BARRIERS AND BENEFITS TO LANDOWNER PARTICIPATION IN CONSERVATION PROGRAMS

An analysis of watershed council conservation efforts in coastal Oregon

Rachel Hiller

University of Oregon
School of Planning, Public Policy, and Management
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Committee: Dr. Richard Margerum and Dr. Stacy Rosenberg

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Abstract

Three evolutionarily significant units of coho salmon are listed as threatened on the Oregon coast. In response, the Oregon Plan for Salmon and Watersheds (1997) was developed to provide action measures to support salmonid health statewide. One of these measures is to provide voluntary restoration on private lands containing salmon priority habitat. The plan requires effective conservation programs that meet the needs of both landowners and conservation goals. An important part of this is maximizing landowner participation and developing lasting, trusting relationships with landowners.

In this study, I examined conservation programs funded by the Oregon Watershed Enhancement Board (OWEB) in two coastal regions. My goal was to identify the barriers and benefits to landowner participation. This was achieved by interviewing watershed council and soil and water conservation district (SWCD) staff in those regions to understand their perceptions. I developed recommendations based on the outcomes of those interviews and prioritized based on needs and ease of implementation.

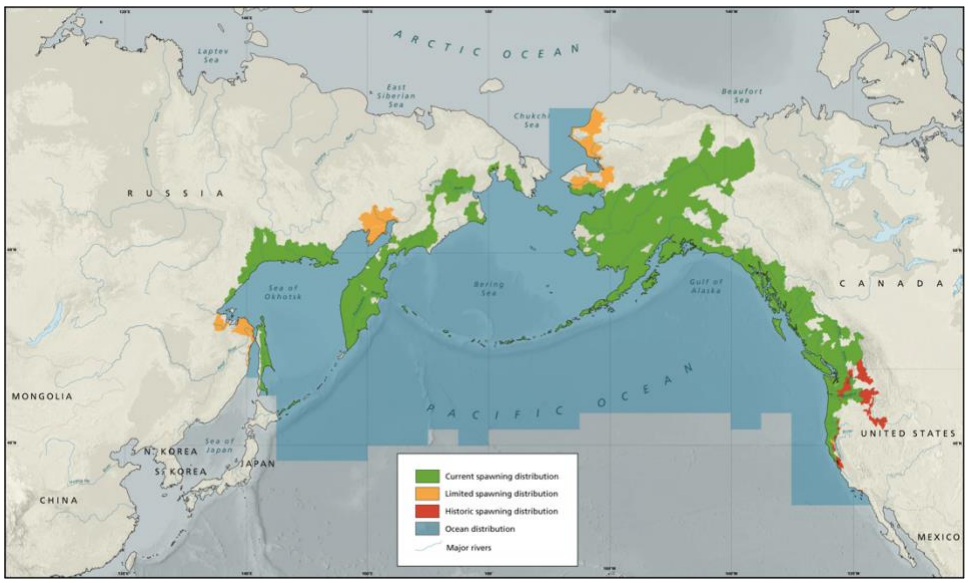
My results indicated that there are landowners who do not perceive conservation programs as incentivized enough to participate. Many landowners feel a mistrust towards regulatory agencies and program structures are often incongruent with landowner needs and abilities. Watershed council capacity issues were also recognized as affecting landowner engagement at times. Landowner benefits were cited as often being indirect, rather than direct, and while landowners generally want to help coho, they do not want to risk losing their autonomy over the management of their land.

Recommendations focus on maximizing benefits for both landowners and environmental resources. My intent is to promote conservation programs as mutually beneficial to increase landowner engagement, improve coho success, and improve relations between citizens and organizations and agencies.

Chapter 1: Introduction

The use of incentive mechanisms in ecologic restoration and conservation programs has increasingly been in use since the 1973 passage of the Endangered Species Act (ESA), which put greater restrictions on land use and development in areas of critically threatened or endangered listed species.[1] While habitat restoration and conservation has long been a mainstay on public management lands, the ESA has necessitated conservations efforts on both public and private land. Many agencies use a holistic approach to address ecosystem-level issues instead of site-specific problems, which often requires addressing ecologic concerns on the private land that surrounds public land.[2] This has caused conflict between landowners and the agencies tasked with regulating and enforcing mandated conservation and restoration programs, with landowners claiming unjust infringements on their rights by governmental regulations or takings.

FIGURE 1.1 COHO SALMON HISTORIC AND CURRENT DISTRIBUTION



Source: Wild Salmon Center

In Oregon, the Lower Columbia Coho Recovery Plan (LC), the Southern Oregon Northern California Coast (SONCC) Coho Salmon Recovery Plan, and the Oregon Coast (OC) Coho Salmon Recovery Plan have Coho populations listed as threatened through the ESA. Coho salmon is a species of anadromous (migrate from the ocean into fresh water to spawn) fish. They are native to the North Pacific Ocean with ranges from Japan toward the Bering Sea and mainland Alaska and south to Monterey Bay, California.

[1] Parkhurst, G. M., & Shogren, J. F. (2003). Evaluating Incentive Mechanisms for Conserving Habitat. *Natural Resources Journal*, *43*(4), 1093–1149. Retrieved from http://www.jstor.org/stable/24888898.

[2] *ibid.*

Coho is an important cultural, economic, and environmental resource in Oregon. They were historically used by many tribes throughout the Pacific Northwest as a food source and important cultural symbol. The National Marine Fisheries Service (NMFS) has listed four evolutionarily significant units of coho populations with the ESA as threatened species.[3]

Although there are separate considerations for threatened and endangered species, listed threatened species still have special habitat considerations that can be addressed through habitat conservation programs. As part of the recovery process, agencies are attempting to increase habitat complexity in salmon habitat throughout coastal Oregon. In order to accomplish this, the Oregon Plan for Salmon and Watersheds was enacted in 1997 to "restore native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits". The Oregon Plan has four elements: voluntary restoration actions, coordinated state and federal agency and tribal action, monitoring, and strong scientific oversight.[4] The partnerships with private landowners will be crucial to assisting habitat recovery on public, as well as private lands. While many state agencies and organizations are responsible for assisting with the plan, this study examines the efforts of the Oregon Watershed Enhancement Board (OWEB), Oregon Watershed Councils, and Soil and Watershed Conservation Districts (SWCDs). More detailed profiles of the Oregon Plan for Salmon and Watersheds and these organizations are found in section 1.1.

With this study, I intend to provide a comprehensive look at both internal and external program and features that act as barriers to landowner participation or benefit landowners who participate in habitat conservation programs in coastal Oregon. Barriers and benefits to landowner recruitment and participation are examined using textual analysis of interviews conducted with watershed councils throughout coastal Oregon. Additionally, I provide recommendations for improvement of conservation programs and grants that will aim to increase landowner recruitment and participation, better provide for landowner needs, and contribute to goals set in the Oregon Plan for Salmon and Watersheds for coho salmon conservation.

[3] *West Coast Salmon Recovery Planning and Implementation.* NOAA Fisheries West Coast (2018).
[4] Oregon Plan for Salmon and Watersheds (1997).

1.1 Context

Part of what interested me in this study is the unique community-based and non-regulatory model Oregon employs in conservation efforts. Watershed councils and Soil and Water Conservation Districts are two organizations I examine in this study because their non-regulatory statuses provide an important resource for landowners. In the next sections, I provide further examinations of these organizations and the statewide policy, the Oregon Plan for Salmon and Watersheds, which contributes to the use of conservation programs in Oregon.

1.1.1 Oregon Plan for Salmon and Watersheds (OPSW)

In 1997, the Oregon Plan for Salmon and Watersheds (OPSW) was established with the mission of "restoring our native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits". The OPSW began as a state strategy for conservation of either currently listed or potentially future listed ESA salmonid species. The intention of the OPSW was to avoid federal involvement through ESA listing due to concerns that: (1) listing of species is rarely successful to species recovery, (2) federal involvement often leads to severe restrictions which negatively impacts social and economic considerations locally and regionally, and (3) avoidance of lawsuits related to failure to develop water quality improvement plans through the Environmental Protection Agency's Total Maximum Daily Loads (TMDLs) program.

The plan originally developed as the Oregon Coastal Salmon Restoration Initiative and focused on coastal coho salmon and water quality improvement. In 1997, the plan was officially adopted by the Oregon Legislature as OPSW and provided a funding strategy for voluntary restoration on private lands.[5]

1.1.2 Oregon Watershed Enhancement Board (OWEB)

OWEB is one of the state agencies responsible for assisting with the Oregon Plan for Salmon and Watersheds. As a non-regulatory agency, OWEB is a grant-providing agency that provides grant support for agencies and

[5] Arha, K., Salwasser, H., and Achterman, G. (2003). *The Oregon Plan for Salmon and Watersheds: A perspective.* Institute for Natural Resources. Oregon State University.

organizations conducting watershed enhancement and improvement projects. OWEB is funded through a variety of state and federal funds. See Table 1.1 for the approved 2017-2019 OWEB budget sources and allocations.

TABLE 1.1 OWEB FUNDING SOURCES (LEGISLATIVELY APPROVED BUDGET 2017-2019)

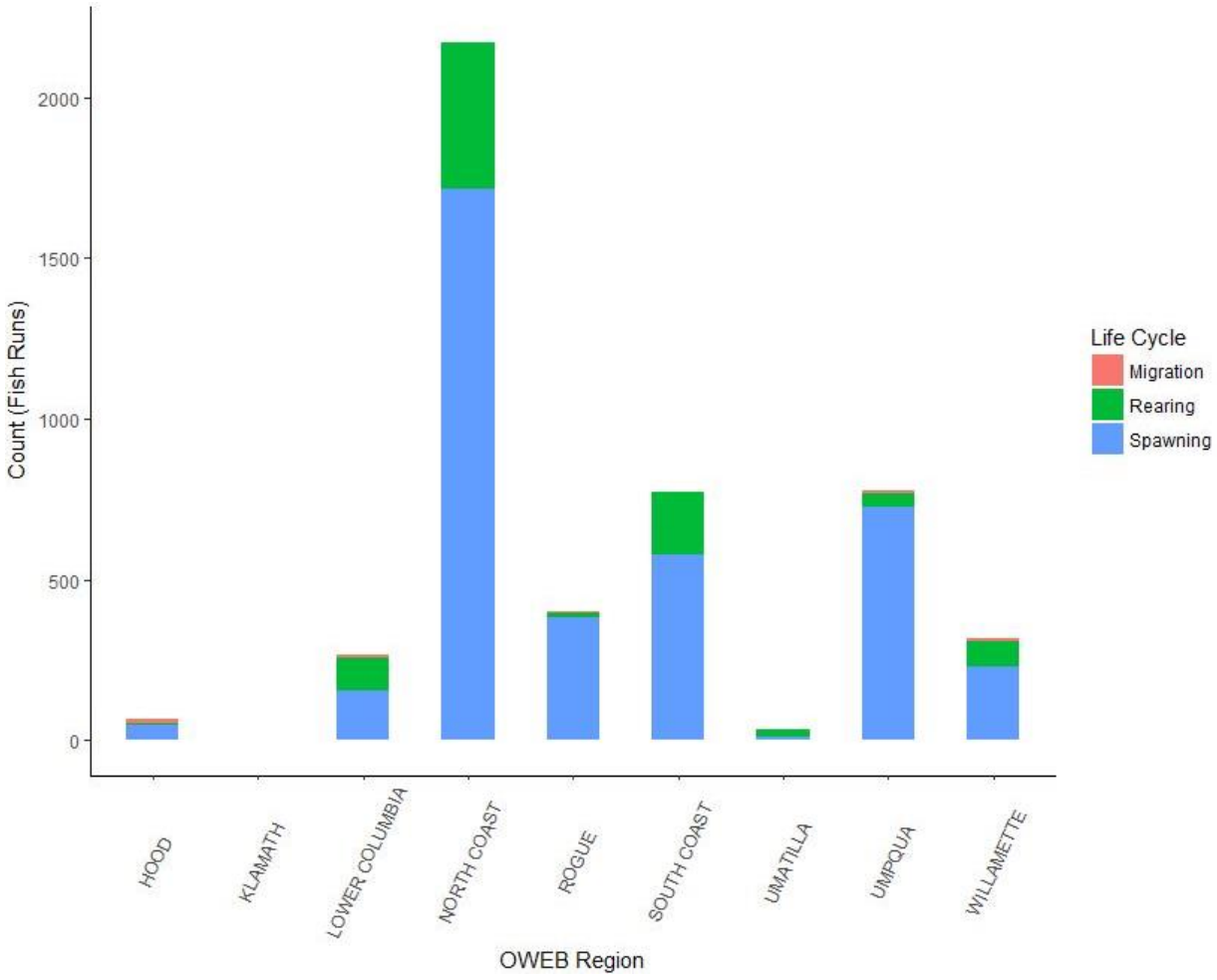
Funding Source	Percent of Budget (2017-2019)	Received:	Allocations
Oregon Lottery	62.4%	annually	Funds provide for Watershed Conservation Operating Fund and Watershed Conservation Grant Fund
Federal Funding:	35.0%	competitive grants applied for annually	
• Pacific Coastal Salmon Recovery Fund			Funds provide for projects assisting salmonids listed under ESA. 3% of total allotment goes towards grant administration
• Natural Resource Conservation Service (U.S. Dept. of Agriculture)			Funds provide for technical assistance and conservation easements
• National Coastal Wetlands Conservation Grant Program (U.S. Fish and Wildlife Service)			Grants, provided by excise tax on fishing and boating equipment, fund wetland restoration projects
Other:	2.5%	annually	
• License plate registration fees (Salmon plates)			Funds provide for Watershed Conservation Operating Fund
• Forest Health Collaborative grants (Oregon Dept. of Forestry)			Funds provide for technical assistance grants and Collaborative Capacity Grants for restoration in federal forests

