



Evaluation of Okanagan Similkameen Stewardship Society And its initiatives

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Okanagan Basin Water Board (2014, 2015, 2018)

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Wildlife Habitat Canada (2014-2016)

Executive Summary

The Okanagan Similkameen Stewardship Society was incorporated in 2014 and later registered as a Canadian Charitable organization, and is nearing its fifth year as an independent society. Okanagan Similkameen Stewardship (OSS) works directly with landowners and community groups to promote voluntary conservation, stewardship and enhancement of important wildlife habitats throughout the Okanagan and Similkameen valleys of British Columbia.

The Okanagan and Similkameen valleys are home to some of the greatest of species diversity of species and highest concentrations species at risk in Canada, and are recognized as one of Canada's most endangered ecosystems (Okanagan Collaborative Conservation Program and South Okanagan Similkameen Conservation Program, 2014). Within the valleys, one-third of the land base is privately owned and managed, concentrated in the valley bottoms where species at risk and sensitive ecosystems are most common. This means that empowering private land managers to undertake voluntary conservation on their own lands and within communities is critical to maintaining a healthy landscape for wildlife.

The purpose of this evaluation is to provide a big-picture understanding of the impact and effectiveness of Okanagan Similkameen Stewardship to date. OSS implements a variety of initiatives including outreach, community stewardship, landowner contact, and Wildlife Habitat Stewards, and works cooperatively and collaboratively with other organizations and user groups in order to achieve deliverables. The overarching goal of the society is to improve wildlife habitats and as such, the focus of this evaluation is on the Wildlife Habitat Stewards program. We sought input from landowners involved in this project on strengths and areas for improvement and also provide recommendations on steps to building a path forward.

Results from this evaluation demonstrate that OSS has become more efficient in securing 10-99 year written management agreements that support conservation of important wildlife habitats over the past 5 years. As of December 2018, OSS holds 93 stewardship agreements, improving management of 5123 acres of wildlife habitat. While the Wildlife Habitat Steward initiative is becoming more efficient, OSS also doubled the number of community initiatives, and developed a website and social media presence, reaching several thousand more people per month than we did prior to 2013.

Meanwhile, with many land stewards interested in permanent securement options and limited ability and appetite for land trusts able to work towards permanent securement of these Critical Habitats (due to ALR issues, high land values, specific criteria for land securement). With limited options for permanent securement, private land stewardship is a critical tool for supporting the high conservation values in the Okanagan Similkameen.

Introduction

Private land stewardship programming began in the south Okanagan and lower Similkameen valleys with the South Okanagan-Similkameen (SOS) Stewardship Program in 1994 under the umbrella of the South Okanagan Conservation Strategy. It was initially administered by The Nature Trust (TNT) of BC and Okanagan Region Wildlife Heritage Fund Society. Following TNT's management, The Land Conservancy (TLC) of BC accepted administrative and operational responsibility for the SOS Stewardship Program until 2012 when it closed its Okanagan office. The South Okanagan Similkameen Conservation Program (SOSCP) assumed administrative oversight until 2013, when partners and stakeholders met to discuss the future of stewardship in the Okanagan and Similkameen valleys. Options of new administrator-partners, geographic range expansion, and becoming a land trust to hold conservation covenants and own property were all carefully considered. Eventually, Okanagan Similkameen Stewardship (OSS) was incorporated and expanded its range to include the Central and North Okanagan Regional Districts in addition to the Regional District of Okanagan-Similkameen. This expansion effectively doubled the working area and increased the population served nearly threefold (Statistics Canada Population Census 2016).

Although OSS has its roots in the South Okanagan Similkameen Stewardship Program, with many ideas, ideals and even some staff carrying over, it is still a relatively new society. It is important to talk about the history of the SOS Stewardship program in this evaluation to help provide a background and understanding of how the program has changed and evolved over time into OSS.

Okanagan Similkameen Stewardship works directly with landowners and community groups in order to support and assist them in conservation, restoration and enhancement of important wildlife habitats throughout the Okanagan and Similkameen valleys. OSS has identified four goals in our Strategic Plan:

- Goal 1: Important Habitats are stewarded in the Okanagan and Similkameen valleys
- Goal 2: The public is engaged in opportunities to learn about and participate in stewardship in their communities
- Goal 3: Okanagan Similkameen Stewardship and its initiatives are recognized within the community as a leading stewardship organization
- Goal 4: Okanagan Similkameen Stewardship is engaged in decision-making processes that affect stewardship

OSS achieves these goals through a series of initiatives:

Outreach

Outreach is an important component of our programming that helps extend stewardship information to a broad audience. Okanagan Similkameen Stewardship outreach projects include Living in Nature Series guides, brochures, booths at Farmers' Markets and community events, website, social media, news articles, and installing interpretive signage.

Community Stewardship

Community Stewardship initiatives are targeted to neighbourhoods with common habitat features and wildlife in a specific geographic area. These initiatives include activities such as species identification workshops, nest box building, planting projects, and garbage clean-ups.

Targeted Landowner Contact

OSS targets individual landowners to contact based on a prioritization framework that takes into consideration the following parameters: property size, designated Sensitive Ecosystems, reported species at risk sightings, wildlife corridors and connectivity, designated Critical Habitat, and adjacency to a conservation project. These landowners are provided with information on habitats, wildlife, species at risk and best management practices. When appropriate, they are also extended an invitation to sign a written management agreement under the Wildlife Habitat Steward program.

Wildlife Habitat Stewards

Wildlife Habitat Stewards are landowners who are voluntarily caring for natural areas on their property. They sign a written management agreement outlining their responsibilities and recommendations that maintain and improve wildlife habitat values. Stewards are provided with technical support and assistance from OSS biologists as well as recognition of their efforts.

Enhancement Projects

Enhancement projects include activities that improve or create habitat for wildlife through restoration, threat mitigation, or residence creation. Projects are selected based on interest and support from Wildlife Habitat Stewards or community groups, are supported by the best available science, and are implemented as capacity allows.

Partnerships and Coordination

OSS is a partner on the Executive Committee of the South Okanagan Similkameen Conservation Program (SOSCP) and the Steering Committee of the Okanagan Collaborative Conservation Program (OCCP), as well as Recovery Teams and focus groups like the Okanagan Wetland Leadership team. Participation in these collective memberships ensures a coordinated and collaborative approach to conserving habitat and ensures that OSS is engaged in regional decision-making processes. OSS also works closely with local land trusts and the SOSCP Securement Team in order to offer landowners assistance with permanent securement options. Unlike in other areas of the province, there are no land trusts active in holding Conservation Covenants in the south Okanagan or Similkameen valleys which poses a great challenge and speaks to the need for support of private land stewardship initiatives in the area.

Evaluation of OSS Projects

Bennett's Hierarchy Extension Program evaluation suggests that, while knowledge, skills, aptitude and aspirations may change, it is changes in behaviour and practice that are impactful. Outreach and community stewardship work towards increasing knowledge, skills, aptitude and aspirations. We consider adoption of best management practices through written agreements and habitat improvement activities as a demonstration of a change in behaviour and practice and thus the ultimate on-the-ground impact of OSS initiatives.

In order to evaluate these changes, historical data was compiled and analysed in order to address quantitative results including inputs and impacts of OSS projects, with some data unearthed from the organization's roots in the South Okanagan Similkameen Stewardship Program.

Evaluation Methods

Historical data

Because files from the South Okanagan-Similkameen Stewardship Program (SOS Stewardship) belong to The Land Conservancy (TLC), we have access to very few stewardship files from before 2012. In addition, SOS Stewardship initiatives were historically reported in combination with other TLC projects and deliverables (e.g. covenant management and the Conservation Partners Program), so separating these data without access to detailed files and records was not possible. As such, this evaluation predominantly reports the impact of OSS and its activities following the restructuring of TLC and closing of its Okanagan Region office in 2011 while providing insight into program changes and structure.

Quantitative analysis

Background information about the Okanagan and Similkameen regions was collected from census records, agricultural industry reports, industry websites, partner organisations, and regional district websites. Data for quantitative analysis was collected from previous OSS annual reports, grant reports, financial reports, and project records.

Qualitative analysis and the Wildlife Habitat Steward survey

The Wildlife Habitat Steward project is at the core of stewardship delivery and developing an understanding of landowner opinions on the strengths and weaknesses will help to provide recommendations on steps to building a path forward.

In order to do this and obtain a qualitative analysis of the program, we implemented a two-part survey of past and present Wildlife Habitat Steward partners, delivered by an impartial consultant. The first part asked about desired methods and frequency of contact (e.g. email checkup or site visit, annually or semiannually) as well as overall satisfaction with projects. The second part was anonymous and concerned landowner's opinions on the program as a

whole, as well as their opinions on program strengths and weaknesses and also asked for clarification on why they decided to participate in the program, whether it was for the sake of supporting environmental causes, for personal gain, or for other reasons. The full survey text can be found in Appendix 1a.

Results & Discussion

Changes in the Okanagan and Similkameen Valleys

Over the past 25 years, the Okanagan and Similkameen valleys have changed dramatically and many conservation issues have moved to the forefront. The population has increased by more than 50%. Property values in the Okanagan increased approximately 560% between 1995 and 2018 (Kelowna Real Estate Board), making purchase of properties for conservation much less feasible. The influx of new residents, changes in land use practices, and increased population living in the interface zone has intensified the magnitude of threats from fire, flood, and conflicts with wildlife. The methods of delivery of stewardship information and programming have changed in order to adapt to a changing population, changing landscape and changing climate.

Two notable changes in the area are the decline in cattle ranching and the boom of the wine industry. Ranching and grazing cattle, when managed responsibly, can be a relatively low intensity land use and can maintain healthy grassland habitats. Cattle ranching in the Okanagan has declined since 2006 (Statistics Canada Census of Agriculture, 2016) often resulting in more intensive agriculture. Conversion of natural areas and ranchlands to high-intensity agriculture causes habitat loss and leads to increased habitat fragmentation in the landscape. There has also been a move from traditional orchards to high intensity farming (See Figure 1). Both vineyards and high intensity orchards often have fewer opportunities for and more barriers to wildlife than traditional orchards (Myczko et al 2013). This increase in high intensity agriculture and deer fencing in the valleys, together with population increase and the resulting increase in traffic and roads has resulted in more fragmentation of habitat and less connectivity, making it harder for wildlife to navigate the landscape (Field & Parrott, 2016).



Figure 1 Example of traditional orchard versus high intensity orchards which are becoming more common..

Before the 1990s, Okanagan wines were less popular internationally and the overall footprint of vineyards and wineries was relatively small, at fewer than 1500 acres and approximately 15 wineries. Just 25 years later, the Okanagan and Similkameen valleys support nearly 10,000 acres of vineyards and 197 wineries (BC Wine Institute). Many vineyards have been planted in “new” agricultural areas, transforming land that was historically grassland and shrub-steppe ecosystems, however most new vineyards have been created through the conversion of existing fruit orchards to grapes.

Aside from the land use changes in the valley, there have also been political and legal changes that have affected the conservation landscape. The Federal Species at Risk Act (SARA) became law just before 2003. This legislation created concerns from private landowners that the discovery of species at risk on their lands would prevent activities like farm usage or future development and resulted in a reluctance to partner with the conservation community. Concern has not been entirely unwarranted, with a landmark case in Quebec in 2017 using SARA that targeted private land development and potentially set a legal precedent for future cases. Although SARA is generally accepted as applying only federal land, many landowners still remain skeptical and continue to choose to work with OSS under a confidential basis. Also in 2003 came a proposal for a South Okanagan-Similkameen National Park, which has been an extremely divisive political issue in the region. The Park debate is not always drawn along pro- and anti-conservation lines; concerns are nuanced and range from fear of government mismanagement, to concerns about loss of historic land uses like grazing, hunting and fishing. OSS has remained impartial to the establishment of a National Park as our target audience and Wildlife Habitat Steward partners are also divided.

After TLC closed its Okanagan Office in 2011, there has been an absence of local land trusts using Conservation Covenants as a long-term securement tool in the South Okanagan and Similkameen. Many of the landowners who are interested in long term securement have agricultural properties and it has historically been difficult to get the Agricultural Land Commission to approve conservation covenants on Agricultural Land Reserve. Further, rising land values make it impossible for land trusts to buy all Critical

Habitat and with one-third of the land base being privately owned and operated, voluntary private land stewardship has become more critical than ever.

In addition to political factors, there has been a marked increase in severe weather-related events in the Okanagan and Similkameen valleys over the past few years. These events have largely been harsh, long winters followed by floods and prolonged fire activity and smoke settling in the valley- especially from 2015-2018, and we have noticed more landowners reaching out for assistance with these issues.. While there are stewardship activities that can help mitigate flood and fire, these projects are often either out of the scope of OSS or, in some cases, have no feasible stewardship options to alleviate the problem. For example: planting riparian areas can help prevent bank erosion and mitigate flooding while also providing wildlife habitat, however, no amount of planting could have provided flood relief from the dramatic freshet water flows of 2017 and 2018 without engineering. Meanwhile, permits are not being granted in a timely manner and work cannot be completed before another freshet and associated flooding.

Outreach & Community Stewardship

Often the most effective way to create change on the ground is to work first at a community level. Methods of outreach have changed greatly with the rise of social media and evolution of conservation partnerships. Broad outreach and education has historically been done by the Okanagan Similkameen Conservation Alliance (OSCA), while South Okanagan-Similkameen (SOS) Stewardship sought a more targeted approach. Over time, it became inefficient to rely on another organization to reach out to local residents and OSCA was not active in areas where OSS expanded (i.e. North and Central Okanagan).

