Land Stewardship Grants

Year 3 Reports
2017-20 Funding Cycle

Introduction

In 2008, the Habitat Conservation Trust Foundation (HCTF) was awarded a $9M endowment contribution from the Province of British Columbia to fund operations and maintenance activities on Conservation Lands. $3M of the endowment was allocated for activities on private lands managed by non-profit organizations. The first intake of this program occurred in late 2016 and 12 grants were awarded to be used from April 2017 to March 2020. More information about this grant program is available here. This document provides copies of all reports submitted for the 2019-20 fiscal year (Year 3 of a 3-year cycle). The table below lists all reports included plus the total amount spent for each project. Note that the detailed financial reporting is removed for confidentiality reasons. If you have any questions about the Land Stewardship Grant program, please contact Shannon West at shannon.west@hctf.ca.

Project #	Project Name	Total Amount Expended 2017-2020
1-650	Cowichan Garry Oak Preserve	$20,280.00
1-678	Settlement Lands	$19,481.46
4-548	Elk Valley Heritage Conservation Area	$30,476.00
5-288	Elkin Ck Nature Preserve	$35,000.00
8-414	Quintal Floodplain	$45,000.00

1-650

Cowichan Garry Oak Preserve

Land Stewardship Grant 2017-20
FINAL YEAR REPORT FORM

HCTF Project Number: CAT18-1-650

Please refer to the Land Stewardship Grant Final Year Reporting Instructions when completing this report.

This report must be completed in conjunction with the Activities and Expenditures Report (spreadsheet) customized for your project based on your proposal.

1. PROJECT INFORMATION

Project/Property Name: Cowichan Garry Oak Preserve

Project Leader Name: Hillary Page

Name of Organization: Nature Conservancy of Canada (NCC)

Date of Report: March 27th, 2020

Author of Report (if different than Project Leader): Steven Godfrey

Name of Organization: Nature Conservancy of Canada (NCC)

Contact Information: Steven.Godfrey@natureconservancy.ca

2. SUMMARY

Provide a general description of project work completed in the last year (500 words max).

In November of 2018, Polster Environmental Services Ltd (David Polster, M.Sc., R.P. Bio., CERP) was retained by NCC to provide recommendations regarding potential restoration strategies for ecosystems present at the Cowichan Garry Oak Preserve (CGOP). This report identified various site constraints or barriers to restoration at CGOP while listing corresponding restoration opportunities and strategies for identified habitat zones (shallow soil, deep soil, pasture areas, and conifer encroachment areas). In April of 2019, a follow up document was produced by Polster providing detailed treatment recommendations specific to each zone.

NCC's restoration targets at CGOP focus primarily on improving and maintaining growing conditions for at-risk plant species found throughout shallow and deep soil Garry oak meadow ecosystems. Polster (2018, 2019) lists the re-establishment of a fire-maintained ecosystem as the recommended restoration treatment for shallow soil habitat zones at CGOP. Accordingly, NCC has prioritized the use of regular prescribed burns as essential to the effective stewardship of these ecosystems; the full amount of year-

three (final year) funding from this Land Stewardship Grant was dedicated to fire-regime planning and preparing for the implementation of a prescribed burn at the Cowichan Garry Oak Preserve (CGOP).

During the summer of 2019, an approved prescribed burn plan was completed in cooperation with the Cobble Hill Wildfire Management Branch (BC Wildfire Service South Island Fire Zone). Completion of the fire plan required a physical assessment of fuel/stand types at CGOP. The assessment identified five polygons for a total area of 1.28 ha designated to be treated via low intensity burn. To prepare the burn site that season, NCC's site contractor worked with the Cobble Hill team to mow fire breaks and apply additional fuel-load management measures as outlined by the plan. Despite these efforts, weather and site conditions prevented the successful implementation of a prescribed burn in 2019. NCC intends to carry over applicable content from our 2019 fire planning efforts to implement during the 2020 burn window.

Beyond the establishment of the burn plan, the planning process allowed NCC to foster and strengthen important relationships in the community. These include ongoing fire-management conversations with: the BC Forest Service, Ministry of Forests, Lands & Natural Resource Operations, John Dick (fire ecologist), Dave Polster (restoration specialist), the Cobble Hill Wildfire Management Branch, fire restoration specialists from Parks Canada, Municipality of North Cowichan Fire Services, Andrew MacDougall (University of Guelph), James Miskelly (Natural Resources Canada), Cowichan Tribes, local contractors, community members, and volunteers. NCC made additional efforts to inform, to educate, and to include community members and neighbours, particularly where there were concerns about the prescribed burn plan, throughout our planning.

Please provide a general summary of overall project outcomes (500 words max).

In year one of the Land Stewardship Grant, staff completed a detailed Baseline Inventory of ecosystems at CGOP, in line with NCC's standard approach to conservation planning. This evaluation provides an improved foundation to inform evolving restoration and management planning efforts for the property through years 1-3 and into the future. Following the establishment of the baseline, during years 1-2 of the Land Stewardship Grant, NCC completed an updated property management plan (PMP) following consultation with community members and our conservation partners at CGOP. The updated PMP has guided regular maintenance, stewardship and restoration activities supported by the Land Stewardship Grant during years 1 and 2. Work completed by or under direction of NCC's site contractor at CGOP included:

- Applying mechanical control methods (mowing and pruning) to an approximately 500 m^2 area of advancing shrubs such as common snowberry (*Symphocarpos albus*)
- Installing and maintaining 400 meters of exclosure fencing to reduce deer browsing on at-risk plants
- Thinning the forest canopy through removal of conifers from three hectares of shallow soil and conifer encroachment habitat areas
- Planting over 100 native plants, and where necessary, protecting the plants with stucco wire

• Maintaining the native plant nursery, including propagating over 20 native plant species to augment established populations and cultivating endemic seedlings, including at-risk species

• Establishing exclosure fencing for sheep-grazing trials

• Applying invasive species management techniques to Scotch broom, English ivy, holly, daphne/spurge-laurel, assorted introduced grasses, common periwinkle and Himalayan blackberry throughout 10 hectares of low-medium density/low distribution sites

Weekly conservation volunteer events "*Weedy Wednesdays*" were held regularly at CGOP throughout the duration of the land stewardship grant, weather permitting (a small number of dates were cancelled due to snow and frozen soil). This volunteer group consists of fourteen Cowichan residents, supported by occasional additional volunteers from the community, who participate in weekly restoration and stewardship activities. The volunteers work to restore and maintain approximately 10 hectares of habitat under the direction of NCC's site contractor, Irvin Banman. Volunteer stewardship activities include, collecting seed, propagating native plants, collecting spatial data, and managing a small nursery, in addition to the manual treatment of various invasive species including: Scotch broom, English ivy, holly, daphne/spurge-laurel, assorted introduced grasses, and Himalayan blackberry.

In April of both 2018 and 2019, NCC hosted the annual "*In Bloom"* Wildflower Festival which saw upwards of 250 visitors each year. *In Bloom* provides an opportunity for community members to visit CGOP; public access is otherwise closely managed by permission only, and is typically reserved for volunteer efforts, sanctioned tours, and researchers. Each year *In Bloom* invites community members to witness the blooming of flagship endemic wildflower species representative of Garry oak meadow ecosystems at CGOP, providing an ideal outreach opportunity. The format of *In Bloom* allows NCC staff, contractors, and local experts to lead a series of informative and interactive stations set up throughout the preserve, focusing on conservation issues, local natural and cultural history, and both the successes and challenges of Garry oak ecosystem restoration.

3. LESSONS LEARNED

Describe any problems or challenges that arose and how you addressed them in order to proceed with the project. What have you learned that would be valuable to share with others that may be undertaking a similar project?

As discussed in Section 1, the re-introduction of fire to the landscape at CGOP remains a high priority restoration/stewardship treatment at CGOP. NCC faced several challenges associated with implementing this activity, largely related to weather conditions, coordination of multiple stakeholders, and addressing public concern (a single individual who opposes the activity).

Through years 1-3, the importance of advanced planning became increasingly evident to NCC staff. In short, the implementation of a controlled burn requires many factors to come together during an

extremely tight window of time (wind, growing conditions, relative humidity, temperature, crew availability, staff/contractor availability, site preparedness, updated safety plans, etc.). In order to carry out a prescribed burn plan during the window when/if the necessary factors align, it is essential to be well prepared while maintaining the capacity to adapt if possible. Although NCC learned this lesson in earlier years and was fully prepared to implement a burn in year 3 of the Land Stewardship Grant, the conditions on site in fall of 2019 prohibited implementing the burn as planned, delaying the final project outcome.

4. COMMUNICATIONS

Project Outreach Activities: Provide information on any outreach activities during the year that directly relate to the project.

NCC's site contractor (Irvin Banman) and conservation & engagement coordinator (Travis Muir) hosted several educational site tours at CGOP during the spring and summer of 2019, these included visits from the Cowichan community Elder College, Maple Bay Elementary School, and the Cowichan Valley Naturalists Society. NCC will continue to support the reintroduction of the Western Bluebird (*Siala Mexicana*) at CGOP through 2020, a program now led by the British Columbia Conservation Foundation (previously, in 2019, the project was led by the Cowichan Valley Naturalists Society). The 2020 program will focus on the installation and maintenance of nest site boxes, monitoring, feeding and outreach activities.

The weekly conservation volunteer event "*Weedy Wednesdays*" were held regularly at CGOP through years one-three of the land stewardship grant (aside from dates cancelled due to severe weather conditions or perceived fire-risk). See section 2, paragraph 2 (General Summary) for more details about activities, results and outcomes from this outreach activity during the reporting period. Planning for NCC's annual *In Bloom* event occurred throughout February and March of 2020. This event (planned for May 2nd) has been cancelled due to social distancing measures taken due to concerns and Provincial advisories related to COVID-19.

With the exception of a single neighbour, community members who raised concerns about the implementation of a prescribed burn at CGOP are generally supportive of this treatment method. An ongoing dialogue between NCC and the concerned neighbour continues, while NCC builds trust and shares information about the conservation rationale of the suggested burn plan. Background information shared to date includes the eco-cultural rationale for burn maintenance of Garry oak ecosystems and the mutual benefits of carefully managed burns. In addition, neighbouring landowners who expressed concerns about a prescribed burn were invited on site for a detailed explanation of the burn plan and walk-through of the associated safety measures.

