

**Regional District of East Kootenay
Columbia Valley Local Conservation Fund (CVLCF)**

Funding Recommendations for 2020 Proposals



Photo: Pat Morrow

Report Submitted by:
Juliet Craig, Program Manager
Kootenay Conservation Program (KCP)
December 19, 2020



Executive Summary

The Kootenay Conservation Program (KCP) received eleven (11) stewardship proposals seeking **\$177,331.00** funding through the Columbia Valley Local Conservation Fund (CVLCF) program for 2020. Of these proposals, the Technical Review Committee (TRC) considers all stewardship projects to have technical merit. The available funding will support seven (7) of these projects but the TRC recommends funding nine (9) of these proponents if possible.

We are very fortunate that we have many good technical projects that are trying to conserve the landscape. The “ask” for 2020 is higher than what was deemed available this year.

Table of Contents

2020 Projects Application Process.....	1
Technical Review Committee.....	1
Project Suitability.....	2
Technical Review Committee Recommendations.....	3
1. Lake Windermere Community-Based Water Monitoring Project.....	4
2. Reintroducing Endangered Northern Leopard Frogs to the Columbia Marshes.....	7
3. Columbia Valley Swallow Project.....	9
4. Columbia Valley Farmland Advantage Stewardship Project.....	11
5. Conservation of Biodiversity in the Columbia Wetlands	13
6. Groundswell Apple Rescue Program	15
7. Luxor Linkage Resiliency and Forest Restoration Project	16
8. CLSS Water Quality, Quantity, Education and Communication Work.....	17
9. Strategic Invasive Plant Control of Leafy Spurge (SIPCOLS).....	21
10. Understanding Groundwater Conservation Needs in the Columbia Valley	23
11. Kootenay Community Bat Project – 495km away: Aligning Columbia Valley Bat Conservation Actions in Advance of the Impending White Nose Syndrome Crisis....	24

2020 Projects Application Process

In September 2019, a request for proposals was put out for the submission of applications to the KCP to access funding through the Columbia Valley Local Conservation Fund (CVLCF). Advertisements were placed in local print and online media as well as via the Kootenay Conservation Program (KCP)'s network channels. The closing date was November 1, 2019, and eleven (11) applications were received. On December 16, 2019, CVLCF's TRC met to collectively score the proposals and make recommendations to the Regional District of East Kootenay (RDEK).

Technical Review Committee

The Technical Review Committee (TRC) continues to function very well. The TRC members who conducted this technical review were:

- Dr. Cameron Gillies (Chair)
- Dr. Suzanne Bayley
- Mr. Greg Anderson
- Mr. Michael den Otter
- Dr. Jeanette Theberge

The TRC operates under a conflict of interest protocol.

Any members who have an actual conflict of interest or an appearance of conflict, which may have a negative or harmful effect on their ability to perform the duties required of the appointment or the reputation of the Committee, will advise all other members and staff, in writing (email accepted), well in advance of Committee meeting: (a) that there is a potential conflict; (b) the nature and scope of the conflict; and (c) the specific project to which the conflict may apply.

(b) For some proposals, Committee members may have a direct involvement in the project. In this case, the Committee member will be asked to leave the meeting during the discussion of such proposals.

This year, the following conflicts of interest were declared:

- Dr. Bayley identified a conflict of interest in relation to the 'Conservation on Biodiversity in the Columbia Wetlands' since she is the proponent and wrote the proposal.
- Dr. Bayley identified a potential conflict of interest with the 'Columbia Valley Swallow Project'. Conflict was confirmed by the Technical Review Committee.
- Ms. Theberge identified a potential conflict of interest with the 'Understanding Groundwater Conservation Needs in the Columbia Valley' since she sits on the Board of Living Lakes Canada.
- KCP Communications Coordinator Nicole Trigg contracts out to two CVLCF proposal proponents - Living Lakes Canada and CWSP – but was not involved in project applications or the CVLCF ranking process so this was not seen as a conflict of interest.

For these conflicts of interest, proponents did not rank the proposal and left the room during the discussion of the project.

Project Suitability

To be considered, a project must first meet a series of mandatory requirements. The project must:

- Fall within the CVLCF service area between Canal Flats and Spillimacheen;
- Address at least one IUCN threat to biodiversity;
- Be an eligible activity under the CVLCF Terms of Reference.

The proponent must:

- Be a registered non-profit organization, local government or First Nation Band or be partnered with a qualified organization;
- Be prepared to make a presentation on the outcomes of their work and submit a written report.

If the project fulfills these requirements, they are scored out of a total of 40 points:

- Project Feasibility – Maximum 10 points;
- Cost Effectiveness – Maximum 5 points;
- Partners/Cost Sharing – Maximum 5 points;
- Project Effectiveness – Maximum 20 points.

RDEK staff determined that approximately \$100,000 would be available for allocation for stewardship projects in 2020.

We are very fortunate that we have many good technical projects that are trying to conserve the landscape. The “ask” is much higher than what was deemed available this year.

