The Restoration Partnership (Partnership) is a collaborative effort comprising the Coeur d'Alene Basin Natural Resource Trustees which are the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM); the Coeur d'Alene Tribe (Tribe); the U.S. Department of Agriculture, represented by the U.S. Forest Service (USFS); and the State of Idaho, represented by the Idaho Department of Fish and Game (IDFG) and Idaho Department of Environmental Quality (DEQ). The Partnership's primary mission is to develop and implement a restoration plan to help restore the health, productivity, and diversity of injured natural resources from releases of mine waste contamination and the services they provide in the Coeur d'Alene Basin for present and future generations. This includes compensation for lost human use services of those resources by developing and implementing projects under the framework of a Restoration Plan for the Coeur d'Alene Basin. The following Partnership activities occurred throughout fiscal year 2021 (FY21):

- The Partnership continued support for ongoing operations and maintenance by USFWS, Ducks Unlimited (D.U.), and private landowners for wetlands at the Schlepp Agriculture to Wetlands Conversion Project. The construction and implementation of this restoration project has been completed, for more information visit: https://www.restorationpartnership.org/schlepp.html

- The Trustees continued to refine their administrative processes for implementing the natural resource restoration projects that have been underway since FY18 and coordinated quarterly reporting and site visits with the Project Sponsors and Project Leads as appropriate.

- Implementation of the following 19 projects continued in FY21 with the exception of some work being delayed due to the COVID-19 pandemic. The amounts expended in FY21 are noted with a brief narrative of work that was completed. There were seven projects completed in FY21.

    - Wetland and stream enhancement at Cougar Bay on Coeur d'Alene Lake (BLM and USFWS sponsors).
      -Funds Allocated: $282,000 wetland enhancement and $125,000 Johnson parcel
      -Amount Expended in FY21: $3,685
      -FY21 Activities: 1) Willows for the Johnson parcel planting test site were grown and provided by the Coeur d'Alene Tribe from their nursery, 2) A site survey and 1-foot contour topographical map of the Johnson project area was lumped under

the same contract as Cougar Bay (directly across Hwy 95), 3) Through the cooperative agreement between D.U. and USFWS and D.U. completed a final plan for the wetland improvements for both parcels, 4) The Cougar Bay parcel was mowed and sprayed by a D.U. contractor to suppress the reed canary grass, 5) D.U. prepared a construction bid package and BLM awarded the contract, and 6) Channel, floodplain, and pond construction began in October.

- *Gul Hnch'mchinmsh* - Native Willow Nursery for Support of Restoration Actions throughout the Restoration Partnership Project Area (Tribe sponsor).
  -Funds Allocated $205,462
  -Amount Expended in FY21: $23,128
  -FY21 Activities: 1) Ground preparation continued with a wildlife exclusion fence and gate, 2) 600 individual willow poles were purchased and planted, 3) Tribal staff maintained access via mowing between rows of established willows, 4) a tour and virtual presentation were provided to the public and Trustees, and 5) Willows were provided to BLM and IDFG for their Cougar Bay and Gray's Meadow restoration projects.

- Cultural Harvest opportunities in the Hangman Creek Watershed (Tribe sponsor).
  -Funds Allocated $97,335
  -Amount Expended in FY21: $5,767
  -FY21 Activities: 1) Additional planning for the parking access occurred, 2) Interviews with the Tribal community and staff were conducted to compile a verbal history of salmon in the Tribes' territories and how cultural harvest opportunities and reintroduction might impact the Tribe, and 3) Due to drought and unseasonable hot weather in the spring and early summer, stream conditions at the release site would not support a live release of salmon for a cultural harvest event.

- Culturally Significant Plants in the Hangman Creek (Tribe sponsor).
  -Funds Allocated $187,770
  -Amount Expended in FY21: $36,116
  -FY21 Activities: 1) Purchased a variety of tall-one nursery plantings, 2) Planted 2,055 native trees and shrubs that provide fruit and utilitarian materials, 3) gathered camas seed for future restoration efforts, 4) Modified camas seed gathering due to drought conditions, and 5) Partnered with Bonneville Power Administration, Avista, the Farm Service Agency, and USFWS on all components of the project.

- Coeur d'Alene Lake Monitoring and Modeling (Tribe sponsor).
  -Funds Allocated $268,668
  -Amount Expended in FY21: $41,201
  -FY21 Activities: 1) collected and analyzed water quality samples from 4 sites over an 8 month period as other Tribal budgets were used for the other sampling events, 2) Reporting and data sharing to the National Academy of Sciences (NAS), 3) Continued data analysis and writing the 2019-2020 combined report for

Coeur d'Alene Lake, and 4) Continued calibration of the AEM3D model and reporting to the NAS.

- Coeur d'Alene Lake Education and outreach- *FINAL* (Tribe sponsor).
  -Funds Allocated $81,008
  -Amount Expended in FY21: $9,264
  -FY21 Activities: 1) Provided Our Gem Collaborative updates to the Coeur d'Alene Regional Chamber of Commerce on a monthly basis, 2) Provided updates to the Basin Environmental Improvement Project Commission and Technical Leadership Group, and local Soil and Water Conservation Districts, 3) Submitted monthly Our Gem Lake Stewardship articles to the Coeur d'Alene Press, 4) Surveyed the Basin community on their perceptions of lake water quality, and 5) worked with numerous partners and area high school students on the development of online water quality curriculum and virtually hosted The Confluence Project.

- Hepton Lake (*Gu̱ł Hnch'mchinmsh)* Wetland Restoration Planning Phase I- *FINAL* (Tribe sponsor).
  -Funds Allocated $ 210,900
  -Amount Expended in FY21: $24,992
  -FY21 Activities: 1) Secured all necessary permits for construction, 2) Submitted the final Wetland Reserve Program of Operations to the Natural Resources Conservation Service (NRCS) and secured matching funds from NRCS for construction with Partnership funds, and 3) transitioned Tribal oversight from planning, design, cultural resource inventory and assessment over to construction planning (Phase II).

- Wetlands restoration planning at Gray's Meadow (IDFG sponsor).
  -Funds Allocated $ 250,000
  -Amount Expended in FY21: $39,667
  -FY21 Activities: 1) Designed and replaced the Lamb's Peak Infrastructure phase to relocate the pump house to the Coeur d'Alene River with all necessary engineering needs accounted for, 2) Produced the 60% Design for Remediation and Restoration with the CDA Trust and EPA, 3) Continued ongoing ecological monitoring and assessments, and 4) Redirected Cave Lake water transfers from Black Lake to the Coeur d'Alene River.

- Gene Day Pond Fishing Access (IDFG sponsor)
  -Funds Allocated $25,000
  -Amount Expended in FY21:$0
  -FY21 Activities: 1) Completed permit acquisition with Idaho Dept. of Transportation and coordinated efforts with BLM and Idaho Dept. of Parks and Recreation.

- Black Rock Slough Wetland enhancement *FINAL* (IDFG sponsor)
  -Funds Allocated $75,000
  -Amount Expended from 2018-2021: $75,000

-FY21 Activities: 1) Acquired a geotechnical evaluation of the Trail of the Coeur d'Alene's causeway, 2) Completed Phase I of the project to limit annual importation of contaminated sediment and reducing the risk of recontamination setting the stage for future remediation by EPA and restoration by the Partnership, and 3) Evaluated the functional performance to facilitate manipulation of wetland pool elevation to meet management goals.

- Wolf Lodge Creek Reach 3 Stream Restoration and Habitat Enhancement Project *FINAL* (DEQ sponsor with Kootenai-Shoshone Soil and Water Conservation District)
  -Funds Allocated $195,814
  -Amount Expended in FY21: $195,814
  -FY21 Activities: 1) Stabilized 2,000 feet of highly eroding streambank with willing landowners, 2) Restored 3.2 acres of riparian area, and 3) Re-established proper channel dimensions to reduce rates of lateral channel migration, property loss, and sedimentation using bioengineering techniques.

- Conservation of Agricultural to Wetlands Conversion Properties within Canyon Marsh (USFWS sponsor with the Inland Northwest Land Conservancy).
  -Funds Allocated $801,480 and $372,400
  -Amount Expended in FY21: $10,010
  -FY21 Activities: 1) Re-assessed easement appraisals due to inflated real estate prices, 2) Finalized 3 conservation easements with private landowners, 3) Initiated future remediation discussions with EPA and the CDA Trust and the Partnership for restoration activities to provide for clean wetlands and waterfowl habitat, 4) Assessed water level management techniques for both waterfowl use and agricultural operations, and 5) Conducted waterfowl surveys.

- Conservation of Agricultural to Wetlands Conversion Property Gleason's Marsh (USFWS sponsor with the Inland Northwest Land Conservancy).
  -Funds Allocated $656,140
  -Amount Expended in FY21: $0
  -FY21 Activities: 1) 255 acre easement was secured and future remediation and restoration was initiated with EPA, the CDA Trust, and the Partnership.

- Lake Creek Watershed Restoration (CDA Tribe sponsor)
  -Funds Allocated $615,951
  -Amount Expended in FY21: $40,446
  -FY21 Activities: 1) Large woody debris placement, 2) High resolution aerial imagery acquired to assist with ongoing designs for re-engaging floodplain pulses, and 3) laid the foundation for compositionally and structurally diverse riparian ecosystems to develop over the next 25-50 years.

- Castle Rock Ranch North Fork Coeur d'Alene River Riparian Restoration Project *FINAL* (DEQ sponsor with Kootenai-Shoshone Soil and Water Conservation District)

-Funds Allocated $12,265
-Amount Expended in FY21: $12,235
-FY21 Activities: 1) Planted native trees and shrubs along the river and on the floodplain with the assistance from a willing landowner, and 2) Coordinated discussions with the landowner and NRCS for future irrigation improvements on the property.

- Prichard Creek Phase I: Conservation Easement and Restoration Planning (DEQ sponsor with Idaho Forest Group and Trout Unlimited)
  -Funds Allocated $1,908,450
  -Amount Expended in FY21: $128,730
  -FY21 Activities: 1) Completed field analysis and initiated development of the phased preliminary restoration plan for the entire project area, 2) Conducted additional metals characterization, snorkel fish surveys, treated populations of the invasive Bohemian knotweed plant, 3) Conducted Cultural Resource Background Investigations, and 4) Initiated conservation easement discussions with the Kaniksu Land Trust and Idaho Forest Group.

- Trapper Creek Bridge and Fish Passage Enhancement *FINAL* (IDFG sponsor with BLM and Shoshone County
  -Funds Allocated $135,000
  -Amount Expended in FY21: $90,167
  -FY21 Activities: 1) Secured all necessary permits, and 2) Removed inadequate culverts, installed the new bridge, and final bank and channel grading was completed.

- Red Ives Phase I Dam Removal *FINAL* (USFS sponsor)
  -Funds Allocated $30,000
  -Amount Expended in FY21: $0 (utilized dedicated USFS funds for Phase I).
  -FY21 Activities: 1) Completed the removal of the abandoned hydroelectric dam to provide for fish passage, 2) 200’ of streambank and fish habitat improvement work was completed utilizing native materials, and 3) Initiated Phase II discussions.

- Rehart Conservation Easement (IDFG sponsor)
  -Funds Allocated $600,000
  -Amount Expended in FY21: $0
  -FY21 Activities: 1) Initiated conservation easement negotiations with a willing landowner to protect natural floodplain communities and cold-water hyporheic flow.

This year the Trustees assessed or restored approximately:

- Secured three Conservation Easements
- 3,200 linear feet of stream/riverbank stabilized
- 2,655 native plantings
- 3.2 acres of riparian area restored

Total Funds Allocated (FY18-21): $6,697,193
Total Funds Expended in FY21: $736,222

For more detailed information on the above projects, please find the Annual Reports for each individual project attached in Appendix A.

Cougar Bay Wetland and stream enhancements

Pre-Dam Removal-Red Ives Dam removal Project, Upper St. Joe River Watershed

Post Dam removal at Red Ives

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Cougar Bay Wetlands and Johnson Parcel

Project Approval Date: Cougar Bay Wetlands -Aug 9, 2018 (44) and Johnson Parcel-Jan. 11, 2020 (52)
Trustee Council Resolutions #: 44 and 52

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $282,000 (44) and $125,000 (52)
Funds Spent this Quarter: $3,384.85
Funds Spent this Fiscal Year: $3,685.85

A. GENERAL INFORMATION

Project Proponent Name: Mike Stevenson, BLM
Primary Telephone Number: (208) 769-5024
Email: cstevenson@blm.gov

Project Sponsor: Mike Stevenson, BLM
Primary Telephone Number: (208) 772-3521
Email: cstevenson@blm.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

   Ducks Unlimited awarded a construction contract to LKE Corporation for the Cougar Bay Wetland restoration project. Implementation will begin in October 2021.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

   Permits took longer than anticipated to obtain due to regulatory staffing shortages at both IDWR and the Army Corps of Engineers.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.
2) Please describe other cost share or contributing funds.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$0	$0	$0	$0	$0
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$301(Johnson)	$551.25 plants	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$433.60 IDWR+IPDES	$0
Long-term operation and maintenance	$0	$0	$0	$2400 Multi-year reveg.plan	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$301	$3384.85	$3685.85
Indirect Costs	$0	$0	$0	$0	$0
Total	$0	$0	$301	$3384.85	$3685.85

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

Willows for the Johnson parcel planting test site were grown and provided by the Coeur d'Alene Tribe from their nursery.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: ***Guł Hnch'mchinmsh - Native Willow Nursery for Support of Restoration Actions throughout the Restoration Partnership Project Area***

Project Approval Date: **August 9, 2018**
Trustee Council Resolution #: **44**

Reporting Quarter/FY: **Quarter 4 / FY2021-Annual**

Partnership Funds Expenditures
Total Amount Awarded: **$205,462.00**
Funds Spent this Quarter: **$3,514.95**
Funds Spent this Fiscal Year: **$23,128.64**

Project Proponent Name: ***Thomas Biladeau***
Primary Telephone Number: ***(208)686-6307***
Email: ***tbiladeau@cdatribe-nsn.gov***

Project Sponsor: ***Coeur d'Alene Tribe***
Primary Telephone Number: ***(208)686-1800***

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application. ***Tribal Staff maintained access via mowing between rows of established willows.***

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application. ***NA***

C. EXPENDITURES

1) Please describe any unforeseen expenditures. ***NA***
2) Please describe other cost share or contributing funds. ***None***

Project Expenditures: **FY21 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$75.21	$6,961.20	$428.33	$2,588.87	$10,053.61
Travel	$0	$0	$0	$0	
Supplies	$522.12	$2,017.00	$325.00	$0	$2,864.12
Equipment	$0	$6,552.84	$0	$0	$6,552.84
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$597.33	$15,531.04	$753.33	$2,588.87	$19,470.57
Indirect Costs	$26.94	$2,551.16	$153.89	$926.08	$3,658.07
Total	$624.27	$18,082.20	$907.22	$3,514.95	$23,128.64

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable. ***NA***

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: ***Cultural Harvest Opportunities within the Coeur d'Alene Reservation***

Project Approval Date: **August 28, 2018**
Trustee Council Resolution #: **44**

Reporting Quarter/FY: **Quarter 4 / FY2021-Annual**

Partnership Funds Expenditures
Funds Allocated: **$97,335.00**
Funds Spent this Quarter: **$0**
Funds Spent this Fiscal Year: **$5,767.30**

A. GENERAL INFORMATION

Project Proponent Name: ***Thomas Biladeau***
Primary Telephone Number: ***(208)686-6307***
Email: ***tbiladeau@cdatribe-nsn.gov***

Project Sponsor: ***Coeur d'Alene Tribe***
Primary Telephone Number: ***(208)686-1800***

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application. **No tasks were completed during Q4.**

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application. **NA**

C. EXPENDITURES

1) Please describe any unforeseen expenditures. **NA**
2) Please describe other cost share or contributing funds. **NA**

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$0	2,025.99	$0	$0	2,025.99
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	1,475.00	1,475.00	$0	$0	2,950.00
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	3,500.99	$0	$0	4,975.99
Indirect Costs	$0	791.31	$0	$0	791.31
Total	1,475.00	4,292.30	$0	$0	5,767.30

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable. **NA**

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: ***uł qhesu'lumkhw*** **(land is good again): Cultural Significant Plant Restoration**

Project Approval Date: **August 9, 2018**
Trustee Council Resolution #: **44**

Reporting Quarter/FY: **Quarter 4 / FY2021-Annual**

Partnership Funds Expenditures
Funds Allocated: **$187,770.00**
Funds Spent this Quarter: **$12,549.43**
Funds Spent this Fiscal Year: **$36,116.01**

A. GENERAL INFORMATION

Project Proponent Name: **Gerald I. Green, Coeur d'Alene Wildlife Program**
Primary Telephone Number: **208-686-0312**
Email: **ggreen@cdatribe-nsn.gov**

Project Sponsor: **Coeur d'Alene Tribe**
Primary Telephone Number: **208-686-0312**
Email: **ggreen@cdatribe-nsn.gov**

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

The majority to the 4th quarter funds (98.2%) were used to purchase tall-one nursery plantings for the coming year. Species included serviceberry (AMAL), elderberry (SACE), mock orange (PHLE), choke cherry (PRVI), bitter cherry (PREM), and western red cedar (THUPLI). A small portion of the expended funds (1.2%) was used to cover the man-hours spent gathering camas seed. Unfortunately, the summer drought resulted in greatly reduced seed availability, and less than 1 quart of camas seed was gathered. This seed will be added to seed gathered in other years and seed will be dispersed over an area identified for camas restoration when the supply is sufficient.

The major accomplishments for the year include the planting of 2,055 native trees and shrubs that provide fruit and utilitarian materials, the gathering of

camas seed for future meadow restoration efforts, and the purchase of nursery stock to be planted in coming years. Each of these accomplishments contribute to the establishment of these native plants of Cultural Significance and contribute to improved landscape diversity, increased landscape esthetics and a healthier environment in which to pursue cultural activities.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

The drought, which began in early March and continues through the writing of this report (late October) reduced the availability of camas seed, which resulted in a relatively low return of camas seed for the man-hours spent gathering. The seed gathering was curtailed early due to this low return. The drought most certainly reduced the survival of the native trees and shrubs that were planted as well, however the exact extent of this reduced survival will not be known until survival counts are completed.

The Coeur d'Alene Tribe Wildlife Program has continually strived to improve the outcome of restoration efforts. Differing planting processes have been employed and the outcomes of those processes have been monitored since the initiation of restoration activities. This last year, a trial of planting older nursery stock in 5-gallon containers conducted on a separate, BPA funded, project in the Coeur d'Alene Basin. Even though the spring and summer evidenced the driest conditions on record, plant survival for these 5-gallon sized deciduous trees and shrubs exceeded 90%. With varying times of planting, and varying wetness of the planting locations, and over a multitude of species, planting 1-gallon tall-ones has rarely exceeded 30% survival. The Wildlife Program is currently coordinating with the nursery to provide larger planting stock as a result of this discovery. A balance between cost, effort and planting numbers will be determined that reduces the number of plantings with larger planting stock while achieving the same or improved number of establishing plants on restoration project sites.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

The decreased volume of camas seed that resulted from the drought was not expected. In the future, camas plants will be sampled in advance in drier years to ensure that the man-power effort will return an amount of seed that warrants the investment.

2) Please describe other cost share or contributing funds.

The restoration process have established an annual cycle of funding sources and set of strategies. While these may vary in detail from year to year and shift as better strategies are discovered, the contribution of partners is much the same from year to year.

