

Survey & Manage

FISCAL YEAR 2003 ANNUAL STATUS REPORT



northwest forest plan

Survey and Manage species are a group of rare and uncommon species associated with old growth forests protected under the Northwest Forest Plan. This group includes 304 species of mollusks, lichens, bryophytes, vascular plants, amphibians, fungi, the Oregon Red Tree Vole, the Great Gray Owl and four arthropod guilds.

Survey and Manage Website

www.or.blm.gov/surveyandmanage

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OVERVIEW

This annual status report chronicles the work products and management direction of the Survey and Manage (S&M) program during fiscal year 2003 (FY03). This past year saw significant efforts by S&M program personnel in several key areas: implementation assistance to the field, priority tasks as prescribed by the 2001 ROD, and technical support for a new Supplemental Environmental Impact Statement (SEIS) which considers the elimination of S&M.

For the past several years, field offices attempting to mesh complex guidelines to protect S&M species with other resource programs have experienced occasional conflicts, sometimes delaying project planning and driving up project costs. In order to help alleviate these challenges, S&M program personnel visited numerous field offices to help specialists utilize options for managing known sites, conducting pre-disturbance surveys and clarifying definitions and processes. These efforts resolved difficulties in most cases and allowed field units to proceed, efficiently and cost-effectively, with projects such as hazardous fuels reductions, meadow restoration, forest thinnings, and watershed restoration.

FY03 saw considerable efforts by the S&M team to implement the 2001 Record of Decision (2001 ROD)¹ guidelines. As predicted, major accomplishments were realized in FY03, focusing the program’s efforts on priority work products while continuing to drive down costs of the overall oversight and direction this program provides. Indications are that a similar drop in the cost of project clearance surveys is also occurring. Total costs of the program, excluding pre-disturbance costs to the field, have decreased from approximately \$11.0 million at the outset of FY01, to \$8.5 million in FY02, \$6.2 million in FY03, to proposed costs in FY04 of \$5.2 million.

Also this past year, the S&M team was engaged in the development of the new Supplemental Environmental Impact Statement (SEIS) that considers eliminating the Survey and Manage mitigation measure from the Northwest Forest Plan (NWFP), a result of a 2002 settlement agreement. Information collected in the S&M program is providing significant support to this analysis.

The agencies are continuing with aggressive implementation of the 2001 ROD until there is a new decision.

¹ 2001 ROD USDA Forest Service and USDI Bureau of Land Management. 2001. Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Portland, Oregon. Var.p. [ROD ii+59 p; S&Gs 11+86p]

BACKGROUND

In the *1994 Record of Decision (1994 ROD)*², the Bureau of Land Management and Forest Service adopted standards and guidelines (S&Gs) for the management of habitat for late-successional and old-growth forest-related species within the range of the northern spotted owl.

One of the mitigation measures adopted under the *1994 ROD*, called “Survey and Manage” (S&M), addressed concerns for the persistence of rare and little-known species by providing for management of known sites, site-specific pre-habitat-disturbing surveys, and/or landscape scale surveys for about 400 rare and/or uncommon species.

As we discovered more about the occurrences and biological needs of these species, primarily through surveys, the agencies decided the original S&Gs needed improvement. This led to the preparation of the *S&M 2001 ROD* which was signed by the Secretaries of Interior and Agriculture in January 2001.

This decision removed 72 species from S&M in all or part of their ranges, established an Annual Species Review process to evaluate new information about taxa and make appropriate changes to their management, and required strategic surveys across the landscape for all species.



It also created six management categories for 346 species, based on the ability to detect them in surveys, and whether they are rare or uncommon.

Although the S&Gs were revised, the *2001 ROD* maintains the same likelihood of persistence for S&M species as the *1994 ROD*, while allowing more management flexibility to provide for the need to accomplish field projects.

In 2001-02, the S&M provisions were the subject of a lawsuit brought by Douglas Timber Operators, the American Forest Resources Council and the Association of O&C Counties against the Secretaries of Interior and Agriculture.

In response to that lawsuit, the agencies entered a settlement agreement in late September 2002, to prepare a Supplemental Environmental Impact Statement (SEIS) that would consider eliminating the S&M mitigation measure.

This action set in motion a concentrated effort involving many agency people, including the S&M staff. The new Record of Decision (ROD) is scheduled for release in early 2004. That decision may lead to a change in management for S&M species.

INFORMATION MANAGEMENT

Since 1994, the Forest Service and the BLM gathered location data for S&M species from herbaria, museums, and National Forest and BLM District staffs. This information was compiled into the *Known Sites Database*, which has since been replaced by the *Interagency Species Management System (ISMS)*, developed over several years and deployed in the field in March of 2000.

The ISMS database holds information on S&M species and their habitats, plus information about where surveys have occurred. Included in this database are sites discovered while surveying prior to proposed land management activities (such as timber sales and recreation trails), and those sites discovered during strategic surveys.

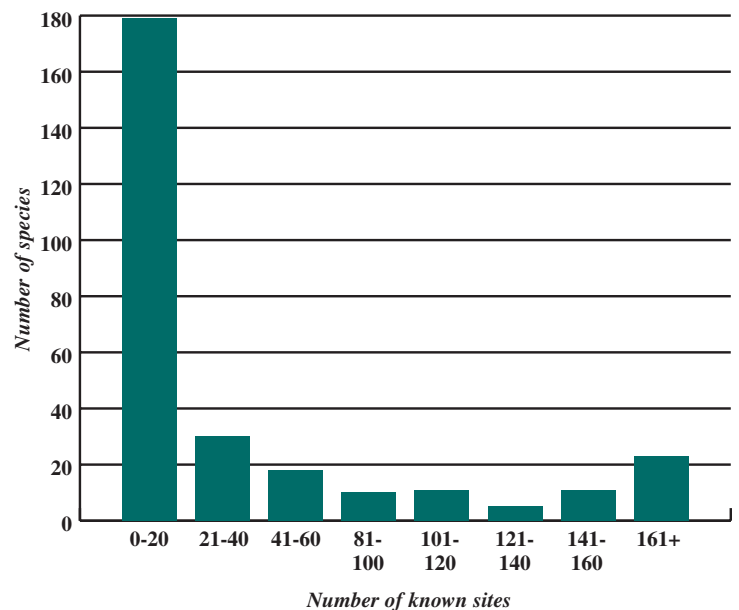
The ISMS team at Portland, Oregon, is responsible for maintaining the ISMS application, providing training and support to the ISMS users, and developing upgrades. A new ISMS version 1.15 was released to include information about fire pre-suppression activities where S&M sites occur.

User support included several introductory training sessions attended by new FS and BLM ISMS users, daily help desk support and completion of the new advanced query capability.

The team also began identifying requirements for overhaul and upgrade of the ISMS database to take advantage of more modern technology and more focused informational needs. This process will culminate in December 2003 with a decision on how to meet the needs of Survey and Manage and/or the needs of the Special Status Species program.

The ISMS database provides information useful in understanding the rarity of S&M species. Of the current 304 S&M species, 288 have known sites within the NWFP area: 179 of those are known from 20 sites or less. **Figure 1** depicts the number of Survey and Manage species known from 0-20 sites, 21-40 sites, 41-60 sites and so on.

Figure 1 S&M Species by Number of Known Sites



² 1994 ROD USDA Forest Service and USDI Bureau of Land Management. 1994b. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. Standards and Guidelines for Management of Habitat for Late-successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl. Portland, Oregon. Var.p. [Northwest Forest Plan]

PRE-DISTURBANCE SURVEYS

Pre-disturbance surveys are “clearance surveys” conducted for projects that may disturb species habitats. They are conducted prior to signing National Environmental Policy Act (NEPA) decisions and have the goal of reducing the potential loss of sites by searching specified habitats.