Technical Review Committee Recommendations

The following projects are ranked by priority (highest to lowest):

Project Name	Proponent	POINTS / 40	Amount Requested	Amount Recommended	Cumulative Amount
Lake Windermere Community Based Watershed Monitoring Project	Lake Windermere Ambassadors Society	35.6	\$11,296	\$11,296	\$11,296
Reintroducing the endangered Northern Leopard Frog to the Columbia Marshes	Calgary Zoo Foundation	34.2	\$21,000	\$21,000	\$32,296
Columbia Valley Swallow Project	Wildsight Golden	33.75	\$10,000	\$10,000	\$42,296
Columbia Valley Farmland Advantage Stewardship Project	Windermere District Farmers Institute	33.4	\$17,985	\$17,985	\$60,281
Conservation of Biodiversity in the Columbia Wetlands	Columbia Wetlands Stewardship Partners	32.5	\$24,437	\$20,000	\$80,281
Groundswell Apple Rescue Program	Groundswell Network Society	32.2	\$2,000	\$2,000	\$82,281
Luxor Linkage Resiliency and Forest Restoration Project	The Nature Conservancy of Canada	31.6	\$15,000	\$15,000	\$97,281
CLSS Water Quality, Quantity, Education and Communication Work	Columbia Lake Stewardship Society	31.6	\$15,792	\$13,000	\$110,281
Strategic Invasive Plant Control of Leafy Spurge (SIPCOLS)	East Kootenay Invasive Species Council	28.8	\$11,500	\$6,500	\$116,781
Understanding Groundwater Conservation Needs in the Columbia Valley	Living Lakes Canada Society	27.8	\$12,750	\$0	
Kootenay Community Bat Association - ... bat conservation	The Rocky Mountain Trench Society	27	\$35,571	\$0	
TOTAL			\$177,331	\$116,781	

- a. **OPTION 1:** Two projects at the cut-off point for funding were tied in the technical merit score: Columbia Lake Stewardship Society (CLSS) – water quality and quantity monitoring and Nature Conservancy of Canada (NCC) – Luxor Linkage Resiliency and Forest Restoration. With current available funding, only one of these valuable projects can be funded. **Option 1 is to fund projects in order of technical merit (see Table on page 3) and select between NCC or CLSS.** This option would result in two technically sound multi-year projects that the TRC recommends (NCC or CLSS) not receiving funding, as well as East Kootenay Invasive Species Council (EKISC) – strategic invasive plant control of leafy spurge.
- b. **OPTION 2:** Fund an additional \$16,781 in order to fund both of the projects with a tied score (CLSS or NCC) as well as EKISC.

1. Lake Windermere Community-Based Water Monitoring Project

Total: 35.6 Points

Funding Requested: \$11,296

Recommended: \$11,296

Submitted by: Lake Windermere Ambassadors Society

Project Location: Lake Windermere

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$11,546.00	\$48,039.00	\$12,880.00	\$72,465.00
16%	66%	18%	

Project Description: This project aims to undertake water quality monitoring and community water stewardship education.

Project Objectives:

- 1) To empower citizens and decision-makers with current, comprehensive, and reliable data about Lake Windermere's water quality and ecological health;
- 2) To strengthen a community ethic of water stewardship and conservation in the Lake Windermere watershed;
- 3) To promote support for science-based management on behalf of local and regional governments.

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$10,000
2018	\$12,870
2017	\$11,000
2016	\$8,500
2015	\$11,000
2014	\$3,000
2013	\$4,700
2012	\$10,624
2011	\$18,000
TOTAL	\$89,864

2019 Accomplishments:

- Our Annual Creek and Lake monitoring program saw a total of 25 volunteers who contributed 84.5 hours total. These volunteers were trained as Citizen Scientists in water monitoring. Additional Citizen Scientist that will be trained will be coming up through our Fall Grebe Survey, and LakeKeepers Workshop.
- Since March of this year The Ambassadors have interacted with 1,147 individuals through events such as shoreline cleanups, Wings Over the Rockies Presentation, Paddle Palooza Festival, Farmers Market, local classroom visits and field trips, boat launch outreach, and free kids summer camps. While each event is different we were able to share a variety of lake stewardship information to a diverse audience at each event.
- Starting in April of 2019 the Ambassadors have published monthly education articles in the local newspaper. We will continue these articles until November for a total of 8. Additionally, we have published 3 educational articles on our website.
- One Grebe study is scheduled for early October of this year.
- The Ambassadors are connecting with the Lake Windermere Rod and Gun Club to share information gleaned from their fall fish study. We will also be conducting a literature over the winter months to develop a study plan for the following season. Lastly, we have developed and distributed a public fish survey seeking information from those fishing on Lake Windermere about populations seen.
- The Ambassadors developed and printed two educational brochures related to water quality and stewardship this summer. One brochure focused on fish species, and the other a broad spectrum of water quality and the ambassadors.
- We have been collecting the necessary data on Windermere Creek since March 2019 to develop a rating curve. Over the next few weeks as we analyze our data we will work with Living Lakes Canada and Columbia Lake Stewardship Society to develop the rating curve.