- **BPA Resident Fish Substitution provided funding for long range planning, staff salaries, tools, and "beaver centric" woody vegetation, and the work associated with "Partnering with Beaver."**
- **Avista Wetland Mitigation provided funding for the management of properties within the Hangman Priority Area that are devoted to the mitigation of lost wetlands.**
- **The Farm Service Agency provided funding for the CCRP contract that secures access to project sites, site specific planning, some "beaver centric" woody vegetation, and tools.**
- **The US Fish and Wildlife Service provided funding for wetland survey and design specific to the needs of *Howellia aquatilis*.**

Project Expenditures: **FY21 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$0	$0	$16,875.47	$149.52	$17,024.99
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$12,325.00	$12,325.00
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$16,875.47	$12,474.52	$29,349.99
Indirect Costs	$0	$0	$6,691.11	$74.91	$6,766.02
Total	$0	$0	$23,566.58	$12,549.43	$36,116.01

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

- **BPA Resident Fish Substitution Funds provided by BPA to enhance a resident redband population in the Hangman Watershed with the hopes of establishing a viable fishery as substitution for a returning anadromous fish resource were used to expand native habitats within streams and drainages of Project Sites. BPA is the primary partner of this Culturally Significant Plant Restoration Project, during FY2021 planting efforts encompassed approximately 105 acres of floodplain. The species planted with BPA funding included "beaver centric" species with the intent of increasing beaver habitats to improve in-stream habitat conditions. The Resident Fish Substitution process was directly involved in improving the habitats within 105.7 kilometers of stream and drainage bottom within the various project sites.**

- **Avista Wetland Mitigation funds were used to restore and manage approximately 1009.53 acres in the Hangman Watershed. These properties contain 9.28 kilometers of stream and drainage bottom habitats as well as accompanying floodplain habitat. Substantive camas resources and a host of Culturally Significant plants exist within this area, however additional areas that are degraded form their potential habitat condition and will offer sites of habitat/plant restoration in the future.**

- **The Farm Service Agency provided CCRP lease payments to landowners to allow native vegetation establishment on 62.33 acres of the Hangman Watershed.**

- **US Fish and Wildlife Service - The Howellia Restoration Partners in Fish and Wildlife funds were used to develop designs for wetlands suitable for *Howellia aquatilis*, a regional sensitive species was recently removed from the Threatened Species List. Designed wetland will serve to enhance floodplain hydrology, increasing the potential for the establishment of a more diverse assemblage of Plants of Cultural Significance while providing fill for stream channel restoration. Wetlands that supported robust howellia populations in 2009 slowly became overrun with reed canary grass till howellia was almost eliminated. In 2021, the reed canary grass was removed from those wetlands in the hopes that the howellia can be reestablished.**

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

- **The success of seeding efforts will be measured with line transects randomly placed through the middle of the seeded area. The results of these transects will deliver a density of the desired plant of Cultural Significance for a specific planting effort. This density is readily translated into the availability of that resource to Community Members.**

- **The success of tall-one planting efforts will continue to be measured with counts of planting survival in the first and second years after planting. It is assumed these years represent the time period of greatest mortality since this effect is commonly demonstrated. Survival rates can readily be translated into the availability of a particular food or utilitarian resource to Community Members.**

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

- **Camas production will be measured with line transect derived indices of density the third, and fifth years after seed dispersal. Camas establishment is a slow process. In 2021, a quick examination of the area broadcast with camas seed in the fall of 2019 revealed no evidence of camas production. However, given the drought year and the slow establishment of camas, which is sometimes not detected for at least 3 years and possibly not for 5 years after seeding, the lack of camas blooms is not a reason to consider the first seeding of camas a failure. In FY2022, which will be the third year after planting, counts of camas flowers along actual transects across the seeded area will be taken.**

- **The survival of planted woody vegetation will be measured through survival counts for the first two years after planting. Preliminary examination of the FY19 and FY20 data reveal that no substantive strides were made in improving survival by altering timing, placement and location of plantings. However, on a separate restoration project site, larger, 5-gallon sized planting stock was tested and the first year survival rates exceeded**

- **90%. Given this result in a drought year, a sift to larger planting stock is warranted, particularly if the same number of plants establish with less man-power investment and similar costs.**

- **The maturation of these resources over time will be observed and as is the case with all efforts to restore Cultural Significant Plants in the Hangman Watershed, the restoration will be considered successful when the abundance of these natural resources are sufficient to entice harvest.**

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: ***chdelm khwa chatq'ele'et*** **Part B – Monitoring and Modeling Coeur d'Alene Lake's Response to Restoration**

Project Approval Date: August 9, 2018
Trustee Council Resolution #: 44

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $268,668.00
Funds Spent this Quarter: $12,810.31
Funds Spent this Fiscal Year: $42,201.46

A. GENERAL INFORMATION

Project Proponent Name: Dale Chess, Coeur d'Alene Tribe. Lake Management Department
Primary Telephone Number: 208.686.1803
Email: dchess@cdatribe-nsn.gov

Project Sponsor: Coeur d'Alene Tribe
Primary Telephone Number: 208.667.5772
Email: rstevens@cdatribe-nsn.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

Lake and River Water Quality Sampling 2021

- **On March 30, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1) and Coeur d'Alene Lake (C5).**
- **On April 19, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**
- **On May 24, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**
- **On June 15 and 16, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**

- **On July 12 and 13, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**
- **On August 23 and 24, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**
- **On September 20 and 21, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**
- **On October 18 and 19, successfully sampled the Coeurd'Alene River at Harrison (CDARHarr), St. Joe River (SJ1), Coeur d'Alene Lake (C5) and Chatcolet Lake (C6).**

Reporting and Data Sharing to National Academy of Sciences Review

- **Continued data analysis and writing the 2019 and 2020 combined report for Coeur d'Alene Lake.**
- **Continued calibration of AEM3D Coeur d'Alene Lake model and reported the model calibration results during the first meeting with the National Academy of Sciences on February 26, 2021.**
- **Filled seven data requests from the National Academy of Sciences committee, with data collected from the CDA Lake Monitoring Project.**

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.
   - **We did not sample in January and February due to a combination of ice cover in the southern part of the lake, and mechanical issues with our research boat.**
   - **On March 30 low Lake levels kept us from entering and sampling Chatcolet Lake (C6).**

C. EXPENDITURES

1) Please describe any unforeseen expenditures. **NA**
2) Please describe other cost share or contributing funds. **NA**

Project Expenditures: **FY21 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$4,959.62	$6,696.75	$6,623.09	$4,763.89	$23,043.35
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$517.50	$1,068.00	$2,019.25	$6,110.50	$9,715.25
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Total Direct Costs	$5,477.12	$7,764.75	$8,642.34	$10,874.39	$32,758.60
Indirect Costs	$2,000.06	$2,800.75	$2,706.13	$1,935.92	$9,442.86
Total	$7,477.18	$10,565.50	$11,348.47	$12,810.31	$42,201.46

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable. **NA**

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: ***chdelm khwa chatq'ele'et***
Part A-Coeur d'Alene Lake Management Plan Outreach and Implementation

Project Approval Date: **August 9, 2018**
Trustee Council Resolution #: **44**

Reporting Quarter/FY: **Quarter 4 / FY2021-Annual**

Partnership Funds Expenditures
Funds Allocated: **$81,008.00**
Funds Spent this Quarter: **$373.37**
Funds Spent this Fiscal Year: **$9,264.74**

A. GENERAL INFORMATION

Project Proponent Name: **Rebecca Stevens**
Primary Telephone Number: **(208)667-5772**
Email: **rstevens@cdatribe-nsn.gov**

Project Sponsor: **Coeur d'Alene Tribe**
Primary Telephone Number: **(208)667-5772**
Email: **rstevens@cdatribe-nsn.gov**

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.
   - **Throughout the 4th Quarter, Tribal staff presented Our Gem Collaborative updates to the Coeur d'Alene Regional Chamber of Commerce UpBeat Breakfast, the Technical Leadership Group, and the Benewah Soil and Water Conservation District.**
   - **Staff worked with the Our Gem Collaborative in submitting the following articles to the CDA Press; 1) Our Gem: The National Academies of Science (NAS) Study- 17 Years of Research to Consider, 2) NAS History and example studies, 3) Efficient Landscape Manual and City of CDA Water Use Guidelines, and 4) How Conserving Water Can Save Tax Dollars.**
   - **At the beginning of the 4th Quarter, the Our Gem Collaborative surveyed the Coeur d'Alene Basin Community on their knowledge and understanding of water quality**

issues pertaining to Coeur d'Alene Lake. See the results of this report.

- **Tribal staff worked with The Confluence Project and provided teachers from nine area highshools with an overview of the hands on research based curriculum.**

- **Tribal staff provided water quality monitoring field trips to Timberlake and Lake City Highschool students.**

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

- **As with all work during the COVID-19 pandemic, face-to-face presentations and meetings were, limited and online presentations continued to occur.**

C. EXPENDITURES

1) Please describe any unforeseen expenditures. **N/A**
2) Please describe other cost share or contributing funds. **N/A**

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

- **DEQ, U of I Community Water Resource Center, CDA2030, CDA Regional Chamber of Commerce, PHD, Kootenai County, Idaho Washington Aquifer Collaborative, City of Coeur d'Alene, and KEA.**

Project Expenditures: **FY21 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$309.59	$673.11	$383.59	$253.54	$1,619.83
Travel	$0	$0	$0	$0	$0
Supplies	5,914.62	$0	$0	$0	5,914.62
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance (office rent)	$0	$0	1,000.00	$0	1,000.00
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	6,224.21	673.11	1,383.59	253.54	8,534.45
Indirect Costs	137.36	301.38	171.72	119.83	730.29
Total	6,361.57	974.49	1,555.31	373.37	9,264.74

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

- **Goal 1 in the Project Application form states that this project would: Increase public**

awareness about best management practices that reduce nutrient inputs and water quality impacts. Throughout the 3-year life span of the project, numerous water quality related articles ran in the Coeur d'Alene Press of which the community responded to our partners at UofI with positive feedback in the information we provided. The "Our Gem Online Speaker Series" was received well wherein community members provided feedback at the end of each session with recommendations on future presentations. All articles and recorded presentations can be viewed virtually at https://www.uidaho.edu/cda/cwrc/our-gem

- **Throughout the last 2 years during the COVID-19 pandemic, The Confluence Project (TCP) was converted to a virtual outreach experience where Tribal staff worked with the other TCP Steering Committee members to create an online curriculum for teachers where they were able to click on the hyperlinks to access all of the water quality outreach materials. This curriculum can be found below after the Our Gem Survey results.**

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

- **This is a unique project wherein performance standards were based on human perception and feedback loops from the community. Due to the Tribe withdrawing their support for the Lake Management Plan in 2019 and a call for action from the community, Tribal staff had to get creative on how to stay engaged with outreach activities. Thankfully, due to our partners at the UofI, DEQ, PHD, and the Chamber of Commerce, these activities continued with success and the Basin community continued to support the Tribe in their call for action in requesting EPA to address the hazardous substances that continue to remain at the bottom of the Lake. The jury is still out as the National Academy of Sciences (not funded by this RP project) continues to analyze water quality data from the Tribe and DEQ. Results from the NAS analysis are anticipated to be presented to the community in 2022-2023.**

- **This is the final report for this restoration project however the Tribe anticipates that they may want to revisit this work with the Trustee Council in the future with potential funding requests depending on how the NAS results come out.**

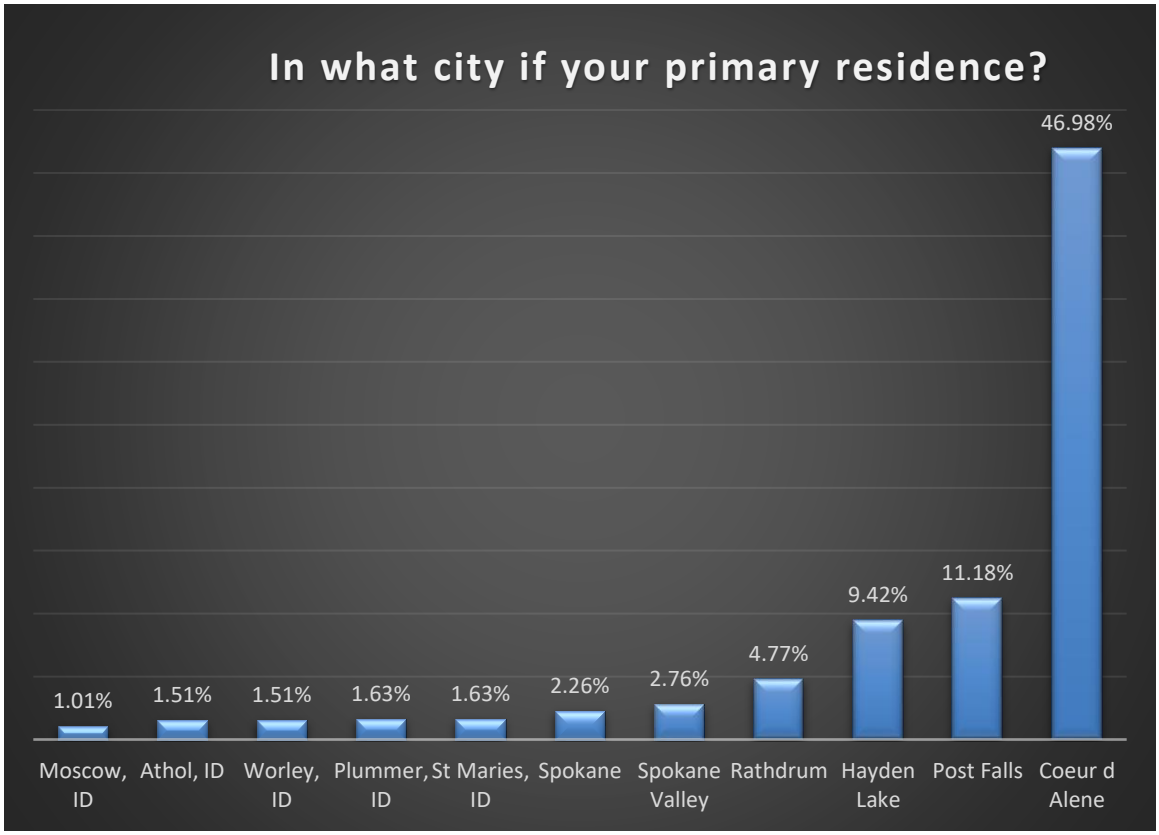
Our Gem Survey Results

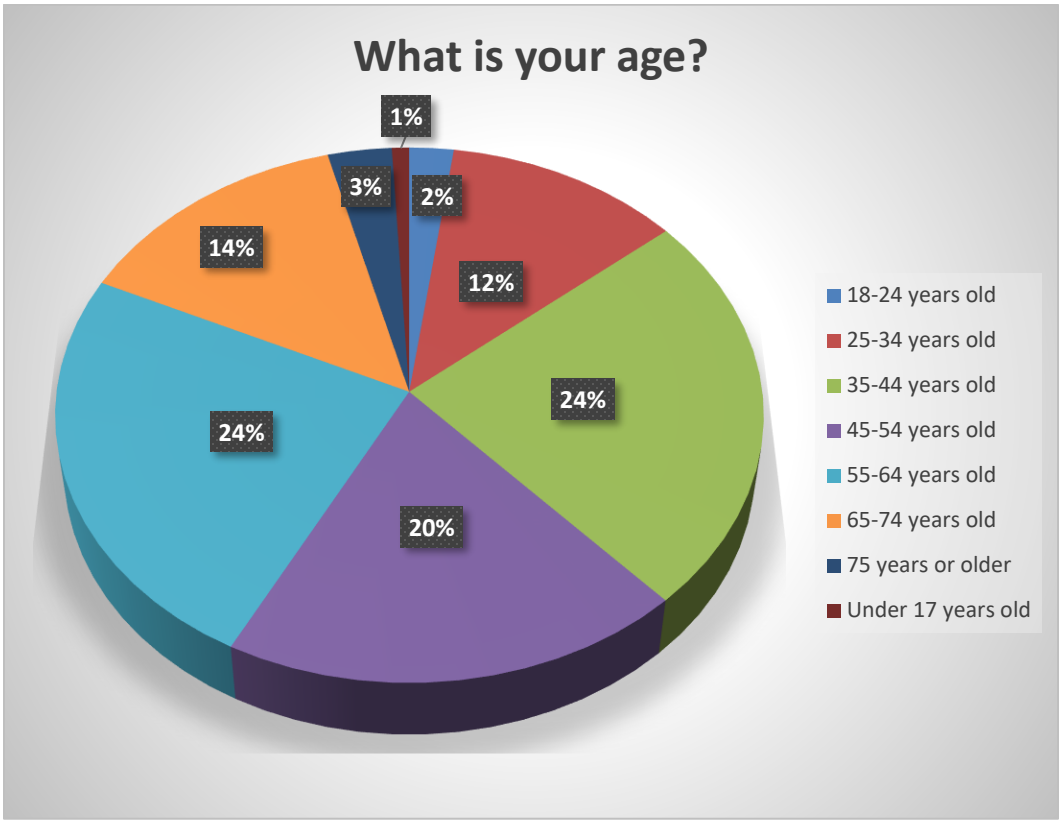
Methodology:

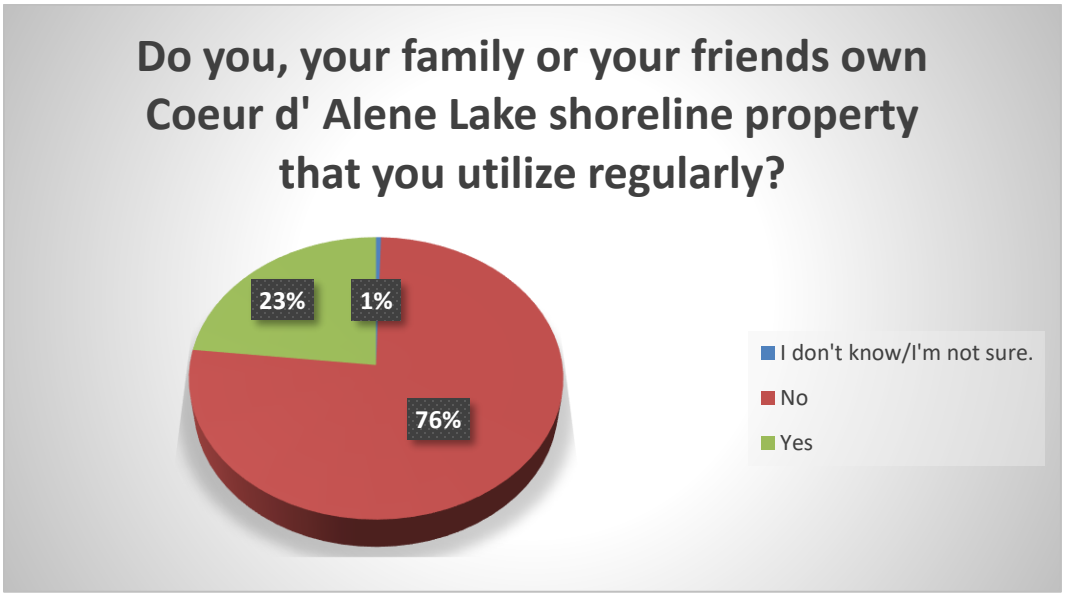
2021 Our Gem Lake Survey was an online survey but was advertised on social media, printed cards, fliers, and word of mouth. 1020 people participated in the survey.

Demographics:

Majority of people surveyed were between 35-64 years old. Majority of people surveyed were from Coeur d' Alene followed by Post Falls. Surveys were submitted by residents in Washington, Oregon, California, Texan, Colorado, Wyoming, Kentucky, and Florida. Majority of those surveyed do not have property on Coeur d' Alene Lake.