With our success in securing Canada Summer Jobs funding, OSS increased its outreach initiatives to include a website and stepped into the social media scene. While SOS Stewardship used to keep hundreds of each factsheet available as a primary form of information sharing, these sheets are now predominantly maintained as an online resource. OSS does still maintain a few materials in print such as Living in Nature Series factsheets, brochures and newsletters, as they continue to be important for outreach at markets and community events, where colourful printed materials help to draw interest, and for some older demographics that do not have an online presence.

OSS continues to distribute a semi-annual newsletter as a means of primary communication with stewards and landowners to over 600 recipients directly and to thousands more indirectly through partner distribution lists. We have also encouraged recipients to receive these newsletters by email rather than in print, thus making the process more efficient by reducing printing, postage, staff time costs and environmental impact of direct mail-out. The newsletter currently has a reach of 641 recipients - 463 by email and 178 by regular post. Over the past year and a half, within the e-news recipients, the newsletter received an average of a 46% open rate and a 10% click rate, which is a

substantially higher rate than the nonprofit industry rates of 20% opens and 3% clicks (MailChimp, 2018). Prior to 2017, the emailed newsletter was not delivered through a trackable email service.

With the rise of social media, OSS is able to reach a larger audience than ever. Where we used to rely on delivering a semi-annual hard-copy newsletter to just 300 recipients, we now have a social media reach of over 5,000 per month with up to 15,000 per year website hits. Our Facebook posts often reach over 400 individuals and many reach over 1000 individuals. Our top post of all time, which was about invasive flowers in wildflower seed mixes reached over 5,200 individuals and had nearly 600 “engagements” (likes, comments, etc.). We have only recently created an Instagram account but have accrued over 120 followers in just 6 months.

Interpretive signage is also an important method of raising awareness, demonstrating on-the-ground impact to the public and building public support for conservation. Over the course of the past 5 years, OSS has installed 7 interpretive signs, 75 gate-post signs and 8 “Habitat Restoration in Progress” signs.

While the method of outreach has changed, so has the messaging to some extent. Since 2014, OSS has implemented recommendations from “The Language of Conservation” (Metz & Weigel, 2013) which provides suggestions on how to communicate effectively to build support for conservation based on voter polling. Adopting this message structure, such as a focus on water and public health linkages, has helped us to better engage a wider audience and more effectively communicate with individuals who are, perhaps, less interested in individual species at risk for example.

In terms of Community Stewardship, projects often involved guest speakers as the focus in the ‘90s and early 2000s was on education and providing information. Though these community-based stewardship approaches are still utilized, and some landowners who partnered with OSS at a community level have gone on the sign written management agreements, OSS has shifted its delivery model to one of action. Since 2014, OSS has focused on on-the-ground stewardship projects within communities, such as community planting days, invasive plant management, shoreline clean-ups and the like. We still offer some education and training at a community level, but the focus is on stewardship and citizen science (e.g. what landowners can do on their properties and how to identify species at risk and report observations).

Trying to engage communities in on the ground conservation while avoiding overstressing capacity can have its challenges. Volunteers love planting days but follow-up events (weeding, etc.) are dramatically less popular. Despite greater efforts to attract volunteers, native plant revegetation projects often attract up to 100 volunteers, while we often get only 1-2 volunteers, if any at all, for follow-up invasive plant management or garbage clean-ups. For plantings to succeed in weedy sites, invasive plants need to be controlled for several years until native plants are large enough to effectively compete. There is a real interest in

community groups for OSS to facilitate planting projects, however ongoing maintenance needs to be a key consideration before taking on new projects. To date, no community groups or individual volunteers have come forward asking OSS to facilitate garbage pick-ups or invasive plant management. (See Appendix 2a for a case study on how this has affected the Riverside Marsh community project)

Targeted Landowner Contact

Originally, the SOS Stewardship Program focused on providing information primarily to ranchers as owners of very large properties that encompassed at risk habitats or were located in relation to other important conservation holdings. With the decline in cattle ranching in the Okanagan (Statistics Canada Census of Agriculture, 2016) and shift to smaller holdings and rapid population growth, the landowner contact extended to non-agricultural private lands with species at risk.

Throughout all targeted landowner contact projects, OSS recommends and facilitates best management practices for wildlife, habitat enhancement projects, and securement through conservation covenants and acquisitions/donations. While these initiatives are no longer named “projects” like “Action for Antelope-brush”, we continue to deliver landowner contact on a habitat and landscape-based approach. Delivery on a landscape level has been critical to our success as it allows for landowners to act on their individual interests and facilitates more opportunities for collaboration. Contacting landowners within close proximity to one another also facilitates and promotes connectivity of wildlife habitat and is also more efficient from a travel perspective (i.e. mileage and staff time) as our region covers over 21,000 square kilometres.

OSS consults with a GIS specialist to develop a prioritization framework for our Landowner Contact properties. Our current methods of prioritization takes into consideration property size, designated Sensitive Ecosystems, species at risk locations, wildlife corridors and connectivity, Critical Habitat, and adjacency to conservation projects. These parameters were chosen as indicators of inherent wildlife habitat value and greatest potential for impact on the land base, and also prioritize parcels that build on existing wildlife habitat. In 2017, this framework identified approximately 15,000 private parcels as priorities for landowner contact throughout the Okanagan and Similkameen valleys (Figure 2).

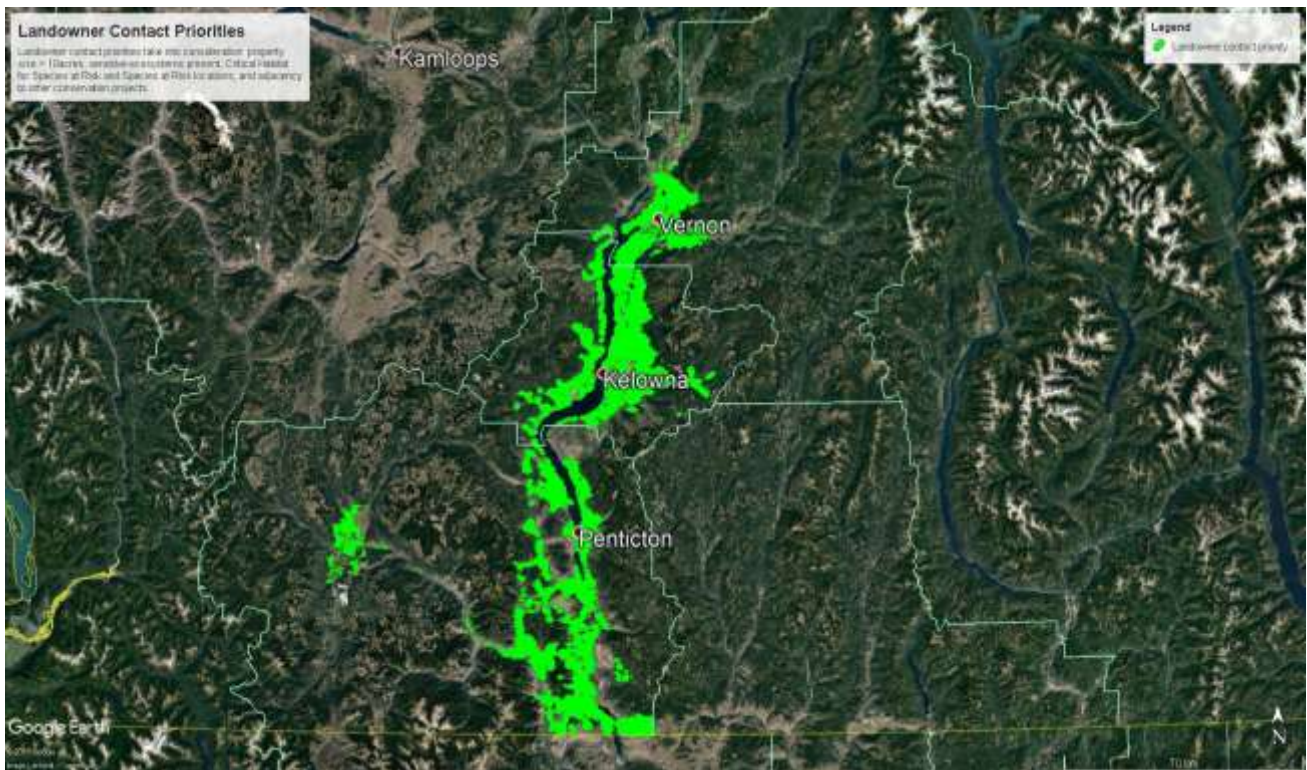


Figure 2 Map of 15,000 priority properties for Landowner Contact based on the priority framework created by OSS.

The methods of landowner contact delivery have evolved with constraints facing the program. In the early 2000s, the Regional District partnered with SOS Stewardship in order to provide the program with mailing addresses of priority landowners. After 2010, SOS Stewardship staff were able to seek addresses freely from the BC Assessment office rolls, which was time-consuming but otherwise free. Following 2014, even with Resolutions of Support from local government councils for landowner contact projects, protection of privacy policies still prohibit them from providing OSS access to mailing addresses. The process of obtaining landowner mailing addresses has been to pay for individual land title records by finding Property Identification Numbers and pulling information from the BC Online portal. Due to the cost of record-searching, OSS has started to shift to implementing door-to-door landowner contact in addition to using the precision mailing service from Canada Post. While precision mailing is less targeted and does not allow for single addressed mail and is usually 200 copies per route, the annual cost is significantly lower. Since we have only used this method once so far, we do not have sufficient data to analyse. We expect that precision mailing will engage fewer landowners as the messages are broader and brochures are sent in bulk, while letters are individually tailored and addressed. Direct mail is still used as a contact method for some landowners however its OSS is selective in its use and will only use it when other methods aren't appropriate

When sending individually addressed letters to landowners, we received between 3-5% response rate to letters. This is nearly double the industry average of 1-3% when sending

direct mail (Canadian Marketing Association 2018). Of those who responded to directly addressed mail, nearly 50% eventually signed stewardships agreements with OSS.

With directly addressed letters, response rates tend to be higher with more charismatic species. Letters regarding bird species on a landowner's property achieve approximately a 10% response rate, with local at-risk hairstreak butterfly species garnering less than half that rate. Letters regarding a general habitat type like wetlands receive a response rate similar to butterflies. To date, no landowner has ever contacted OSS after receiving a letter on rare plants and mosses. This clear preference from landowners for more familiar and/or attractive species demonstrates that leveraging these charismatic species can help open the door to stewardship and conservation.

OSS's policy of landowner control over data obtained on private lands has helped facilitate written management agreements that would not have been possible had all data been shared with government partners. There is an option to potentially send information and contact letters through existing local government communications, however, landowners seem to be more receptive when contact comes from a non-governmental source.

Landowners can become overwhelmed with land management issues such as riparian area stewardship, invasive plant management and fencing, to the point where providing information and best management practices is not enough. This need for more direct support led to a program expansion that included on-the-ground assistance. Over time, OSS began to undertake habitat enhancement activities on private lands more frequently, and this includes in-depth management plans and restoration of natural habitat. Increased costs of on-the-ground efforts resulted in a need to develop written agreements that would ensure landowners intended to maintain projects implemented on their property on private lands.

Wildlife Habitat Stewards

Stewardship agreements, or written management agreements, are a conservation tool that has been implemented fairly recently to indicate a landowners intent to manage natural areas on their property while retaining all legal rights to their property. Throughout the history of stewardship in the Okanagan and Similkameen valleys, these agreements have been used under two different programs: the Conservation Partners Program and the Wildlife Habitat Steward Program. Management agreements can be tailored, much like a Conservation Covenant, but are not legally binding and are not registered on title of property. Written management agreements are often thought to be an introduction to future longer-term securement options such as conservation covenants and fee-simple purchases. To our knowledge, 80% of land trust fee-simple purchases and 100% of conservation covenants in the South Okanagan Similkameen over the past 20 years have had stewardship contact prior to securement.

Prior to the formation of OSS, TLC implemented the Conservation Partners Program (CPP), a provincial partnership program targeted to agricultural landowners that involved signing a partnership agreement. Agriculturalists could participate if they had natural areas on their property or if they provided the program with a monetary donation, so these agreements did not necessarily mean that there were on-farm natural areas conservation. With so many priority landowners having agricultural properties, CPP worked well.

As the valley changed, there was a need to adapt stewardship delivery to suit the needs of properties with homesteads and other non-agricultural land uses. This led to the development of the Wildlife Habitat Steward program by SOS Stewardship in 2008. In order to improve the value of habitat stewardship agreements, the Wildlife Habitat Steward program included a requirement of having important habitat on the property, making properties without habitat ineligible.

Upon the restructuring of TLC and the absence of the CPP program in the Okanagan, the Wildlife Habitat Steward program grew further to fill the gap, including agricultural partners. Wildlife Habitat Stewards receive assistance and technical support with the management of sensitive ecosystems on their properties. The agreements are negotiated over a minimum term of 10 years and a maximum term of the lifetime of the landowner. Wildlife Habitat Stewards commit to implementing best management practices for wildlife on their properties, such as fencing riparian areas, managing for invasive plants, and planting native plants. In turn, Stewards receive a gatepost sign and recognition on the OSS website and in media articles, however, some choose to remain anonymous.