Communicating about HCTF: Provide information on any activities specific to communicating about HCTF undertaken during the year.

HCTF was highlighted as a conservation partner on the 2019 *In Bloom* interpretive event program distributed to over 250 event participants (*see* ***Photo 1***).

HCTF is recognized for land stewardship funding contributions as a "Partner in Conservation" on NCC's CGOP Featured Project web page: http://www.natureconservancy.ca/en/where-we-work/british-columbia/featured-projects/salish-sea/cowichan-garry-oak-preserve.html

Media Coverage: Provide a list of any articles or media coverage during the year.

Article discussing controlled burns in Garry oak ecosystems, focusing on CGOP and work completed in partnership with the BC Wildfire Service: https://vancouverisland.ctvnews.ca/b-c-orders-controlled-burns-for-rare-garry-oak-ecosystems-on-vancouver-island-1.4581596?cache=almppngbro%3FclipId%3D89925

In Bloom Wildflower Festival article:
https://www.cowichanvalleycitizen.com/community/in-bloom-wildflower-festival-celebrates-spring-in-cowichan-garry-oak-preserve/

5. PHOTOS

Include a minimum of three photos as part of your report, attached as separate JPG files. List the filenames below, plus a description of each photo.

Please note, a limited number of photos are available demonstrating work completed in the 2019 field season under the Land Stewardship Grant due to the inability to implement the prescribed burn.

Photo 1 File name and Photo Description:

File Name
HCTFLandGrant_Final_Photo1_InBloom2019EventProgram.jpg

Photo Description
HCTF is recognized as a funder of land stewardship at CGOP on the back page of the 2019 *In Bloom* Wildflower Festival event program which was distributed to over 250 event attendees.

Photo 2 File name and Photo Description:

File Name
HCTFLandGrant_Final_Photo2_PrescribedBurnPolygons.jpg

Photo Description
Photo 2 displays the five polygons assessed for treatment with prescribed burn (total area 1.28 hectares). Though these areas were mapped during the 2018 field season, a physical assessment of fuel and site condition for was completed again in 2019 as part of the updated burn plan.

Photo 3 File name and Photo Description:

File Name
HCTFLandGrant_Final_Photo3_IrvNurseryChat.jpg

Photo Description
NCC's site Contractor, Irvin Banman speaks to volunteers lining up alongside CGOP's native plant nursery as part of a restoration workshop held in March of 2019.

Photo 4 File name and Photo Description:

File Name
HCTFLandGrant_Final_Photo4_InBloomPollinatorTable.jpg

Photo Description
NCC's Conservation and Engagement Coordinator greets visitors to the "*Pollinator Partnership"* table, an interpretive educational table which was part of the 2019 *In Bloom* Wildflower Festival event.

Photo 5 File name and Photo Description:

File Name
HCTFLandGrant_Final_Photo5_WeedyWednesdayInvSpRemovaljpg

Photo Description
*Weedy Wednesday v*olunteer, Roger Wiles, displays a bag full of English Ivy manually removed from the upper mead habitat area at CGOP.

HABITAT CONSERVATION TRUST FOUNDATION

Land Stewardship Grant 2017-20
FINAL YEAR REPORT FORM

6. ADDITIONAL DETAILS

Provide a description of any materials and supplies purchases funded by HCTF that are considered capital assets. See Final Year Reporting Instructions for information on Capital Assets.

No capital assets were purchased with HCTF land stewardship funding.

Provide any other information you wish to share with HCTF.

In spring and summer of 2020, monitoring of forty-three permanent sample plots will be completed. This work will focus on plant community and forest canopy composition, marking the fourth phase which has been completed at five-year intervals since 2000. Analysis and results of this work is expected to inform land stewardship work at CGOP in the future while providing an indicator to assess past land management decisions and they're effect on Garry oak ecosystem plant communities. NCC also hosts many long-term university-led research projects at CGOP, with the intent that outcomes will inform management and stewardship activities at CGOP. Currently, there are five active research permits for projects focusing on topics related to drought, plant herbivory, and Garry oak ecosystem restoration

7. SUBMIT YOUR GRANT REPORT

- Save this report using the Project # and grant year in the filename. Example: 1-123 Grant Report 2019-20
- Please send your Final Year Grant Report to reporting@hctf.ca
- Your report should include the following:
    - Completed Final Year Grant Report Form (this document)
    - Completed Final Year Activities and Expenditures Report
    - Photos as JPG files
    - Copies of any print media articles (or provide links in report)
    - Invoice for remaining funds

By submitting this grant report, you certify that this report is an accurate reflection of project activities and expenditures per the HCTF Grant Agreement.

HCTF Land Stewardship Grant 2017-20 HCTF Project # 1-650

Final Year Activities and Expenditures Report

	FROM PROPOSAL				ACTIVITIES & OUTCOMES REPORT		
Property/Complex Name:	**Goal**	**Objective**	**Expected Outcome/Performance Indicators by End of Year 3**	**Activities**	**Activities Completed in the Final Year**	**Expected Outcome/Performance Indicators met? (Yes/No/Partial)**	**If Expected Outcome/Performance Indicators not met, provide an explanation**
Cowichan Garry Oak Preserve **Property Vision and/or Overall Management Goals for Property:** NCC's Cowichan Garry Oak Preserve (CGOP) is one of the few remaining examples of an intact Garry oak ecosystem. The primary management goal for the preserve is to restore and protect critical habitat for rare plants, invertebrates and birds, and provide opportunities for restoration, volunteer engagement and research in this ecologically significant ecosystem.	To effectively maintain and enhance the natural values found on the property in partnership with local stewards.	Develop high-level management planning documents with community involvement to guide resource conservation, habitat restoration and enhancement and human activities on CGOP.	By June 2017, baseline inventory fieldwork and a report will be complete. By December 2017, a formal property management plan will be complete. By March 2018, strategies, work plans and supporting documents will be complete.	Undertake resource inventory, analyze and compile current and archived resources in an accurate baseline inventory following NCC's standard template. (Year 1)	-	**Yes (Completed in yr 1):** Both a PMP and baseline inventory were developed, reviewed and approved for CGOP following NCC PPSGs **Yes (Completed in yr 2)**: NCC has implemented stewardship and monitoring stratetgies guided by an approved restoration plan	-
				In collaboration with stewardship partners in the Cowichan Valley including Cowichan Tribes, develop and create a formal property management plan following NCC's standard template. (Year 1)	-		
				Develop regular maintenance programs, invasives management strategy and staff/volunteer plans for site management, research and engagement programs. (Year 2)	-		
	To effectively maintain and enhance the natural values found on the property in partnership with local stewards.	Implement the property management plan to effectively steward the long term natural values of CGOP.	By 2020, management of aggressive invasives will reduce invasive shrub extent by 20% of 2016 mapped levels; By 2020, management of exotic grasses will reduce invasive grass cover by 50% of 2016 mapped levels.	Mechanical removal (mowing, shears, hand pulling) of remaining shrubby invasive species like Scotchbroom. (Year 1-3)	Ongoing throughout year 3, completed by NCC site contractor	**Yes (Completed in yrs 1-3):** Maintenance of exclosures and mowing of snowberry and exotic grasses was completed by a contractor. Mechanical removal of Scotchbroom, Laurel and English Holly was completed by the contractor with conservation volunteer support	-
				Maintenance of sheep grazing to treat exotic grasses (Year 1-3)	Ongoing throughout year 3, completed by NCC site contractor (and volunteers under the direction of NCC contractor)		
					-		
	Restoration and enhancement of endangered Garry Oak meadow ecosystems	Renovation and expansion of the nursery at CGOP to improve restoration work at the property.	By December 2020, expand the current nursery by 1000 square feet; By 2020, increase recruitment of cultivated rare seedlings and plant out an additional 50 seedlings every year.	Expand the nursery and recruit greater diversity of seeds. (Year 1)	-	**Yes (Completed in yrs 1-3**: Weeding and nursery maintenance completed by conservation volunteers with oversight by NCC site contractor and staff	-
				Installation of irrigation to accommodate watering of seedlings. (Year 2)	-		
				Weeding and maintenance of cultivated seedlings (Year 1-3)	Ongoing throughout year 3, completed by NCC site contractor (and volunteers under the direction of NCC contractor)		
	Restoration and enhancement of endangered Garry Oak meadow ecosystems	Use of various approved techniques to manage invasive species and maintain the Garry Oak meadow ecosystem.	Additional 400 metres of restoration fencing to secure restoration area for additional 2 acres by 2018; By 2020, annual prescribed burns and mechanical treatment of invasives are used to reduce invasive species cover by 20% increasing the productivity of the Garry Oak meadow and providing opportunities for the establishment of at least 1 new rare plant species population.	Installation of 400 additional metres of restoration fencing to prevent deer from grazing sensitive habitat. (Year 1)	-	**Partial Completion yrs 1-3**: Approved burn plan created in 2018 & 2019, though weather conditions prevented the implementation of a prescribed burn on site despite site preparation and planning efforts. Native species cultivated in the nursery were succesful planted at CGOP in yr 3.	Approved prescribed burn plan was completed. NCC's site contractor prepared burn plots during the summer /fall of 2019, including the mowing of fire breaks and add'l fuel-load management. Weather conditions prevented implementation of a prescribed burn in 2019.
				Prescribed burns are completed annually in partnership with the Cobble Hill Fire Base to maintain Garry Oak meadow habitat by reducing shrub habitat. (Year 1-3)	Burn plan completed, site prepared, project partners engaged, public education and outreach activities complete		
				Planting out of native species cultivated in the preserve nursery and monitoring of over-wintering success (Year 1-3)	Ongoing throughout year 3, completed by NCC site contractor (and volunteers under the direction of NCC contractor)		

1-678

Settlement Lands

Land Stewardship Grant 2017-20
FINAL YEAR REPORT FORM

HCTF Project Number: 1-678

1. PROJECT INFORMATION

Project/Property Name: Settlement Lands
Project Leader Name: John Millen / Erika Bland
Name of Organization: Denman Conservancy Association
Date of Report: June 23, 2020 (extension granted due to complications around COVID-19 pandemic)

Author of Report (if different than Project Leader): Erika Bland
Name of Organization: Denman Conservancy Association
Contact Information: dcalandmanager@gmail.com 250-702-7773

2. SUMMARY

Provide a general description of project work completed in the last year (500 words max).