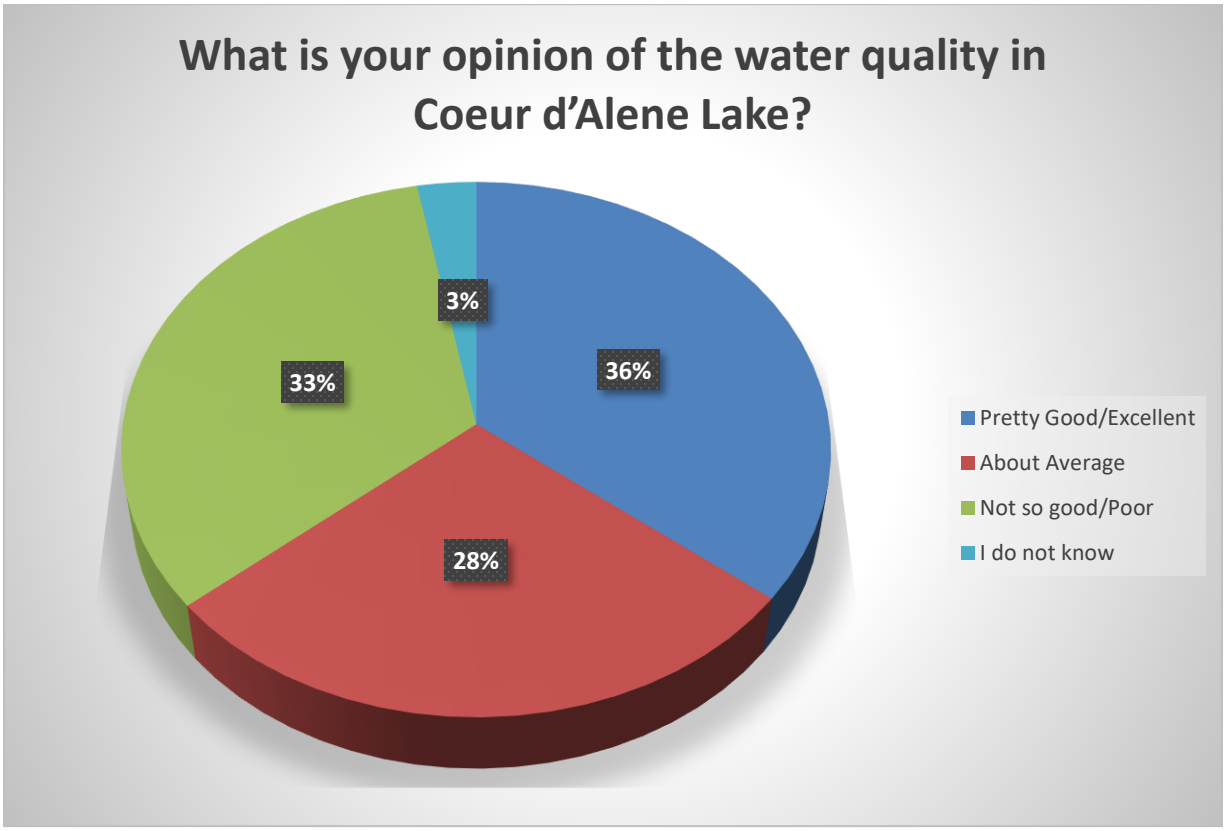


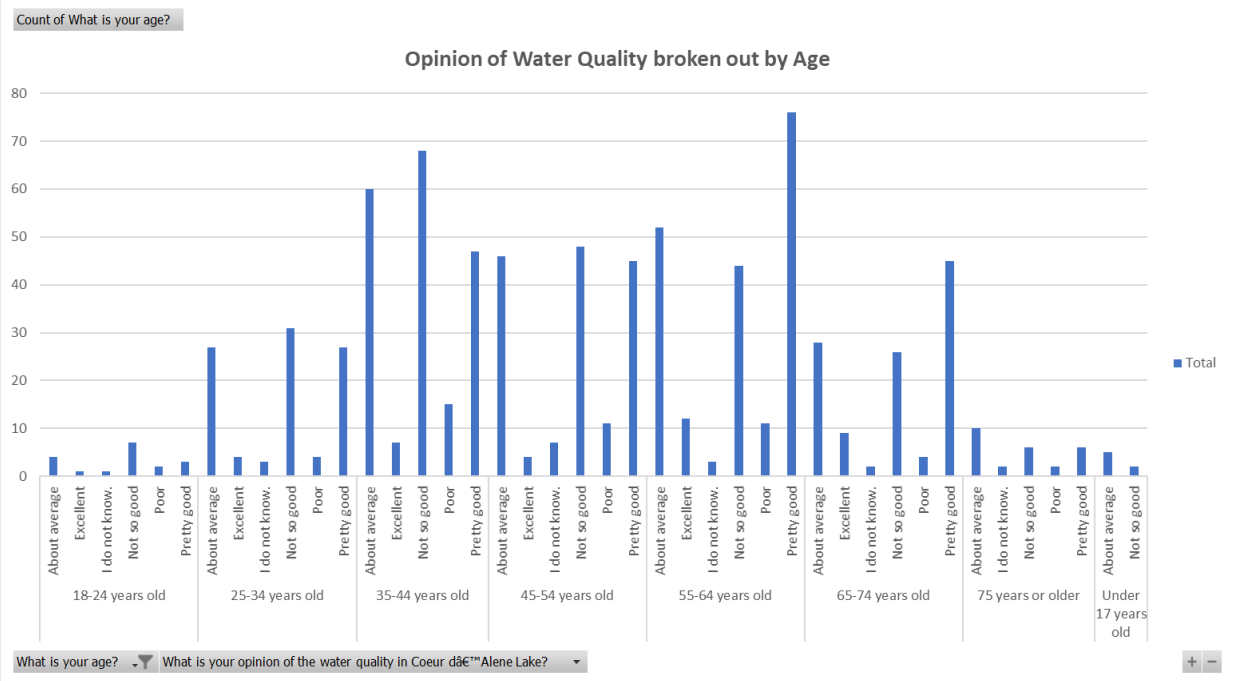


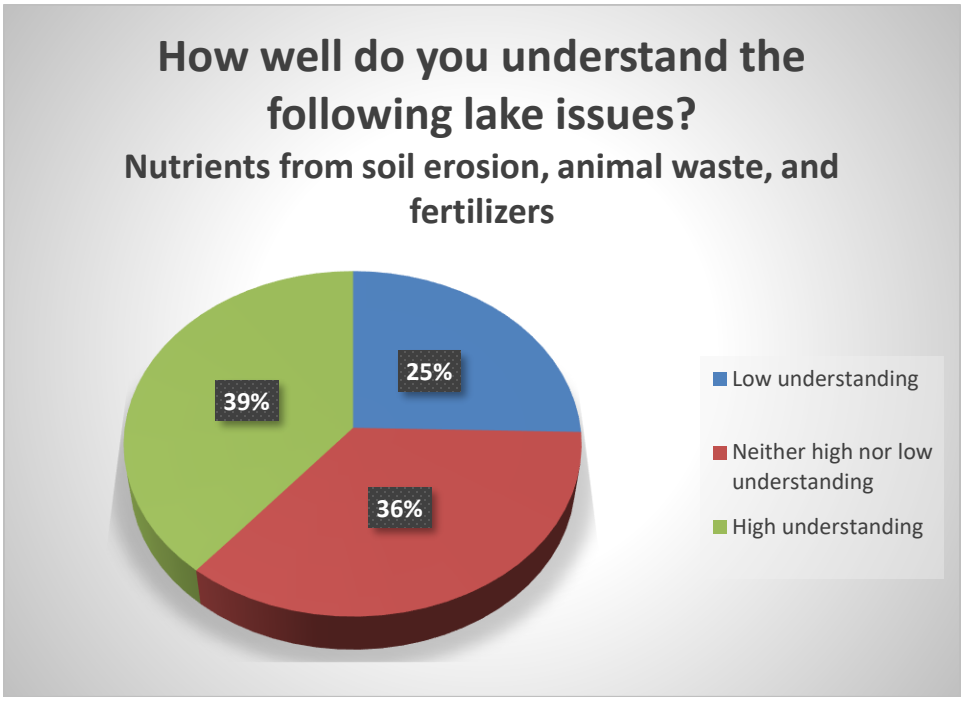
Knowledge about the Water Quality of Lake Coeur d' Alene:

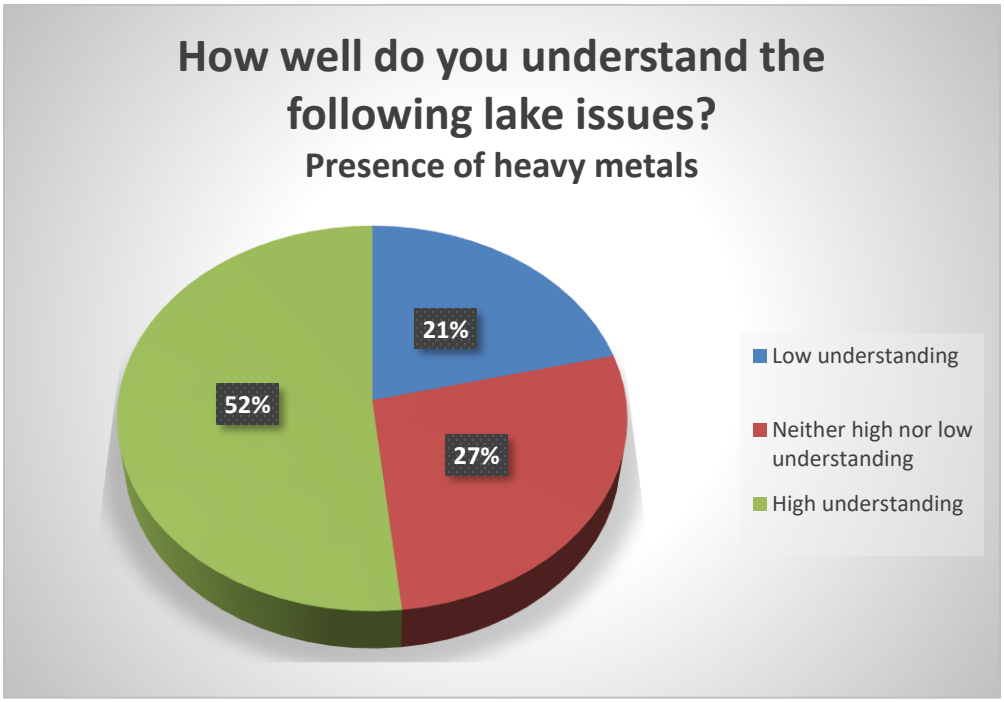
Majority of people surveyed believe that water quality of Lake CDA is pretty good or excellent, but it was almost evenly split between 1/3 people thought the water quality was poor, 1/3 thought it was

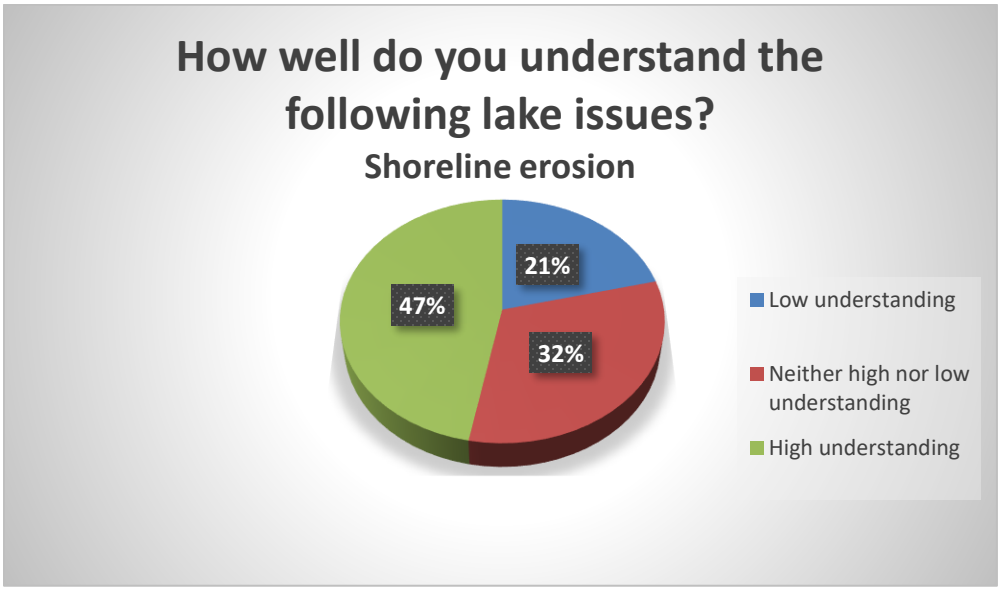
excellent, and 1/3 about average. Those that felt the Lake's water quality was excellent or pretty good were more likely to be between the ages of 55-64 years old. Those that felt the Lake's water quality was not so good or poor were more likely to be between the ages of 35-44 years old, followed by 45-54 years old. Most people surveyed have a high understanding of the following lake issues: Nutrients from soil erosion, animal waste and fertilizers, Presence of heavy metals, Shoreline erosion, Untreated Stormwater, and Importance of healthy oxygen levels. Those surveyed had the highest understanding of the importance of healthy oxygen levels, the presence of heavy metals, and shoreline erosion. Most people have neither high nor low understanding of environmental regulations impacting property values and recreation.

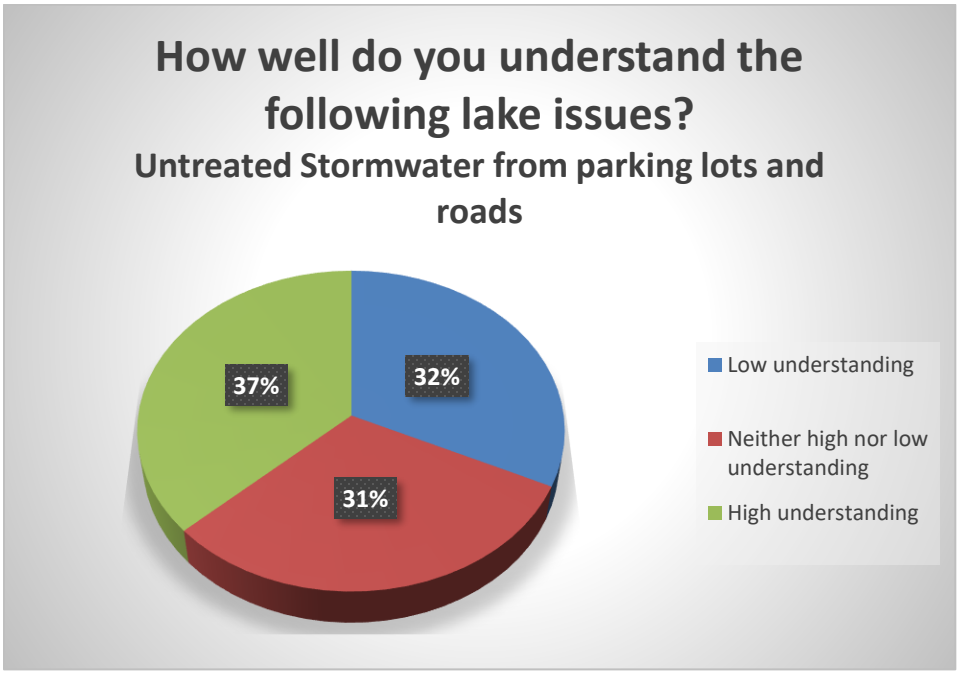


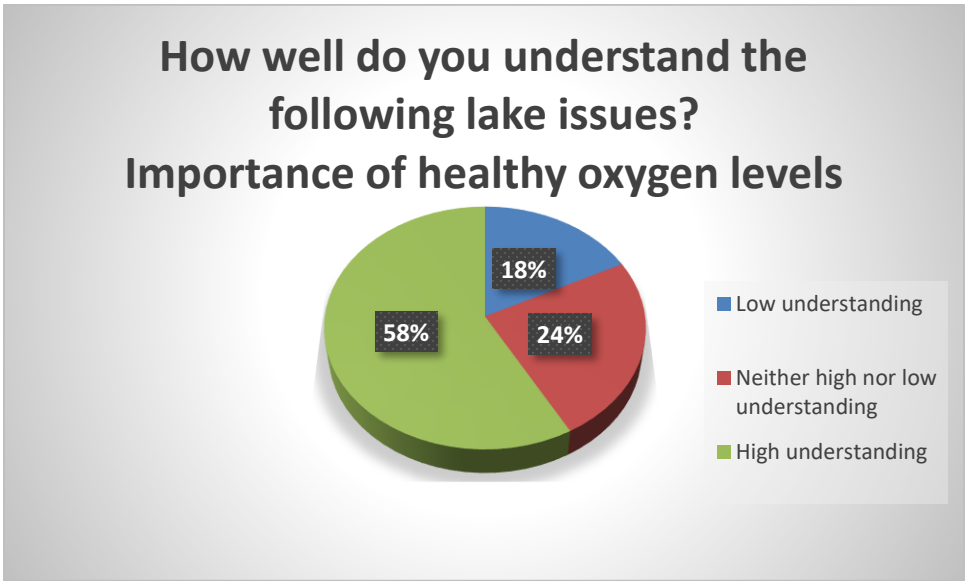

Count of What is your age?
Opinion of Water Quality broken out by Age
80
70
60
50
40
30
20
10
0
Total
About average
Excellent
I do not know.
Not so good
Poor
Pretty good
18-24 years old
25-34 years old
35-44 years old
45-54 years old
55-64 years old
65-74 years old
75 years or older
Under 17 years old
What is your age?
What is your opinion of the water quality in Coeur dâ€™Alene Lake?

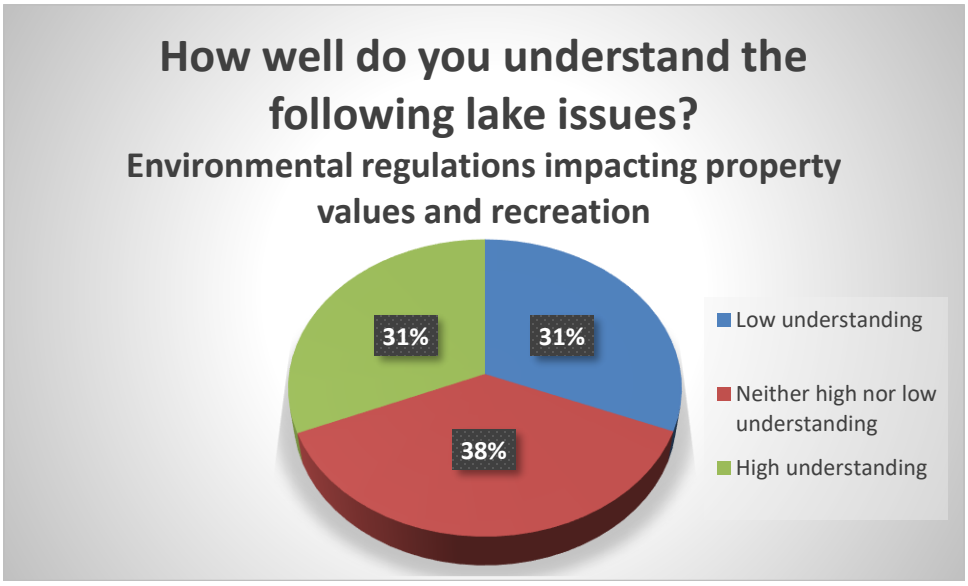

How well do you understand the following lake issues?
Nutrients from soil erosion, animal waste, and fertilizers
25%
39%
36%
Low understanding
Neither high nor low understanding
High understanding


How well do you understand the following lake issues?
Presence of heavy metals
21%
27%
52%
Low understanding
Neither high nor low understanding
High understanding


How well do you understand the following lake issues?
Shoreline erosion
21%
32%
47%
Low understanding
Neither high nor low understanding
High understanding

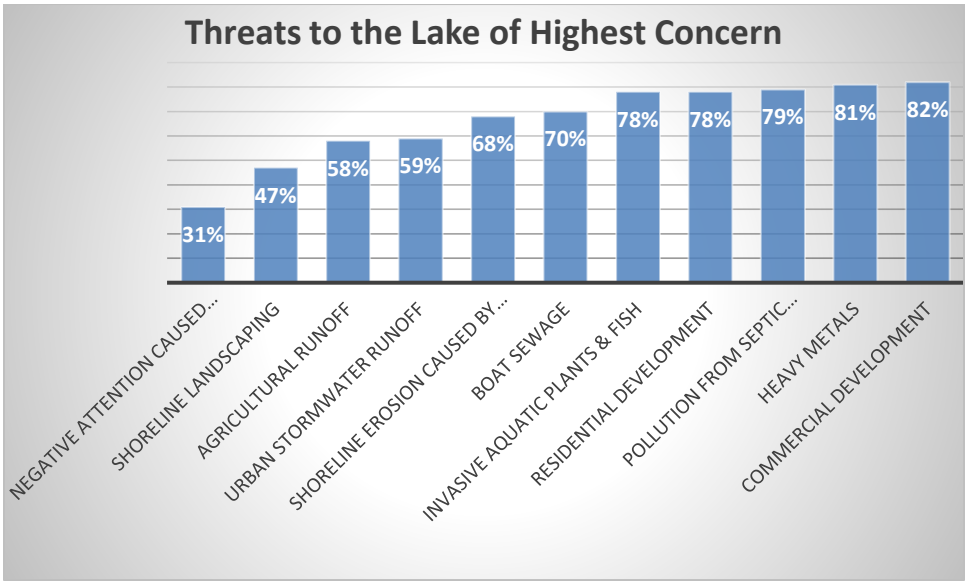

How well do you understand the following lake issues?
Untreated Stormwater from parking lots and roads
32%
31%
37%
Low understanding
Neither high nor low understanding
High understanding

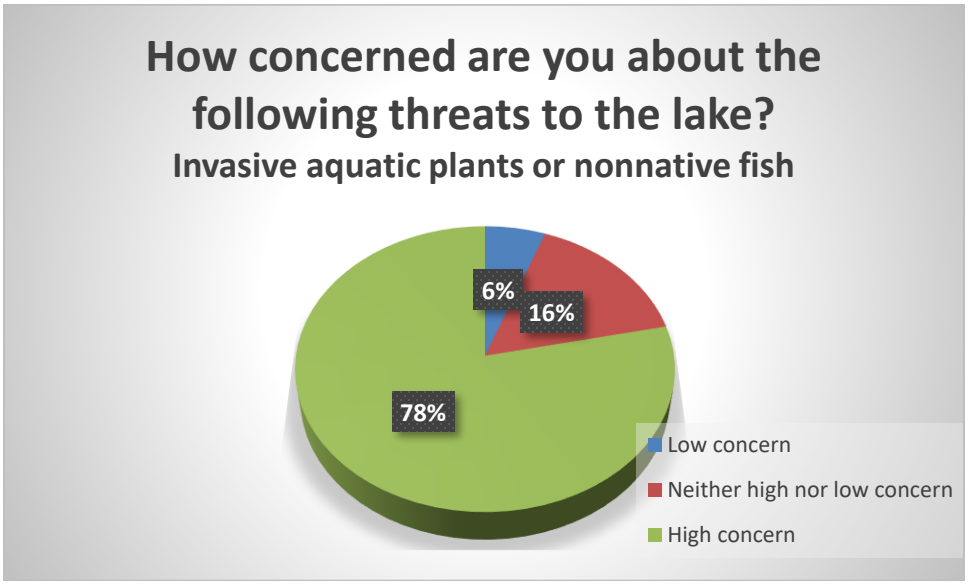

How well do you understand the following lake issues?
Importance of healthy oxygen levels
18%
24%
58%
Low understanding
Neither high nor low understanding
High understanding

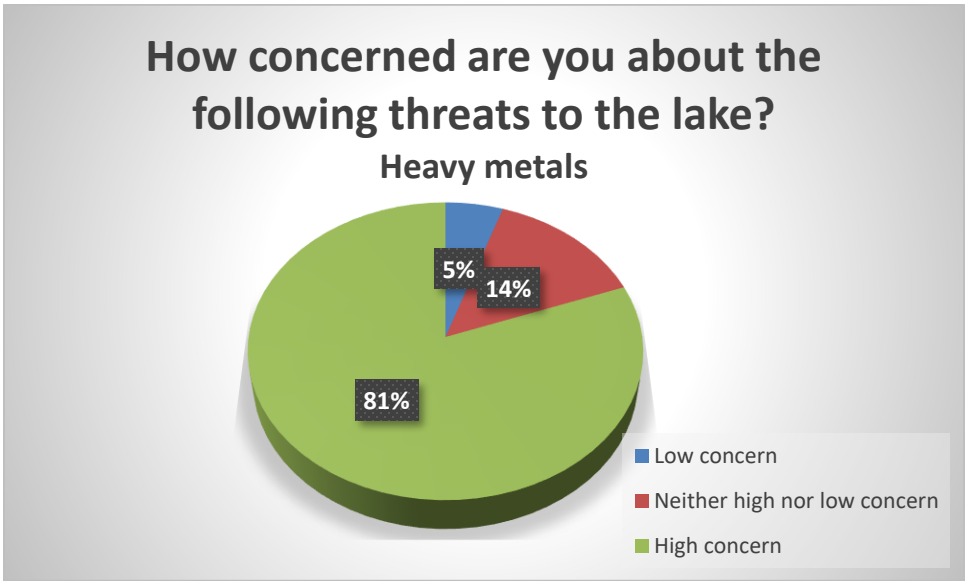


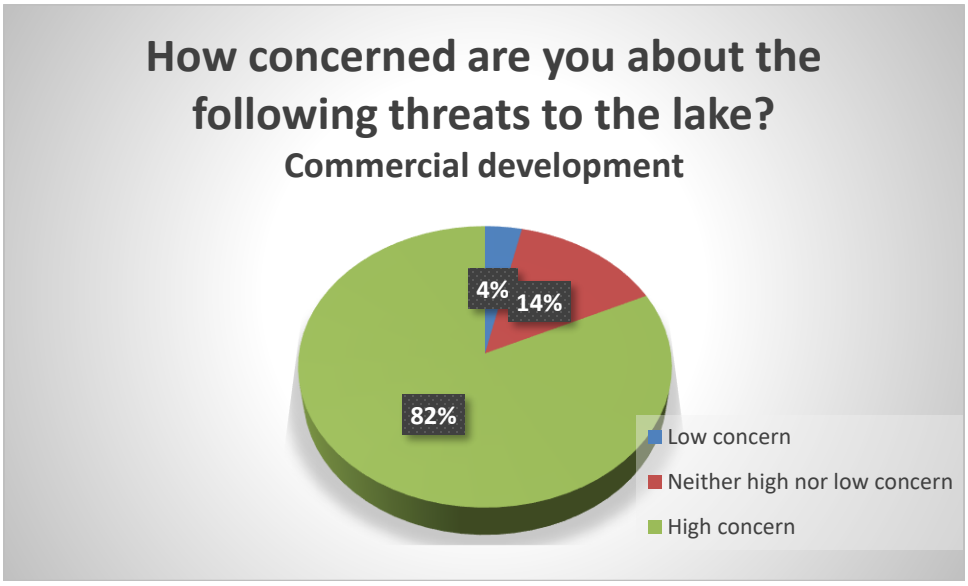
Threats to the Lake:

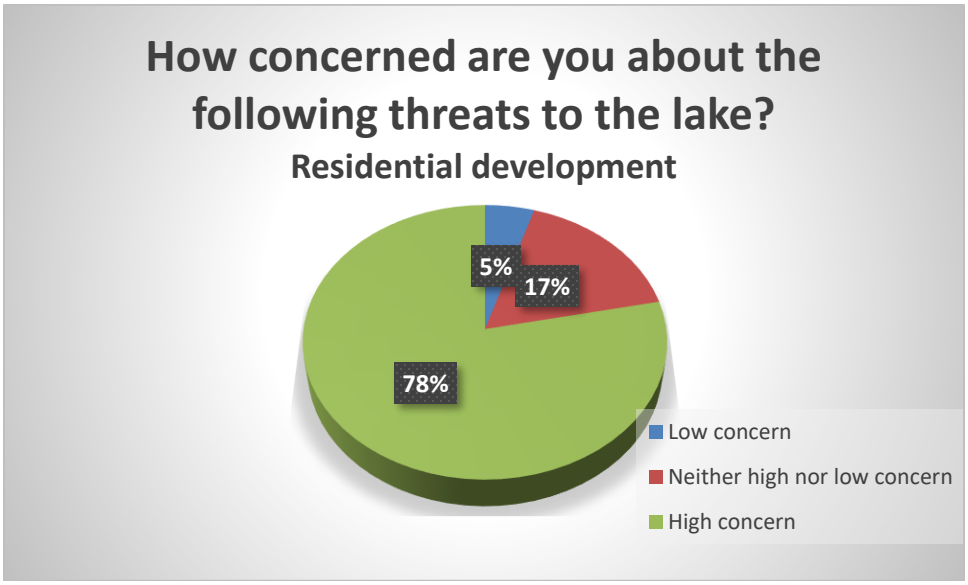
Majority of people were concerned about all threats to the lake except the negative attention caused by EPA Superfund cleanup activities. People were most concerned about Commercial Development, Heavy metals, Pollution from septic systems, Invasive aquatic plants and fish, and Residential Development.

