriate action to identify and protect from adverse effects on any rare, threatened, or endangered species on the hatchery. The authority for funding (normal fire year programming) and all emergency fire accounts is found in the following authorities:

> Section 102 of the General Provisions of the Department of Interior's annual Appropriations Bill provides the authority under which appropriated monies can be expended or transferred to fund expenditures arising from the emergency prevention and suppression of wildland fire.
>
> P.L. 101-121, Department of the Interior and Related Agencies Appropriation Act of 1990, established the funding mechanism for normal year expenditures of funds for fire management purposes.
>
> 31 US Code 665(E)(1)(B) provides the authority to exceed appropriations due to wildland fire management activities involving the safety of human life and protection of property.

Authorities for procurement and administrative activities necessary to support wildland fire suppression missions are contained in the Interagency Incident Business Management Handbook.

FIRE MANAGEMENT OBJECTIVES

The overall objectives for fire management are to promote a program to ensure firefighter and public safety, aimed at reducing human-caused fires and to ensure appropriate suppression response capability to meet expected wildland fire complexity. Specific fire management objectives are:

- Promote a fire management program and control all wildland fires at less than 10 acres.
- Protect life, property, and resources from wildland fires at costs commensurate with resource values at risk, keeping losses to improvements and other property to less than $10,000 in any calendar year.
- Use appropriate suppression tactics and strategies that minimize long-term impacts of suppression actions, particularly related to water quality to avoid a reduction, caused by wildland fire, in hatchery production in any one year period.

DESCRIPTION OF HATCHERY

The hatchery comprises approximately 880 acres in Bayfield County, Wisconsin (Figures 1 and 2). It is located seven and one-half miles northeast of Iron River, 40 miles east of Superior, and 25 miles west of Ashland, WI. An addition to the hatchery land base is in the process of negotiation. When completed the hatchery will total 1,200 surface acres.

Approximately 1.5 million lake trout from the hatchery are planted in Lakes Superior, Michigan and Huron each year.

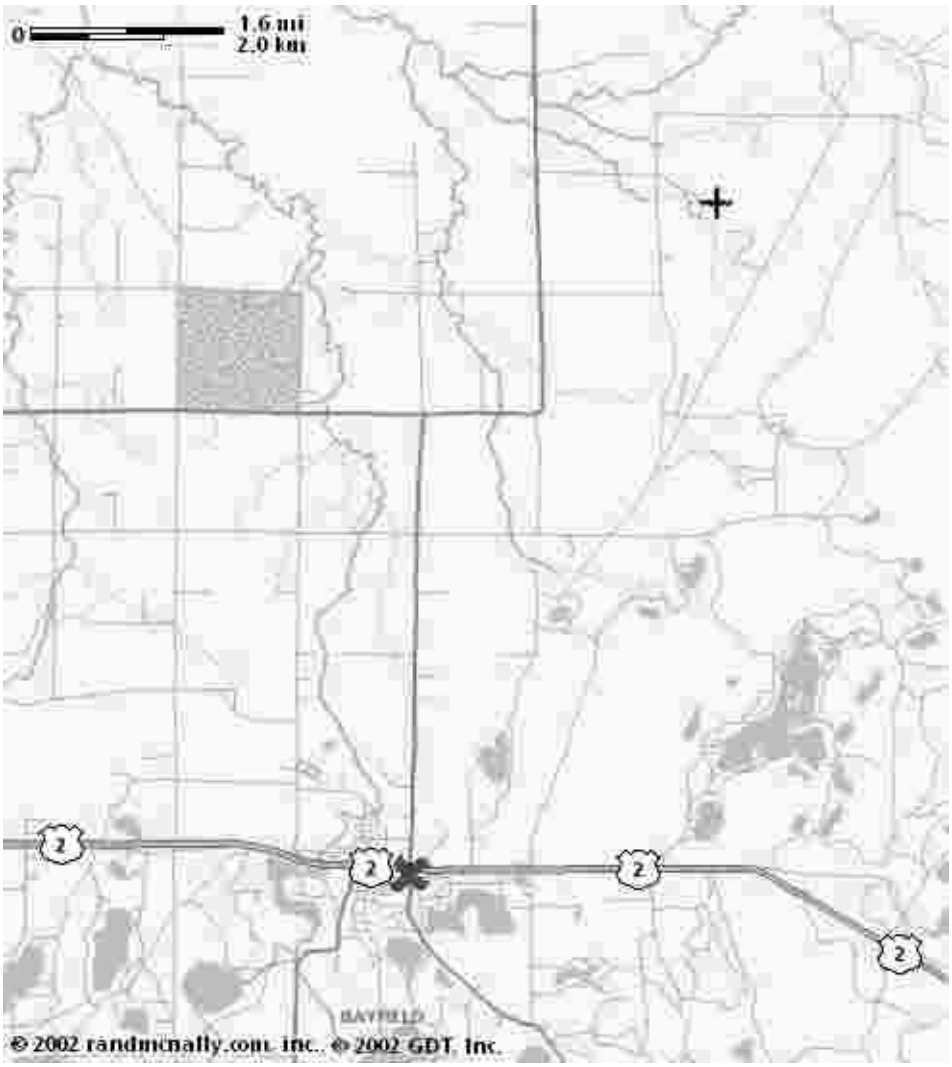


Figure 1 - Vicinity Map

+ - Iron River NFH

CULTURAL RESOURCES

Pre-construction consultation with the State Historical Society of Wisconsin (Society), revealed that the hatchery and adjacent lands have not been throughly surveyed for archeological or architectural resources. Therefore, there are no recorded sites.

The Society did note the presence of an "unusual" building, a log home discovered in a reconnaissance survey in 1975. The building was located in the NE ¼, SE ¼, of Section 9, Township 48 North, Range 8 West and would "merit additional investigation if any proposed activities would result in material changes." It is no longer present and is believed to have been removed prior to government acquisition.

A letter dated December 26, 2001 to the Regional Historic Preservation Officer from the Wisconsin Historical Society indicated no National Register of Historic Places structures and no known archeological sites on the proposed 320 acre addition to the hatchery.

Communication with the Lake Superior Bands of Chippewa Indians regarding Native American Grave Protection and Repatriation Act (NAGPRA) issues has occurred. A response from the Regional Office to the Assistant Tribal Historic Preservation Officer at Lac du Flambeau, WI dated January 5, 2001 indicated no known tribal interest sites at Iron River.

FISH AND WILDLIFE

Wildlife harvest regulation on the hatchery is by the WIDNR. The hatchery is open to hunting and trapping under Wisconsin regulations. Lists of species likely to occur on the hatchery may be found in the Integrated Resource Management Plan in the hatchery office. Both Federal and state listed T&E or special emphasis species that may be found in the vicinity of the hatchery are found in Tables 5 and 6 in Appendix F.

Mammals found on the Hatchery include beaver (*Castor canadensis*), numerous small mammals, white-tailed deer (*Odocoileus virginianus*), bobcat (*Lynx rufus superiorensis*) and coyote (*Canis latrans*). Fire operations are not expected to adversely affect mammal populations.

Endangered species to be considered include the following:

Bald Eagle (*Haliaeetus leucocephalus*): The bald eagle is listed as threatened in Wisconsin. A proposal to delist the species is being reviewed (Fed. Reg., Vol. 64, No. 128, pp. 36454-36464). Bald eagles nest along the Lake Superior shoreline, including the Apostle Islands National Lakeshore as well as on inland lakes in northern Wisconsin. Eagles are frequent visitors to the surrounding area, but there are none that currently nest within or immediately adjacent to Hatchery lands. Bald eagles are sensitive to human disturbance during critical times of the nesting season, especially during nest initiation.

Gray Wolf (*Canis lupus*): The gray wolf is listed as endangered in Wisconsin, but a proposal has been presented to the public to delist it to threatened. The nearest wolf packs are 10 to 20 miles from the Hatchery (U.S. Fish and Wildlife Service, Green Bay, WI). We are not aware of wolf use within the Hatchery

boundary, but a wolf might pass through the area periodically as it moves from one wolf pack to another in the region.

Canada Lynx (*Lynx canadensis*): This species was formerly listed as threatened in Wisconsin. Since 1997 it has been designated a protected animal. It is occasionally found in northern forest areas of the state. Bayfield and Ashland counties are included in the list of counties with the highest likelihood of occurrence, but lynx are considered to be very rare in Wisconsin, with 5 sightings each in Ashland and Bayfield Counties during the period 1976-1984.

The hatchery is located within the 1842 Chippewa ceded area. Band members may exercise their usufructuary rights to hunt, fish and gather within the hatchery boundaries, adhering to harvest restrictions and seasons as set by the Band. Tribal wardens have enforcement authority over Band members.

Beaver activity on water supply streams is quickly curtailed through trapping and demolition of the dam by hatchery personnel.

VEGETATION

About 710 acres of the current hatchery property are forested. Upon completion of the pending acquisition, about 1,000 acres of the hatchery will be forested land. Current forest vegetation is either mesic in nature (most of the area below the sand plain on the east boundary), riparian (along the water courses), and somewhat zeric on the sand plain (Curtis, 1959, Craven, 1985, Gullion, 1984). (See Figure 2.)

Several old fields are kept open, one area under a haying permit, the others by hatchery staffing mowing in late summer. An early attempt was made to plant warm season native grasses (Kuester, 1980). There was no follow up as construction of the residences and completion of the access road system took enough time that the seeding failed.

PHYSICAL RESOURCES

Geologically the area is typical of the glaciation found near Lake Superior. Soils are generally of the Ontonagon-Pickford Association, mostly a silt loam, relatively infertile and erosive if exposed (Ableiter, 1961). Along the east boundary, on the sand plain, the Orienta-Ogemaw Association predominates. This soil is characterized as a loamy sand to fine sandy loam from 3-5 feet deep, highly erosive and low in fertility. The underlying clay tends to make these soils poorly drained.