A contractor was hired to construct an outdoor classroom/interpretive structure, near a vernal wetland designated for protection of endangered Taylor's Checkerspot Butterfly, was constructed at the property entrance in lieu of the Bird Blind planned in the original application.

200 ingrowing small trees were removed from the Butterfly Reserve. Signage and gates were installed at the pollinator garden. A wetland plant display was created. 10 beds were seeded with native pollinator host species and the garden was maintained, weeded and watered, with volunteer participation.

New distance markers installed on Taylor's Checkerspot monitoring transect. Transect trail maintained. Vegetation response experiment involving controlled removal of bracken fern was completed by Andrew Fyson, PhD botany. Monitoring was carried out for adult and larval Checkerspots and one larvae was confirmed within the breeding wetland near the pollinator garden.

4 wetland sites were monitored and data collected on water depth and water quality, as well as general observations. 6 volunteers were trained in the use of professional water testing equipment.

Protected Area signs were installed along Pickles and Lake Rds. New trail signage was installed on walking trails.

Scotch broom was removed from a total of 5ha of pollinator habitat by contractors and volunteers. 47 English holly plants were removed across the property. 16 hawthorne plants were removed. Everlasting pea was treated by digging from 0.2ha at the property edge. St. John's wort flowers were cut to discourage growth. Treatment will continue.

Please provide a general summary of overall project outcomes (500 words max).

This grant allowed DCA to complete necessary land management tasks associated with this newly established conservation covenant area. We are exceedingly grateful for this financial support.

We established a trail network with good signage, now regularly used. We installed boundary markers to inform neighbouring landowners. We established a parking area and installed bollards to prevent

vehicle encroachment, refurbished an out-of-commission bridge, and installed two information kiosks and 2 'protected area' road signs. We installed a cedar outdoor classroom structure, which will serve for many years to come as a focal point for nature education and bird and wildlife viewing. The at-risk olive-sided flycatcher is regularly heard there. The outdoor classroom also provides shade to volunteers maintaining the newly installed pollinator garden, where plant host species for Taylor's Checkerspot butterflies and other native pollinators (wild strawberries, self-heal, yarrow, scouler's harebell, blue-eyed-mary, marsh speedwell, thyme-leaved speedwell, red-flowering currant, baldhip rose, nootka rose, trailing blackberry, Salal and Oregon grape) are thriving. Pollinators including bees, wasps, ladybugs, and dragonflies are seen regularly on these plants. Signs were installed within the garden area to teach visitors about the plants and habitat. A water cistern and fencing were installed and the cistern is regularly filled by the volunteer fire department. A team of volunteers helps maintain the garden.

The 3.64ha butterfly reserve was enhanced through removal of ingrowing small trees and invasive species. A study of the effects of removal of bracken fern was carried out. Monitoring in the butterfly reserve revealed that Taylor's Checkerspot is still breeding in the reserve, despite declining numbers on the island. DCA created a Management Plan for Checkerspots at the Settlement Lands, and participated in meetings of the Regional Implementation Group. DCA hosted and presented at 3 'open houses' about Checkerspots.

The trail network originally proposed in the property management plan was revised slightly to remove the Marsh View Trail after biologists identified important wildlife values in this sensitive wetland habitat area. A "non-disturbance" area was demarcated to provide refuge for beaver, mink, deer, nesting waterfowl, and many species of resident breeding and migrating birds.

A 410m fence was installed at the Homestead Marsh in collaboration with the neighbouring farmer to keep cattle out of the wetland. Vegetation in the excluded area has regenerated extremely well. Two bat houses were installed at this marsh and are regularly monitored by DCA Biologist Jenny Balke. Water depth gauges were installed at 4 sites and water quality data are collected regularly by trained volunteers, using professional equipment purchased through grant funding from Environment and Climate Change Canada. Educational walks about botany, invasive species, birds, beaver and other wetland wildlife were led by biologists and DCA land manager through the life of this project. Newsletter articles were printed regularly informing the community about the grant work.

Finally, invasive species including Scotch Broom, English Holly, English hawthorne, Everlasting Pea, Periwinkle, and St. John's wort were treated and removed across 9.5 hectares of the property. We were able to employ 7 local people in these efforts, and 28 volunteers participated in work bees.

3. LESSONS LEARNED

Describe any problems or challenges that arose and how you addressed them in order to proceed with the project. What have you learned that would be valuable to share with others that may be undertaking a similar project?

The property Management Plan laid out plans to create a wildlife viewing structure at Homestead Marsh, and the original grant proposal laid out plans for a bird blind there. This proved unfeasible due to regulatory requirements and the decision to close the area to the public to protect it as a non-disturbance area for wildlife. In lieu of this bird blind, we created a wildlife viewing platform and outdoor classroom/interpretive structure in the butterfly reserve. Shifting our focus and site while

maintaining the project's overall objectives required some careful thought and lots of conversation by our Lands Committee.

Germination of seeds and growth of plants in the pollinator garden was poor in the first year, but improved over the 3 year grant. There are now numerous plants producing flowers and seeds there, and pollinators are seen using them regularly. Thrillingly, a Checkerspot larva was seen in the breeding wetland closest to this pollinator garden in Feb 2020.

Near the beginning of the 3-year grant period, someone was found to have removed approx. 10 small conifer trees near the property's northern boundary. This presented a major challenge as the neighbour thought the trees were on their land. With the help of a retired geologist with extensive survey experience, the boundary markers provided through this grant were installed and now provide clear guidance to neighbouring landholders about the location of property lines.

Removal of St. John's Wort through cutting only proved ineffective. Cutting was recommended initially since the infestation is located at the top of a steep slope, and cutting was deemed the best way to cause minimal disturbance to the slope integrity and to allow work to be carried out safely. However, the infestation remains. Earlier or varied attempts at different removal strategies such as digging would have allowed us to achieve a more thorough eradication of this patch of invasive plants within the grant timeline. Work will continue on removal of the plants in the coming years, with more focus on digging out the roots with minimal disturbance.

4. COMMUNICATIONS

Project Outreach Activities: Provide information on any outreach activities during the year that directly relate to the project.

DCA initiated a youth nature program in collaboration with the Denman Island Community School. We had planned to carry out a field trip with the students to the butterfly reserve to visit the new outdoor classroom and butterfly reserve in March 2020, but this activity was curtailed due to Covid19.

The land manager hosted a water quality monitoring training workshop in March 2020 prior to the pandemic restrictions, with 7 volunteers in attendance. From these volunteers, a team of regular wetland monitors has been established to continue our water baseline data collection beyond the life of the project.

In August 2019, DCA hosted visiting scientists from the National Lake Pulse project, who gave an informative presentation to over 50 islanders about their sampling activities in the Chickadee-Beadnell watershed.

DCA co-hosted an evening information session to present the latest information about Taylor's Checkerspot Recovery on Denman Island including at the Settlement Lands property, in February 2020 with 25 islanders in attendance, as well as a weekend open house in early March 2020 to share more information and recruit volunteers.

Communicating about HCTF: Provide information on any activities specific to communicating about HCTF undertaken during the year.

April 2019 DCA Newsletter article about invasive plants circulated via The Island Grapevine to 625 households on Denman Island. Signage installed at the pollinator garden shows the HCTF logo. Powerpoint presentation at Taylor's Checkerspot evening presentation and Open House acknowledged HCTF as project funder. Verbal acknowledgement of financial support at the Denman Island Christmas Craft Fair and Isfeld High School Ecofair, Lake Pulse dinner event. Monthly reports to presented to the DCA Board of Directors. DCA board members and Lands Committee members acknowledge that these grant funds have allowed us to accomplish many important outcomes that would not have been possible if only relying on DCA's small operating budget.

Media Coverage: Provide a list of any articles or media coverage during the year.

April 2019 DCA Newsletter article about invasive plants circulated via The Island Grapevine to 625 households on Denman Island.

5. PHOTOS

Include a minimum of three photos as part of your report, attached as separate JPG files. List the filenames below, plus a description of each photo.

Photo 1 File name and Photo Description:
File Name: 1-678-01-Pollinators in Garden-SelfHeal-GerryAmburyPhoto.JPG
Description: Photo of bee and fly species nectaring on *Prunella vulgaris* cultivated in the pollinator garden at the Butterfly Reserve. Photo donated by Gerry Ambury, a professional photographer and Denman resident.

Photo 2 File name and Photo Description:
File Name: 1-678-02-Pollinator Garden View.JPG
Description: Looking in from edge of the Pollinator Garden, with the new outdoor classroom structure in the background

Photo 3 File name and Photo Description:
File Name: 1-678-03-Garden Larval Host Plants.JPG
Description: Newly constructed in winter 2019, a demonstration of the larval host species used by Taylor's Checkerspot.

Photo 4 File name and Photo Description:
File Name: 1-678-04-Contractor and volunteer at completed outdoor classroom structure.JPG
Description: Contractor Stacey Borgstrom and volunteer J.R. after completing the construction of the Pagoda at the Settlement Lands Butterfly Reserve pollinator garden

Photo 5 File name and Photo Description:
File Name: 1-678-05-Volunteer Helping with Pagoda and Gates.JPG
Description: Keith Biddulph, one of the garden helper volunteers, puts finishing touches on the new gate at the pollinator garden.

Photo 6 File name and Photo Description:
File Name: 1-678-06-New Monitoring Transect Marker.jpg

Description: DCA Land Manager and Biologist Jenny Balke installed new 50m markers throughout Checkerspot monitoring transect.

