

**Regional Biodiversity Monitoring Partnership
Workshop**

Final Report

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1.0 Executive Summary

1.1 Overview

The Biodiversity Monitoring Workgroup (Appendix 1)—which consists of federal, state, university, NGO’s, and private landowner stakeholders who are involved in aspects of monitoring biodiversity in the states of Oregon and Washington—conceived of the idea of exploring the possibilities of creating a *Regional Biodiversity Monitoring Partnership*. The Workgroup’s idea of hosting a workshop to explore such possibilities is grounded in a shared vision that recognizes the underlying value of biodiversity and relies on the compiling, managing, and sharing of biodiversity information in the region that will ultimately inform management and conservation efforts and decisions, and identify gaps where new efforts might be needed. The overall effort is sponsored by the U.S. Forest Service Pacific Northwest Research Station as part of the Focused Sciences Delivery Program’s Biodiversity Initiative and facilitated by the Institute for Natural Resources at OSU.

Workshop participants greeted the idea and need of having a partnership with warm regard. Many regarded it as an essential component to extending and elevating the presence of monitoring regional biodiversity efforts. While participants spoke well on behalf of a partnership, this document focuses on the issues that individual participants and break-out groups thought needed to be addressed to create a viable, accessible, and sustainable regional biodiversity monitoring partnership. The issues and recommendations listed throughout the document reflect the range of views of individuals and break-out groups and do not reflect a consensus by all participants.

1.2 Workshop Goals

By bringing together 25 to 40 biodiversity stakeholders from Oregon and Washington, the intent of the workshop was to explore the possibilities of establishing a partnership to regionally monitor biodiversity. The objectives of the workshop were to:

- Share stakeholder perspectives, differences, and objectives as they pertain to monitoring biodiversity.
- Discuss a draft monitoring framework developed by the Biodiversity Monitoring Workgroup as a starting point for structuring shared efforts on this issue.
- Explore what a biodiversity monitoring partnership might look like (i.e., shared visions, concepts, objectives, and expectations; how it could be formally or informally institutionalized; identifying roles, expectations, and willingness to participate in various aspects of the partnership).
- Establish next steps to jointly develop and coordinate the monitoring framework and partnership.

1.3 Workshop Drivers

The Biodiversity Workgroup (Appendix 1)—consisting of roughly 16 people from federal agencies, Oregon and Washington state agencies, non-government conservation organizations, and private land interests—held three meetings in late 2005 and early 2006 to explore the possibilities of creating a shared vision for biodiversity monitoring in Oregon and Washington. During the discussions, the Workgroup agreed that such a project should rely heavily on partnerships and should build on and complement ongoing efforts and foster integration. Several Workgroup members emphasized the need to understand what their “neighbors” are doing regarding biodiversity management and monitoring in order to be successful in meeting their own goals around this complex issue. The Workgroup’s idea of hosting a workshop to explore the possibility of forming a *Regional Biodiversity Monitoring Partnership* is grounded in a shared vision statement that recognizes the underlying value of biodiversity and envisions compiling, managing, and sharing biodiversity information in the region that will ultimately inform management and conservation efforts and decisions, and identify gaps where new efforts might be needed.

To this end, the Workgroup has taken several initial steps:

1. composing a “vision statement” capturing their mission;
2. beginning to compile a spreadsheet/database of ongoing monitoring activities; and,
3. drafting a monitoring framework that identifies the pieces of a technical plan for biodiversity monitoring, collaboration, and information sharing.

At the heart of the draft framework and the intent of this workshop was the process of developing a common sense of value in collaborating for regional biodiversity monitoring.

1.4 New Opportunity for Partnership

From the Workgroup’s initial efforts to scope out needs for biodiversity conservation-related activities, they recognized that the natural diversity of plants, animals, and ecosystems have economic, social, and ecological value to people of the region. The Workgroup is just beginning to understand, however, the specific relations between natural diversity and these values. There are also many challenges to maintaining that diversity and in understanding the important contributions different land ownerships provide to the region’s biodiversity. The region’s ability to adapt to changing economic, social, and ecological conditions depends on the quality and consistency of the information gathered through monitoring and evaluation. The Workgroup believes that Oregon and Washington can be more effective and efficient in sustaining the region’s biodiversity by working together under a common vision than any one group can do on their own.

1.5 Workshop Highlights

A few big ideas of needs and opportunities for guiding the development of a regional biodiversity monitoring partnership resulted from the workshop. These include:

- Basing the governance of the partnership on Oregon and Washington’s wildlife conservation strategies, with the possibility of elevating it to the Governors’ level to involve other state agencies
- Establishing a charter or MOU and pattern it after other similar types of agreements
- Placing emphasis on getting something going quickly and easily
- Organizing and making available information that already exists, and making sure that grassroots organizations have access to the information
- Using biodiversity as an education tool and promoting it as such
- Assessing the needs of those who would use the partnership’s products
- Linking monitoring back to critical questions of interest and relevance – this would drive what the data collected looks like
- Looking for some opportunities for smaller pilot projects that could be successful early on (proof of concept)

1.6 Structure of Report

The report is structured in the following way:

- Section 2 presents the organization of the workshop and the desired outcomes that participants’ hoped would come from the workshop.
- Section 3 presents a series of key issues and recommendations (ideas) that participants mentioned regarding the possibilities of developing a regional biodiversity monitoring workshop. These recommendations are meant to stimulate further discussion among the Biodiversity Monitoring Workgroup and other individuals and organizations interested in a partnership.
- Section 4 concludes with next steps.

2.0 Organization of the Workshop

Staff from the Institute for Natural Resource (INR) at Oregon State University organized and facilitated the workshop. To get a range of representatives to invite to the workshop, members of the Biodiversity Workgroup developed a list of potential invitees. Forty-two people participated in this by-invitation-only workshop and represented the private sector, non-governmental organizations, and federal, state, and local agencies (Appendix 2).