Pre-disturbance surveys utilize a variety of survey methods to focus on priority habitats, habitat features, or entire project areas. These surveys must adhere to protocols developed for individual species.

There are two types of pre-disturbance surveys based on individual species characteristics. *Practical surveys* are developed for species that have characteristics making them likely to be located with a reasonable survey effort. Practical surveys were limited to 64 species in FY03.

Equivalent-effort surveys are developed for species that have characteristics, such as extremely small size or irregular life cycles, making identification during pre-disturbance surveys less likely. Equivalent-effort surveys are currently limited to 5 species of mollusks.

Information collected during pre-disturbance surveys includes detailed location and habitat data. These data, along with information collected from strategic surveys, are used to develop or revise management recommendations, revise survey protocols and complete the Annual Species Review.

According to the Interagency Species Management System (ISMS) database, field offices recorded surveys on 183,057 acres in 2003. Administrative units also recorded a total of 2733 known sites in the ISMS database in 2003 for 135 different taxa.

Table 1 displays the total number of known sites recorded in 2003 and entered into the ISMS database for both the Forest Service and Bureau of Land Management.



Table 1.		Known Sites Recorded in FY2003			
Taxa Group	Forest Service		BLM		
	R5	R6	CA	OR/WA	
Fungi	1	105	37	97	
Lichens	26	296	5	136	
Bryophytes	20	122	2	18	
Vascular Plants	20	94	2	40	
Mollusks	330	696	0	165	
Amphibians	13	13	0	0	
Great Gray Owl ³	0	5	0	0	
Red Tree Vole ⁴	7	228	0	255	
Total	417	1559	46	711	

³ Known site for the Great Gray Owl is defined as a reproductive pair.
⁴ The number reported represents “biosites” recorded in ISMS.

Survey Protocols

Survey protocols were developed for seven species of lichens this past year. Four of the species (*Bryoria pseudocapillaris*, *Bryoria spiralifera*, *Dendroscocaulon intricatulum*, and *Nephroma occultum*) were added to Category A as a result of the 2001 Annual Species Review. Pre-disturbance surveys were not previously required for these species and survey protocols had not been developed prior to this year.

The remaining three species (*Hypogymnia duplicata*, *Lobaria linita* var. *tenuoir*, and *Pseudocyphellaria rainierensis*) required pre-disturbance surveys prior to this year under a survey protocol released on March 12, 1998. The protocol amendment released this year updated species information with data that had accumulated since 1998, and brought all pre-disturbance survey lichens under the same protocol requirements.

The lichen survey protocol amendment, dated September 22, 2003, may be accessed via the internet at www.or.blm.gov/surveyandmanage.



STRATEGIC SURVEYS

What are Strategic Surveys?

Strategic surveys gather information on S&M species that relate to the information needs and the management objectives for each species. Strategic surveys can help answer the following questions:

- Is the species rare or uncommon?
- Is there a concern for species persistence?
- Is the species closely associated with late-successional/old-growth habitats?
 - Do the reserve land use allocations and other standard and guidelines provide for a reasonable assurance for species persistence?

These surveys range in scale from small-scale, site-specific surveys that collect habitat data at known species locations, to large-scale multiple species surveys that collect information about species distribution and abundance.

Strategic surveys are prioritized based on three factors:

Biological Factors – these address the inherent aspects of species biology and how these factors relate to persistence concerns and/or management questions.

Managerial Factors – Information may contribute to increased management efficiency; such as putting species in the proper management category (or removal from the list), increasing efficiency of pre-disturbance surveys, or providing flexibility in species management.

Operational and Logistical Factors – Due to the large size of the Northwest Forest Plan (NWFP) area and the number of species, it is not possible to simultaneously survey for all species across the planning area, so logistical considerations are evaluated to increase efficiency.

Strategic Survey Accomplishments in Fiscal Year 2003

Strategic survey accomplishments in FY03 continue to collect information about S&M species and their habitats to be used in the Annual Species Review Process, and development of management recommendations. Following is a brief summary of what was accomplished by each survey type.

CVS/FIA Random Grid Survey – This survey began in 2000 in three pilot areas (Gifford Pinchot, Umpqua, and Siuslaw National Forests) on 300 randomly selected CVS plots. In 2001, surveys were initiated throughout the NWFP area on an additional 300 CVS plots in Oregon and 150 FIA plots in California. Field surveys are now complete, and specimen identification, statistical analysis and bio-interpretation are in progress. Information collected from this survey will be used in the 2004 Annual Species Review.

At this time a total of 113 current S&M species have been detected at least once from this survey. These detections will be used to estimate the species abundance across the NWFP area and test their association with late-successional/old-growth habitats and reserve land use allocations.

Approximately 42% of the CVS/FIA plots have had detections of one or more S&M species. Plots in late-successional/old-growth habitats (stand age greater than 80 years old) had detections on 45% of the plots while those in non-late-successional habitats had detections on 33% of the plots. Eight S&M species was the maximum number of S&M species detected on one plot.

A survey of randomly selected plots in the southern Washington Cascades occurred for Van Dyke salamander to determine population abundances and collect habitat data. This information potentially will be used to modify this species'

pre-disturbance survey protocol.

Known Site Surveys – A total of 37 known site surveys were completed for 16 S&M species. These surveys collect detailed microsite and vegetation data that can be used to focus strategic surveys and develop potential habitat maps. Information from these surveys is entered into the Known Site Survey Module in ISMS.

Purposive Surveys – Purposive surveys are used to locate additional sites of species or to attempt to re-locate historic locations. In 2003, 10,536 acres were surveyed purposively for botanical species (bryophytes, lichens, and vascular plants), mollusks and fungi. A total of 137 new lichen sites (10 species), 48 new mollusk sites (5 species), 20 new bryophyte sites (4 species), and 14 new fungi locations (4 species) were found.

Habitat Modeling – Several modeling efforts for S&M species occurred in 2003. These include expanding the Potential Natural Vegetation (PNV) modeling for lichens, bryophytes, vascular plants, mollusks, fungi and amphibians into Oregon and northern California.

Species Specific Surveys – These surveys are for those species or species groups where the previous survey types may not be effective at gathering the specific information needs or those that require different survey methodologies. These survey efforts are described below:

Amphibians – Strategic survey efforts continued for Larch Mountain, Van Dyke and Siskiyou salamanders. Species range and habitat association maps are currently being developed for both Larch Mountain and Van Dyke salamanders. Surveys for Siskiyou salamanders to assess distribution, abundance, and habitat on reserve land use allocations occurred throughout the species range. Once completed, these surveys should assist managers in refining pre-disturbance survey protocols.

Red Tree Vole – Survey work for red tree voles included continuing a radio telemetry study looking at the daily and seasonal movements of individual red tree voles that can be used to estimate the species home range.

Coastal Lichens – This survey, data analysis, and final reports were completed in 2003. This survey was designed to perform an extensive and systematic search for 16 lichen species (13 S&M species) known only from the immediate coast to evaluate their association with late-successional/old-growth forests and rarity within the NWFP area.

Aquatic Lichens – The objective of this study was to collect distribution, and habitat information for two aquatic lichen species (*Dermatocarpon luridum* and *Leptogium rivale*). This NWFP survey involved a randomized approach to estimate abundance between reserve and non-reserve lands and collecting data on numerous habitat variables. Preliminary data analyses are ongoing and final reports are expected in 2004.

Specimen Identification – Approximately 9,000 known or suspected fungi, bryophyte, lichen and mollusk specimens were collected and have been identified, or are awaiting identification.