Photo 7 File name and Photo Description:
File Name: 1-678-07-Broom at Main Parking Site-before-20170601.JPG
Description: A view facing west of the Settlement Lands parking site, where broom was growing densely.

Photo 8 File name and Photo Description:
File Name: 1-678-08-Broom at Main Parking Site-after-20200322.JPG
Description: Same view at parking area, after broom removal, and also showing newly installed bollards to restrict vehicle access to parking zone, and new property sign, which has trail maps and more property info on reverse.

Photo 9 File name and Photo Description:
File Name: 1-678-09-Everlasting Pea Removal-Example-before.JPG
Description: An example of the area along Chickadee Place where everlasting pea was removed with flowers in full bloom before their removal.

Photo 10 File name and Photo Description:
File Name: 1-678-010-Everlasting Pea Removal-Example-after.JPG
Description: Same area with everlasting pea removed.

Photo 11 File name and Photo Description:
File Name: 1-678-011Trail Signage Example.JPG
Description: Photo of one of the many signs installed along newly developed trails in the Settlement Lands.

Photo 12 File name and Photo Description:
File Name: 1-678-012-Trail Repair Culvert Homestead Marsh.JPG
Description: Trail maintenance underway by volunteers and DCA Land Manager. Small sections of culvert were installed in a wet area trail crossing to minimize damage to wetland vegetation.

Photo 13 File name and Photo Description:
File Name: 1-678-013-Boundary Marking at Settlement Lands with Volunteer.JPG
Description: J Thornton and Erika Bland installing custom made boundary marker signs to clarify exact location of the north Settlement Lands Boundary, following unauthorized tree removal by neighbour.

Photo 14 File name and Photo Description:
File Name: 1-678-014-Vegetation regrowth two years after cattle fencing installed at Homestead Marsh.JPG
Description: Vegetation has bounced back remarkably well along the edge of Homestead Marsh following the exclusion of cattle by installing a 410 metre fence there.

Photo 15 File name and Photo Description:
File Name: 1-678-015-Volunteers Removing Broom at Settlement Lands.jpg
Description: One of many volunteer work bees at the Settlement Lands to remove invasive species including Scotch Broom.

Image 16 File name and Photo Description:
File Name: 1-678-016-Wetland Wildlife Non Disturbance Area.JPG
Description: This map shows the location (blue) of the wetland non-disturbance area established at the Settlement Lands. This area has been closed off to the public with the exception of scientific monitoring activities including water quality monitoring by a team of trained volunteers.

Image 17 File name and Photo Description:
File Name: 1-678-017-Invasives Map Settlement Lands 2019.jpg

Description: Map of invasive species at the Settlement Lands as of April 2019. Scotch broom was removed across nearly the entire property. Most mapped instances of large English Holly plants were removed. Everlasting pea was removed, but will likely require continued treatment. St. John's wort was not removed but will continue to be a focus for invasive species control.

6. ADDITIONAL DETAILS

Provide a description of any materials and supplies purchases funded by HCTF that are considered capital assets. See Final Year Reporting Instructions for information on Capital Assets.

The purchase of a brush cutter and reciprocating saw (Years 1 & 2) funded through this grant will continue to serve DCA for years to come. Fencing at the Homestead Marsh to exclude the neighbour's cattle could be considered a capital asset. The Wildlife Viewing Pagoda is a capital asset that will stand as a reminder of the support of HCTF for all visitors to the Taylor's Checkerspot Butterfly Reserve.

Provide any other information you wish to share with HCTF.

DCA submitted a project change request for reallocating funds for the Bird Blind to the Outdoor Classroom Structure on 2019.06.24 that was approved by HCTF (Christina Waddle) via email on 2019.06.26.

Denman Conservancy is exceedingly grateful for this financial support. We have accomplished so much over the past 3 years as a result of this grant! THANK YOU!

7. SUBMIT YOUR GRANT REPORT

- Save this report using the Project # and grant year in the filename. Example: 1-123 Grant Report 2018-19
- Please send your Final Year Grant Report to reporting@hctf.ca
- Your report should include the following:
  - Completed Final Year Grant Report Form (this document)
  - Completed Final Year Activities and Expenditures Report
  - Photos as JPG files
  - Copies of any print media articles (or provide links in report)
  - Invoice for remaining funds

By submitting this grant report, you certify that this report is an accurate reflection of project activities and expenditures per the HCTF Grant Agreement.

HCTF Land Stewardship Grant 2017-20 HCTF Project # 1-678

Year 2 Activities and Expenditures Report

	FROM PROPOSAL				ACTIVITIES & OUTCOMES REPORT		
Property/Complex Name:	**Goal**	**Objective**	**Expected Outcome/Performance Indicators by End of Year 3**	**Activities**	**Activities Completed in the Final Year**	**Expected Outcome/Performance Indicators met? (Yes/No/Partial)**	**If Expected Outcome/Performance Indicators not met, provide an explanation**
Settlement Lands	Maintain/increase populations of invertebrate species at risk including: Taylor's Checkerspot (TC) (endangered); Dun Skipper; Common Wood Nymph; Western Pine Elfin; Western Pondhawk; Blue Dasher;	Enhance Taylor's Checkerspot & other invertebrate species habitat focusing on areas with food & nectar plants for larvae & adults; Create a demonstration Butterfly Garden to expand available habitat while providing education opportunities	Debris from previous tree felling is removed from 0.5ha of existing Butterfly Reserve area to expose nectar & larval host plants; Creation of a 0.02ha demonstration Butterfly Garden involving 20+ volunteers; Invertebrate larvae & adults are observed using plants in the garden by year 3; 10 species of native plants known to be host plants for rare invertebrate species are established & self-propagating within the garden within 5 years from the time of its creation; 3 educational visits are attended by local community school children & community members	Remove debris from 0.5ha of Butterfly Reserve area. Map 0.02ha butterfly garden area & existing plants. Design plan for supplemental butterfly-significant plants. Cultivate specific plant species (Year 1)	Remove 200 ingrowing small trees from Reserve Area.	Yes	
				Prepare sites for additional butterfly-significant plants using hand tools. Install fence and water cistern. Plant supplemental plant species. (Year 2)	Install garden gates. Create mini wetland pond garden - propagate larval host species (veronica spp) for Taylor's checkerspot. Seed 10 beds with native species. Document pollinator use of garden.		
				Weed, water &maintain garden area throughout summer months to encourage plant growth (Years 2&3)	Maintain garden to encourage plant growth. Install information signs about pollinator host plant species.		
	"	Conduct scientific research & monitoring to evaluate over time the quality, characteristics & use of Butterfly Reserve and wider SL property by rare invertebrates (Taylor's Checkerspot and Dun Skipper)	Database established to record monitoring data & staff/contractors are trained in its use. TC larvae monitoring areas are selected & monitored 3x/week from February-April; 800m butterfly transect monitored 3x/week from April-June; Intensive botanical plot studies carried out for 2 years, 1x/week for 6 weeks in May/June. Reports on monitoring are produced; Priority activities & areas for invertebrate species are identified to create a 5-year Invertebrates Mgmt Plan specific to the SL property	Establish database (contractor 4hrs with volunteer intern 4 hrs) for recording of monitoring observations (Year 1)		Yes	
				Monitoring (and associated data entry/reports) of TC larval area (40 hrs HCTF); adult butterfly transect (40 hrs DCA contribution); and intensive botanical study areas (48hrs HCTF) by contractors (Years 1-3)	Install numbered posts along 600m pollinator monitoring transect. Vegetation response study (bracken fern) and report completed by Andrew Fyson. Monitoring for Taylor's Checkerspot adults and larvae completed.		
				Identify priority management activities and areas and create Settlement Lands Threatened Invertebrates Management Plan (Year 2)	DCA participation Regional Implementation Grp for Taylor's Checkerspot in BC - consultation and review of current literature/reports on management for TCB.		
Property Vision and/or Overall Management Goals for Property: **The Settlement Lands' rare Coastal Douglas-fir ecological community is to be protected both by a Conservation Covenant, held by the Trust Fund Board (Islands Trust Fund - ITF), and by on-going stewardship to conserve and enhance the property's rich biodiversity and valuable natural features. The Settlement Lands varied terrain with its numerous large wetlands, portions of interconnecting creeks, steep rocky bluffs, slopes of various aspects, and extensive plateaus will continue to provide ecological connectivity and refugia for wildlife by its position in the centre of a large area of protected lands (Denman Island Provincial Park, ITF's Inner Island Nature Reserve and DCA's Central Park and Winter Wren Wood). Overall management goals will emphasize conservation strategies for enhancing the survival of the endangered Taylor's Checkerspot butterfly, as well as the other 14 species at risk and the 6 rare ecosystem communities. In addition, management goals will include providing opportunities for low-impact nature observation, scientific research, community outreach and education.**	Maintain/increase populations of aquatic & bird species at risk including: Red-legged Frog; Common Beaver; Cutthroat Trout; Common Nighthawk; Great Blue Heron; Olive-sided flycatcher; Band-tailed piegon; Barn owl; Western Screech owl; Barn Swallow	Prevent current degradation of wetland riparian habitat and evaluate yearly changes in marsh water levels & quality	Neighbouring cattle are prevented from entering marsh and wetland habitat; 200m of fencing is installed along the eastern boundary of the property adjacent to Homestead Marsh; A program is established for ongoing monitoring of beaver activity and wetland levels; 2 water depth guages are installed; Beaver activities and wetland levels/quality are recorded monthly for 3 years; Bridge installed along existing trail at crossing of a stream connected to salmonid-bearing watershed headwaters	Install 200 m of woven wire fencing along eastern boundary wetland edge (Contract labour and materials from HCTF; 40hrs labour in kind and DCA Land Manager) (Year 1)	Fence inspected; Native vegetation on newly fenced area is regenerating well following the exclusion of cattle there.	Yes	
				Install water depth guages in Homestead and Pickles Marshes (HCTF funds) (Year 1). Purchase water quality testing equipment & monitor wetland levels and quality monthly for 3 years (DCA contribution) (Years 1-3)	Wetland monitoring data collected at 4 sites. Volunteer team established and trained to continue wetland depth and quality monitoring beyond grant timeline.		
				Install bridge along stream trail (materials HCTF; 20 hours in kind DCA contribution) (Year 2)	Bridge inspected and maintained.		
	"	Provide safe community access to specific aquatic habitat areas to encourage community support for conservation and natural history education while protecting habitat & native species through non-disturbance areas	A 7.3 hectare non disturbance area for the protection of beavers and other wetland and bird species is identified and signage is installed to alert users to this area; A bird blind & kiosk are installed to the south of the wetland non-disturbance area; DCA sponsors 2 annual outings to the site focused on guided low-impact wildlife viewing & education; Interpretive information surrounding the importance of beavers, red legged frogs, marsh birds & other species is installed a the bird blind site;	Map out and select Wetland/beaver non-disturbance area and install signage to demarcate boundaries (Year 1)	Consult local biologist on boundaries proposed for Non-disturbance Area.	Partial	Beaver and Wetland NDA surveyed and mapped, and much better understood. Flagging installed around boundaries at key areas, but signage to demarcate beaver NDA was not installed. Planned outreach activities were unable to happen due to closure of schools.
				Design and install bird blind at wetland non-disturbance area edge (Year 3); Design and install interpretive information for bird blind (Year 3). - PROJECT CHANGE: Construct outdoor classroom/interpretive structure at vernal wetland habitat for Taylor's Checkerspot Butterfly - change request approved by HCTF June 26, 2019	PROJECT CHANGE: Construct outdoor classroom/interpretive structure at vernal wetland habitat for Taylor's Checkerspot Butterfly - change request approved by HCTF June 26, 2019		
				Conduct 2 educational outreach visits to bird blind with hired local biologists (10 hours in-kind) (Year 3)	Planned activities at Outdoor classroom and garden area for March 2020 unable to happen due to Covid-19 school closure.		