To prepare for the workshop, participants were given a briefing document. The purpose of the briefing document was to provide background about the U.S. Forest Service Biodiversity Initiative and to provide a preliminary framework that the Biodiversity

Monitoring Workgroup drafted regarding the elements of regional monitoring (Appendix 3). The workshop was designed to solicit the greatest amount of information in the shortest timeframe (Appendix 4), while being flexible enough to allow for “mixing” in small and large groups and follow the direction developed by the interaction of the participants.

2.1 Desired Workshop Outcomes

At the beginning of the workshop participants were asked to state what outcomes they hoped would come from the workshop (Box 1). A number of general themes presented themselves, many of which expanded beyond the partnership-exploration scope of the workshop.

- **Common language and definitions:** Providing a common definition (e.g., biodiversity, green certification, restoration, etc.) with reasonable goals and objectives for monitoring; measuring biodiversity and the social value of it
- **Recognition that private lands, cities, counties are also important:** Recognizing the important role of small woodlot owners; making sure that the partnership effort is not seen as threatening; considering what tools are available not only for federal/public lands, but for all stakeholders and making them useable to others
- **Promote efficiencies:** Looking for opportunities for efficiency across different landowner borders
- **Leverage resources:** Leveraging funding for monitoring; having common standards and indicators, sharing information
 - How do we make decisions about what to invest in?
- **Keeping momentum of collaboration:** Developing a collaborative process to forge relationships and do real work together
 - At what scale is monitoring collaboration cost effective?
- **Common monitoring protocols, framework, strategies, visions:** Developing a large scale strategy; retooling protocols
- **Integrate and link with other efforts:** Linking various biodiversity initiative efforts; explaining biodiversity monitoring within the context of many other efforts; understanding what the relationship is between this new initiative and what is already going on; putting together ongoing activities and aggregating them to assess how well Oregon and Washington are already doing in biodiversity monitoring
 - What do we get, in terms of biodiversity, from landscapes that are managed differently?
 - How can the partnership benefit from Oregon’s and Washington’s wildlife conservation strategies?
- **Connecting upland and aquatic monitoring:** Linking biodiversity with sustainable ecosystems
- **Public Outreach:** Articulating to the public that the partnership is moving in the right direction; building trust and enhancing communication to include private lands

Box 1: Overall Themes of Participants’ Desired Meeting Outcomes

Following the “desired outcomes” session, presentations were given by Audrey Hatch (ODFW), John Pierce (WDFW), and Randy Molina (USFS) to orient workshop participants to the efforts of Oregon and Washington, and to present the draft framework (these presentations will be accessible on the Institute for Natural Resources website at <http://inr.oregonstate.edu/>).

3.0 Key Issues and Recommendations

“Partnership” is used to describe a range of interpersonal and organizational relationships with varying degree of shared purpose and responsibility (Box 2). The important question is how partnership objectives are best served by the different degrees of partnership. Approaches to developing partnerships vary considerably as do their long-term sustainability. Developing partnerships can be regarded as a question of dealing with organizational boundaries, while others look upon it as primarily about relationships between professionals and others who may be involved. Nonetheless, partnerships take a substantial investment of time, effort, and a commitment of sustained communication.

- **Coexistence** may be a rational solution where clarity is brought to who does what and with whom.
- **Cooperation** is often a prerequisite of further degrees of partnership, where there is early recognition of mutual benefits and opportunities to work together.
- **Coordination** is where the parties accept the need to make some changes to improve services/ activities from a user/ customer/ community perspective and make better use of their own resources.
- **Collaboration** is where the parties agree to work together on strategies or projects, where each contributes to achieve a shared goal.
- **Co-ownership** is where the parties commit themselves wholly to achieving a common vision, making significant changes in what they do and how they do it.

Source: Employers Organization.[online] <http://www.lgpartnerships.com/resources/lead-fivedegrees.asp>

Box 2: Five Degrees of Partnership

Before embarking on a partnership, several considerations must be taken, including: the feasibility of identifying and involving partners; the clarity of the idea or goal around which the partners can connect; the level of knowledge that potential partners have about each other; clearly delineated roles of the partners (including who will lead the partnership); and, the viability of the partnership

The recommendations (ideas) in this section came out of the small and large group workshop discussions and are not based on the consensus of all workshop participants. The recommendations are structured around key issues, which also resulted from the discussions, and are presented here as a list of options to stimulate further discussion regarding the potential to develop a regional biodiversity monitoring partnership. In some cases, where they are quite distinct, the recommendations are not summarized but bulleted.

3.1 General Issues

3.1.1 Key Issues: Value of a Regional Biodiversity Monitoring Partnership

There are divisions in agencies and in the public eye about how to view the biodiversity. A partnership would need to show the value not only of biodiversity, but the partnership itself, to the public and to policymakers. As one participant mentioned, “a partnership would allow us to speak as one voice and give us a common body of knowledge”. Communication and trust are key to creating value in a partnership. Box 3 highlights the values that workshop participants see in a regional biodiversity monitoring partnership.