- We are continuously tracking website traffic and spent much time this year updating our water data site to provide visitors with the most available up to date information relating to water quality on Lake Windermere.
- We are currently finishing the 2019 sampling season and beginning to compile the necessary information to complete more deliverables (four in total):
 - Management recommendation for local governments or citizens to improve water quality and conservation
 - Presentations to decision-makers about water quality results and management recommendations
 - Presentations to non-decision makers about results and stewardship action
 - Final report in fall 2019 summarizing annual findings

IUCN Biodiversity Threats Addressed:

- Invasive and Problematic Species
- Climate Change - Droughts, Temperature Extremes, and Storms/Floods
- Pollution - Runoff
- Human Intrusions and Disturbance (Recreational Activity)

Committee Comments:

- Very good proposal.
- Restoration work sounds promising.
- Solid group of partners & funding.
- 2020 State of Lake Report is important to do and very useful.
- This is an excellent project that includes both valuable monitoring data and public engagement.
- They have a very high frequency of lake and stream monitoring (although could not find the data that they are monitoring for).
- Excellent idea for develop rating curve for Windermere Creek. Hydrology very lacking in info for that type of tributary.
- Good idea for a 10- year summary and analysis of lake data but hope that they get a qualified person for the interpretation of the data. Unclear if Program Coordinator will write the 2020 report on the lake. Recommend bringing a limnologist for the review the State of the Lake report
- Did well on all criteria for CVLCF projects.

2. Reintroducing Endangered Northern Leopard Frogs to the Columbia Marshes

Total: 34.2 Points

Funding Requested: \$21,000

Recommended: \$21,000

Submitted by: Calgary Zoo

Project Location: Columbia Wetlands

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$21,000.00	\$160,600.00	\$5,700.00	\$187,300.00
11%	86%	3%	

Project Description: This project aims use conservation translocations to recover northern leopard frogs and prevent local extinction within the province.

Project Objectives:

- 1) Continue reintroductions in Brisco for the next 4 years with the goal of releasing 8,000 tadpoles per year at the release site.
- 2) Monitor the reintroduced frogs each year to:
 - a. Determine if tadpoles complete metamorphosis and if frogs successfully overwinter
 - b. To look for evidence of successful breeding in the wild
 - c. Assess size, growth rates, general health and body condition of frogs and compare to previous reintroduction efforts and wild populations.
 - d. Assess survivorship, based on recapture of individuals (identified using spot pattern recognition).
 - e. Ascertain if frogs have colonized and bred at additional sites using visual surveys and automatic recording units (Song meters).
 - f. Assess long-term persistence of reintroduced populations.

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$19,000
2018	\$19,084
2017	\$28,000
2016	\$29,000
2015	\$29,767
2014	\$29,890
TOTAL	\$154,741

IUCN Biodiversity Threats Addressed:

- Residential & commercial development
- Agriculture
- Energy production and mining
- Transportation & service corridors
- Human intrusions & disturbance
- Natural system modifications
- Invasive species & diseases
- Pollution
- Climate change effects on water availability and river flow

Committee Comments:

- Strong proposal.
- Type of project CVLCF should support, some concern over long term success, however.
- Strong letters of support.
- Important and needed for the new Kootenay Connect KCP program – conserving Species at Risk.
- Good news that project had overwintering of juveniles. Frogs in Columbia Valley may have slight immunity to chytrid.
- Not convinced they can achieve their objectives of a sustained population.
- Why increasing funding each year? Keep to same as last year.
- Strongly encourage a definition of success (or failure) as an end point for the project.
- We recommend seeking federal funding and/or support to contribute to this project.

3. Columbia Valley Swallow Project

Total: 33.75 Points

Funding Requested: \$10,000

Recommended: \$10,000

Submitted by: Wildsight Golden

Project Location: Across the CVLCF Service Area

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$10,000.00	\$47,160.00	\$22,135.00	\$79,295.00
13%	59%	28%	

Project Description: The main goals of this two-year project are to: a) build increased awareness for swallow species and their conservation status; b) coordinate volunteers to inventory/monitor swallow nests; c) erect artificial nesting structures for swallows to increase habitat availability.

Project Objectives:

- 1) Determine nesting sites (for bank and barn swallows) and land ownership for nest locations or colonies. Most inventories for nests will be conducted by foot/car, but Columbia Lake and Lake Windermere will be inventoried by boat. Remote river banks that have had documented swallow colonies (through eBird) will be surveyed by kayak (e.g. Radium to Edgewater) to determine species. Bank and Northern Rough-winged swallows (NRWS) look similar, but NRWS are not at-risk.
- 2) Ebird will be used to assist in planning and knowing where Barn/Bank Swallows have been detected during previous breeding seasons. This information will guide us in terms of inventory locations.
- 3) At all nest locations, the goal will be to monitor the more accessible nest locations once/week through the breeding season. Lake Windermere Ambassadors and Columbia Lake Stewardship Society will monitor colonies at their respective lakes.
- 4) Host training sessions (class and in-field) in Invermere to describe the six different swallow species in the Columbia Valley, and train volunteers on nest inventory/monitoring protocols. Provide necessary equipment. Collecting quality data in year 1 will be a major goal for use in conserving and recovering Bank/Barn Swallows.
- 5) Input all data into provincial data warehouse (WSI) to identify critical habitat areas in Columbia Valley.
- 6) Outreach aimed towards conserving critical habitat areas for swallows (nesting colonies, nest sites, roosting areas), e.g. locations for WMA boundary expansions suggested to MFLNRO, promote and educate communities on Best Management Practices (BMPs) to

landowners, e.g. nest platforms such as ledges under eaves, minimize disturbance at colony, maintain food source, no pesticides.