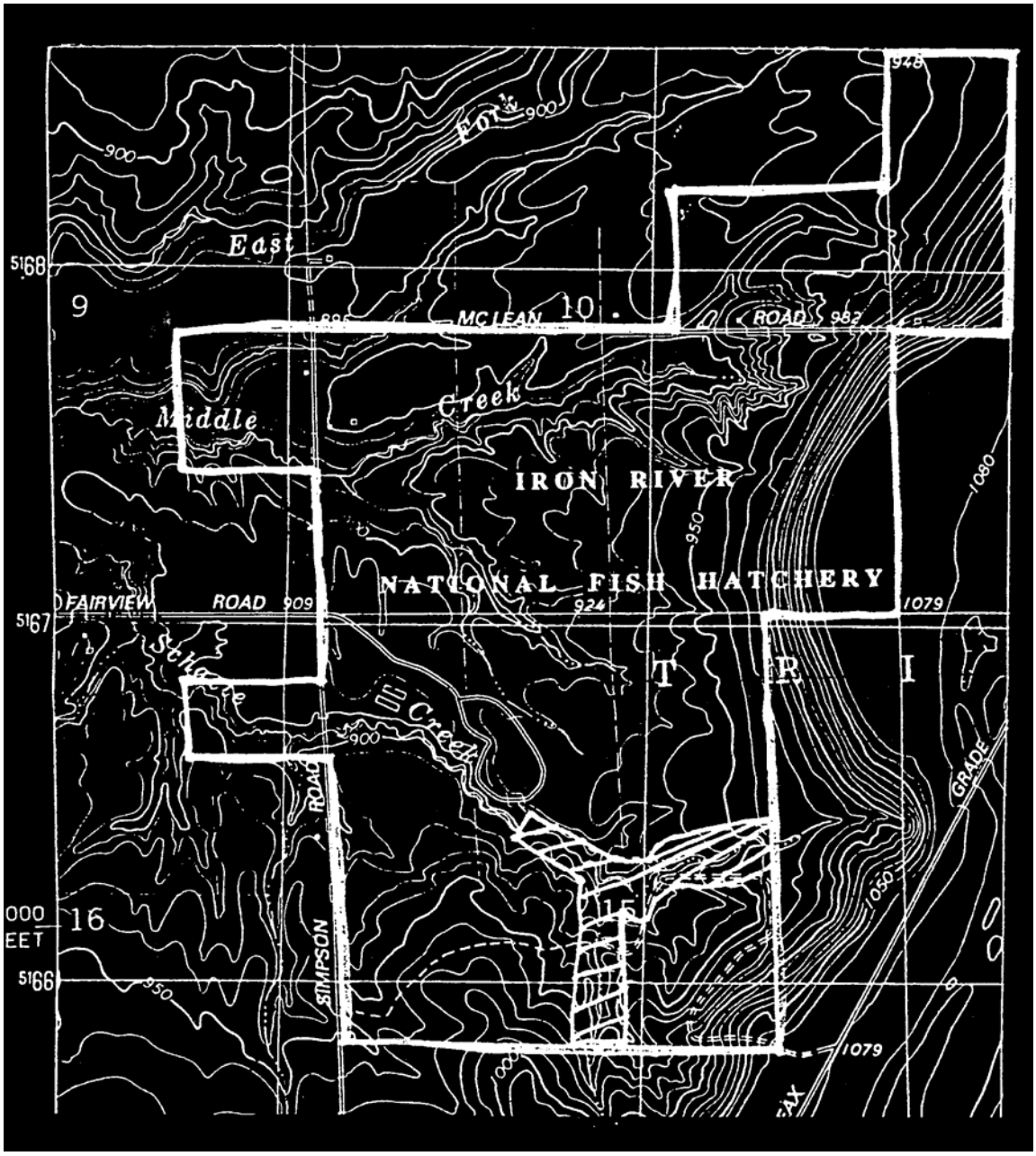
The topography of the hatchery property is characterized by gently to steeply sloped hillsides and numerous natural drainages that lead into Middle and Schacte Creeks. The steepest slopes are found near the east boundary where the sand plains drop into the hatchery watershed.

Water resources associated with the hatchery include Middle and Schacte Creeks, the primary hatchery water supply. There are areas of semi permanent water adjacent to both streams. All of the drainage is to the Iron River and then to Lake Superior, approximately 9 miles north of the hatchery. A Wisconsin Pollutant Discharge Elimination System Permit allows the discharge of effluent into ~~Schacte Creek.~~ Sedimentation and monitoring facilities insure discharge water

meets the permit restrictions. Water quality is not expected to be affected by operations under this plan.

The area is rated as Class II air quality. This means that actions under the plan will be designed to prevent significant deterioration in air quality.

Figure 2 - Topography and Critical Watershed


East
Middle
Creek
IRON RIVER
NATIONAL FISH HATCHERY
MC LEAN
ROAD
FAIRVIEW
ROAD
Schaefer
Creek
SIMPSON
GRADE
T
R
I
5168
5167
5166
9
10
16
900
950
1050
1079
1080
924
909
982

STRUCTURES AND FACILITIES

There are several structures, primarily dwellings on adjacent lands to the north and west of the hatchery property. On the north, the buildings are located in the wildland fuels and subject to loss during a fire. Those buildings on the west are located in open areas and are more defensible. The hatchery buildings are generally in the open and easily defensible.

Table 1 lists the structures on the hatchery.

Table 1 - Hatchery Facilities

Facility	Value
Hatchery/Office Building	4,921,078
Influent Water Sample Building	68,149
Effluent Water Sample Building	114,664
Water Intake #1 - Schacte Creek	51,923
Water Intake #2 - Schacte Creek	51,923
Water Intake #3 - Schacte Creek	51,923
Water Intake #4 - Middle Creek	51,923
Fish Barrier #1 - Schacte Creek	77,885
Fish Barrier #2 - Schacte Creek	77,885
Pipeline Access - Schacte Creek	259,616
Broodstock Facility Raceways - Schacte Creek	722,599
Effluent Lagoon #1 & #2 - Schacte Creek	418,632
Water Pipelines	1,936,306
Hatchery Sign	16,226
Production Facility (Schacte Creek) Raceways	1,982,821
Residence and Garage # 23	151,443
Residence and Garage # 24	151,443

Facility	Value
Residence and Garage # 25	151,443
Broodstock Facility Dome - Schacte Creek	719,354
Production Facility Dome - Schacte Creek	2,133,600
Sediment Tank Structure	27,805
Garage/Storage Building - Schacte Creek	703,353
Total Value -Hatchery Structures	14,841,994

WILDLAND FIRE MANAGEMENT SITUATION

HISTORIC ROLE OF FIRE

The only fire history available for the hatchery relates to two prescribed fires conducted by WIDNR in June, 1987 as part of a native grass restoration project. No unwanted wildland fires have been recorded since the start of acquisition in 1976. It is likely that fire affected hatchery habitats in the past, however, generalizations based on knowledge of the silvicultural needs of the various forest tree species must be used to determine fire's role.

On the moister sites the pre-settlement forest probably consisted of the mixed northern hardwood-conifer type (Mladenoff, et al, 1993). Along the east boundary the likely forest type was a sparsely stocked jack pine forest (Vora, 1993).

Pre-settlement fires

The natural fire interval is unknown. However, based on similar habitats in northern Wisconsin with some fire history available, the following assumptions may be made. On the sand plain east of the hatchery a fire return interval of 50-80 years would be reasonable. At lower elevations of the hatchery the natural fire return interval could range from 200-400 or more years.

Based on the assumptions above, the fire regime on the sand plains may have been driven by lightning during drier than average periods. On lower sites drought coupled with ignition by lightning or fire movement from a more fire prone habitat (sand plains) probably define the fire regime.

Post-settlement Fire History

Fire suppression or exclusion began when logging activities became prevalent in the area, about 1880. In the northern portions of the Lakes States fires frequently followed logging. Examples include the Pestigo Fire (1871) and the Hinkley Fire (1894). Many other fires are mentioned in numerous diaries and journals kept by the early European settlers. Attempts at farming frequently followed logging and fires from land clearing and slash burning were common.

Northern Wisconsin typically has a split fire season. The first part is in the spring from the time snow disappears until vegetation has begun its growth (greenup). This part of the fire season usually runs from mid-April until late May or early June. A fall season occasionally follows the growing season if conditions are sufficiently dry. The first frost cures remaining fine fuels and this season may last until snow cover is on the ground. Growing season statistics for the area indicate a 90 day growing season on average.

Since the end of the logging era, most of the area in the hatchery watershed has been farmed so fires were quite uncommon. Because the hatchery, by its nature, lies mostly on low ground, fire occurrence is expected to continue as an extremely rare event. With hunting allowed, primarily in the fall, possible ignitions would be expected to be human-caused, likely from warming fires or smoking material disposal.

Prescribed fire history

As mentioned above, there were two prescribed fire conducted in June, 1987 to enhance a native grass restoration project. None have been conducted since and none are planned as the forest lands are more desirable for old-growth habitat to benefit neotropical migrants and other wildlife species needing old growth forests. Opening maintenance has been by means of haying permits and hatchery mowing.

RESPONSIBILITIES

There is no fire management staff at Iron River National Fish Hatchery. The Project Leader is responsible for planning and implementing the fire management program on the Hatchery. A Zone Fire Management Officer (FMO) located at the Leopold Wetland Management District in Portage, WI is responsible for fire management program oversight.

Pre-suppression planning and work is accomplished with resources and guidance provided by the Zone FMO. Emergency fire management actions will be handled by WIDNR as they have a legal responsibility for wildland fire suppression under state law. The Zone FMO will be immediately notified of all emergency actions.

Project Leader (PL)

- Is responsible for implementation of all fire management activities within the unit and will ensure compliance with Department and Service policies.
- Selects the appropriate management responses to wildland fire.
- Identifies preparedness projects and biological objectives to Fire Management Officer (FMO) and notifies FMO of project constraints.
- Acts as the primary Hatchery Resource Management Specialist during fire management planning and operations.

Zone Fire Management Officer (FMO)

- Responsible for all fire-related planning and implementation for the Hatchery. Integrates biological objectives into all fire management planning and implementation.
- Solicits program input from the PL.
- Supervises preparedness project planning.
- Coordinates with cooperators to ensure adequate resources are available for fire operational needs.
- Is responsible for implementation of this Plan.
- Is responsible for preparation of fire reports following the suppression of wildland fires and for preparedness projects requiring such..
- Prepares an annual report detailing fire occurrences and preparedness activities undertaken in each calendar year. This report will serve as a past year's fire management activities review, as well as provide documentation for development of a comprehensive fire history record for the Hatchery.
- Submits budget requests and monitors FIREBASE funds.
- Maintains records for all personnel involved in suppression and preparedness activities, detailing the individual's qualifications and certifications for such activities.
- Updates all fire qualifications for entry into the Fire Management Information System.
- Nominates personnel to receive fire-related training, as appropriate.