- **Overall benefits to decision makers and policy makers:** Be cautious about value judgments – what are the benchmarks we will use to look at trends and limiting factors. We need to be very specific and agree on these benchmarks so as not to alienate any user
- **Common voice:** A partnership could speak with one voice; create new values; provide a strong science vision to other scientists and the public
- **Leveraging resources:** spreading costs across multiple sponsors [note: we need to be realistic about funding for any large endeavor]; sharing expertise and experience
- **Data management:** Providing a means to be able to understand how to use the various data sets; one group could manage data to keep it all together; a web-based approach to develop an “encyclopedic” approach to provide data; a way to integrate aquatic and terrestrial information [note: we need to be careful about the quality assurance of the data, we need to know what databases exist, are available, and what data can not be shared]
 - **Data sharing issues**
 - **Data quality.** Does the partnership impose standards? If a data source does not meet Federal Data Quality Processing Act standards, it probably can not be used in some decision processes (ESA, etc)
 - **Data compatibility.** This would probably have to involve agreeing on common monitoring protocols
 - **Privacy.** The partnership would not be able to get all data sets.
 - **Raw data vs. analysis.** What good is the data if one does not even know what questions it answers? How do you fix the problem when you can not pin down the cause? However, given that there are many, many scattered sources of information out there, it seems as if the first thing to do is to bring it all together in one place and make it available. The online encyclopedia format was brought up as an example. Different end users are going to have different uses for data.
 - **Data accessibility.** We need to ensure grassroots access to information (public, NGOs).
 - Critical questions that must drive development of the actual framework:
 - Who will use this data? And how will they use it?
- **Monitoring policy and management:** The partnership would need to describe what we do and don't know (just knowing this would be a good starting place);
- **Building trust**

Box 3: Value of a Regional Biodiversity Monitoring Partnership

3.1.2 Key Issue: Terminology

Participants repeatedly pointed out that “biodiversity”, among other words, has multiple meanings and definitions, depending on to whom one is speaking – even within the same agency, let alone across agencies, private sector, and the public. In short, there is a lack of common understanding of what biodiversity is. One participant pointed out that biodiversity is such a fuzzy, “undefined mass” that it is difficult to pinpoint what one would be committing to.

Recommendation: Develop a partnership definition “biodiversity” and other key terms

This should be done as a first step around which the partnership can garner support.

Recommendation: Change the terminology

To some the term “biodiversity” is seen as unpopular. If the word is used as a driving force of the partnership it may hinder interest, particularly the interest of the leadership of federal agencies, who – as some participants pointed out – already appears reticent.

3.1.3 Key Issue: Identifying and learning about users/stakeholders/beneficiaries of the Partnership

In the effort to develop and foster a partnership, workshop participants cautioned that the users and beneficiaries of the partnership (the audience) should not be lost track of. It was noted that monitoring is only important if it meets someone’s needs and that the partnership could provide an opportunity for involving citizen science.

Recommendation: Make the partnership meaningful

Monitoring must link to questions of interest and has to be meaningful. This should drive what data looks like and/or how it is made available.

3.2 Governance

The ideas about what a partnership should or could be varied quite substantially. Should it be a formally structured entity or a loose, voluntary group focused on information sharing? Should it be a stand-alone institution or a professional society? Each option has its advantages and disadvantages. For instance, in a loose, voluntary partnership would be more difficult to keep voluntary groups together, plus such a partnership might have potentially poor data quality; however, the partnership could classify the data by quality level. A professional society, on the other hand, might have more protocols and standards to allow for better data quality/integrity but would have a cost of paying staff to manage data. To craft a system that will persist into the future, the partnership must assess what is already being done regionally, how it adds value to these efforts, and be sure that its expectations are realistic and supported with good science.

<u>Advantages</u>	<u>Disadvantages</u>
<ul style="list-style-type: none"> • consolidation can save funds (i.e., “corporate model”) • a comprehensive assessment is more effective and allows for increased efficiency • by working regionally, a partnership can leverage similar information that might be collected for different reasons 	<ul style="list-style-type: none"> • it is much more work to coordinate outside your organization, which can range from just providing information to changing/improving your efforts • it requires more effort devoted to increased understanding of the value of biodiversity • one needs to build the niche and the connection to biodiversity
Box 4: Advantages and Disadvantages of a Biodiversity Monitoring Partnership	

3.2.1 Key Issue: Leadership

What role would the leadership for this effort take – dialogue, implementation, or both?

Recommendation(s)

- **Build on the state comprehensive wildlife conservation strategies.** Since these state efforts already have momentum, could Washington and Oregon collaborate to take the lead for this partnership?
- A **Non-profit entity** could be hired as a model to take the lead as a contractor for this endeavor
- A **university** might also provide good objective leadership for this process
- Structure it as a **cooperative** (e.g. Watershed Research Cooperative for Hinkle Creek, which is member-directed and science-driven)

3.2.2 Key Issue: Potential partners

Recommendation: Identify potential partners’ strengths and expertise

Determine what type of partners would fill gaps in the identified areas in which the partnership can add value to biodiversity monitoring. Understand potential partners’ mission, goals, and activities to ensure compatibility with the partnership’s mission, goals, and activities. Focus on what each partner is doing well. Once the partners are identified, determine why what they do is done well, how it is being used, and who is benefiting from it. One group of workshop participants listed some general groups that would need to be represented on a regional biodiversity monitoring partnership

- State agencies (i.e., Fish and Wildlife, Department of Environmental Quality, Forestry, etc.)
- Federal agencies
- Universities
- Non-governmental organizations
- Watershed councils
- Tribes
- Private

Recommendation: Clarify roles and expectations

- *Federal* – provision of seed money, but not sustain the effort; can not fully take on the work
- *State* – academic representation (Oregon University System) and professional societies (AFS, TWS)
- *Tribes*
- *NGO* – will vary by organization and can include some public representation
- *Private*
- *Public* – increased understanding value of biodiversity, especially important for biodiversity (vs. water)

Recommendation: Determine partnership's ability to manage and fulfill the agreed upon goals and the roles partners can take

3.2.3 Key Issue: Partnership structure

Recommendation: Formal Structure/Developing a MOU

The partnership should have a formal structure. Loose partnerships tend to dissolve, though the partnership needs to allow flexibility, and mandatory partnerships seem not to work. The partnership would need to allow for different levels of contribution and participation from partners. One suggestion was to develop an MOU with a directive from state governors. The MOU would explicitly detail each partner's roles, obligations, and what outcomes the partners agree upon. Amendments could be made to the MOU to help eliminate a "fear factor". A strategic or action plan must tie into the MOU by showing the capacity to meet the partnership agreement and expected outcomes.