Strategic Survey Framework – This document, published as a Pacific Northwest Research Station General Technical Report, was completed in February 2003. It is accessible on the Northwest Forest Plan Survey and Manage website. The Strategic Survey Framework outlines a repeatable process for assessing information needs for S&M species, designing and implementing strategic surveys, and analyzing that information for use in the Annual Species

STRATEGIC SURVEYS

Review and adaptive management processes.

Strategic Survey Implementation Guide – The 2003 Strategic Survey Implementation Guide was approved and is also accessible on the Northwest Forest Plan Survey and Manage website. This document, updated annually, helps focus agency resources on the highest priority species information needs and helps ensure that the agencies comply with the strategic survey deadlines as described in the 2001 ROD standards and guidelines.

Currently the priorities of the strategic survey program are to complete the statistical analysis and bio-interpretation of the region-wide survey on randomly selected CVS/FIA plots, and complete other on-going survey efforts. Strategic surveys have been proposed for species lacking previous surveys (great gray owl and arthropods), for species with new information needs, and for those rare species that must have strategic surveys completed by a specific deadline.

ANNUAL SPECIES REVIEW

Results of the FY02 Annual Species Review (ASR) were released to the public in March 2003, which qualifies them as accomplishments for FY03. They are found in this report. Agency approval of the FY03 Annual Species Review results is pending. Those results are expected later this spring, and they will be published in the FY04 Annual Status Report.

Overview

The Annual Species Review is an annual adaptive management process that evaluates new information and ensures appropriate levels of management for S&M species. The 2001 ROD standards and guidelines (S&Gs) pages 14-19 provide the guidance for this process which is comprised of four phases.

A decision by the agency leads for the FS and BLM in compliance with the RIEC finding for implementation by the administrative units throughout the Northwest Forest Plan (NWFP) area closes the process.

Through the ASR process species can:

- be removed from, or added to, the S&M program,
- be changed from one management category to another, or
- have a new biological range validated.

A species can be removed from S&M if the species or its potential habitat does not occur within the NWFP area; the species is not found to be associated with late-successional or old-growth forest; and/or the reserve system or other S&Gs of the NWFP provide for a reasonable assurance of persistence of the species. Species proposed for addition to S&M must be taxonomic entities published in appropriate peer-reviewed journals accepted by the scientific community. They must also occur or have potential habitat within the NWFP area, be associated with late-successional or old-growth forest, and not have a reasonable assurance of persistence provided by the reserve system or by the implementation of other S&Gs of the NWFP.

Summary of FY 2002 Annual Species Review Results

All 313 S&M species were evaluated in FY2002. Eight species were removed in all or part of their ranges from S&M requirements. The species were removed because 1) the reserve system and other S&Gs of the NWFP provide for a reasonable assurance of species persistence, or 2) they were not closely associated with late-successional or old growth forest. In addition,

- 1 S&M species no longer requires pre-disturbance surveys
- 1 S&M species that did not require pre-disturbance surveys previously now requires them.
- 1 S&M species no longer requires managing known sites.
- 304 species remain in Survey and Manage plus 4 arthropod guilds
- Approximately 1900 known sites were released from Survey and Manage requirements, but are still covered by other S&Gs of the NWFP.



Photo courtesy of Nan Vance.



ANNUAL SPECIES REVIEW

See **Table 1-1 in Appendix One** *Species Included in Survey and Manage Standards and Guidelines and Category Assignment (March 2003)*, for the most recent listing of S&M species and their management categories (also accessible online at www.or.blm.gov/surveyandmanage/).

FY03 Annual Species Review

The 2003 Annual Species Review was initiated in January 2003, evaluating 304 species to determine if there was significant new

information available that would support further evaluation of the species. Eighteen species were elevated to the last phase of the process to determine if management changes were justified. Ranges were changed for an additional 20 species. The Bayesian belief network was used again this year to help identify an initial list of potential outcomes that were consistent with the information identified for each taxon and with the *2001 ROD* standards and guidelines. It was modified in 2003 to include the uncommon criteria provided in the *2001 ROD* standards and guidelines.

MANAGEMENT RECOMMENDATIONS

What are they?

Management Recommendations (MRs) are guidelines for managing S&M species on federal lands within the NWFP area. These guidelines establish specific goals and objectives for the species and general management policy for providing a reasonable assurance of species persistence at the known site-scale. The guidelines also describe species and their life history, characteristics, and habitat relations.

Under the provisions of the *2001 ROD*, “Known Site MRs” have been developed, or are in development, for species considered to be rare (Category A, B and E species). A species is determined to be rare when information indicates that a species may have: a limited distribution, a low number of known sites or individuals per site, restricted distribution patterns relative to their range or potential habitat, highly specialized habitat requirements, or a narrow ecological amplitude. For these rare species, all known sites are likely to be necessary for a reasonable assurance of persistence. An exception process, reviewed by the Regional Ecosystem Office (REO), may on occasion identify certain sites as not needed for a reasonable assurance of species persistence in order to allow for greater management flexibility.

Under the provisions of the *2001 ROD*, “High Priority Site MRs” are in development for species considered to be uncommon (Category C and D species). A species is determined to be uncommon when information indicates that a species may have: a more widespread distribution, a higher numbers of known sites, less restricted distribution patterns relative to their range or potential habitat, or moderate-to-broad ecological amplitude. For uncommon species, not all known sites are likely to be necessary for a reasonable assurance of persistence. To allow for greater management flexibility a 4-step process for the identification of non-High Priority Sites is available to allow administrative units to identify, on a case-by-case basis, certain sites not needed for a reasonable assurance of species persistence, and release them for other management. This 4-step process was used again in FY03, particularly for the red tree vole.

As reported in the FY02 Annual Status Report, MRs were developed to allow fuels-reduction treatments (as directed by the National Fire Plan) to help reduce the risk of large-scale or high intensity fires around identified communities at risk. This year, these MRs have been expanded beyond the forest areas around communities at risk, to other areas covered by the NWFP. These MRs are currently awaiting final review and signature.

New and Revised Management Recommendations

In the *1994 ROD*, S&M species were organized into one of four categories regarding the type of management and surveys required. The *2001 ROD* created six management categories for these species, based on the ability to find them during surveys, and whether they are considered rare or uncommon. In addition the *2001 ROD* created the Annual Species Review process which provides for the movement of species between management categories, or their removal from (or addition to) S&M provisions. Due to these changes, many species require the creation or revision of MRs dependent on their current management category. Species in Category F are exempt from the MR requirement because they are uncommon and information is insufficient to determine specific criteria for persistence or their association with late-successional and old-growth forest.

Known Site MRs are being written or revised for 60 + lichen species. Currently there are 22 species with High Priority Site MRs with either drafts in review or under development.

Table 2-1 in Appendix Two displays the list of species that were without governing MRs when the *2001 ROD* was implemented. The MRs of species not listed in Table 2-1 were completed prior to the *2001 ROD* and continue to be in effect.

IMPLEMENTATION MONITORING

The purpose of regional implementation monitoring is to determine and document to what extent agency field units have complied with the *1994 ROD* standards and guidelines. For Survey and Manage specifically, results of implementation monitoring reviews provide feedback on how well field units have applied provisions contained in the *S&M 2001 ROD*, and allow us to evaluate our progress toward meeting species persistence objectives.

Using a standard questionnaire format for both project-level and watershed activities, review teams visit randomly selected field units, and discuss whether specific standards and guidelines have been applied to individual projects (e.g. have required pre-disturbance surveys been done) and at the watershed scale (e.g. to what extent has watershed analysis been used).