Incident Commander

- Incident Commanders (of any level) use strategies and tactics as directed by the Project Leader and a Wildland Fire Situatuion Analysis (WFSA), where applicable, to implement selected objectives on a particular incident. A specific Limited Delegation of Authority (Appendix C) will be provided to each Incident Commander prior to assuming responsibility for an incident. Major duties of the Incident Commander are given in the National Wildfire Coordinating Group (NWCG) Fireline Handbook, including:
- Brief subordinates, direct their actions, and provide work tools.
- Ensure that safety standards identified in the Fire Orders, the Watch Out Situations, and agency policies are followed at all times.
- Personally scout and communicate with others to be knowledgeable of fire conditions, fire weather, tactical progress, safety concerns and hazards, condition of personnel, and needs for additional resources.
- Order resources to implement the management objectives for the fire.
- Inform appropriate dispatch of current situation and expected needs.
- Coordinate mobilization and demobilization with dispatch and the Collateral FMO.
- Perform administrative duties, i.e., approving work hours, completing fire reports for command period, maintaining property accountability, providing or obtaining medical treatment, and evaluating performance of subordinates.
- Assure aviation safety is maintained to the highest standards.

Initial attack modules

An initial attack module will not be assembled at this field station due to low fire occurrence and staff limitations.

Employees participating in any wildland fire activities on Fish and Wildlife Service or cooperators' lands will meet fitness requirements established in PMS 310-1, except where Service-specific fitness requirements apply.

INTERAGENCY COORDINATION

The State of Wisconsin has primary responsibility for wildland fire suppression on hatchery lands. There is an agreement between WIDNR and U.S. Forest Service which assigns initial attack responsibility in a 1 mile wide zone adjacent to Forest Service lands to the Forest Service. Upon completion of the acquisition of the 320 acre parcel, the hatchery will abut USFS lands and that portion of the hatchery will be protected by the Forest Service. A table of cooperators and agreements is found below

Table 2 - Cooperator List

Cooperator	Agreement Type
WI Department of Natural Resources	None, Statutory
U.S. Forest Service	None

Iron River VFD (Structure Protection)	None, Statutory

Initial attack actions within the mile zone are considered mutual aid and are not reimbursed. Structure fires are the responsibility of the Iron River Volunteer Fire Department. This department is primarily tax funded and costs are not charges to the property owner.

If needed, Iron River National Fish Hatchery will use the Incident Command System (ICS) as a guide for fireline organization. Qualifications for individuals is per DOI Wildland Fire Qualifications and Certification System, part of NIIMS and the National Wildland Fire Coordination Group (NWCG) Prescribed Fire Qualification Guide.

PROTECTION OF SENSITIVE RESOURCES

A critical consideration during suppression operations is the use of foams or other retardants near water sources for the hatchery. Fish have been shown to be extremely sensitive to the presence of these agents (Gaikowski et al, 1996). An agreement with both WIDNR and USFS to enumerate restrictions on retardant use is needed. Environmental guidelines for foam or retardant use, taken from a paper published by the Forest Service's Missoula Technology and Development Center, are found in Appendix L.

Water quality considerations should drive every facet of a wildland fire suppression operation on hatchery lands. Use of heavy equipment for fireline installation is restricted to those areas of the hatchery property downstream from the ponds and raceways. There are four intake structures; three on Schacte Creek and one on Middle Creek. In addition there are two fish barriers on Schacte Creek and underground waterlines from the creeks to the hatchery proper.

It is unlikely that any wildlife resources will be affected more than temporarily by smoke and the flame front. Vegetation may be affected by fire; the effects will depend on fire intensity, rate of spread, condition of fuels and other factors (Schramm, et al, 1983, Kelleyhouse, 1979).

Hatchery staff will be available to show critical areas that could be adversely affected by either fire or suppression operations, staff would act as resource advisor to the Incident Commander.

Preparation for prescribed fires such as constructing fire lines are subject to Section 106 of the National Historic Preservation Act. The procedures in the Notice dated December 8, 1999, "Historic Preservation Responsibilities," apply to the planning and preparation for conducting prescribed fires.

Efforts to control wildland fires (including prescribed fires that get out of control) are also subject to Section 106 of the National Historic Preservation Act. We will meet our obligations under this act in the following ways:

When the land covered by a wildfire has been inventoried to identify cultural resources, and the cultural resources have been evaluated for significance according to the criteria for the National Register of Historic Places, the Fire Management Officer will direct ground disturbing fire suppression efforts around (will avoid impacting) historic properties. Nevertheless, evidence of a previously undetected cultural resource may be encountered. The project leader shall immediately notify the Regional Historic Preservation Officer (RHPO). The RHPO will take immediate steps to have the cultural resource evaluated and protected, as appropriate, to the extent required by law and policy. This may require

arranging for a qualified professional to visit and evaluate the site's importance and recommend a course of action. An evaluation and decision on the disposition of the cultural resource should be made within 48 hours of the discovery unless the project's schedule allows greater flexibility.

When the land covered by a wildfire has *not* been inventoried for cultural resources and wildfire suppression activities do result in ground disturbing activities, we will take the following action. Soon after fire control, the project leader will contact the RHPO to arrange for an archeologist to investigate the disturbed areas to determine if sites were affected.

Hatchery operations and maintenance funds will pay the cost of these activities unless the action is an emergency archeological and historic property survey in unstable areas prone to further degradation (i.e., erosion) following a wildland fire or in association with an emergency fire rehabilitation treatment. Emergency archeological and historic property surveys in unstable areas prone to further degradation (i.e., erosion) following a wildland fire or in association with an emergency fire rehabilitation treatment, and archeological, historic structure, cultural landscape, and traditional cultural property resource stabilization and rehabilitation can be funded with emergency rehabilitation funding.

Impacts to archeological resources by fire vary. The four basic sources of damage are (1) fire intensity, (2) duration of heat, (3) heat penetration into soil, and (4) suppression actions. Of the four, the most significant threat is from equipment during line construction for wildland fire holding actions.

The following actions will be taken to protect archeological and cultural resources:

Wildland Fires

- Minimum impact fire suppression tactics will be used to the fullest extent possible.
- Foam use will be minimized in areas known to harbor surface artifacts.
- Resource Advisors will inform Fire Suppression personnel of any areas with cultural resources and should contact the Regional Historic Preservation Officer and/or his/her staff for more detailed information.
- Mechanized equipment should not be used in areas of known cultural significance.
- The location of any sites discovered as the result of fire management activities will be reported to the Regional Historic Preservation Officer.
- Rehabilitation plans will address cultural resources impacts and will be submitted to the Regional Historic Preservation Officer for review.

WILDLAND FIRE ACTIVITIES

Fire program management describes the operational procedures necessary to implement fire management at Iron River National Fish Hatchery. Program management includes: fire prevention, preparedness, emergency preparedness, fire behavior predictions, step-up staffing plan, fire detection, fire suppression, minimum impact suppression, minimum impact rehabilitation, and documentation.

All fires will be appropriately suppressed. As this station has no fire history since start of acquisition, a full suppression response will be the usual practice.

Records from WIDNR show that fire season is typically from mid-April to late May or early June and then from mid-September to snowfall, usually mid-November. Depending on the specific weather of any particular year the seasons may be shorter or longer and, therefore, may start earlier or last longer.

FIRE MANAGEMENT STRATEGIES

Although resource impacts of suppression alternatives must always be considered in selecting a fire management strategy, managing fire for resource benefit will not be the primary consideration. Appropriate suppression action will be taken to ensure firefighter safety, public safety, and protection of unit resources.

Critical protection areas, such as the headwaters and water intake areas for the hatchery will receive priority consideration in fire suppression planning efforts. In all cases, the primary concerns of fire suppression personnel shall be safety, and if needed, all individuals not involved in the suppression effort may be evacuated.

Suppression strategies should be applied so that the equipment and tools used to meet the desired objectives are those that inflict the least impacts upon the natural and cultural resources. Minimum impact suppression tactics (MIST) will be employed to protect all resources. Natural and artificial barriers will be used as much as possible for containment. When necessary, fire line construction will be conducted in such a way as to minimize long-term impacts to resources. Sites impacted by fire suppression activities or by the fire will be rehabilitated as necessary, based on an approved course of action for each incident.

Specific fire management strategies for Iron River National Fish Hatchery are:

- All wildland fires will be controlled using the appropriate suppression strategy which considers safety, property, natural resources, and economics.
- Priority will be given to the protection of hatchery water supplies and facilities for water collection.
- Mechanical treatment will be used to reduce hazardous fuels around structures and improvements as needed.
- Known cultural resource areas will be excluded from all fire management activities including fire line location, retardant drops, and adverse fire effects.

PREPAREDNESS

Preparedness is the work accomplished prior to fire occurrence to ensure that the appropriate response, as directed by the Fire Management Plan, can be carried out. Preparedness

activities include: budget planning, equipment acquisition, equipment maintenance, dispatch (Initial attack, extended, and expanded), equipment inventory, personnel qualifications, and training. The preparedness objective is to have a well trained and equipped fire management organization to manage all fire situations within the hatchery. Preparedness efforts are to be accomplished in the time frames outside the normal fire season dates.

Historical weather analysis

The hatchery has no weather station. Weather history (Figure 3) comes from National Oceanic and Atmospheric Administration (NOAA) records at Ashland, WI. The normal fire season as determined by WIDNR extends from mid-April to late May. Occasionally, a fall season will occur in late September extending into late October.

Figure 3 - Ashland, WI Climatology

There is no occurrence data for the hatchery as no wildland fires have occurred since establishment.

Fire Prevention
An active fire prevention program will be conducted, as needed, in conjunction with other agencies to protect human life and property, and prevent damage to cultural resources or physical facilities.

A program of internal and external education regarding potential fire danger may be implemented. Visitor contacts, bulletin board materials, handouts and interpretive programs can be utilized to increase visitor and neighbor awareness of fire hazards.

During periods of extreme or prolonged fire danger emergency restrictions regarding hatchery operations, or area closures may become necessary. Such restrictions, when imposed, will usually be consistent with those implemented by cooperators.

