

The Heritage Program

25 Years Old and Looking Ahead Assessing the Future of the Heritage Program

Final Report

Final Report submitted to

The Natural Heritage Advisory Council

**by
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13 February 2006

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List of Abbreviations

BLM	Bureau of Land Management
DAS	Department of Administrative Services
DLCD	Department of Land Conservation and Development
DSL	Department of State Lands
IMST	Independent Multidisciplinary Science Team
INR	Institute for Natural Resources
LTER	Long-term Ecological Research Network
NEON	National Ecological Observatory Network
NGO	Non-governmental Organization
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
ODPR	Oregon Department of Parks and Recreation
ORNHIC	Oregon Natural Heritage Information Center
ORS	Oregon Revised Statutes
OSU	Oregon State University
OWEB	Oregon Watershed Enhancement Board
PSU	Portland State University
TNC	The Nature Conservancy
U of O	University of Oregon
USFS	United States Forest Service

25 Years Old and Looking Ahead Assessing the Future of the Heritage Program

1.0 INTRODUCTION

Over the last 25 years numerous approaches, understandings, and perceptions about natural areas have changed – changes which affect the relevance of programs such as the Heritage Program. As one participant stated, “the complexity of science in general has been humbling”. The last 25 years has shown many assumptions and premises upon which the Heritage Program were founded have changed. Most important has been the recognition that to focus primarily on pristine areas is not the only way to conserve, that pristine ecosystems do not exist, and that management and restoration are needed in much of the landscape. Nature is much more dynamic and less easily compartmentalized than once assumed. Habitat needs are more complex, context (e.g., capacity for seed dispersal and fire) is becoming more important, and species are often quite tenacious instead of fragile. There is a better understanding that the survival of many species occurs outside of our influence and control. Aside from habitat loss, the major threats most impacting Oregon’s natural heritage, global climate change and exotic species invasions, were not viewed as important when the program was created.

Twenty-five years ago meta-population theory did not exist. Technology, including the prevalence and advancement of computers and database management, has progressed. Institutions such as watershed councils, land trusts, and water trusts either did not exist when the Heritage Program began have come into being, or were not considered very important to conservation. Socially, there is a greater sense that biodiversity is now “on the edge”, that more has been lost than we had thought. Also, there is the appreciation that ecosystems provide services and functions other than what can be provided by small “islands” of natural areas.

In essence, the Heritage Program needs to accommodate these and other changes by working with a broader context of conservation strategies.

1.1 Approach

In June 2005, the Natural Heritage Advisory Council (the Council) chose to have a 25-year review of the Natural Heritage Program to help define future program priorities, functions, and relevance of the existing program to current and future governmental programs and public policy. To conduct this review, the Institute for Natural Resources (INR), based at Oregon State University and home to the Oregon Natural Heritage Information Center, was asked to organize four focused and facilitated meetings during Fall of 2005 – one each with the university community, state agencies, federal agencies, and non-governmental organizations. Interviews were conducted with some of the individuals that were not represented at the meetings. In order to eliminate any

perceptions of bias, INR chose to hire a professional facilitator outside of the Oregon University System to facilitate all of the meetings.

1.2 Review Meetings Structure

Meetings for the 25-year review of the Heritage Program took place on November 2 in Corvallis for the university community, November 9 in Salem for state and local agencies, December 7 in Portland for federal agencies, and December 12 in Portland for the non-governmental organizations. Each meeting was held for two and a half hours.

Following the acceptance of the invitation to participate in the meetings, participants were sent a briefing document that described the Oregon Natural Heritage Plan and Program and presented the Oregon Natural Heritage Act, as amended. Through the professional facilitation services of Janet Gillaspie, of Environmental Strategies, LLC, each meeting was moved through a detailed agenda. Janet facilitated all of the meetings, with the exception of the meeting held on December 12.

1.3 Participants

Those participating in the review meetings represented diverse organizations. At the university community meeting, though faculty invited to the meeting represented Oregon State University (OSU), the University of Oregon (U of O), and Portland State University (PSU), the majority of those attending were from OSU, with some representation from the U of O. At the state/local agency meeting staff from the City of Eugene, the Association of Oregon Counties, the Oregon Department of Forestry (ODF), the Oregon Department of Parks and Recreation (ODPR), the Department of State Lands (DSL), the Oregon Watershed Enhancement Board (OWEB), and the Oregon Department of Transportation (ODOT) were present. The federal agency meeting included representatives from the Forest Service (USFS) and the Bureau of Land Management (BLM). U.S. Fish and Wildlife Service and National Park Service representatives were not able to attend this meeting due to last minute conflicts. Staff from the Defenders of Wildlife, The Nature Conservancy, Wetlands Conservancy, and Wetlands Joint Venture attended the NGO meeting.

<u>Meetings/Interviews</u>	<u># invited</u>	<u># accepted</u>	<u># attended</u>
University Community Meeting	20	9	7
State/Local Agency Meeting	20	10	9
Federal Agency Meeting	25	7	8
NGO Meeting	7	7	7
Interviews	n/a	n/a	n/a

Interviews were to be scheduled for those unable to attend the meetings and those not yet contacted. However, in the interests of fiscal and time efficiency, staff decided to submitting this report to all stakeholders (industry, tribes, those who could not attend, those who did attend the meetings, and other interested parties) and solicit their input in writing. All comments received to date are included at the end of this report.

1.4 Structure of Report

The report is structured in the following way.