	Protect and enhance biodiveristy through the maintenance of wildlife refugia and ecologcal corridors within the SL property and with adjacent protected areas	Identify new, and maintain existing, ecological corridors/refugia for wildlife	Key areas for preservation of wildlife refugia are identified using the property baseline study (Balke 2016); Correspondence is initiated with owners of adjacent protected lands to ascertain location and extent of existing or potential refugia areas beyond SL boundaries; Ecological connectivity areas are identified and mapped; Boundary markers are installed at corners of the property and in areas where pedestrian traffic from adjacent lands is expected to occur	Identify key refuge areas through field and report research and comminications with adjacent property owners, carried out by contracted biologist/ecologist (4 hours contracted) and reviewed by DCA committee (4 hours in-kind) (Year 1)			
				Mapping of refuge areas by contractor and Volunteer Intern (Year 1) in connection with DCA Protected Areas Network Mapping project below;	Mapping of wetland boundaries, wetalnd refuge area, invasive species infestations.	Yes	
				12 boundary markers (at SL boundaries with adjacent lands) and 2 Protected Area signs (along Lake Rd and Central Rd) are designed and installed by Land Manager (materials from HCTF funds; labour from DCA) (Year 1)	Yellow cedar Protected Area signs installed along Lake and Pickles Rds.		
	"	Ensure protection of refugia, and ecological connectivity areas via a well-defined, low-impact trails network that directs visitors away from these areas while linking the SL property with existing trails on adjacent lands	Safe trail network is created within biodiverse habitats to encourage community support for conservation & to provide natural history education; Directional signs & wayfinding maps are installed at key locations; 2 information kiosks are installed alerting visitors to trails/non-disturbance areas & providing educational information about wildlife & habitat; Barriers are installed at 2 roadside locations to discourage use of motorized vehicles & prevent other unauthorized land uses (i.e. illegal dumping of garden or other wastes).	Clearing and subsequent bi-annual maintenance of trails carried out by Land Manager (16 hours HCTF Funds) and volunteers (in-kind) (Years 1-3);	Trail maintenace across the property was completed incl. clearing fallen trees and branches & culvert at wet area near inflow to		
				Installation of wayfinding signage (10 signs) along trails (Year 2)	A final sign for the 'Overlook Trail' was fabricated and installed by DCA Land Manager.	Yes	
				Installation of information kiosk (HCTF funds) (Year 2), parking barriers (Year 1) & butterfly kiosk (additional funds confirmed) (Year 1)			
	Restore native plant habitat by reducing Invasive Species across the SL Property	Through the manual removal of existing plants, control the spread of a) Scotch Broom; b) English Holly; c) English Hawthorne; d) St. John's Wort; e) Perriwinkle; f) Everlasting Pea	12 volunteers contribute 120 hours to assist contractors in the removal of invasive species; 8Ha of broom is removed from clearcut areas, old logging landings, roadsides and trails; English Holly (<100 plants) and English hawthorne (<100 plants) are removed from the property; St.John's Wort, Perriwinkle and Everlasting pea is manually removed from 0.02ha area	A brush cutter is purchased and paid contractors (total 100 hrs, 50 of these HCTF funds) remove Broom from designated areas across SL property amounting to 10ha (Years 1-3)	Scotch broom removed from 3ha of butterfly reserve and 2ha of surrounding area using remaining HCTF funds as well as from HSP as match to HCTF contributions.		
				Land Manager locates and removes English Holly and English Hawthorne plants from SL property (16 hours) (Year 3)	27 large English Holly and 16 small Hawthorne plants were removed across the Settlement Lands.	Partial	Some St.John's Wort and Perriwinkle plants remain, as repeated cutting did not prove to be an effective treatment method for their complete removal. Treatment will continue by digging the plants to fully eliminate the infestation.
				Land manager (40 hours, 20 in kind hours), with volunteers, removes 0.01ha of St. Johns Wort/Perriwinkle and 0.01ha of Everlasting Pea through digging and mulching (Years 1&2)	Everlasting Pea plants were dug up amounting to 0.2ha along Chickadee Pl. St.John's Wort and Perriwinkle flowers cut in June 2019 to discourage growth. Consultation with professional botanist L.Hermanutz to create plan for continued removal of invasive species across Settlement Lands.		

4-548

Elk Valley Heritage Conservation Area

Land Stewardship Grant 2017-20
FINAL YEAR REPORT FORM

HCTF Project Number: CAT18-4-548

Please refer to the Land Stewardship Grant Final Year Reporting Instructions when completing this report.

This report must be completed in conjunction with the Activities and Expenditures Report (spreadsheet) customized for your project based on your proposal.

1. PROJECT INFORMATION

Project/Property Name: Elk Valley Heritage Conservation Area

Project Leader Name: Richard Klafki, Canadian Rocky Mountains Program Director

Name of Organization: The Nature Conservancy of Canada (NCC)

Date of Report: March 31, 2020

Author of Report (if different than Project Leader): Kate MacKenzie, Stewardship Coordinator

Name of Organization: The Nature Conservancy of Canada

Contact Information: 250-812-0539, kate.mackenzie@natureconsercancy.ca

2. SUMMARY

Provide a general description of project work completed in the last year (500 words max).

In the final year of the Elk Valley Heritage Conservation Area (EVHCA) project, NCC staff focused on completing the Property Management Plan (PMP) update, where ecological targets, threats, and conservation priorities were reassessed in order to better inform stewardship activities for the next five years. Additionally, contractors were hired to plan and carry out herbicide treatments on high priority invasive plants, and to monitor the success of past treatments. Volunteers from the local community also came out to help pull invasive plants from around two restored wetlands, and to plant native species in the restored riparian areas of Wilson Lake. Projects completed in years 1 and 2 of the grant (e.g. Wilson Lake restoration, access management rehabilitation) were also revisited to monitor the effectiveness of those restoration activities.

Please provide a general summary of overall project outcomes (500 words max).

Activities that were completed on the EVHCA in the final year of grant CAT18-4-548 include the completion of a PMP update, invasive plant management actions, and effectiveness monitoring for projects carried out in years 1 and 2 of the grant.

Staff work in year 3 was particularly focused around the field work, data compilation and writing components of the PMP update. Using the Open Standards guidelines for the practice of conservation, NCC staff reviewed the Baseline Inventory document that was updated in year 1 and determined the primary conservation targets on the EVHCA property. After reviewing the threats and stresses related to each target, a series of management actions were outlined that will address those threats and guide NCC's management activities on the property over the next five years.

Invasive plant treatments were also completed in 2019 using funding from this grant, with treatments focused around the restored wetlands and in the two rehabilitated access management areas that were restored in year 2. High priority species such as Spotted Knapweed and Common St. John's-wort were targeted with herbicide treatments. These treatments complemented other invasive management activities on the property that were carried out by various partners (e.g. B.C. Hydro, Ministry of Transportation), which occurred along hydro transmission corridors, forestry roads, and in industrial sites. It was observed in 2019 that there have been significant reductions of Sulphur Cinquefoil in areas that were treated with herbicide in 2018, however further treatments will be required on this property in the future.

In 2019, NCC staff completed effectiveness monitoring of the wetland restoration project that was done in year 2 of this grant. Photo points and vegetation survey plots were monitored, and the Cows and Fish wetland health assessment protocol for lentic systems was implemented to track the health of the riparian areas over time. These surveys will be completed annually going forward.

Volunteers from the local community were invited to two separate volunteer events at Wilson Lake in May, 2019. The Elk River Alliance (ERA) was invited to run these events, which brought out a total of 30 students and 4 adult educators to pull invasive plants, plant live dogwood and willow stakes, and plant plugs of various shrub and wetland plant species around Wilson Lake and Hosmer Wetland. From these events, 10 large garbage bags of invasive plants were pulled and over 300 plugs were planted.

In 2019, NCC staff also completed follow-up monitoring of the access management sites adjacent to the Hosmer Main road that were rehabilitated in year 2 of this grant. Efforts to rehabilitate these areas and deter motorized use and illegal dumping have been successful, as there has been no evidence of motorized trespass. While there have been some outbreaks of invasive plants resulting from ground disturbance, NCC staff observed that the grass seed applied in 2018 has established successfully. It is expected that these sites will continue to naturalize over the next several years and provide functional habitat for wildlife such as Elk and Grizzly Bear.