Hazard Reduction for Structure Protection
Hazard reduction is conducted to prevent wildland fires from spreading onto structures owned by the FWS. Because most structures subject to fire damage are located in the open, mowed portions of the facility, little protection is necessary. Defensibility is good to excellent.

Staffing Priority Levels
As no weather station is present on the property and there is no suppression capability on staff a limited Step-up Plan (Appendix H) has been developed.

It is expected that during periods of extreme fire danger as determined by nearby agencies, visitors would be warned of the risk of fire and access to remote portions of the unit would be restricted.

Training
Departmental policy requires that all personnel engaged in suppression and prescribed fire duties meet the standards set by the National Wildfire Coordinating Group (NWCG). Iron River National Fish Hatchery will conform strictly to the requirements of the wildland fire management qualification and certification system and USFWS guidelines.

Basic wildland fire training refreshers are offered annually for red-carded firefighters and records kept in a centralized database. Additional training is available from surrounding agencies in pump and engine operation, power saws, firefighter safety, fire weather and fire behavior, and helicopter safety. On-the job training is encouraged and will be conducted at the field level. Whenever appropriate, the use of fire qualification task books will be used to document fire experience of trainees. The FMO will coordinate fire training needs with those of other nearby FWS units, cooperating agencies, and the RO.

Fire suppression is an arduous duty. Poor physical condition of crew members can endanger safety and lives during critical situations. Personnel performing fire management duties will maintain a high level of physical fitness. This requires successful completion of a fitness pack test. Appendix K contains a brief explanation of the physical testing requirements.

Supplies and Equipment

There are no suppression tools or equipment on the hatchery except those handtools usually available (shovels, rakes, etc.). As no one on the hatchery is trained for fire operations none of the personnel are equipped with Personal Protective Equipment.

DETECTION

Fires located by hatchery staff would be reported to either WIDNR in Brule, or to USFS in Washburn. Fires detected by visitors would be reported in the same manner. As needed, WIDNR and USFS may have aerial detection flights. In addition, WIDNR staffs several fire towers in the area.

The Fire Management Plan does not discriminate between human-caused and lightning caused fire. All wildland fires will be suppressed. However, detection shall include a determination of fire cause. Moreover, human-caused fires will require an investigation and report by law enforcement personnel. For serious human-caused fires, including those involving loss of life, a qualified arson investigator will be requested. Qualified investigators are available from either WIDNR or USFS.

COMMUNICATIONS

The hatchery has no land based radio system. Several distribution vehicles have radios capable of vehicle to vehicle contact, none of these radios is adequate for fire use. Cellular phone coverage around the hatchery is poor. Communications would be expected to be provided by the responding agency with their frequency sharing agreements in place.

PRE-ATTACK PLAN

Upon discovery of a fire, all subsequent actions will be based on the following:

- The Incident Commander (IC) will locate, size-up, and coordinate suppression actions.
- Provide for public safety.
- Considering the current and predicted fire conditions, the Incident Commander will assess the need for additional suppression resources and estimate the final size of the fire. The potential for spread outside of the hatchery should be predicted, as well as the total suppression force required to initiate effective containment action at the beginning of each burning period.
- The Incident Commander will assess the need for law enforcement personnel for traffic control, investigations, evacuations, etc. and make the request to the FMO.
- Document decisions and complete the fire report (DI-1202).
- Should a wildland fire move into an extended attack a Delegation of Authority will be invoked. Once a Delegation of Authority has been authorized the Incident Commander will make the final decisions pertaining to the fire. A copy of Delegation of Authority is in Appendix C.

FIRE MANAGEMENT UNITS

There is only one Fire Management Unit (FMU) on the hatchery. It is all encompassing.

Due to staff limitations, relatively small land area, long response times, valuable resources, and values at risk on neighboring lands, this plan does not recommend wildland fire managed for resource benefit as an option for the unit. Wildland fires will be suppressed using the appropriate suppression response.

Fire Effects
Fire effects are expected to be limited due to the mostly moist conditions found on the hatchery. Effects on forest vegetation are not expected to be severe unless significant drought conditions are present. Areas that are grass covered would recover within a growing season or less depending on the time of fire occurrence.

Effects of fire on wildlife may be divided into two categories. Large mammals are not likely to be affected as they are highly mobile and most fires in the area would be expected to be relatively slow moving. Smaller mammals and reptiles may be more subject to fire because of limited mobility. Most reptiles would be in wetter areas or burrows where temperatures are cooler. Effects on small mammals would be more pronounced in the grass fuels and in the ecotone between grass and forest or brush fuels where escape is difficult. Some small mammals such as field mice and voles may be caught by the flame front but mortality is not expected to be heavy. Regeneration of vegetation provides an excellent habitat for these small species and natural reproduction will quickly repopulate the area.

Fuel Types
Northern Hardwoods - this type is best represented by Northen Forest Fire Laboratory (NFFL) fuel models 8 and 10. This fuel covers most of the hatchery property and consists of litter and understory growth with a 65 to 90 % crown closure. Species found in this fuel complex include aspen (*Populus spp*.), red maple (*Acer rubrum*), black ash (*Fraxinus nigra*), red oak (*Quercus rubra*) and others requiring mesic sites.

Pine-Hardwood - this type is best represented by NFFL fuel model 8. Most of this type is found on the east edge of the hatchery along the sand plain edge and upper slopes of Schacte and Middle Creeks. Jack pine (*Pinus banksiana*), red pine (*Pinus resinosa*), white pine (*Pinus strobus*), aspen and red oak.

Grass - represented by fuel model 3, the grass on the hatchery is a remnant of the farms that covered the area after logging. Species represented include timothy (*Phleum pratense*), alfalfa (*Medicago satavia*) and fescue (*Festuca spp*.). There are some individual spots of restored native grasses from the mid-1980's, species composition is unknown.

Lowland brush - represented best by fuel model 5, the site is wet and contains primarily of Alder (*Alnus spp*.) and willows (*Salix spp*.)

Fire Behavior
Normal fire behavior in the forest fuels on the hatchery would be slow moving with minimal (1-2') flame lengths. Areas with a high percentage of pine would be expected to burn somewhat faster, with longer flame length and more heat output. The grass areas would see flame lengths of 1-3' with a rapid spread component depending on the stage of curing. Under normal conditions, the brush areas would see some creeping fire on higher areas, otherwise the type is wet enough to not support fire.

Extreme fire behavior in the hardwood areas would see flame lengths of 2-4 feet with potentially rapid spread depending on the season and condition of the litter layer. During the fall with cured fuels, flame lengths could run to 6+ feet with rates of spread high enough to require

indirect attack. The areas with a high percentage of pine could see flame lengths of 4-6' with the potential of crown fire development.

SUPPRESSION TACTICS

Suppression involves a wide range of possible tactics from the initial attack to final control. To this end, all wildland fires will be suppressed in a safe, aggressive, and cost-effective manner to produce efficient action with minimal resource damage and limit smoke impacts to local communities.

Typical initial attacks will include engine and tractor plow with 2 or 3 firefighters. Depending on local conditions, WIDNR or USFS may dispatch additional personnel and/or equipment. All fires will be assessed by the first on-scene incident commander and attacked using minimum impact fire suppression tactics for the hatchery. Roads and natural barriers will be used as much as possible to reduce fireline construction. Fireline and mop-up through riparian areas should consider long-term damage to water quality and vegetation. Unnecessary cutting and bucking should be replaced with alternative actions whenever possible. Back-fires and burnout operations should consider head fire intensities and attempt to avoid heating the soil or running fire into riparian areas. Where wildland fires cross roads, the burned area adjacent to the road should be mopped up and dangerous snags felled.

Due to the size of the hatchery and the difficulty in maintaining the boundaries to be easily seen, the following restriction on foam/retardant use will be presented to the IC: Foam or retardant will not be used within the area bounded by Wiedenaar Rd. to the west, McLean Rd. to the north and the Battleaxe Grade between the two roads to the east. Specific requirements and exceptions can be provided by hatchery staff on an individual incident basis.

In addition to the consultation with the Project Leader or their representative, a resource advisor should be assigned to the incident from the beginning to document rehabilitation needs, and also assist with on-the-ground tactical decisions.

There will be only one Incident Commander responsible through the FMO to the project leader. The Incident Commander will designate all overhead positions on fires requiring extended attack. Reference should be made to a Delegation of Authority (Appendix C).

Suppression Conditions

A full suppression alternative was selected for the hatchery which requires containment and control of all wildland fires. Certain guidelines have been developed to assist with this strategy to protect the hatchery from unnecessary damage. Heavy equipment and aircraft/retardant use is restricted due to cultural, wildlife, and safety concerns. Unless life or property is at imminent risk, consultation with the hatchery manager or their representative prior to their use is necessary. This decision is based on the fact that water quality to supply the hatchery is critical to both hatchery operations and restoration of lake trout stocks. Issues of restrictions should be discussed with cooperators annually. Changes and areas of concerns should be documented.

Wildland Fire Situation Analysis

For fires that cannot be contained in one burning period, a WFSA must be prepared. In the case of a wildland fire, the Project Leader, in conjunction with the FMO, will prepare the WFSA. Approval of the WFSA resides with the Project Leader.

The purpose of the WFSA is to allow consideration of alternatives by which a fire may be controlled. Damages from the fire, suppression costs, safety, and the probable character of suppression actions are all important considerations. A sample WFSA is found in Appendix J.

Public safety will require coordination between all hatchery staff and the IC. Notices should be posted to warn visitors, trails may be closed, traffic control will be necessary where smoke crosses roads, etc. Where wildland fires cross roads, the burned area adjacent to the road should be mopped up and dangerous snags felled. Every attempt will be made to utilize natural and pre-constructed barriers, including changing fuel complexes, in the control of wildland fire. Rehabilitation efforts will concentrate on the damages done by suppression activities rather than on the burned area itself.

Aircraft Operations

Aircraft may be used in all phases of fire management operations. All aircraft must be Office of Aircraft Services (OAS) or Forest Service approved. An OAS Aviation Policy Department Manual will be provided by OAS.

Helicopters may be used for reconnaissance, bucket drops and transportation of personnel and equipment. Natural helispots and parking lots are readily available in most cases. Clearing for new helispots should be avoided where possible. Improved helispots will be rehabilitated following the fire.

As in all fire management activities, safety is a primary consideration. Qualified aviation personnel will be assigned to all flight operations.