Fiscal Year 2003 (FY03) reviews were conducted on 21 watersheds and 23 projects (15 Late Successional Reserve density management projects, 7 prescribed fire projects and 1 locatable mineral/ mining project) randomly selected throughout the Northwest Forest Plan area. Twenty-four projects were originally planned for monitoring reviews, but one project in the Deschutes Province was not monitored due to wildfire. Of the 23 projects monitored, two were on Bureau of Land Management lands and 21 were on Forest Service land.

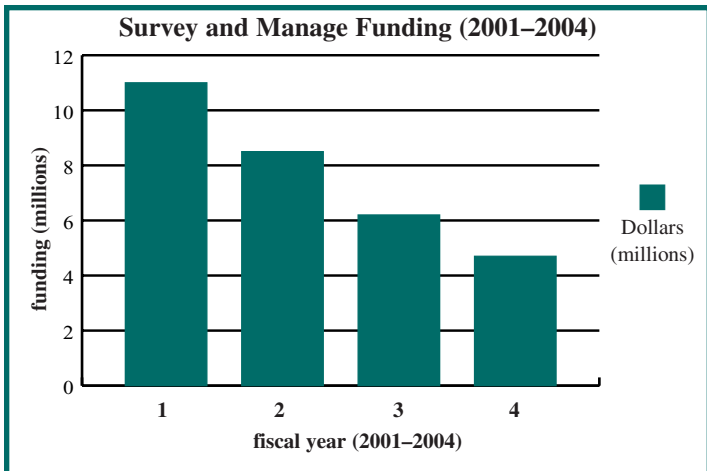
Results of FY03 implementation monitoring are not available at this time. Data are currently being compiled and the 2003 Implementation Monitoring Report is expected for release in the near future. Monitoring information is accessible online at www.reo.gov/monitoring/.



LOOKING FORWARD

A new decision stemming from the SEIS effort currently underway may lead to a change in management for those species managed under S&M. But in the meantime, the Survey and Manage program will continue focusing on implementation of the 2001 ROD.

We will continue to drive down costs of the overall oversight and direction this program provides. The FY2000 SEIS predicted short-term (1-5 years) costs would be \$9,800,000 (including overhead). The following table is a rough comparison of program costs, excluding pre-disturbance costs to the field, from FY01 through FY04 (proposed).



Indications are that a similar drop in the cost of project clearance surveys is also occurring. Reduced cost and reduced impacts of S&M requirements on other programs will continue in FY04 as new information supports adaptive management decision-making.

Major parts of our strategic surveys are coming to completion. Some use was made of raw data in FY03 but the statistical and biological analyses taking place in FY03 will provide critical information in the decision processes in FY04.

It is exciting to see the results of surveys being utilized in decisions on the management of S&M species, the analysis of the future of the management of Survey and Manage species, and by

State agencies when considering these same species for listing under their individual rare species programs. I expect this trend will expand as more agencies discover the wealth of information that is now available to them.

While new information has resulted in the change of management for many species it is still evident that the majority of the species are in fact rare. We will continue to learn more about these species in order to provide support for decisions to assign appropriate protections, insuring a reasonable assurance of persistence.

We will begin to exhaust our information needs for specific species in FY04. The S&M strategy for these species will come to closure, as expected, and we can say we're "done". Despite the potential to add species, we should continue to see reduced costs and impacts before a leveling is experienced.

/s/ Terry Brumley
Survey and Manage Program Manager



APPENDIX ONE

Table 1-1 Results of FY02 Annual Species Review

Species Included in Survey and Manage Standards and Guidelines and Category Assignment (March 2003)

Note: Where taxon has more than one name indicated, first name is current accepted name, second one (in parentheses) is name used in NFP (Table C-3).

TAXA GROUP Species FUNGI	Category
<i>Acanthophysium farlowii</i> (<i>Aleurodiscus farlowii</i>)	B
<i>Albatrellus avellaneus</i>	B
<i>Albatrellus caeruleoporus</i>	B
<i>Albatrellus ellisii</i>	B
<i>Albatrellus flettii</i> , In Washington and California	B
<i>Alpova alexsmithii</i>	B
<i>Alpova olivaceotinctus</i>	B
<i>Arcangeliella camphorata</i> (<i>Arcangeliella</i> sp. nov. #Trappe 12382; <i>Arcangeliella</i> sp. nov. #Trappe 12359)	B
<i>Arcangeliella crassa</i>	B
<i>Arcangeliella lactarioides</i>	B
<i>Asterophora lycoperdoides</i>	B
<i>Asterophora parasitica</i>	B
<i>Baeospora myriadophylla</i>	B
<i>Balsamia nigrens</i> (<i>Balsamia nigra</i>)	B
<i>Boletus haematinus</i>	B
<i>Boletus pulcherrimus</i>	B
<i>Bondarzewia mesenterica</i> (<i>Bondarzewia montana</i>), In Washington and California	B
<i>Bridgeoporus nobilissimus</i> (<i>Oxyporus nobilissimus</i>)	A
<i>Cantharellus subalbidus</i> , In Washington and California	D
<i>Catathelasma ventricosa</i>	B
<i>Chalciporus piperatus</i> (<i>Boletus piperatus</i>)	D
<i>Chamonixia caespitosa</i> (<i>Chamonixia pacifica</i> sp. nov. #Trappe #12768)	B
<i>Choiromyces alveolatus</i>	B
<i>Choiromyces venosus</i>	B
<i>Chroogomphus loculatus</i>	B
<i>Chrysomphalina grossula</i>	B
<i>Clavariadelphus ligula</i>	B
<i>Clavariadelphus occidentalis</i> (<i>Clavariadelphus pistillaris</i>)	B
<i>Clavariadelphus sachalinensis</i>	B
<i>Clavariadelphus subfastigiatus</i>	B
<i>Clavariadelphus truncatus</i> (syn. <i>Clavariadelphus borealis</i>)	D
<i>Clavulina castanopes</i> v. <i>lignicola</i> (<i>Clavulina ornatipes</i>)	B
<i>Clitocybe senilis</i>	B
<i>Clitocybe subditopoda</i>	B
<i>Collybia bakerensis</i>	F
<i>Collybia racemosa</i>	B
<i>Cordyceps ophioglossoides</i>	B
<i>Cortinarius barlowensis</i> (syn. <i>Cortinarius azureus</i>)	B
<i>Cortinarius boulderensis</i>	B
<i>Cortinarius cyanites</i>	B
<i>Cortinarius depauperatus</i> (<i>Cortinarius spilomeus</i>)	B
<i>Cortinarius magnivelatus</i>	B
<i>Cortinarius olympianus</i>	B
<i>Cortinarius speciosissimus</i> (<i>Cortinarius rainierensis</i>)	B
<i>Cortinarius tabularis</i>	B
<i>Cortinarius umidicola</i> (<i>Cortinarius canabarba</i>)	B
<i>Cortinarius valgus</i>	B
<i>Cortinarius varipes</i>	B
<i>Cortinarius verrucisporus</i>	B
<i>Cortinarius wiebeae</i>	B
<i>Craterellus tubaeformis</i> (syn. <i>Cantharellus tubaeformis</i>), In Washington and California	D
<i>Cudonia monticola</i>	B
<i>Cyphelostereum laeve</i>	B
<i>Dermocybe humboldtensis</i>	B
<i>Destuntzia fusca</i>	B
<i>Destuntzia rubra</i>	B
<i>Dichostereum boreale</i> (<i>Dichostereum granulosum</i>)	B
<i>Elaphomyces anthracinus</i>	B
<i>Elaphomyces subviscidus</i>	B
<i>Endogone acrogena</i>	B
<i>Endogone oregonensis</i>	B