Property owners tend to maintain ownership of large acreages for over ten years before turnover, with turnover being more frequent for primary residences versus properties that provide a form of income, such as working farms (South Okanagan Real Estate Board, pers. comm.). Over the lifetime of the Wildlife Habitat Steward project, eight stewarded properties have either been sold or had the steward pass away, many with very recent turnover. To date, two of the new owners have signed new stewardship agreements. We are continuing to contact new owners of previously stewarded properties and are encouraging adoption of best management practices for the new land usage.

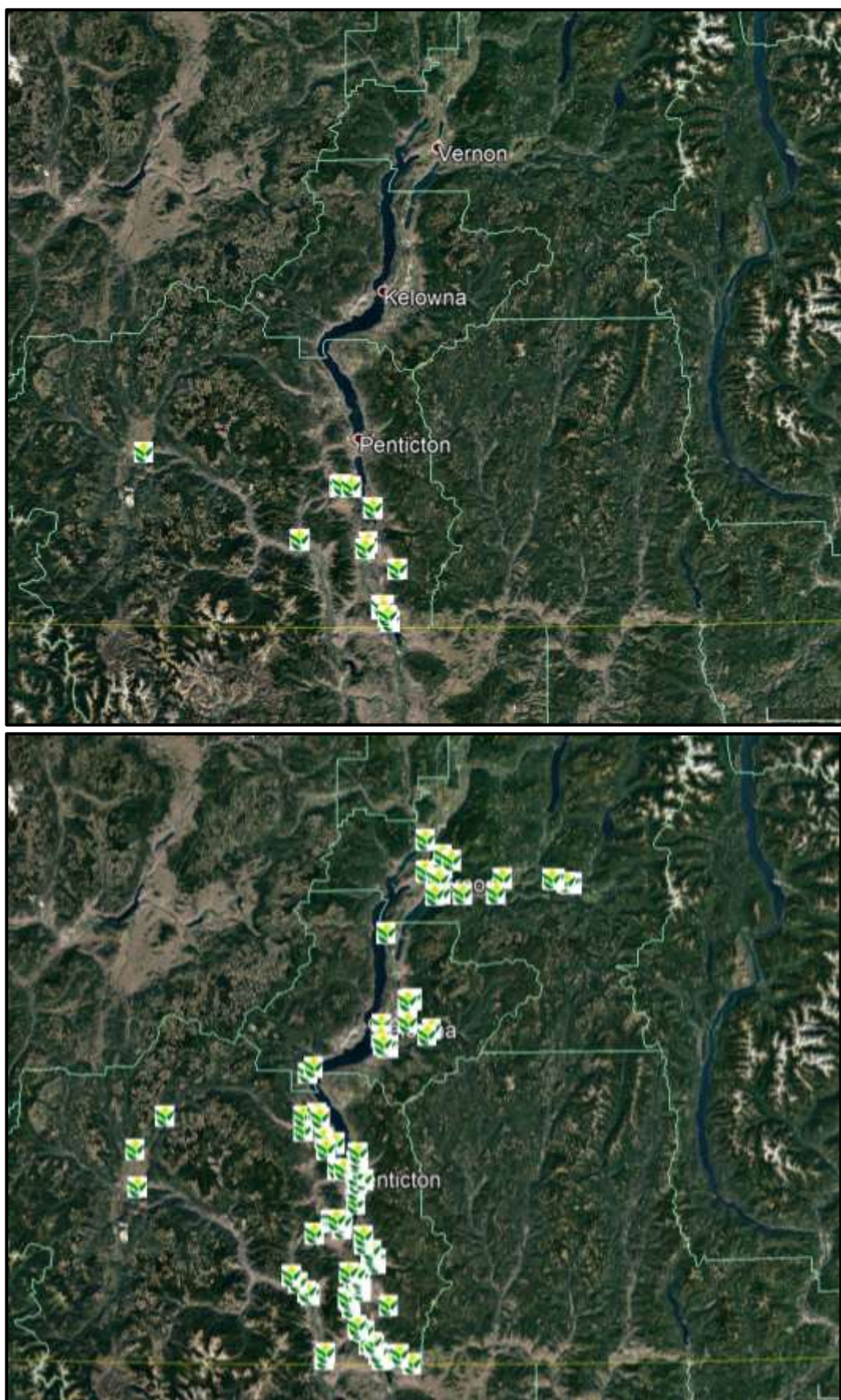


Figure 3 Comparison of 13 Wildlife Habitat Steward locations at the inception of OSS as an independent society in 2013 (above) and 93 Wildlife Habitat Steward locations as of Dec 2018 (below).

With more recent attention to the Wildlife Habitat Steward program, the number of partners has grown significantly, especially since OSS was incorporated in 2013 (Figure 3). As of December 2018, OSS partners with 94 landowners to actively manage 5150 acres through the Wildlife Habitat Steward program (Figure 4). Nearly two-thirds of stewarded habitat (3451 acres) is also designated as a Sensitive Ecosystem through the Sensitive Ecosystems Inventory, a standard mapping methodology which identifies ecosystems as sensitive or rare. Over three-quarters of stewarded area (4006 acres) is designated Critical Habitat for species at risk through the Recovery Strategy process of Environment and Climate Change Canada. Critical Habitat is habitat that is necessary for the survival or recovery of species listed as extirpated, endangered, or threatened.

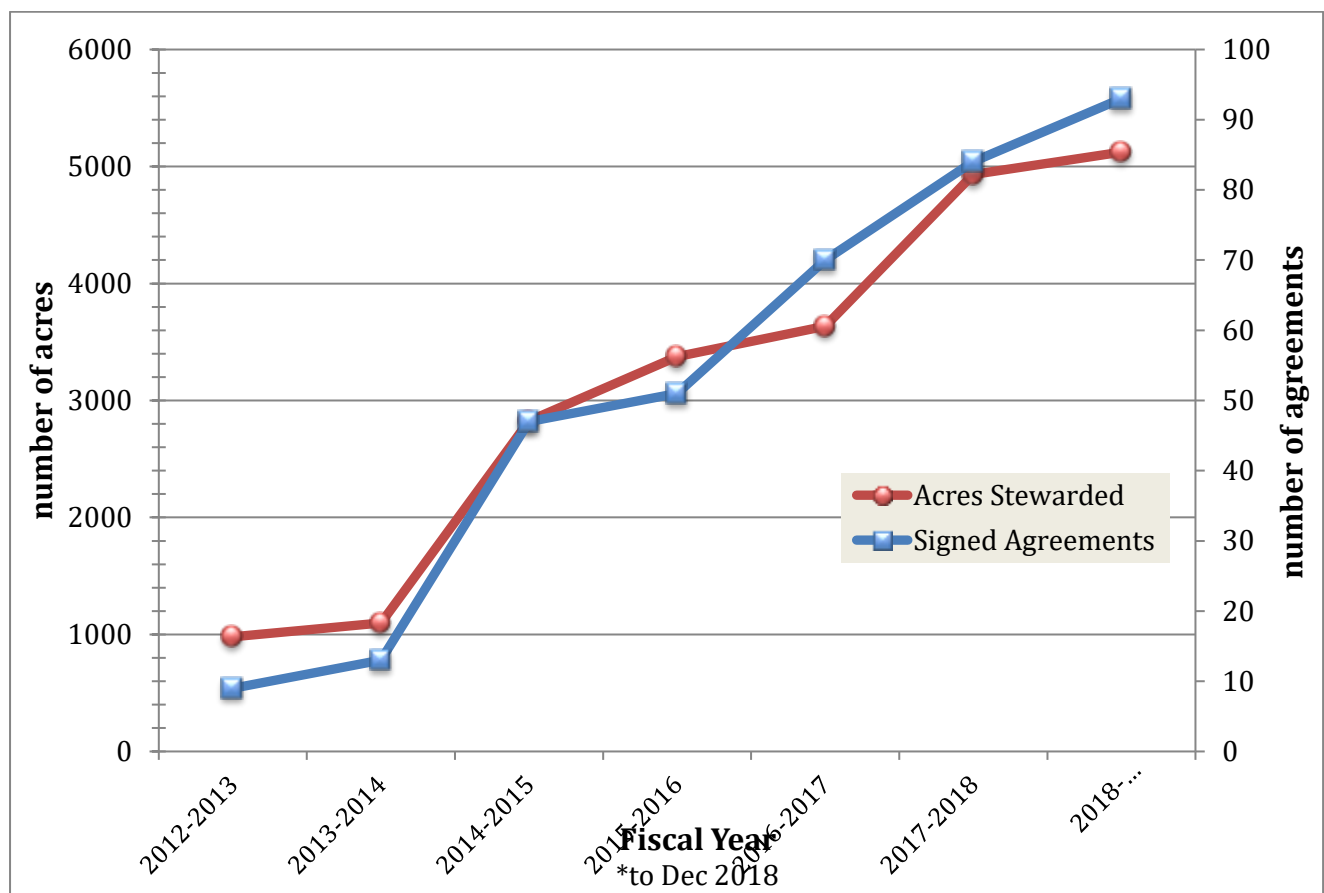


Figure 4 Number of stewarded acres and signed stewardship agreements held by Okanagan Similkameen Stewardship from 2013 to 2019. Years previous to 2012 were not included as the records are conflated with other TLC programs, i.e. CPP and covenants.

While many landowners are keen to become Wildlife Habitat Stewards fairly quickly, it is also not uncommon for it to take more than a year for a landowner to sign on. Some landowners do not sign on as Wildlife Habitat Stewards for a decade or more. In the past 18 months, we have developed written management agreements with a number of landowners who have had close ties to Okanagan Similkameen Stewardship for over 15 years. In most cases, these landowners have been interested in receiving assistance with a project, such as forest management. It has been our experience that larger working properties with more complex land use practices can take longer to sign on as stewards,

likely due to concerns about impacts to their livelihoods. As previously stated, many landowners (especially those with larger properties and in more remote locations) sometimes feel threatened by government, fearing that government may impose restrictions on their private land. These landowners are often more trusting of grassroots, non-governmental organizations

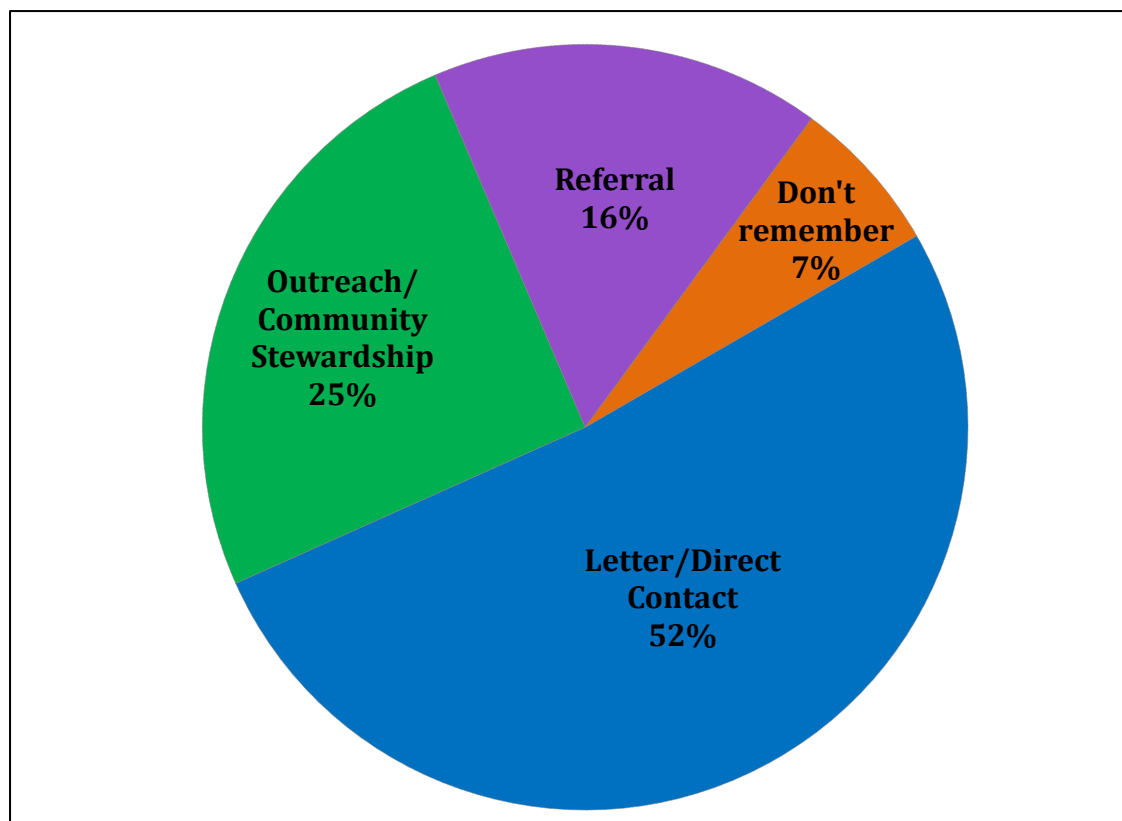


Figure 5 Method by which Wildlife Habitat Stewards discovered Okanagan Similkameen Stewardship. Letter/Direct Contact includes stewards who received Landowner Contact Letters or were otherwise directly approached by OSS staff. Outreach and Community Stewardship includes stewards who discovered the program via stewardship events run by OSS, other community events at which OSS set up a table or booth, and both print and online media (newspapers/magazines, OSS website, online news sources, and social media). Referrals may be through word of mouth from other landowners or from partner organizations. Stewards were placed in 'Don't remember' if neither the steward nor OSS staff could recall the method of discovery.

Results of Wildlife Habitat Steward survey

55 stewards completed the survey, which constitutes an approximate 65% response rate from our stewards, however many surveys were only partly completed. There were no incentives provided to stewards for completing the survey, although in hindsight, providing incentive could have increased the number and thoroughness of responses.