3. LESSONS LEARNED

Describe any problems or challenges that arose and how you addressed them in order to proceed with the project. What have you learned that would be valuable to share with others that may be undertaking a similar project?

No major challenges were encountered in year 3 of the project. A valuable lesson learned this year was that having funds available for invasive plant management provides much-needed leverage for securing additional funds. This helps to significantly increase the amount of invasive plant management that can occur in a given year, and magnifies the positive impacts. Additionally, working with partners such as the East Kootenay Invasive Species Council, Elk River Alliance, and BC Hydro to conduct herbicide treatments and weed pull events on the EVHCA ensures a coordinated and strategic effort when it comes to controlling invasive plants.

4. COMMUNICATIONS

Project Outreach Activities: Provide information on any outreach activities during the year that directly relate to the project.

In May 2019, NCC staff coordinated with the ERA to deliver two volunteer activities at Wilson Lake and Hosmer Wetland. 30 students and 4 adult educators participated, focusing on pulling invasive plants from around the restored wetlands, as well as planting native shrubs and other wetland vegetation.

Communicating about HCTF: Provide information on any activities specific to communicating about HCTF undertaken during the year.

There were no 2019 communications due to the nature of the activities completed in year 3. It is expected that there will be many opportunities to recognize the contributions of the HCTF to the project in future years, as NCC staff will likely host more volunteer activities related to the restored wetlands.

Media Coverage: Provide a list of any articles or media coverage during the year.

No media coverage about the project occurred in year 3. In future years, NCC staff plan to report to the local community by way of a news release about the benefits of the rehabilitation of the access management areas once further monitoring has been done. HCTF and other funders will continue to be acknowledged as future stories are released.

5. PHOTOS

Include a minimum of three photos as part of your report, attached as separate JPG files. List the filenames below, plus a description of each photo.

Photo 1 File name and Photo Description:
Student volunteers.JPG – Group of student volunteers from Fernie, BC following a live-stake planting event at Wilson Lake in May, 2019, run by the Elk River Alliance.

Photo 2 File name and Photo Description:
Access management area_pre-restoration.JPG – View of one of the access management areas before year 2 rehabilitation and restoration activities, showing stock-piled woody debris. Photo taken in July, 2018.

Photo 3 File name and Photo Description:
Access management area_post-restoration 1.JPG – View of access management area in year 3 (one year following rehabilitation activities), showing signage and barrier to motorized access and native grass seed establishment. Photo taken in July, 2019.

Photo 4 File name and Photo Description:
Access management area_post-restoration 2.JPG – View of access management area in year 3 (one year following rehabilitation activities), showing good coverage of vegetation and lack of trespass by motorized vehicles. Photo taken in July, 2019.

Photo 5 File name and Photo Description:
Wilson Lake_inprogress-restoration 1.JPG – View of riparian areas around Wilson Lake immediately following restoration activities in year 2. Photo taken in August, 2018.

Photo 6 File name and Photo Description:
Wilson Lake_post-restoration 2.JPG – View of riparian areas around Wilson Lake in year 3 (one year after restoration activities), showing establishment of native grasses. Photo taken in July, 2019.

Photo 7 File name and Photo Description:
Wilson Lake_post-restoration 3.JPG – View of Wilson Lake in year 3 (one year after restoration activities), showing restored areas on the far shore and on-going gravel extraction activities on the near shore. Photo taken in July, 2019.

* All photo credits can be given to the Nature Conservancy of Canada

6. ADDITIONAL DETAILS

Provide a description of any materials and supplies purchases funded by HCTF that are considered capital assets. See Final Year Reporting Instructions for information on Capital Assets.

No materials or supplies were funded by HCTF.

Provide any other information you wish to share with HCTF.

The funding from HCTF has helped NCC address a range of management issues on the EVHCA. Over the course of this grant all the identified goals have been achieved despite not being completed in chronological order originally identified in the proposal. NCC appreciates the opportunity and flexibility that HCTF has shown allowing NCC to complete these tasks over the past three years. The collaborative work between NCC, HCTF and other neighbours has worked to maintain and enhance cross-valley animal movement corridors, reclaimed old gravel quarries into wetlands, controlled invasive plant species, updated the property management plan, and provided non-motorized recreation access while preventing illegal dumping.

7. SUBMIT YOUR GRANT REPORT

- Save this report using the Project # and grant year in the filename. Example: 1-123 Grant Report 2018-19
- Please send your Final Year Grant Report to reporting@hctf.ca
- Your report should include the following:
  - Completed Final Year Grant Report Form (this document)
  - Completed Final Year Activities and Expenditures Report
  - Photos as JPG files
  - Copies of any print media articles (or provide links in report)
  - Invoice for remaining funds

By submitting this grant report, you certify that this report is an accurate reflection of project activities and expenditures per the HCTF Grant Agreement.

HCTF Land Stewardship Grant 2017-20 HCTF Project # 4-548

Final Year Activities and Expenditures Report

	FROM PROPOSAL				ACTIVITIES & OUTCOMES REPORT		
Property/Complex Name:	**Goal**	**Objective**	**Expected Outcome/Performance Indicators by End of Year 3**	**Activities**	**Activities Completed in the Final Year**	**Expected Outcome/Performance Indicators met? (Yes/No/Partial)**	**If Expected Outcome/Performance Indicators not met, provide an explanation**
Elk Valley Conservation Area	Reflect conservation management strategies set forth in Elk/Flathead Natural Area Conservation Plan (NACP)	Specific planning for this suite of sites and their varied threats	Completion of a Second Phase Property Management Plan	update 2010 baseline inventory study, collaborate with local partners (Year 1)	Yes (combined with activity below)	Yes	Updated inventory data and collobration with local partners was completed. Ecological threats and conservation priorities were reassessed, and conservation targets, threats and actions have been identified in an updated property management plan for the EVHCA.
				reassess ecological threats and conservation priorities to better inform stewardship activities on site (Year 1)	Yes		
				action planning (Year 1)	Not funded		
	Reflect conservation management strategies set forth in Elk/Flathead Natural Area Conservation Plan (NACP)	Implement updated Property Management Plan	Increase awareness of ecological sensitivity among property visitors, while implementing the conservation and stewardship strategies as outlined in the Property Management Plan	mototorized recreation access management through route decommissioning, signage, and local awareness (Years 1 to 3)		Yes	2019 invasive plant treatments were carried out as planned, including a volunteer event to hand-pull invasive plants from around restored wetlands.
				gravel pit restoration wetland plan implementation (Years 1 to 3)			
				invasive plant treatment (Years 1 to 3)	Yes		

Property Vision and/or Overall Management Goals for Property: The Elk River Valley properties have a range of issues to address (see attached example photos). Goals include: to maintain and enhance cross-valley animal movement corridors; reclaimation of commercial gravel extraction sites; control of invasive plant species, and; the provision of local, non-motorized recreation access and prevention of illegal dumping.

5-288

Elkin Creek Nature Preserve

HABITAT CONSERVATION TRUST FOUNDATION

Final Year Grant Report #5_-288__

HCTF Note: This project accidentally used the incorrect template to report on this program. HCTF staff have removed some of the sections not relevant to the Land Stewardship Grant program

Project #_5_-_288__

Project Name: [Elkin Creek Nature Preserve 5-288___]

Grant Information for this Grant Year

Grant Agreement Year: 20__ - 20__ Conditional Grant Agreement #: CAT- CAT- 18-5-288____

Year Status of this Grant: Year _3_ of _3_ Years

Project Leader Name and Title: Wayne P. McCrory, RPBio. Director and Coordinator

Name of Organization: Valhalla Foundation for Ecology and Social Justice

Contact info: waynem@vws.org. Phone: 250-358-7796

Executive Summary of the Project *(max. 500 words)*

The rationale was to complete the decade long stewardship or our 97 ha Elkin Creek Nature Preserve in the BC Chilcotin over the HCTF grant period. The primary goal was to design and construct a 2 km wildlife-friendly fence to keep trespass range cows out of sensitive riparian/bottomland wildlife and songbird habitat and wetlands/streams important to 11 species of freshwater fish. Cattle were badly damaging these sensitive habitats. The secondary goal was to complete baseline inventory (wetland mapping, freshwater fish habitat) to be used for a long-term Stewardship plan. The conservation benefits is to enhance protection of sensitive valley bottom fish and wildlife wetland and grasslands habitats in a major wildlife corridor and bird migration route.

Summary of Activities for this Grant Year *(100 words or less)*

Briefly describe the current grant year accomplishments.

Two semi-volunteer work bees finished the 1.7 km wildlife friendly fence. Observations showed cows no longer able to access sensitive fish and wetland/riparian/meadow habitats because of the new fence. Monitoring in Jan/Feb. 2020 showed moose, wolves and other wildlife still able to move

through the valley corridor by crossing through or over the fence. Completed the long-term draft Stewardship Plan that needs to approved by the Board in May.

Activities Completed in this Grant Year

#	Activities	Timeline	Completed/ Partially Completed/ Not Completed	Explanation
Objective 1:				
	Complete Wildlife-Friendly Cattle Exclusion Eco-Fence	September, 2020	Fully completed	Delays were experienced by First Nations contractors being busy elsewhere. Foundation volunteers completed the fence in 2020
Objective 2:				
	Complete Nature Preserve Stewardship Plan	February 28, 2020	Freshwater fish & wetland inventory reports completed. CONFIDENTIAL Draft completed. Needs to be reviewed by Directors	2014 SCC Title Lands (not Crown Land) surround nature preserve. Issues with Xeni Gwet'in wishing to acquire all private land & also restrict access to such.
Objective 3:				
	Complete Boundary survey & delineation of boundaries	Feb. 2020	Partially completed	South boundaries slashed out with metal markers. Too expensive to survey all boundaries
Objective 4:				
	Complete research/caretaker cabin	Sept. 2020	Completed	Solar power, fridge, etc. NOT funded out of HCTF budget.

Measures of Success Achieved in this Grant Year

Refer to the Measures of Success in your approved proposal **for this grant year**.
Briefly list measures completed– point form is ok – and expand on any details in the "Results and Discussion" section. Include any measures not yet achieved.