REHABILITATION AND RESTORATION

There are 3 types of fire rehabilitation, Suppression, Burn Area, and Emergency Stabilization.. Suppression rehabilitation is to restore and repair property and resources from direct suppression activity damage, i.e. cut fences, dozer lines, and campsites. Burn area rehabilitation and stabilization is to restore resources and property damaged or otherwise impacted from the fire, i.e. burned waterlines, denuded hill sides, etc.

Suppression Rehabilitation

In the event of a wildland fire, rehabilitation of fire suppression damage should be accomplished immediately. An appropriate time is within 7 days after the fire is controlled unless the regional fire coordinator grants an extension. Funding for suppression rehabilitation is from the specific fire cost account as established by the FMO. The Incident Commander as agreed to by the Project Leader will initiate suppression rehabilitation. Rehabilitation will be directed toward minimizing or eliminating the effects of the suppression effort and reducing the potential hazards caused by the fire. These actions may include:

- Backfill control lines, scarify, and seed*.
- Install water bars and construct drain dips on control lines to prevent erosion.
- Restore natural ground contours, which were altered.
- Remove all flagging, equipment and litter.

- Completely restore camping areas and improved helispots.
- Re-vegetation to restore sensitive impacted areas due to suppression actions*.

*If re-vegetation or seeding is necessary, only locally procured seeds of native plant species will be used.

A written suppression rehabilitation plan may be appropriate on larger incidents. Contractors or equipment may be hired to accomplish specialized work.

Emergency Stabilization Versus Rehabilitation
Emergency stabilization is the use of appropriate emergency stabilization techniques in order to protect public safety and stabilize and prevent further degradation of cultural and natural resources in the perimeter of the burned area and downstream impact areas from erosion and invasion of undesirable species. Rehabilitation is the use of appropriate rehabilitation techniques to improve natural resources as stipulated in approved management plans and the repair or replacement of minor facilities damaged by the fire.

Total "rehabilitation" of a burned area is not within the scope of the Emergency Rehabilitation funding. Emergency Rehabilitation funding can be used to begin the rehabilitation process if other funding is committed to continue the rehabilitation throughout the life of the project (beyond the initial 3 years of Emergency Rehabilitation funding). Major facilities are repaired or replaced through supplemental appropriations of other funding.

Burned Area Emergency Stabilization and Rehabilitation (ESR) Plan
The goal of the ESR Plan is to protect public safety and stabilize and prevent further degradation of natural and cultural resources, and to rehabilitate the stability, productivity, diversity, and ecological integrity of Service lands after a wildland fire as described in approved management plans. The ESR Plan is tiered to the hatchery Integrated Resources Management Plan and Fire Management Plan (FMP). Development of ESR Plan objectives is guided by resource management objectives, general management practices, and constraints identified in approved plans.

If Burned Area Emergency Stabilization and Rehabilitation is required to reduce the effects of a wildland fire, then the hatchery should request appropriate funding through the Burned Area Emergency Stabilization and Rehabilitation (ESR) fund. The Service representative at the National Interagency Fire Center administers the ESR fund. A rehabilitation and restoration survey, plan, and request must be prepared and submitted according to agency guidelines. Smaller incidents may only need simple plans prepared by local staff. Larger incidents with extensive rehabilitation efforts should employ a ESR Team. A ESR Team is composed of personnel who specialize in key disciplines of resource management and are experts in ESR Plan preparation. A formal request for a ESR Team should be made in consultation with the Incident Management Team as soon as it appears damage may be significant. Instructions for ESR Team mobilization can be found in the National Wildfire Coordinating Group mobilization guide. Delays in making a request may hinder funding approval and magnify the damage. Once a ESR Team is employed, the Project Leader or their representative should provide guidance to the ESR team leader with expectations. The Project Leader and FMO will review all ESR Plans. The final plan will be submitted to the Region for review prior to submission to the WO.

Direction on ESR guidelines can be found in the Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook.

REQUIRED REPORTING

The IC will be responsible for documenting decisions and providing information to the Project Leader to complete the fire report (DI-1202). The FMO will be responsible for any additional required reports.

FIRE INVESTIGATION

Fire management personnel will attempt to locate and protect the probable point of origin and record pertinent information required to determine fire cause. They will be alert for possible evidence, protect the scene and report findings to the fireline supervisor.

Prompt and efficient investigation of all suspicious fires will be carried out. However, fire management personnel should not question suspects or pursue the fire investigation unless they meet state requirements for WIDNR investigators or federal standards for federal investigators. All fire investigations should follow the guidelines outlined in 4.1-2 of the Fire Management Handbook (2002).

FIRE RESEARCH

No fire related research is occurring on the hatchery and none is planned.

PUBLIC SAFETY

Iron River National Fish Hatchery is dedicated to ensuring the safety of each visitor and to all residents and property adjacent to the hatchery boundary. Trails allowing access to interior portions of the hatchery may be closed. Much of the access to the hatchery does occur along public roads. If necessary, signs could be posted along the boundary on public roads, however, there is not sufficient staff to supervise any closure of that nature.

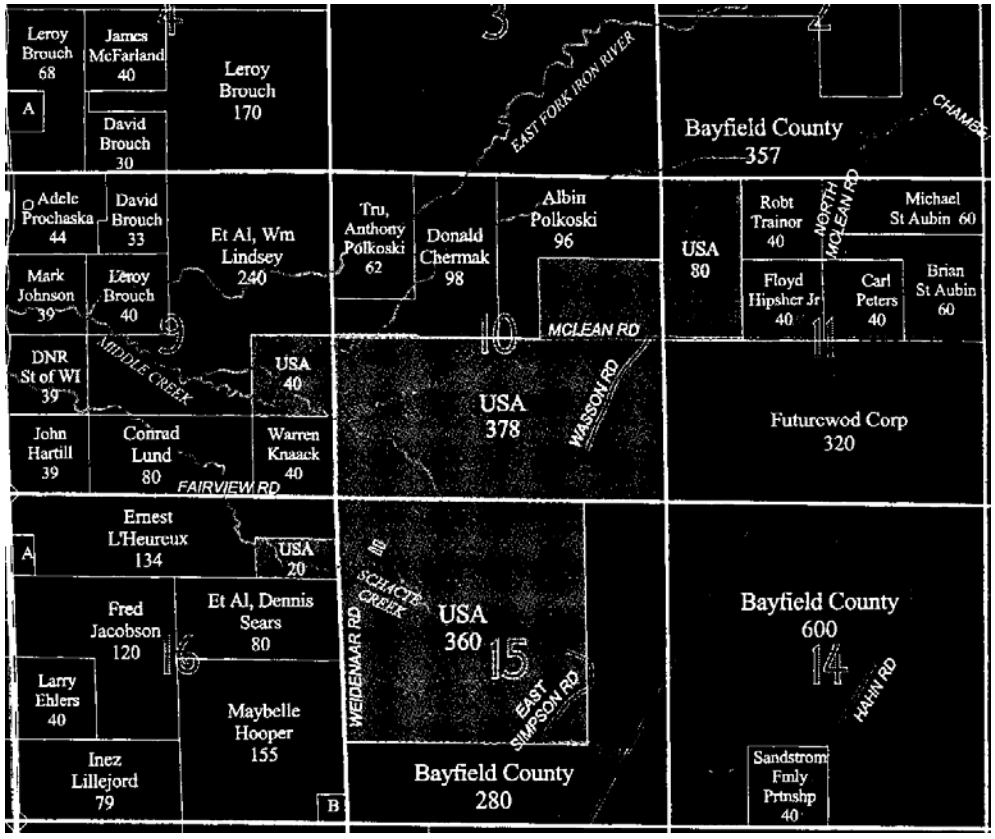
Interior access can be controlled more effectively but would not restrict those members of the public determined to enter the property.

Areas of fire activity will be clearly signed at visitor contact points.

A contact list for adjacent landowners is found in Appendix E. The county platbook map of adjacent owners is found in Figure 4, below.

A first aid kit will be on-site for wildland fires. The local police, fire, and emergency medical services will be notified of any wildland fires.

Figure 4 - Map of Adjacent Landowners



PUBLIC INFORMATION AND EDUCATION

The public information program will be developed as follows:

- The fire management program may be incorporated into visitor contacts. Particular attention will be given when fires are conspicuous from roads or visitor use areas.
- News releases will be distributed to the media as appropriate.
- The public information outlets of neighboring and cooperating agencies and the regional office will be provided with all fire management information.
- The fire management program will be discussed in informal talks with all employees , volunteers, residents, and neighbors.

During wildland fire events, on-site information will be provided to alleviate visitor concern about the apparent destruction of resources by fire or the impairment of visitor activities due to temporary smoke.

As outlined in the prevention section, emergency closures or restrictions may become necessary during periods of extreme or extended fire danger.

FIRE CRITIQUES AND ANNUAL PLAN REVIEW

FIRE CRITIQUES

Fire reviews will be documented and filed with the final fire report. The FMO will retain a copy for the hatchery files.

ANNUAL FIRE SUMMARY REPORT

The FMO will be responsible for completing an annual fire summary report. The report will contain the number of fires by type, acres burned by fuel type, cost summary, personnel utilized, and fire effects.

ANNUAL FIRE MANAGEMENT PLAN REVIEW

The Fire Management Plan will be reviewed annually. Necessary updates or changes will be accomplished prior to the next fire season. Any additions, deletions, or changes will be reviewed by the Project Leader to determine if such alterations warrant a re-approval of the plan.

CONSULTATION AND COORDINATION

The following agencies, organizations and/or individuals were consulted in preparing this plan.

Bast, Dale, Project Leader, Iron River National Fish Hatchery
Gale, Cal, Program Analyst, RS Staffing Services, Inc.
Zellmer, Tom, Zone FMO, USFWS, Leopold WMD

APPENDICES

APPENDIX A: REFERENCES CITED

Ableiter, J.K. 1961. Soil survey of Bayfield County, Wisconsin. U.S.D.A. in Cooperation with the Wisconsin Geological and Natural History Survey, Soil Survey Division. .

Craven, S. 1985. Wisconsin woodlands: Wildlife management. University of Wisconsin-Extension, Department of Agricultural Journalism, University of Wisconsin- Madison. Publication No. G3097.

Curtis, J .T ..1959. The vegetation of Wisconsin. University of Wisconsin Press, Madison, Wisconsin.