Overall, the average length of time since signing on as a Wildlife Habitat Steward for survey respondents was 2.5 years, with one-third of responses provided by stewards who signed on in 2017 or 2018. Some respondents' lack of response or uncertainty about aspects of the program may be due to their limited time involved with OSS.

Responses to the survey were analysed straight from the raw data where possible, as some questions were multiple choice or checkbox-based. Responses to open-ended questions were highly variable, so some responses were categorized to highlight recurring opinions. Responses were placed in categories only if the meaning behind them was unequivocally clear, if not they were placed in an Other category. (All responses to both surveys can be viewed in Appendix 1b.)

A great majority (78%) of Stewards want “Check-ins” at least once per year or more, and over half (52%) want site visits at least once per year or more. Currently, we check in with each steward on an annual or semi-annual basis, with more check-ins for stewards with projects. We also respond to requests for support as needed. In some cases, the majority of interaction stewards have with OSS is through summer interns while the interns are assisting with habitat management activities, as it is generally not efficient to have staff-biologists spend long days on manual labour or double the travel expenses to sites. This concern was raised in the Opinion Survey by a steward who found that

“...Internships are a bit short, so the representatives who come visit are always changing...”

Another steward commented in the survey that they did not feel a sense of belonging because they did not have a project on the go.

“It's not a weakness as such, but I've not been sure how we fit into the program beyond just being in it. It's not like we have active work or rehabilitation underway, so just being is doing I guess. Maybe it's just a sense of disconnect.”

Visiting each of our 94 stewards once per year requires an average of 3 site visits per week (from March through October when habitat isn't under snow pack), often with significant travel. This does not take into account the “land use schedules” of our stewards (e.g. planting, pruning, harvest, and calving seasons etc.). OSS should consider options to address the growth of the Wildlife Habitat Steward initiative, either through building capacity for more individual attention from year-round staff, developing a community of stewards, and/or increasing the frequency of steward recognition initiatives.

All five of the respondents who stated there was not sufficient contact with OSS have, in fact, received at least the frequency of contact that they stated would be desired. This will be addressed on a case by case basis.

With respect to the question of overall project satisfaction, we realised after responses were delivered that the question had been poorly worded. Instead of phrasing the question as whether stewards were satisfied with how OSS conducted and completed projects, the questions asked about overall satisfaction with projects, which led to 6 out of 8 “Unsatisfied” responses involving factors beyond OSS' control (e.g. a landowners' own efforts, birds or bats not using installed boxes, or invasive plants not being completely eradicated). There is

a need to manage project expectations with landowners regarding issues that are beyond OSS' control. All landowners who responded "Unsatisfied" were contacted immediately in an attempt to resolve any issues. Subsequent communication often indicated that their dissatisfaction was not directed at OSS but was related to other factors.

"I think you got the wrong impression, I'm not dissatisfied by the project, certainly not dissatisfied at all with osss[sic]. It is more with the stage I am at with it..."

As seen in Table 1 below, a few responses to the question of Program Weaknesses stated that they did not think OSS was visible enough in local communities. Ensuring that Wildlife Habitat Stewards install their gatepost signs will help to increase visibility of OSS. In addition, interpretive signage at demonstration sites serves to communicate project details while raising the profile of OSS, our wildlife habitat steward partners, and our funders. Working primarily on private land means there is some sensitivity to drawing in the public, however, we are partnering with an increasing number of eco-tourism based stewards who would likely welcome more signage. Exploring recruitment of volunteers within our communities who would be willing to extend information at community events we would otherwise be unable to, may also be worthwhile- taking into consideration that display equipment is limited and would still need to be transported to these communities.

Table 1: Summary of categorised responses to the question of Program Weaknesses in the Part 2 of the survey. Responses were placed into the following four categories: 1) No perceived weakness; 2) Lack of funding and/or staff; 3) Brand visibility and awareness; 4) Other; 5) No response entered.

Program Weakness	Number of responses
Brand visibility and awareness	3
Lack of funding, long-term funding and/or staff	18
No perceived weakness	9
Other	5
No response entered	17

Of those who provided a response to the question of weaknesses, over 50% stated that they see a lack of funding or staff as the weakest point. Without consistent, guaranteed funding, we often have to ask landowners to wait on projects because we need to wait to make sure we have funding before we okay it. Relying on annual grants for funding, this can create the perception of lack of capacity and funding. While some funders grant multi-year projects, here is still the need to apply every year and funding is not guaranteed. Further, all OSS representatives work on a part-time or contract basis. While OSS is growing and does need to build capacity, there is also a broad perception of non-profits being chronically under-funded. Comments related to capacity are similar to those below. For a table of all responses, see Appendix 1b.

“as for all non-profits- regular, stable funding. This should be a basic service!

“It appears to me that OSS is often too understaffed and underfunded to do all the projects that would be beneficial. Greater allocation of Gov.t funding for those projects, but also funding for recruitment and more prominence in the public awareness may get more people volunteering and/or paid positions.”

Responses to the question of Program Strengths were more varied than those of Program Weaknesses. While many responses did fall into categories like Providing Knowledge and Information; Staff Support; Positive Environmental Impact; and Community Engagement, too many other responses either overlapped into multiple potential categories or were too unique to fit into any potential category, like the selection of responses below. For a table of all responses, see Appendix 1b.

“It's grass roots and so I think more sustainable over the long term at a lower cost than buying property. It's especially useful in the central okanagan where so much of the land is already in use. The users need to be onboard with environmental protection”

“Knowledgeable, science based actions, that also consider the individual limitations of our business, and the scope of what is possible given those limitations.”

“Gives publicity to the fact private property owners have a support system for leaving the land in a better place; they have a resource they can access.”

One observation that became clear when looking at the opinion survey responses was the appreciation that our Wildlife Habitat Stewards have for the wealth of information they can get from OSS Staff. Although we did not categorize the responses to the Strength questions, 45% of them mentioned access to knowledge or information in some form. Another strength that was repeated in responses by 20% of stewards was with respect to OSS project support in terms of technical expertise and partnership.

“...your help on projects that might never have gotten accomplished.”

In general, the responses to the Overall View of the program were highly positive, with only one respondent who wished OSS would disseminate more information about reptiles and amphibians. Otherwise, the responses mirrored the responses to the question of Program Strengths, though they shared a far more general sentiment:

“They do excellent work and are very caring”

“It's great work to be involved in”

The final questions of the survey (completed and future desired enhancement projects) was not analysed as it was not meant to be a part of the evaluation and was added to gauge individual landowner interest in additional projects and will help OSS better form the prioritization framework for enhancement project

Enhancement

Initially, the SOS Stewardship Program focused on educating landowners about general environmental issues, however, there has been a shift in the type of information being provided to landowners on what they can do on their properties to improve wildlife habitat. After signing Stewardship agreements, landowners often still require further support and request assistance with enhancement and restoration projects. The restoration projects implemented by OSS are currently considered on a case-by-case basis and implemented where landowner matching contributions are promised, activities will provide a significant impact to wildlife, and where recommendations for priority activities are found within species recovery strategies. With the exception of community events, enhancement projects are undertaken on the properties of Wildlife Habitat Stewards. Wildlife Habitat Stewards are primarily recruited through direct contact based on priority mapping. This means that most enhancement projects are on properties targeted by priority mapping and the best available science to ensure that enhancement projects are maximizing potential benefits to wildlife and species at risk.

The restoration and threat mitigation projects OSS has completed include native plant revegetation, invasive plant management, nest box and roost installation, livestock and trespass exclusion fencing, FrogLog amphibian escape ramps, turtle basking logs, turtle nesting beaches, wetland construction, floodplain restoration, and development of management plans for open Ponderosa forests (See Table ABC).

Table 2 Summary of habitat enhancement and restoration activities completed by OSS from 2013 to the end of 2018. For a detailed breakdown per fiscal year, see Appendix 3

Plants planted	Wildlife boxes installed	Fences installed	Garbage removed	Frog Logs installed	Enhancement sites on private land	Enhancement sites on public land	Total Acres Enhanced/ Restored
15,600	101	2,900 m	5,700 kg	19	58	11	2311

OSS strives to carry out land management projects that are landowner-driven and mutually beneficial, achieving environmental conservation goals while supporting current land uses. Our experience has shown that, in cases where landowners only become a steward in order to address an issue brought forward by Conservation Officers (or were otherwise reported), the projects have been largely one-sided and rely heavily on OSS with respect to

project completion and ongoing maintenance. Projects where landowners have made matching contributions of time or money, the projects have been much more manageable in the long term. Some examples of mutually beneficial projects include a pond construction project to protect a fruit orchard from frost (Appendix 2b: Kambo Pond), as well as incorporating “nose-ins” into riparian fencing projects to allow for livestock watering needs.

Because each enhancement project is unique in terms of location, habitat, and project type, there is less quantitative data available for analysis. Additionally enhancement project monitoring has taken on a generally “adaptive management” process. Instead of direct analysis of projects with time-heavy metrics (e.g. vegetation plots, transects etc), projects are evaluated by a walk through and adjusted as successes and challenges present themselves. For example, invasive plant management is recommended if invasive plants are seen to be a problem. Or, a secondary planting may be recommended if survivorship of plants is low or the original planting was not dense enough, if the planting is doing very well planned maintenance may be reduced.

In general, OSS planting projects have seen and estimated >85% plant survivorship. There is a lack of information with respect to local ecological restoration, however, some similar projects completed in the valley have seen much lower survival (South Okanagan Real Estate Board, pers. comm.). In one planting in Summerland, OSS planted over 1200 plants and had an estimated 98% survivorship to the next year. Another example of a planting with very high survival is our Riverside planting (Appendix 2a: Riverside Marsh Community Project). In areas where survivorship has been lower, there has usually an external threat that has been outside of our control, such as voles, extreme flooding or harsh winter immediately following planting (Appendix 2c: Radies Pond). We attribute our success to using native plants sourced from local nursery, and ensuring that our projects have a maintenance plan in place that includes follow up recommendations for the landowner with respect to watering schedule, invasive plant management, mulching, exclusion fencing, etc.

Due to recent flooding and forest fires, we have noticed forest management becoming of increasing concern and interest amongst landowners. Forest management plans and prescriptions and their subsequent execution is a costly process. Management plans have cost an average of \$250/hectare (OSS files), and treatments like slashing and spacing can cost \$1200-1900/hectare. These plans also contain the logistical challenges of burning slash piles and meeting venting regulations (Rocky Mountain Trench Ecosystem Restoration Program, 2013). OSS does not currently have the capacity to address all landowner concerns to the extent that has been requested and has assisted landowners on a small-scale, case-by-case basis.

OSS has excavated several ponds through the Okanagan valley in order to address dramatic wetland habitat loss in the valley bottom. Expert herpetologists provided direction with respect to all pond location to ensure that habitat was developed in appropriate locations would not become population sinks. While initial ponds constructed 2008-2013 were very small and relatively simple, we excavated two ponds in 2016 and 2017 that were

much large. Although pond construction projects are very popular and have a large visual impact, they are not without challenges- primarily with respect to permitting and extensive ongoing management commitment (ie. invasive plants). (Appendices 2b and 2c: Kambo Pond and Radies Pond)

More recently, the requirement of permits at a regional and provincial level have limited OSS's ability to assist with habitat enhancement. Planting riparian areas with native trees and shrubs as well as digging out invasive plants require Environmentally Sensitive Development Permit Area approvals, Riparian Area Regulations approvals and, at times, approval under the Water Act. However, these regulations include exemptions that allow clearing habitat for agriculture and for building single family homes. There have been promises to streamline these applications, but currently the additional red tape coupled with short funding cycles is problematic, as permitting is a real consideration when taking on a new project. It greatly increases the cost of each project, requiring additional Ecological Assessments, RP Bio Applications, and fees associated with the permits in order to plant native trees and shrubs with hand tools in areas that have been converted to agriculture and are otherwise degraded. Permits can take several years to go from application to approval in our region. The length of time to obtain permit approvals also requires very patient and tolerant landowners as well as stable long-term funding agreements.