- 7) We will conduct private landowner outreach visits with commercial operators that have known bank or barn swallow colonies, e.g. Invermere Home Hardware, gravel pit in Canal Flats and educate businesses about the Migratory Birds Convention Act and obligations to protect nests under this act.
- 8) Develop and distribute a brochure (500) that speaks to at risk swallow species in the Columbia Valley and what one can do to conserve their habitats.
- 9) Encourage partnerships and shared stewardship through outreach opportunities, e.g. farmers markets (4), community presentations (2), social media, create webpage on CVSP, newspaper articles, deliver Wings Over the Rockies field trip, bird walks (2).
- 10) Develop and deliver 3 public presentations on swallow ID, conservation status and current regulations that protect them.
- 11) In year two, construct and erect artificial nesting structures for swallows. Have private landowners maintain and monitor nest boxes/platforms.

IUCN Biodiversity Threats Addressed:

- Residential and commercial development
- Agriculture: pesticide use
- Energy production & mining
- Transportation & service corridors
- Human intrusions & disturbance
- Natural system modifications
- Pollution
- Climate change and severe weather.

Committee Comments:

- Good partnerships.
- Good project proponent with a good track record.
- Good value for money.
- Like the incorporation of citizen science and community engagement.
- Like seeing a new project for the Columbia Valley.
- Wonder if project could be implemented for a lower cost. I.e. hire a student.
- Concerned about on-the-ground conservation gain. Not convinced that they are habitat constrained (i.e. will boxes actually increase population?). Appears that insect prey availability is the constraining factor.
- Technical Review Committee recommends paying attention to the other swallow species (northern rough-winged and cliff).

4. Columbia Valley Farmland Advantage Stewardship Project

Total: 33.4 Points

Funding Requested: \$17,985

Recommended: \$17,985

Submitted by: Windermere District Farmers Institute

Project Location: Upper Columbia Valley

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
17,985.00	25,250.00	151,500.00	194,735.00
9%	13%	78%	

Project Description: This project aims to enhance the region's ecology by rewarding contracted farmers to take extraordinary stewardship action to conserve and enhance important riparian areas on their farms.

Project Objectives:

- 1) Conserve and restore 252 acres of prime riparian habitat and 7987 meters of shoreline.
- 2) Contract farmers to take extra ordinary efforts to conserve and restore the targeted riparian areas on 11 farm sites.
- 3) Retain the engagement of 95% of the region's farmers.
- 4) Raise awareness of, and support for the CVLCF by holding a field day and at publishing least two articles in local media publications.
- 5) Monitor the results of the project using RHA, and other monitoring methods.
- 6) Work with Bird Studies Canada to conduct Lewis's Wood Pecker survey on sites.
- 7) Prove the model works by quantifying ecological results and economically valuing those results.

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$17,985
2018	\$17,985
2017	\$10,700
2016	
2015	\$7,500
2014	

2013	\$13,000
2012	\$4,000
2011	\$5,000
2010	\$5,000
TOTAL	\$81,170

2019 Accomplishments:

While the 2019 project is not completed the following describes the progress of the deliverables to date:

- 1) Renewing stewardship contracts with the farmers to conserve and restore high value riparian sites.
 - a. Agreements have been renewed
- 2) Monitor the response of the sites to the stewardship actions by: completing Riparian Health Assessments and Inventories on the sites (this repeated the baseline Riparian Health Assessments completed on these sites in 2016, and 2018), and conducting other monitoring studies such as the Species at Risk survey
 - a. Two monitoring methods have been further refined.
 - i. RHI- Riparian Health Inventory method has been further refined and training was held in the Invermere area using the tool on Shuswap and Abel Creeks.
 - ii. Species at Risk monitoring tool. Farmland Advantage has worked with Bird Studies Canada to refine and test the related SAR monitoring tool.
- 3) Quantify the economic value of the ecosystem service benefits resulting from the stewardship
 - a. Sites have been surveyed using the new and improved surveying methodology
- 4) Analyze and report the results of the assessments and studies
 - a. Analysis is being completed
- 5) Communicate effectively to farmers, funders, ENGOs, and regional populations
 - a. Three field tours were conducted:
 - i. Local Government officials
 - ii. Wings over the Rockies
 - iii. KCP Field tour
- 6) Produce a final project report
 - a. Content for the final report is being collected

IUCN Biodiversity Threats Addressed:

- Residential and commercial development
- Climate change
- Invasive and/or other problematic species
- Fire and fire suppression
- Human intrusions and disturbance (recreational activities)

Committee Comments:

- Partnership with Birds Canada is good to see.
- Feasibility – how to get government involvement. Cost – is BC government funding possible?
- Expanding to other parts of BC. Would like to see 2019 report and how this project is expanding provincially and going beyond the pilot phase.
- Farmland Advantage is providing an on-the ground increase in conservation.
- The DFO collaboration will present new opportunity to link riparian health with the fisheries/tributary restorations directed by Shuswap Indian Band project. Really great potential.
- Not clear how the \$150,000 DFO in-kind was calculated. Questions about how the matching and in-kind costs are developed.
- Details are vague in proposal.
- Shuswap Indian Band, Columbia Wetlands Stewardship Partners, Lake Windermere District Rod and Gun Club working together on this project. Shuswap Indian Band does have cash for Farmland Advantage.
- Would like to see more detailed answers to Technical Review Committee's questions.
- Would like to see the # ha restored per year documented in next year's proposal.
- Would like to see a long-term sustainable funding source.
- Would like to see more communications so there is more awareness about this project.