TAXA GROUP Species FUNGI (continued)	Category
<i>Entoloma nitidum</i> (<i>Rhodocybe nitida</i>)	B
<i>Fayodia bisphaerigera</i> (<i>Fayodia gracilipes</i>)	B
<i>Fevansia aurantiaca</i> (<i>Alpova</i> sp. nov. # Trappe 1966) (<i>Alpova aurantiaca</i>)	B
<i>Galerina atkinsoniana</i>	B
<i>Galerina cerina</i>	B
<i>Galerina heterocystis</i>	E
<i>Galerina sphagnicola</i>	E
<i>Gastroboletus imbellus</i>	B
<i>Gastroboletus ruber</i>	B
<i>Gastroboletus subalpinus</i>	B
<i>Gastroboletus turbinatus</i>	B
<i>Gastroboletus vividus</i> (<i>Gastroboletus</i> sp. nov. #Trappe 2897; <i>Gastroboletus</i> sp. nov. #Trappe 7515)	B
<i>Gastrosuillus amaranthii</i> (<i>Gastrosuillus</i> sp. nov. #Trappe 9608)	E
<i>Gastrosuillus umbrinus</i> (<i>Gastroboletus</i> sp. nov. #Trappe 7516)	B
<i>Gautieria magnicellaris</i>	B
<i>Gautieria oththii</i>	B
<i>Gelatinodiscus flavidus</i>	B
<i>Glomus radiatum</i>	B
<i>Gomphus bonarii</i>	B
<i>Gomphus clavatus</i>	F
<i>Gomphus kauffmanii</i>	E
<i>Gymnomyces abietis</i> (<i>Gymnomyces</i> sp. nov. #Trappe 1690, 1706, 1710; <i>Gymnomyces</i> sp. nov. #Trappe 4703, 5576; <i>Gymnomyces</i> sp. nov. #Trappe 5052; <i>Gymnomyces</i> sp. nov. #Trappe 7545; <i>Martellia</i> sp. nov. #Trappe 1700; <i>Martellia</i> sp. nov. #Trappe 311; <i>Martellia</i> sp. nov. #Trappe 5903)	B
<i>Gymnomyces nondistincta</i> (<i>Martellia</i> sp. nov. #Trappe 649)	B
<i>Gymnopilus punctifolius</i> , In California	B
<i>Gyromitra californica</i>	B
<i>Hebeloma olympianum</i> (<i>Hebeloma olympiana</i>)	B
<i>Helvella crassitunicata</i>	B
<i>Helvella elastica</i>	B
<i>Hydnotrya inordinata</i> (<i>Hydnotrya</i> sp. nov. #Trappe 787, 792)	B
<i>Hydnotrya subnix</i> (<i>Hydnotrya subnix</i> sp. nov. #Trappe 1861)	B
<i>Hydropus marginellus</i> (<i>Mycena marginella</i>)	B
<i>Hygrophorus caeruleus</i>	B
<i>Hygrophorus karstenii</i>	B
<i>Hygrophorus vernalis</i>	B
<i>Hypomyces luteovirens</i>	B
<i>Leucogaster citrinus</i>	B
<i>Leucogaster microsporus</i>	B
<i>Macowanites chlorinosmus</i>	B
<i>Macowanites lymanensis</i>	B
<i>Macowanites mollis</i>	B
<i>Marasmius applanatipes</i>	B
<i>Martellia fragrans</i>	B
<i>Martellia idahoensis</i>	B
<i>Mycena hudsoniana</i>	B
<i>Mycena overholtsii</i>	D
<i>Mycena quinaultensis</i>	B
<i>Mycena tenax</i>	B
<i>Mythicomyces corneipes</i>	B
<i>Neolentinus adhaerens</i>	B
<i>Neolentinus kauffmanii</i>	B
<i>Nivatogastrium nubigenum</i> , In entire range except OR Eastern Cascades and CA Cascades Physiographic Provinces	B
<i>Octavianina cyanescens</i> (<i>Octavianina</i> sp. nov. #Trappe 7502)	B
<i>Octavianina macrospora</i>	B
<i>Octavianina papyracea</i>	B
<i>Otidea leporina</i>	D
<i>Otidea smithii</i>	B
<i>Phaeocollybia attenuata</i>	D
<i>Phaeocollybia californica</i>	B
<i>Phaeocollybia dissiliens</i>	B
<i>Phaeocollybia fallax</i>	D
<i>Phaeocollybia gregaria</i>	B
<i>Phaeocollybia kauffmanii</i>	D

APPENDIX ONE

TAXA GROUP Species	Category
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FUNGI (continued)	
<i>Phaeocollybia olivacea</i> , In Oregon	F
<i>Phaeocollybia olivacea</i> In Washington and California	E
<i>Phaeocollybia oregonensis</i> (syn. <i>Phaeocollybia carmanahensis</i>)	B
<i>Phaeocollybia piceae</i>	B
<i>Phaeocollybia pseudofestiva</i>	B
<i>Phaeocollybia scatesiae</i>	B
<i>Phaeocollybia sipei</i>	B
<i>Phaeocollybia spadicea</i>	B
<i>Phellodon atratus</i> (<i>Phellodon atratum</i>)	B
<i>Pholiota albivelata</i>	B
<i>Podostroma alutaceum</i>	B
<i>Polyozellus multiplex</i>	B
<i>Pseudaleuria quinaultiana</i>	B
<i>Ramaria abietina</i>	B
<i>Ramaria amyloidea</i>	B
<i>Ramaria araiospora</i>	B
<i>Ramaria aurantiisiccescens</i>	B
<i>Ramaria botrytis</i> var. <i>aurantiramosa</i>	B
<i>Ramaria celerivirescens</i>	B
<i>Ramaria claviramulata</i>	B
<i>Ramaria concolor</i> f. <i>marii</i>	B
<i>Ramaria concolor</i> f. <i>tsugina</i>	B
<i>Ramaria conjunctipes</i> var. <i>sparsiramosa</i>	B
(<i>Ramaria fasciculata</i> var. <i>sparsiramosa</i>)	B
<i>Ramaria coulterae</i>	B
<i>Ramaria cyaneigranosa</i>	B
<i>Ramaria gelatiniaurantia</i>	B
<i>Ramaria gracilis</i>	B
<i>Ramaria hilaris</i> var. <i>olympiana</i>	B
<i>Ramaria largentii</i>	B
<i>Ramaria lorithamnus</i>	B
<i>Ramaria maculatipes</i>	B
<i>Ramaria rainierensis</i>	B
<i>Ramaria rubella</i> var. <i>blanda</i>	B
<i>Ramaria rubribrunnescens</i>	B
<i>Ramaria rubrievanescens</i>	B
<i>Ramaria rubripermanens</i> In Oregon	D
<i>Ramaria rubripermanens</i> In Washington and California	B
<i>Ramaria spinulosa</i> var. <i>diminutiva</i> (<i>Ramaria spinulosa</i>)	B
<i>Ramaria stuntzii</i>	B
<i>Ramaria suecica</i>	B
<i>Ramaria thiersii</i>	B
<i>Ramaria verlotensis</i>	B
<i>Rhizopogon abietis</i>	B
<i>Rhizopogon atroviolaceus</i>	B
<i>Rhizopogon brunneiniger</i>	B
<i>Rhizopogon chamaleontinus</i> (<i>Rhizopogon</i> sp. nov. #Trappe 9432)	B
<i>Rhizopogon ellipsosporus</i> (<i>Alpova</i> sp. nov. # Trappe 9730)	B
<i>Rhizopogon evadens</i> var. <i>subalpinus</i>	B
<i>Rhizopogon exiguus</i>	B
<i>Rhizopogon flavofibrillosus</i>	B
<i>Rhizopogon inquinatus</i>	B
<i>Rhizopogon truncatus</i>	D
<i>Rhodocybe speciosa</i>	B
<i>Rickenella swartzii</i> (<i>Rickenella setipes</i>)	B
<i>Russula mustelina</i>	B
<i>Sarcodon fuscoindicus</i>	B
<i>Sedecula pulvinata</i>	B
<i>Sowerbyella rhenana</i> (<i>Aleuria rhenana</i>)	B
<i>Sparassis crispa</i>	D
<i>Spathularia flavida</i>	B
<i>Stagnicola perplexa</i>	B
<i>Thaxterogaster pavelekii</i>	B
(<i>Thaxterogaster</i> sp. nov. #Trappe 4867, 6242, 7427, 7962, 8520)	B
<i>Tremiscus helvelloides</i>	D
<i>Tricholoma venenatum</i>	B
<i>Tricholomopsis fulvescens</i>	B
<i>Tuber asa</i> (<i>Tuber</i> sp. nov. #Trappe 2302)	B
<i>Tuber pacificum</i> (<i>Tuber</i> sp. nov. #Trappe 12493)	B
<i>Tylopilus porphyrosporus</i> (<i>Tylopilus pseudoscaber</i>)	D