Funding

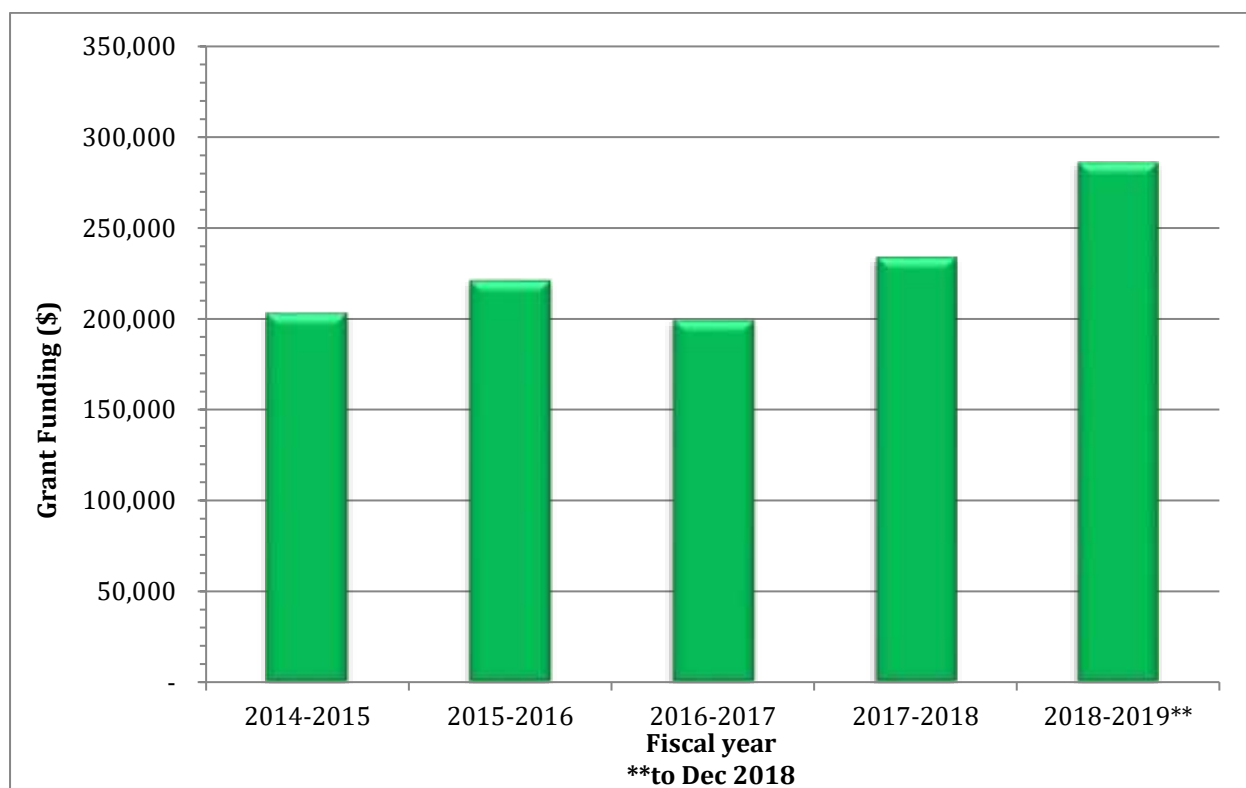


Figure 6 Funds granted to OSS from 2014 to 2019. Years previous to 2012 were not included as funds were granted to The Land Conservancy and included funding for management of TLC conservation areas and covenants in TLC's Okanagan Region. The 2013-14 fiscal year was not included as this was a transitional year and OSS had neither full independence nor its own bank account. Starting in the 2016-2017 fiscal year, a more concerted effort was made to diversify funding sources.

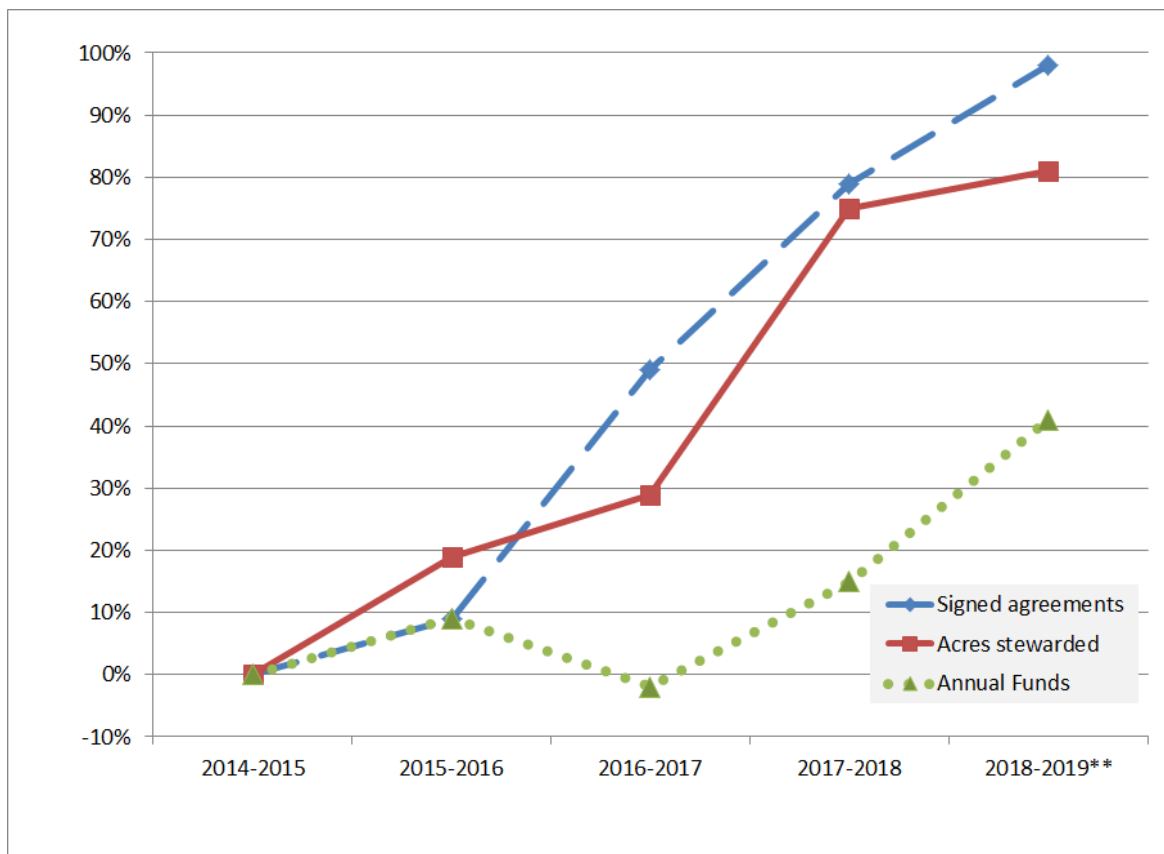


Figure 7 Percent change of funds and key deliverables since Okanagan Similkameen Stewardship became an independent society. The 2014-15 fiscal year is plotted at zero as it was used as a baseline; percent change for each subsequent year was calculated in comparison to this start point.

Habitat Conservation Trust Foundation and Environment Canada have been principal funders of stewardship in the Okanagan Valley through OSS since 2013, and through The Land Conservancy of BC, The Nature Trust of BC and Okanagan Region Wildlife Heritage Fund Society before that. Prior to formation of OSS, the annual budget also included expenditures such as covenant development, securement-related costs (ie. ecological assessments and legal costs) as well as land management activities for conservation properties.

In growing from 13 to 94 partners, steward-driven projects have greatly increased the draw on resources, resulting in less individual attention available to each steward. In order to address this, OSS has made a worked to diversify funding sources and are hopeful that we will be able to access new regional conservation funds as they are adopted, as well as provincial funding through BC Community Gaming.

The number of stewards and acres stewarded is increasing at a faster rate than the funding. The difference in rates of increase demonstrate that, over the past 5 years OSS has become more efficient in securing 10-99 year written management agreements that support conservation of important wildlife habitats. While Wildlife Habitat Steward projects are becoming more efficient, OSS has also worked towards doubling the number of community initiatives and has increased the amount of outreach through a website and social media presence.

Key Findings and Recommendations

With rising land prices, lack of land trusts taking on projects apart from outright donations and fee-simple purchases, there is an incredible need to support private landowners in stewardship of wildlife habitat.

Key Findings:

1. Landowners find value in OSS initiatives and are satisfied overall. The strengths of OSS are its staff, knowledge base, and support with habitat enhancement.
2. As OSS builds on the Wildlife Habitat Steward initiative, there is a need to increase capacity to meet stewards' needs. This includes completing more site visits, creating a sense of belonging, and responding to requests for support.
3. Permitting challenges and the absence of land trusts in the south Okanagan that hold covenants are new barriers to conservation, in addition to time and cost
4. Private land stewardship is a critical tool for achieving habitat conservation goals.
5. OSS is becoming more efficient through its growth.

Table 3 The following are recommendations for a path forward derived from the evaluation process, linked to the OSS Strategic Plan (2017-2022).

Goal 1: Important habitats are stewarded in the Okanagan and Similkameen valleys		
Objective	Ongoing priorities	Recommendation for future priorities
Deliver landowner contact and community based initiatives based on the best available science	<ul style="list-style-type: none"> • Continue to contact landowners on a one-on-one basis in the most cost-efficient manner possible (i.e. door-to-door, precision mailing and direct mail). • Coordinate landowner contact efforts with other partners • Deliver coordinated community based initiatives in neighbourhoods with high wildlife habitat values, Species at Risk 	<ul style="list-style-type: none"> • Identify gaps in community outreach, particularly in the north and central Okanagan, where other partners are not working as community stewardship initiatives are demonstrated to lead toward landowners signing Wildlife Habitat Steward agreements • Consider more print media articles. This is one avenue OSS has not historically focused on in order

	and incidence of Critical Habitat.	<p>to build partnerships with landowners as it is very broad, but may be worth exploring.</p> <ul style="list-style-type: none"> • Highlight charismatic species in order to build support for conservation
Continue to support existing Wildlife Habitat Stewards while expanding the number of Wildlife Habitat Stewards	<ul style="list-style-type: none"> • Continue to build capacity for addressing ongoing maintenance of Wildlife Habitat Steward agreements: Most stewards want 1-2 check-ins per year and steward properties with active projects require more frequent attention. 	<ul style="list-style-type: none"> • Refine guidelines for Wildlife Habitat Steward partnership that include minimum property size, willingness of landowner to adopt “acceptable” land use practices, and existing landowner prioritization framework. • Develop a Community of Stewards to build a sense of belonging and recognition among Wildlife Habitat Stewards.
Support landowners and community groups in restoration and enhancement projects that support wildlife	<ul style="list-style-type: none"> • Continue to support landowners and community groups with restoration and enhancement projects that support wildlife. 	<ul style="list-style-type: none"> • Refine prioritization framework for enhancement and restoration projects that addresses species needs, community and/or landowner support, etc. to ensure projects completed are based on the best available science as well as community and landowner support.
Facilitate long-term conservation options with interested landowners	<ul style="list-style-type: none"> • Continue providing support and assistance with landowners interested in long-term conservation options. 	<ul style="list-style-type: none"> • Ensure SOSCP Securement Team and SOSCP Program Manager are aware of gap of land trusts who hold conservation covenants.
Goal 2: The public is engaged in opportunities to learn about and participate in stewardship in their communities		
Provide landowners and community groups with information about local habitats and wildlife	<ul style="list-style-type: none"> • Continue to provide relevant information using social marketing guidelines such as the “Language of Conservation” in order to reach the greatest number of 	<ul style="list-style-type: none"> • Identify and address gaps in landowner-targeted information as necessary.

	<p>landowners possible</p> <ul style="list-style-type: none"> • Continue partnerships with the OCCP, SOSCP and other conservation organizations. • Continue to work cooperatively with recovery teams to promote BMPs on private lands. 	
Encourage participation of stakeholders in stewardship initiatives by respecting diverse social and cultural values	<ul style="list-style-type: none"> • Continue to remain neutral with respect to local political issues (eg. National Park), in order to be inclusive of all stakeholders. • Continue to provide opportunities to participate in stewardship that are inclusive regardless of social and cultural backgrounds. • Continue to provide information using language that is easy to understand by the general population of the Okanagan and Similkameen valleys. 	<ul style="list-style-type: none"> • Increase partnerships with industry publications in order to reach a broader audience of stakeholders (eg. BC Wine, Beef in BC, cycling clubs, etc.)
Facilitate stewardship of important habitats through hands-on volunteer opportunities	<ul style="list-style-type: none"> • Continue to offer volunteer opportunities on-the-ground. 	<ul style="list-style-type: none"> • Explore new ways to encourage volunteers to assist with less popular tasks such as invasive plant management.
Goal 3: OSS is recognized within the community as a leading stewardship organization		
Increase presence and visibility throughout our region		<ul style="list-style-type: none"> • Explore having volunteers assist at Farmer's Markets.
Recognize and highlight the value of stewards and their contributions	<ul style="list-style-type: none"> • Continue recognizing the value of stewards and their contributions through website, social media, print media and 	<ul style="list-style-type: none"> • Facilitate a "Community of Stewards" in order to better recognize stewards and increase a sense of belonging

	recognition events.	
Recognize and highlight our funding partners	<ul style="list-style-type: none"> Continue recognizing and highlighting funding partners for their contributions to stewardship initiatives. 	<ul style="list-style-type: none"> Continue to pursue and diversify funding opportunities.
Goal 4: OSS is engaged in decision making processes that affect stewardship		
Increase and facilitate access to relevant information, data and expert stewardship knowledge.	<ul style="list-style-type: none"> Continue sharing expert stewardship knowledge through participation in collaborative partnerships (ie. OCCP Steering Committee), and provincial and federal government (SOSCP Executive Committee). 	<ul style="list-style-type: none"> Consider making more presentations in order to facilitate access to stewardship knowledge.

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Appendix 1a: Wildlife Habitat Steward survey text

Survey Part 1

This survey is for our past and present Wildlife Habitat Stewards (WHS) and is a part of a 25-year evaluation of the WHS program. This will help us identify ways to improve and also helps us demonstrate the impact of the program to our funders, partners, and other collaborators. By completing this survey you are directly assisting us with the evaluation and are helping make the program better than ever. Thank you!

Please answer the questions to the best of your ability. If you have any questions, please email us at info@osstewardship.ca or call the office at 250-770-1467.

1) Name: _____

2) Are you currently a Wildlife Habitat Steward with OSS?

- ☐ Yes, I am currently a Wildlife Habitat Steward
- ☐ No, I am no longer a Wildlife Habitat Steward

3) How long have you been or how long were you a steward?

- ☐ Less than one year
- ☐ 1-5 years
- ☐ 5-10 years
- ☐ More than 10 years

3) If you are a former Steward, what was the reason for departing the program?