Source: OWEB

OWEB's Mission Statement is "to help protect and restore healthy watersheds and natural habitats that support thriving communities and strong economies". As a non-regulatory agency, OWEB is tasked mainly with providing grants for

projects benefiting streams, rivers, wetlands, and natural areas.[6] There are nine regions throughout the state, each with a regional representative that works with watershed councils and organizations on OWEB initiatives. Figure 1.2 outlines the coho distribution by OWEB region.

FIGURE 1.2 OREGON COHO SALMON DISTRIBUTION BY OWEB REGION, 2009



Source: Oregon Department of Fish and Wildlife and Hiller, R.

OWEB provides funding for Oregon Watershed Councils and Soil and Water Conservation Districts. They also provide grant funding in the form of open solicitation grants, acquisition grants, and support grants.

[6] *ibid.*

1.1.3 Oregon Watershed Councils

Watershed councils are non-regulatory and community-based organizations that provide support for watershed initiatives, provide assessments of watershed health, and give project support to restore and enhance fish and native plants. Watershed councils can be funded through a variety of means; however, OWEB and the Pacific Coast Salmon Recovery Fund are common sources.

Watershed councils work with a variety of partners including local, state, and federal agencies as well as with private landowners. County governments designate councils which are governed by a Watershed Council Board made up of local community members intending to represent broad and balanced views.[7]

NETWORK OF OREGON WATERSHED COUNCILS

The Network of Oregon Watershed Councils is the larger network of councils that provides support to individual councils. The goal of this organization is to increase council capacity by supporting relationships with key partners and funders. They have regular meetings which allows council staff and board members to meet and discuss strategies.

Membership is not required, however councils that pay membership dues have access to additional funding resources, technical support and guidance, and other educational resources.

1.1.4 Soil and Water Conservation Districts (SWCDs)

Soil and Watershed Conservation Districts (SWCDs) are also non-regulatory and operate under the Oregon Department of Agriculture. There are 45 SWCDs within Oregon that work to protect and conserve natural resources while preserving the cultural, social and economic interests of local communities.

Similar to watershed councils, SWCDs work with landowners and provide assistance with project implementation. SWCDs provide technical support, grant seeking services for financial assistance, education and outreach, and landowner engagement within their districts.[8]

[7] *Who We Are*. Network of Oregon Watershed Councils (2018). www.oregonwatersheds.org.
[8] Oregon's Association of Conservation Districts (2018). https://oacd.org/.

1.1.5 Conservation Programs

OWEB, watershed councils, and SWCDs often work side-by-side on conservation programs as a method of providing restoration and enhancement to land and waters within watersheds. There are many conservation and conservation grant programs offered federally and state-wide in Oregon, although program features and funding can vary greatly. Management goals and needs of public and private land are often diverse and different programs may be more beneficial for certain landowners and land use types.

Conservation programs are a method of incentivizing or reducing hardships for landowners wishing to participate in conservation projects on their land. OWEB provides grant funding for conservation programs, while watershed councils and SWCDs have a more direct relationship with landowners and assist landowners with applications, securing funding, project development and implementation, and other technical resources.

Conservation programs can target a variety of landscapes and resources. For the purposes of this study, only conservation programs that target fish habitat and conservation were examined. Chapter 4 provides a detailed overview of programs analyzed for this study.

1.2 Research Objectives

The purpose of this study is to examine conservation programs commonly used by watershed councils in Oregon to promote coho restoration in collaboration with private landowners. Because these programs are voluntary for participants, I found it necessary to understand the mechanics of the programs and how they can be mutually beneficial to both landowners and coho populations.

Specifically, the objectives of this study are to understand:

1. What benefits do landowners receive from participating in conservation programs in OWEB Regions 1 and 2?

2. What are the barriers affecting landowner recruitment and willingness to participate in these conservation programs?

3. What policies can be recommended and implemented within conservation programs that will encourage landowner recruitment for conservation programs for coho?

The first question asks which features of habitat conservation programs can benefit landowners who participate. I want to understand the types of benefits landowners consider when choosing to participate in conservation programs. Is it monetary, and if so, which type of monetary compensation do landowners prefer (e.g. tax credits, direct subsidies, etc.)? Are there other non-compensatory benefits landowners consider when participating in the conservation programs?

The second question asks for the features of the conservation programs that act as barriers to landowner participation or willingness to participate. Because each program incorporates different incentives, outreach mechanisms, and program support, I am curious to understand if there are specific features of programs that encourage or discourage participation. While there is well-documented research that indicates features of effective conservation programs, barriers to landowner willingness to participate are highly spatially and temporally-dependent.

I also wanted to formulate recommendations for how OWEB can improve their programs, so the intent of the third question to inform OWEB and partners about the features that can be included in future OWEB grant programs. The purpose of these recommendations is to increase program effectiveness and participation, while also supporting the conservation goals within the Oregon Plan for Salmon and Watersheds.

Chapter 2: Existing Literature

Many studies have examined the various incentive mechanisms commonly used by agencies to encourage private landowners to manage their land in ways that will promote conservation or restoration goals. While this literature is helpful in examining the costs and benefits of each incentive program, the complex social factors of each area and landowner makes it difficult to apply broad-spectrum incentive mechanisms within a given spatial or temporal relationship.

Throughout the literature, gaps in knowledge about what social and economic factors contribute to a landowner's willingness to participate in an incentive conservation or restoration program are widespread. These past studies raise important questions and help form the basis for recommendations for improvement of conservation programs to better provide for landowner needs and contribute to the goals of the Oregon Plan for Salmon and Watersheds.

Themes present throughout the existing literature provide helpful insight into how the programs are applied and utilized by agencies and private landowners to encourage participation through the use of economic incentives, cost-benefit analysis of programs, and social support structures. Programs that lack these features can become barriers to landowners and prevent participation.

2.1 Economic Incentives

A common theme throughout the literature suggests that landowners, in general, are more likely to participate in a voluntary conservation program in which economic incentives are provided. A study in Australia asked the question of whether incentive programs work, in which surveys were administered asking landowners about their opinions regarding management of re-vegetation areas within conservation areas (Jellinek, Parris, Driscoll, & Dwyer, 2013). The results of this study found that if income was primarily made outside of the farm or by the land within the conservation area, landowners were more likely to engage in restoration activities. Additionally, they found that incentive programs should be broad to allow for greater benefits to the landowner (Jellinek et al., 2013). They determined there was need for further research in understanding how and to what extent incentives that increase ground layers on properties will benefit

biodiversity off-site (Jellinek et al., 2013). Exploring how incentives can encourage a landowner to increase biodiversity on their site to allow for better biodiversity off-site was an important component to my project.

Additional evaluation on the relationship between economic incentives and biodiversity are discussed in other studies as well. A 2012 study suggests that the supply of biodiversity is lacking because private landowners are not rewarded for providing biodiversity on their land due to a missing market for biodiversity. (Hanley, Banerjee, Lennox, & Armsworth, 2012). This is seen often in conservation programs: landowners will provide their least productive land first for mitigation projects, even if the land does not provide the needed requirements for proper mitigation.

The authors suggest creating a market for biodiversity in which a cap-and-trade type program allows landowners to provide mitigation to improve biodiversity off-site in order to develop their land. This could be done with species conservation credits or by educating landowners of the indirect benefits of conservation (Hanley et al., 2012). Other studies have examined a similar theme in creating unique, separate markets for direct purchase of ecosystem services (PES) which can allow for greater adoption of the incentive mechanisms (Wegner, 2016). Additionally, integrating PES into a national strategy for rural development may allow for better integration of incentives that comply with broader socio-economic trends in land use and markets, although more research needs to be completed on this topic. This is an important consideration in my study, as rural areas are the primary target in many coho habitat conservation programs in Oregon.

The literature identifies the need for additional research in understanding how contract lengths of programs will increase benefits to landowners. Generally, the longer the contract, the better the benefits to biodiversity; however, this also tends to lower the likelihood of participant re-enrollment (Hanley et al., 2012). Examining how programs of different contract lengths can change program success or participation is still needed.

Common incentive mechanisms most frequently used on private land include the following compensation schemes:

- Direct compensation from the government to land owners which provides financial compensation for land takings, rather than through controlling the land ex ante through county permits or ex post through financial penalties. This includes fee simple acquisitions or subsidies;

- Tradable development rights in habitat areas which provides a mechanism for those who wish to develop land purchase permits from those would otherwise be unable to develop due to development restrictions. This also includes the use of conservation easements, either as purchased development rights or donations for tax relief;

- Insurance programs through which landowners are compensated if endangered species impose a cost on them;

- Tax breaks for landowners willing to preserve large tracts of land, as opposed to breaking them up in order to pay for federal estate taxes;

- Conservation banking programs that allows for mitigation of habitat elsewhere to allow development on land deemed desirable;

- Zoning as a tool for better land use in habitat conservation areas (Parkhurst & Shogren, 2003).