Recommendation: Information/Data Sharing Focus

Most agencies do not have the resources or motivation to take on new monitoring efforts. Creating a partnership for biodiversity information-sharing might be a better focus. In the short-term, however, a primary focus should include increasing the understanding of the value of biodiversity. One group of participants suggested that the partnership should be viewed as "data stewards".

Recommendation: Look at other models and efforts

NED and PNAMP could be used as models for how to establish partnerships. Among others things, in the development of this partnership, one can look to NED's model for structuring MOU's (i.e., middleware model). PNAMP took a voluntary model that could be sponsored at the executive level. NW Environmental Data network is already going on and officially sanctioned so the partnership could take advantage of this effort. Other models for partnership, include: Wikipedia (start at larger scale and then proceed to finer scales); Ecotrust; the Institute for Natural Resources ("clearinghouse" for Oregon state groups); National Water Quality; Geospatial 1-stop; Magnusson Act (Council

represents many sectors); and, Washington’s Biodiversity Council (pre-existing with mission and multiple partners).

Recommendation: Develop a ‘straw man’ charter

The charter would serve as a draft document with more explicit objectives and guidelines that can be “shopped around” to the leadership of potential partners for input and buy-in.

Recommendation: Develop a business plan

The partnership would need to develop a long-term business/funding plan. Such a business/funding plan would need to be thought about and linked between the partnership’s needs and activities and how it complements other ongoing monitoring efforts in the region. It would need to show financial savings as incentives for executives to support this as a new venture. This plan should be seen as a road map for regional biodiversity monitoring. One suggestion was to have a 10-year plan.

Recommendation: Focus on the added value of the partnership

Focus on what the states are doing successfully. Once that is identified, determine why it is done well, how people are using what it, and who is benefiting from it. Then concentrate efforts on its capacity to add value. Have the current efforts made a difference?

3.3 The Draft Framework

The framework for the partnership needs to be as simple as possible. Particular focus needs to be given to elaborating the “what” section of the framework (Appendix 3), eliminating value-based statements (i.e., what is good for biodiversity versus what needs to be done). For detailed comments regarding the draft framework, see Appendix 5.

3.3.1 Key Issue: Information and Data Gaps

Information is key to biodiversity monitoring and is developed and utilized within the numerous contexts of the region’s conservation and monitoring efforts. Workshop participants identified several gaps that need to be addressed, particularly in data scaling; data sharing – develop commonalities; gap analysis – relative to benchmark; communicating about “biodiversity” – values; and, disparate missions. Participants noted that it will be important for NGOs to be able to access the information that government has.

- **Metro** – water quality, online data
- **The Nature Conservancy** – data for specific questions/applicability
- **Forest Service** – data, FIA, District
- **OR and WA Departments of Forestry** – inventory, assessments, all monitoring info, analyses
- **NWHI** – online data files
- **U.S. Park Service** – monitoring data, advice on methodology

Box 5: Ideas for Data Contributions/Sharing

Recommendation: Develop an overall plan for information and data-sharing

- The partnership would need to agree on and provide standards for data collection and sharing

Recommendation: Decrease information and data gaps

- Collaboration and coordination to identify data gaps

Recommendation: Develop quick accessible information and documentation

- Develop quick, accessible information and documentation – levels of forwarding, public access, research capabilities (i.e. Wikipedia)
- Approaches to collect data – data warehouse (old method) or portals (new method) can harvest information [note: need to consider what the information is used for, which will require a data quality review]
- Catalogue databases; however, some may not be legally available

Recommendation: Provide good tools for spatial and non-spatial analysis

4.0 Next Steps

To continue and expand the momentum of the efforts of those involved in the workshop and the initial efforts of the Biodiversity Workgroup a few next steps were suggested by the workshop participants:

- Get presentations from workshop put on a website
- **Develop a straw man charter:** use it as a basis for discussion and buy-in
- **Analysis of monitoring spending:** Do an economic analysis of what we are already spending in this arena
- **User needs assessment:** have groups write down how they might use the information so we can get started on “user needs”
- **Compilation and assessment of efforts:** explore and document how a newer biodiversity monitoring partnership relates to what is already being done; compile a list of organizations who have data, starting with Todd Stevenson’s list and keep adding to this
- **Have a review done by an independent firm**

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Appendix 3: Workshop Briefing Document

DRAFT

Biodiversity monitoring workgroup: building a framework

Background

The Biodiversity Initiative—In the Pacific Northwest, biodiversity management has gained attention with the ongoing debate over protection of northern spotted owls, marbled murrelets, and salmon, in an area known for its timber resources. In short, land managers are faced with numerous challenges in deciding how best to manage ecosystems for multiple values. To respond to this need, the USDA Forest Service’s Pacific Northwest Research Station created the Biodiversity Initiative in 2004. This 2-year initiative focuses on forests and rangelands of Oregon and Washington with two main objectives: (1) to learn from the diverse natural resource stakeholders in Oregon and Washington what major challenges they face in managing for biodiversity; and (2) to develop a set of priority management tools or products in direct partnership with interested collaborators to help meet those challenges. During the process, we hope to forge partnerships and open communication channels with a diverse base of clients, and to create a feedback loop between research and management.

In the initial information-gathering stage of this project, we asked for individual input from approximately 100 people involved in natural resource management in Oregon and Washington. Stakeholder groups included state and federal agencies, private forestry companies, conservation organizations, and city and county governments. Second, we held four interactive workshops in various locations in both eastern and western Oregon and Washington. These workshops also enlisted a wide variety of people and organizations. We asked participants what challenges they face in managing for biodiversity, where they go for information on the topic, and what types of tools and information would help them in their work.