- ☐ I am currently a steward
- ☐ I sold the property and/or moved away
- ☐ I changed the land use of my property and stewardship didn't fit in
- ☐ I did not feel like participating in the program any longer
- ☐ No comment
- ☐ Other (please specify: _____)

4) Current Stewards, what is your preferred method of contact?

- ☐ I am no longer a Steward
- ☐ Phone
- ☐ Email
- ☐ I use both phone and email equally

5) Current Stewards, please enter your email address and/or phone number below. *(Your personal information will never be shared with anyone other than staff.)*

Phone: _____

Email: _____

6) How did you first hear about the Stewardship Program?

- ☐ I received a letter/brochure in the mail
- ☐ I attended a community program (eg Snake Smart, Beginner Birding, etc)
- ☐ I talked to OSS staff at a booth at a local event (eg market, festival etc)
- ☐ I was referred to OSS by someone I know (eg friend, family member, etc)
- ☐ I found the OSS website and contacted OSS myself
- ☐ I read about OSS in a newspaper or other media and contacted them myself
- ☐ I don't remember

7) Do you feel like you receive sufficient contact with OSS representatives?

- ☐ Yes
- ☐ No

8) How often would you like to be contacted by OSS (ie phone or email check-ins)?

- ☐ Never
- ☐ Just when I need/request it
- ☐ Once per year
- ☐ Twice per year

9) How often would you like to receive on-site visits?

- ☐ Never
- ☐ Just when I need/request it
- ☐ Once per year
- ☐ Twice per year

10) Which of the following projects/activities have you completed since first contacting OSS? Please check all that apply.

- ☐ I have not undertaken any specific projects
- ☐ Baseline ecological inventory
- ☐ Land management plan or prescription
- ☐ Exclusion fencing
- ☐ Native plant revegetation
- ☐ Installed owl box(es)

- ☐ Installed bat box(es)
- ☐ Installed other bird box(es)
- ☐ Removed invasive plants
- ☐ Removed non-native fish or turtles from a pond or wetland
- ☐ Constructed a pond or wetland
- ☐ Forest management practices (eg thinning)
- ☐ Human impact mitigation measures (eg Frog-log, snake fence etc)
- ☐ Changed land use practices to benefit wildlife (Decreased pesticide/herbicide use, left wildlife corridors corridors, planted pollinator-friendly plants etc)
- ☐ Other. *Please specify* _____

11) Are you satisfied with the progress or outcome of the project(s) on your property?

- ☐ I haven't done any projects
- ☐ Yes, I am satisfied
- ☐ I am not entirely satisfied
- ☐ No, I am not satisfied

If you are unsatisfied, please briefly describe what you are unsatisfied with and if you have ideas on how it can be improved.

12) Are there any future enhancement projects or land use changes you would like to see on your property? Check all that apply.

- ☐ No, I am happy with my property the way it is now
- ☐ Native plant revegetation
- ☐ Wildlife residence installation (owl/bat/bird boxes)
- ☐ More advice on invasive plant management
- ☐ More advice on wildlife management
- ☐ Other. *Please specify* _____

If there are any additional comments or clarifications you would like to make about your answers, please put them here:

Anonymous Survey

This section of the survey concerns your opinions of the Wildlife Habitat Stewardship Program. All of these questions are completely voluntary and can be left blank.

1) What is your overall opinion of the Wildlife Habitat Stewardship Program?

2a) Why did you decide to become a Wildlife Habitat Steward?

- ☐ I was already caring for the habitats on my property so why not?
- ☐ I wanted to show support for local causes
- ☐ I wanted to show my support for environmental causes
- ☐ I needed help managing my property
- ☐ It allowed me to get financial assistance with a project
- ☐ It allowed me to get an owl box/bat house/frog-log for free
- ☐ It helped my brand my business as "eco-friendly"
- ☐ Other. Please specify _____

2b) If you would like to elaborate on your reason(s) above, please do so here.

3) What are some of the strengths of the program?

4) What are any problems or weaknesses you see with the program? Do you have suggestions on how to fix these issues?.

Appendix 1b: Responses to Survey: Identifiers (name, email and phone number) have been removed to respect Steward and staff privacy. Survey responses table was split into two for readability and individual responses can be referenced via first name

<u>Identifier</u>	<u>Preferred contact method</u>	<u>How did you hear about us?</u>	<u>Current or former Steward?</u>	<u>Why no longer a steward</u>	<u>Number of years as Steward</u>	<u>Sufficient contact?</u>	<u>Check in frequency</u>	<u>Site visit frequency</u>	<u>Projects completed</u>	<u>OTHER Completed projects</u>
1	Email	Referral	Current	N/A	<1	Yes	Twice/year	Upon request	No projects	
2	Either	Don't remember	Current	N/A	>10	No	Twice/year	Twice/year	Baseline inventory, Management plan/prescription, Bat boxes, Invasives removal, Forest mgmt	
3	Either	Letter/Brochure	Current	No Comment	5 to10	Yes	Once/year	Upon request	Bat boxes, Invasives removal	
4	Either	Letter/Brochure	Current	N/A	>10	No	Once/year	Once/year	Baseline inventory, Management plan/prescription, Planting, Bat boxes, Invasives removal, Pond construction, Forest mgmt, Changed practices	
5	Email	Letter/Brochure	Current	N/A	<1	Yes	Once/year	Once/year	Owl boxes	
6	Phone	Letter/Brochure	Current	N/A	>10	No	Once/year	Upon request	impact mitigation	
7	Either	Community Program	Current	N/A	1 to 5	Yes	Twice/year	Once/year	Invasives removal	
8	Email	Don't remember	Current	N/A	1 to 5	Yes	Upon requeust	Upon request	Planting, Bird boxes, Invasives removal	
9	Email	Found website	Current	N/A	1 to 5	Yes	Once/year	Upon request	Planting, Invasives removal	
10	Either	Community Program	Current	N/A	<1	Yes	Twice/year	Once/year	Planting, Bat boxes, Bird boxes, Invasives removal, Forest mgmt	
11	Either	Letter/Brochure	Current	N/A	1 to 5	Yes	Twice/year	Twice/year	Baseline inventory, Invasives removal, Forest mgmt, Changed practices	

12	Either	Referral	Current	N/A	1 to 5	Yes	Twice/year	Upon request	Management plan/prescription, Planting, Invasives removal, Pond construction
13	Email	Found website	Current	Other	1 to 5	Yes	Once/year	Once/year	Planting Management plan/prescription, Fencing, Pond construction, Forest mgmt
14	Either	Don't remember	Current	N/A	>10	Yes	Twice/year	Upon request	
15	Email	Community Program	Current	N/A	<1	Yes	Twice/year	Once/year	No projects Baseline inventory, Management plan/prescription, Fencing, Planting, Invasives removal, impact mitigation, Changed practices
16	Either	Letter/Brochure	Current	N/A	5 to 10	Yes	Once/year	Once/year	
17	Email	Don't remember	Current	N/A	1 to 5	Yes	Upon request	Upon request	Planting, Invasives removal
18	Either	Booth at event	Current	N/A	1 to 5	Yes	Upon request	Upon request	Management plan/prescription, Bat boxes, Bird boxes
19	Email	Newspaper/Outreach material	Current	N/A	<1	Yes	Upon request	Once/year	Baseline inventory, Bird boxes, Invasives removal
20	Either	Letter/Brochure	Current	N/A	5 to 10	Yes	Upon request	Upon request	Pond construction Management plan/prescription, Planting, Bat boxes, Invasives removal, Fish/turtle removal, impact mitigation
21	Either	Letter/Brochure	Current	N/A	1 to 5	Yes	Once/year	Once/year	
22	Email	Letter/Brochure	Current	Other	1 to 5	Yes	Upon request	Upon request	Bird boxes, Changed practices
23	Email	Letter/Brochure	Current	N/A	1 to 5	Yes	Once/year	Upon request	Owl boxes, Invasives removal, Changed practices
24	Phone	Letter/Brochure	Current	N/A	5 to 10	Yes	Once/year	Upon	Planting

								request		
25	Phone	Booth at event	Current	N/A	1 to 5	Yes	Once/year	Twice/year	Bat boxes, Bird boxes, Invasives removal	
26	Either	Letter/Brochure	Current	N/A	>10	Yes	Once/year	Upon request	Planting, Invasives removal	
27	Email	Referral	Current	N/A	1 to 5	Yes	Twice/year	Upon request	Management plan/prescription, Planting, Bird boxes, Invasives removal	
28	Either	Booth at event	Current	N/A	5 to 10	Yes	Once/year	Once/year	Baseline inventory, Management plan/prescription, Fencing, Planting, Bat boxes, Invasives removal, impact mitigation	
29	Either	Newspaper/Outreach material	Current	N/A	5 to 10	Yes	Twice/year	Upon request	Bat boxes, Bird boxes, Other Baseline inventory, Management plan/prescription, Planting, Bat boxes, Invasives removal, Pond construction, impact mitigation, Changed practices	I just took over the job so don't really know what has been done in the past. The previous vineyard manager did not keep records.
30	Email	Referral	Current	N/A	>10	Yes	Once/year	Upon request		
31	Either	Community Program	Current	N/A	5 to 10	Yes	Upon request	Upon request	Bat boxes	
32	Either	Don't remember	Current	N/A	>10	Yes	Once/year	Twice/year	Baseline inventory, Fencing, Planting, Owl boxes, Other	owl box was one Roger built, not from OSS
33	Either	Booth at event	Current	N/A	>10	Yes	Once/year	Upon request	Management plan/prescription, Fencing, Invasives removal	
34	Either	Letter/Brochure	Current	N/A	<1	Yes	Twice/year	Upon request	Bird boxes, Invasives removal, Changed practices	
35	Either	Referral	Current	N/A	1 to 5	Yes	Once/year	Once/year	impact mitigation	
36	Either	Found Website	Current	N/A	<1	Yes	Twice/year	Twice/year	impact mitigation	

37	Either	Referral	Current	N/A	1 to 5	Yes	Twice/year	Twice/year	Other	Tracking road kill in Wilden. Painted turtles etc.
38	Either	Don't remember	Current	N/A	>10	Yes	Upon request	Upon request	Fencing, Planting, Owl boxes, Bat boxes, Bird boxes, Changed practices	Removed part of apple orchard and repanted to native species
39	Email	Community Program	Current	N/A	1 to 5	Yes	Once/year	Once/year	Invasives removal, Forest mgmt	
40	Email	Newspaper/Outreach material	Current	N/A	1 to 5	Yes	Twice/year	Twice/year	Owl boxes Management plan/prescription, Fencing, Planting, Bird boxes, Invasives removal, impact mitigation, Changed practices	
41	Email	Letter/Brochure	Current	N/A	>10	Yes	Twice/year	Twice/year	Invasives removal Management plan/prescription, Changed practices	
42	Email	Referral	Current	N/A	1 to 5	No	Twice/year	Once/year	Invasives removal Management plan/prescription, Changed practices	
43	Email	Community Program	Current	N/A	<1	Yes	Twice/year	Once/year	Planting, Invasives removal, Fish/turtle removal, Other	ongoing riparian habitat steward
44	Either	Letter/Brochure	Current	No Comment	>10	Yes	Twice/year	Once/year	Fencing, Planting, Bird boxes, Invasives removal, Other	Efforts are being made to remove horses from the property.
45	Either	Don't remember	Current	N/A	5 to 10	Yes	Twice/year	Twice/year	Planting, Bat boxes, Invasives removal	
46	Either	Found website	Current	N/A	1 to 5	No	Once/year	Upon request	Planting, Bat boxes, Bird boxes, Invasives removal, Pond construction	
47	Either	Referral	Current	N/A	1 to 5	Yes	Twice/year	Twice/year	Invasives removal, Other	making a ramp for turtles
48	Email	Letter/Brochure	Current	N/A	5 to 10	Yes	Upon request	Upon request	Other	Frog logs for swimming pool
49	Email	Referral	Current	N/A	1 to 5	Yes	Upon request	Upon request	Baseline inventory, Owl boxes, Bat boxes	
50	Email	Found website	Current	N/A	1 to 5	Yes	Once/year	Once/year	Bat boxes	volunteered at planting/weeding
51	Either	Referral	Current	N/A	1 to 5	Yes	Twice/year	request	Bat boxes	
52	Email	Referral	Current	N/A	1 to 5	Yes	Upon	Upon	Bat boxes, Bird boxes, Pond	

							request	request	construction
53	Email	Referral	Current	Changed land use	5 to 10	Yes	Twice/year	Once/year	Baseline inventory, Planting, Invasives removal
54	Email	Found website	Current	N/A	1 to 5	Yes	Once/year	Once/year	Owl boxes, Bat boxes, Bird boxes
55	N/A	Referral	Former	Sold/moved	5 to 10	Yes	Never	Never	Management plan/prescription, Fencing, Invasives removal

<u>First Name</u>	<u>Satisfied with projects?</u>	<u>Why unsatisfied</u>	<u>Further projects?</u>	<u>OTHER Future projects</u>	<u>Additional comments</u>
1	N/A		Boxes, Invasives advice, Wildlife advice		I regret that I was away this fall and missed the opportunity to work more with you, esp. the baseline ecological inventory you offered to me. I hope we can do it another time soon.
2	Yes		Other	Help more thinning of ingrown forest and monitoring success	
3	Yes		Other	Cattle exclusion fencing	
4	Yes		Planting, Invasives advice, Wildlife advice		Would like more native plant revegetation along the road, and totally open to hearing about any other projects that OSS thinks could be good
5	N/A	Don't know yet	Planting		Would like to do some reforestation where dead pine was taken out
6	Yes		No more projects		
7	N/A		Planting, Boxes, Invasives advice, Wildlife advice		
8	Yes		Invasives advice		
9	Yes		Planting		
10	Yes		Planting, Wildlife advice		
11	Yes		Boxes, Invasives advice, Wildlife advice		