5. Conservation of Biodiversity in the Columbia Wetlands

Total: 32.5 Points

Funding Requested: \$24,437

Recommended: \$20,000

Submitted by: Columbia Wetlands Stewardship Partners

Project Location: Across the CVLCF Service Area

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$24,437.00	\$105,563.00	\$10,000.00	\$140,000.00
18%	75%	7%	

Project Description: This project goal is to determine the locations and develop maps of biodiversity hotspots in the Columbia Wetlands and Columbia Valley, which will be used to prioritize and enhance the conservation of SAR and important focal species. This project has two Phases over three years (2020-2022).

Project Objectives:

- 1) Phase 1 (2020)
 - a. To ground truth mapped vegetation associations, and to classify the wetlands based on their hydrology.
 - b. To provide a field assessment (cover and species) of the plant communities, their SAR & concern in important wetland classes and map those locations.
 - c. To provide a field assessment of the animal SAR & habitat relationships and map their locations.
- 2) Phases 2 (2021 & 2022)
 - a. Develop maps of the hotspots of plant and animal biodiversity, overlay them on the wetland habitat maps, and combine these with the maps from the Kootenay Connect-KCP to make local upland, riparian and wetland maps of biodiversity hotspots and linkages.
 - b. Using these maps of biodiversity hotspots, develop conservation actions that CWSP and KCP and other Partners will use to enhance the protection of our important species at risk, concern and important focal species.

IUCN Biodiversity Threats Addressed:

- Residential and Commercial Development
- Climate Change
- Transportation and Service Corridors
- Human Intrusions and Disturbance (Recreational Activity)

Committee Comments:

- Well documented and written proposal.
- Good partnership with Shuswap Indian Band project and other partners.
- Federal funding recognition raises stature.
- The connection to on-the-ground action is not clear in this proposal. TRC deemed this project eligible for this year but will require clear information on how this project is leading to on-the-ground action when it is primarily mapping and inventory.
- Although the Technical Review Committee recognizes the value of mapping for better land management they are not convinced that CVLCF is the appropriate funding source.
- There is larger federal funding coming in from Kootenay Connect but relatively little showing on this budget. Not clear on how matching funding was calculated.
- There is a lot of matching funding and the CVLCF is a relatively small fund.
- Recommend that future proposals include a clear timeline and outline for how this project will lead to on-the-ground action to ensure that this is an eligible project for the CVLCF.

6. Groundswell Apple Rescue Program

Total: 32.2 Points

Funding Requested: \$2,000

Recommended: \$2,000

Submitted by: Groundswell Network Society

Project Location: Invermere, RDEK Areas F & G

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$2,000.00	\$2,718.00	\$2,100.00	\$6,818.00
29%	40%	31%	

Project Description: The goal of this project is to harvest apple trees to reduce bear attractants and deter human-wildlife conflict, and to advocate for the creation of a regional compost program to ensure backyard compost containing apples is also not creating a wildlife attractant.

Project Objectives:

- 1) Decrease the instances where wildlife are destroyed because of, or in order to prevent Human/Wildlife conflict
- 2) Support Bear Smart initiatives which include updated bylaws to improve enforcement, proper composting techniques and commercial waste storage.
- 3) Determine how much waste can potentially be diverted from the landfill in fruit waste alone, in order to advocate for the creation of a regional compost program
- 4) Increase the number of trees adopted, fruit rescued, waste diverted and participants involved.
- 5) Provide volunteer opportunities for people in the community
- 6) Build a database of fruit tree owners and other fruit bearing bushes and trees
- 7) Develop a strategy to expand our fruit rescue program aligned with what we grow at Groundswell's developing food forest.
- 8) Continue the care and development of our Food Forest, located at Groundswell Community Greenhouse and Gardens, as a mechanism to develop educational opportunities surrounding fruit gleanings
- 9) Expand this program to Windermere and area. A partnership with the local Shuswap band is under development to incorporate an orchard into our program. We are exploring options to demonstrate fruit tree pruning, and proper harvesting techniques at this site. We are also discussing potentially running an electric fence workshop at this orchard.

- 10) Support the expansion of the Apple Rescue Program to Radium, Windermere and Fairmont.
- 11) Continue to promote food preservation techniques that increase food security and access for local residents by promoting Groundswell's food preservation tool library.

IUCN Biodiversity Threats Addressed:

- Residential and Commercial Development

Committee Comments:

- Proven track record for this type of project (e.g. apple rescue).
- Good to see the natural expansion from a trial program.
- Very small funding request.
- Good partnerships.
- Good example of a local project.
- On-the-ground action that other communities in BC do and is important for bear management.
- Good outreach component that involves land managers and students.
- Would like to see more government partnership over time.
- Would like to see more rationale on the current threat to bears (e.g. how many calls to the Conservation Officers get each year, monitor to see if that changes over time, what is the reduction in threat with apple trees).