Establishment of the monitoring workgroup—During our listening phase, participants often expressed their frustration at the lack of a standardized process for monitoring biodiversity. Many conservation and restoration projects are initiated recognizing the general value of biodiversity, but what this means is not always well understood. Most land managers and decision makers lack the information necessary to assess the effectiveness of conservation strategies and to determine whether biodiversity management goals are being met. Federal land management plans such as the Northwest Forest Plan emphasize biodiversity monitoring tangentially, but don’t provide explicit protocols beyond those for selected species such as northern spotted owls, salmon, and marbled murrelets. There are also many ongoing monitoring efforts and conservation actions being carried out by various groups and agencies. For example, state wildlife agencies in Oregon and Washington have independently developed comprehensive wildlife and habitat conservation strategies that include monitoring proposals. The state strategies identify priority species and habitats for

conservation, and make recommendations to address priority needs. But what's missing is an overall framework that unifies these efforts across all land ownerships, sectors, and state lines; takes into account the various contributions that all landowners and managers are providing towards maintenance of the region's biodiversity; and provides a standardized process for monitoring elements of biodiversity and effects of management and conservation activities. To answer this need, we have convened a workgroup to figure out how to evaluate and monitor biodiversity and management and conservation activities in a broad context with the ultimate goal of creating a common framework that various groups and agencies can use. A unified framework will increase efficiency and promote collaboration, leveraging resources toward common goals.

The Biodiversity Monitoring Workgroup

The workgroup—consisting of roughly 16 people from federal agencies, Oregon and Washington state agencies, non-government conservation organizations, and private land interests—held three meetings in late 2005 and early 2006 to explore the possibilities of creating a shared vision for biodiversity monitoring in Oregon and Washington. During the discussions, the group agreed that this project should rely heavily on partnerships and should build on and complement ongoing efforts and foster integration. Several workshop members emphasized the need to understand what their “neighbors” are doing regarding biodiversity management and monitoring in order to be successful in meeting their own goals around this complex issue. The project will be grounded in a shared vision statement that recognizes the underlying value of biodiversity. The project's goal of compiling, managing and sharing biodiversity information in the region will ultimately inform management and conservation efforts and decisions, and identify gaps where new efforts might be needed.

To these ends, the workgroup has accomplished or set in motion several preliminary steps.

4. We have begun composing a “vision statement” capturing our mission. The versions below are both works in progress, and subject to modification based on input from future partners.

Vision statement: long version

We support the establishment of a long-term regional monitoring collaboration for native plants and animals in the Pacific Northwest. This partnership will use monitoring results to respond to the evolving pressures on biological diversity from both natural and human disturbances, including changing economic, ecological, and social conditions. We will collect, share, and analyze the information required to respond effectively to change. Our success will be directly proportional to the quality and consistency of our information and analysis. We recognize that our scientific knowledge of natural diversity is incomplete, but that society is beginning to account for its tremendous economic, social, and aesthetic value.

Short version

To meet the continually evolving challenges facing the natural diversity of plants, animals, and ecosystems, we support the establishment of a long-term regional monitoring collaboration that will provide the means to collect, share, and analyze information.

5. We have started compiling a spreadsheet/database of ongoing monitoring activities. This provides a critical head start on understanding what is currently going on in terms of monitoring in the region, and will assist in future analyses of overlaps, redundancies, gaps, and needs. It will increase an understanding of our interdependencies and what we will gain from collaboration.
6. We have created a draft monitoring framework that identifies the pieces of a technical plan for biodiversity monitoring, collaboration, and information sharing. Our goal is a coherent, cost-effective, and user-friendly monitoring framework for the collection, management and sharing of information on native plants, animals, other life forms, and functioning ecosystems at multiple scales. Our draft sets out to define some general parameters that will answer these questions:
 - How do we create partnerships?
 - What should we measure?
 - How do we manage information?

The following outline presents the basic parameters defined by our workgroup, and serves as a starting point for future discussion as we move toward forming partnerships.

The Regional Biodiversity Monitoring Framework

1. WHAT: Framework content—This section defines the actual measurable entities that a monitoring protocol will assess.

- a. Assess the overall changes in distribution, configuration, and condition of **ecosystems**. This information will help us understand which ecosystems are in reasonably good condition, which are at risk, and why. We need to recognize disturbance elements and functional components of ecosystems, such as fire, water yield, carbon sequestration, soil productivity, and energy flow, and the important role these functions play in “big picture” issues such as responding to climate change and providing for water quality. Our aim is to be able to identify limiting factors affecting ecosystems and the services they provide.
- b. Assess the overall changes in distribution, configuration, and condition of **habitats** of selected species. This information will help us understand which habitats are in reasonably good condition, which are at risk, and why. This will entail keeping track of such data as habitat range maps, changes in habitat distribution, and changes in habitat quality at multiple scales. We will need to relate habitats to vegetation communities, specific species, and other fundamental environmental attributes. Ultimately, our aim is to identify the limiting factors affecting habitat quality and distribution.
- c. Assess the overall changes in distribution, configuration, and condition (done via ORNHIC/listing process) of **species**. This information will help us understand

- which species are in reasonably good condition, which are at risk, and potential reasons for why. This will entail keeping track of such data as range maps, changes in distribution, and population abundance. We will need to define criteria for selecting species to monitor (e.g., species at risk, indicator species, species groups, etc.). Additionally, our aim is to be able to identify the limiting factors affecting species survival and distribution. Where appropriate, “species” can also include subspecies, populations, and evolutionarily important units below the taxonomic species level.
- d. Identify what people are doing to address limiting factors affecting species, habitats, and ecosystems. Assess the effectiveness of these activities. For this piece, we will track and map on-the-ground conservation and other land use actions through the Defenders of Wildlife Conservation Registry. We will also keep track of ongoing monitoring and research activities. This will allow us to identify conservation needs, and will be helpful in interpreting the effectiveness of existing conservation activities.

2. HOW: Framework information structure—Sharing information from monitoring efforts is essential. This section organizes our information management approach.