12	Yes		Boxes		For contact the more the better, and onsite-visits whenever works for OSS.
13	Yes		Other	Open to suggestions from OSS	We are happy with the progress made on site, all looking good. Somemight signage at the site explaining the remediation work done to date be a good idea.
14	Yes		Planting, Wildlife advice		
15	N/A		Boxes, Invasives advice		Need more information about invasive plants in swamp area. Appreciated both --- and -----'s expertise
16	Yes		Planting, Boxes, Invasives advice, Wildlife advice		Thanks for all the great work you do.
17	No, I am not satisfied.	Cinquefoil remains a significant issue on the property.	Planting, Invasives advice		
18	Somewhat	No bats or swallows seen in the houses yet, but that takes time.	Other	Pollinator pasture	
19	Yes		Planting		
20	Yes		No more projects		
21	Yes		Planting, Boxes	Turtle ramp, bat count	We as a Home Owners Association have extremely please with the co-operation and assistance provided by OSS.
22	Somewhat		Other	wetland restoration/enhancement	Would appreciate a visit again sometime to discuss mitigation of habitat destruction along our roadway along with increase in alien vegetation (due to our neighbour widening the road access substantially. However am away till mid November.
23	Somewhat		Planting		
24	Yes		No more projects		Can visit site anytime OSS needs

		Would like someone to come by and make sure bluebird boxes and bat boxes are in the right spot as not a lot of traffic there. Would also be good (if funding allows) to have a big weeding event, wanted to get something going with kids school for that. Would like to get some sort of cat fence as neighbours cats hurting bird population, if that's even possible. Would be interested in having my property used as demonstration garden and tour to show children and others on difference between native and non-native plants and how to manage them.			
25	Somewhat		Boxes, Invasives advice		For on-site visits the more often the better to make sure we remember to keep on top and that funding is tight but if feasible of the land. I understand it would be good to have more contact and more follow-ups.
26			Invasives advice	assistance maintaining rivers edge. high water levels the past few years is causing massive erosion concerns.	
27	Yes		Boxes, Invasives advice, Other		Love this whole program. Can't say enough good things about the staff and management!!
28	Somewhat		Planting, Boxes, Invasives advice, Wildlife advice		
29	Yes		Planting, Boxes, Invasives advice		Given the fact that we have a large unplanted area on our property I would love to continue working closely with the OSS to sustain this original habitat and bring some fallow areas back to where they once were.
30	Yes		Other	Riparian area enhancement	on-site visits can happen whenever OSS wants
31	Yes		No more projects		For contact, I would like visits and contact just whenever the OSS needs

32	Yes	Yes, still very interested in project as never want property developed, only protected.	Invasives advice	Would like to get some help with Aspen management.	
33	Somewhat	The OSS hasn't helped with any of the projects that have been undertaken, so happy with the outcomes of the projects we have done ourselves, minus some knapweed coming in. Deer still get in as fencing isn't deer-proof	Invasives advice		Would like a visit in the spring from the OSS to look at some groundwater issues etc.
34	Yes		No more projects		
35	No, I am not satisfied. Yes	Amphibians do not use the froglog. Still an issue.	Other Boxes, Invasives advice	Would like to get involved in exclusion fencing for snakes	Design of froglogs is Okay but just does not function at all as it should.
36	No, I am not satisfied.	I feel we need to put in nesting grounds for the turtle. This would help with road kill hazards.	Boxes	More education signs on wildlife.	We need better traffic control on Union. People drive like maniacs and hit th turtles. I would like to see tough fines if caught. Some people do this on purpose for kicks.
37	Yes		Invasives advice		
38	No, I am not satisfied.	Trees dying due to pine beetle makes forest management difficult. Would like to remove some of the debris.	Other	Would like to remove some of the pine debris to make it less of fire hazard	
39	Yes		Planting, Boxes, Wildlife advice		

40	Yes		Other	more public awareness through vineyard signage on Stamp Mill hike	
41	N/A		Planting, Boxes, Wildlife advice		
42	No	I had hoped to accomplish more this year.	Planting, Boxes, Other	just getting started	
43	No	Need further assistance controlling invasive tree species	Planting, Other	On the ground help	Thank you :) Rob
44	Yes		No more projects		
		Still have a lot of work to do to get rid of noxious / invasive plants.			
45	No	Also did have any takers for the bat box so hopefully next year.	Planting, Boxes		
46	Yes		No more projects		
47	Yes		No more projects		
48	Yes	Could use new ones soon. (Frog logs)	Planting, Boxes		
49	Yes		Wildlife advice		
50	Yes		No more projects		Think it's a great program!
51	Yes		Boxes		
52	Yes		Boxes		

			No owls or bats in the boxes! We do see bats and we have Great Horned Owls but no screech owls for the boxes. Not sure if the bat box is going to be used (flickers are more interested in it than the bats).	Planting, Boxes		We're interested in keeping/making the property the best habitat we can for assorted creatures. Our ephemeral pond didn't dry up this year so there have been different birds nesting/hanging out this summer. It's popular with assorted bears too. The only work we're doing is firesmarting around the house, and I still would like to add more native plants to the garden beds around the patio. There already are some, but it would be great to have more of a pollinator garden. We do have a low-flow well so irrigation is a concern.
53	No					
54	Yes			Other	There is a great deal the new owners could do.	

Appendix 1c: Responses to Survey Part 2. Any potential identifiers have been removed to respect Steward and Staff privacy

1) What is your overall view of the Wildlife Habitat Stewardship program?	2a) Why did you decide to become a Wildlife Habitat Steward?	2b) If you would like to elaborate on any reasons selected above, you may do so here. [Optional]	3) What are some of the strengths of the program?	4) What are any problems or weaknesses you see with the program? Do you have suggestions on how to fix these issues?
Great program	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project		Your help on projects that might never have gotten accomplished	

It's great work to be involved in	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, We wanted to know more about the habitats we have on our property and how to best maintain them.		The visit by someone from the program to walk around on the property and tell us about it and what else shares it	It's not a weakness as such, but I've not been sure how we fit into the program beyond just being in it. It's not like we have active work or rehabilitation underway, so just being is doing I guess. Maybe it's just a sense of disconnect.
I like it - I'm proud to display the signs.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It helped my brand my business as "eco-friendly"	I didn't know about the owl/bat boxes - I think that's a great option I'm interested in	Maintaining habitat for native species.	I like the change to email over the previous multiple mailings I used to get and thought were a waste of money.
Excellent	I wanted to show my support for environmental causes			Additional funding.
Think it's a wonderful program- would be great if it were better funded and known	I was already caring for the habitats on my property so why not?		knowledgeable staff	as for all non-profits- regular, stable funding. This should be a basic service!
I am pleased that it exists in order to promote the preservation of our wildlife.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, It allowed me to get financial assistance with a project, It allowed me to get an owl box/bat house/frog-log for free, It helped my brand my business as "eco-friendly"		Simple and no red tape	None as far as I can see.

It's great.	I wanted to show my support for environmental causes, It allowed me to get an owl box/bat house/frog-log for free	Was able to help critters not drown in my pool	People are helpful	Could probably use more people to talk to more people to make them aware of program.
They do excellent work and are very caring	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It allowed me to get an owl box/bat house/frog-log for free			
we are very happy .	It allowed me to get financial assistance with a project		It is very supportive group	no
I really support what they are doing and would like to see them get more exposure.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It allowed me to get an owl box/bat house/frog-log for free, valued getting help identifying the invasive plants that need to be removed.		It's grass roots and so I think more sustainable over the long term at a lower cost than buying property. It's especially useful in the central okanagan where so much of the land is already in use. The users need to be onboard with environmental protection	They need more visibility, more publicity and need to be more proactive in getting people on board to become land stewards.

The people I work with in the program are very, very helpful, obliging, informative, and supportive.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, It allowed me to get financial assistance with a project, It helped my brand my business as "eco-friendly"		Congenial, knowledgeable staff	
I think it's good	I wanted to do it		Helping to preserve small segments of the environment / wildlife	
Love it and thankful to the dedicated individuals making it happen. Hope to see it grow and gain support.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes	Wasn't my intention but reading how it helps brand business does fit.	The people and information they share. Good reputation, connections and network it offers.	Small, still finding footing for having an influencing voice over bylaw and policy that affect stewardship related issues regionally.
I thin it is truly amazing and a much needed organization. I like hearing about the various projects and feel good about what little has been done so far (invasive weeds). I found ----- very knowledgeable and her staff very friendly.	I needed help managing my property, It helped my brand my business as "eco-friendly"		Knowledge base	Maybe just more time spent in what more is possible on my land i.e. wildlife especially.
We have really enjoyed having ----- and her intern crew come out and help with revegetation and planning for maintenance and upgrading the aging snake fencing. We look forward to a continued partnership with OSS and welcome any ideas for new projects.	I wanted to show my support for environmental causes, It helped my brand my business as "eco-friendly"		Knowledgeable, science based actions, that also consider the individual limitations of our business, and the scope of what is possible given those limitations.	It appears to me that OSS is often too understaffed and underfunded to do all the projects that would be beneficial. Greater allocation of Gov.t funding for those projects, but also funding for recruitment and more prominence in the public awareness may get more people volunteering and/or paid positions.

Valuable for the community.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property		Engaged Restoration Society people making positive change for local ecology	Can't think of any at the moment, but would like to see you guys grow!
OSS is doing best to protect some area. Would like to see more people involved	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, Have some wildlife and plant species that are worth protecting on property, like blue-tailed skinks and wild flowers		Preservation of what's left	None that I am aware of
	I was already caring for the habitats on my property so why not?			
I think it's awesome, would like to see more support for it. I think awareness is growing which is good.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property	It allowed me to have awareness of the frog-logs, would be happy to pay and contribute that way for them.	----- obviously cares a lot, and the personal touch the people involve seem to have, it's more than just a job. good education programs/events for kids (Behr's hairstreak ID day)	If there was more funding they could reach more people and then there would be more protected areas
It's okay, could do a better job of getting people who live in the areas to be more aware of the wildlife and why we need them (snakes, turtles, salamanders etc).	I was already caring for the habitats on my property so why not?, Already involved in snake protection etc.		The people who work for the society are dedicated to what they are doing	Need more awareness, more people involved in the program.

positive	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It helped my brand my business as "eco-friendly"	I want my property to be a nature haven	Great advice
It is excellent. We have never had any complaints, we realize that our property is one of the smallest properties so don't expect a lot of support, but what we have had is great. Had advice on how to manage the environment for the little creatures we have on the property like the birds and amphibians.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, In case we decided to will the property to someone other than a family member, it could be a place that the society could use		Internships are a bit short so the representatives who come visit are always changing and then there is silence in between those internships. Don't need more contact necessarily, but regular contact would be good.
I think it is a great idea	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It helped my brand my business as "eco-friendly"	Good job at encouraging people to protect the land.	Could use more advertising of the work that is being done
It's good. I call when I need them and they come.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, Mostly just to attract bats away from the house and into bat boxes	That OSS is always available to answer questions which is great	Nothing comes to mind, OSS is doing a great job

Think it's great to have that technical service for rural communities. Great work being done to have everyone working together	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project, It helped my brand my business as "eco-friendly"	Mainly having an organisation that was providing funds for land management was the key attractant for becoming a steward	The outreach to whole basin provides consistency, and technical support that is there is key to addressing the knowledge gaps in rural communities on land-use management	More funding is needed for OSS to increase presence in community
It's a great program and they do a lot of good work in the area.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, We wanted to sustain the habitat we have not planted.		Easy communication with OSS and possibility to set up on site visits whenever needed.	na
	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It helped my brand my business as "eco-friendly"			
an important service to the okanagan. We are at a time of fast growth and at risk of losing important areas. This program needs a big funding boost so they can do more work that will benefit the Okanagan.	I wanted to show my support for environmental causes, I needed help managing my property, It helped my brand my business as "eco-friendly", the education piece for myself was very important to do a better job looking after the environment that surrounds us.		the hands on approach of the management. Specifically -----, she cares and is amazing. The Okanagan is lucky to have her.	I think the program is understaffed. To be more effective and have the impact that is needed they need more people working.

It is a good program for individuals to show support of environmental issues and help educate the public, land owners etc about these issues	I wanted to show my support for environmental causes	Education	
I think it is a great idea, it is really important because this type of knowledge is always in danger of getting lost with how quickly areas are being developed and changed to non-native landscapes. Important reminder for how to be good stewards of the land and work with nature rather than against it. very valuable program.	I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project, It allowed me to get an owl box/bat house/frog-log for free, Just to reinforce the intention to be a good steward, good reminder to stick with it and have the support there as hard to do on own	The people have all been really great, and the resources are there. Any questions I've had have been answered and they have tried to provide the resources to answer those questions.	Funding. Would be nice for the OSS to have more funding to be able to provide more assistance to homeowners.
No opinion	I don't remember	No opinion	No opinion
excellent work	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes	it is great to feel part of preserving habitat for wildlife	see no problems
excellent	I was already caring for the habitats on my property so why not?, to try and be an example to other landowners in area/improve the area as best possible		not well known enough. More publicity/marketing/public presence?