7. Luxor Linkage Resiliency and Forest Restoration Project

Total: 31.6 Points

Funding Requested: \$15,000

Recommended: \$15,000

Submitted by: The Nature Conservancy of Canada

Project Location: Luxor Linkage Conservation Area

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$15,000.00	\$37,764.00	\$2,000.00	\$54,764.00
27%	69%	4%	

Project Description: The project goal is to restore 10-20 ha of Rocky Mountain Douglas-fir forest to dry open forest structure within the Luxor Linkage Conservation Area.

Project Objectives:

- 1) Based on the Property Management Plan (PMP) for Luxor Linkage Conservation Area (NCC 2016) and Rocky Mountain Trench climate modeling, assess which vegetation management units on the Luxor Linkage conservation property are most vulnerable to the effects of climate change.
- 2) Develop forest stewardship prescriptions that take into account conservation values, climate change, and that limit soil disturbance.
- 3) Implement prescriptions on Luxor Linkage Conservation Area.
- 4) Enhance land management and community partnerships in the RDEK Area G region.

IUCN Biodiversity Threats Addressed:

- Natural Systems Modifications (Fire and Fire Suppression)
- Invasive and Problematic Species
- Climate Change

Committee Comments:

- Good community involvement.
- Important connectivity corridor for wildlife movement. An important area to restore and important work.
- Proven track record. Great organization.
- Not clear on restoration objective. Comment in proposal to 'ameliorate the adverse impacts of habitat shifting'. Should be consistent with where the provincial direction is heading regarding what state they're restoring to (past or future vegetation conditions).
- Why is this project focused on the eastern most point of the property line? Why not start at highway and move outwards?
- Consistent with ecosystem restoration RXs & treatments, high cost/ha. Costs per hectare are consistent with this type of project.
- Totally dependent on FWCP funds for majority. Little confirmed funding.

8. CLSS Water Quality, Quantity, Education and Communication Work

Total: 31.6 Points

Funding Requested: \$15,792

Recommended: \$13,000

Submitted by: Columbia Lake Stewardship Society

Project Location: Columbia Lake

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$15,792.00	\$14,548.00	\$28,750.00	\$59,090.00
27%	24%	49%	

Project Description: This project goal is to improve our community's knowledge of water resources and the steps that we can all take to protect them.

Project Objectives:

- 1) Monitor Water Quality
 - a. Continue to monitor baseline water quality by periodic measurements of established parameters. We will add iron, manganese, hardness and alkalinity, fecal and total coliform testing 3 times per season. Adding these parameters will allow us to better identify any contaminants that may enter the lake.
 - b. Confirm chloride results from locations that were tested in 2019 and determine if the levels change through time by sampling in May, mid-July and end September
 - c. Monitor water quality on 5 representative streams (see Streams below)
- 2) Monitor Surface Water Quantity
 - a. Measuring the water levels and flows on the inflowing Dutch Creek and Headwaters Creek near Canal Flats and the outflowing Columbia River.
 - b. Measuring the change in volume of water held in storage in the Lake by measuring Lake water levels.
- 3) Evaluate the impact of rainfall and snowmelt
 - a. Measuring rainfall, air temperature and snow depth
 - b. Install and monitor data loggers on the Kootenay River and in the south end of Columbia Lake to estimate the magnitude of the hydraulic head driving water from the Kootenay River into Columbia Lake. These data loggers will provide a current assessment of the hydraulic gradient between the two water bodies, groundwater interaction and will monitor aquifer recharge near Canal Flats. In addition, they may capture potential effects due to weather events, general atmospheric conditions and climate change.
 - c. Attempt to coordinate a program to measure precipitation at higher elevations to gain a better measure of the overall amount of precipitation entering the local watershed.
 - d. Attempt to design a means of estimating evapotranspiration losses.
- 4) Better understand the significance and impact of small streams
 - a. Monitoring five streams (the four listed above and Lansdowne Creek) to establish baselines for water quality. The same parameters collected for water quality on the lake (except turbidity) will be collected. The streams will be sampled 4 times from spring to fall for a total of 20 sampling events.
 - b. Installing data loggers at Marion and Hardie Creeks to monitor water quantity. Data may be extrapolated to calculate volume from other streams.

- c. Continuing to develop our understanding of the distribution and character of the streams as well as how the streams appear to be connected to local wetlands and riparian areas.
- 5) Communication and Education
- a. Engaging and training community volunteers in water quantity and quality monitoring of both the lake and surrounding streams
 - b. Developing and implementing outreach activities such as classroom programs, lake tours and information booths at community events.
 - c. Preparing, printing and distributing brochures, articles and lakefront plaques that will provide information about the subjects listed above.
 - d. Develop our proficiency in using social media to communicate CLSS's activities as well as the results and significance of our monitoring activities
 - e. Continue to communicate the CLSS's activities through our website and other social media

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$13,000
2018	\$11,000
2017	\$11,900
2016	\$2,800
2015	\$12,035
2014	\$3,400
TOTAL	\$54,135

2019 Accomplishments:

- 1) Water Quality
 - a. Monitored the water quality of the lake by collecting water samples on the main part of the lake. (4 sampling events over the summer). The parameters collected are typically analyzed for waters used for drinking water, recreational activity and aquatic organisms.
 - b. Maintained and expanded the water quality database
 - c. Monitored water quality on 4 representative streams
 - d. Collected samples at 14 locations in order to understand the distribution of chloride in
 - e. the lake. Preliminary results show changes in chloride concentrations from south to north in the lake.
- 2) Water Quantity
 - a. Continued to monitor the four water level monitoring stations we have been monitoring for the past 5 years (continuous in-situ water level measuring

supplemented by quarterly manual measurements, 3 events measuring stream profiles and volumes on the Kootenay at 4 sites.)