- a. **Make information and data accessible** to everyone. Make sure it is freely available and that users know where to find it.
- b. **Organize the information and data** to accommodate users’ needs. Provide effective links and connections with other data sets and web sites outside of databases. Make the information easy to use.
- c. **Create a centralized portal** for information that includes user-friendly tools for adding new data into the data structure. This portal should also include analytical tools for evaluating the information that’s there and also to determine what’s missing. Users should be able to get data at a level appropriate to their needs, from broad-level to detailed.
- d. **Define how to manage governance** of the data and information structure. Who will maintain the data and oversee quality control? This component will serve to ensure the accessibility, coherence, cost-effectiveness, and user-friendliness of the information structure.
- e. **Analyze and report** data and information. This component could map results and disseminate information through publications or other outlets. The information synthesis might include simple indices. One product of this effort could be a periodic report on the status of biodiversity in the region (or ecoregions).

3. WHO: Framework partnerships—It is important for the success of this effort to build partnerships with the goal of creating a long-term interagency coalition for monitoring biodiversity in Oregon and Washington (and potentially beyond).

a. **Define who to include.** We want to include both data providers and data users. We also hope to enlist data analysts, and partners who can assist us with science delivery and communication. We recognize that partners will have different capacities for participation and commitment. Some may simply support our cause, while others can provide funding or personnel. In any case, each partner organization needs to obtain commitment from their high-level decision makers. Our intention is to be as inclusive as possible so that our “vision” doesn’t become fragmented. We are inviting:

- Landowners and land managers (public agencies)
- Policy makers
- Citizens
- Regulatory agencies
- Universities
- Scientific institutions
- Educators

b. **Define expectations.** We will be careful to analyze and clarify the contributions of each partner to biodiversity conservation and monitoring activities. Having this analysis is important for getting buy-in from a diverse range of partners for achieving broad representation. For example, it will be helpful for family forest owners to understand what we expect from them and where their contribution can fit in. They may ask “What can I gain from this? How do I get credit for my contributions to the region’s biodiversity? And what might I have to fear from it? How can those fears be addressed?”

4. WHERE: Framework scope—Although it is necessary to define our geographic scope at the outset, we hope that our framework will be flexible enough that it could potentially grow to encompass a larger area (depending on the interests of future partners).

- a. We initially define the **geographic scope** to include all of Oregon and Washington, but with the potential inclusion of peripheral ecoregions that extend into adjacent states if there is enough interest from partners.
- b. In terms of **ecological scope**, we are including all terrestrial, inland aquatic, coastal, and marine ecosystems. We recognize that other efforts such as PNAMP, the Oregon Plan, and the Washington monitoring forum are focusing on some of the same ecosystems.
- c. Our **political scope** includes any and all land ownerships.

Appendix 4: Workshop Agenda

Biodiversity Monitoring Partnership Workshop

*Thursday, 18 May 2006
10:00AM – 4:00PM
DoubleTree Hotel, Oregon Room
1000 NE Multnomah
Portland, Oregon*

Meeting Goal

At the heart of this workshop is the intent to begin the process of developing a coherent, cost-effective, and user-friendly monitoring framework for the collection, management, and sharing of information on native plants, animals, and functioning ecosystems at multiple scales. By bringing together biodiversity stakeholders from Oregon and Washington, we hope to explore the possibilities of establishing a partnership to regionally monitor biodiversity.

Draft Agenda

Time	Topic
<i>10:00 - 10:10</i>	Welcome – <i>Lisa Gaines and Randy Molina</i>
<i>10:10 -10:30</i>	Introductions – <i>all</i>
<i>10:30-11:00</i>	Overview of Current Biodiversity Conservation and Monitoring Efforts and Needs – <i>Audrey Hatch (OR Department of Fish and Wildlife), John Pierce (WA Department of Fish and Wildlife), and Randy Molina (USDA Forest Service)</i>
<i>11:00-11:50</i>	Participant Perceptions and Feedback – <i>all</i>
<i>11:50-1:00</i>	<i>Lunch on own</i>
<i>1:00-1:45</i>	Part I: Biodiversity monitoring partnership: what might it look like – <i>small groups</i>
<i>1:45-2:35</i>	Part II: Biodiversity monitoring partnership: examining potential biodiversity partnership models – <i>small groups</i>
<i>2:35-2:45</i>	<i>Break</i>
<i>2:45-3:20</i>	Facilitated Discussion: What did we come up with? Issues, Concerns, Next Steps – <i>all</i>
<i>3:20-3:25</i>	- Workshop Check-out – <i>Lisa Gaines</i>
<i>3:30</i>	<i>Adjourn</i>

Appendix 5: Workshop Feedback

The questionnaire below was sent to the workshop participants immediately following the workshop for feedback. Seven of the 42 participants responded. Their responses are noted verbatim below.

Biodiversity Monitoring Partnership Feedback

Portland Workshop, 18 May 2006

This questionnaire includes items to gauge workshop participants' interest and concerns for continuing the momentum of trying to develop a regional biodiversity monitoring partnership. Based on your participation in the workshop, please answer the following questions. Confidentiality will be maintained. Please return the questionnaire to lisa.gaines@oregonstate.edu by **Friday, 2 June 2006**.

Concept of a Partnership

It is important for the success of this effort to build partnerships with the goal of creating a long-term interagency coalition for monitoring biodiversity in Oregon and Washington (and potentially beyond).

Overall Rating *(please check one)*

- | | |
|-------------------|-----|
| Commendable | (2) |
| Good | (4) |
| Okay | (1) |
| Needs improvement | |

Specific Strengths of a Partnership

- A partnership would result in much greater value for any biodiversity monitoring data collected by an individual organization. A regional data network would provide a basis to compare data from one location to another and to develop a regional assessment of biodiversity.
- Products respond to a diversity of needs. More political support. More opportunities for public participation
- Conserve resources, increase awareness and participation.
- Improve efficiencies and effectiveness in monitoring, sharing of data through a network of information, and use of data in decision-making, adaptive management of the resource, and public education, establishment of a standardized process (ideal outcome). Strengthen monitoring usefulness.