- Section 2 presents participant assessments of what has worked well and what needs improvement in the Heritage Program as it presently stands.
- Section 3 presents a series of legislative and non-legislative recommendations regarding how the Heritage Program can better reflect contemporary conservation thinking and be better integrated with other conservation efforts taking place in Oregon. These recommendations are meant to stimulate discussion among the council members during their February 16th, 2006 meeting, and not meant to be seen as the only options for the future of the Heritage Program.

2.0 INVENTORY OF THE HERITAGE PROGRAM

In each meeting, participants were asked to list what they believed have worked well and what needs improvement with the Heritage Program.

2.1 What has worked well?

Participants spoke about many of the same issues when asked, “What has worked well?” According to participants, the Heritage Program has:

- Been a source of expertise and one-stop-shopping (e.g., through publication of the listings and status of species and habitats)
- Provided information about rare and listed species through an accessible, consistent, and coherent database serves as a major scoping tool
- Has successfully delivered information and data despite a small budget
- Created a number of spin off products (e.g., Oregon Biodiversity Project, Gap Analysis Program for Oregon, the Willamette Restoration Program, Willamette Basin Futures study, Oregon-Washington wildlife habitats book)
- Been perceived as systematic, scientifically-based, and accurate, despite the political nature of listing of species under the state and federal endangered species acts
- Established large numbers of natural areas in a political climate that has not been conducive to it
- Succeeded at identifying ecological cells and classifying vegetation, even though identifying and defining ecosystems is more difficult than species.

Participants in the university community meeting also noted different agencies have voluntarily worked well together to leverage their resources to increase the overall level and capacity of information. Participants at the federal and state and local agency meetings also mentioned that the heritage data has been critical for use in state and federal agency plan revisions and assessments, such as the ODFW Comprehensive Wildlife Conservation Strategy, OWEB Acquisition Strategy, USFS Forest Plans, and BLM Resource Management Plans. The non-governmental groups noted that taking over and revitalizing GAP, making proactive inventories of lands for natural areas, and relocating the program within the INR have provided value added to federal agencies.

2.2 What needs improvement?

The meeting participants had different perspectives and frames of reference regarding what needs improvement, although several elements were commonly stated:

- Funding
- Marketing products and self-promotion
- Changing the original notion of small, isolated natural areas protecting elements (e.g., “the term ‘living museums’ should be removed”)
- Engaging in or focusing on creative alternatives (e.g., mitigation banking) instead of land acquisition
- Meeting and challenging political resistance
- The natural areas program is not well known
- There is no systematic oversight of natural areas in Oregon due to lack of staff (Washington has oversight and staff for this work)
- There is fewer inventories being done recently which is negating the historic gains from past fieldwork; keeping inventories up-to-date is important.
- There is not a formal way to capture the inventories of other agencies and the efforts of other programs (e.g., work happening in McDonald Dunn Forest and H.J. Andrews) so that they are integrated into the Heritage Program database.

The university community focused on the research applications of the Program while state/local agency participants focused on governance and decision-making. For instance, the university participants mentioned that there needs to be a better understanding of ecosystems, and natural processes need to be better addressed within the Program. They questioned whether or not mega-fauna and flora – a historic primary focus of the Program – is a good proxy for biodiversity and conservation. They also noted the difficulties of bringing the most up-to-date information (e.g., genetic) into the system and thus the need to improve the full utilization of current science. The academic participants mentioned that Oregon can also conserve its natural heritage in urban and developed landscapes, and that credits for the built environment should be integrated into the Program.

In the area of “needs improvements”, the state/local agency meeting participants focused on governance and decision-making, primarily noting that there should be clarity of what the Council could or should be doing (council authority). They suggested improvements in the clarity of the Program’s relationship to state government and in how to use the database to inform landscape applications such as restoration and permitting. They noted that administrative rules for Goal 5 and the Heritage Program do not align, and that local governments need technical assistance. They felt that a system of coordinated and negotiated management schemes for all lands is needed.

State/local agency participants also pointed out the need to clarify misperceptions about the Program. For instance, there is the perception that many local governments are not aware of the Program and there is the general misconception that ‘the landlord’ can not establish natural areas without restricting revenue generation from the land at the same time.

Federal agency participants pointed out that the Heritage Program is supposed to be establishing state natural areas and that that does not seem to be happening.

NGO participants noted that there seems to be an issue with the way the Program is utilized and that its utilization ebbs and flows. For instance, some said that state agencies seem to use the Program more opportunistically than supporting the Program outright and wholeheartedly. They also questioned the degree to which local agencies use Heritage Program information in their planning.

3.0 KEY ISSUES AND RECOMMENDATIONS

Recommendations for change were both legislative and non-legislative. These recommendations are presented as a list to stimulate discussion for the council's February 16, 2006 meeting. In some cases, where recommendations are quite distinct, the ideas are bulleted.

3.1 Legislative Issues

3.1.1 Key Issue: Acknowledgement of changed concept of natural areas (Out-dated language)

As noted above, the past 25 years has brought understanding that to focus primarily on pristine areas is not the only way to conserve natural heritage, that pristine ecosystems rarely exist, and that most often management and restoration are needed. Nature is dynamic that a broader context for a diverse array of conservation strategies is needed than what is defined in the current legislation.