- b. Maintained and expanded the water quantity database.
 - c. Replaced aging loggers and a stabilizer fin.
 - d. Evaluated the impact of rainfall and snowmelt by:
 - i. Measuring rainfall, air temperature and snow depth
 - ii. Estimating the amount of water lost to evaporation from temperature, humidity, wind speed and cloud cover data recorded at the Fairmont Hot Springs Airport.
- 3) Small Streams
- a. Gathered data on the location and relative size of various streams
 - b. Collected water quality samples on four streams (Hardie, Marion, and Dutch Creeks and Canal Flats Springs).
 - c. Discovered that the stream chemistry differs noticeably from stream to stream
- 4) Communication and Education
- a. Engaged and trained community volunteers in water quantity and quality monitoring of both the lake and surrounding streams
 - b. Developed and implemented outreach activities such as classroom programs, lake tours and information booths at community events.
 - c. Prepared, printed and distributed brochures, articles and lakefront plaques that will provide information about the subjects listed above.
 - d. Increased community awareness about the monitoring program as measured by conversations between CLSS members and members of the community (moved AGM to June helped increase opportunities to interact).
 - e. Increased awareness among residents and visitors of the impacts of their activities on our watershed as measured through number and quality of interactions at community events, number of brochures picked up, and testimonials from the individuals we interact with.
 - f. Prepared a short video of CLSS's objectives and activities which was posted to Facebook and is available on our website
- 5) Volunteers
- a. Sustained involvement of core volunteers
 - b. Added new volunteers to our programs and the board

IUCN Biodiversity Threats Addressed:

- (Not explicitly stated)
- Invasive and/or other problematic species
- Climate change

Committee Comments:

- Feasible project.
- Good communications.
- Program has matured and proposal has improved every year.

- This project provides a lot of high value for the region. Its water quantity work is the most definitive for the entire Columbia River.
- Excellent provision of education benefits.
- It will be very important to Columbia Valley hydrology to get flow measurements from the two small creeks. However, they only say that they will measure water levels, not that they will provide rating curves (that is relate flow to water levels through the season).
- Very good that they will quantify ground water inputs from the Kootenay to the Columbia using data loggers, especially when have a proposal for a bottling plant to take that water - great info to have.
- Would like to see rationale for why they need to measure Mn, Fe, DO and coliform in two small creeks or Cl.
- CLSS is only group that can respond with data on the 3 proposed new docks and the water bottling plant being proposed for Canal Flats.
- TRC recommends a more explicit explanation of how this project is supporting on-the-ground action.

9. Strategic Invasive Plant Control of Leafy Spurge (SIPCOLS)

Total: 28.8 Points

Funding Requested: \$11,500

Recommended: \$ 6,500

Submitted by: East Kootenay Invasive Species Council

Project Location: Fairmont to Radium Hot Springs

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$11,500.00	\$12,500.00	\$2,000.00	\$26,000.00
44%	48%	8%	

Project Description: This project aims to decrease the infestation levels of Leafy Spurge in the Upper Columbia Valley.

Project Objectives:

- 1) To control leafy spurge infestations in the Fairmont to Radium Hot Springs area.
- 2) Leafy spurge infestations that are on crown land in close proximity to the Columbia Valley Wetlands (1 kilometer or less) may be treated (if funding permits), to establish a containment line so as to protect the high ecological value of the wetlands.

- 3) Inventory and map all known and new leafy spurge sites to allow for better informed decisions regarding a leafy spurge management plan for the Columbia Valley.

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$6,500
2018	\$6,500
2017	\$6,500
2016	\$5,000
2015	\$5,000
2014	\$5,500
2013	\$6,500
2012	\$7,500
2011	\$8,500
TOTAL	\$57,500

2019 Accomplishments:

1. Generate list of LS sites in RDEK Electoral Areas F&G using Provincial IAPP Database.
2. Identify private properties with LS and create 1km buffer to prioritize treatments (LS w/in buffer are priority).
3. Develop and present work plan to relevant organizations.
4. Hire experienced licensed herbicide contractor to treat priority sites.
5. Monitor at least 10% of all treatments to ensure efficacy (minimum 80%)
6. and site completion (minimum 90%) is reached.
7. Analyze treatment records.
8. Provide final report outlining the goals, objectives, and measures of
9. success.
10. Present results to project partners.
11. Press release to local papers showcasing project and results.

Deliverables 1 through 5 have been completed, and we are working on deliverables 6 through 9 (target completion date is Jan 31, 2020).

IUCN Biodiversity Threats Addressed:

- Invasive and/or other problematic species

Committee Comments:

- Important conservation issue. Worthwhile project.
- Project with direct on-the-ground benefits.

- Good to see SIPCOLS engage with the Shuswap Indian Band and their control program.
- Heavy reliance on CVLCF for this project. No clear project end date. There is a risk to not funding this project, though, in order to maintain control of leafy spurge.
- Not clear how to actually evaluate the project benefits. We need treatment but we will never get rid of it.
- Not clear why CVLCF requested budget has doubled.
- TRC recommends better reporting (how much treated, how much controlled). Would like to see effective measures for evaluating progress and success.