TAXA GROUP Species	Category
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LICHENS	
<i>Bryoria pseudocapillaris</i>	A
<i>Bryoria spirallifera</i>	A
<i>Bryoria subcana</i>	B
<i>Buellia oidalea</i>	E
<i>Calicium abietinum</i>	B
<i>Calicium adpersum</i>	E
<i>Cetrelia cetrarioides</i>	E
<i>Chaenotheca chrysocephala</i>	B
<i>Chaenotheca ferruginea</i>	B
<i>Chaenotheca furfuracea</i>	F
<i>Chaenotheca subroscida</i>	E
<i>Chaenothecopsis pusilla</i>	E
<i>Cladonia norvegica</i>	B
<i>Collema nigrescens</i> , In WA and OR, except in OR Klamath Physiographic Province	F
<i>Dendricocaulon intricatum</i> , In CA	E
<i>Dendricocaulon intricatum</i> , Rest of Oregon outside of Coos, Curry, Douglas, Josephine & Jackson Counties; WA	A
<i>Dermatocarpon luridum</i>	E
<i>Heterodermia sitchensis</i>	E
<i>Hypogymnia duplicata</i>	C
<i>Hypogymnia vittata</i>	E
<i>Hypotrachyna revoluta</i>	E
<i>Leptogium burnetiae</i> var. <i>hirsutum</i>	E
<i>Leptogium cyanescens</i>	A
<i>Leptogium rivale</i>	E
<i>Leptogium teretiusculum</i>	E
<i>Lobaria linita</i> , In WA WL, WA WC south of Snoqualmie Pass, WA EC; OR; CA	A
<i>Lobaria oregana</i> , In California	A
<i>Microcalicium arenarium</i>	B
<i>Nephroma bellum</i> , In OR; Klamath, Willamette Valley, Eastern Cascades; WA; Western Cascades (outside GPNF), Eastern Cascades, Olympic Peninsula Physiographic Provinces	E
<i>Nephroma isidiosum</i>	E
<i>Nephroma occultum</i>	A
<i>Niebla cephalota</i>	A
<i>Pannaria rubiginosa</i>	E
<i>Pannaria saubinetii</i>	F
<i>Peltigera pacifica</i>	E
<i>Platismatia lacunosa</i> , all except OR CR	E
<i>Pseudocyphellaria perpetua</i> (<i>Pseudocyphellaria</i> sp. 1)	B
<i>Pseudocyphellaria rainierensis</i>	A
<i>Ramalina thrausta</i>	A
<i>Stenocybe clavata</i>	E
<i>Teloschistes flavicans</i>	A
<i>Tholurna dissimilis</i> , south of Columbia River	B
<i>Usnea hesperina</i>	E
<i>Usnea longissima</i> , In California and in Curry, Josephine, and Jackson Counties, Oregon	A
<i>Usnea longissima</i> , In Oregon, except in Curry, Josephine, and Jackson Counties and in Washington	F

TAXA GROUP Species	Category
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BRYOPHYTES	
<i>Brotherella roellii</i>	E
<i>Buxbaumia viridis</i> , In California	E
<i>Diplophyllum plicatum</i>	B
<i>Herbertus aduncus</i>	E
<i>Iwatsukiella leucotricha</i>	B
<i>Kurzia makinoana</i>	B
<i>Marsupella emarginata</i> v. <i>aquatrica</i>	B
<i>Orthodontium gracile</i>	B
<i>Ptilidium californicum</i> , In California	A
<i>Racomitrium aquaticum</i>	E
<i>Rhizomnium nudum</i> , In OR	B
<i>Schistostega pennata</i>	A
<i>Tetraphis geniculata</i>	A
<i>Tritomaria exsectiformis</i>	B
<i>Tritomaria quinqueidentata</i>	B

APPENDIX ONE

TAXA GROUP Species	Category
VERTEBRATES	
Larch Mountain salamander <i>Plethodon larselli</i>	A
Shasta salamander <i>Hydromantes shastae</i>	A
Siskiyou Mountains salamander <i>Plethodon stormi</i> , In North Range	D ¹
Siskiyou Mountains salamander <i>Plethodon stormi</i> , In South Range	A
Van Dyke's salamander <i>Plethodon vandykei</i> , Cascade population only	A
Great Gray Owl <i>Strix nebulosa</i>	A
Oregon Red Tree Vole <i>Arborimus longicaudus</i> , In Central Range	D
Oregon Red Tree Vole <i>Arborimus longicaudus</i> , Outside Central Range	C

TAXA GROUP Species	Category
MOLLUSKS	
<i>Ancotrema voyanum</i>	E ^{3,4}
<i>Cryptomastix devia</i>	A
<i>Cryptomastix hendersoni</i>	A
<i>Deroceras hesperium</i>	B ⁴
<i>Fluminicola</i> n. sp. 3	A ²
<i>Fluminicola</i> n. sp. 11	A ²
<i>Fluminicola</i> n. sp. 14	A
<i>Fluminicola</i> n. sp. 15	A
<i>Fluminicola</i> n. sp. 16	A
<i>Fluminicola</i> n. sp. 17	A
<i>Fluminicola</i> n. sp. 18	A
<i>Fluminicola</i> n. sp. 19	A ²
<i>Fluminicola</i> n. sp. 20	A ²
<i>Fluminicola seminalis</i>	A ²
<i>Helminthoglypta talmadgei</i>	D ¹
<i>Hemphillia burringtoni</i>	E
<i>Hemphillia glandulosa</i> , In WA Western Cascades Physiographic Province	E
<i>Hemphillia malonei</i> , Washington	C
<i>Hemphillia pantherina</i>	B ⁴
<i>Juga</i> (O.) n. sp. 2	A
<i>Juga</i> (O.) n. sp. 3	A
<i>Lyogyrus</i> n. sp. 1	A
<i>Lyogyrus</i> n. sp. 2	A
<i>Lyogyrus</i> n. sp. 3	A
<i>Megomphix hemphilli</i> , South of south boundary of Lincoln, Benton, and Linn Counties, Oregon	F ⁵
<i>Megomphix hemphilli</i> , North of south boundary of Lincoln, Benton, and Linn Counties, Oregon	A
<i>Monadenia chaceana</i>	B ⁴
<i>Monadenia fidelis minor</i>	A
<i>Monadenia infumata ochromphalus</i> (syn. <i>M. f. klamathica</i> , <i>M. f.</i> <i>ochromphalus</i> , <i>M. f. salmonensis</i>)	B ^{3,4}
<i>Monadenia troglodytes troglodytes</i>	A
<i>Monadenia troglodytes wintu</i>	A
<i>Oreohelix</i> n. sp.	A
<i>Pristiloma arcticum crateris</i>	A ²
<i>Prophysaon coeruleum</i> , In California and Washington	A
<i>Trilobopsis roperi</i>	A
<i>Trilobopsis tehamana</i>	A
<i>Vertigo</i> n. sp.	A
<i>Vespericola pressleyi</i>	A
<i>Vespericola shasta</i>	A
<i>Vorticifex</i> n. sp. 1	E