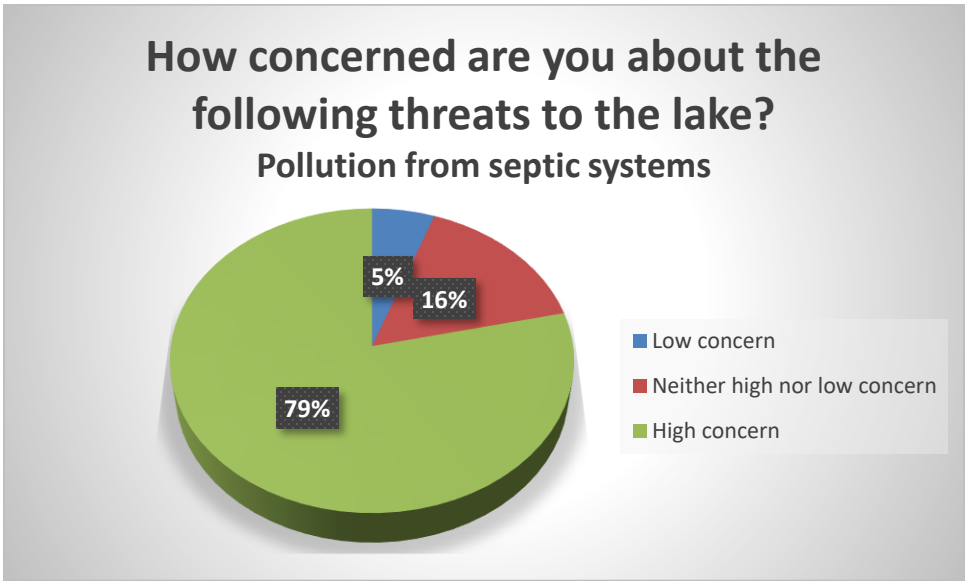


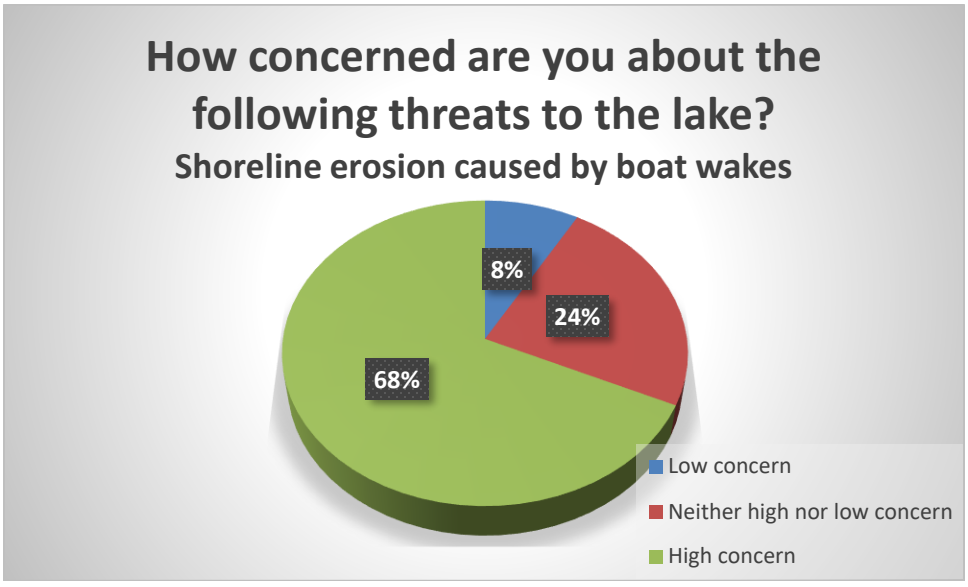

How concerned are you about the following threats to the lake?
Invasive aquatic plants or nonnative fish
6%
16%
78%
Low concern
Neither high nor low concern
High concern

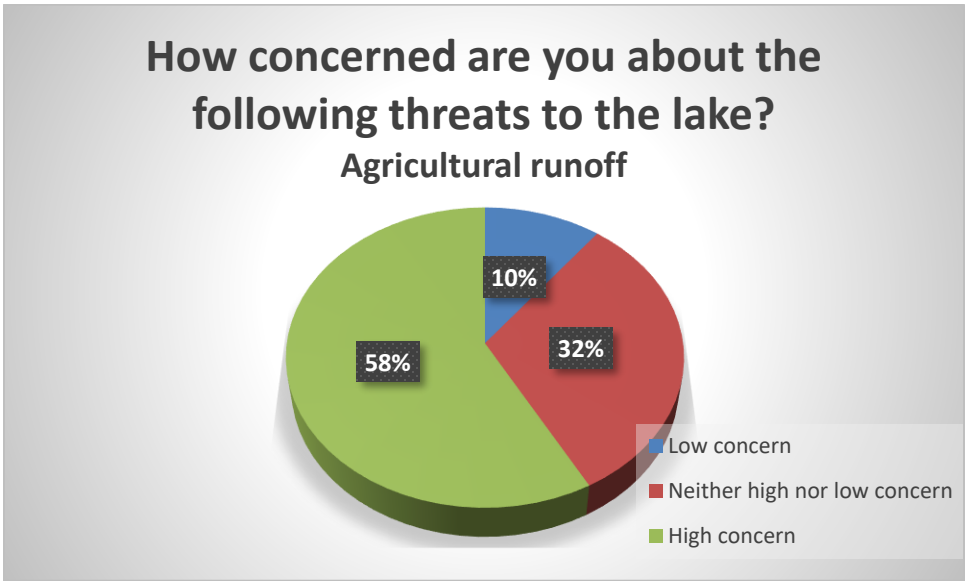

How concerned are you about the following threats to the lake?
Heavy metals
5%
14%
81%
Low concern
Neither high nor low concern
High concern

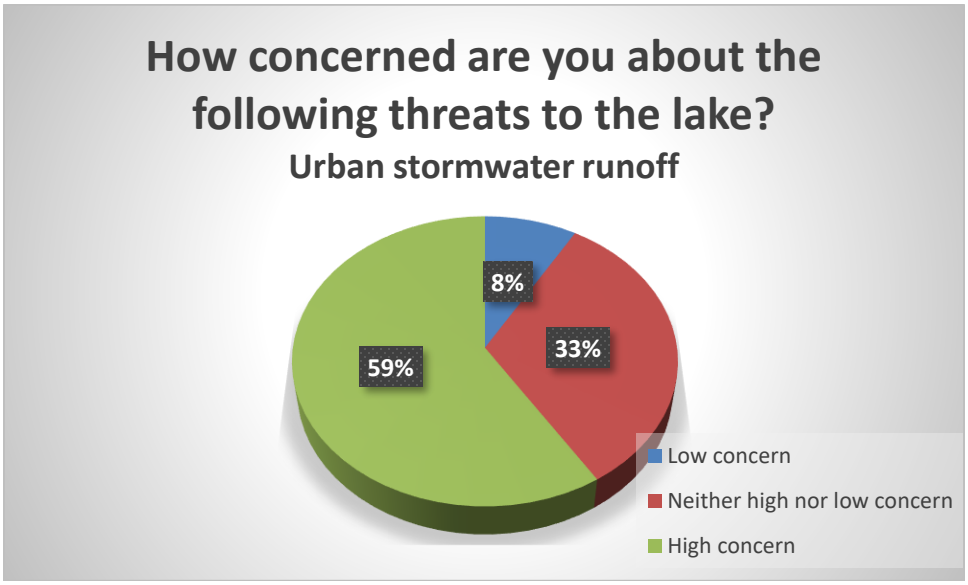

How concerned are you about the following threats to the lake?
Commercial development
4%
14%
82%
Low concern
Neither high nor low concern
High concern

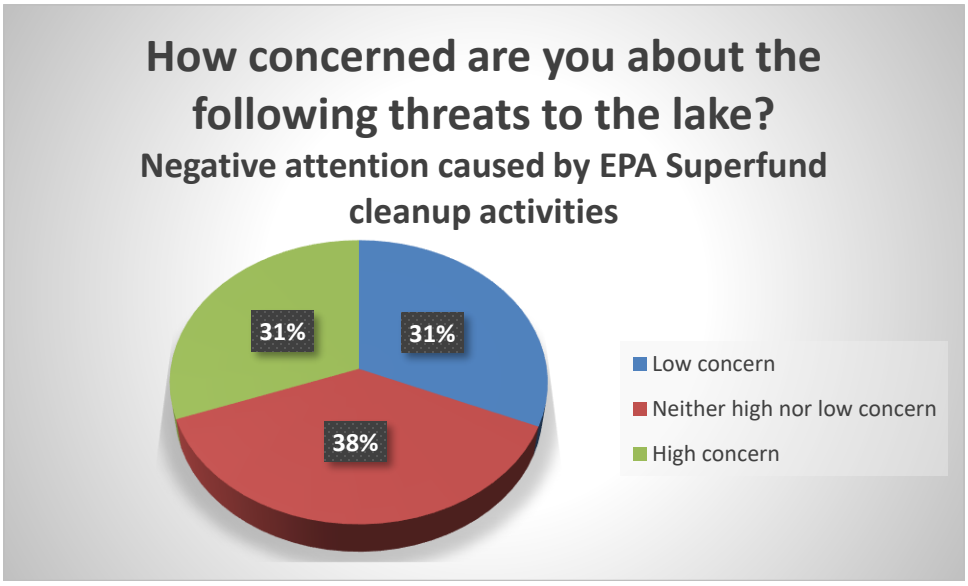

How concerned are you about the following threats to the lake?
Residential development
5%
17%
78%
Low concern
Neither high nor low concern
High concern

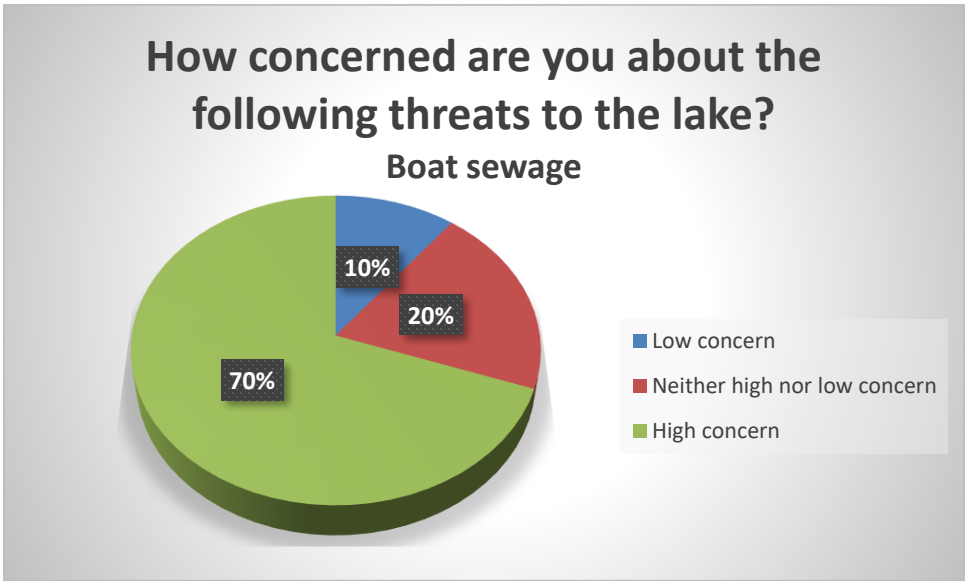

How concerned are you about the following threats to the lake?
Pollution from septic systems
5%
16%
79%
Low concern
Neither high nor low concern
High concern

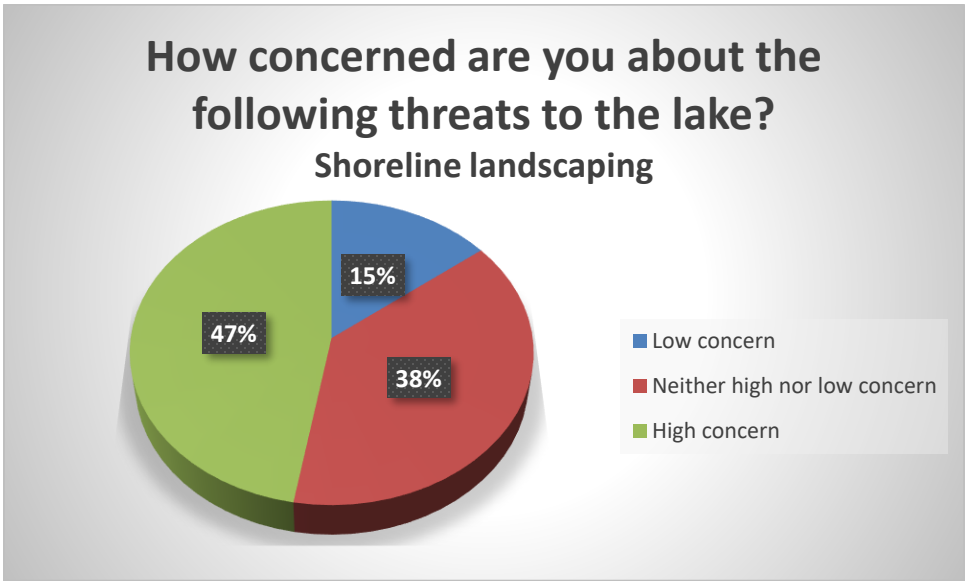

How concerned are you about the following threats to the lake?
Shoreline erosion caused by boat wakes
8%
24%
68%
Low concern
Neither high nor low concern
High concern


How concerned are you about the following threats to the lake?
Agricultural runoff
10%
32%
58%
Low concern
Neither high nor low concern
High concern


How concerned are you about the following threats to the lake?
Urban stormwater runoff
8%
33%
59%
Low concern
Neither high nor low concern
High concern

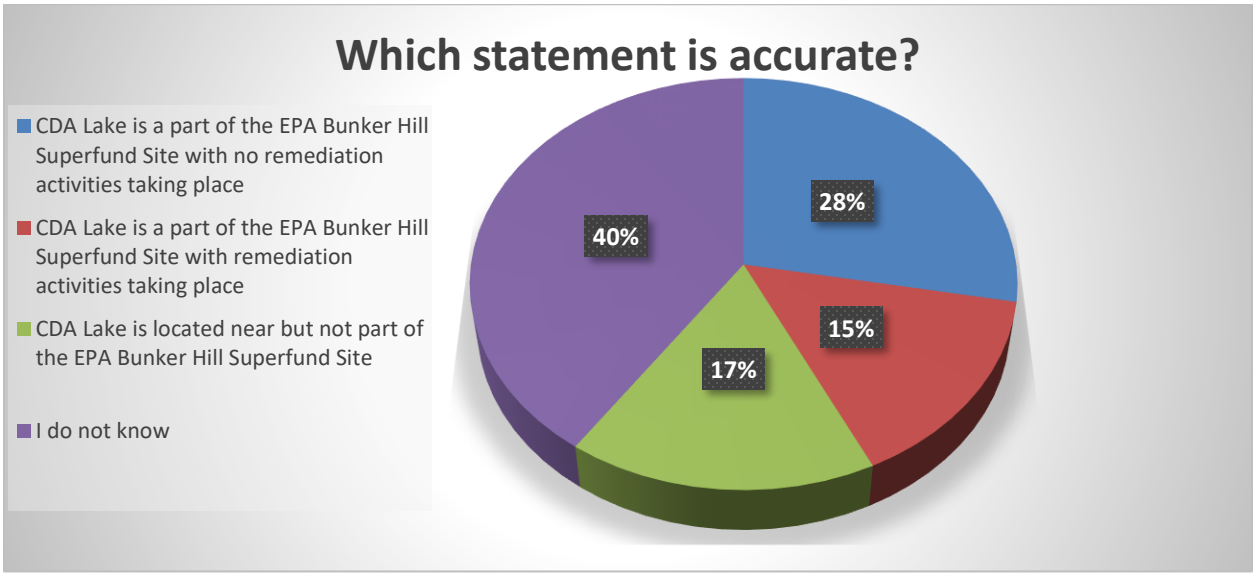

How concerned are you about the following threats to the lake?
Negative attention caused by EPA Superfund cleanup activities
31%
31%
38%
Low concern
Neither high nor low concern
High concern

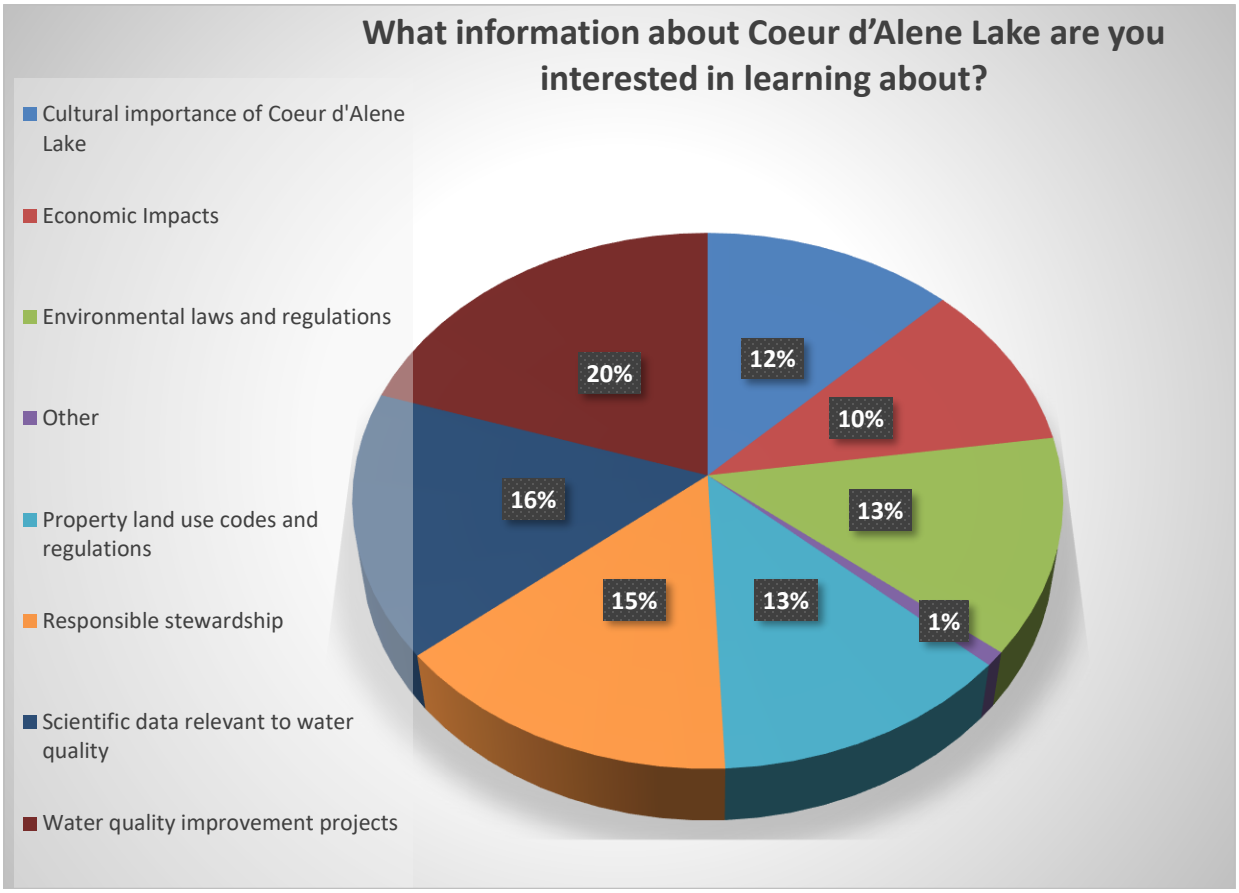

How concerned are you about the following threats to the lake?
Boat sewage
10%
20%
70%
Low concern
Neither high nor low concern
High concern