Gaikowski, Mark P., Steven J. Hamilton, Kevin J. Buhl, Susan F. McDonald, and Cliff Summers.. 1996. Acute toxicity of firefighting chemical formulations to four life stages of fathead minnow. Ecotoxicolog and Environmental Safety. 34(0070):252-263. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/fireweb/fathminn/fathminn.htm (Version 02MAR98).

Gullion, G. W .1984. Managing northern forests for wildlife. Publication No.13,442, Miscellaneous Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minnesota.

Iron River National Fish Hatchery. 1995. Integrated Resoource Management Plan. 46 pp.

Johannes, S.I., L.M. Sather, and C. W .Threinen. 1970. Surface water resources of Bayfield County. Wisconsin Department of Natural Resources Madison, Wisconsin.

Kelleyhouse, David G. 1979. Fire/wildlife relationships in Alaska. In: Hoefs, M.; Russell, D., eds. Wildlife and wildfire: Proceedings of workshop; 1979 November 27-28; Whitehorse, YT. Whitehorse, YT: Yukon Wildlife Branch: 1-36.

Kuester, L. 1980. Management proposal for sharp-tailed grouse at the Iron River National Fish Hatchery, U.S. Fish and Wildlife Service unpublished report, St. Cloud, Minnesota.

Mladenoff, D. I., and I. Pastor. 1993. Sustainable forest ecosystems in the northern hardwood and conifer forest region: concepts and management. Pages 145-180 m H.A. Aplet, et al. eds. Defining sustainable forestry. The Wilderness Society, Island Press, Washington D.C.

Sand, C. and I. Kampa. 1990. Iron River system survey, Bayfield County 1989-1990. Wisconsin Department of Natural Resources, Brule Area Headquarters.

Schramm, Peter; Willcutts, Brian J. 1983. Habitat selection of small mammals in burned and unburned tallgrass prairie. In: Brewer, Richard, ed. Proceedings, 8th North American prairie conference; 1982 August 1-4; Kalamazoo, MI. Kalamazoo, MI: Western Michigan University, Department of Biology: 49-55.

USDA-USDI. 2002. Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook. 151 pp.

USFS. Missoula Technology and Development Center. 1999.Wildland Fire Chemical Products, Toxicity and Environmental Issues and Concerns.

Vora, R.S. .1993. Moquah Barrens. Pine barrens restoration experiment initiated in Chequamegon National Forest. Restoration & Management Notes 11(1):39-44, Summer 1993.

APPENDIX B: DEFINITIONS

Agency Administrator. The appropriate level manager having organizational responsibility for management of an administrative unit. May include Director, State Director, District Manager or Field Manager (BLM); Director, Regional Director, Complex Manager or Project Leader (FWS); Director, Regional Director, Park Superintendent, or Unit Manager (NPS), or Director, Office of Trust Responsibility, Area Director, or Superintendent (BIA).

Appropriate Management Action. Specific actions taken to implement a management strategy.

Appropriate Management Response. Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

Appropriate Management Strategy. A plan or direction selected by an agency administrator which guide wildland fire management actions intended to meet protection and fire use objectives.

Appropriate Suppression. Selecting and implementing a prudent suppression option to avoid unacceptable impacts and provide for cost-effective action.

Bureau. Bureaus, offices or services of the Department.

Class of Fire (as to size of wildland fires):

Class A - ∃ acre or less.

Class B - more than ∃ but less than 10 acres.
Class C - 10 acres to 100 acres.
Class D - 100 to 300 acres.
Class E - 300 to 1,000 acres.
Class F - 1,000 to 5,000 acres.
Class G - 5,000 acres or more.

Emergency Fire Rehabilitation/Burned Area Emergency Rehabilitation (EFR/BAER). Emergency actions taken during or after wildland fire to stabilize and prevent unacceptable resource degradation or to minimize threats to life or property resulting from the fire. The scope of EFR/BAER projects are unplanned and unpredictable requiring funding on short notice.

Energy Release Component (ERC) A number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. It is generated by the National Fire Danger Rating System, a computer model of fire weather and its effect on fuels. The ERC incorporates thousand hour dead fuel moistures and live fuel moistures; day to day variations are caused by changes in the moisture content of the various fuel classes. The ERC is derived from predictions of (1) the rate of heat release per unit area during flaming combustion and (2) the duration of flaming.

Extended attack. A fire on which initial attack forces are reinforced by additional forces.

Fire Suppression Activity Damage. The damage to lands, resources and facilities directly attributable to the fire suppression effort or activities, including: dozer lines, camps and staging areas, facilities (fences, buildings, bridges, etc.), handlines, and roads.

Fire effects. Any consequences to the vegetation or the environment resulting from fire, whether neutral, detrimental, or beneficial.

Fire intensity. The amount of heat produced by a fire. Usually compared by reference to the length of the flames.

Fire management. All activities related to the prudent management of people and equipment to prevent or suppress wildland fire and to use fire under prescribed conditions to achieve land and resource management objectives.

Fire Management Plan. A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans.

Fire prescription. A written direction for the use of fire to treat a specific piece of land, including limits and conditions of temperature, humidity, wind direction and speed, fuel moisture, soil moisture, etc., under which a fire will be allowed to burn, generally expressed as acceptable range of the various fire-related indices, and the limit of the area to be burned.

Fuels. Materials that are burned in a fire; primarily grass, surface litter, duff, logs, stumps, brush, foliage, and live trees.

Fuel loadings. Amount of burnable fuel on a site, usually given as tons/acre.

Hazard fuels. Those vegetative fuels which, when ignited, threaten public safety, structures and facilities, cultural resources, natural resources, natural processes, or to permit the spread of wildland fires across administrative boundaries except as authorized by agreement.

Initial Attack. An aggressive suppression action consistent with firefighter and public safety and values to be protected.

Maintenance burn. A fire set by agency personnel to remove debris; i.e., leaves from drainage ditches or cuttings from tree pruning. Such a fire does not have a resource management objective.

Natural fire. A fire of natural origin, caused by lightning or volcanic activity.

NFDRS Fuel Model. One of 20 mathematical models used by the National Fire Danger Rating System to predict fire danger. The models were developed by the US Forest Service and are general in nature rather than site specific.

NFFL Fuel Model. One of 13 mathematical models used to predict fire behavior within the conditions of their validity. The models were developed by US Forest Service personnel at the Northern Forest Fire Laboratory, Missoula, Montana.

Prescription. Measurable criteria which guide selection of appropriate management response and actions. Prescription criteria may include safety, public health, environmental, geographic, administrative, social, or legal considerations.

Prescribed Fire. A fire ignited by agency personnel in accord with an approved plan and under prescribed conditions, designed to achieve measurable resource management objectives. Such a fire is designed to produce the intensities and rates of spread needed to achieve one or more planned benefits to natural resources as defined in objectives. Its purpose is to employ fire scientifically to realize maximize net benefits at minimum impact and acceptable cost. A written, approved prescribed fire plan must exist and NEPA requirements must be met prior to ignition. NEPA requirements can be met at the land use or fire management planning level.

Preparedness. Actions taken seasonally in preparation to suppress wildland fires, consisting of hiring and training personnel, making ready vehicles, equipment, and facilities, acquiring supplies, and updating agreements and contracts.

Prevention Activities directed at reducing the number or the intensity of fires that occur, primarily by reducing the risk of human-caused fires.

Rehabilitation (1) Actions to limit the adverse effects of suppression on soils, watershed, or other values, or (2) actions to mitigate adverse effects of a wildland fire on the vegetation-soil complex, watershed, and other damages.

Suppression. A management action intended to protect identified values from a fire, extinguish a fire, or alter a fire's direction of spread.

Unplanned ignition. A natural fire that is permitted to burn under specific conditions, in certain locations, to achieve defined resource objectives.

Wildfire. An unwanted wildland fire.

Wildland Fire. Any non-structure fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Situation Analysis (WFSA). A decision-making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Wildland/urban interface fire A wildland fire that threatens or involves structures.

APPENDIX C: SAMPLE DELEGATION OF AUTHORITY

Iron River National Fish Hatchery
Iron River, WI

Delegation of Authority

As of 1800, May 20, 2001, I have delegated authority to manage the Simpson North fire, number 0102, Iron River National Fish Hatchery, to Incident Commander, John Doe and his Incident Management Team.

The fire which originated as an arson fire on May 18, 2001, is burning in habitat adjacent to the hatchery boundary. My considerations for management of this fire are:

1. Provide for firefighter safety.

2. I would like the fire managed in such a manner that suppression actions will cause little environmental damage as possible.

3. Key features requiring priority protection are: adjacent private lands and the watershed of the hatchery water supply.

4. Key resource considerations are: protecting water quality on Schacte and Middle Creeks.

5. Restrictions for suppression actions are no tracked vehicles in the area of the creeks; no foam or retardents use within triangle formed by Weidenaar Rd., McLean Rd. and the Battleaxe Grade without consultation with the hatchery manager.

6. Minimum tools for use are Type II/III helicopters, and chainsaws.

7. My agency advisor will be hatchery biologist, Jane Smith.

8. Managing the fire cost-effectively for the values at risk is a significant concern.

_____

Dale Bast
Project Leader Iron River National Fish Hatchery
May 20, 2001

APPENDIX D: NEPA DOCUMENTATION

This plan does not support any activities that would constitute a new Federal action. It only documents the current situation which has been in existence since 1963. It is eligible for Categorical Exclusion status and this is reflected in the Finding of No Significant Impact.

APPENDIX E: ANNUAL UPDATE DOCUMENTS

Cache Equipment Inventory

No cache or fire equipment on station.