Hanley et al. (2012) evaluated each of the above mechanisms based on three criteria (1) biological need of land and species, (2) landowner interest, and (3) government or regulatory concerns. Each criterion was rated on a five-point scale to examine successfulness of program (Parkhurst & Shogren, 2003). In particular, they were looking to identify programs that incorporate successful incentives for land and habitat conservation, using the Washington Salmon Recovery Funding Board (SRFB) as an example of how conservation easements and purchased development rights incentives were merged to make a more attractive offer to landowners with endangered salmonid species (Parkhurst & Shogren, 2003). They found that while this was a good example of using a combination of incentive mechanisms, more research needs to be done to ensure that landowners have sufficient and lasting incentives that will allow them to continue their contracts in the future and uphold the conservation programs (Parkhurst & Shogren, 2003). Understanding these incentive

mechanisms is necessary for my project. Researching the gap of combining various incentive structures to allow for lasting impacts for landowners, and therefore conservation program success, is essential.

2.2 Cost-Benefit Analysis

The literature also acknowledges the importance of incorporating a cost-benefit analysis into the use of incentive mechanisms for conservation programs, as it is necessary for validation of the programs. Understanding the costs associated with a program can help to address the insufficiencies of incentives and influence future policy changes. Studies suggest that incorporating proper cost estimates in a cost-benefit analysis will assist in selecting and prioritizing appropriate restoration projects and ultimately assist in acceptance of the program by landowners (Iftekhar & Polyakov, 2016). Additional studies have found that voluntary actions are harder to complete when specific opportunities are compared on a cost basis to projects in undisturbed areas, and as such, cost, location, and availability must be factored into a cost-benefit analysis (Simenstad, Tanner, Crandell, White, & Cordell, 2005).

The opportunity cost of restoration is higher than the opportunity cost of creating a reserve in a natural, undisturbed setting. This can often go unnoticed in restoration projects, and ultimately cost the project more money in overhead costs (Iftekhar & Polyakov, 2016). Understanding how benefits of these programs can be privately captured is important, as landowners who receive an increase in private benefits, which are non-monetary and include indirect benefits of conservation, are often more willing to participate in programs with lower government support and incentives. While the financial compensation is still important to landowners, understanding the benefits landowners may receive from these programs can help lower agency costs to administer the programs while still providing an incentive for landowners to participate. This is an important component of my project, as understanding how maximize benefits and minimize costs for both the landowners and agency is the ultimate goal.

2.3 Social Support

The literature identifies the importance of understanding the social structure and support mechanisms available to landowners when understanding willingness to participate in incentive programs, but there are few common themes. Depending on the spatial and temporal aspects of the study, studies produced different results on landowner needs for incentive programs.

A study in Australia focusing on social factors and private benefits in relation to restoration priorities examined the (1) willingness to participate in programs, (2) barriers to participation, (3) prioritization of proposed restoration actions, (4) expected public or private benefits for undertaking proposed restoration actions on land, and (5) most preferred incentive for undertaking proposed restoration actions on their land (Januchowski-Hartley, Moon, Stoeckl, & Gray, 2012). They found that landowners claimed biases toward ecological outcomes and not productive ones, impractical programs, and governmental mistrust were major barriers to participation success. This was also an aspect found in other studies, as landowner willingness is often the outcome of an array of social, behavioral, and is context specific (Sorice, Conner, Kreuter, & Wilkins, 2012) (Trenholm, Haider, Lantz, Knowler, & Haegeli, 2017).

Further studies have found that landowners consider indirect benefits when participating in conservation programs. A study in Australia examined publicly funded market-based conservation programs and the effects participating landowners received from their engagement. They found that (1) landowner appreciation that their land was both productive and engaged in conservation values increased, (2) the flow of information to build capacity through improved awareness and education increased, and (3) the market-based programs increased competition between production and conservation which prompted many landowners to re-design their land into production and conservation zones to maximize production benefits (Zammit, C., 2013). This study indicates that landowners do benefit and recognize indirect benefits from participating in conservation programs. It also shows that in general, landowners want to participate in these programs because they want to engage in conservation practices, as long as it does not interfere with their ability to use their lands. While this may require redesign of land management practices, it is possible to benefit from program participation both directly and indirectly.

However, the solutions to overcoming these barriers were all context specific. Studies have found that information outreach on indirect benefits could improve willingness to participate in programs (Wallander, Ferraro, & Higgins, 2017). Trenholm et al. also found that landowners were much more willing to consider the indirect benefits of conservation programs on their land. Januchowski-Hartley et al. found that landowners perferred incentives for high priority restoration actions through direct compensation and were not as willing to particpate for indirect benefits of conservation. All of the reviewed literature acknowledged the importance demographics plays in these determinations. Sorice et al. found that measuring the lifestyle centrality related to farming allowed for greater examination of social factors pertaining to incentive acceptance. The landowner perceived level of dependence on the land for income, as well as the length of time the owner has occupied the land factor into the willingness to participate in incentive programs (Sorice, Conner, Kreuter, & Wilkins, 2012).

The importance of social and behavioral economics of landowners must be examined in-depth in my project. The complexities of human behavior and preference is difficult to determine, but the literature emphasizes the importance of examining landowner preference for incentive mechanisms. Studies that identify the causal relationship between landowner preference and willingness to participate in voluntary incentive conservation programs are largely site specific and cannot be applied broadly.

2.4 Summary

The literature suggests that incentive restoration and conservation programs must factor economic, cost-benefit analyses, and social factors into landowner willingness to participate. Gaps in current research show a need for looking at increasing biodiversity and combining incentive structures can increase landowner participation and what effects that will have on the conservation program success. Additionally, understanding how the incentive programs can maximize the cost-benefits within rural development areas, and the socio-economic behaviors of landowners participating in programs can influence conservation program success must be explored further. By examining these gaps in past studies, I hope to provide a comprehensive look at landowner preference for incentive programs for salmon species recovery on the Oregon

coast and contribute to a greater understanding of how incentive programs can contribute to conservation programs on a larger scale.

The complexities of human behavior and preference is difficult to determine, but the literature emphasizes the importance of examining landowner preference for incentive mechanisms. Studies that identify the causal relationship between landowner preference and willingness to participate in voluntary incentive conservation programs are largely site specific and cannot be applied broadly. By examining these gaps in past studies, the aim of this study is to provide a comprehensive look at landowner preference for incentive programs for salmon species recovery on the Oregon coast and contribute to a greater understanding of which program features can contribute to improvement of conservation programs within this region.

TABLE 2.1 SUCCESSFUL CONSERVATION PROGRAM ELEMENTS

Program Elements	Notes
Economic Incentives	Do plans incorporate economic incentives (e.g. direct compensation, tradable development permits, insurance programs, tax breaks, conservation banking programs, zoning)?
Cost-Benefit Analysis	Do plans clearly describe the costs/benefits of program participation?
Outreach and Education	Do plans include outreach and education programs for landowners?
Technical Assistance	Do plans provide technical assistance for the implementation of projects?

Chapter 3: Methodology

The purpose of this study is to examine conservation programs commonly used by watershed councils in Oregon to promote coho restoration in collaboration with private landowners. To answer the research questions, I reviewed documents on conservation programs and conducted 13 open-ended interviews with watershed council staff.

3.1 Program Review

I selected four OWEB programs to evaluate. Open Solicitation, Acquisition, and Small grant programs were chosen because of their widespread use as funding for conservation and restoration projects by councils. The Focused Investment Partnership was also chosen as it is one of OWEB's newest programs and was mentioned throughout the interviews as an avenue many councils would like to explore in the future. Programs evaluated are:

- OWEB Open Solicitation Grants
- OWEB Acquisition Grants
- OWEB Focused Investment Partnerships
- OWEB Small Grants

The aim of the program evaluation is to understand the program features that make up these conservation programs and how they overlap or differ between programs. This serves to provide an overview of different conservation programs and the program features and benefits available to landowners. This is intended to be a useful aid to watershed councils, organizations, and landowners to more easily understand program features that will assist landowners with their decisions regarding signing up for programs.

3.2 Interviews

To understand more about landowner perspective on the OWEB programs, I interviewed watershed councils and SWCDs in OWEB Regions 1 and 2. I chose

these regions due to the varied habitat that is crucial for anadromous fish species and the high distribution of coho in these regions (see Figure1.2). The interviews serve three purposes:

1. to better understand what program barriers exist in conservation programs that prevent landowners from participating;

2. to understand what features of the programs are effective or ineffective;

3. to involve watershed councils in the dialogue about program needs due to their valuable insights on landowner needs.

Of the 35 watershed councils in OWEB Regions 1 and 2 (15 in Region 1, 20 in Region 2), 20 watershed coordinators were contacted. Twelve watershed councils and one SWCD responded to interview requests, with four organizations providing multiple personnel on interviews. The interviews were conducted via telephone throughout spring 2018 and each lasted approximately 1 hour.

FIGURE 3.1 STUDY AREA

Source: Hiller, R.

Interviewees were asked about their perceptions of landowner benefits and barriers to participating in conservation programs based on their interactions and hands-on involvement in conservation projects. The list of questions asked to interviewees is provided in Appendix A.

3.2.1 Analysis

With permission from the interviewees, the interviews were audio recorded and transcribed. I then analyzed the responses and coded them based on common themes. Themes emerged regarding both the benefits and barriers to landowners.

Barrier themes included:

- how the program structure affected landowners
- the social features of communities
- the time and commitment requirements of programs
- financial requirements of programs

Benefit themes included:

- direct
- indirect

More detailed descriptions of these categories appear in Chapter 5.

Once responses were coded into their respective barrier and benefit themes, I based my recommendations for program improvement on those responses that were most commonly cited by interviewees. See Chapter 7 for recommendations.

3.3 Limitations

Though I attempt to answer questions surrounding program barriers and benefits to landowner participation and recruitment, some limitations exist that prevented a holistic, in-depth review of these issues.

3.3.1 Limitation 1: Lack of Direct Landowner Contact

A major limitation was the lack of direct landowner involvement and contact throughout this study. Constraints such as time, cost, and concerns about response rates limited my ability to reach out to landowners for input on this topic. Although watershed council coordinators provided valuable input and insight into this topic, it is impossible to account for the direct input of landowners. Landowner needs and preferences are diverse and watershed council coordinators often do not have the ability to provide that diverse information. A commonly cited phrase throughout the interviews was that these answers were generalized, and it really depended on the landowner and the specific context of the issue.

3.3.2 Limitation 2: Watershed Council Response Rates

Another limitation was the number of watershed councils contacted. The study area, which included OWEB Regions 1 and 2, has 35 watershed councils. 20 of these were contacted, and 12 responded to interview requests. While these numbers allowed for data trends to occur and be analyzed, a larger sample size may have brought increased knowledge and insights into my study.

3.3.3 Limitation 3: Conservation Programs Analyzed

Additionally, this study examines programs limited to conservation of coho salmon habitat. While the results may be applicable to other conservation programs targeting other species or goals, some of the results may be not be applied broadly. Programs identified for analysis are based on their scopes that provide habitat for riparian and aquatic species due to the identified need for coho salmon habitat projects. This will not necessarily be useful to other conservation programs that target more terrestrial species or issues.

Chapter 4: OWEB Grant Programs Overview

This chapter provides a review of four OWEB conservation grant programs most often utilized by watershed councils in coastal Oregon (see Table 4.1). Appendix B provides greater detail on these programs.

To apply for these grants, the applicant must be a legal entity and have a Federal Employee Identification Number (FEIN). State or federal agencies may only apply for funding as a co-applicant with an eligible organization. Eligible organizations include local or tribal governments, non-profit organizations, institutions for higher education, and individuals (not eligible for indirect or administrative costs).