Current legislation states:

The Legislative Assembly finds that many valuable natural heritage elements are represented in natural areas...These areas will comprise a discrete and limited system of natural heritage conservation areas which are selected to represent the full range of Oregon's natural heritage resources. These areas shall have substantially retained their natural character, or, if altered in character, shall in addition to their natural heritage resource values be valuable as habitat for plant and animal species or for the study and appreciation of the natural features. As such they will be living museums for scientific research, educational purposes and nature interpretation (ORS 273.566).

Recommendation: Reexamine concept of natural areas

- The concept of natural areas as the primary way of doing conservation should be reexamined. Natural area establishment should consider how they reside in the landscape and how they fit into the large-scale, land management practices

(e.g., restoration or adjacent land management status). Size of the area is a big issue. *

- Analyze potential future uses of natural areas.
- Consider concept of natural areas versus biodiversity.
- Consider conservation easements, safe harbors, transfer development rights, etc. as ways to help conserve Oregon's natural heritage
- Consider the utility of means to achieve conservation of natural heritage that are not limited to fee title acquisition.

Recommendation: Change the definitional language

Change the definition of “natural heritage” and “natural areas” (among others) in the legislation to reflect new, more comprehensive concepts in conservation thinking, and to assure that ideas related to ecosystem process, continuing evolution, and ability of species and systems to respond to external stresses, such as climate change and invasion of exotics, are included.

Recommendation: Strike “living museum” language/strategy

The “Noah’s Ark” approach, as expressed in the legislation as a living museum, should be removed.

3.1.2 Key Issue: Governance

Changes in the Act need to be done with the Department of State Lands (DSL), particularly with regard to governance. With the changes that have taken place in the conceptual and organizational landscape of natural areas and conservation in the state of Oregon, the Heritage Program’s governance structure needs to be reexamined. Many other conservation organizations exist and redundancy needs to be eliminated. Once it is determined what the Heritage Program will be in this new arena, the most appropriate governance structure needs to be put in place. For instance, if the Program is trying to pursue the Noah’s Ark approach to conservation, then perhaps, State Parks should provide the leadership. Most pressing for the Program’s governance is/will be the ability to legitimize conservation by securing funding (e.g., consider such examples as trust land transfers approach in Washington state), distinguishing the Program, and improving self-promotion, among other issues.

Recommendation: House program staff in the Institute for Natural Resources

The Heritage Program should be housed outside of existing natural resource agencies to de-politicize it. Housing the Program in the Institute for Natural Resources would be a good fit for several reasons: (1) INR is part of the Oregon University System and universities are viewed as being more objective than government agencies; and, (2) its mission is to provide Oregon leaders with ready access to current, science-based information and methods for better understanding Oregon resource management challenges and developing solutions. It is important to understand that “Science” and “Conservation of Natural Heritage” are very different concepts. Science can inform conservation efforts, but this involves entering a social arena. One caveat is that though INR’s small base of legislative funding makes it primarily driven by contract opportunities.

Recommendation: Centralized entity to integrate information and create integrated tools

To prevent conservation issues, concerns, and programs from “falling through the cracks”, a centralized entity, or an independent group, that would facilitate the statewide conservation process should be established. This entity would be a source that all stakeholders (federal, state, and private) could tap into for general information, environmental requirements, and integrated tools and programs. For instance, instead of having the ODOT mitigation banking program, this centralized entity would instead host the Oregon mitigation banking program. Some have suggested creating a Department of Natural Resources, though they mentioned that such a possibility would meet political resistance.

Recommendation: New role for the Natural Heritage Advisory Council

The council should be seen as objective and nonpartisan. Possible new roles for the council could be, but are not limited to:

- expanding the role to include other types of designations and general strategies;
- reviewing OWEB applications for their merit to natural heritage; and,
- having the authority to perform synthesis functions, e.g., pulling together technical and databases information, including information from various local, regional, and statewide plans and analyses.

With a new role for the council come the issues of credibility and member credentials. It was suggested that credibility would be more than who is a good scientist. Members would not only need to have an interest in the subject but the political connections to make the council used more than as a technical body. The council should be able to get political buy-in for an integrated conservation strategy. It was questioned with whom the council would need establish its credibility: The Legislature, foundations, County Commissioners, scientists?

In a new role, the council would need to have members with technical knowledge and practical knowledge, and would thus need legislative change about board composition, particularly if the council is involved in more controversial issues.

Recommendation: Multi-pronged response to direct New Heritage Conservation Program (if mission is changed to include all of natural heritage conservation)

The Program needs a multi-prong response to direct the Program. INR is a fine choice for the information portion and to facilitate and convene groups, but another organization would be required for the Conservation Program. What would an integrated conservation strategy look like and what organization would sanction it – the State Land Board? OWEB, with a changed focus? A new entity (e.g., in the Governor’s office)? The Sustainability Board? DLCD? Some other new board?

It was argued that it should not be in the Governor’s natural resource office because the office fluctuates enough that they can not be relied on from one

administration to another. It was suggested that OWEB could be the overarching organization as its responsibilities are larger than fish and water quality. However, this would require OWEB to redefine its culture from bottom up to top-down, and would need the OWEB Board to have statewide priorities to reconcile or work to meet local needs. It was questioned how this might impact the Independent Multidisciplinary Science Teams (IMST), and noted that if this happened solely in OWEB, the justification for the IMST might disappear.

Other possible roles within this multi-pronged response could include:

- INR to synthesis information and convene/facilitate policy discussions
- The Council to serve as advisory to the OWEB board: to review OWEB grant proposals and to provide guidance to the board on conservation related matters.