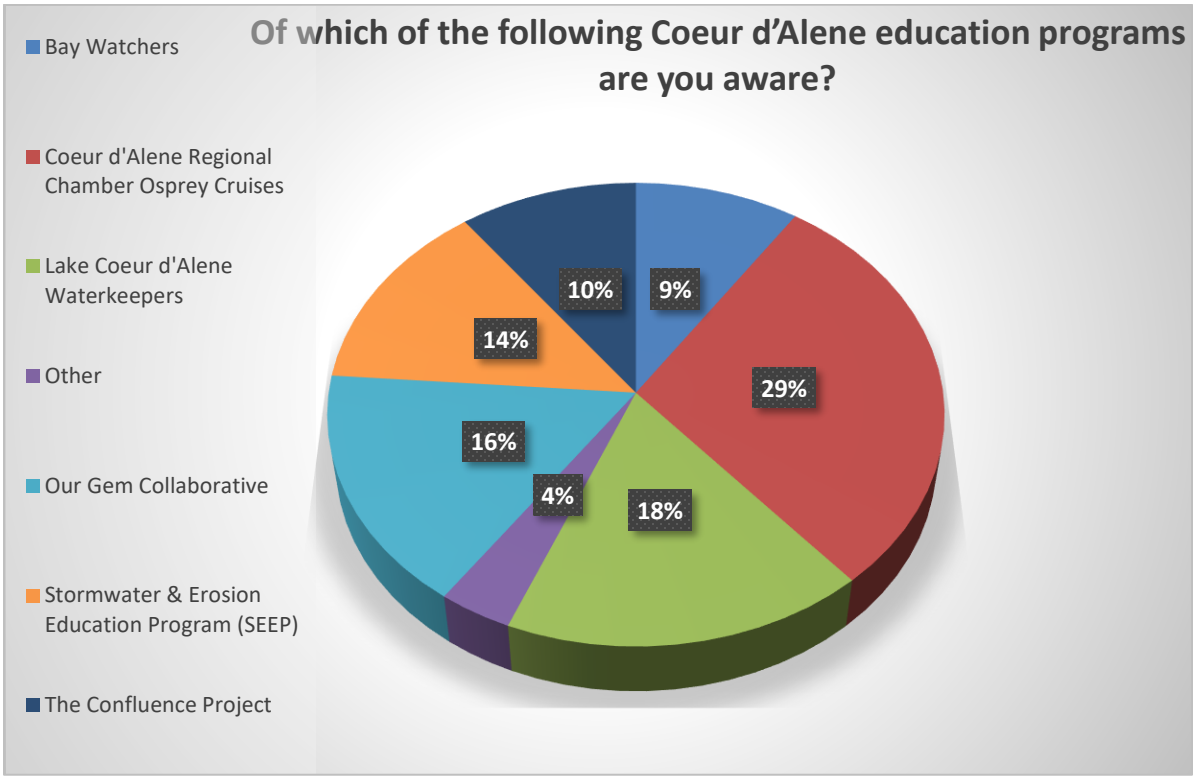


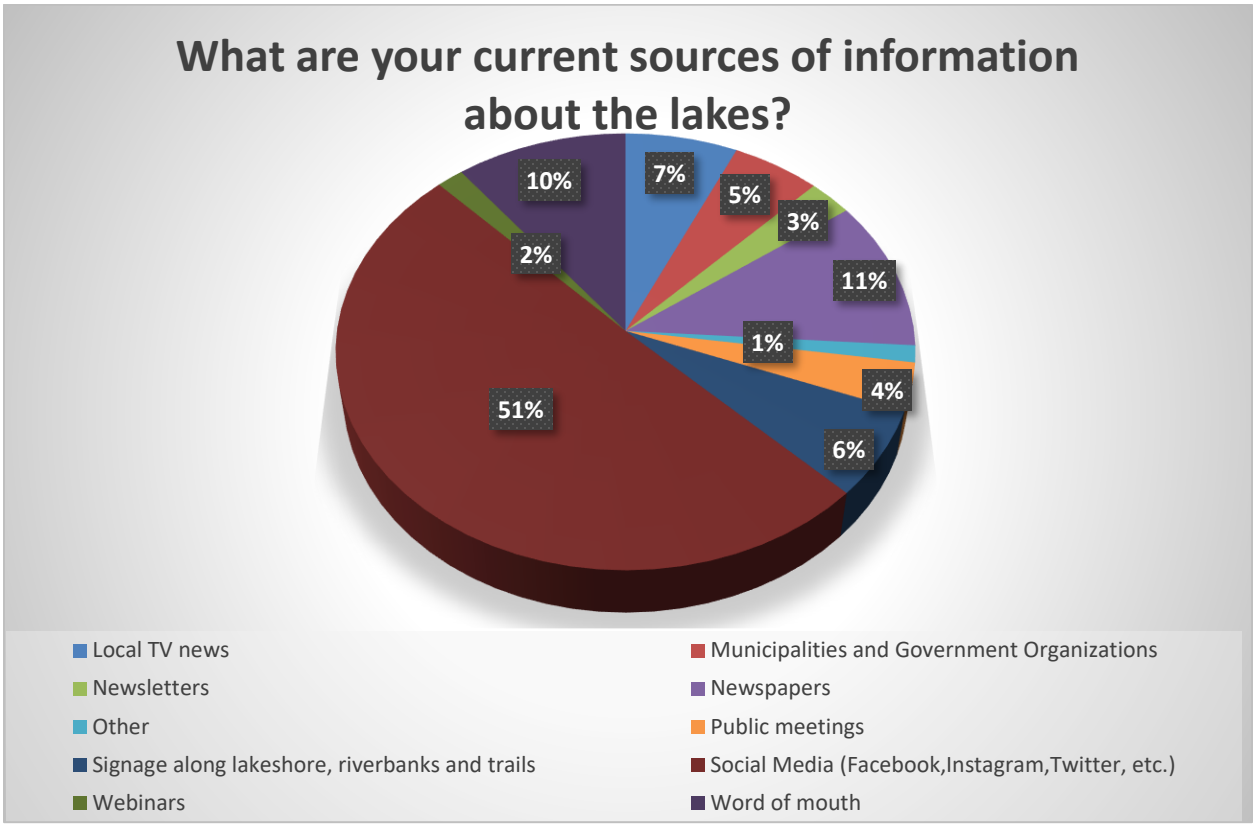
Lake Coeur d'Alene Outreach:

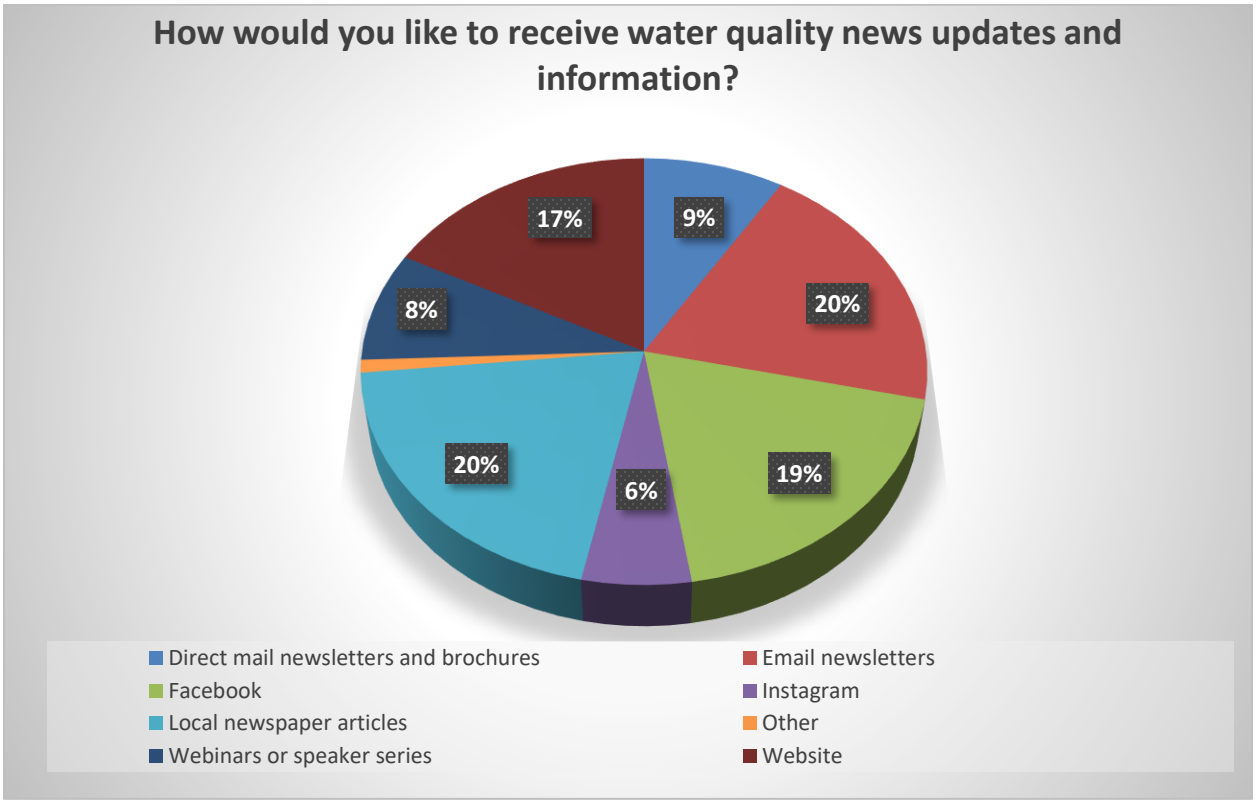
Majority of people were not sure which statement was correct regarding CDA Lake and the EPA Bunker Hill Superfund Site, although 28% of people did know that it is part of the Superfund site without remediation plans. Most people would like information on Water Quality improvement projects for Lake Coeur d'Alene followed by Scientific Data relevant to water quality and responsible stewardship. Most people are aware of the Chamber Osprey Tours, followed by Lake Coeur d'Alene Waterkeepers. Most people get their information about the lake from Social Media, followed by newspapers. Majority of people would like to receive information about water quality from the Local newspaper or email newsletters, followed by Facebook.




What information about Coeur d'Alene Lake are you interested in learning about?
Cultural importance of Coeur d'Alene Lake
Economic Impacts
Environmental laws and regulations
Other
Property land use codes and regulations
Responsible stewardship
Scientific data relevant to water quality
Water quality improvement projects
12%
10%
13%
1%
13%
15%
16%
20%

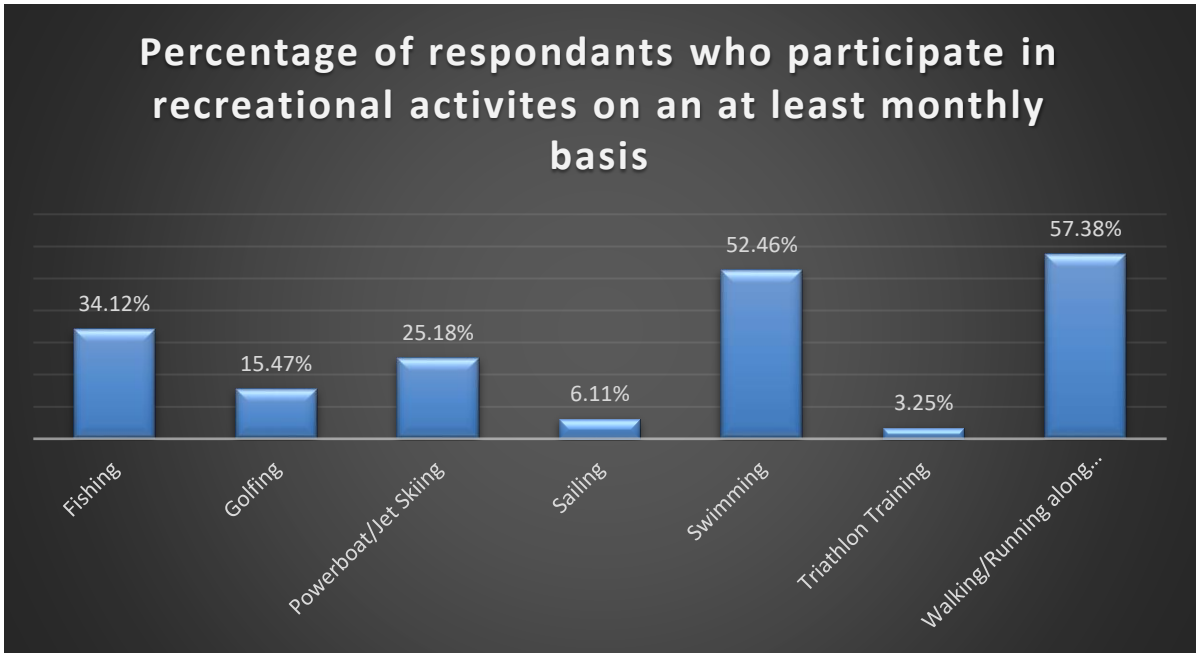

Of which of the following Coeur d'Alene education programs are you aware?
Bay Watchers
Coeur d'Alene Regional Chamber Osprey Cruises
Lake Coeur d'Alene Waterkeepers
Other
Our Gem Collaborative
Stormwater & Erosion Education Program (SEEP)
The Confluence Project
9%
29%
18%
4%
16%
14%
10%


What are your current sources of information about the lakes?
7%
5%
3%
11%
1%
4%
6%
51%
2%
10%
Local TV news
Municipalities and Government Organizations
Newsletters
Newspapers
Other
Public meetings
Signage along lakeshore, riverbanks and trails
Social Media (Facebook,Instagram,Twitter, etc.)
Webinars
Word of mouth



Coeur d'Alene Lake Recreational Activities:

Of the people surveyed, the top three activities they participated in on an at least monthly basis were walking/running along the lake, swimming, and fishing.



THE CONFLUENCE PROJECT

Teachers Online Curriculum Outline

1. TCP Introduction Lessons
    a. Pre Survey
    b. TCP Overview
        i. PPT: TCP Overview
        ii. Quiz

2. Watershed Lessons
    a. What is a Watershed?
        i. Article: What is a Watershed
        ii. Video: What is a Watershed? ~2 minutes
        iii. Quiz
    b. What is in your Watershed?
        i. Article: CDA Lake Quality
        ii. Video: CDA Basin ~8 minutes
        iii. Video: Protecting our Lake ~16 minutes
        iv. Article: A Dangerous Cocktail
        v. Quiz

c. Health of our Lakes
   i. Video: Health of our Lakes-26 minutes
   ii. Quiz
d. Stream Ecology
   i. Video-A Study in Stream Ecology~7 minutes
   ii. Quiz
e. The Water Cycle
   i. Video: The Water Cycle-~6 minutes
   ii. Quiz
f. The Water cycle and water pollution
   i. Video: Water cycle and water pollution ~17 minutes
   ii. Quiz
g. Eutrophication
   i. Article: Eutrophication: 6 pages
   ii. Article: Eutrophication at Fernan Lake: 1 page - unable to cite article that was found in TCP folder
   iii. Quiz
h. Hypoxia
   i. Article: Hypoxia 101 - 4 pages
   ii. Quiz

3. Water Quality
   a. Water Quality Testing Parameters
      i. PPT: TCP WQ testing
      ii. Video: Jim Ekin's pH & DO Testing Instructions ~ 4 minutes
      iii. Quiz
   b. Water Quality Testing
      i. PPT: TCP Water Quality Testing Instructions
      ii. TCP Water Quality Data Entry

   c. Macroinvertebrates
      i. Macroinvertebrates
         1. Video: Macroinvertebrates: Understanding water quality ~3 minutes
         2. Quiz
      ii. Macroinvertebrates
         1. Video: Biotic Index ~ 11 minutes
         2. Quiz

   d. Land Use
      i. Video: Tributaries Study ~3 minutes
      ii. Quiz

e. Nutrient Pollution
   i. Nutrient Pollution
      1. Video: Nutrient Pollution ~2 minutes
      2. Quiz
   ii. The Quality of our Nation's Waters
      1. Article: The Quality of our Nation's Waters: 4 pages
      2. Quiz

f. Harmful Algae Blooms
   i. Video: Harmful Algae Blooms ~ 10 minutes
   ii. Quiz

g. Stormwater
   i. What is stormwater
      1. Video: What is stormwater~3 minutes
      2. Quiz
   ii. Managing stormwater
      1. Video: Managing stormwater~2 minutes
      2. Quiz
   iii. Stormwater pollution
      1. Video: Stormwater pollution & Green Infrastructure~30 minutes
      2. Quiz
   iv. Debris in waterways
      1. Article: Debris in waterways:10 pages
      2. Quiz

h. Climate Change
   i. The water paradigm
      1. Video: Climate Change: The water paradigm~2 minutes
      2. Quiz
   ii. Freshwater Ecosystems
      1. Video: Freshwater aquatic ecosystems~4 minutes
      2. Quiz
   iii. Climate change and snowpack
      1. Article: Climate change will mean more multiyear snow droughts in the West - 7 pages
      2. Quiz
   iv. Climate change and the Great Lakes
      1. Article: Superior Article - 5 pages
      2. Quiz

v. Climate Change and Fish Habitat
    1. Article: How does climate change make fish late for dinner? - 5 pages
    2. Quiz

i. Aquatic Invasive Species
    i. What are Invasive Species and what harm can they do?
        1. Article: What are Invasive Species and what harm can they do?: 2 pages
        2. Quiz
    ii. Quagga and Zebra Mussel Case Study
        1. Article: Quagga and Zebra Mussel Case Study: 3 pages - *Invasive Species of Idaho website, Why it Matters, Learn more:economic impacts of mussel infestation.*
        2. Quiz
    iii. How Hurricanes Spread Invasive Species
        1. Article: Storm Tracker' Maps Shows How Hurricanes Spread Invasive Species: 2 pages
        2. Quiz
    iv. Aquatic Invasive Species Monitoring
        1. Video: AIS monitoring in Montana~2 minutes
        2. Quiz
    v. What happens when a fouled boat is found at an AIS monitoring station
        1. Video: Trucker driving fouled sailboat into Idaho
        2. Fact sheet about AIS stations

4. Groundwater
    a. What is an Aquifer
        i. Video: What is an aquifer~5 minutes
        ii. Quiz
    b. Groundwater Activity
        i. Project Wet ground water activity in document link
    c. Rathdrum Prairie Aquifer
        i. PPT: TCP Groundwater presentation
        ii. Quiz
    d. Spokane Valley Rathdrum Prairie Aquifer
        i. Video: SVRPA ~10 minutes
        ii. Quiz
    e. Aquifer demonstration
        i. Video: Aquifer activity~4 minutes
    f. Ground Water in Idaho
        i. Article from IDEQ: Ground Water in Idaho: 4 pages

ii. Quiz

g. What is Ground Water?
   i. Article from USGS: What is Ground Water: 4 pages
   ii. Quiz

h. Aquifer Decline
   i. Article: Palouse Background - 5 pages
   ii. Article: Palouse Basin Aquifer Scenario - 1 page
   iii. Quiz

5. Snow Science
   a. Water and Snow Pack
      i. Video: Measuring snow pack~1.3 minutes
      ii. Quiz
   b. Snow water equivalent
      i. Video: Snow water equivalent~1.38 minutes
      ii. Quiz
   c. TCP Snow Science
      i. PPT: What is Snow Science
      ii. PPT: Snow Science Instructions
      iii. Video: Jim Ekin's Snow Science Instructions ~ 15 minutes
      iv. Snow Science Data Sheet
   d. Snow Drought
      i. Article: Snow Drought - 8 pages
      ii. Quiz
   e. Declining Snowpack
      i. Article: Declining Snowpack in the west - 4 pages
      ii. Quiz

6. Youth Water Summit Preparation

   a. Scientific Method
      i. Video:Scientific Method~8 minutes
      ii. Quiz
   b. Developing a Research Question
      i. Video: Developing~ 4 minutes
      ii. Quiz
   c. Primary and Secondary Sources of Information

   i. Video: Primary~ 3 minutes
   ii. Quiz

d. Credible sources of information
   i. Video: Credible~ 3 minutes
   ii. Quiz

e. How to read research papers
   i. Video: How~ 8 minutes
   ii. Quiz

f. How to make a good research poster
   i. Video: Making~ 4 minutes
   ii. Quiz

g. Project Preparation
   i. PPT:Research and Annotation
   ii. Guidelines for contacting experts
   iii. Poster Guidelines
   iv. Project timeline
   v. Research project overview

h. Resources
   i. Seasonal formation and stability of dissolved metal particles in mining impacted, lacustrine sediments. - 14 page scientific article
   ii. Sulfur species, Bonding environment, and metal mobilization in Mining-Impacted Lake Sediments - 19 page scientific article
   iii.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: **Project Part C -Hepton Lake wetland restoration project *Gul Hnch'mchinmsh* (Swimmer's Landing among the Cottonwoods)**

Project Approval Date: **August 9, 2018**
Trustee Council Resolution #: **44**

Reporting Quarter/FY: **Quarter 4 / FY2021-Annual**

Partnership Funds Expenditures
Total Amount Awarded **$210,900.00**
Funds Spent this Quarter: **$1,666.96**
Funds Spent this Fiscal Year: **$24,992.76**

A. GENERAL INFORMATION

Project Proponent Name: **Rebecca Stevens**
Primary Telephone Number: **(208)667-5772**
Email: **rstevens@cdatribe-nsn.gov**

Project Sponsor: **Coeur d'Alene Tribe**
Primary Telephone Number: **(208) 667-5772**
Email: **rstevens@cdatribe-nsn.gov**

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.
   - **Throughout the 4th Quarter, Tribal staff secured the 404 permit from the Army Corps of Engineers, the 401 water quality certification, and Section 106 of the National Historic Preservation Act (NHPA) cultural clearance.**
   - **Tribal staff developed the Cultural Resource Mitigation Plan with the Tribal Historic Preservation Office.**
   - **Tribal staff submitted the final Wetland Reserve Program of Operations Plan and funding request to the National NRCS office and in secured funding from NRCS for construction of the levee repair.**
   - **This 4th Quarter Report will be the final report for Phase I of this project and moving forward to construction, Angelo Vitale, the Tribe's Fisheries Program Manager will take over reporting to the Restoration Partnership if additional funding for construction is**

approved through the Trustee Council.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

- **The Tribe will continue to work with NRCS during the first quarter of FY22to finalize contractual documents related to NRCS funding commitments for construction of the project.**

C. EXPENDITURES

1) Please describe any unforeseen expenditures. **N/A**
2) Please describe other cost share or contributing funds.