TAXA GROUP Species	Category
VASCULAR PLANTS	
<i>Arceuthobium tsugense mertensiana</i> , In Washington only	F
<i>Bensoniella oregana</i> , In California only	A
<i>Botrychium minganense</i> , In Oregon and California	A
<i>Botrychium montanum</i>	A
<i>Coptis asplenifolia</i>	A
<i>Coptis trifolia</i>	A
<i>Corydalis aquae-gelidae</i>	A

TAXA GROUP Species	Category
VASCULAR PLANTS (continued)	
<i>Cypripedium fasciculatum</i> , WA outside Eastern Cascades; OR; CA	C
<i>Cypripedium montanum</i> , Entire range except Washington Eastern Cascades Physiographic Province	C
<i>Eucephalus vialis</i> (syn. <i>Aster vialis</i>)	A
<i>Galium kamtschaticum</i> , Olympic Peninsula, WA Eastern Cascades, OR & WA Western Cascades Physiographic Provinces, south of Snoqualmie Pass	A
<i>Platanthera orbiculata</i> var. <i>orbiculata</i> (syn. <i>Habenaria orbiculata</i>)	C

TAXA GROUP Species	Category
ARTHROPODS	
Canopy herbivores (south range)	F
Coarse wood chewers (south range)	F
Litter and soil dwelling species (south range)	F
Understory and forest gap herbivores (south range)	F

FOOTNOTES

- ¹ Although Pre-Disturbance Surveys are deemed practical for these species, continuing pre-disturbance surveys is not necessary in order to meet management objectives.
- ² For these species, until Management Recommendations are written, the following language will be considered part of the Management Recommendation: Known and newly discovered sites of these species will be protected from grazing by all practical steps to ensure that the local population of the species will not be impacted.
- ³ For these species, until Management Recommendations are written, the language known and newly discovered sites of these species will be protected from grazing by all practical steps to ensure that the local population of the species will not be impacted is the Management Recommendation and no other recommendations are imposed at this time.
- ⁴ Based upon direction contained in the ROD, equivalent-effort pre-disturbance surveys are required for these mollusk species.
- ⁵ Based upon direction contained in the ROD, this one mollusk species requires management of sites known as of 9/30/99.

APPENDIX TWO

Table 2-1 provides a listing of species that lacked Management Recommendations (MRs) when the Survey and Manage 2001 Record of Decision and Standards and Guidelines were signed, an update on MR status and needs based on the results of the findings of the 2002 Annual Species Review and status of MRs as an adaptive management approach to meeting the needs of the National Fire Plan. Status is categorized by the following:

- ND = "no draft"
- RV = "current MR, but revision in process"
- IR = "draft, in review"
- FP = "draft, final pending"
- DO = "done"

Where a year is identified in the "Status" column, the year is the date of MR completion (these species were misidentified as needing MRs in the 2003 Annual Status Report).

National Fire Plan MRs are typed as:
 WUI = "Fire and Fuels Treatments for Communities at Risk"
 EXP = "Fuel Hazard Reduction Treatment MRs in short fire return interval areas not associated with communities at risk (Expanded fire MRs)".

FUNGI						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
<i>Albatrellus ellisii</i>	FP	<i>Cantharellus subalbidus</i> , In Washington and California	ND	WUI	<i>Cantharellus subalbidus</i>	DO
<i>Albatrellus flettii</i> , In WA and CA	FP	<i>Chalciporus piperatus</i> (<i>Boletus piperatus</i>)	ND	WUI	<i>Clavariadelphus occidentalis</i> (<i>Clavariadelphus pistillaris</i>)	DO
<i>Asterophora lycoperdoides</i>	FP	<i>Clavariadelphus truncatus</i> (syn. <i>Clavariadelphus borealis</i>)	ND	WUI	<i>Clavariadelphus sachalinensis</i>	DO
<i>Asterophora parasitica</i>	FP	<i>Craterellus tubaeformis</i> (syn. <i>Cantharellus tubaeformis</i>), In Washington and California	ND	WUI	<i>Gomphus bonarii</i>	DO
<i>Baeospora myriadophylla</i>	FP	<i>Mycena overholtsii</i>	ND	WUI	<i>Gomphus clavatus</i>	DO
<i>Cantharellus subalbidus</i> , In WA and CA	FP	<i>Otidea leporine</i>	ND	WUI	<i>Gomphus kauffmanii</i>	DO
<i>Catathelasma ventricosa</i>	FP	<i>Phaeocollybia attenuata</i>	ND	WUI	<i>Mycena overholtsii</i>	DO
<i>Chalciporus piperatus</i> (<i>Boletus piperatus</i>)	FP	<i>Phaeocollybia fallax</i>	ND	WUI	<i>Otidea leporine</i>	DO
<i>Chrysomphalina grossula</i>	FP	<i>Phaeocollybia kauffmanii</i>	ND	WUI	<i>Ramaria rubrioermanens</i>	DO
<i>Clavariadelphus ligula</i>	FP	<i>Ramaria rubrioermanens</i> , In OR	ND	WUI	<i>Sowerbyella rhenana</i>	DO
<i>Clavariadelphus occidentalis</i> (<i>Clavariadelphus pistillaris</i>)	FP	<i>Rhizopogon truncatus</i>	ND	WUI	<i>Spathularia flavida</i>	DO
<i>Clavariadelphus sachalinensis</i>	FP	<i>Sparassis crispa</i>	ND	WUI	<i>Tremiscus helvelloides</i>	DO
<i>Clavariadelphus subfastigiatus</i>	FP	<i>Tremiscus helvelloides</i>	ND			
<i>Clavariadelphus truncatus</i> (syn. <i>Clavariadelphus borealis</i>)	FP					
<i>Clavulina castanopes</i> v. <i>lignicola</i> (<i>Clavulina ornatipes</i>)	FP					
<i>Collybia racemosa</i>	FP					
<i>Cordyceps ophioglossoides</i>	FP					

FUNGI						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
<i>Cortinarius barlowensis</i> (syn. <i>Cortinarius azureus</i>)	FP					
<i>Cortinarius cyanites</i>	FP					
<i>Cortinarius depauperatus</i> (<i>Cortinarius spilomeus</i>)	FP					
<i>Cortinarius speciosissimus</i> (<i>Cortinarius rainierensis</i>)	ND					
<i>Cortinarius tabularis</i>	ND					
<i>Cortinarius valgus</i>	FP					
<i>Craterellus tubaeformis</i> (syn. <i>Cantharellus tubaeformis</i>), In WA and CA	FP					
<i>Cudonia monticola</i>	FP					
<i>Cyphellostereum leave</i>	FP					
<i>Fayodia bisphaerigera</i> (<i>Fayodia gracilipes</i>)	FP					
<i>Galerina atkinsoniana</i>	FP					
<i>Galerina cerina</i>	FP					
<i>Galerina heterocystis</i>	FP					
<i>Galerina sphagnicola</i>	FP					
<i>Gastroboletus turbinatus</i>	FP					
<i>Gomphus bonarii</i>	FP					
<i>Gomphus kauffmanii</i>	FP					
<i>Gyromitra californica</i>	FP					
<i>Hydropus marginellus</i> (<i>Mycena marginella</i>)	FP					
<i>Hygrophorus caeruleus</i>	1997					