#	Measures of Success	Achieved/ Partially Achieved/ Not Achieved	Explanation
Activity 1: Completion of 3 year fence project			

	Sept. 2019. Range cows in area but kept out of sensitive habitats by fence. Jan. Feb. 2020. Biologist field track surveys. Results a huge success. Indicated wildlife such as wolves and moose not blocked by fence	Achieved	Even during partial fence completion in 2018 most of the range cows were kept out of sensitive habitats we are trying to protect 2018 winter fence monitoring also showed wildlife moving through fence
Activity 2: Completion of Stewardship Plan			
	Draft Plan completed	Nearly achieved	Still has to be reviewed by Directors. Confidential document due to issues with First Nations adjacent Title lands.
Activity 3: Mark surveyed boundaries better and complete boundary survey			
	Southern Lot surveyed boundaries marked better, including forming new fenceline.	Partially	Former surveyor not available. Most important boundaries surveys of south lot were already done. Too expensive to survey larger lot to north and not needed right now
Activity 4: Complete near final Caretaker/research cabin			
	Done including new window, rodent proofing and increasing solar power	Achieved	No HCTF funds were used.

Results and Discussion

Describe what was accomplished through the activities and measures completed in the previous section (including details on what you were not able to complete). Relate the contribution of this year's work to the overall project. Identify any problems or unforeseen issues and relate how these were addressed or will be addressed in future. Describe any project changes approved by HCTF during this grant year.

All projects were completed, it was a major year. The main unforeseen issue was that in 2017 a major forest fire in the region meant that our Xeni Gwet'in contractors did little work on the fence. This continued in 2018 due to the lucrative morel mushroom harvest and shortage of local subcontractors. VFE has to start bringing in their own subcontractors and volunteers in 2018 and then two ten-day each work bees in 2019.

Completing the Stewardship Plan that incorporated the new eco-fence and fish/wetland inventory reports mostly funded by HCTF combined with 15 years of previous stewardship improvements including major garbage, constructing a caretaker/research cabin, other wildlife and fish inventory and wetland mapping and previous experimental electric fences to try to keep trespass cattle out of main sanctuary habitats. Stewardship plan also incorporates previous cattle/ecodamage consultant's report done for VFE.

Describe the expected/observed outcomes – i.e., what difference did this project make for fish and/or wildlife conservation? What are the management implications or applications of your project?

It greatly enhanced the recovery of riparian areas and bluegrass bottomland meadows previously degraded by cattle over use to now recover. This will improve the sanctuary for various wildlife including ground-nesting grassland birds, grizzly bears and other species.

Freshwater fish habitat will now be protected from cattle degradation including small feeder streams important to the rearing of juvenile trout and other fish species.

Technical Report attached? Yes _x_ No __

Technical Report CITATIONS:

COVER PAGE ONLY DUE TO CONFIDENTIAL ISSUES WITH FIRST NATIONS.McCrory, W. and S. Parr. 2020. ELKIN CREEK NATURE (*DENI BELH TENALQELH*) PRESERVE STEWARDSHIP PLAN: 2020. Valhalla Foundation for Ecology.

Durand, R. 2019. Ecosystem mapping of the Elkin Creek Nature Preserve. Report for Valhalla Foundation for Ecology.

Smith, G. and R. Holmes. 2018. The 2018 fish and fish habitat assessment of select locations at the Elkin Creek Nature Preserve. Report for Valhalla Foundation for Ecology.

Communications/Outreach Results

a. Project Outreach Activities

Activities undertaken this Grant Year

"Notes from the Field" sent to Foundation supporters and donors each year of grant.
Valhalla Foundation website and newsletter still being worked on.
Communications with Xeni Gwet'in First nation members and leadership (nothing formal).

b. Communicating About HCTF

Activities specific to communicating about HCTF undertaken this Grant Year

HCTF credited in the above-mentioned.

Articles/Media Coverage on this project attached? **Yes** **No** **x**

Please list attached articles:

No media has been done. This was a low profile project and Stewardship plan involves sensitive issues with First Nations adjoining Title lands.

Photographic Record

We often include engaging photos of HCTF projects on our website. While we appreciate photos embedded in your report, we need jpeg photo files (about 5 MB) attached separately.

Please ensure you attach photos jpegs and list the photo titles here:

EcoFence2020EastSideFishHabitat;
EcoFenceWorking!Raphel'scowsoutsidefencefishhabitatSept2019;
VolunteersEco-Fence-2-Sept2019;
EcoFenceMonitorWildlifeCrossingswinter 2019-20

Lessons Learned

It was a learning curve designing a wildlife-friendly eco-fence to keep range cattle out of critical fish

and riparian/wetland habitats that worked since we did not have a lot to go on.

Project Spotlight

The Valhalla Foundation for Ecology manages a large (97 ha) nature preserve near BC's famous Nemiah Valley, homeland of the Xeni Gwet'in First Nation. We are the first land trust to be surrounded by Supreme Court of Canada (2014) Aboriginal Title lands, no longer "Crown Land". Completing a Stewardship Plan that includes coordinating our conservation efforts and protection of an ancient village site will be very important for our working relationship with the Xeni Gwet'in government. Designing and building an extensive wildlife friendly eco-fence to prevent ecological damage to sensitive riparian and freshwater fish habitats should be a model for others.

HCTF Land Stewardship Grant 2017-2020 HCTF Project # 5-288

Final Year Activites and Expenditures Report

	FROM PROPOSAL				ACTIVITIES & OUTCOMES REPORT	
Property/Complex Name:	**Goal**	**Objective**	**Expected Outcome/Performance Indicators by End of Year 3**	**Planned Activities**	**Activities Completed in the Final Year**	**Actual Outcomes/Performance Indicators at Project End**
Elkin Creek Nature Preserve	Restore and maintain critical wildlife and fisheries habitats	Protect a valley bottom mosaic complex of sensitive stream, riparian, wetland and valley bottomlan bluegrass meadow habitats	2 km of wildlife-friendly fencing is installed around the sensitive habitat complex to prevent trespass by cattle from free-range adjacent lands that damage multiple habitats by trampling and over-grazing, especially to fish-stream and riparian habitats.	Research, design and build wildlife friendly fence in spring (year 1) around senstivie habitats. Monitor and remove trespass cattle and repair fence. Monitor wildlife access.	Completed in Year 3	In Year 2 with partial completion of fence and year 3 completion in fall, range cattle were successfully kept out of the protected riparian, bluegrass meadows and Elkin Creek fish habitat including rearing areas for rainbow trout in small side streams. Year 1 saw the planned fence completion stall by our Xeni Gwet'in contractors due to the large Hanceville fire. Year 2 (2018) they were making more money picking morel mushrooms in the burn so work again stalled. in Sept. we organized a work bee. Year 3 we hired our own subcontractors and 3-4 volunteers and finsihed the fence with two 10-day work parties. Even then we had
				Fence inspection, monitoring and closing any gaps (year 2). Determine if wildlife such as wintering moose and seasonal grizzly bears are able to still access critical habitats	Completed in Year 3	
				Fence inspection, monitoring and closing any gaps (year 3). Determine if wildlife such as wintering moose and seasonal grizzly bears are able to still access critical habitats	Year 2 and Year 3 winter monitoring show moose, wolves and other wildlife able to go through and over fence. Grizzly bears in fall appear to be able to	
	Develop a 10-year stewardship plan	Establish a professional-level document with some local input to manage and preserve over the long term high wetland, wildlife and connectivity values	A 10-year steward ship plan using Best Management Practices for preserving high wildlife/ecological values; based on technical inventory of habitats; fish-stream values, grizzly bear and other canrivores, moose and mule deer, birds, species at risk (e.g. rare plant communities, sharp-tailed grouse). Plan to include input from locals, tourism lodge, cattle rancher, First Nations, BC Parks. To include public access management to a nerarby provincial park and for hunting, trapping, research, etc.	Habitat and species inventories by staff and consultants (Year 1)	Planning stage	We were lucky to find an experienced fish biologist and wetland specialist in the summer of 2018 who were availbable to do the work. The provided to be considerably more costly than we had originally budgetted but the Foundation was able to come up with the needed funds.
				Habitat and species inventories by staff and consultants (Year 2). Input from local ranchers, trapper, private land owner using property for access, First Nations and others	Year 2, Freshwater fish inventory and wetland/habitat mapping/report done. Some consultation with First Nations as well as private land owner who lives beyond. Good	
				Complete babitat and species inventories by staff and consultants (Year 3) and complete Stewardship planwith Best Management Practices.	Draft Stewarship Plan done in February 2020. Still needs to be reviewed by Foundation Board of Directors and approved in the spring. Not for public review since complex issues related to Xeni Gwet'in	
Property Vision and/or Overall Management Goals for Property: **The Valhalla Foundation's long-term vision for its Elkin Creek Nature Preserve is to restore (by fencing out trespass cattle grazing) and preserve a unique valley bottom mosaic of habitats including wetlands, riparian zones, important fish-bearing stream, bluegrass meadows and adjacent bunchgrass hillsides important for a great variety of wildlife, 11 freshwater fish species, Chinook salmon, species at risk, migratory and resident birds and others. Maintaining a major wildlife corridor for grizzly bears and other species and important wintering habitat for moose is an important goal. Our research cabin is used as a base for studies including an on-going wolf diet study. Besides long-term preservation our goal is to use the planned wildlife friendly "ecological fence" as a model for people to learn to protect sensitive riparian and fish habitats from cattle grazing impacts. Our preserve also enhances protection of nearby Nunsti Provincial Park.**	Complete partial survey of boundaries and permanently mark	Make sure the main boundaries are clearly defined for the fencing project, access management	Main boundaries will be slashed out with permanent metal markers so that our fencing can be properly placed and people will know where the reserve is located	Complete existing boundary slashing and permanent metal posts for main areas of the preserve including areas to be fenced (Year 1)	Some slashing done	We did not have the funding to do the boundary survey of the north property (160 acres) but did complete the south 80 acres where the 2 km eco-fence was completed in year 3. Considerable slashing of the property lines were done to install the fence, which followed most of the southern half of the south property. About 30 metal stakes were used to more permanently mark the boundares.
				Complete boundary slashing and metal posts for other main areas of the Preserve (Year 2)	Mostly clearing at south end property for installation of fence. Same in Year 3.	