- **The Tribe has secured $800,000 from the National NRCS Wetland Reserve Program/ Farm Bill and will leverage other funding sources in the amount of $193,638 to support construction of the levee repair. The Tribe will be submitting a supplemental budget request to the Trustees for Phase II/ construction in the amount of $193,638.**

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable. **NRCS, USFWS, ACOE, THPO, other Tribal Programs, and Alta Science and Engineering, Inc.**

Project Expenditures: **FY21 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$2,757.20	$1,090.20	$1,657.87	$924.83	$6,430.10
Travel	$0	$0	$0	$0	$0
Supplies	$188.47	$271.80	$189.20	$130.57	$780.04
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$4,473.75	$6,256.25	$2,643.20	$0	$13,373.20
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Motor vehicle)	$565.92	$400.02	$513.65	$170.10	$1,649.69
Total Direct Costs	$7,985.34	$8,018.27	$5,003.92	$1,225.50	$22,233.03
Indirect Costs	$1,110.29	$494.47	$713.51	$441.46	$2,759.73
Total	$9,095.63	$8,512.74	$5,717.43	$1,666.96	$24,992.76

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the

proposed project.

This project was originally awarded funding in 2018 and over the course of 3 years, the following was accomplished; 1) Cultural Resource Inventory and Assessment/Cultural Clearance under Section 106 of the NHPA, 2) Worked with Alta Engineering to advance the 60% design that was initiated in 2017 to 100% completion, 3) Received support from Tribal Council and the Tribe's Culture Committee to officially re-name the project to *Gul Hnch'mchinmsh*, 4) received clearance from USFWS on ESA, 5) secured 401 and 404 permits, and 6) secured NRCS funding for construction.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

- **See measures of success above, refer to FY19, FY20, and FY21 quarterly reports for more details, and design documents.**

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Gray's Meadow

Project Approval Date: 8-9-18
Trustee Council Resolution #: 44

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $250K Planning; 2.25M construction contingent on plan reviews
Funds Spent this Quarter: $8012
Funds Spent this Fiscal Year: $39,667

A. GENERAL INFORMATION

Project Proponent Name: David Leptich
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

Project Sponsor: Idaho Department of Fish and Game
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

a. Design, review, and contracting of the Lamb's Peak Infrastructure Phase to: replace and relocate the Lamb's Peak pump house closer to the CDA River, add a gravity diversion between the Lamb Peak basin and the Black Lake tie channel, reroute water transfers from the Lamb's Peak Basin directly to the CDA River or tie channel, replace the existing structurally inadequate bridge over the tie channel, and widen/improve the existing access road to better accommodate construction and future public motorized access was completed.

b. Pioneer Technical produced a final review draft of the 60% Gray's Meadow Remediation and Restoration to the CDA Trust. Release of that draft for stakeholder review is anticipated to occur in October.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

No challenges resulting in delays occurred this quarter.

C. EXPENDITURES

1) Please describe any unforeseen expenditures. No unanticipated expenditures occurred this quarter.

2) Please describe other cost share or contributing funds. The EPA/CDA Trust expended $700,141.30 in matching/cost share funds this quarter:

Investigation:	$ 49,034.68
Design:	$515,799.74
Construction:	$135,306.88
Total:	**$700,141.30**

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					
Travel					
Supplies	$1,570	$10,790	$4,171		$16,531
Equipment					
Contractual (Honorarium)	$2172	$675	$12,277	$8,012	$23,137
Permitting					
Long-term operation and maintenance					
Monitoring					
Other (Community Activities)					
Total Direct Costs	$3,742	$11,465	$16,448	$8,012	$39,667
Indirect Costs					
Total	**$3,742**	**$11,465**	**$16,448**	**$8,012**	**$39,667**

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

EPA/ CDA Trust FY 2021 Expenditures:

Investigation:	$ 425,628
Design:	$1,172,722
Construction:	$ 398,280
Total:	**$1,996,630**

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

Baseline ecological monitoring/evaluation was completed by ALTA (Montana Wetlands Assessment Method) and IDFG (Wetlands Ecosystem Services Protocol for the United States (WESPUS)) to establish a baseline/benchmark wetlands condition against which to evaluate future condition post remediation/restoration completion. This effort supports the long-term improved wetland habitat/function goals and objectives of this project.

Cave Lake water transfers were redirected from Cave Lake to the CDA River. A water management working group consisting of IDFG and water quality staff from the CDA Tribe and IDEQ was formed to consult and recommend water management strategies that minimize water transfer effects on the CDA River/CDA Lake while still accommodating construction and wetland management needs. Quarterly water quality monitoring continues. Together these efforts serve the water quality goals and objectives of the project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

To this point this has amounted to construction management monitoring to ensure the work is executed as designed/contracted. Professional engineers from Pioneer Technical the EPA/CDA Trust/RP contractor make regular inspection of the work and sign off on as-built and substantial completion documents.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Gene Day Pond

Project Approval Date: 5-29-19
Trustee Council Resolution #: 46

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $25,000
Funds Spent this Quarter: $0
Funds Spent this Fiscal Year: $0

A. GENERAL INFORMATION

Project Proponent Name: Chris Pfhal
Primary Telephone Number: 208-753-3812
Email: sveng@hughes.net

Project Sponsor: Idaho Department of Fish and Game
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

Project leads have made good progress on administrative hurdles and are close to completing TOC ROW and IDT permit processes to install new restroom and other infrastructure improvements. As weather permits we anticipate starting on the ground work in the coming quarter or early next spring when weather improves.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

Personnel changes at IDPR have resulted in improved collaboration and project progress.

C. EXPENDITURES

1) Please describe any unforeseen expenditures. No unforeseen expenditures this quarter.
2) Please describe other cost share or contributing funds. No new cost share this quarter.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					$0.00
Travel					$0.00
Supplies					$0.00
Equipment					$0.00
Contractual (Honorarium)					$0.00
Permitting					$0.00
Long-term operation and maintenance					$0.00
Monitoring					$0.00
Other (Community Activities)					$0.00
Total Direct Costs					$0.00
Indirect Costs					$0.00
Total					$0.00

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

BLM and ITD are collaborators on this project with portions of parking and restroom infrastructure developed on their adjoining ownership.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland

habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

This project is characterized as a human use project related to an ecological restoration project (Gene Day Pond). The project goal is safe public access to restored fishing opportunity and reduced risk of recreational exposure to metals contamination. Gene Day Pond experiences regular public use as a family and ADA friendly urban fishery. Completion of infrastructure projects as designed will satisfy the project goal and be deemed successful.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Construction performance is verified through transmittal review and regular site inspections by IDFG construction managers for conformance to project technical specifications. Because of the nature of this project infrastructure development in conformance with design standards is considered successful.

Restoration Partnership

Annual Report Form

Project Title: Black Rock Slough

Project Approval Date: 5-29-19
Trustee Council Resolution #: 46

Reporting Quarter/FY: Q3/FY21/FINAL REPORT

Partnership Funds Expenditures
Total Amount Awarded: $ 75,000
Partnership Funds Spent this Quarter: $ 0
Partnership Funds Spent this Fiscal Year: $ 75,000 (Life of the Project)

A. GENERAL INFORMATION

Project Proponent Name: David Leptich
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

Project Sponsor: Idaho Department of Fish and Game
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

The project is complete.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

Across the life of the project three significant challenges arose: 1.) Substantial increases in construction cost locally and nationally required revision (reduced scope) of the original plan and delay while additional funds were solicited; 2.) IDPR required geotechnical evaluation of the TOC causeway which created unexpected costs and a significant time delay; 3.) Securing the final IDPR lease agreement proved to be an administratively slow and difficult process that delayed the initiation of construction and consumed considerable staff time.

C. EXPENDITURES

1) Please describe any unforeseen expenditures. Previously reported geotechnical evaluations.

2) Please describe other cost share or contributing funds:

AVISTA: $75,000
North American Wetlands Conservation Act Grant: $75,000
IDFG License Funds: $99,265

Project Expenditures:

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Final
Salaries/Fringe					
Travel					
Supplies					
Equipment					
Contractual (Honorarium)					$323,234.88
Permitting					
Long-term operation and maintenance					
Monitoring					
Other (Community Activities)					
Total Direct Costs					$323,234.88
Indirect Costs					$0
Total					$323,234.88

An additional $24,050 of IDFG Restoration Partnership Core Funds were spent over the life of the project to cover unexpected costs (primarily geotechnical testing of the causeway and results guided engineer assisted development of a water management rubric).

The Idaho Department of Fish and Game Bureau of Administration maintains a detailed and auditable record of all funds expended on this project.

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

N/A beyond cost-share reported above.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]
Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

This project is phase 1 of a multi-phase approach to restoration of Black Rock Slough. Its primary immediate goals are: a.) To exclude or limit annual importation of contaminated sediment thereby reducing recontamination risk and setting the stage for future remediation/restoration; b.) To improve the ability to actively manage wetland water level depth, duration, and timing to achieve management ecological and recreational objectives. The project is a success if the water control structures function as designed and achieve the above two goals.

Improved ecological function should result from water management that better mimic natural regimes. The full ecological potential of the site cannot be realized until remediation/restoration occur in future phases.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Construction performance is verified through transmittal review and regular site inspections by IDFG construction managers and the contracted design engineer for conformance to project technical specifications. The IDFG Engineering Bureau, in consultation with IDFG construction managers and the design engineer, signed-off on substantial completion before the final invoices were paid.

Functional performance, i.e. the ability to exclude or limit contaminated spring inflows and facilitate manipulation of wetland pool elevation to meet management goals will be confirmed over the first 36 months of operation by regular inspection and trial manipulations. No manipulations are planned during the first 6-12 months after construction in order to allow fill material to settle and vegetative cover to take hold and stabilize soils before applying force to the structures.

Ecological performance: In 2016 both Wetland Ecosystem Services Protocol for the United States (WESPUS) and Montana Department of Transportation Montana Wetland Assessment baseline

surveys were conducted to provide a pre-project ecological baseline. These will be repeated 5 growing seasons post completion to document and evaluate ecological benefits resulting from this project.

F. Attachments

1. IDFG letter accepting contractor's proposal to do the work.

2. Change order to reduce the scope and cost of the original proposal needed to meet the project budget.

3. IDFG Engineering Bureau Certificate of Substantial Completion.

4. IDFG Administration Bureau summary of total expenditures by various supporting grants.

5. Project photo sheet.

IDAHO DEPARTMENT OF FISH AND GAME
600 S Walnut / P.O. Box 25
Boise, Idaho 83707

Brad Little / Governor
Ed Schriever / Director

July 26, 2021

DG&S Company
Attn. Jeff Nearing
PO Box 219
Kingston ID 83839

RE: DFG 2018-121 Black Rock Slough Enhancement

Dear Mr. Nearing:

This letter constitutes formal acceptance of your proposal for the above project in the amount of $398,039.95. Please sign both (2) copies of the enclosed Contract and return them to this office along with the Performance Bond, Labor and Materials Payment Bond, Public Works Contract Report (we will file this report with the Tax Commission), and Contractor's Affidavit Concerning Taxes. You also need to supply a Certificate of Insurance for the Liability Insurance set forth in Article 34 of the General and Supplementary Conditions and Workman's Compensation Insurance. As soon as the Contract is signed by an Official from the Department of Fish and Game, we will issue a Notice to Proceed.

The Contract date will be the date signed by the Department. The Contract completion date will be calculated at that time.

The Project Manager for this project will be Mike Maffey. If you have any questions, please contact him at 208-287-2843 or mike.maffey@idfg.idaho.gov.

Sincerely,

Crystal Christensen
Administrative Assistant
Engineering Bureau

MSM:clc

Enclosures

	STATE OF IDAHO **DEPARTMENT OF FISH AND GAME** **CONTRACT CHANGE ORDER**	DFG Project No. 2018-121 PCA: Multiple
To (Contractor): DG&S Company		Date: 10/7/2019
Name and Location of Project: Black Rock Slough Enhancement		Change Order No. 1

You are hereby requested to comply with the following changes from the contract plans and specifications:

Proposal Request No. (1)	Description of Changes - Quantities, Units, Unit Prices, Change in Completion Schedule, Etc. (2)	Change in Contract Price (3)
1	Mobilization/Demobilization	$0.00
2	Site Access and Parking	-$1,000.00
3	Site Preparation	$0.00
4	Precast Concrete Water Control	-$1,100.00
5	Geotextile	$0.00
6	Embankment Fill (imported material)	-$6,825.00
7	Over-Excavation (unsuitable soil)	-$3,600.00
8	Aggregate Road Surfacing	-$1,950.00
9	Rock Riprap - Class 2	-$7,520.00
10	Rock Riprap - Class 3	$0.00
11	42" CMP Culvert (2X poly coating)	-$3,906.40
12	42" Inlet Slide Gates w/Operator	-$3,000.00
13	42" Flap Gates	-$4,000.00
14	Embankment Fill	$0.00
15	Geotextile	$0.00
16	Riprap - Class 2	$0.00
17	24" CMP Culvert	$0.00
18	24" Agridrain Water Control Structure	$0.00
19	30" Flap Gate	-$1,100.00
	Original Contract Amount.....	$364,185.20
	Prior Change Order Adjustments (Net).....	$0.00
	Contract Amount prior to this Change Order.....	$364,185.20
	Net (increase)(decrease) in contract price this Change Order.....	-$34,001.40
	Revised Contract Amount.....	$330,183.80

The time provided for completion in the contract is (unchanged)(increased)(decreased) by -366- calendar days. The revised date of Substantial Completion therefore is November 30, 2020. This document shall become an amendment to the contract and all provisions of the contract will apply hereto.

Recommended by	Engineer: X Michael Maffey	Date: 10/11/19
Accepted by	Contractor: X	Date: 12/30/2019
Approved by	Chief, Bureau of Engineering: X Michael Maffey	Date: 10/11/19

BLACKROCK SLOUGH REVISED PROPOSAL

PO Box 219
Kingston, ID 83839
(208) 682-3330

ITEM	DESCRIPTION	Bid Qty	New Qty	U/M	Original Unit Price	Original Amount	Proposed UNIT Price	New Amount	DESCRIPTION
1	MOBILIZATION/DEMOBILIZATION	1		LS	$65,000.00	$65,000.00		$ 65,000.00	
2	SITE ACCESS AND PARKING	1		LS	$6,500.00	$6,500.00	$ 5,500.00	$ 5,500.00	Reduction in Potential Pavement Repair Associated with Schedule C
3	SITE PREPARATION	1		LS	$18,500.00	$18,500.00		$ 18,500.00	
4	PRECAST CONCRETE WATER CONTROL	2		EA	$16,866.00	$33,732.00	$ 16,316.00	$ 32,632.00	Change in grate requirement
5	GEOTEXTILE	500		SY	$6.35	$3,175.00		$ 3,175.00	
6	EMBANKMENT FILL (IMPORTED MATL)	1200	900	CY	$22.75	$27,300.00		$ 20,475.00	Quantity Reduction
7	OVER-EXCAVATION (UNSUITABLE SOIL)	1320	1170	CY	$24.00	$31,680.00		$ 28,080.00	Quantity Reduction
8	AGGREGATE ROAD SURFACING	100	50	TON	$39.00	$3,900.00		$ 1,950.00	Quantity Reduction
9	ROCK RIPRAP- CLASS 2	210	50	TON	$47.00	$9,870.00		$ 2,350.00	Quantity Reduction
10	ROCK RIPRAP - CLASS 3	1270		TON	$38.81	$49,288.70		$ 49,288.70	
11	42" CMP CULVERT (2X POLY COATING)	152		LF	$386.00	$58,672.00	$ 360.30	$ 54,765.60	Delete 7 Concrete Anchors
12	42" INLET SLIDE GATES W/ OPERATOR	2		EA	$11,400.00	$22,800.00	$ 9,900.00	$ 19,800.00	Change From Stainless to Aluminum
13	42" FLAP GATES	2		EA	$6,500.00	$13,000.00	$ 4,500.00	$ 9,000.00	Change From Stainless to Aluminum
14	EMBANKMENT FILL	50		CY	$36.00	$1,800.00		$ 1,800.00	
15	GEOTEXTILE	30		SY	$6.35	$190.50		$ 190.50	
16	RIP RAP - CLASS 2	45		TON	$47.00	$2,115.00		$ 2,115.00	
17	24" CMP CULVERT	16		LF	$382.00	$6,112.00		$ 6,112.00	
18	24" AGRIDRAIN WATER CONTROL STRUCTURE	1		EA	$5,750.00	$5,750.00		$ 5,750.00	
19	30" FLAP GATE	1		EA	$4,800.00	$4,800.00	$ 3,700.00	$ 3,700.00	Change From Stainless to Aluminum
					TOTAL BID:	**$364,185.20**	***NEW TOTAL***	***$ 330,183.80***	

AS DISCUSSED - Other Potential Cost Savings - 08-29-2019

7	Pit Run - for Over-Ex Item (Brian mentioned leaving as is)								Reduce by $2.16/CY = $2,527.20
4	Galvanized Grip Strut vs. Proposed Steel Grating								Reduce UP by $975 EA - in addition to reduced amount above = $1,950.00
1	MOBILIZATION/DEMOBILIZATION								Reduce by $3500.00 if IDFG provides and installs wildife fence

STATE OF IDAHO
DEPARTMENT OF FISH AND GAME

CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: Black Rock Slough Enhancement Project ENGINEER: Idaho Fish and Game

D.F.G. NUMBER: 2018-121 CONTRACTOR: DG&S Company

CONTRACT DATE: September 25, 2019

CONTRACT AMOUNT: $323,234.88

DATE OF CERTIFICATE ISSUANCE: April 12, 2021

The Work performed under this Contract has been reviewed and found to be substantially complete. The Date of Substantial Completion is hereby established as March 31, 2021 which is also the date of commencement of all warranties and guarantees required by the Contract Documents.

DEFINITION OF DATE OF SUBSTANTIAL COMPLETION

The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the Work or designated portion thereof for the use for which it is intended.

A list of items to be completed or corrected, prepared by the Contractor and verified and amended by the Architect, is appended hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents.

ENGINEER/ARCHITECT 4-19-21 DATE

The Contractor will complete or correct the Work on the list of items appended hereto within N/A days from the above Date of Substantial Completion.

CONTRACTOR 04/19/2021 DATE

The Owner accepts the Work or designated portion thereof as substantially complete and will assume full possession thereof on March 31, 2021.

OWNER/ENGINEER 4-19-21 DATE

The Owner shall assume full responsibility for all utilities and insurance effective March 31, 2021.