3.1.3 Key Issue: Administrative rules for Goal 5 and the Program do not align

Recommendation: Alignment

The “Big Look” is supposed to attempt to address the conservation of Goal 5 attributes, all of which (except for aggregates) would fit under a natural heritage conservation plan/strategy. Goal 5 and the natural heritage conservation plan/strategy need to be aligned.

3.2 Non-legislative Issues

3.2.1 Key Issue: The role of research in natural areas (this has legislative implications in the definition of natural areas)

Natural areas are an underutilized research resource at this point. The challenge is that research natural areas are limited by natural “undisturbed” environments. Research often involves the need for manipulation, so if research is a goal, areas need to be large enough to provide for both controls and active experimental management. It is not possible to do experimental research in natural areas and through the Program. The state does not have funds for, or rarely funds, research. There are national trends toward supporting large scale, long-term research, and not research on small sites.

Recommendation: Considering the role of research in natural areas and conservation strategies

- Evaluate the role of research in the definition and designations of natural areas.
- Develop some basic infrastructure for research involving larger tracts of research and natural lands (e.g. National Ecological Observatory Networks [NEON] and Long-term Ecological Research Networks [LTERs]), which the Heritage Program currently lacks the capacity to implement.

3.2.2 Key Issue: Need new programmatic framework

To craft a system that will persist into the future, the Heritage Program must focus on what it is doing successfully and how it adds value to the conservation efforts in Oregon. Since the Heritage Program was established, many other institutions and factors that did not previously exist have come into being (e.g., watershed councils, land and water trusts). The governing bodies overseeing conservation planning in Oregon need to step back and ask, “Do we want to try to be successful in natural heritage conservation or do we want to limit our activities to information management?” If the Program is limited to just information management, then a different set of issues must be dealt with. If natural heritage conservation is the goal, how does the Program address integrating biological diversity conservation needs with other societal demands?

Participants generally agreed that protecting elements of diversity is something that the state should be doing differently. Should the Heritage Program be responsible for it? Should they be a partner to others such as OWEB or the Sustainability Board? Some of the programmatic areas that participants mentioned as lacking include:

- Common agreement on what the Heritage Program is
- Sufficient funding to adequately manage a program
- The ability to know who is doing what in regard to conservation of natural heritage statewide, or an overall plan to conserve all of Oregon’s Natural Heritage. There are many efforts happening across the state (e.g., the ODFW conservation strategy, ODF assessment, federal assessments) and it is difficult to tell if the efforts “add up”
- Oregon heritage can be conserved in urban and developed landscapes as well natural lands. Mitigation or restoration credits for built environment are missing from the current Program
- The inclusion of local and county planning and conservation efforts.

There needs to be a complete rethinking of the Heritage Program – its approaches to conserving natural heritage, the role of the council, and the possible outcomes. The Program needs to be an organization that would help people be sure that when they are considering a natural area or trying to navigate the regulatory quagmire that they have good information. Having some type of official council certification and/or consultation may lend credence to these efforts.

Recommendation: Focus on what the Heritage Program does well

Focus on what the Program is doing successfully (e.g., data). Once that is identified, determine why it is well done, how people are using what it, and who is benefiting from it. Then concentrate efforts on its capacity to add value. Has the current system of natural areas made a difference? Need to separate natural areas due to the Heritage Program versus those that have existed through other means.

Recommendation: Develop a business plan

A business model has to be thought about and linked between agencies with funds (e.g., ODOT, counties) and Program needs. The business plan needs to show that natural heritage conservation can be part of a larger plan leading to economic

viability. In the short-term (in 6 months) there should be a proposed business plan and advisory council structure for the next 3 years, including tasks and schedule. This business plan should be a road map for natural heritage conservation through 2010. At the end of process it should be clear to the Legislature that they need to hard-fund the Program. We need to learn from California, as an example.

Recommendation: Streamline and integrate

- Department of Administrative Services (DAS) information management responsibilities should be integrated into the Heritage Program.
- Consider a three stage process:
 1. Build on the framework of what is in place (federal, state, land, NGOs, environmental laws, etc.) and work on updating the Heritage Plan to get it to the next evolutionary stage (the current plan has stagnated). As an example look at The Nature Conservancy) ecoregional planning process. This is an opportunity for the council to work on the recently developed initiatives and try to integrate those for a common vision
 2. Make sure the conservation framework is secure (Measure 37 showed the planning framework was not secure)
 3. Identify the components of Oregon’s natural heritage that are not secured – specifically elements (species, habitat types, etc.) and processes (fire, flooding, climate change – ability to respond to the rate of change, wind throw, population growth). Naming a process and naming a spatial extent are two different things.
- Develop a program that includes:
 1. A **central repository of data** that reduces redundancy by building a formal way to integrate databases across agencies (use this as a “low hanging fruit”; mention the successes of OWEB and ODFW).
 2. An **integrated conservation planning strategy** that:
 - a. uses existing strategies (e.g., ODF, ODFW Conservation Strategy for Oregon, etc.)
 - b. establishes statewide ecosystem goals (how much and where) and priorities (incorporate into state agency missions, best science/collective, bio-calculus);
 - c. gets beyond just listed T&E species and matches with other conservation dollars, asking, “What else should be conserved?”
 - d. incorporates local governments
 3. A **coordination and advocacy strategy** – across state, federal, and private partners, involving incentives and developing a plan that the partners will buy into. This is best achieved by a council.
 4. **The streamlining of permits/requirements**. It is important that an independent organization, without restrictions, can take care of this by helping people through the regulatory process. The process needs to assure that places needing conservation or mitigation are rapidly identified, and those not are also easily determined. If all

issues are directed through Heritage Program then people will want to use it.