TABLE 4.1 OWEB GRANT PROGRAM OVERVIEW

OWEB Grant	Types Offered	Amount	Cycle
Open Solicitation	• Monitoring • Restoration • Stakeholder Engagement • Technical Assistance	Greater than $10,000	Spring or Fall Fall Only (Monitoring)
Acquisition	• Land • Land Technical Assistance • Water	Varied based on appraisals and assessments	Fall Only (Land and Water) Spring or Fall (Land TA)
Focused Investment Partnerships	• Development • Implementation	$150,000 for 2 years (Development) $12 million for 6 years (Implementation)	Fall Only (Development) Spring Only (Implementation)
Small Grant Program	variable	Less than $15,000	Variable depending on local Small Grant Team

4.1 Open Solicitation Grants

OWEB's Open Solicitation grants are part of an open grant program that can be used to apply for a variety of watershed improvement projects. There are currently Monitoring, Restoration, Stakeholder Engagement, and Technical Assistance grants available.

All Open Solicitation grants require a 25% in-kind match or leveraged resources to be eligible for receipt. In general, these grants are for projects with expenses greater than $10,000.

4.1.1 Monitoring

Monitoring grants are used to support monitoring programs and establish evaluations of restoration efforts related to physical, chemical, and biological evaluations. These grants are only available for fall applications.

4.1.2 Restoration

Restoration grants are available in the spring and fall and supply funding for statewide restoration priorities. Eligible projects are based on habitat type and type of restoration activity (see Table 4.2). However, this is not an exhaustive list, and councils are encouraged by OWEB to contact a project manager for projects outside this scope.

There is optional monitoring associated with these grants. Monitoring actions should target post-restoration activities or effectiveness of project. Monitoring through Restoration grants is funded up to $3,500. If more extensive monitoring is requested, the applicant will have to fill out a Monitoring grant application as well.

FIGURE 4.2 Eligible Projects by Habitat and Activity

Habitat	Eligible Activities
Instream	• Bank stabilization • Fish passage improvement • Fish screening • Flow • Habitat restoration • Stockpiling logs
Riparian, Upland, Wetland, and Estuarine	• Road closures/decommissioning • Road drainage improvement • Vegetation establishment or management
Riparian, Wetland, and Estuarine	• Exclusion for habitat protection
Riparian and Upland	• Livestock management
Riparian	• Debris and structure removal
Wetland and Estuarine	• Channel modification, including creation • Structure removal/modification/installation • Nonstructural removal and placement protection
Upland	• Agricultural practices for conservation, including erosion control • Non-agricultural practices for conservation, including erosion control • Urban impact reduction

Source: OWEB

4.1.3 Stakeholder Engagement

Stakeholder Engagement grants are for projects whose purpose is to communicate and engage with landowners, communities, and organizations about the need, feasibility, and benefits of a specific eligible restoration or acquisition project within an identified area. Education projects are not eligible with this grant type. These grants are available in the spring and fall.

Eligible projects must be tied to a specific geography, address clear habitat, watershed, or ecosystem function goals, and have a clear path for achieving the restoration or acquisition measurable outcomes within a reasonable and specific timeframe.

4.1.4 Technical Assistance

OWEB offers two types of Technical Assistance grants, which must be applied for separately. The first, Technical Design Development assists with technical designs for a restoration project (e.g. hydrologic analysis, topographic surveys, hydraulic modeling). The second, Technical Planning Development assists with

development of an implementation plan for restoration activities (e.g. conducting habitat restoration and feasibility studies). These grants are available in the spring and fall.

4.2 Acquisition Grants

Acquisition grants are used to acquire land or water resources from willing landowners. There are three kinds of acquisition grants available: land, land technical assistance, and water. All applicants are required to show 25% of land acquisition project cost is being sought as match which is required to complete the acquisition purchase.

4.2.1 Land

Land acquisition grants are for the procurement of land by willing landowners for the purposes of restoration or resource conservation. These grants are only available in the fall. There is an eight-step process to apply for these grants, which can take up 3 years to process.

4.2.2 Land Technical Assistance

Land acquisition TA grants fund projects to assess the feasibility of restoring estuarine function and tidal inundation to a site intended to be purchased with OWEB acquisition funds within tidal wetlands. These grants are available in the spring and fall.

4.2.3 Water

Water acquisition grants are used to purchase water from a willing landowner to increase instream flow for habitat, species conservation, and water quality improvement. These grants are only available in the fall.

4.3 Focused Investment Partnerships (FIPs)

FIP investments are used to address an OWEB Board identified Focused Investment Priority that is of significance to the state. These achieve clear and measurable ecological outcomes through the use of strategic action plans that

use results-oriented approaches. FIPs are implemented by high-performing partnerships. High-performing partnerships are defined by OWEB as "collaborative groups of organizations with an existing governance structure that includes a formal decision-making process resulting in an effective performance history". There are two types of FIPs available, Development and Implementation, which both require a 25% match.

4.3.1 Development FIP

Development FIP funding supports improving partnership capacity and developing or enhancing a strategic action plan. These can also be used to build partnership capacity to partner at high-performing levels. Development FIPs grants up to $150,000 over two years. These grants are only available in the fall.

4.3.2 Implementation FIP

Implementation FIP funding supports high-performing partnerships in pursuing conservation initiatives with existing strategic action plans. Initiatives must address an OWEB Board-approved priority of significance to the state. The initiatives must also demonstrate clear and measurable restoration outputs and ecological outcomes that support liming factors outlined in a federal recovery and/or state conservation plan. Implementation FIPs grants up to $12 million over six years. These grants are only available in the spring.

4.4 Small Grants

OWEB's Small Grant Program awards up to $15,000 for restoration projects on private lands. This program has contributed greatly to the Oregon Plan for Salmon and Watersheds by encouraging voluntary restoration on private land. This program is generally seen as an alternative to the Open Solicitation grants and results in a much shorter timeframe. Unlike the Open Solicitation grants, these grants are reviewed and granted locally as opposed to through the Regional Review Team. Application deadlines are variable based on local Small Grant Team. Project maintenance and effectiveness monitoring are not included in these grants and they may not be used as a source for matching.

Chapter 5: Findings

I identified several themes from the interviews with watershed councils and SWCD staff. Comments regarding barriers to landowners in conservation programs were shown to occur in four different categories: (1) Program Features, (2) Social Features, (3) Commitment Requirements, and (4) Financial Features. There were also two distinct categories for identified benefits of these conservation programs: (1) Direct and (2) Indirect. The findings from these interviews are outlined below and organized by their respective categories of barriers and benefits. A more detailed discussion and analysis of these findings are presented in Chapter 6.

5.1 Results Overview

All interviewees acknowledged that both barriers and benefits existed for landowners participating in conservation programs. Of those interviewed, all agreed there are barriers built into the programmatic features of conservation programs. They all also reported social barriers to landowner participation. A majority believed that the requirements for landowner commitment to program participation was a barrier. Financial features of programs were also listed as a major barrier for landowner participation. More interviewees identified indirect benefits than direct benefits as benefiting landowners.

5.2 Landowner Barriers

Barriers to landowners were classified into four themes:

- **Program Features** are barriers that affect how the conservation programs are structured. These are typically built-in features that are generally inflexible due to set minimum requirements or funding mechanisms of the program. These may also be external of the program itself, such as with comments regarding inefficient bureaucratic processes related to permitting.

- **Social Features** are barriers that are often felt by landowners as externalities of participating in the programs. These may be implicit or explicit barriers that landowners feel prevents or impedes their desire to participate.

- **Commitment Requirements** are barriers landowners feel towards commitment requirements of programs. While these are often the result of programmatic features of the conservation programs, these are specific to concerns landowners have about the level of commitment required by both landowners and agencies.

- **Financial Features** are barriers landowners face related to financial aspects of participating in programs. These are related to concerns about costs to participate or how the grant cycles operate which may prevent them from receiving assistance that will allow them to participate.

Table 5.1 outlines the outcomes of the program feature barriers to conservation programs. For more detailed data categories, Appendix A breaks out data into further categories.

TABLE 5.1 LANDOWNER BARRIERS (n= 13)

Program Feature Barriers	n =
Program Focus	13
Programs too environmentally-focused	
Programs not mutually beneficial	
Lack of outreach and education	
Programs don't fit landscape	
Varying requirements between agencies/ bureacracy	
Social Features	13
Trust/lack of respect	
Fear of opening themselves up to liability or violations	
Social pressure/politics	
Commitment Requirements	10
Contract lengths	
Project timelines too long or unclear	
Concerns about privacy and data	
No maintenance to projects once implemented	
Financial Features	9
Concerns about cost to landowner	
In-kind matching requirements	
Inflexible grant cycles	

5.2.1 Program Features

All interviewees (n =13) agreed that the program features were barriers to many landowners. While the reason for this varied among watershed regions, many coordinators agreed that the programs were too environmentally-focused and mutual benefits were not explicitly stated for landowners which affected their perceptions of the programs.

In some regions, landowners felt uncomfortable being labeled "environmentalists" and felt that the programs were too "fish-centric". Many landowners were reported to fear that participation in programs would cost them use and autonomy over management of their land.

Some landowners also felt the programs were not mutually beneficial and did not account for landowner needs and interests. Many landowners perceived the programs as being too resource-focused and too outcome-based. Interviewees generally felt that because the programs were too focused on achieving resource conservation, they did not keep in mind the programs were voluntary. Landowners did not want to sign up as they did not feel their risk would outweigh the benefits of the programs. Coordinators agreed that many programs did not keep landowner needs in mind and explained that this was a major barrier to many landowners, especially those deriving economic value from their land.

> Coordinator E (Region 1):
>
> *"The concern that doing what we want them to do to benefit fish will cost them use of some of their land. […] The effect of what looks to us as a modest barrier can be to them [the landowner], a significant loss of usable land.*

Coordinators also felt that many programs did not include funding for education or outreach, which is an indirect barrier to landowner participation. Of those who reported this issue, many said landowners were simply not aware of watershed health issues or of the resources available to them by OWEB and watershed councils. While interviewees, again, cautioned that it is important to not make these programs too environmentally-focused, it is still useful for landowners to be aware of the environmental issues facing their watersheds and communities. Coordinators who mentioned this believed that expanding education and

outreach funding into grants which allow more town hall-type meetings and workshops would be helpful for reaching a larger audience. The education should focus on larger watershed issues such as the importance of biodiversity in watersheds. However, the programs currently focus only on specific resources, such as coho, which does not give landowners a full understanding of the issues or why it is important for watershed health. Presenting the information in a neutral light that describes benefits landowners receive from functioning watersheds is a feature many interviewees agreed is lacking from current programs.

Coordinator G (Region 2):

"Outreach can be done, and it shouldn't be attached to specific projects. When they [agencies] do this, they're paying you to talk to one landowner instead of supporting your organization to outreach around a specific topic such as water quality. This gives them [landowners] options.

Several coordinators reported that the inflexible nature of the programs and too-specific minimum qualifying requirements to participate prevented the programs from being utilized in their regions. Features such as minimum parcel size, buffer widths in riparian areas, and habitat requirements were cited as major barriers preventing landowners from participating in programs. These features sometimes even prevented landowners from signing up for programs, even though they had interest in participating. For some, this was reported to be a minor barrier, as they could assemble several landowners together for projects, but in other regions, the political and social landscape prevented these programs from being implemented.

Coordinator I (Region 2):

"For us, it's [minimum parcel size] a problem because we have a lot of smaller parcels so often one landowner isn't enough to build a project around for it to be funded. Sometimes we have to put 2-3 neighbors together which complicates it because then you have multiple personalities to deal with."