It's a great program, has helped people without knowledge be able to get important information and help with doing the things that need to be done and that we wanted to get done.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project, It allowed me to get an owl box/bat house/frog-log for free, Have a pond that is important part of homeowners association, and this program allowed us to manage it properly	Training is great. OSS does a great job of coming out and explaining to volunteers how to do the work and why we are doing it.	No problems that I can see
	I wanted to show my support for environmental causes		
I like it and I think it's done a lot for restoring habitat. I would like to see some form of accountability by the farmer however. Not sure what that would look like.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, It allowed me to get financial assistance with a project	The staff are great. As is the marketing of the program.	More accountability by participants...maybe report, yearly check in...etc
I think it's great, very helpful and I think its great they came all the way out from Penticton	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get an owl box/bat house/frog-log for free	OSS has a lot of resources, they have the answers to my questions which is very helpful.	No weaknesses come to mind.

I am glad that the program is available. I am concerned that it relies so heavily year to year on grant funding (problem with funding not with the program per se).	I was already caring for the habitats on my property so why not?, I needed help managing my property	Capacity to restore/create habitat. On-going support for projects. Access to information and assistance for the stewards. Having a project be part of the OSSS program raises its profile - this in turn can be used to optimize opportunities for education and/or encouraging others to become stewards.	I don't know how much assessment / or monitoring is done with respect to the long-term impacts of projects in terms of benefits to native species? If this isn't in place, I think it would be hugely beneficial...I doubt that OSSS has the capacity for this, but would there be a way for a partnership with another organization(s) to do the long-term monitoring? There are, at times, issues with communication/follow-up - a challenge, of course, when staff is mostly out in the field. Not sure how this could be addressed.
Very important program	<p>I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project, It helped my brand my business as "eco-friendly"</p> <p>I was already caring for the habitats on my property so why not?, I needed help managing my property, It allowed me to get financial assistance with a project</p>	<p>Knowledgeable staff, help with projects</p> <p>they have knowledgeable staff who are updated on funding sources and environmental needs of the area</p>	<p>I think it is a well run program</p> <p>need more time spent on coming up with ideas to strengthen funding partners. i see a big need to support stewardship activities which would increase habitats that don't burn easily in the summer but burn in spring and fall with less smoke.</p>
Very positive experience with OSSS, happy to continue.	It sped up the habitat remediation process which we were already committed to.	Community and volunteer involvement, including schools	Bigger and more detailed signage so as to tell the public what is happening on the site.

An opportunity for education and support.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get an owl box/bat house/frog-log for free, Help to identify invasive and native plants.	N/A	On site visits. Education on managing property.	We've only just been introduced to the SOS and look forward to developing a relationship.
I think it's really good and hope that it keeps going	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It allowed me to get financial assistance with a project		Staff is energetic and enthusiastic. Fun to have around.	Bigger community profile is needed, OSS needs to be more active in community and have more publicity so people know about them as not many do.
I really like it, pleasantly surprised. The girls that came were really nice and helpful, pointed out weeds and birds. Great program.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get an owl box/bat house/frog-log for free		Getting people involved and raising awareness of the need to maintain the habitats, and aware of what species are endangered so they will be more motivated to protect them and get involved.	Not really, haven't been super involved yet since I am not living on the property full-time at the moment, but like what I have seen so far.
I think it's very great, very positive view of the program	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, COnsistant with my values		The availability of on-site advice is very helpful	No weaknesses that I've noticed so far

I don't know enough about it. But I am sure we all should support it.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes	I am rally interested in getting owl boxes	As I see there are lots of young people involved	It's not the programs weakness, but I feel I am getting nowhere. Maybe a bit more concrete help even in finding the question what should be done first and most.
I don't know enough about it to really give an opinion. Only had interaction with ----- when she came out over 10 years to work on property.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, It allowed me to get an owl box/bat house/frog-log for free		The fact that they fund people like ----- to come out and interact with the landowners	Not really in the program as I only have a froglog, but could be more aggressive with finding and contacting landowners who are doing work or who could do more projects to help the land.
I think it's great	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, It allowed me to get an owl box/bat house/frog-log for free, To bring back the screech owls		That there is acknowledgment that there were species here before us and that we need to work with the land.	Since i'm new it's hard to say if there are any weaknesses.
I feel it doesn't get enough funding but it is a great program	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get an owl box/bat house/frog-log for free, It helped my brand my business as "eco-friendly"		I haven't been super involved in the program recently so not sure what exactly to say for strengths at this time.	More communication could be good. Also more funding.
Good for wildlife. Buying farms amd ending farm use is negative to communities	I was already caring for the habitats on my property so why not?, It allowed me to get financial assistance with a project		Protection of habitat for endangered species is always a good thing	

Staff are excellent, knowledgeable and efficient but it seems they are underfunded. I would like to talk with them more about ongoing opportunities but since the funding is not stable it is not possible to have a long term plan or if there is we don't know about it.	I was already caring for the habitats on my property so why not?, I wanted to show support for local causes, I wanted to show my support for environmental causes, I needed help managing my property, It allowed me to get financial assistance with a project, It allowed me to get an owl box/bat house/frog-log for free, I like talking with likeminded people and can see the efforts to restore natural habitats making progress year by year. I wish I had photo journaled the work that has been done.	I would like to have help with mapping my property and identifying various habitats and species.	Assists with information and access to help for identification, restoration and preservation of private land which is often expensive and time consuming for individuals and often left as a "will do it when I have the time job".	More secure funding would help. Ask for people to include stewardship in their wills. Outreach to communities where several neighbours could participate and link together to participate in restoration projects together. Maybe connect with realtors so they would be aware of property that is for sale For has ecological values and where stewardship could be part of a new owners plans for their new property.
We appreciate that we can get advice and support from knowledgeable and dedicated staff and volunteers to manage parts of our property.	I was already caring for the habitats on my property so why not?, I wanted to show my support for environmental causes, I needed help managing my property	We hope to work with you more next year.	to get access to scientific knowledge and land management experiences	

Appendix 2a: Case Study- Riverside Marsh Community Project



Riverside Marsh is a small remnant oxbow located in a well-used city Penticton park. The wetland connects to the Penticton River Channel and as the river level drops in the summer the wetland dries out.

Most of this area was historically treated as a park lawn and some wetland areas were mowed in the summer once water levels had dropped. There were also areas between paved pathways and cattail marsh that were not maintained and had become very weedy and difficult to manage.

In 2016 OSS teamed up with the City of Penticton, TD tree days and 70 Volunteers restore the east side of the marsh. The City prepared the ground for planting by removing sod and rototilling the soil. Volunteers helped to plant 532 native riparian trees and shrubs and spread mulch in the prepared area. In early spring 2017 a local elementary school brought their grade 3 class out to help plant an additional 250 plants.

Spring 2017 was very wet, Okanagan Lake hit record high water levels and the Penticton River Channel was running at peak flows into August. Correspondingly the water in Riverside Marsh remained high much later into the year than it normally does. As a result in some areas the only a handful of plants survived.

During the Summer of 2017 OSS returned to Riverside marsh five times and held community weeding days. In spite of the popularity of the planting project and extensive efforts to attract volunteers, these events were not popular, attracting at most 3 volunteers. Due to the large numbers of invasive plants in some areas prior to the planting there was a large seed bank of weed seeds and managing invasive plants on site remains a challenge. Summer interns and volunteers removed as many invasive plants as possible, focusing on the areas directly around native plants to reduce competition.

In fall of 2017 OSS, the City of Penticton and TD tree days again partnered, this time to plant the West side of the marsh. This time over 90 volunteers came out to help plant 1000 native riparian trees and shrubs. Volunteers included members of the public, families, foreign exchange students and groups like Brownies and Nature Kids.

In spring of 2018, the city of Penticton removed weeds from the last unplanted portion of the marsh. OSS planted an additional 525 native trees and shrubs together with 25 volunteers. The only advertisements of the event were a single email and facebook post, which speaks to the popularity of planting events. Spring of 2018 was again very wet, but after 2017 we were more prepared and had left the wettest areas unplanted. Survivorship of native plants planted in the fall of 2017 and the spring of 2018 was very high.

During the Summer of 2018 OSS staff again returned to the marsh 5 times for community weeding events. In spite of our best efforts including offering prizes and other incentives for volunteers these events remain unpopular with at most 4 volunteers coming to help. OSS has continued to struggle with invasive plants at the Riverside site. However the purchase of brush-cutters in 2018 allowed student interns to be much more efficient and provides reasonable control for the invasive species present on site, which are mostly annuals. The native plants are healthy and exhibiting good growth, we expect that the amount of invasive plant management needed at this site will decrease as the native plants continue to establish and the seed bank of annual weeds is reduced.

OSS is currently in the process of developing signs for Riverside marsh, which will be installed in the spring of 2019. These signs will be seen by hundreds of people a day in the summer months in this popular park.

Appendix 2b: Case Study- Kambo Pond



In 2009 SOS Stewardship, in partnership with Puddles for Peepers, the University of Waterloo and landowners Ranbir and Shinder Kambo, excavated a pond North of Osoyoos. Though this pond was excavated by SOS Stewardship under TLC and not OSS, it is included as a case study because OSS has continued maintenance of the project, it is a great example of a successful agricultural/conservation partnership and provides an important perspective of how pond projects evolve over time.

The pond was suggested, by a researcher at the university of Waterloo, as a solution to a frost pocket that was affecting cherry farming. The thermoregulating properties of water help act as a buffer to temperature fluctuations, reducing the loss of cherries to frost. The pond was constructed in a natural low spot with where the water table was high. This also made the pond creation a relatively simple process of digging a down to below the water table.

The pond design needed to take into consideration that the landowners wanted to have a peninsula for pond viewing, as well as required depth and slope to create habitat values. This led to the pond being excavated in a horseshoe shape. The peninsula led to steep banks in some areas which brought concerns about slumping and erosion.

Partly to avoid erosion of steep banks and partly to as weed mitigation, weed barrier fabric was used for large areas of the pond bank. Willows were planted through the weed barrier, to allowed them to take root and start creating shade. Invasive plant management was needed for the first few years but overtime cattails and shrubs have grown in competing with invasive plants and drastically reducing the amount of maintenance required. The pond is used by waterfowl and is a breeding location for Spadefoots (BC Blue list, SARA Threatened 2003). The pond was also successful at eliminating the frost pocket and cherry production on the property increased in spite of trees being removed to create the pond.

Appendix 2c: Case Study- Radies Pond



The Radies pond was constructed in the BX neighbourhood in Vernon, in the fall of 2015. Prior to construction the area was essentially a wide and weedy ditch which held water only briefly throughout the year. The goal of the project was to create a pond area that would hold water for more of the year, providing habitat for waterfowl and amphibians.

Before construction of the pond could begin a Water Act permit was required. Obtaining this permit took several years of back and forth between biologist and ministry staff before final approval was granted.

The Radies pond was excavated in partnership with the Wetland Institute of the BC Wildlife Federation. OSS covered the cost of permits, materials, machine-time and an OSS biologist who stayed on site for construction, 700 native trees and shrubs, as well as substantial ongoing maintenance and subsequent plantings. The landowner worked an excavator to sort soil from clay as well as a compactor to complete the bioliner, and has done substantial follow-up invasive plant management. The Wetland Institute provided an expert who oversaw bioliner construction using clay that was found on site and provided training to participants who helped to plant the surrounding area. Because of the large area of soil exposed during this project, and the large seed bank of invasive plants native grass seed as well as fall rye was spread over the area.

In the spring of 2016 the fall rye was well over 3 feet tall, shading and crowding out native plants. OSS staff attempted to clear fall rye from the areas immediately surrounding native plants however native plants were often under a foot tall and they were very hard to locate in the sea of rye. As the rye matured it created millions of seeds, which in turn supported hundreds of voles. The voles were relatively safe in the tall dense field of fall rye and supplemented their diet with the bark of our native plants the following winter.

In Spring of 2017 when the fall rye had died back and other plants became more visible it was clear that there had been many of the native plants had not survived the combination of fall rye and vole damage. OSS and the landowners planted an additional 180 native trees and shrubs to replace those that had died. During the summer the landowner and OSS summer interns continued to remove invasive plants from the riparian area. In the fall of 2017 vole guards were added to many of the plants. Vole guards do provide some protection, but motivated voles can sometimes still access the plants and they are inefficient with multistemmed shrubs. During the installation of the vole guards OSS biologist found that the number of thriving native plants was still low and another planting was planned for spring of 2018.

In the spring of 2018 OSS and the landowners completed another planting of 330 native trees and shrubs. The species composition of this planting was slightly altered from previous plantings to include higher numbers of species that were doing well on site. During that planting OSS staff ensured that all native plants were tagged with flagging tape or irrigation flags to simplify invasive plant removal later in the season. During the process of flagging the native plants many more native plants were found than expected. Small native plants had been missed during invasive plant removal and were coming back from their roots. By the fall of 2018, though still weedy, the wetland is looking good. Many of the native plants show impressive growth, and are starting to bear fruit. Though we expect invasive plants to remain problematic for the next few years on this project we believe that we are starting to turn the corner and the native plants are becoming large enough to compete for sunlight and resources.

Appendix 3: Annual totals for Enhancement Project statistics.

<i>Year</i>	<i>Native Trees and Shrubs Planted</i>	<i>Boxes Installed</i>	<i>Fencing</i>	<i>Garbage</i>	<i>FrogLogs</i>
2013-14			1000		
2014-15	1400	28	1000	5615	11
2015-16	2100	36			
2016-17	4500	11	300	100	5
2017-18	3100	16	140		3
2018-19	4500	10	460		
Total	15,600	101	2900 m	5715 kg	19