Work on the value-added piece in the short-run, and then focus on redundancy issues. Money spent within agencies to work on agency databases should be consolidated for the Heritage Program database. This would happen through the Governor's budgeting process. (e.g., sage grouse work regionally done by Steve Knick of USGS in Boise, Jon Sadowski of BLM in Lakeview, and Christian Hagen of ODFW in Bend, along with independent local studies such as those of John Crawford of OSU working at Hart Mountain). The data rarely get integrated, and none of it is available to the public without directly contacting these people.

Recommendation: Develop a statewide strategy

- Build on existing plans, strategies and assessments and assure there is some authority to implement what is pulled together.
- Consider an approach, such as the comprehensive ecoregional analysis (TNC), the Oregon Biodiversity Project or the Comprehensive Wildlife Conservation Strategy (ODFW) that considers ecoregions and priorities instead of “people’s favorite places”.
- Consider a larger approach that includes trends, threats, composition, and, elements.
- Important to address biological conservation on state scale (e.g., conservation opportunities areas), guidance for local implementation, and understand and integrate ecosystem processes (fire, flooding) that have changed through time. There are process limitations to many habitats. We’ve looked at the historical range of variability but may no longer have the processes to restore systems to that historic state).
- Have statewide ecosystem priorities that:
 - are incorporated into state agency missions
 - use the best science / collective information
 - have a funding source (e.g., ODOT will help pay, bio-calculus)
- Goals – establish how much and where (important both for Goal 5 and integrated conservation strategy).
- Build on ODOT applications and other large investments for efficiency.
- Develop and maintain a system for keeping old natural heritage information, imagery, photographs, etc. (archiving).

NOTE: OWEB was created based on this general integrative model. However it was noted that they have not been very successful at impacting other groups because of the perception that this work does not fall into the other agency mandates, and because of salmon culture in the agency.

Recommendation: Develop creative alternatives

- Change the buffers paradigm (e.g., to restoration and how can the built community be related to natural heritage).
- Create trading credits.

- Simplify and use mitigation banking. Mitigation is currently too difficult to implement. The final product should link wetlands, stream and wildlife habitat restoration and mitigation activities.
- For example: “Oregon’s Greatest Wetlands”.
- “Ecosystem Marketplace” idea – combining multiple sources of mitigation areas with sites of other sources.

3.2.3 Key Issue: Misconceptions about and lack of visibility of the Program

Communication about the Heritage Program has not been good, as many groups (e.g., local government, universities, general public, etc.) are not aware of the Program. There is also confusion about the difference between the Heritage Program and The Nature Conservancy (e.g., focus and understanding of missions) and confusion about the Program’s relationship to state government. Also there is the misconception that “the landlord” can not put natural areas in place if it does not restrict revenue generation from the land (related to current natural areas mission, particularly on state lands).

Recommendation: Market the Program

- Promote the Heritage Program as part of that three-legged stool (social, economic, environment) as there is a lot being done on sustainability. Example: the Interagency Fire Center.
- “Build the buzz” for the Program. Need to have a unified vision. Need to have something to “sell” – solution to statewide problem with Goal 5.
- Build a broader base. Market information effectively – learn and then get it to those who need it.
- Do not lose what we have (e.g., natural areas, Section 6). Highlight what the Program has going for it (e.g., laws, areas, policies, processes).
- Getting audience relevance (decision-makers) via threats database can start the discussion; predictive future scenarios are widely used by the USFS and ODF, but do not appear to have a customer in the conservation community. The Program must be able to connect to the relevancy of agency planners and assure they consider issues of scale and the pressures on jobs at the local level.

3.2.4 Key Issue: Feedback loops to decision-makers

There is the need to shorten the loops between information and decision-makers and get audience relevance.

Recommendation: Improve Communication with decision-makers

- Good solid monitoring data includes a hierarchy from population to habitat to area of state that is allocated. Ideally it should go to all the boards and commissions that feed to governor’s natural resources portfolio.
- Include local governments in the loop as they are doing a huge amount of work.
- On status of species, what does it take to get through a permit? Information needs to get to the regulatory agencies (DSL, EPA, USFWS, and US Army Corps of Engineers) for scoping to minimize or avoid impacts.

- Use OWEB's connections to other commissions.
- ODFW, through its statewide strategy, might have some momentum; see about tapping into their networks.
- Consider an integrated "wetlands portal" for information access, similar to the Willamette Explorer (<http://willametteexplorer.info>) and the Oregon Explorer (<http://oregonexplorer.info>).

3.2.5 Key Issue: Lack of support of the Program

Heritage Program should evolve but not go away. We should not lose the big picture of what Oregon needs. The state needs to be a leader in conservation and the lead should come through Heritage Program. However, as the Program stands, the Program suffers from a severe lack of financial and hence human resources.