Finally, many landowners were reported as saying they didn't want to become involved in projects that were inefficient, badly managed, or would cause inconvenience to them due to bureaucracy. Most interviewees agreed that they have good relationships with landowners in their regions, mostly due to their organizations being non-regulatory. However, some coordinators found that many landowners in their regions were not aware of watershed councils or the role they have in conservation projects. In these regions, landowners perceived watershed councils as an extension of regulatory agencies and contributed to feelings of mistrust that the process would be efficient and well-handled. While this was not an unanimously agreed upon barrier, it was reported as being a major barrier in those regions with less of a watershed council presence among landowners. Councils with greater capacity for landowner engagement often reported this to be a non-issue as they had staff to act as project managers and guide landowners through more efficient processes.

5.2.2 Social Features

Everyone interviewed (n =13) also agreed that social features of the communities and programs prevented some landowners from participating in conservation programs. While reasons varied, most agreed that trust was a major barrier and reported that there was a general lack of trust between many landowners and regulatory agencies.

TRUST

This trust was also extended to the relationship landowners felt with agency staff and watershed coordinators. Many coordinators reported that landowners wanted a local connection when working with staff on conservation program projects, as this helped alleviate concerns about outsiders' lack of local knowledge about issues. As discussed above, landowners do not want to be involved with bureaucratic processes and want to trust that watershed councils and all other involved parties will be conscientious of this need and be accountable for the projects.

Coordinator G (Region 2):

"Trust is a big one […] Just making sure that your organization is accountable to that landowner and they understand that we will continue bringing accountability throughout the project."

Coordinator F (Region 2):

"What kind of trust they have in the project manager. A lot of projects never get off the ground because of this. […] A project manager who has the ability to show professionalism and empathy for landowner issues. They need to understand the landowner has needs, fears, and stakes in the project."

RURAL PERSPECTIVES

For some, trust gave way to concerns about a general lack of respect conservation programs and agencies had for landowners. Some interviewees felt the way the programs were presented to landowners was disrespectful of landowners and were perceived by landowners as placing their needs beneath the needs of coho and other natural resources. Interviewees indicated that because many of the conservation projects are done in rural, depressed economies, landowners often cannot afford to place their needs beneath coho. It was also mentioned that a lack of mutual respect sometimes existed, with regulatory agencies not recognizing the knowledge of local residents. Some believed this was due to attitudes between the rural and urban divide:

Coordinator C (Region 1):

"Recognizing education isn't the only criteria for knowledge. They should be respectful of local knowledge and experience– it's nice to have mutual respect."

Coordinator I (Region 2):

"If you go to an urban dweller and tell them to give me their car because it's bad for the air– you don't do that. So, it's very frustrating that OWEB and the agencies are constantly presenting this as a fish issue because we've got a huge trust hurdle to overcome right away because the landowner understandably assumes that their interests are not even part of the equation."

Coordinator J (Region 2):

A lot of these programs only account for rural landowners and telling rural landowners what they should be doing. Urban living also has an impact, but no one tells urban dwellers they have to tear down their houses or stop using their land the way they want."

LOCAL POLITICS

Interviewees also reported landowners are concerned about exposing themselves to liability and being cited with non-compliance of regulations due to program participation. Many landowners were concerned that allowing access to their properties by program staff or agency officials would leave room for increased scrutiny of potential violations. Coordinators agreed that watershed council roles as non-regulatory advocates for landowners helped with this perception, but it was still considered a major hurdle for many.

In some regions and communities, coordinators reported the social pressures and politics of the community prevented landowners from wanting to participate. Communities that had turbulent relationships with regulatory agencies tended to have more social pressure for landowners to not participate in conservation programs. Landowners were reportedly afraid to participate out of fear of losing their place within their communities and upsetting the social and economic structures of their communities.

In one region, politics within the county was reported to be the primary– and a major– barrier to landowners participating in conservation programs.

Coordinator D (Region 1):

"If they happen to be in an area where there's a lot of social pressure to not participate, they risk their place in the community in a way. […] there's a lot of social pressure not to remove the land from agriculture production."

5.2.3 Commitment Requirements

Many coordinators interviewed (n =10) believed that the inflexible nature of programs required too much commitment from landowners which greatly influenced their decision to participate. Many programs require a fixed contract length and access to property and data which are required of all participants.

Some of these barriers were contributed to programmatic features, such as contract lengths, although other landowners were concerned about project-specific features such as project timeline duration. Long, multi-year contract lengths were generally considered undesirable by landowners. Many landowners preferred short-term projects that would not keep them from utilizing their land.

Coordinator G (Region 2):

"Most are hesitant for projects with long timelines. I've been working with land easements and land acquisition agreements, but people are still very reluctant and are afraid of devaluing their property or are unsure of what to do with their land. They are weary of impacts on their livelihood when signing up for something more permanent."

Additionally, projects with timelines that were not clearly planned due to funding and matching constraints were also considered a barrier for some landowners. Some landowners did not want to become involved with a project that did not have a clear timeline, citing concerns that they would lose their vision for what they wanted the project to become. Uncertainties with grant funding was a major contributor to this. Coordinators also found that because grant cycles favored longer-term projects, they were unable to reach a significant portion of small landowners who needed shorter-term projects.

Larger landowners tended to have more resources at their disposal and had more flexibility with how parcels of land were used during project implementation. Smaller landowners with working lands generally want short project durations due to needing their land to stay productive for as long as possible.

> Coordinator C (Region 1):
>
> *"We generally don't work on short-term time scales. I need to plan out six months to two years because of the grant turn-around time. If someone needs a really urgent project, this can be a deal breaker for working with our organization. We end up working with mostly larger landowners because their time frame is more compatible with ours and grants. For small landowners, this is a big barrier as they tend to need quicker turn-around times."*

Landowners were also reportedly concerned with privacy issues occurring as a result of participating in public programs. Many landowners do not want their information or data to be made publicly available which contributes to their decision as to whether they wish to participate in conservation programs. Some landowners were concerned this would contribute to further regulation for how their land could be used.

Other landowners were reported to be concerned with how projects would be maintained after implementation. Elderly landowners or those who need physical assistance want to ensure that projects have the capacity to be maintained after initial implementation.

5.2.4 Financial Features

For many landowners, cost is considered the bottom line and the greatest barrier to participation. Landowners often reported being concerned with program costs, both the initial matching and long-term costs related to maintenance. Many landowners were concerned that programs did not consider the underlying costs to landowners and didn't use a cost-benefit scenario to compare the landowner costs to the benefits for landowners and fish. In general,

landowners did not want to participate in programs that did not meet their needs or balance the cost of participating.

> Coordinator F (Region 2):
>
> *"Most of the fish passage work doesn't need state permits but you need to jump through a lot of hoops for the feds. Fees cost more than it would cost to take out the structure– not cost effective. Is the benefit for natural resource more than the cost it takes to go through removal process?"*

Others felt landowners sometimes miscalculated the true cost of participating in conservation programs and undervalued program benefits which did not give them the perception of conservation programs having landowner benefits.

> Coordinator E (Region 1):
>
> *"A lot of landowners undervalue their own labor. If you're spending an hour a day doing chores for keeping animals and USDA [U.S. Department of Agriculture] comes in to rent their land and allows landowners to keep their land without having to keep animals. But they don't take into account the time saved from not having to perform labor. They don't believe the payments are compensatory enough, but they aren't taking into account saving money on labor. "*

In-kind matching requirements were a problem in some watersheds more than others and were program-specific. Programs that allowed matches to be met with time, resources, or other non-monetary in-kind donations were generally more helpful to landowners. Because much of the work is done in rural areas with depressed economies, landowners often lacked resources to contribute in-kind monetary match for projects. While some watersheds organizations were able to provide match on behalf of landowners, others found it difficult because grant cycles did not always align to allow them to apply for adequate funding to cover matching requirements for landowners.

5.3 Landowner Benefits

Benefits to landowners were classified into two categories:

- Direct benefits are the primary benefits that landowners receive directly as a result of participating in conservation programs.

- Indirect benefits are the secondary benefits that landowners report receiving as a result of participating in conservation programs. These may be perceived or quantifiable benefits.

5.3.1 Direct Benefits

While most of the interviewed participants did not believe landowners considered conservation programs to have many direct benefits, some noted benefits such as technical support, monetary compensation, land acquisition, and conservation easements (see Table 5.2).

TABLE 5.2 DIRECT BENEFITS (n= 13).

Benefit	n =
Technical support	4
Monetary compensation	3
Land acquisition	2
Conservation easements	1

Technical support was cited as a major benefit in some watersheds. Landowners that wanted assistance with projects were reportedly satisfied with the ability to contact watershed councils or other staff with questions regarding project implementation. The types of assistance cited ranged from help with planting along riparian buffers to engineering of flood control structures. Of the coordinators who cited this, it was indicated that landowners typically wanted assistance with various aspects of the project, but still wanted to maintain control over the type of work done on their land.

Coordinator D (Region 1):

"Landowners want a lot of technical assistance. They need to be getting something out of it, which is different for everyone. Technical assistance, and physical assistance as well. A lot of the landowners are elderly and want assistance with those projects."

Monetary compensation was considered a benefit for some landowners, although many coordinators believed that acquisition programs were generally not compensatory enough for most landowners to consider participating.

Coordinator M (Region 2):

"Funding is a big thing. It's an awkward way to start the conversation, but people are motivated by money. Trying to find a way to convince the landowner that money is coming from a source that is fish-centric is a way to show that the program can be mutually beneficial."

5.3.2 Indirect Benefits

Many more indirect benefits were identified by interviewees (see Table 5.3). It is important to note that because indirect benefits are generally perception-based, more categories and types of benefits can be identified than direct benefits which only have a few possible outcomes. However, most coordinators agreed that the programs were perceived as having more indirect benefits than direct and the direct benefits were generally not cited as a major incentive by landowners.

Additionally, most coordinators agreed that whether these benefits were considered enough of a benefit to encourage landowners depended greatly on the landowner and situation. Because motives for program participation vary and are highly individualistic, it is difficult to assign value to some indirect benefits on a large scale.

TABLE 5.3 INDIRECT BENEFITS FINDINGS (n= 13)

Indirect Benefits	n =
Site improvements	11
Helps coho and the environment	11
Aesthetics	5
Helps community building	4
Removes responsibility for violations	4
Develops opportunities for monitoring projects	4
Opens up resources and information for landowners	3
Contributes to social goodwill	2
Builds relationship between government and landowners	2

A majority (n =11) reported that landowners benefited from site improvements on their property as a result of participating in conservation programs. Many also responded that a majority of landowners also felt good about contributing to coho habitat improvement and helping the environment (n= 11).

While some coordinators acknowledged there are some landowners whose primary goal is to boost coho habitat, most landowners were described as not wanting to lose control of the management and use of their land.

> Coordinator J (Region 2):
>
> *"Most people are fond of salmon and generally want to do something to help improve that as long as it doesn't affect their ability to extract economic value of the land. I find that even people who are economically tied to their land, they like salmon. But it has to be a balance between that and taking out 5 acres of their hayfield, for example."*

Community building was cited as a benefit for some landowners as well as an incentivizing agent. Landowners in some areas were very open to talking about their conservation projects and wanted others to see the work that was done on their property. This was regarded as a very effective way to bring in new landowners and build up a sense of community among participating landowners.