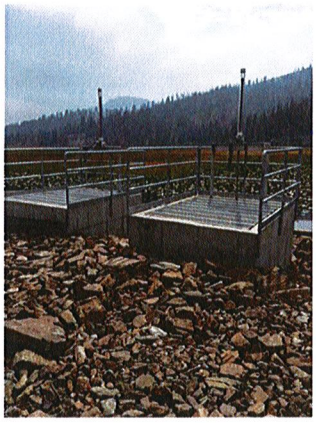
IDAHO DEPARTMENT OF FISH AND GAME 4-20-21 DATE

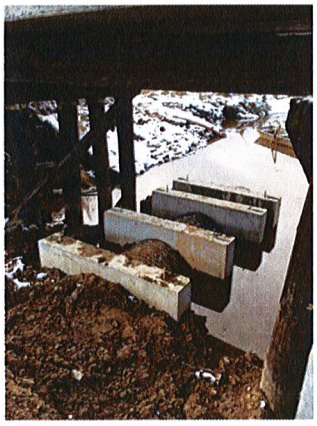
Final Black Rock Slough Expenditure Summary

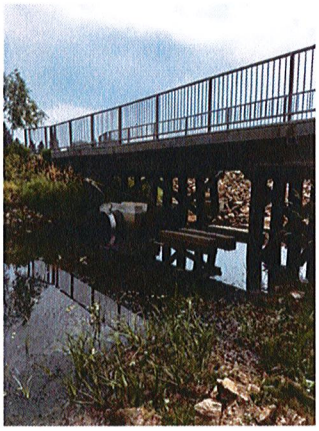
BudgetYr	PCA	Title	Fund	Bureau	Funding
2020	60014	BLACK ROCK SLOUGH PROJECT (48127)	0050	FGAD	Avista
2020	60015	BLACK ROCK SLOUGH PROJECT (46119)	0050	FGAD	NAWCA
2020	60016	BLACK ROCK SLOUGH PROJECT (46145)	0050	FGAD	Restoration Partnership
2020	60018	BLACK ROCK SLOUGH PROJECT (41877)	0050	FGAD	IDFG License
2020	60019	BLACK ROCK SLOUGH PROJECT (81802)	0050	FGAH	IDFG License
2020	60020	BLACK ROCK SLOUGH PROJECT (81801)	0050	FGAH	IDFG License
2020	60021	BLACK ROCK SLOUGH PROJECT (81804)	0051	FGAH	IDFG License

GL	Year	PCA	Title	Object	Amount	Description	Vendor	Date
Expense	2021	60014	BLACK ROCK SLOUGH PROJECT (48127)	Operating	14,606.25	9/26 PMT #1	DG&S COMPANY	10-02-2020
Expense	2021	60014	BLACK ROCK SLOUGH PROJECT (48127)	Operating	60,393.75	11/6 DFG 2018-121 PAY EST #2	DG&S COMPANY	11-30-2020
Expense	2021	60015	BLACK ROCK SLOUGH PROJECT (46119)	Operating	43,031.93	11/6 DFG 2018-121 PAY EST #2	DG&S COMPANY	11-30-2020
Expense	2021	60015	BLACK ROCK SLOUGH PROJECT (46119)	Operating	30,938.07	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60016	BLACK ROCK SLOUGH PROJECT (46145)	Operating	75,000.00	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60018	BLACK ROCK SLOUGH PROJECT (41877)	Operating	15,000.00	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60019	BLACK ROCK SLOUGH PROJECT (81802)	Operating	10,000.00	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60020	BLACK ROCK SLOUGH PROJECT (81801)	Operating	10,000.00	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60021	BLACK ROCK SLOUGH PROJECT (81804)	Operating	2,621.88	12/16 DFG 2018-121 PAY EST #3	DG&S COMPANY	12-30-2020
Expense	2021	60021	BLACK ROCK SLOUGH PROJECT (81804)	Operating	45,481.25	4/5 DFG2018-121 PAY EST #4	DG&S COMPANY	04-20-2021
Expense	2021	60021	BLACK ROCK SLOUGH PROJECT (81804)	Operating	16,161.75	4/5 DFG2018-121 PAY EST #5	DG&S COMPANY	04-30-2021
					323,234.88	Total paid		

Black Rock Slough Photos







Project Title: Wolf Lodge Creek Reach #3 – Stream Restoration and Habitat Enhancement Project

Project Approval Date: 05/29/2019
Trustee Council Resolution #: 46

Report Date: July 12 2021
Project Fiscal Years: FY2019 - FY 2021

Partnership Funds Summary

Total Partnership Funds Awarded:	**$195,814.00**
Partnership Funds Spent:	**$195,814.00**
Excess Partnership Funds Remaining (if any):	**$ 0.00**

A. GENERAL INFORMATION

Project Proponent Name: Kootenai Shoshone Soil & Water Conservation District -Karla Freeman

Primary Telephone Number: (208) 209-4348
Email: KSSWCD@yahoo.com

Project Sponsor: Idaho Department of Environmental Quality – Kajsa Van de Riet
Primary Telephone Number: (208) 666-4633
Email: kajsa.vanderiet@deq.idaho.gov

B. PROJECT DESCRIPTION & ACCOMPLISHMENTS

1) Describe project accomplishments, completion of deliverables, and how the project met its goals and objectives. As applicable, provide quantified estimates of these accomplishments such as the acreage or stream miles of habitat restored.

This projected stabilized 2000 ft. of highly eroding streambank and restored 3.2 acres of riparian area. The streambank erosion was threatening the integrity/production of 30 acres of timothy hay production with cattle grazing, and a larch tree seedling orchard. Wolf Lodge Reach # 3 was identified as a high-priority reach for restoration efforts in the Wolf Lodge Creek Watershed Assessment and Restoration Prioritization Plan (finalized in 2017). Wolf Lodge Creek Reach #3 was the highest sediment-producing stream reach in the Wolf Lodge Creek watershed- contributing 830 tons of sediment (43 percent of the total sediment load of watershed) with bank erosion rates ranging from 2- 7 feet of migration per year between 2004 and 2015. Upstream from the agricultural production within the Wolf Lodge Reach # 3 project area was the most erosive streambank which was high risk of undermining a shop structure that was less than 6 feet from the streambank.

The project re-established proper channel dimensions and streambank conditions that will reduce rates of lateral channel migration, property loss, and sedimentation. It re-established important habitat for westslope cutthroat trout and aquatic organisms. The project used bioengineering techniques, vegetative wood and brush fascines, and large wood habitat structures. Water quality

improvements from stream restoration will also accrue in Wolf Lodge Creek and downstream in Wolf Lodge Bay of Coeur d'Alene Lake for years to come.

This project took place in two stages, the design phase and then the construction phase. The design phase started in June 2019 in which bid packages were sent out to engineering companies. In August 2019 River Design Group (RDG) was awarded the bid in which an agreement was initiated and signed by both RDG and the District. There were several onsite meetings to help with all cooperating agencies and landowners. Designs were finalized in March 2020 and permits were filed with the assistance of Bill Lillibridge and Brad Shelton with ISWCC. Once the permits were issued bid packages were sent out for construction of the project. In July 2020, the winning bid was awarded to Glacier Excavating. During this time, the District had to find additional funding to cover the construction phase of the project, along with sourcing 5000 pieces of wood for the structures. The District had additional assistance from Diane Partridge, IDL to go on site and conduct a tree inventory and mark all the trees that could be used for the landowners' match. Sandy and Paul Schlepp were used to harvest all the marked trees and provide all willow cuttings that were planted along the bank. Kristin Lowell with DEQ was the key person assisting the District to secure the additional funding from the 319 BMP grant. Once we had the funds secured, we moved forward with executing agreements with Glacier Excavating. Construction of the project began in October 2020 and lasted only seven weeks. Once construction started there were no roadblocks or hurdles. Construction was completed on November 24,2020. In the spring of 2021 there was a spring cleanup on both landowners property to finish this project.

2) Describe any challenges encountered and how those challenges were overcome. Describe any changes to the project from the original application. *The original application was for 1,400 ft. of bank to be restored. River Design Group included an additional 600 ft. to the design since the upper portion of the creek played an important role in how it would affect the remaining 1,400 ft. Once we received the construction designs, the District was short on funding. The first hurdle came with sourcing the wood needed as per the final designs. 5,000 pieces of wood would be needed for the structures. Karla Freeman, KSSWCD and Diane Partridge, IDL went to one of the landowners' property to do a tree inventory. Trees were marked and counted to meet this requirement needed. This was used as the landowner's match. Sourcing the trees on site saved thousands of dollars in hauling costs and labor. The District still had to scramble to find additional funding for this project to move forward. Kristin Lowell with DEQ was the key person assisting the District to secure the additional funding from the 319 BMP grant. The change in design and budget was approved by the Trustee Council, the DEQ subaward was amended and the changes increased cost share but did not increase the amount of funding from the Restoration Partnership. Funding was secured and the project was able t-o move forward.*

An additional roadblock occurred when we were waiting for additional funding. We were instructed not to put the construction out for bid, although our request for bid packet had contingencies written in stating the bid would not be awarded until funds were secure. This put us back 30 days in the process.

There were two pipelines present on site and just prior to taking trees down and setting up the staging areas the pipeline representatives came out to look over and give guidance an exactly where we could have the staging area. The staging area ended up having to be relocated from the original design plans due to the two pipelines that were so close to the project area. With the

small change came some smaller additional costs due to extra hauling distance for Glacier Excavating, however, this was funded by the cost share and did not change the amount of funds from the Restoration Partnership.

3) Please provide images to represent the project, including digital image files as .jpg or similar. For habitat restoration projects, include before and after photographs at a minimum. These should be taken from the same vantage point and there should be a set of photos from each property, if multiple properties are involved. *See attached photos as well as attached digital files.*

C. EXPENDITURES

Please describe any unforeseen expenditures. *There were a couple of unforeseen expenditures with this project. The original application was for 1,400 ft. of bank to be restored. River Design Group included an additional 600 ft. to the design since the upper portion of the creek played an important role in how it would affect the remaining 1,400 ft. Once we received the construction designs, the District was short on funding. This did not change the amount of funds from the Restoration Partnership. The increased cost led to seeking additional funding from the 319 BMP Grant. The funds from this grant were not exhausted. Another unforeseen expenditure were the additional cost of hauling the trees to the project area, this was due to having to relocate the staging area due to the two pipelines. However, this was funded by the cost share and did not change the amount of funds from the Restoration Partnership.*

Please describe cost share or other contributions. *DEQ Ag BMP $98,451, Avista - $10,000, DEQ Coeur d'Alene Lake Management Program $35,000, Trans Canada $5,000, NRCS - $16,849, North Idaho Fly Casters - $2,000, Fly Fishers International $2,000, Landowner Mike Murphy $2,000, Landowner Steve and Janet Funk - $5,000, ISWCC - $15,094, IDL - $2,644. Some aspects of the project costed less than the original budget so $12,750 was returned to the AG BMP program. We are grateful for the outpouring of support from everyone involved.*

Project Expenditures:
Please include expenditures for the entire project period, round to the nearest dollar, and do not leave any cells blank. Do not alter the rows or columns without pre-approval from DEQ.

Planning and Design Phase

	DEQ RP FUNDS	DEQ LMP FUNDS	Secured Cost – Share (Cash)	In-Kind Cost-Share	Total
Salaries/Fringe	$2,087	$0	$0	$8,108	$10,195
Travel	$12	$0	$0	$0	$12
Supplies	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Engineering Design, Wood Collection)	$3,403	$20,000	$0	$0	$23,403
Subtotal Direct Costs	$5,503	$20,000	$0	$8,108	$33,611
Indirect	$550	$0	$0	$0	$550
Total	$6,054	$20,000	$0	$8,108	$34,162

Construction Phase

	RP Funds	LMP Funds	DEQ AG BMP Funds	Other Secured Cost-Share (Cash)	In- Kind Cost - Share	Total
Salaries/Fringe	$3,000	$0	$0	$0	$3,765	$6,765
Travel	$200	$0	$0	$0	$0	$200
Supplies	$0	$0	$49,059	$19,684	$5,000	$73,743
Equipment	$0	$0	$0	$0	$0	$0
Contractual	$169,309	$15,000	$36,641	$17,316	$1,500	$239,766
Permitting	$0	$0	$0	$0	$0	$0
Long Term O & M	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$7,000	$7,000
Other	$0	$0	$0	$0	$0	$0
Subtotal Direct Costs	$172,509	$15,000	$85,700	$37,000	$17,265	$327,474
Indirect	$17,251	$0	$0	$0	$0	$17,251
Total	$189,760	$15,000	$85,700	$37,000	$17,265	$344,725

Total Project Budget

	RP Funds	LMP Funds	DEQ AG BMP Funds	Other Secured Cost-Share (Cash)	In- Kind Cost-Share	Total
Salaries/Fringe	$5,087	$0	$0	$0	$11,873	$16,960
Travel	$212	$0	$0	$0	$0	$212
Supplies	$0	$0	$49,059	$19,684	$5,000	$73,743
Equipment	$0	$0	$0	$0	$0	$0
Contractual	$172,712	$35,000	$36,641	$17,316	$1,500	$263,169
Permitting	$0	$0	$0	$0	$0	$0
Long Term O & M	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$7,000	$7,000
Other	$0	$0	$0	$0	$0	$0
Subtotal Direct Costs	$178,012	$35,000	$85,700	$37,000	$25,373	$361,084
Indirect Costs	$17,801	$0	$0	$0	$0	$17,801
Total	$195,814	$35,000	$85,700	$37,000	$25,373	$378,885

D. PROJECT PARTNERS

1) Please describe the involvement of project partners, if applicable. *Our outstanding partners were Bill Lillibridge and Brad Shelton, both with ISWCC. These two were on site from day one to oversee and handle any issues that arose. They also handled all the permitting and constructing the bid packages. Diane Partridge with IDL, was on hand to conduct the tree inventory for sourcing the wood as well as attending all on site meetings, Kristin Lowell with DEQ was the key person assisting the District to secure the additional funding from the 319 BMP grant that allowed the project to move forward and be completed. The District would like to thank Kristin for all her mentoring of our new administrator on such a complex project. We had North Idaho Fly Casters hold a meeting for outreach to the community with a District Board member presenting a power point on this project and lastly, the landowners. The landowners were a huge part of this project and could not have been completed without them.*

E. MEASURES OF SUCCESS

1) Describe monitoring activities, if applicable, to measure or evaluate the effectiveness of the project. Please provide copies of monitoring plans and associated reports.
KSSWCD will continue to monitor the success of the project. The District will be making frequent site visits to check the water tables to make sure the willows are rooting and

growing as projected. Should the planting look like they are dying we hope to have irrigation pumps and sprinklers being loaned to us from IDL, which we would then set up and water the project area. Photo monitoring will help evaluate erosion protection success.

The Coeur d'Alene Lake Management program is conducting water quality monitoring in lower Wolf Lodge Creek (near the KOA Campground). This monitoring started before the project and continues.

2) Describe performance standards used to measure the success of the project and how the goals and objectives were met.

Under management of the best qualified stream restoration/engineering firm and supervision by the ISWCC Engineer and Water Resource Conservationist, project construction was completed as designed. The ISWCC Engineer and/or Water Quality Resource Conservationist were on-site when construction was implemented. The Engineer and Hydrologist from the stream restoration/engineering firm was on site during critical times of construction. Measurements of success for the goals of the project were as follows:

- *The project will produce clean water consistent with supporting aquatic life and beneficial uses:*
- *The DEQ Coeur d'Alene Lake Management team has installed an automatic water quality monitoring devise that collects samples for nutrient and total suspended solids. In addition, a sonde is installed to measure turbidity, conductivity, pH, and temperature. This baseline data will be compared to data collected post-project through 2021.*
- *KSSWCD will conduct annual photo-monitoring of the project area. Incorporate streambank stabilization techniques that provide interim stability and support development of mature riparian vegetation:*
- *There was successful implementation of the engineering design under management and supervision of construction.*
- *BURP monitoring will determine condition of streambank stability and riparian vegetation. BURP monitoring was conducted before construction, then 2 years post-construction to measure improvement in streambank stability and riparian vegetation.*
- *The design included removing the historical hardened stream restoration features that are no longer functioning: the structures were removed.*
- *The project created complex aquatic habitat components such as depth, velocity, substrate, cover, and pools that support populations of wild trout and other aquatic organisms:*
- *The project reshaped the existing channel to the proper dimensions to increase sediment transport capacity through the reach:*
- *The project coordinated restoration plans with the landowner to ensure restoration treatments are compatible with existing and future land uses: Coordination was on-going. Conceptual restoration designs created with feedback from the landowner. Meetings were held with the landowner before, during, and after the project was conducted to assure*

treatments were compatible with existing future land uses and that landowner agreements are followed.

- *There was Quality Control and Quality Assurance during construction: The design engineer and appropriate staff were on-site during construction- assisting them was staff from the Kootenai-Shoshone Soil and Water Conservation District as well as the Idaho Soil and Water Conservation Commission. Construction crews were briefed each day before construction was started, including design elements and overall design goals. Construction oversite and any required monitoring was continuous during construction. Materials were evaluated (rock size, wood size and species, planting species, etc.) when delivered to assure they met design requirements. After construction, a post-construction walk-through was completed by design and construction staff to verify that all design and construction requirements were met prior to equipment being removed from the site.*

3) Describe the expectations for long-term viability and sustainability of the project. Identify risks and include short-term and long-term operation and maintenance planned for the project, if applicable.
The project's design was for long-term viability and sustainability with minimal intervention or O & M. The biggest risk is viability of plants the first year after installation. Willows and shrubs were planted very deep so they get water from the water table at most times. One month into a very hot summer, the willows are thriving. KSSWCD, project partners, and the landowners will continue to monitor the project for long-term sustainability and decreased erosion loss and sediment transfer in Wolf Lodge Creek.

4) Adaptive management – Describe lessons learned from the project and how this information can be used to improve outcomes of future projects*. The biggest lessons learned from this project had to deal with the budget of the project. The construction costs as well as materials used for the project were underestimated. To produce a budget for a grant application without knowing true costs was a difficult task, it was not until the bid packages went out when we learned the true cost of the construction and materials needed to complete this project. Since the budget was underestimated, it was imperative to source the wood on site to save costs on hauling material in. Due to the budget being hugely underestimated, Kristin Lowell with DEQ was the key person assisting the District to secure the additional funding from the 319 BMP* grant *in order for this project to be completed.*

Wolf Lodge Creek Restoration Project Phase 1 – Site 3

Photo Log

Complied on:
April 27th, 2021

Prepared for:
Avista
Idaho Department of Environmental Quality
Idaho Soil & Water Conservation Comission
Jeff Sells
Mike Murphy
North Idaho Fly Casters
Restoration Partnership
Steve & Janet Funk
TC Energy

Prepared by:
Kootenai-Shoshone Soil and Water Conservation District

7830 Meadowlark Way Suite C1,
Coeur d'Alene, Idaho 83815
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Wolf Lodge Creek Restoration Project
Phase 1 – Site 3

Pre-construction

Photo 1: Pre-construction 10/31/2019. Right bank and stream channel, facing upstream. Near upstream end of project area. (*IMG_6810.jpg*)

Photo 2: Pre-construction 10/31/2019. Stream channel, facing downstream. Upstream of fence line. (*IMG_6827.jpg*)

Photo 3: Pre-construction 10/31/2019. Left bank and stream channel, facing downstream. Upstream of property owner's structures. (*IMG_6838.jpg*)

Photo 4: Pre-construction. Left bank, facing downstream. Near property owner's structures. (*Murphy Shed.jpg*)

Photo 5: Pre-construction 10/31/2019. Stream channel, facing downstream. Downstream of property owner's structures. (*IMG_6858.jpg*)

Photo 6: Pre-construction 10/31/2019. Stream channel and left bank, facing downstream. Downstream end of property fence line. (*IMG_6880.jpg*)

Photo 7: Pre-construction 2/25/2020. Sourcing wood and identifying staging areas with partners. (*SandySchleppGroup.jpg*)

Photo 8: Pre-construction 7/27/2020. Sourcing wood with partners. (*Prior to Sandy Schlep 07.27.2020.jpg*)

Wolf Lodge Creek Restoration Project
Phase 1 – Site 3

Construction

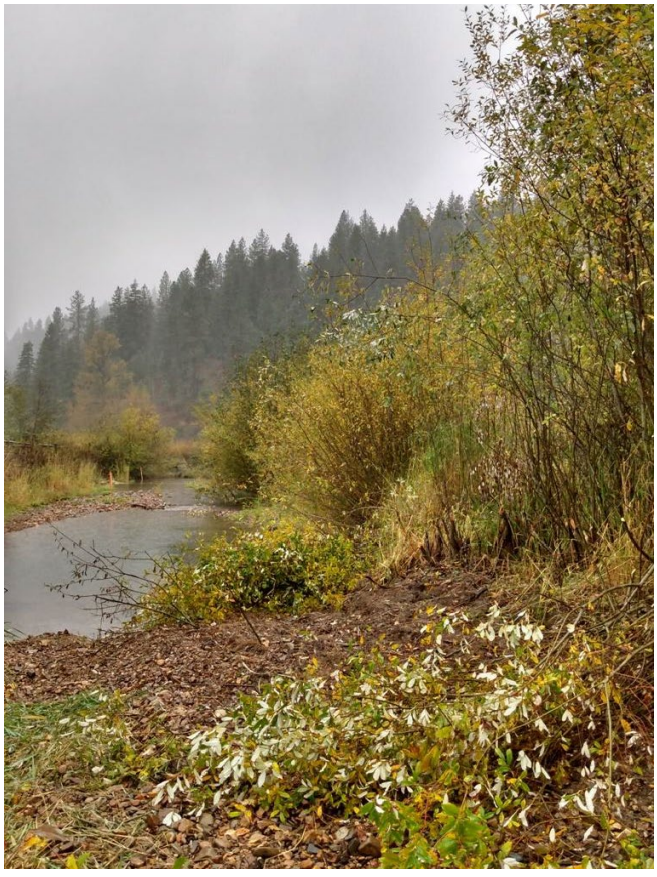

Photo 9: Construction. Willow harvesting. (*willow and flood plain before shot_Page_4.jpg*)

Photo 10: Construction. Collecting Category 1 wood. (*Cat 1 wood (a).jpg*)

Photo 11: Construction. Staging area. (*Staging Area 1.jpg*)

Photo 12: Construction. Staging area Category 3 wood. (*Cat 2 Staging Area.jpg*)

Photo 13: Construction. Recontouring of stream with Vegetated Wood Matrix Type 1 installation. Left bank, upstream of property owner, facing downstream. (*DownstreamMurphy.jpg*)

Photo 14: Construction. Floodplain treatment (right bank) with Vegetated Wood Matrix Type 1 and 2 installation (left bank). From right bank to left bank, near property owner's structures. (*Upstream looking at Mikes.jpg*)

Photo 15: Construction. Inspection of Vegetated Wood Matrix Type 1 with partners . (*1.jpg*)

Photo 16: Construction. Streambank access road, left bank. Upstream of landowner property, facing upstream. (*11.24.2020.jpg1.jpg*)

Photo 17: Construction. Recontouring of stream channel and floodplain enhancement, down stream of landowner property. Viewed from S Wolf Lodge Creek Rd. (*Road view.jpg*)

Wolf Lodge Creek Restoration Project
Phase 1 – Site 3

Post Construction
November 25th, 2020

Photo 18: Post Construction. Installed Vegetated Wood Matrixes near upstream edge of project area, looking downstream. (*PXL_20201125_171322887.jpg*)

Photo 19: Post Construction. Installed Vegetated Wood Matrixes and constructed streambed upstream of property owner's structures. Facing upstream. (*PXL_20201125_172143597.jpg*)

Photo 20: Post Construction. Installed floodplain treatment. Right bank, upstream of property owner's structures, facing downstream. (*PXL_20201125_172422048.jpg*)

Photo 21: Post Construction. Installed Vegetated Wood Matrixes and constructed streambed upstream of property owner's structures. Facing downstream. (*PXL_20201125_172445806.jpg*)

Photo 22: Post Construction. Installed Vegetated Wood Matrixes and constructed streambed downstream of property owner's structures. Facing downstream (*PXL_20201125_173543929.jpg*)

Photo 23: Post Construction. Floodplain treatment downstream of property owner's structures. Left bank, facing downstream. (*PXL_20201125_174233961.jpg*)

Wolf Lodge Creek Restoration Project
Phase 1 – Site 3

Post Construction
Spring Site Visit
April 15th, 2021

Photo 24: Post Construction Spring. Upstream Edge of project, facing downstream. Left bank. (*Startofprojectarea#2.jpg*)

Photo 25: Post Construction Spring. Inspection with partners of left bank on landowner's property. (*Murphy#2.jpg*)

Photo 26: Post Construction Spring. Inspection with partners of left bank downstream of landowner's structures. (*Groupshot.jpg*)

Wolf Lodge Creek Restoration Project
Phase 1 – Site 3

Pre and Post Construction Comparisons

Photo 27: Pre-Construction. Left bank looking upstream. Downstream of property owner's structures. (*IMG_6840.jpg*)

Photo 28: Post Construction. Left bank looking upstream. Downstream of property owner's structures.(*PXL_20201125_172841635.jpg*)

Photo 29: Pre-Construction. Stream channel, downstream of property owner's structures. Facing downstream. (*willow and flood plain before shot_Page_8.jpg*)

Photo 30: Post Construction. Stream channel, downstream of property owner's structures. Facing downstream. (*PXL_20201125_173122977.jpg*)

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Canyon Marsh Agriculture to Wetlands Conservation Easement

Project Approval Date: August 9, 2018
Trustee Council Resolution #: 44 and 46

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $801,480 (44) and $372,400 (46)
Funds Spent this Quarter: 0
Funds Spent this Fiscal Year: $ 10,010.86

A. GENERAL INFORMATION

Project Proponent Name: Christy Johnson-Hughes
Primary Telephone Number: 208-513-4984
Email: christy_johnsonhughes@fws.gov

Project Sponsor: U.S. Fish and Wildlife Service
Primary Telephone Number: 208-513-4984
Email: christy_johnsonhughes@fws.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.
    - Two easements have been completed and one is nearing completion. The FWS established a landowner agreement with a property owner (Cochrane) to manage water levels utilizing existing pumping infrastructure. This may allow FWS to drawdown water levels earlier during spring migration creating additional clean feeding areas (~100 acres of a total of 300 acres). The Cole easement will close on October 29, 2021. The Cole agreement includes remediation and restoration. FWS is working with INLC to finalize the easement.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.
    - The Fourth of July Creek culvert repair is still under discussion with EPA in an effort to prioritize the project for FY22.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

- Additional efforts were conducted at the landowners' request (Cole) to update the easement appraisal Additional efforts were conducted at the landowners' request (Coles) to update the easement appraisal since real estate prices have gone up since the appraisal was completed in the fall 2020. The appraisal was re-assessed and the original valuation was not changed by current market trends. The landowners decided to move forward with the sale of the easement.