8-414

Quintal Floodplains

Land Stewardship Grant 2017-20
FINAL YEAR REPORT FORM

HCTF Project Number: _ CAT18-8-414_

Please refer to the Land Stewardship Grant Final Year Reporting Instructions when completing this report.

This report must be completed in conjunction with the Activities and Expenditures Report (spreadsheet) customized for your project based on your proposal.

1. PROJECT INFORMATION

Project/Property Name: Quintal Floodplain

Project Leader Name: Sarah Nathan

Name of Organization: Ducks Unlimited Canada

Date of Report: June 25 2020

Author of Report (if different than Project Leader):

Name of Organization:

Contact Information:

2. SUMMARY

Provide a general description of project work completed in the last year (500 words max).

The South Okanagan is a key region for nesting and migratory birds beyond waterfowl. Our Quintal Floodplain project is a mosaic of wetland, riparian and meadow habitats. Avian species at the site mirror this diversity of habitats: in addition to waterfowl, riparian and meadow dependant song bird species, feature highly as important beneficiaries of habitats at Quintal Floodplains.

In the first two years of this land stewardship grant, we completed weed control activities as well as a number of riparian plantings (i.e. planting of 200 Cottonwood trees, 150 Mountain Alders, 150 live stakes and an additional 500 grams of Alder seed at the site). Survival of these plantings has been mixed due to extreme water fluctuations at the site.

By the mid-point of year two, it was clear that the primary issue at this site is Russian Olive encroachment. In fall 2018, we noted that cut Russian Olive trees left on site after Year 1 had begun suckering. This was a surprise for us, and certainly an important lesson learned regarding control of Russian Olive. We chose to focus our remaining Year 2 efforts on removing these downed Russian Olive

trees. Removal and disposal of invasive plant material is challenging and costly given regulations against disposal, and bylaws against as well as risks associated with burning on-site. Fortunately, we were able to identify and retain a contractor who generously donated half of their time to mulch Russian Olive on site. This will help us expend more grant and other partnership funds on controlling other weeds, additional Russian Olive, and planting native species.

Given the threat that Russian Olive poses, especially to meadow habitats, and the progress that we made controlling Russian Olive in Year 2, we focussed our Year 3 efforts entirely on reducing presence of this plant at Quintal. We coordinated this work with Nature Conservancy of Canada (NCC). NCC owns and manages adjacent conservation properties, and DUC has partial conservation interests in these properties. NCC expressed that Russian Olive control is an important priority in this area for them also. Since Russian Olive is more likely to return to conservation properties when it is not controlled in adjacent areas, NCC and DUC aligned themselves in Russian Olive control efforts on the South Okanagan Properties.

Please provide a general summary of overall project outcomes (500 words max).

Quintal Floodplain is a 43 ha property. For our final grant year, we had a vegetation control contractor cut and treat Russian Olive throughout the property to the extent of budget available. The contractor was able to cut and treat Russian Olive on the entire property with the exception of the western boundary. While funds were not sufficient to completely remove Russian Olive trees along the western boundary, these trees were treated with a basal bark herbicide, and will continue to die back in spring/summer 2020.

3. LESSONS LEARNED

Describe any problems or challenges that arose and how you addressed them in order to proceed with the project. What have you learned that would be valuable to share with others that may be undertaking a similar project?

We quickly learned that Russian Olive is a critical threat to riparian and meadow habitat in the south Okanagan. We also learned that without removing and/or chemically treating cut Russian Olive trees, the trees will sucker and continue to threaten habitats. This drives up the cost of treatment significantly. We discussed these findings with conservation partners in the south Okanagan, including NCC and NTBC. Russian Olive is widespread throughout this region. Given the importance of meadow and riparian habitats for bird species in the Okanagan, it would likely be worth collaborating more broadly with the Ministry of FLRNORD Thompson-Okanagan Region as well as our ENGO partners to develop a broad control program for Russian Olive, analogous to DUC's Spartina program.

4. COMMUNICATIONS

Project Outreach Activities: Provide information on any outreach activities during the year that directly relate to the project.

Our outreach activities on this project focussed on liaising with conservation partners (in particular NCC) to collaborate on control of this invasive species. We hope to begin developing a partnership to continue managing Russian Olive in the Okanagan given the habitat values threatened by this tree in that region.

Communicating about HCTF: Provide information on any activities specific to communicating about HCTF undertaken during the year.

We communicated about this project in a story on our website, here:
https://www.ducks.ca/stories/invasive-species/fighting-russian-olive-in-the-okanagan/

We completed social media posts regarding this project and our partnership with HCTF on our Facebook page here:
https://www.facebook.com/ducinbc/?hc_ref=ARSLlab7riVoiPKboFMScGFZXxImPZPVkeOH88ze9xCjNFK2arr6y3CAoSRCVjHKYA8&fref=nf&__tn__=kC-R

Media Coverage: Provide a list of any articles or media coverage during the year.

We communicated about this project in a story on our website, here:
https://www.ducks.ca/stories/invasive-species/fighting-russian-olive-in-the-okanagan/

We completed social media posts regarding this project and our partnership with HCTF on our Facebook page here:
https://www.facebook.com/ducinbc/?hc_ref=ARSLlab7riVoiPKboFMScGFZXxImPZPVkeOH88ze9xCjNFK2arr6y3CAoSRCVjHKYA8&fref=nf&__tn__=kC-R

5. PHOTOS

Include a minimum of three photos as part of your report, attached as separate JPG files. List the filenames below, plus a description of each photo.

Description of Photos: All three of these photos depict Russian Olive removal activities on Quintal; specifically, mechanical removal of trees and suckers.

Photo 1 File name: Quintal Russian Olive Control 1

Photo 2 File name: Quintal Russian Olive Control 2

Photo 3 File name: Quintal Russian Olive Control 3

Photo 4 File name: Quintal Russian Olive Control 4

6. ADDITIONAL DETAILS

Provide a description of any materials and supplies purchases funded by HCTF that are considered capital assets. See Final Year Reporting Instructions for information on Capital Assets.

Provide any other information you wish to share with HCTF.

7. SUBMIT YOUR GRANT REPORT

- Save this report using the Project # and grant year in the filename. Example: 1-123 Grant Report 2018-19
- Please send your Final Year Grant Report to reporting@hctf.ca
- Your report should include the following:
    - Completed Final Year Grant Report Form (this document)

- Completed Final Year Activities and Expenditures Report
- Photos as JPG files
- Copies of any print media articles (or provide links in report)
- Invoice for remaining funds

By submitting this grant report, you certify that this report is an accurate reflection of project activities and expenditures per the HCTF Grant Agreement.

HCTF Land Stewardship Grant 2017-20 HCTF Project # 8-414

Final Year Activities and Expenditures Report

	FROM PROPOSAL				ACTIVITIES & OUTCOMES REPORT		
Property/Complex Name:	**Goal**	**Objective**	**Expected Outcome/Performance Indicators by End of Year 3**	**Activities**	**Activities Completed in the Final Year**	**Expected Outcome/Performance Indicators met? (Yes/No/Partial)**	**If Expected Outcome/Performance Indicators not met, provide an explanation**
Quintal Floodplain	Establish healthy riparian zones alongside restored wetlands.	Eradicate invasive plants on berms alongside restored oxbows.	Canada thistle, purple loosestrife, and other invasive plants removed from riparian zones around restored oxbows.	Spring/summer monitoring by staff to identify areas requiring further treatment for invasive plants (annual).	Spring monitoring showed that some Russian olive persist though signeficantly reduced due to control efforts	Partial	We learned over the course of this grant that Russian Olive is a key threat to native vegetation diversity in the Okanagan Region. As such we shifted our focus from native plantings of riparian areas to control of Russian Olive. Russian Olive threatens both riparian and meadow habitats, encroaching on both. This results in a marked reduction in ripariand diversity, and elimination of meadow habitat upon which species at risk (e.g. Bobolink) depend.
				Refinement of treatment plan and site visit with weed removal contractor (annual).	Contractors strongly recommended focussing on Russian Olive control.		
				Chemical treatment of invasive plants by contractor (annual spraying in summer). May shift to mechanical treatment as the incidence of Canada thistle is reduced and native plant density increases at site.	shifted to mechanical and chemical control of Russian Olive		
	Establish healthy riparian zones alongside restored wetlands.	Increase native riparian plant density on berms alongside restored oxbows.	Diverse community of native shrubs and trees (snowberry, rose, etc.) established in riparian zones around restored oxbows (3.5 hectares total).	Fall monitoring by staff to determine survival of planted stock and identify areas requiring further planting treatment (annual).	Shifted to Russian Olive control. Fall monitoring indicated pronounced reduction in meadow habitat.	Partial	Survival of native plantings was approximately 50%. This did increase native riparian diversity. Reduction in Russian Olive also reduces the pressure on native plant diversity, though clearly this property would need significant investiment in ongoing management to truly accomplish these goals.
				Refinement of planting plan and site visit with planting contractor (annual).	We shifted our focus to Russian Olive control rather than planting, which had mixed success in Year 1		
				Infill planting and seeding to increase native plant density and discourage re-establishment of invasive plant species along berms. (Estimate 3,300 shrubs/trees planted over 3 years: Year1: 2,000; Year2: 900; Year3: 400. Note, seed may include non-native species selected to discourage re-establishment of fast-spreading invasive plants.)	We shifted our focus to Russian Olive control rather than planting, which had mixed success in Year 1		
Property Vision and/or Overall Management Goals for Property: Ducks Unlimited Canada's vision for the Quintal Floodplain property is a mosaic of healthy valley-bottom wetland, riparian and meadow habitats supporting a biologically diverse community of wildlife, including waterfowl, other avifauna (such as COSEWIC-listed Western Yellow-breasted Chat (Endangered), Western Screech Owl (Endangered), Bobolink (Threatened), and Long-billed Curlew (Special Concern)), amphibians, and others.							