Recommendation: Create incentives to support the program

- Create incentives to support this program, because conservation via regulation is seen as obstacle and burden by agencies and the public. Refer to Sarah Vickerman's article on private land owner incentive as a basis for creating incentives.
- Deal with private land issues more effectively; incentives policy fundamental problems:
 - conservation through incentives is a political issue
 - there is no personal willingness to invest (tax laws and land use laws that need to be fixed
 - we need to ask, what's there, how do we want to do things differently, how is it being paid for?
- Consider how "green box money" can be channeled for conservation? Green Box is public support for environmental friendly producers.
- Forest Service is interested in the "ecosystem services". Consider how to deliver payments for ecosystem services. Federal agencies set performance standards. (e.g., Rooster Rock State Park got funds from an outside source); how to not pay people for what they were going to do anyway and focus resources on all the right places?

Recommendation: Build Partnerships and Leverage the efforts of others

Non-land management agencies

- Improve leveraging and partnering to manage natural areas. For example, ODOT is moving toward mitigation banking – wetland and conservation – but it is not a land management agency. This is a leveraging opportunity. ODOT could provide funds for mitigation areas and then turn them over to another land agency to manage. Concerns as to how and when ODOT chooses mitigation could be eased. A similar conservation banking opportunity may also exist with counties when they acquire defaulted lands.
- Provide technical assistance. For instance, help with wildlife connectivity issues, ODOT needs technical assistance with issues such as grazing land management.

OWEB

- Take advantage of OWEB lottery funds and perhaps the OWEB Board expertise and contacts.
- OWEB is set up to be reactive and their restoration priorities are fairly opaque. An opportunity lies in developing more systematic, clearly established priorities for where the state invests its money.

The Nature Conservancy

- Have serious discussion with TNC.
- Need to define what the Program does differently from the TNC. There should not be replication but efforts should complement each other (e.g., feeding heritage database information into TNC conservation efforts on a continual basis, as federal and state agencies use the Heritage Program database).

NOTE: TNC approach focuses on the conservation of biological diversity. This may not work with federal mandates which focus often on resource production and conservation in an overall context. In a perfect world, it would be seamless with no boundaries.

Resource Advisory Councils (RAC)

- Resource Advisory Councils (RAC) for Title II and III money work on county basis (culverts, road decommissioning). Determine how to get to work for conservation. It is a FACA charter (federal).

Recommendation: Parcel Exchanges/Shuffles

- A method to conserve common school fund, and other state lands, could involve land exchanges.
- Land exchanges could also greatly increase viability of small reserves. Planning and establishing need to be depoliticized.

Recommendation: Look to other states for fund-raising examples

- For example, West Virginia supported its Heritage Program through the issuing of customized license plates (similar to what was done for salmon here in the state).
- “Bootleg” system to serve needs (USFS, state, BLM – what California did)...use as match on grants.

3.2.4 Key Issue: Coordination

There is a lack of coordination and communication between Washington and Oregon regarding their conservation efforts. And, there needs to be better coordination with other agency efforts (e.g., with the ODFW strategy)

Recommendation: Provide channels for coordination

- Pursue improved coordination between species and habitat status rankings between Washington and Oregon.
- Use the Oregon Watersheds Plan as a template (regarding how to coordinate interagency boards of citizens, federal, and non-federal members), which has

been thought of positively. Take this concept and make it larger. Once in place, the bigger concept needs incentives, and smaller areas need to be looked at on a case-by-case basis.

- Examine what California's Environmental Quality Act has done to lead to more evaluation for projects to see how they fit in to larger conservation strategies.
- Consider the State Agency Coordination (SAC) Plans. This could be used as a coordinating body.

3.2.5 Key Issue: Data

Information is segregated by subject matter and it can not be looked at it in one place. Data is a key piece of and used for conservation purposes. Documentation to support rankings of current data is weak and in many areas (e.g., invertebrates, vertebrates, marine, and fish) it is too limited. There are two levels of data in the Heritage Program: species data and ecosystems data. Species data is well used, particularly for plants, but what about the ecosystem data? There is a lot of data that exists from many sources but there is not an overall plan for the data.

Recommendation: Develop overall plan for data

- Secure any viable level of staffing for the database.
- Develop (or improve) quality one-stop data shopping.
- Need to expand what INR has been doing but more comprehensively and more accessibly.
- Develop information on where people are making conservation investments and how do they add up (e.g., conservation registry).
- Focus on what the data will be used for.
- Consider web-enabled spatial services.

Recommendation: Decrease data gaps

- Better coordination to identify data gaps (Washington Heritage Program does a better job and has more confidence in their rankings).
- Higher level of funding and staffing to the database and its maintenance to cover areas now not covered.
- Greater use of global positioning systems to catalogue data and pass it on to the Heritage Program.
- Data and data management needs comprehensive and accessible data layer (this is the added value).
- Need more data for fish and water in the databases, or better access to state and federal data (shortcoming of staffing leads to shortcoming in this area of data).
- Need to take on marine data and marine conservation data.

Recommendation: Increase predictive capabilities

- More dynamic capacity to manage changing information.
- More predictive and less static data source.
- Model the future and track the past.

- Predictive future scenarios should be expanded, include dimensions and effect of change (e.g., climate, fire, etc.), and make predictions on changes in distributions of species and habitats. They should be linked to decision support tools.
- Need data system to convert “blobs” on maps to strategies and have the ability to map those strategies.
- Expand the inventory function for capturing change and for identifying conservation investments. This is critical; it should include more than just geographic information systems data
- Consider threats information (in the broadest sense): groundwater withdrawal, climate change, land use, exotics, etc.