APPENDIX TWO

FUNGI Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	

<i>Hygrophorus karstenii</i> (<i>Hygrophorus saxatilis</i>)	FP					
<i>Hypomyces luteovirens</i>	FP					
<i>Mycena tenax</i>	FP					
<i>Mythicomyces corneipes</i>	FP					
<i>Octavianina papyracea</i>	1997					
<i>Phaeocollybia attenuata</i>	FP					
<i>Phaeocollybia fallax</i>	FP					
<i>Phaeocollybia kauffmanii</i>	1997					
<i>Phaeocollybia olivacea</i> In WA and CA	FP					
<i>Phaeocollybia pseudofestiva</i>	FP					
<i>Phaeocollybia spadicea</i>	FP					
<i>Phellodon atratus</i> (<i>Phellodon atratum</i>)	FP					
<i>Podostroma alutaceum</i>	FP					
<i>Ramaria abietina</i>	FP					
<i>Ramaria concolor</i> f. <i>tsugina</i>	FP					
<i>Ramaria coulterae</i>	FP					
<i>Ramaria suecica</i>	FP					
<i>Rhizopogon abietis</i>	FP					
<i>Rhizopogon atroviolaceus</i>	FP					
<i>Rhizopogon truncates</i>	FP					
<i>Rickenella swartzii</i> (<i>Rickenella setipes</i>)	FP					
<i>Russula mustelina</i>	FP					
<i>Sarcodon fuscoindicus</i>	FP					
<i>Sparassis crispa</i>	FP					
<i>Spathularia flavida</i>	FP					
<i>Stagnicola perplexa</i>	FP					
<i>Tremiscus helvelloides</i>	FP					

BRYOPHYTES Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	

<i>Buxbaumia viridis</i> In CA	RV	No Category C or D species		WUI	<i>Ptilidium californicum</i> In CA	DO
<i>Iwatsukiella leucotricha</i>	RV			WUI	<i>Schistostega pennata</i>	DO
<i>Ptilidium californicum</i> In CA	RV			WUI	<i>Tetraphis geniculata</i>	DO
<i>Rhizomnium nudum</i> In OR	RV					
<i>Schistostega pennata</i>	RV					
<i>Tetraphis geniculata</i>	RV					
<i>Tritomaira quinqueidentata</i>	RV					

LICHENS Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	

<i>Calicium abietinum</i>	ND	<i>Hypogymnia duplicata</i>		WUI	<i>Dendrococaulon intricatum</i>	DO
<i>Calicium adspersum</i>	ND			WUI	<i>Peltigera pacifica</i>	DO
<i>Cetrelia cetrarioides</i>	ND			WUI	<i>Ramalina thrausta</i>	DO
<i>Chaenotheca chrysocephala</i>	ND			WUI	<i>Usnea longissima</i>	DO
<i>Chaenotheca ferruginea</i>	ND					
<i>Chaenotheca furfuracea</i>						
<i>Chaenotheca subroscida</i>	ND					
<i>Chaenothecopsis pusilla</i>	ND					
<i>Cladonia norvegica</i>	IR					
<i>Collema nigrescens</i> In WA and OR, except in OR Klamath Physiographic Province						
<i>Heterodermia sitchensis</i>						
<i>Hypogymnia vittata</i>	ND					
<i>Hypotrachyna revoluta</i>	ND					
<i>Leptogium burnetiae</i> var. <i>hirsutum</i>	ND					
<i>Leptogium cyanescens</i>	IR					
<i>Leptogium teretiusculum</i>	IR					
<i>Lobaria oregana</i> , In CA	IR					
<i>Microcalicium arenarium</i>	ND					

APPENDIX TWO

LICHENS						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
<i>Nephroma bellum</i> In OR; Klamath, Willamette Valley, Eastern Cascades; WA; Western Cascades (outside GPNF), Eastern Cascades, Olympic Peninsula Physiographic Provinces	ND					
<i>Nephroma isidiosum</i>	ND					
<i>Nephroma occultum</i>	IR					
<i>Pannaria saubinetii</i>						
<i>Peltigera pacifica</i>	IR					
<i>Platismatia lacunosa</i> all except OR CR	ND					
<i>Ramalina thrausta</i>	IR					
<i>Stenocybe clavata</i>	ND					
<i>Usnea longissima</i> , In CA and in Curry, Josephine, and Jackson Counties, OR	IR					

MOLLUSKS						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
complete for all species	DO	<i>Helminthoglypta talmadgei</i>	IR	WUI EXP	<i>Helminthoglypta talmadgei</i>	DO FP
		<i>Hemphillia malonei</i> , In WA	IR	WUI	<i>Megomphix hemphilli</i>	
				WUI	<i>Monadenia chaceana</i>	
				WUI	<i>Monadenia fidelis minor</i>	
				WUI	<i>Monadenia troglodytes troglodytes</i>	
				WUI	<i>Monadenia troglodytes wintu</i>	
				WUI	<i>Oreohelix n. sp.</i> , <i>Pristioma arcticum crateris</i>	
				WUI	<i>Prophysaon coeruleum</i> , In CA	
				WUI	<i>Vespericola shasta</i>	

VASCULAR PLANTS						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
complete for all species	DO	<i>Cypripedium fasciculatum</i> , WA outside Eastern Cascades; OR; CA	IR	WUI EXP	<i>Cypripedium fasciculatum</i> , WA outside Eastern Cascades; OR; CA	DO FP
		<i>Cypripedium montanum</i> , Entire range except Washington Eastern Cascades Physiographic Province	ND	WUI EXP	<i>Eucephalus vialis</i> (syn. <i>Aster vialis</i>)	DO FP
		<i>Platanthera orbiculata</i> var. <i>orbiculata</i> (syn. <i>Habenaria orbiculata</i>)	ND	WUI EXP	<i>Botrychium montanum</i>	DO FP

VERTEBRATES						
Known Site MR (A,B,E and some C&D species)	Status	High Priority Site MR (C&D species)	Status	National Fire Plan MRs		Status
				Type	Species	
Amphibians						
<i>Hydromantes shastae</i> (Shasta salamander)	ND	<i>Plethodon stormii</i> , In north range	ND	WUI EXP	<i>Hydromantes shastae</i>	DO FP
<i>Plethodon larsellii</i> (Larch Mountain salamander)	ND			WUI EXP	<i>Plethodon stormii</i>	DO FP
<i>Plethodon stormii</i> , In south range (Siskiyou Mountain Salamander)	ND					
<i>Plethodon vandykei</i> (Van Dyke's Salamander)	ND					
Birds						
<i>Strix nebulosa</i> (Great Gray Owl)	ND	Not Applicable, Category A species		WUI	<i>Strix nebulosa</i> (Great Gray Owl)	IR ^a
Mammals						
Complete, 9/2000 currently Category C & D species	DO	<i>Arborimus longicaudus</i> (Red Tree Vole)	ND ^b	WUI EXP	<i>Arborimus longicaudus</i> (Red Tree Vole)	DO FP

^a Draft MR exceeded current direction in 2001 Standards and Guidelines.
^b Supplemental direction for a programmatic process for the identification of Non High Priority Sites was developed and released while development of the High Priority Site MR continues.

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