10. Understanding Groundwater Conservation Needs in the Columbia Valley

Total: 27.8 Points

Funding Requested: \$12,750

Recommended: \$0

Submitted by: Living Lakes Canada Society

Project Location: Across the CVLCF Service Area

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$12,750.00	\$27,500.00	\$8,880.00	\$49,130.00
26%	56%	18%	

Project Description: The goal of this project is to protect groundwater in the Columbia Valley for the safeguarding of ecological services – including maintaining habitats for fish, waterfowl, and wildlife – and informing direct conservation actions that address the threats of climate change, pressures of development, and land cover modifications.

Project Objectives:

- 1) Evaluate and analyze the existing groundwater data in order to help quantify the role of groundwater in addressing threats to biodiversity and maintaining environmental flow needs;
- 2) Identify ecologically important priority monitoring locations in the Columbia Valley that will help inform direct conservation actions through water management tools (such as the requirement for the issuance of groundwater licenses to consider environmental flow needs); and
- 3) Initiate groundwater monitoring in the Valley, so that there is site-specific quantitative data on which to base water management decisions and direct conservation actions.

IUCN Biodiversity Threats Addressed:

- Residential and Commercial Development
- Climate Change
- Natural Systems Modifications (forest ingrowth and wildlife impacts land cover and groundwater recharge)

Committee Comments:

- Good funding partners.
- The project provides very good education on the importance of groundwater in the Columbia Valley to landowners and government.
- Justification for monitoring groundwater is valid and important.
- Living Lakes Canada does good work.
- Benefit is to Columbia Basin as a whole, not necessarily to Columbia Valley.
- Questionable value for money.
- This project is focused on monitoring with no on-the-ground action/restoration value so the CVLCF is not the most appropriate funding source.

11. Kootenay Community Bat Project – 495km away: Aligning Columbia Valley Bat Conservation Actions in Advance of the Impending White Nose Syndrome Crisis

Total: 27.0 Points

Funding Requested: \$35,571.00

Recommended: \$0

Submitted by: Rocky Mountain Trench Natural Resources Society

Project Location: Across the CVLCF Service Area

Project Budget:

Cash Requested	Other Cash	Total In-kind	Total Budget
\$35,571.00	\$5,000.00	\$16,275.00	\$56,846.00
62%	9%	29%	

Project Description: The goal of this three-year project is to maintain healthy, long-lasting and diverse bat populations in the Columbia Valley to give Columbia Valley bats the best possible chance for survival and ultimate recovery in the face of White Nose Syndrome, the fungal disease that has killed an estimated 6.7 million bats in North America.

Project Objectives:

- 1) Identify and describe maternity roost sites (Years 1-2)
- 2) Identify and survey candidate bridges for night roosting habitat (Years 1-2)
- 3) Determine how many roost sites are used by maternity roosts (Year 1)
- 4) Describe temperature and relative humidity profiles of maternity roosts in artificial habitats (Year 1)
- 5) Train regional Bat Ambassadors (Year 1)
- 6) Establish a regional acoustic monitoring site (Year 1)
- 7) Expand Annual BC Bat count initiative (Years 1-3)
- 8) Support landowners who have bats (Years 1-3)
- 9) Provide best management practices training to land managers as it relates to bats and bat habitat (Year 2 – 2021)
- 10) Create artificial maternity roosting habitat. (Year 2 – 2021)
- 11) Dispense WNS probiotic treatment at high priority maternity and night roost sites (Year 3 – 2022).

Previous CVLCF Funding:

Year	CVLCF Funding Received
2019	\$10,000
2018	\$10,000
2017	\$10,000
2016	\$10,000
2015	\$15,807
2014	\$13,788
TOTAL	\$69,595

IUCN Biodiversity Threats Addressed:

- Invasive and Problematic Species
- Residential and Commercial Development
- Climate Change

Committee Comments:

- Bats are definitely at risk of losses from White-Nose Syndrome so need to accelerate bat conservation.
- KCBP was currently in the 3rd year (of 3) slated to finish in 2020.
- Not sure that this new program justifies a 4x increase in funding.
- This is definitely a good study. However, the likelihood of stopping WNS is minimal.
- CVLCF is 87% of the funding (and 91% of cash). Low cost share.
- Previous data from CVLCF project is not well presented. Not clear how many roosts, how many bats, etc. Last year's comments included: *Future proposals MUST include statistics*

on number of roost sites inventoried and protected, number of bats present, bat count results, species present, etc.

- Project is research oriented - not all objectives are on-the-ground. The two that are most on-the-ground are assisting with exclusions and best management practices for land managers.
- What is the outcome from the bat house monitoring project previously?
- What is on-the-ground outcome to bridge surveys?
- It is difficult to tell how much more they are going to do compared to their previous ongoing program.
- One landowner roost to test the with a WNS prophylaxis treatment is not good science, a poor experimental design. There must be a huge ongoing effort in the US to find a WNS prophylaxis treatment.
- Research on mitigating the impact of WNS is still in preliminary stages. If probiotic is applied in summer, how do you measure effectiveness? Don't know where winter hibernacula area.