APPENDIX A: COMMENTS FROM STAKEHOLDERS

Comment 1

Thanks again for including a local government representative (me) in your review process. I think you've done a very good job of corralling the various comments from our government agency discussion into an organized presentation. The big picture goal of conserving natural heritage in the state of Oregon should continue to drive the discussion, which immediately takes the discussion beyond the existing boundaries of the program as it now exists. In fact, it seemed that in the agency discussion, the question we were answering was somewhat different from the explicit question that you asked: we seemed to be responding to the question "how can we increase the effectiveness of natural heritage conservation in the state of Oregon, and in particular, how can the role of state government and the Heritage Program be made more effective in that endeavor?" This led to many suggestions related to interagency leadership and coordination, identifying cross-agency priorities, goals and objectives, consolidating data and broader data dissemination, and discussion on where these functions would best reside.

When I try to put myself in the shoes of the Council reading and digesting all of it, it feels a bit overwhelming. There are so many disparate ideas, issues and strategies to consider. My guess is that they will need to sift it all down into some basic policy alternatives. The split between legislative and non-legislative suggestions is helpful in that regard. Another dichotomy that might be helpful is a more distinct delineation into recommendation groups that essentially improve effectiveness of what the program already does now, vs. recommendations that fundamentally change its purpose, function, role and structure.

I applaud the Council for initiating the review, and I look forward to hearing the outcome of the Council's discussion of the 25 year review and seeing where the Program goes from here. This already valuable program has so much potential to provide greater benefits to man and nature in our fair state! Good luck and keep up the excellent work at INR!

Comment 2

I took a quick read through the draft report and thought it captured what I can remember of the discussions at the NGO session in December. I don't have any specific suggestions but I thought the **strongest** sections of the recommendations were 3.2.2 (Need new programmatic framework) and 3.2.5 (data). Addressing those two broad key issues would probably go a long way toward resolving the other ones.

Comment 3

General Thoughts

The report blends the various discussion groups' comments into a good working document and foundation for our February 16th workshop. My overall reaction, as I read through the document, was the similarity of the various groups' comments regarding the scope, concerns and assessment of the natural resource problems being faced by the State of Oregon. The problem we were attempting to address from this effort concerned the Natural Heritage Program and its' future, but the comments we received addressed a

much broader scope and direction. We asked for comment on the dog's tail and got answers about the whole dog. There were mixed ideas and suggestions on solutions, but a universal concern that a comprehensive natural resource management strategy was needed to provide consistent policies and guidelines for an integrated natural resource management strategy.

There were some common themes:

- The dysfunction's within our current natural resource management program are long standing, present in all areas and need immediate attention
- There needs to be central policy guidance so sound, consistent and predictable management can occur
- The problem that needs to be addressed is larger than the Natural Heritage Program, but the Natural Heritage Program and information base it generates is a necessary and valuable part of the whole
- An interim sorting out of issues and approaches may be needed before a workable strategy can be developed
- There needs to be some group formed that is composed of stakeholders or general citizens/technical/professional persons to evaluate the scope of the problem and suggest a strategic approach to solving the problem. (I got the impression that some felt this group should be a permanent thing; others felt it was the first of a 2 or 3 step process necessary to address the integrated natural resource management challenge.)

The "whole dog" may be well beyond the scope and intent of our modest effort, but these are the themes that I see emerging from the discussion groups' input.

Comment 4

I was a participant at the Federal meeting on December 7 at Robert Duncan Plaza. I work for both the USFS and OR/WA BLM in our Interagency Special Status/Sensitive species program. I am working from home, so this is being sent from my home e-mail in order to meet your due date.

I have reviewed the draft final report sent out for comment. I feel you all did a great job of capturing the comments at the meeting I attended, especially the coordination (page 16, 3.2.4) and data (page 17, 3.2.5). I did have an additional comment in regards to marketing.

On page 14, 3.2.3, the bullet that states "Build a broader base. Market information effectively - learn and then get it to those who need it" stimulated my thinking from another angle. I was also thinking that another goal of marketing is to not only get information to folks, but that by marketing the Heritage program (ORNHIC specifically) as a major information arm for the state, specialists/researchers will seek Heritage out to share data and assist in species assessments, therefore creating more confidence in species statuses not only from BLM and FS employees but the public too.

This document will definitely stimulate discussion among council members. Thanks for the opportunity to comment. Sorry we didn't coordinate our response from FS and BLM.

APPENDIX B: DEFENDERS OF WILDLIFE MEMORANDUM

Memorandum

To: Jimmy Kagan and the Oregon Natural Heritage Advisory Council
From: Sara Vickerman, Defenders of Wildlife
Date: 11/14/2006
Re: Future of the Heritage Council and Natural Areas Program
CC:

Thanks for the opportunity to participate in one of the focus groups that discussed the history and the future of the Natural Heritage Advisory Council and the program in general. We also reviewed the draft report and offer these suggestions to the Council for consideration.