Coordinator D (Region 1):

"Participation in a community effort and feeling satisfaction from that. There are hotspots of participation and some want to talk about it. These people live in areas where people want to talk about it and there are like-minded people. There are people who are participating but live in areas where nobody wants to talk to them about that. It's a really effective way to get new participants in areas where that is accepted. Word of mouth can be a great way to get new landowners."

Coordinator H (Region 2):

"We do a lot of projects with multiple landowners, which ties landowners to each other in an uplifting and supportive way."

Removing liability for violations was cited as a benefit and reason for landowner participation in conservation programs. This was most often reported by agricultural and timber landowners who wanted to stay compliant with various federal and state regulations regarding best management practices. Whether regulations were targeting fish passage, waste disposal, or flood control, programs that alleviate these concerns were cited as being beneficial by landowners. Coordinators said the reason for this was the programs incentivized compliance with regulations:

Coordinator F (Region 2):

"Structures out here are all old and will need to be restored. Landowners will be triggered to do something because they will be responsible for fish passage. That's been our best tool to help landowners understand where projects can go in the future."

Comments regarding benefits of increased monitoring activities were not necessarily considered a landowner benefit, but coordinators felt that it was a benefit worth mentioning as long-term monitoring of coho was often cited as a major concern in watersheds.

Chapter 6: Discussion

This chapter will discuss the findings of the Chapter 5 and put those results into context. While each response is telling and useful to understanding the "big picture" of landowner barrier and benefits to participating in conservation programs, it is also important to recognize that landowners are incredibly diverse as are the watershed councils and organizations that work with them. Not all watershed councils or SWCDs have the same resources at their disposal and the issues facing landowners can vary greatly by land use type.

6.1 Cross Case Analysis

In my analysis of the interviewee comments, I noted trends across the cases that related to land use types and council capacity. These provide additional insight into the variation of barriers landowners encounter with conservation programs.

6.1.1 Land Use Types

Interviews with councils in primarily agricultural versus primarily timber land uses indicated different issues affecting landowners. Most councils with dairies and agriculture found landowners were generally hesitant to sign up for programs. Most interviewees agreed this was due to the need for landowners to keep land in production as they were economically dependent on their land. This is a challenge for many councils in these areas, as agricultural land tends to be in lowlands and has high priority coho habitat. Other councils noted that even landowners who did not use their land primarily for agriculture, but still had some livestock or were hobby farms, did not want to participate in programs out of fear they would lose their tax status as farmland from their land being out of production during project implementation.

Coordinators agreed that focusing on agricultural lands should be a focus moving forward and finding ways to encourage, educate about the issues, and support agricultural landowners will be necessary in the future. Coordinators also generally agreed that the programs will have to be restructured to fit the needs of these landowners and encourage their participation.

Timber landowners tended to be more varied in their perceptions of conservation programs. Some private timber landowners were very receptive of participating in conservation programs because the programs encouraged land use practices and restoration projects they were already implementing. Other private timber landowners were less responsive to council staff and preferred to keep restoration efforts in-house. Coordinators believed this to be a result of high turnover rates of land ownership in timber companies. They also noted that many timber lands were being bought by companies outside of Oregon and the Pacific Northwest and many do not have a background in timber or land management. Because land prices are very high, many companies invest a lot of initial capital into land purchases. This is often at the expense of employing larger staffs of biologists and foresters who are trained in land management practices. These companies are generally interested in re-selling the land quickly for a profit and do not want to invest in a long-term management strategy. In these cases, coordinators generally had a difficult time engaging with landowners.

In both agricultural and timber land uses, interviewees noted that shifting trends in the market and economy has made landowners warier of participation in conservation programs. In agricultural landscapes, loss of access to markets has made dairies harder to sustain. What several generations ago was a prosperous dairy or farm operation has now lost access to those markets, placing economic hardships on those landowners. Despite this, there remains social pressures to not take that land out of agricultural production which creates more barriers to agricultural landowners wanting to participate in conservation programs. In timber landscapes, the shifting trend of company ownership also contributes to this. Companies previously were locally or regionally owned and operated, however this is changing with more national or international companies changing ownership every few years. This has made it difficult for council staff to establish relationships with those landowners and engage in conservation projects.

6.1.2 Council Capacity

Another trend that appeared in this study was the differences among each council's capacity and resources. Each council has access to varying resources which changes their ability to engage and use OWEB's conservation programs.

Councils with greater access to programs such as the Coho Business Plan received far more technical assistance than other non-participating councils. This greatly enhanced their ability to engage in conservation projects in their regions.

Other capacity differences include the size of the organization. Some organizations have multiple full-time or part-time staff, while others have only one or two part-time staff. Organizations with fewer staff reported that they often did not have the capacity to effectively engage with landowners in the manner they felt was necessary to develop relationships and perform education and outreach. Although, most councils, regardless of size reported they often had much more work than capacity to accomplish tasks.

This also affected council ability to apply for grants and funding. Larger staffed councils were able to dedicate more staff resources to applying for grants, both public and private. Most councils expressed their hope to diversify their funding sources to include both public and private foundation funding. Many found that private funding was less strict about how funds were used, and councils were able to put that money towards aspects such as education and outreach, monitoring, and meeting in-kind matching requirements, which were lacking in OWEB programs. These differences were especially apparent in speaking with the SWCD, which had dedicated staff for outreach and did not report this to be an issue in the same way as watershed councils.

Because of these capacity issues, many councils expressed a need for greater support from OWEB. Assistance such as more technical support, better networking opportunities, and more funding for the Network of Oregon Watershed Councils were mentioned as improvements OWEB could make to support councils with their needs to better assist landowners.

6.2 Program Metrics and Reporting

Many coordinators believed that the funding mechanisms for the conservation programs were too focused on tangible outcomes and negated the benefits and importance of more indirect outcomes, such as monitoring or education and outreach activities. Many coordinators believed that programs needed to value

these inherent benefits and develop metrics that account for their importance. Reporting requirements on grants make development of this metric difficult, as OWEB grants require detailed accounting of expenses. However, many coordinators reported they wanted value placed on important non-quantifiable aspects of program participation.

When asked whether they perceived these conservation programs to be successful with contributing to coho salmon habitat and population success, answers varied greatly between coordinators. Many coordinators said it was too soon to tell as projects have not been implemented long enough to see changes to long-term trends in population. Some commented that while it is too soon to see changes, they believed the conservation programs were beneficial to the watersheds. Coordinators believed that increased OWEB funding for monitoring would be beneficial to gauge whether the conservation programs were contributing to coho success.

Coordinator M (Region 2)

"Metrics are in dollars spent and there's no adequate funding for monitoring. There's no metric for understanding how water quality improvement is useful. At the practitioner level, we recognize the need for monitoring and we need to have funding for water quality sampling."

While this question largely falls outside the scope of this study, it was an issue that many coordinators felt strongly about and that has implications for landowners and those participating in the programs. Education and outreach was cited as a major barrier to landowners and coordinators. While some organizations had more resources and in-house staff dedicated to outreach, many did not and believed there were steps OWEB and other agencies could take to make outreach more accessible.

Chapter 7: Recommendations and Future Steps

This chapter discusses recommendations for OWEB to consider for conservation program restructuring. These recommendations are the result of the interview findings discussed in chapters 5 and 6. It concludes with a discussion of future research that can be done to continue answering questions related to conservation programs and landowner engagement.

7.1 Study Overview

Conservation programs have historically been utilized to provide incentives for landowners to engage in conservation or restoration activities on their land. Coho salmon have an important economic, social, and environmental status in Oregon. The Oregon Plan for Salmon and Watersheds (1997) supports measures to improve water quality and quantity and habitat restoration for anadromous fish. One of the measures, voluntary restoration actions, can help be accomplished with the use of conservation programs.

While conservation programs can be a useful method to encourage landowners to engage in conservation efforts, the programs must include benefits for participating landowners. Programs that do not include mechanisms that encourage landowner participation will ultimately not be successful in meeting conservation goals, as landowner participation is voluntary. To better incorporate conservation programs that will assist with coho salmon conservation and adherence to the Oregon Plan for Salmon and Watersheds, it is important to understand landowner needs and whether they are being met by these conservation programs. Understanding the barriers and benefits to landowners will help refine programs to make them mutually beneficial to both landowners and the resources the programs protect.

This study sought to answer some of these questions regarding benefits and barriers to landowner participation in conservation programs. I interviewed twelve watershed councils and one SWCD throughout OWEB Regions 1 and 2 and asked staff about their perceptions of landowner benefits and barriers to

participation in programs. While there are a variety of region-specific barriers that affect landowner participation, the findings show that some landowners do not perceive conservation programs to be beneficial enough to them to risk participation and fear losing autonomy of their land management. While there are some direct compensatory benefits that landowners acknowledged as a result of participating, many more landowners appear to benefit indirectly with improvements made to their properties. For a more detailed discussion of findings, see chapters 5 and 6.

7.2 Recommendations

The following recommendations are the result of coordinator interviews and my independent assessment of the ease of implementation (see Figure 7.1). Recommendations were chosen based on their ability to answer research objectives, which are to encourage landowner recruitment for conservation programs. While many coordinators would like to see increased grant funding and more flexible timelines, they also acknowledged the difficulty OWEB would face in implementing those recommendations. In recognition of this, I formed recommendations using the most commonly agreed upon barriers faced by landowners and watershed councils. I organized them by priority level, which was based two factors:

1. the number of councils who mentioned it;
2. the degree of importance that was placed on it by interviewees.

My assessment of the ease of implementation for OWEB was based on:

1. Monetary contribution – does funding need to be restructured or added to accommodate the change?
2. Ease of program re-structuring – does the program need to be significantly re-structured to accommodate the change?
3. Timeline – how long will it take to implement this change?

FIGURE 7.1 RECOMMENDATION PRIORITIES AND EASE OF IMPLEMENTATION

Recommendation	Priority	Ease of Implementation
Promote mutual benefits		
Improve Regional Review Team communication		
Increase watershed council support		
Add education and outreach funding to Open Solicitation grants		
Provide flexibility in grant spending		

Priority	
First-level Priority	
Second-level Priority	

Ease of Implementation	
Easy	
Relatively Easy	
Difficult	

Recommendation 1: Promote Mutual Benefits of Programs

To encourage landowner participation, programs should consider more efforts to promote benefits to landowners. While there are some landowners throughout coastal Oregon who will participate in programs regardless of incentives, the goal is to reach landowners who do not benefit from any programs. The current attitude among those landowners is that programs are too resource-centric. This causes some landowners to feel it is not in their best interest to sign up for these voluntary programs that may affect their ability to use their land.

What was also made clear by interviewees, however, is that there are benefits landowners receive. In particular, site improvements to their property was cited by nearly every interviewee as an indirect benefit that landowners receive as a result of participating in programs. Whether these site improvements are the result of tide gate improvements, culvert or infrastructure repair, or aesthetic, landowners can benefit from conservation projects. While they also indicated that most landowners do genuinely care about coho and want them to succeed, this is a secondary concern to most landowners who do not want to lose the ability to extract economic value from their land.

This indicates that landowners are receptive to conservation projects but want a balance between their needs and those of the resource. Because these programs are already providing benefits to landowners, reframing the programs to be less "fish-centric" may be an important step towards encouraging landowners concerned with a lack of mutual benefits. This may be accomplished by the way the programs are presented to landowners:

> Coordinator H (Region 2):
>
> *"The way we pitch the project is, this will save you [the landowner] time and money from a productive land perspective and not from a 'look at all the wonderful things we can do for fish' perspective. They're [the landowners] land and water stewards but don't want to characterize themselves as being environmentally-minded necessarily."*

This was a highly cited response by interviewees, and most agreed that there are ways to present these programs as mutually beneficial to landowners who need their land to stay productive but also would like to participate in conservation projects. This would be an easy change to implement, as these programs are already benefiting landowners with site improvements and other indirect benefits. Reframing the programs to showcase those benefits would likely help alleviate concerns landowners have about programs being too resource-focused.