- The primary strength is that there seems to be a high interest from various participants at the workshop.
- Sharing resources; Generating broad support; Acquiring the best and most diverse scientific involvement
- Partnership will spread cost and effort across multiple user groups → efficiency; Partnership facilitates dialogue to allow for a broader set of congruent needs to be met

Specific Concerns of a Partnership

- Making it sustainable: it has to last for a long time frame for it to work; Making it work – it has to be easy to use and maintain for it to attract participants; Can't try to do everything – modest goals that are attainable are better than grandiose goals that are never achieved; Costs need to be in line with what participants are willing to put out.
- Different needs among partners dilute clarity of effort. More energy required to maintain organization.
- Shifting agency budgets and priorities. Uneven responsibilities, in ability to participate.
- Possibly unwieldy and difficult to establish and maintain in the long term (how to institutionalize). Framework has not yet been detailed out on how a partnership would be structured and developed, and agreement on a framework from all potential partners might be difficult. Partners can lose interest over time, or it might be difficult to get potential partner buy-in. Difficult to get everyone on board, sharing protocols and strategies, and maintaining monitoring integrity. One entity would need to be the lead (or group of entities). Who would provide funding, and what is the cost?
- There is much work to be done. There is as of yet a clearly defined goal of the partnership. What primary problem(s) are the groups coming together to solve? How can we build on existing efforts, especially as it relates to monitoring. There are scarce resources to fund even the existing need for monitoring.
- Long time lags in getting things done; Sometimes the effort is no one's priority
- Needs strong leadership to maintain momentum and facilitate action over endless planning; Needs strong leadership to ensure a balance of addressing the needs, perspectives, etc of the various partners; Partnership will need committed participants from all partners to facilitate activities that benefit all of the partners.

Interest in a Partnership

Your personal interest *(please check one)*

Very high (1)
High (4)
Moderate (2)
Low
Very low

Your perception of your organization's interest *(please check one)*

Very high (2)
High (1)
Moderate (2)
Low (2)
Very low

Comments:

- [This federal agency] has limited capacity to engage at this time. We perceive our engagement as restricted to providing the data we collect on our lands, and providing technical consultation on data management and distribution.
- A partnership is an excellent idea. Has this been done elsewhere in the US? Do we have other prototypes to follow?
- As a rule, small woodland owners generally react well to either perceived personal benefits, or personal losses. Within the category, there are altruistic members, however.
- Low to moderate interest from organization due to past experiences with initiatives that have significant time commitments and poor results.

This section refers to the Draft Framework that the Biodiversity Monitoring Workgroup drafted and Randy Molina presented at the beginning of the workshop. For your reference, a copy of the draft framework is at the end of the PDF attached to the e-mail. The framework will be fleshed out as (when/if) the partnership moves forward.

Draft Framework: Framework Content

The actual measurable entities that a monitoring protocol will assess

Specific Strengths

- Breakdown of biodiversity elements into ecosystems, habitats, and species would seem to work well.

- As presented, the framework makes very good sense to me. It identifies important products and intelligently identifies challenges to moving forward. If implemented, the framework would have great value to Oregon and Washington, and offer a model for similar work elsewhere.

- Compatible data sharing, consistency in evaluations, better resource monitoring.

- Tiered levels of content are good (ecosystems, habitat, species) – from global to specific.

- Provides the beginning of a document to edit.

- Comprehensive framework that covers not only the hierarchal components of the landscape, but also the pertinent features of each level

- Seems to have covered all the bases for the various scales of ecosystem management

Specific Concerns

- Content needs to stay flexible to accommodate organizations that collect biodiversity data for different reasons. I would expect that most data coming into the partnership would be collected for a different reason, and contribution to the partnership would be ancillary to its original purpose. So getting too specific about protocols will turn a lot of people away. Better to establish standards for metadata, so what data that does come in can be appropriately used and interpreted.

- It's a tall order. Bring all the elements together to achieve this will take great organizational skill, energy, and resolve.

- In ability to input all past data due to lack of resources and in-compatibility, budgets change, newly elected politicians change priorities. This endeavor needs a minimum of 10 years of funding to proceed.
- Need to identify the type of monitoring data that would be included in each of the tiers. How do we make sense of that data as it applies to its specific tier? At what level is this done? (user level, data gatherer level, data management level?).
- Too broad with no clear link to specific management or actions. In other words, how could the information be used to inform management/policy decisions? Who would use it and how and why? What's the incentive to use this information?
- Repeated reference to “assess(ing) changes” yet no discussion of baseline from which to quantify change. Past efforts such as this have degraded into a process that “proves” pristine habitats are “good” and everything else falls into a spectrum of “bad”. This then leads to unnecessary (and often unscientific) value judgments about human-caused “changes” and often unrealistic expectations about returning to more pristine conditions. This WILL alienate landowners, counties, and possibly tribes and the policy makers that represent them.
- Repeated reference to addressing “limiting factors”. Past efforts at limiting factors analysis have frequently become a laundry list of everything that might have a detrimental effect rather than a process of identifying (through empirical research) specific contributors to changing conditions (see salmon recovery sub-basin plans for examples). This approach leads to a very negative perspective on current environmental conditions and often unrealistic expectations for change. This WILL alienate landowners, counties, and possibly tribes and the policy makers that represent them.
- The Framework Content can be easily modified with a clearer statement about avoiding these problems and perhaps a more detailed description of what is meant by assessing change. The overall partnership will need to make a commitment to maintaining an open, proactive, and pragmatic approach to any sort of trend analysis resulting from monitoring.

Draft Framework: Framework Information Structure

Sharing information from monitoring efforts is essential. This section organizes our information management approach.