APPENDIX E: CONTINUED

Cooperator Contacts

Table 3 - Cooperator Contact List

Name	Phone Number
Chequamegon National Forest	(715) 373-2667
Wisconsin Department of Natural Resources Brule Area Headquarters	(715) 372-8539 X 113
Bayfield County Emergency Government	(715) 373-6113

APPENDIX E: CONTINUED

Adjacent Landowner Contact List

Table 4 - Adjacent Landowner Contact List

Owner	Address	Phone #
Bayfield County Forest Cropland Bayfield County Emergency Government	Washburn, WI	(715) 373-6113
Brian St. Aubin	Iron River, WI	(715) 372-8238
Robert Trainor	Absentee Owner	
Albin Polkaski	**10550 Mclean Rd Iron River, WI**	**(715) 372-8251**
William F. Lindsey	**68505 Topside Lake Rd Iron River, WI**	**(715) 372-4000**
Donald Chermak	Absentee Owner	
Dennis Sears	Ruth Lake Rd. Iron River, WI	(715) 372-5305
Debbie Hipsher	11280 McClean Rd. Iron River, WI	(715) 372-5221
Floyd Hipsher	PO Box 335 Iron River, WI	(715) 372-8952
Warren Knaack	74xxx Weidenaar Rd Iron River, WI	**(715) 372-8220**
Ernest L'Heureux	9585 Fairview Rd., Iron River, WI	(715) 372-5121
Maybelle Hooper	Absentee Owner	
Chequamegon National Forest Washburn Ranger District	Washburn, WI	(715) 373-2667

APPENDIX E: CONTINUED

Cooperative Agreements

No cooperative agreemennts currently in force.

APPENDIX E: CONTINUED

Wildland Fire Dispatch Plan

Iron River National Fish Hatchery
Dispatch Plan

When report of smoke or fire is received get as much information as possible from the caller. The following list should be filled in.

Location of smoke or fire:

Location of caller:

Name and telephone number of caller:

Color of smoke:

Size of fire:

Type of Fuel:

Character of fire (running, creeping, etc.):

Anyone on the fire:

See anyone in the area or vehicles leaving the area:

1. *Check map location and ownership/protection status*
2. *If fire is on or threatening hatchery call WIDNR in Brule 113.* *(715) 372-8539 x*
3. *Notify Project Leader*
4. *Maintain log of all telephone communications.*
5. *Remain on duty and notify:*

Adjacent landowners:

Bayfield County Forest Cropland
Bayfield County Emergency Government Washburn, WI *(715) 373-6113*

Ernest L'Heureux
9585 Fairview Rd., Iron River, WI *(715) 372-5121*

Chequamegon National Forest		
Washburn Ranger District	*Washburn, WI*	*(715) 373-2667*

Hatchery Personnel	*Position*	*Home Phone*
*** Hatchery resident**		
Dale Bast	*Project Leader **	*(715) 372-8288*
Denise and John Johnston	*Fishery Biologists **	*(715) 372-5341*
Nicholas Grueneis	*Animal Caretaker **	*(715) 372-5817*
John Anttila	*Maintenance Man*	*(715) 363-2592*
Steven Redman	*Fishery Biologist*	*(715) 372-5385*
Laurie Gucinski	*Admin. Tech.*	*(715) 774-3354*

DIRECTORY

Regional Office

Brian McManus	*Fire Mgt. Coordinator*	*Office*	*(612) 713-5366*
		Home	*(507) 263-8878*
Todd Turner	*Hatchery Coordinator*	*Office*	*(612) 713-5127*

NIFC

Phil Street	*FWS Coordinator*	*Office*	*(208) 387-2595*
		Home	*(208)*

WIDNR, Brule Area Headquarters

Jay Gallagher	*Area Ranger*	*Office*	*(715) 372-8539 x 113*

Chequamegon National Forest

	Fire Staff	*Office (715) 373-2667*

Bayfield County Emergency Government

	Manager	*Office (715) 373-6113*

Other Services

Hospital

Memorial Medical Center *1615 Maple Ln, Ashland, WI 54806-3689*	*(715) 682-4563*
Ambulance	*911*
Gordon Ambulance *Gordon, WI 54838*	*(715) 376-2640*
Sheriff	*911*
State Patrol	*911*

APPENDIX F: IRON RIVER SPECIES LISTS

Not all species listed in the table below have been documented on the hatchery, they may be transients; like the Gray Wolf, or within the identified range like Fassett's Locoweed.

Table 5 - Federal Listed Threatened or Endangered Species

Common Name	Accepted Scientific Name	Status
BIRDS		
Bald Eagle	*Haliaeetus leucocephalus*	T
Kirtland's Warbler	*Dendroica kitrlandii*	E
Piping Plover	*Charadrius melodus*	E
MAMMALS		
Canada Lynx	*Lynx canadensis*	T
Gray Wolf	*Canis lupus*	E
INSECTS: BUTTERFLIES & DRAGONFLIES		
Hine's Emerald Dragonfly	*Somatochlora hineana*	E
Karner Blue Butterfly	*Lycaeides melissa samuelis*	E
PLANTS		
Dwarf Lake Iris	*Iris lacustris*	T
Eastern Prarie Fringed Orchid	*Platanthera leucophaea*	T
Fassett's Locoweed	*Oxytropis campestris var. chartacea*	T
Northern Wild Monkshood	*Aconitum noveboracense*	T
Pitcher's Thistle	*Cirsium pitcheri*	T
Prairie Bush-clover	*Lespedeza leptostachya*	T

Table 6 - Wisconsin Threatened and Endangered Species

Common Name	Scientific Name	Status
BIRDS		
Acadian Flycatcher	*Empidonax virescens*	T
Barn Owl	*Tyto alba*	E
Bell's Vireo	*Vireo bellii*	T
Bewick's Wren	*Thryomanes bewickii*	E
Caspian Tern	*Sterna caspia*	E
Cerulean Warbler	*Dendroica cerulea*	T
Common Tern	*Sterna hirundo*	E
Forster's Tern	*Sterna forsteri*	E
Great Egret	*Casmerodius albus*	T
Greater Prairie Chicken	*Tympanuchus cupido*	T
Henslow's Sparrow	*Ammodramus henslowii*	T
Hooded Warbler	*Wilsonia citrina*	T
Kentucky Warbler	*Oporornis formosus*	T
Loggerhead Shrike	*Lanius ludovicianus*	E
Osprey	*Pandion haliaetus*	T
Peregrine Falcon	*Falco peregrinus*	E
Piping Plover	*Charadrius melodus*	E
Red-shouldered Hawk	*Buteo lineatus*	T
Red-necked Grebe	*Podiceps grisegena*	E
Snowy Egret	*Egretta thula*	E
Spruce Grouse	*Falcipennis canadensis*	T
Trumpeter	*Swan Cygnus buccinator*	E
Worm-eating Warbler	*Helmitheros vermivorus*	E

Common Name	Scientific Name	Status
Yellow-throated Warbler	*Dendroica dominica*	E
Yellow Rail	*Coturnicops noveboracensis*	T
Yellow-Crowned Night Heron	*Nyctanassa violacea*	T
MAMMALS		
Pine Marten	*Martes americana*	E
REPTILES & AMPHIBIANS		
Blanchard's Cricket Frog	*Acris crepitans blanchardi*	E
Blanding's Turtle	*Emydoidea blandingii*	T
Butler's Gartersnake	*Thamnophis butleri*	T
Massasauga	*Sistrurus catenatus*	E
Northern Ribbon Snake	*Thamnophis sauritus*	E
Ornate Box Turtle	*Terrapene ornata*	E
Queen Snake	*Regina septemvittata*	E
Slender Glass Lizard	*Ophisaurus attenuatus*	E
Western Ribbon Snake	*Thamnophis proximus*	E
Wood Turtle	*Clemmys insculpta*	T
PLANTS		
Algal-leaved Pondweed*	*Potamogeton confervoides*	T
Alpine Milkvetch*	*Astragalus alpinus*	E
Auricled Twayblade*	*Listera auriculata*	E
Bald Rush	*Rhynchosjsora scirysoides*	T
Beautiful Sedge*	*Carex concinna*	T
Bog Bluegrass	*Poa paludigena*	T
Braun's Holly Fern*	*Polystichum braunii*	T
Broad-leaved Twayblade*	*Listera convallarioides*	T

Common Name	Scientific Name	Status
Calypso Orchid*	*Calypso bulbosa*	T
Cliff Cudweed	*Gnaphalium saxicola*	T
Clustered Bur Reed	*Sparganium glomeratum*	T
Coast Sedge*	*Carex exilis*	T
Common Butterwort*	*Pinguicula vulgaris*	E
Dotted Blazing Star	*Liatris punctata var nebraskana*	E
Drooping Sedge*	*Carex prasina*	T
Dwarf Huckleberry*	*Vaccinium cespitosum*	E
Dwarf Milkweed	*Asclepias ovalifolia*	T
English Sundew *	*Drosera anglica*	T
Fassett's Locoweed*	*Oxytropis campestris var chartacea*	E
Fire Pink	*Silene virginica*	E
Flat-leaved Willow	*Salix planifolia*	T
Floating Marsh Marigold	*Caltha natans*	E
Fly Honeysuckle	*Lonicera involucrata*	E
Giant Pinedrops	*Pterospora andromedea*	E
Ground-Plum	*Astragalus crassicarpus*	E
Hall's Bulrush	*Scirpus hallii*	E
Hawthorn-leaved Gooseberry	*Ribes oxyacanthoides*	T
Lake Cress*	*Armoracia lacustris*	E
Lapland Buttercup	*Ranunculus lapponicus*	E
Large Water Starwort	*Callitriche heterophylla*	T
Large-leaved Sandwort*	*Moehringia macrophylla*	E
Lenticular (Shore) Sedge*	*Carex lenticularis*	T
Lessor Wintergreen*	*Pyrola minor*	E

Common Name	Scientific Name	Status
Linear-leaved Sundew *	*Drosera linearis*	T
Little Goblin Fern*	*Botrychium mormo*	E
Louisiana Broomrape	*Orobanche ludoviciana*	E
Marsh Grass-of-Parnassus*	*Parnassia palustris*	T
Michaux's Sedge*	*Carex michauxiana*	T
Moonwort Grape-fern*	*Botrychium lunaria*	E
Moor Rush*	*Juncus stygius*	E
Mountain Cranberry*	*Vaccinium vitis-idaea spp minus*	E
Plains Ragwort	*Senecio indecorus*	T
Prairie Dunewort	*Botrychium campestre*	E
Purple False Oats	*Trisetum melicoides*	E
Ram's-head Ladys-slipper*	*Cypripedium arietinum*	T
Sand Violet	*Viola fimbriatula*	E
Satiny Willow	*Salix pellita*	E
Schweinitz's Sedge	*Carex schweinitzii*	E
Seaside Crowfoot	*Ranunculus cymbalaria*	T
Slender Spike-rush	*Eleocharis nitida*	E
Small Round-leaved Orchis*	*Amerorchis rotundifolia*	T
Small Yellow Water Crowfoot*	*Ranunculus gmelinii var hookeri*	E
Small Skullcap	*Scutellaria parvula var parvula*	E
Smith Melic Grass*	*Melica smithii*	E
Smooth-Sheathed Sedge	*Carex laevivaginata*	E
Snowy Campion	*Silene nivea*	T
Soft-leaf Muhly	*Muhlenbergia richardsonis*	E
Spike Trisetum*	*Trisetum spicatum*	T

Common Name	Scientific Name	Status
Spotted Pondweed	*Potamogeton pulcher*	E
Squashberry	*Viburnum edule*	E
Sweet Coltsfoot*	*Petasites sagittatus*	T
Tubercled Orchid*	*Platanthera flava var. herbiola*	T
Western Jacob's Ladder	*Polemonium occidentale ssp. lacustre*	E
Wolf Spikerush	*Eleocharis wolfii*	E

Site for vertebrates is located at:
http://www.dnr.state.wi.us/org/land/er/factsheets/etlist1.htm#MAMMALS

Site for plants is located at: http://www.dnr.state.wi.us/org/land/er/factsheets/00etlist2.htm.
Plants marked with an * are confirmed in either Ashland and/or Bayfield Counties.