Recommendation 2: Improve Regional Review Team Communication

Improving OWEB Regional Review Team communication was suggested by several councils. While this recommendation is more for watershed council support than direct landowner support, councils that reported this felt the review process was ultimately detrimental to landowners because councils could not gauge whether funding would be approved by the Regional Review Teams' closed-off approval process.

This was not cited by all councils but was cited by several from both Regions 1 and 2. Councils that mentioned this want more transparency in the process overall and would like the opportunity to communicate with the review team to

advocate for their applications. One coordinator commented that the review team was a “black box of confusion” and once they sent in their application they had no idea whether they would receive funding until the decision was made. For many councils, this was a problem because they could not plan for other funding options until they knew what types of OWEB funding they would receive.

Coordinators believed that allowing for two-way communication between councils and the review team would help alleviate this. Some also thought encouraging the review teams to visit the councils in their regions would be useful in providing more familiarity with the area. Several coordinators commented that the review team staff often did not have fish biology backgrounds, which made it challenging to make informed decisions on grant allocations for projects. Including more review team members with fish biology backgrounds may help with this concern. Additionally, some coordinators believed there should be term limits to the review team members. Including fresh perspectives in the review process will be useful to many councils.

I list this as a secondary priority because perceptions of review team issues were mixed. However, communication and transparency were general themes present throughout interviews and increased transparency may also assist with landowner concerns about government and regulatory agency mistrust.

Recommendation 3: Increase Support for Watershed Council Staff

A very common theme in the interviews was watershed councils wanting more OWEB support. Councils want acknowledgement of the time and resources it takes to build relationships with landowners. Because of their often limited capacity to provide education, outreach, and craft relationships with landowners in their regions, these necessary components are missing from many councils. Councils reported wanting more administrative costs included in grants to assist with this, although they also acknowledged this may be difficult to accomplish.

Other non-monetary support they felt OWEB could provide included providing more technical and support assistance with navigating the various regulatory agencies. Many coordinators acknowledged the challenges of dealing with varying federal and state requirements on projects. Requirements such as minimum buffer widths along riparian areas were mentioned in interviews as

frustrating variances to navigate when completing projects. More technical support from OWEB giving councils guidance and outlines for navigating the various federal and state regulatory channels for project completion would likely help with these concerns. One way to address this is to provide more support and funding for the Oregon Network of Watershed Councils which will allow for greater networking and training opportunities for coordinators.

Additionally, many councils acknowledged their need to diversify their funding options for projects. Because most acknowledged it may be difficult for OWEB to restructure their funding, many councils have tried expanding their funding to other agencies and private foundations to help cover expenses not covered in OWEB grants. Assistance with promoting other funding outside of OWEB will be helpful for many councils. Creating a web portal for funding opportunities, both public and private, that provide funding for conservation projects will simplify the process for councils. This will also likely help more landowners meet matching requirements for OWEB grants, as this was often a limiting factor for landowners who wanted to participate but could not due to cost.

Recommendation 4: Add Education and Outreach Funding to All Open Solicitation Grants

Many councils mentioned the need to increase education and outreach within their regions but could not, due to lack of funding and capacity. Coordinators recognize the importance education plays in recruiting and maintaining landowner involvement. Often because there is only limited funds and time to perform education and outreach, councils are unable to speak about broader watershed issues and are able to only provide project-specific outreach. This is not an effective long-term strategy.

Coordinators want to continue developing relationships with landowners in their regions and educate landowners about issues affecting watersheds that are not attached to specific conservation projects. One coordinator spoke about treating the problem versus the symptom. Educating participating landowners about issues with fish passage is only treating the symptom of the larger problem related to watershed health. Having the ability to speak to larger groups of landowners, schools, and at other community events would allow for larger outreach and education measures.

Explicitly acknowledging the time it takes for councils to educate and engage with landowners with allocated funds in all OWEB Open Solicitation grants will help with these concerns and help with long-term landowner retention and recruitment efforts. This is recognized as being a difficult outcome to implement as funding will have to be restructured. However, for long-term investment of program buy-in by landowners, adding increased funding for education and outreach will be necessary.

Recommendation 5: Provide Flexibility in Grant Spending

My final recommendation will be another long-term investment into the conservation programs and their funding structures. Coordinators repeatedly mentioned their desire to have funding that is less project-specific and will allow for some discretion in how the money is spent. Some of the reasons mentioned in interviews centered around monitoring and project types. Monitoring was reported as lacking in conservation programs which makes it difficult to establish baselines in data and examine whether the conservation programs are targeting the correct features for coho improvement.

Coordinators also commented that the OWEB programs were too inflexible regarding the types of projects. Many coordinators mentioned the need to provide funding for water quality improvement projects, as this is also attached to fish health. Some councils have sought funding for projects that did not fall within the scope of OWEB projects, but still had direct implications for coho and were not able to receive funding to complete the projects. One council commented they believed this to be attributed to a lack of innovation by OWEB and the Regional Review Team.

Coordinator E (Region 1):

"We have made some progress with some of the agencies in promoting this idea that to improve things, is to work in more places than just wadeable streams. It has been hard to get funding for coho projects that are not in wadeable streams. The real preference of the review team is to do more of the things we were doing 10 years ago. OWEB seems opposed to not trying new things and being adaptable."

Allowing grants to have more flexibility in the types of projects councils take on may be important for allowing adaptability in the types of projects necessary to assist with coho conservation. While this may not have direct landowner impacts, this will help support watershed councils in finding more innovative ways to address issues within their regions and better target projects to willing landowners.

One way to address this may include using a block grant funding structure which would allow individual councils to allocate money as they deem necessary for watershed improvement projects. While the reporting will still need to be structured to assure accountability, block grants may be useful for addressing issues that affect individual regions that do not fit within the mold of current OWEB programs.

7.3 Recommendations Summary

The recommendations presented in section 7.2 were created to assist watershed councils with their needs to effectively use OWEB's conservation grant programs and engage with landowners in their regions (see Table 7.2).

While recommendations 1 and 2 will be easier to implement than the latter three, all were reported to be important to councils in their interactions with OWEB's programs. Because conservation programs are voluntary and will require long-term buy-in from landowners, considering ways to make conservation programs adaptable to the needs of councils and landowners will be necessary in the future.

TABLE 7.2 RECOMMENDATION ACTION ITEMS

Recommendation	Issue	Action Items for OWEB
Promote mutual benefits	Programs currently too resource-focused for a majority of landowners	Re-frame programs as mutually beneficial to participating landowners
	Landowners care about coho, and generally receptive to conservation projects, but need their priorities taken care of first	
	Site improvements (infrastructure improvements, flood control, etc.) cited as major indirect benefit for landowners	Promote site improvement outcomes of conservation programs through education and outreach
Improve Regional Review Team Communication	Closed-off communication between review team and applicants	Encourage and allow 2-way communication between applicants and team members
	Review process not characterized as transparent	Team members should give feedback as to why applications not approved
	Review Team members do not have background in issues	Institute term limits for team members to allow fresh perspectives on issues and diversity in member backgrounds
Increase watershed council support	Limited council capacity for landowner engagement	Increase administrative costs in grants
	Councils require more technical support with navigating project requirements and regulations	Increase support for the Oregon Network of Watershed Councils to give councils more access information and networking opportunities
	Lack of diversity in funding options for projects	Create web portal that advertises public and private funding opportunities to streamline search for applicants
Add education and outreach fundng to Open Solicitation grants	Limited funds prevent education and outreach to landowners	Include education and outreach funding to all Open Solicitation grants that are not project-specific. Make these funds explicit to acknowledge time it takes to develop relationships
	Funds for stakeholder engagement are project-specific and do not address larger watershed issues	
Provide flexibility in grant spending	Monitoring is lacking for projects	Consider using block funding model to allow more discretion in how funds are spent or allocations distributed
	Funding is focused on older coho success metrics and inflexible on region-specific issues	

7.4 Future Research

For this study I looked at what benefits and barriers exist for landowners participating in OWEB conservation programs. This provided some insight into the issues affecting councils and landowners in coastal Oregon. Moving forward, additional research into the type of support agricultural landowners need will be useful to understanding how to create and target programs that will encourage participation. Agriculture is changing throughout the coastal region and many farms are disappearing or diminishing in size. There are also generational changes occurring, with some coordinators commenting that younger generations of farmers are more receptive to conservation projects. Understanding those changing dynamics will be important for investing in future programs.

Other studies into the types of indirect benefits that will support landowner participation will be useful as well. Because indirect benefits were cited often by interviewees, a more targeted look at whether these indirect benefits are viewed by landowners as priority factors in their decision-making process will be important to understand whether these indirect benefits can be expanded upon. Additionally, studying the economic impacts of these indirect benefits will be useful in understanding their value. For example, examining the value of improved tide gates for flood control or the value of saved labor costs due to taking land out of production. This will serve to place quantifiable values to these benefits which may be more useful to landowners.

Finally, although landowners were the targeted audience of this study and the aim was to understand how conservation programs affect them, it is very apparent that watershed councils and SWCDs are also impacted by these programs and OWEB's support structure. Many coordinators expressed desire for better assistance with seeking funding both with OWEB and from other sources. The Focused Investment Partnership program in particular was mentioned throughout interviews as a potential program with which councils would like to become involved. Understanding how to best build council capacity and engage in partnerships will be important for these organizations moving forward as it will allow for increased adaptability, conservation efforts, and landowner engagement.

Appendix A: Interview Materials

Interview Questions

Interviews were open-ended and follow-up questions were often asked. The template used for interviews is below.

1. Could you briefly state the watershed council you work for and your role within the council, specifically in regard to landowner engagement?

2. Could you describe the general land use characteristics of your watershed?

3. Which Coho salmon-related habitat conservation programs or habitat conservation grant programs, if any, have you directed landowners to?

4. Have you found these conservation programs to be beneficial to Coho success in your watershed?
    a. If so, what features of the program contribute to Coho improvement?

5. Is there a typical demographic of landowner signing up for conservation programs in your watershed?
    a. If so, could you describe general characteristics (such as occupation, length of residence etc.) of landowners signing up for these programs?

6. What program features do you look for when recommending a specific program(s) to a landowner?

7. What is the largest factor you believe landowners consider when signing up for a program?

8. What, if any, indirect benefits of participating in conservation programs do you know of landowners considering? [“indirect” meaning non-compensatory]

9. What are commonly cited concerns landowners have about participating in a conservation program?

10. What barriers do you believe most impacts a landowner’s decision to sign up for a program?

11. Of these barriers, how do you believe they have affected a landowner’s willingness to participate or continue participating in the program? [are these minor setbacks or major barriers to participation?]

12. For landowners not willing to participate in the conservation programs listed in this study, are there other programs you refer them to?
    a. Does this help to overcome the perceived barriers of the other programs?

13. What recommendations do you have for OWEB to improve their programs and make them more attractive for landowner participation?

14. Is there anything else you would like to add regarding these programs or their barriers?

Barriers to Participation

Itemized barriers to participation by total number of respondents are listed below.