Specific Strengths

- Good - lays out the necessary components of an information structure.
- Clearly this has been worked over repeatedly, and it's a polished concept. If implemented, it would be popular and valuable to everyone from lawmakers to school children.

- Framework information structure includes good elements.
- The overall framework seems fine. Just need to select 1 or 2 areas to focus on initially. Questions to help guide this process are: What's the incentive to enter data or maintain this information infrastructure? Who's responsibility would this be? What user needs can be enhanced as well as biodiversity needs?
- Comprehensive set of principles organized around meeting user needs from a centralized portal
- Creating a portal for information is a much needed service for a wide variety of agencies and other entities. This is something that is being duplicated everywhere.

Specific Concerns

- Need to develop consistent nomenclature, definitions, and associated metadata for specific content. I wouldn't expect "analyze and report" to necessarily be part of the partnership. Data might be organized with a particular analysis in mind (e.g., an index of biodiversity health), but analysis entails a greater commitment of effort and money than a partnership might be able to sustain. If it can, that would be great. But that is a task that might be better taken on by an individual organization or the home institution of the partnership that has a primary interest in regional biodiversity.
- There will be problems with proprietary information, and fear of government snooping. It may well be possible to overcome this by demonstrating how well it works on public lands first, as well as enthusiastic private cooperators.
- Data management and maintenance should be centralized, but who is the entity to do that? This is a huge task. Two levels of information structure (framework) seem apparent: 1) that which includes ALL information through a centralized portal, or 2) that which provides an overarching infrastructure (partnership agreement pertaining to standardized tools, data quality, how it is to be done, etc.), but monitoring data is maintained and archived within the respective partner, and accessed through links.
- What's proposed can be very costly. I haven't seen identified in the document a clear need or desire by users for this information. Try linking specific needs to each information infrastructure.
- The job looks Herculean, for three major reasons: there is a mountain of existing information not organized in that structure; there is no existing overarching motivation to participate in a large scale data sharing system; and the resources to back it up are not centrally located or controlled.
- (related to part d) Caution should be used in getting too wrapped up in protocol consistency for existing data included through the portal. Rather, metadata on

protocols used, purpose of the data collection, etc will allow users to judge the value of a particular set of data.

- (related to part e) Data synthesis/analysis and reporting will need to be done in a rigorously unbiased fashion or it will be discounted by interests who do not like the results. A code of scientific conduct might be a good idea, as well as some kind of oversight system.

Draft Framework: Framework Scope

Although it is necessary to define our geographic scope at the outset, we hope that our framework will be flexible enough that it could potentially grow to encompass a larger area (depending on the interests of future partners).

Specific Strengths

- Oregon and Washington is a good core area to work with for institutional purposes.
- Oregon and Washington is more than large and diverse enough to provide substantial challenges. I wouldn't even think of expanding beyond that until the program is relatively mature and successful.
- OK as identified.
- The scope is also comprehensive within a geographic area (Oregon and Washington), and the ecological and political scope are provide the necessary universe.
- Allows for regional assessments. Allows for ecosystem or habitat analysis that cross state boundaries. Ultimately I could see this expanding to include parts of Idaho, N California, and BC for some spp/habitats.

Specific Concerns

- Oregon and Washington do not comprise meaningful ecological boundaries. So flexibility to include parts of California, Idaho, Montana, and British Columbia would be highly desirable. Ecological scope might be too ambitious. Maybe start with terrestrial and get that going before trying to do other ecosystem types.
- Don't overreach. Find small-scale successes and grow them.
- Overall the scope needs reduced and piloted. Currently, project scope is all of WA and OR, all ecosystems – terrestrial, aquatic, marine, etc., and all partners that want to participate. Again, I would tighten up the focus and reduce the initial project scope.
- I would break the project goals up as 1 year, 3 year, 5 year, and 10 year, etc.

- It is good to have the broad and comprehensive framework scope in order to keep all the necessary “pieces” in context and perspective. However, it may be necessary to demonstrate the feasibility of achieving implementability on a smaller scale in order to gain commitment and resources to expand to the whole.
- None.

Appendix 6: Report Comments

The draft of this report went through several reviews before it was sent to workshop participants for comments on 21 August. Workshop participants were given approximately one month to submit content-related comments. Submitted comments are below.

Comment A

Absolutely a business plan will be needed, as well as an economic analysis of what is currently being spent by all. This will be required to get our leaders on board.

I would tend towards having the endeavor housed and managed by a university, they at least have the appearance of being less susceptible to politics and bias.

There needs to be some protections in place for private landowners if they choose to include information in the system, there needs to be guarantees that the information would not and could not be used to penalize them.

A system of reward of some type should be put in place to encourage people to bring the data out from under their desks and put it into a data base.

I still would like the 'Wikipedia' style of information sharing to be included in these discussions. There may be a great opportunity to have different kinds of data included with different levels of accessibility, detail and peer reviewed data.

There needs to be a mechanism put in place that would insure that democracy doesn't bring a consolidated effort down. When we elect new leaders every year we get new budgets and priorities. There should be at least 10 years worth of commitment and funding to undertake this project. Please see the Bonneville Environmental Foundations current policy and consider weaving it into this work <http://www.b-e-f.org/news/releases/013106.shtm>

Comment B

...few [at the meeting] had a clear picture in their minds about how to forge a partnership, and that those that did were mostly thinking of how it would work only in the context of their own agency/entity culture. This is a major challenge for this partnership. I think as potential partners get to know more about each others agencies/entities (e.g. how things work, what barriers there are to action, financial, political, administrative issues, etc) this problem will be resolved. I do think that the partnership needs to consider creating a set of operating principles that incorporate such ideas as scientific transparency and objectivity, inclusiveness of all landowner types, and a commitment to produce quality products but not get deeply involved in the social policy side of what these products mean or should be used for.