Species lists for the hatchery may be found in the Integrated Resource Managmeent Plan in the hatchery office.

APPENDIX G: HISTORIC FIRE SEASON ANALYSIS

No unwanted wildland fires have been recorded on the hatchery since initial land acquisition. An analysis may be completed in future revisions if sufficient fire activty occurs.

APPENDIX H: STEP-UP PLAN

As there is no fire qualified staff on the hatchery, the step-up plan only address public and visitor information needs. Adjective class will be obtained from WIDNR at the Brule Area Headquarters.

Adjective Class	Step up Actions
Low	No special public information efforts
Moderate	No special public information efforts
High	No special public information efforts
Very High	Personal contacts with visitors, bulletin board materials, and handoutswill be utilized to increase visitor and neighbor awareness of fire hazards.
Extreme	During periods of extreme or prolonged fire danger emergency restrictions regarding hatchery operations, or area closures may become necessary. Such restrictions, when imposed, will be consistent with those implemented by cooperators.

APPENDIX I: COMMUNICATION PLAN

As the hatchery has no radio system, a communication plan is not necessary. Cooperators will use their own systems with the appropriate frequency sharingf agreements in place.

APPENDIX J: SAMPLE WILDLAND FIRE SITUATION ANALYSIS

Wildland Fire Situation Analysis

WFSA Information

WFSA Number: 1

Jurisdiction(s): USFWS

Fire Name: Schacte 1

Geographic Area: EACC

Incident Number: 3925

Unit: Iron River National Fish Hatchery

Date/Time Prepared: 07/16/02 0859

Management Code: 30130-9261-3925

Fire Situation

Start Date/Time: 7/3/02 1000

Current Fire Size: 3.5 acres

Fuel Conditions:
1 hr = 10%
10 hr = 12%
100 hr = 16%

Fire Behavior - Current and Forecast:
Currently creeping in northern hardwood fuels.

Forecast to continue current behavior until fire reaches the slope up to the pine barrens. Then expected to make runs and torch in pine stand.

Weather- Current and Forecast:
Current- dry, sunny, 76F, RH 26%, wind WNW @ 7

Forecast. more of same for 48 hours

Suppression Resource Availability:
State is working fire. Additional resources from state and USFS are available. .

WFSA No.1 Schacte 1 Page 2

Objectives

Objective	Priority	Weight	Contribution
Safety	**10**	**0.45**	
Firefighter Safety	10	0.67	0.303
Firefighter safety is the highest priority in this operation.			
Public Safety	5	0.33	0.152
Public safety is not expected to be a problem, road closures are coordinated with the Sheriff's Office.			
Economic	**7**	**0.32**	
Improvements	5	0.17	0.055
Current predictions keep fire away from hatchery facilities including residences.			
Timber	7	0.24	0.077
Timber protection is critcal to watershed protection for continued hatchery production.			
Water	10	0.34	0.110
Watershed protection is necessary to insure continued operation of the hatchery.			
Wildlife	7	0.24	0.077
Mammals are not likely affected. Protection of the watershed to insure continued stocking of lake trout is a priority. Destruction of hatchery capability could cost cooperators millions of dollars in lost stocking opportunities.			
Social	**5**	**0.23**	
Public Concern	6	1.00	0.227
Landowners and residents surround the hatchery need to be informed of progress on fire and potential effects on homes.			

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Alternatives

Alternative A Minimize Fire Size

Use aggressive suppression methods to keep fire to smallest possible size while protecting watershed values.

Target Outcome

Fire kept of slopes to the east, some hand extensive
and wetline within 300 feet of Schacte watershed
Creek with minimal disturbance to surface.

Probability: 70%
Final Fire Size: 10 acres
Time to Contain: 2 days
Time to Control: 3 days

Worst Case Outcome

Fire Damage to watershed is extensive
with most of the Schacte Creek watershed
burned.

Probability: 30%
Final Fire Size: 400 acres
Time to Contain: 5 days
Time to Control: 7 days

Alternative-B Minimize Suppression Damage

Use least damaging suppression methods, particularly close to creeks supplying the hatchery. No foam or retardant use between Weidenaar Rd., McLean Rd. and Battleax Grade.

Target Outcome

Fire kept off slopes on east side of hatchery. Handlines and wetlines more than 300 feet from creek.

Probability: 85%
Final Fire Size: 35 acres
Time to Contain: 3 days
Time to Control: 4 days

Worst Case Outcome

Fire damage to watershed is extensive
with most of Schacte Creek watershed burned.

Probability: 15%
Final Fire Size: 400 acres
Time to Contain: 5 days
Time to Control: 7 days

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Suppression Costs

Alternative A Minimize Fire Size

Target Outcome	**Worst Case Outcome**
1 Engine 3 3 days 1 Local Crew 3 days Suppression cost: $4,500	Suppression cost: $15,000

Alternative B Minimize Suppression Costs

Target Outcome	**Worst Case Outcome**
1 Engine 3 4 days 1 Local Crew 4 days Suppression cost: $6,000	Suppression cost: $15,000

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Impact on Resource Values

Alternative A Minimize Suppression Costs

Item	Target Outcome		Worst Case Outcome	Expected Impact
Mature Timber	-214		-5,300	
Immature Poles	-78		-2,020	
Seed and Saplings		-50	-1,160	
Water Use	-94		-2,820	
Fisheries - Wm/Cd Wtr	-244		-6,300	
Fisheries - Anad. Sport	-244		-6,300	
Wildlife – Big Game	80		1,520	
Wildlife – Other	36		564	
Total	-$806		-$21,800	-$7,100

Alternative B Minimize Firefighter Exposure

Item	Target Outcome		Fallback Outcome	Worst Case Outcome	Expected Impact
Mature Timber	-747			-5,300	
Immature Poles	-273			-2,020	
Seed and Saplings		-175		-1,160	
Water Use	-327			-2,820	
Fisheries - Wm/Cd Wtr	-852			-6,300	
Fisheries - Anad. Sport	-852			-6,300	
Wildlife – Big Game	280			1,520	
Wildlife – Other	126			564	
Total	-$2,820			-$21,800	-$5,670

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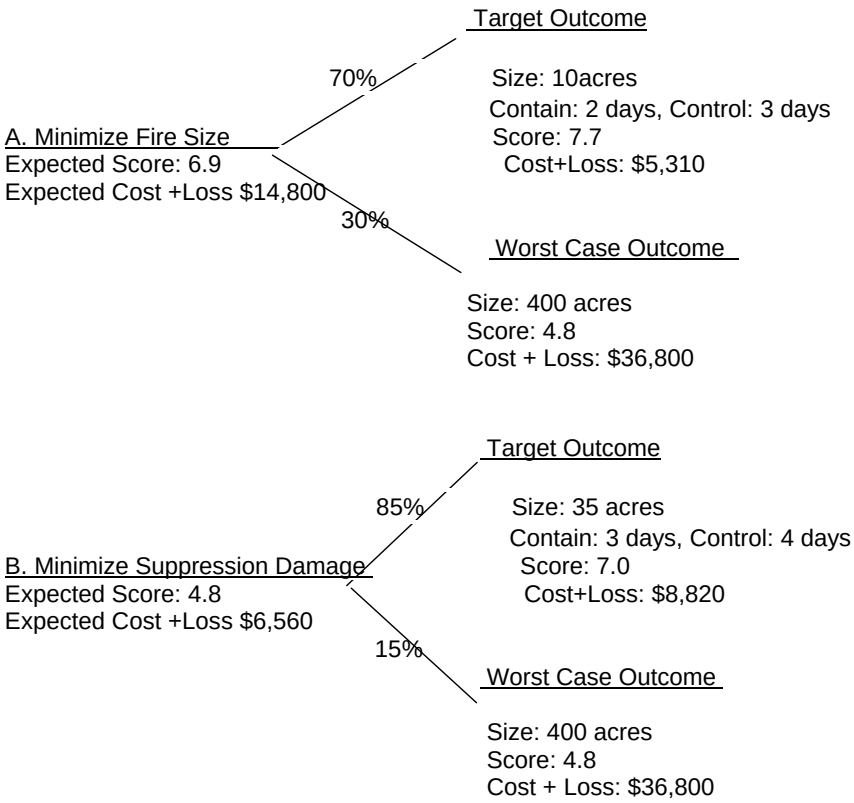
Decision Tree



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Decision Summary

Strategy:

Minimize Fire Size

Description

Use aggressive suppression methods to keep fire to smallest possible size while protecting watershed values. Fire kept off slopes to east, some hand and wetline within 300 feet od Schacte Creek with minimal disturbance to surface.

Rationale

Due to shorter time frame, less chance of fire effects adversely affecting hatchery operations. This alternative also has firefighters at risk for a shorter period of time.

Special Considerations

The selected alternaive should have the minimum effect on hatchery operations. Incident Commander should inform the hatchery manager if itv appears that water supply from Schacte Creek is is threatened so arrangements to use water from Middle Creek can be made.

Information Policy

Hatchery will keep neighbors and local media informed on progress of suppression and potential for movement onto neighboring property.

_____

Agency Administrator Signature Date/Time

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Daily Review

Date	Time	By	