Program Feature Barriers	n =
Program Focus	13
Programs too environmentally-focused	11
Programs not mutually beneficial	11
Lack of outreach and education	7
Varying requirements between agencies/ bureacracy	4
Programs don't fit landscape	3
Social Features	13
Fear of opening themselves up to liability or violations	9
Trust/Lack of respect	5
Social pressure/politics	3
Commitment Requirements	10
Contract lengths	6
Project timelines too long or unclear	6
Concerns about privacy and data	5
No maintenance to projects once implemented	2
Financial Features	9
Concerns about cost to landowner	8
In-kind matching requirements	5
Inflexible grant cycles	5

Appendix B: OWEB Conservation Programs

To apply for these grants, the applicant must be a legal entity and have a Federal Employee Identification Number (FEIN). State or federal agencies may only apply for funding as a co-applicant with an eligible organization. Eligible organizations include local or tribal governments, non-profit organizations, institutions for higher education, and individuals (not eligible for indirect or administrative costs).

OWEB GRANT PROGRAM OVERVIEW

OWEB Grant	Types Offered	Amount	Cycle
Open Solicitation	• Monitoring • Restoration • Stakeholder Engagement • Technical Assistance	Greater than $10,000	Spring or Fall Fall Only (Monitoring)
Acquisition	• Land • Land Technical Assistance • Water	Varied based on appraisals and assessments	Fall Only (Land and Water) Spring or Fall (Land TA)
Focused Investment Partnerships	• Development • Implementation	$150,000 for 2 years (Development) $12 million for 6 years (Implementation)	Fall Only (Development) Spring Only (Implementation)
Small Grant Program	variable	Less than $15,000	Variable depending on local Small Grant Team

Open Solicitation Grants

OWEB's Open Solicitation grants are part of an open grant program that can be used to apply for a variety of watershed improvement projects. There are

currently Monitoring, Restoration, Stakeholder Engagement, and Technical Assistance grants available.

All Open Solicitation grants require a 25% in-kind match or leveraged resources to be eligible for receipt. In general, these grants are for projects with expenses greater than $10,000.

Monitoring

Monitoring grants are used to support monitoring programs and establish evaluations of restoration efforts related to physical, chemical, and biological evaluations. These grants are only available for fall applications. Eligible monitoring types include:

- status and trend: monitoring made at regular intervals to determine long-term trends and assess conditions of a specific criteria
- project effectiveness: monitoring effectiveness of restoration projects in meeting biological and ecological objectives
- landscape effectiveness: monitoring environmental parameters to determine effectiveness of restoration actions for creation of habitat conditions at a large geographic scale
- rapid bio-assessment: collection, compilation, analysis, and interpretation of biological data to facilitate management decisions or mitigation of impairment; assessments are rapid and allow multiple site investigations in a field season with quick production of results for management decisions

Monitoring projects can take place on a variety of habitat types including:

- instream
- riparian
- upland
- wetland
- estuary

Restoration

Restoration grants are available in the spring and fall and supply funding for restoration priorities including:

- altered watershed functions affecting water quality, water flow, and fish production capacity
- removal or remediation of structures to improve water quality and/or fish habitat
- land management practices to address causes of chronic disturbances to watershed
- direct evidence of collaboration between stakeholders and agencies over single-party projects
- upslope and upstream treatments

For salmon recovery, OWEB requires documentation of local and regional plans and assessments for federal and state reporting requirements. Projects that specifically benefit salmon or steelhead should be located within a salmonid evolutionarily significant unit (ESU) recovery domain and intend to assist waterways with current or projected future ESU species use.

Eligible projects are based on habitat type and type of restoration activity. However, this is not an exhaustive list, and councils are encouraged by OWEB to contact a project manager for projects outside this scope.

Eligible Projects by Habitat and Activity

Habitat	Eligible Activities
Instream	• Bank stabilization • Fish passage improvement • Fish screening • Flow • Habitat restoration • Stockpiling logs
Riparian, Upland, Wetland, and Estuarine	• Road closures/decommissioning • Road drainage improvement • Vegetation establishment or management
Riparian, Wetland, and Estuarine	• Exclusion for habitat protection
Riparian and Upland	• Livestock management
Riparian	• Debris and structure removal
Wetland and Estuarine	• Channel modification, including creation • Structure removal/modification/installation • Nonstructural removal and placement protection
Upland	• Agricultural practices for conservation, including erosion control • Non-agricultural practices for conservation, including erosion control • Urban impact reduction

Source: OWEB

There is optional monitoring associated with these grants. Monitoring actions should target post-restoration activities or effectiveness of project. Monitoring through Restoration grants is funded up to $3,500. If more extensive monitoring is requested, the applicant will have to fill out a Monitoring grant application as well.

Stakeholder Engagement

Stakeholder Engagement grants are for projects whose purpose is to communicate and engage with landowners, communities, and organizations about the need, feasibility, and benefits of a specific eligible restoration or acquisition project within an identified area. Education projects are not eligible with this grant type. These grants are available in the spring and fall.

Eligible projects must be tied to a specific geography, address clear habitat, watershed, or ecosystem function goals, and have a clear path for achieving the restoration or acquisition measurable outcomes within a reasonable and specific timeframe. These include:

- acquiring interests in land or water that will protect or restore native fish and wildlife habitat

- projects to protect or restore native fish and wildlife habitat

- projects to protect or restore natural watershed or ecosystem functions to improve water quality or streamflow

- projects to engage stakeholders in resource assessment and planning projects that result in an eligible restoration or acquisition project

Technical Assistance

OWEB offers two types of Technical Assistance grants, which must be applied for separately. The first, Technical Design Development assists with technical designs for a restoration project. The second, Technical Planning Development assists with development of an implementation plan for restoration activities. These grants are available in the spring and fall.

For salmon recovery, OWEB requires documentation of local and regional plans and assessments for federal and state reporting requirements. Projects that specifically benefit salmon or steelhead should be located within a salmonid evolutionarily significant unit (ESU) recovery domain and intend to assist waterways with current or projected future ESU species use.

TECHNICAL DESIGN DEVELOPMENT

These projects include activities such as conducting engineering (e.g. hydrologic analysis, topographic surveys, hydraulic modeling) work to develop restoration project designs, permitting assistance, or other information necessary to implement projects.

TECHNICAL PLANNING DEVELOPMENT

These projects include planning and assessment activities such as conducting habitat restoration and feasibility studies, developing restoration plans, and conducting instream or habitat surveys and assessments.

Acquisition Grants

Acquisition grants are used to acquire land or water resources from willing landowners. There are three kinds of acquisition grants available: land, land technical assistance, and water. All applicants are required to show 25% of land acquisition project cost is being sought as match which is required to complete the acquisition purchase. Acceptable costs and activities that qualify as match include:

- in-kind contributions
- funding commitments made by others as a result of grant applicant efforts
- donated portion of a bargain sale
- funds deposited in a stewardship endowment (must be done before OWEB funds are released)

All landowners must acknowledge and agree to acquisition before application is to be reviewed by OWEB. OWEB reviews all appropriate due diligence information relevant to the purchased property including: appraisals, title reports, environmental site assessments, water rights documentation, permits, easements, etc. It is strongly encouraged that applicants work with attorneys and OWEB staff throughout the acquisition project to assure compliance with regulations.

Land

Land acquisition grants are for the procurement of land by willing landowners for the purposes of restoration or resource conservation. These grants are only available in the fall. There is an eight-step process to apply for these grants, which can take up 3 years to process.

The first step is a pre-application consultation between the applicant and OWEB in which preliminary project specifics are discussed. Next is the application submission and processing, followed by the application review. Step four is a public review process in which all affected parties are notified, and public

hearings and comments are opened. The OWEB Board then makes their decision. Following the OWEB Board decision, an 18-month due diligence period occurs in which all funding conditions must be met by the grantee. Finally, the property goes into closing in which final expenditures, insurance, and settlement agreements are finalized. The final step is a stewardship agreement in which a management plan is to be developed within 18 months of closing. Monitoring is required for these grants to ensure successful project implementation.

Land Technical Assistance

Land acquisition TA grants fund projects to assess the feasibility of restoring estuarine function and tidal inundation to a site intended to be purchased with OWEB acquisition funds within tidal wetlands. These grants are available in the spring and fall.

Eligible projects include:

- elevation surveys and mapping
- infrastructure surveys
- hydrologic modeling
- geotechnical investigations
- development of preliminary restoration plans

Water

Water acquisition grants are used to purchase water from a willing landowner to increase instream flow for habitat, species conservation, and water quality improvement. These grants are only available in the fall.

These projects include interest in water related to instream leases, water use agreements for protectable instream flows, conserved water projects, and permanent or time-limited instream transfers.

Focused Investment Partnerships (FIPs)

FIP investments are used to address an OWEB Board identified Focused Investment Priority that is of significance to the state. These achieve clear and measurable ecological outcomes through the use of strategic action plans that use results-oriented approaches. FIPs are implemented by high-performing partnerships. High-performing partnerships are defined by OWEB as "collaborative groups of organizations with an existing governance structure that includes a formal decision-making process resulting in an effective performance history".

There are two types of FIPs available, Development and Implementation, which both require a 25% match.

Development FIP

Development FIP funding supports improving partnership capacity and developing or enhancing a strategic action plan. These can also be used to build partnership capacity to partner at high-performing levels. Development FIPs grants up to $150,000 over two years. These grants are only available in the fall.

Implementation FIP

Implementation FIP funding supports high-performing partnerships in pursuing conservation initiatives with existing strategic action plans. Initiatives must address an OWEB Board-approved priority of significance to the state. The initiatives must also demonstrate clear and measurable restoration outputs and ecological outcomes that support liming factors outlined in a federal recovery and/or state conservation plan. Implementation FIPs grants up to $12 million over six years. These grants are only available in the spring.

Small Grants

OWEB's Small Grant Program awards up to $15,000 for restoration projects on private lands. This program has contributed greatly to the Oregon Plan for Salmon and Watersheds by encouraging voluntary restoration on private land.

This program is generally seen as an alternative to the Open Solicitation grants and results in a much shorter timeframe. Unlike the Open Solicitation grants, these grants are reviewed and granted locally as opposed to through the Regional Review Team. Application deadlines are variable based on local Small Grant Team.

Eligible projects include:

- instream process and function: improving instream habitat, manage erosion, eradicate or manage exotic aquatic species
- fish passage: removing irrigation or push-up dams and installing alternatives, removing and/or replacing culverts, removing or replace stream crossings
- urban impact reduction: installing storm water runoff treatments, creating off-channel flood storage, employing integrated pest management (IPM)
- riparian process and function: manage nutrient and sediment inputs through managed grazing, manage vegetation, IPM
- wetland process and function: manage nutrient and sediment inputs, manage vegetation, restore wetlands, IPM
- upland process and function: manage erosion on agricultural lands, manage nutrient and sediment inputs to streams through grazing management, manage vegetation, manage wildfire, IPM
- water quantity and irrigation efficiency: recharging groundwater and implementing irrigation practices
- private road impact reduction: road decommission and improving surface drainage

Project maintenance and effectiveness monitoring are not included in these grants and they may not be used as a source for matching.

Appendix C: Literature Review References

Key words: incentive programs, restoration programs, habitat

Databases used:

- *JSTOR: a multi-disciplinary collection of academic journals, books, and primary sources*
- *Google Scholar: web search engine that indexes the full text or metadata of scholarly literature*
- *UO Library: database search engine through the University of Oregon Library system that provides a collection of academic journals, books, and primary sources*
- *Web of Science: a multidisciplinary research tool that connects linked content citation metrics from multiple sources within a single interface*

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