1. Since the Heritage Program has moved into the Institute for Natural Resources, it is our impression that the focus on collecting, interpreting, integrating, and communicating scientific information about native plant communities, plants and animals has increased relative to the designation of natural areas. Given the evolution of the different roles and responsibilities of other agencies, private organizations, and academic institutions, this appears to be the right direction. There may be a perceived conflict of interest and some suspicion by critics that a conservation “agenda” could influence the quality of the scientific work (though we don’t see a problem).
2. The report correctly highlights changes in ecological theory over the past two decades suggesting that the “Noah’s Ark” approach to conservation is inadequate to address biodiversity and ecological processes in dynamic ecosystems. In addition to the establishment of conservation reserves, we need to be addressing management issues across the landscape, on both public and private lands.
3. A natural areas conservation program, in order to be successful, must have several essential elements. The first is money. The second is a clear conservation mission. The third is the expertise to make wise investments. Only one natural resource agency in Oregon comes close. The Oregon Watershed Enhancement Board has revenue from the lottery (and administers federal funds) for habitat conservation purposes. Which leaves the third element – expertise.
4. The Oregon Watershed Enhancement Board has an excellent staff and board, and has done an admirable job of developing a strategic approach to land acquisition. However, the focus of the programs have been water and fish-centric, and the local scale, technical review of restoration projects is inadequate to address the broader biodiversity issues, especially on terrestrial lands. We suggest moving the

natural areas program and the council into OWEB and using the council to do three things:

- a. Advise the Board about statewide conservation priorities that cut across agencies, have a broad base of support, and address multiple resource needs.
 - b. Review grant applications for large “signature projects” of statewide significance and make recommendations to the Board.
 - c. Review and approve natural area designations as it does now.
5. It has been suggested that the Heritage Program develop, or help develop a statewide conservation plan. At this point, it is our view that there has been enough planning, and what’s needed is an entity with the responsibility for integrating existing plans and identifying major gaps relative to biodiversity conservation needs. For example, the Oregon Department of Fish and Wildlife just completed a statewide strategy, the Forestry Program for Oregon addresses biodiversity issues on forest lands, and the Oregon Plan for Salmon and Watersheds addresses salmon and some water quality issues. There are dozens of other local and regional plans as well.

We’d appreciate being involved in continuing discussions about the future of this important program.

APPENDIX C: LIST OF INVITEES

Academic Meeting

John Bolte, Oregon State University
Bob Doppelt, University of Oregon
Dan Edge, Oregon State University
Stan Gregory, Oregon State University
David Hulse, University of Oregon
Paul Jepson, Oregon State University
Norm Johnson, Oregon State University
Robert Kaplan, Reed College
Susan Kephart, Willamette University
Frank Lang, Southern Oregon University
Aaron Liston, Oregon State University
Patricia Muir, Oregon State University
Mary O'Brien, University of Oregon (Natural Heritage Advisory Council)
Bitty Roy, University of Oregon
Hal Salwasser, Oregon State University
Darlene Southworth, Southern Oregon University
Karen Sturgeon, Linfield College
Mark Sytsma, Portland State University
Mark Wilson, Oregon State University
Alan Yeakley, Portland State University

State Meeting

Noel Bachellor, Oregon Parks and Recreation Department
Bob Bailey, Department of Land Conservation and Development
Chris Bayham, Association of Oregon Counties
Ann Beier, Department of Land Conservation and Development
Ken Bierly, Oregon Watershed Enhancement Board
Neil Bjorklund, City of Eugene
Charles Corrarino, Oregon Department of Fisheries and Wildlife
Roy Elicker, Oregon Department of Fish and Wildlife
Hal Gard, Oregon Department of Transportation
Debbie Gorham, Oregon Department of Agriculture
Dan Hilburn, Oregon Department of Agriculture
Larry Ojua, Oregon Department of Agriculture
Jeannette Holman, Department of State Lands
Cliff Houck, Oregon Parks and Recreation Department
Ian Madin, Department of Geology and Mineral Industries
Gail McEwen, Oregon Department of Fisheries and Wildlife
Rollie Montagne, Natural Heritage Advisory Council
Jim Morgan, Metro
Kate Schutt, Oregon Parks and Recreation Department
Willie Tiffany, League of Oregon Cities

Andrew Yost, Oregon Department of Forestry

Federal Meeting

Robert Alvarado, U.S. Forest Service
Ken Berg, U.S Fisheries and Wildlife Service
Paula Burgess, Bureau of Land Management
Alan Christensen, U.S. Forest Service
Dana Collins, Bonneville Power Administration
Blair Csuti, Portland Zoo
Tom DeMeo, U.S. Forest Service
Paul Dunn, U. S. Forest Service PNW Research Station
Lisa Freedman, U.S. Forest Service
Sara Greene, U.S. Forest Service
Miles Hemstrom, U. S. Forest Service (Natural Heritage Advisory Council)
Barbara Hill, Bureau of Land Management
Russ Holmes, U.S. Forest Service
Kathy Jopes, National Park Service
Cal Joyner, U.S. Forest Service
Sara Madsen, U.S. Forest Service
Phil Mattson, U.S. Forest Service
Kemper McMaster, U.S Fisheries and Wildlife Service
Joe Moreau, Bureau of Land Management
Michael Murray, National Park Service
Tom Pansky, Bonneville Power Administration
Dave Powers, U.S. Environmental Protection Agency
Matt Rea, Army Corp of Engineers
Nancy Tubbs, US Geological Survey
Chuck Willis, Army Corp of Engineers

Conservation Organization Meeting

Cathy Macdonald, The Nature Conservancy
Sara Vickerman, Defenders of Wildlife
Rick Brown, The Defenders of Wildlife/NHAC
Esther Lev, The Wetlands Conservancy
Bruce Taylor, Defenders of Wildlife/Northwest Joint Venture
Mark Stern, The Nature Conservancy
Nan Evans, The Nature Conservancy
Steve Buttrick, The Nature Conservancy
Evan Smith, The Conservation Fund