2) Please describe other cost share or contributing funds.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$4,825.46	$0	$5185.34	$0	$10,010.86
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$0	$0	$0
Indirect Costs	$0	$0	$0	$0	$0
Total	$4,825.46	$0	$5185.34	$0	$10,010.86

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.
    - The FWS (Partners for Fish and Wildlife Program) contributed $14,476.25 toward pumping infrastructure repairs. This will allow for continued water level management for both waterfowl use and agricultural operations.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.
    - Conservation easements with the landowners in the Canyon Marsh area. The goal is to have easements in place over all of Canyon Marsh. There is also a small piece of Fisher-Colley Rose Lake Legacy property that may also be pursued east of an adjacent property. If the easements are accomplished, this area may be one of the most important areas to remediate and restore in the entire lower basin due to bird use, size, and geographic location in the basin.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.
    - The primary measure of success for this phase of the Canyon Marsh project would be the conservation of 290 acres of a Tier 1 wetland identified within the Restoration Plan. Opportunities to conserve agricultural lands that may be converted to clean wetland habitat are limited within the lower Coeur d'Alene River Basin. This will ensure future opportunities for remedial and restoration actions in high priority conservation areas within the lower Basin.
    - The USFWS has also conducted waterfowl surveys for this property and waterfowl use could be compared for pre and post remedial/restoration conditions.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Gleason's Marsh Agriculture to Wetlands Conservation Easements

Project Approval Date: August 9, 2018
Trustee Council Resolution #: 44

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: 656,140.00
Funds Spent this Quarter: 0
Funds Spent this Fiscal Year: 0

A. GENERAL INFORMATION

Project Proponent Name: Christy Johnson-Hughes
Primary Telephone Number: 208-513-4984
Email: Christy_johnsonhughes@fws.gov

Project Sponsor: U.S. Fish and Wildlife Service
Primary Telephone Number: 208-513-4984
Email: Christy_johnsonhughes@fws.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.
    - None – The wetland remediation and restoration project will be completed after the IDFG Gray's Meadow project (approx. 2 years).

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.
    - None

C. EXPENDITURES

1) Please describe any unforeseen expenditures. None
2) Please describe other cost share or contributing funds. None

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$0	$0	$0	$0	$0
Travel	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0
Contractual (Honorarium)	$0	$0	$0	$0	$0
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$0	$0	$0
Indirect Costs	$0	$0	$0	$0	$0
Total	$0	$0	$0	$0	$0

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.
    - None

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.
    - 225-acre easement has been completed as well as landowner agreements between FWS and EPA to conduct remedial and restoration actions. Success will be measured by wetland design, construction, and long-term management to provide waterfowl habitat.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Lake Creek Watershed Restoration

Project Approval Date: 1/11/20
Trustee Council Resolution #: 52

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $615,951
Funds Spent this Quarter: $2,411.71
Funds Spent this Fiscal Year: $40,446.47

A. GENERAL INFORMATION

Project Proponent Name: Coeur d'Alene Tribe Fisheries Program
Primary Telephone Number: (208) 686-6903
Email: avitale@cdatribe-nsn.gov

Project Sponsor: Coeur d'Alene Tribe
Primary Telephone Number: (208) 686-6903
Email: avitale@cdatribe-nsn.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

Project #3 – Upper Lake Creek LWD Additions

Project Location:

Watershed: Lake Creek | **Legal: T49N, R6W, S36 SW ¼**
Sub Basin (River Kilometer): 13.6/2.3 rkm | **Lat: 47.543732N Long: -117.037573W**

Site Characteristics:

Slope/Valley gradient: 1-2% | **Aspect: S** | **Elevations: 780 m**
Valley/Channel type: C4(Cupp1989)/E4 | **Proximity to water: Instream and adjacent floodplain**
Other: Large wood was placed in 538 meters of channel to increase habitat complexity and improve floodplain connectivity.

Description of Treatment: Large woody debris was placed in Upper Lake Creek between river kilometer 1.8 and 2.3 where instream wood was lacking prior to treatment. High resolution

aerial imagery was aquired using a DJI M600 Pro Hexacopter drone to assist in planning for wood placements. The drone flight was conducted early in the spring of 2019 while stream runoff was approximately equal to the 1.2 year return interval flood and prior to emergence of perennial grasses that would obscure the view of channel patterns at a fine scale. When the drone imagery was processed, it allowed for identification of primary flow paths, as well as floodplain channels, swales and off-channel wetlands, all of which were much more difficult to identify during low flow periods when these features were hidden by vegetation. The imagery was subsequently used to stake the field locations for wood placements that were then coded for specific configurations with desired functional attributes (e.g., grade control, pool scour, instream cover, floodplain connectivity, etc.).

A Cat 303 mini-excavator equipped with a rotating grapple was used to place 120 logs, ranging in size from 0.15 – 0.51 m diameter and 4.2 – 7.3 m long (2-3 times the bank-full width), and 45 whole trees, totaling approximately 42 cubic meters (14 MBF) in the Fall 2020. An additional 40 logs totaling approximately 14 cubic meters (5.9 MBF) were placed in the Fall 2021 within the same reach.

The wood was placed in a variety of configurations within the bankfull channel and floodplain during base flow conditions. Placements included (in relation to the bankfull channel) parallel, transverse, bridged, partial- and fully-buried, as well as complex, channel spanning log jam structures. Both the locations and configurations were deliberately selected to achieve specific hydraulic effects, including: scour, deposition, and sorting of stream gravels; increase roughness to reduce near-bank sheer stress and improve bank stability; provide grade control (i.e., vertical/horizontal stability); create backwater effects comparable to natural beaver dams where floodplain channels diverged/converged from the primary flow path; and to provide overhead and instream hiding cover for fish. Thirty-four individual treatments were installed during the Fall 2020 and four additional treatments were installed during the Fall 2021.

Project Timeline: A landowner agreement was negotiated and signed in 2018. Permits and NEPA compliance documentation were received in early 2019. Wood was first placed in August and September of 2019 to treat 964m of stream channel immediately upstream of the current work. Additional wood was placed in 538 m of channel in October 2020 and in September 2021.

Project Goals & Objectives: Objectives include increasing instream wood quantities and associated wood related habitat function to meet a wood loading target of 6 m^3/100 m. Improvements are anticipated for pool frequency and quality, gravel sorting and spawning gravel retention, hiding cover for fish, bed and bank stability, and stream/floodplain connectivity.

Relationship to Scope of Work: This project fulfills the Program commitments for Project #3 in the RP Lake Creek Watershed Restoration proposal (see Project Proposal, Table 1). The landowner provided approximately 6MBF of logs as a direct cost share for this project. Additional cost share was provided by the Tribe and BPA to cover equipment rental and labor.

Photo 1. Instream wood placement in upper Lake Creek, October 2020.

Project #3 – Upper Lake Creek Riparian Planting

Project Location:

Watershed: Lake Creek | **Legal: T49N, R6W, S36 SW ¼**

Sub Basin (River Kilometer): 13.6/2.3 rkm | **Lat: 47.543732N Long: -117.037573W**

Site Characteristics:

Slope/Valley gradient: 1-2% | **Aspect: S** | **Elevations: 780 m**

Valley/Channel type: C4(Cupp1989)/E4 **Proximity to water: Floodplain**

Other: Project to treat 21.9 hectares of floodplain and 1464 m of streambank to improve riparian function and condition over a period of 3-4 years.

Description of Treatment: Containerized aspen were planted in the floodplain adjacent to 500 meters of the Upper Lake Creek channel on May 13 -14, 2021. A total of 135 5-gallon

containers were planted and fenced to protect the plants from animal browse. A 3' diameter circular area around each planting site was treated with an aquatics approved herbicide (Rodeo®) in the spring approximately 10 days prior to planting. Although we had planned to plant up to 300 aspen in this area in the spring, not all of these plants were sufficiently well rooted in the containers to warrant planting. An additional 125 5-gallon containers were planted and fenced September 27-28, 2021 after being held at the nursery through the summer.

Project Timeline: A landowner agreement was negotiated and signed in 2018. A small test plot consisting of 60 containerized aspen trees was first planted in spring 2018. More widespread planting of 500 aspen was accomplished along 964 meters of channel in spring 2019. A third treatment was implemented in spring and fall 2021 adjacent to 500 meters of channel lying south of the primary access road and extending to the south property boundary. Additional plantings are being contemplated for 2022 to further diversity the developing riparian plant community and would occur throughout the longer 1464m project reach.

Project Goals & Objectives: Reestablish a patchwork of native vegetation communities on approximately 4.39 hectares of the floodplain to lay the foundation for a compositionally and structurally diverse riparian ecosystem to develop over the next 25-50 years. Provide for significant increases in canopy density and overhanging vegetation over a 20 year timeframe. Focus plantings on preferred species (aspen and willow sp.) to support and sustain colonization of the site by beaver.

Relationship to Scope of Work: This project fulfills the Program commitments for Project #3 in the RP Lake Creek Watershed Restoration proposal (see Project Proposal, Table 1). RP funding was used to purchase nursery stock (tall 5 gallon Aspen) planted in 2021 and fencing materials.

Photo 2. Containerized aspen -"tall" 5 gallon pots – were planted throughout the floodplain adjacent to 500 meters of Upper Lake Creek in spring and fall 2021.

Photo 3. Containerized aspen that have been planted and fenced within a canary grass (Phalaris arundinacea) dominated floodplain have survived at very high rates (>90%) and shown excellent growth over the past several seasons.

Project #(unassigned) – School Creek Culvert Replacement

Project Location:

Watershed: Lake Creek | **Legal: T48N, R6W, S12 SW ¼**
Sub Basin (River Kilometer): 11.2/0.0 rkm | **Lat: 47.51453N Long: -117.02332W**

Site Characteristics:

Slope/Valley gradient: 1-2% | **Aspect: S** | **Elevations: 768 m**
Valley/Channel type: C4(Cupp1989)/E4 | **Proximity to water: In-Channel**
Other: An undersized culvert is to be replaced to improve fish passage. Native trout will gain improved access to 750 meters of potential rearing and spawning habitat.

Description of Treatment: A design was developed for replacing an existing 24" diameter circular culvert located on School Creek, near its confluence with Lake Creek. Hydraulic modeling (HY-8) was conducted using survey data collected on site to size the new pipe. The tributary has a drainage area of 1.08 square miles with an estimated bankfull discharge ($Q_{1.5}$) of 5.2 cfs. The tributary is intermittent with only limited seasonal habitat for cutthroat trout upstream, but has supported spawning and early life stage rearing of cutthroat during some years in the past. The former culvert is undersized and required replacing to reduce erosion of the road prism and entrainment of fine sediments to downstream portions of mainstem Lake Creek where important rearing habitats exist for cutthroat trout. The former culvert was a migration barrier during higher flows due to excessive velocity.

The former pipe was removed and replaced with a 35" x 24" diameter arch pipe on June 8, 2021. The road over the culvert was raised approximately 1' over the pipe and across the floodplain to ensure that flood flows would not overtop and erode the road prism. The new larger pipe and road configuration was designed to pass a flow of 27 cfs (Q_{100}) before overtopping the road. The former configuration resulted in overtopping when flows exceeded 14 cfs.

Other Accomplishments

- **Operated PIT tag arrays to monitor movement of tagged fish throughout the watershed.**
- **While Upper Lake Creek supports moderate to high densities of Age 1+ cutthroat trout in the range of 20-50 fish/100m, little use of the stream by adfluvial fish for spawning or rearing has been noted in the recent past (Firehammer and Vitale 2018). This may be due in part to the presence of a fish passage barrier located at rkm 2.3. The removal of this barrier in 2018 improved passage to no less than 2526 m of cold water habitat in the upper watershed to migratory cutthroat trout. As such, these reaches represent good opportunity for improving the habitat attributes that can contribute in the short term to increasing stream productivity, and especially for the adfluvial life history variant. Accordingly, this area has been targeted for restoration actions that are underway and/or already completed.**

A PIT tag array was set up on the property in October 2020 at rkm 2.2 to monitor movement of tagged fish through the treated reach. Data generated in this manner will be used to describe the effectiveness of the collective treatments that are being implemented in the upper watershed.

- **Operated traps in lower Lake Creek to track the number of returning adult spawners and outmigrating juveniles at the watershed scale.**
- **Northern pike removal activities were conducted in Windy Bay in fall and spring. During fall suppression periods in 2020, a total of 32 nets were deployed over four days of netting from October 1 to October 9 in which 52 northern pike were captured. Pike numbers were quickly depleted to <1fish/net. During spring, a total of 64 nets were deployed from March 23 to May 18, 2021 with 73 northern pike captured. Catch rates were <1fish/net for much of the season.**
- **Engaged one private landowner (S. Hicks) to negotiate a landowner agreement to allow project work to proceed on Upper Lake Creek (*see project #7 and #13 in the proposal*). The project plan includes 13.3 acres of upland reforestation to convert former agricultural lands to a coniferous forest buffer adjacent to the valley bottom floodplain. Riparian plantings consisting of aspen, cottonwood and various willow species is proposed for up to 787 feet of channel to provide shade to moderate water temperature, maintain stream bank stability, increase wildlife habitat values, and improve aesthetics. Finally, the channel will be surveyed in the spring of 2022 to develop specific recommendations for stream enhancement, taking into account the existing channel pattern, profile, dimension and the frequency and duration of floodplain engagement. Primary goals to support native fisheries, wildlife and wetland functions include:**
  1. **Floods spread over the full width of the valley bottom floodplain so flood pulses are diffused and subdued;**
  2. **Maintain high water table and close connection between stream flow and ground water to ensure reliable base flow and continuous water exchange between surface and subsurface water;**
  3. **Provide diverse habitats and cold water refugia across a wide range of flows.**
- **Negotiated an MOA with Inland Empire Paper to update the 2008 forest road inventory and assessment on their ownership within the Lake Creek watershed. Conducted surveys for approximately 40 miles of forest road during May through July 2021. A work plan and MOA was drafted in September identifying project work that will be completed in 2022.**
- **Drafted and submitted a NOAA drought resilience grant, entitled "Wetlands to Combat Drought: Strengthening Drought Preparedness on the Coeur d'Alene Reservation through Wetland Restoration and Monitoring", in partnership with the Ohio State University. The proposal identifies restoration project sites in the Lake Creek watershed that will (1) restore capacity of wetlands to mitigate drought, (2) enhance fish refugia, and (3) provide**

additional habitat for culturally important wetland plant and wildlife species. If the proposal is funded, requested funds would be leveraged with Restoration Partnership funds and other funding to accomplish restoration projects identified in the upper watershed.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

None to report

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

Replacement of the School Creek culvert was not a project originally scoped and identified in the project proposal. However, the condition of the pipe and its status as a fish barrier justified its replacement. Unanticipated costs billed to this project totaled $1,661.80 to cover the purchase of the new culvert.

2) Please describe other cost share or contributing funds.

A cost share in the amount of $29,703 was received from Bonneville Power Administration for planning, design and implementation of Project #3 Upper Lake Creek LWD Additions.

A cost share in the amount of $23,030 was received from Bonneville Power Administration for planning, design and implementation of Project #3 Upper Lake Creek Riparian Planting

A cost share for services and materials valued at $3,950 was received from a landowner for implementation of Project #3 Upper Lake Creek Riparian Planting/LWD Additions.

A cost share for time and materials valued at $2,145 was received from a landowner for implementation of the School Creek culvert replacement.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe	$4,007.42	$774.91	$9,776.49	$1,034.68	$15,593.50
Travel	$0	$0	$0	$0	$0
Supplies	$4,361.35	$8,480.50	$2,121.30		$14,963.15
Equipment	$2,423.92	$0	$0	$0	$2,423.92
Contractual (Honorarium)	$0	$0	$0	$880.00	$880.00
Permitting	$0	$0	$0	$0	$0
Long-term operation and maintenance	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0
Other (Community Activities)	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$0	$0	$0
Indirect Costs	$1,632.00	$339.49	$4,117.38	$497.03	$6,585.90
Total	$12,424.69	$9,594.90	$16,015.17	$2,411.71	$40,446.47

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

Project partners involved during this reporting period include Bonneville Power Administration, Ohio State University, Inland Empire Paper Company, John and Terry Bauer, Gale Akers, Steve and Kelly Hicks.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore,

restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Monitoring has been conducted during the past fiscal year to describe several indices of the cutthroat trout population in Lake Creek at multiple spatial scales. Data are compiled and analyzed for bi-annual reports to the Bonneville Power Administration. Publication of the next report is anticipated in January 2022 covering the period January 2020 – December 2021. All results pertinent to the Lake Creek watershed will be shared with the Restoration Partnership upon publication of the final draft report. Monitoring actions are summarized below.

Status and trend monitoring is conducted at the watershed scale by generating annual estimates of adfluvial spawners and juvenile outmigrants that serve to describe trajectories in adfluvial production and aid in the assessment of population responses to collective habitat restoration efforts. Survival rates of both life stages are also assessed annually at the watershed scale to evaluate population response to northern pike suppression measures. Monitoring is also conducted at the sub-drainage and reach scales to describe the spatial distribution of WCT during summer rearing periods which permits an examination of whether abundance trajectories differ across sub-drainages or reaches within sub-drainages. The detection of declining trends or persistently low numbers of fish at these scales may signal localized degradation or deficiencies in habitat conditions that need to be addressed and prioritized for prospective habitat improvements. The spatial distribution of the adfluvial life-history variant is also assessed at the sub-drainage scale to examine potential impediments to adfluvial production and to prioritize future restoration efforts for either the preservation or re-establishment of the migratory life-history strategy.

In the past, monitoring efforts for WCT have primarily focused on assessing the status and trend of populations at the watershed scale to identify primary factors limiting population recovery, and tracking the status and trend of sub-populations at smaller, sub-drainage scales to identify impairments in stream habitat for the prioritization of localized restoration efforts. More recently, however, monitoring actions are serving in analyses to evaluate the effectiveness of non-native fish suppression measures. Migrant traps will continue to be used as the preferred method to evaluate the numerical response of adfluvial WCT in the Lake Creek watershed to pike suppression, for estimates generated

from both adult and juvenile traps are invaluable when interpreting population trajectories.

PIT-tag technology has been used to describe the spatial distribution of the adfluvial life-history form in the Lake Creek watershed, and to illustrate movements and growth rates of out-migrating juvenile WCT that allude to important seasonal spring habitats that can be reproduced with habitat restoration actions. Currently, it is being used to evaluate actions aimed at re-establishing the migratory component in sub-drainages in which the variant is seemingly deficient.

Project Title: Castle Rock Ranch – North Fork of the Coeur d'Alene River Riparian Project

Project Approval Date: 01/11/2020
Trustee Council Resolution #: 52

Report Date: October 15,2021
Project Fiscal Years: FY2021

Partnership Funds Summary

Total Partnership Funds Awarded:	**$12,265.00**
Partnership Funds Spent:	**$12,235.73**
Excess Partnership Funds Remaining (if any):	**$ 29.27**

A. GENERAL INFORMATION

Project Proponent Name: ***Kootenai Shoshone Soil & Water Conservation District – Karla Freeman District Administrator***
Primary Telephone Number: (208) 209-4348
Email: ***ksswcd@yahoo.com***

Project Sponsor: ***Idaho Department of Environmental Quality – Robert Steed***
Primary Telephone Number:
Email: *robert.steed@deq.idaho.gov*

B. PROJECT DESCRIPTION & ACCOMPLISHMENTS

1) Describe project accomplishments, completion of deliverables, and how the project met its goals and objectives. As applicable, provide quantified estimates of these accomplishments such as the acreage or stream miles of habitat restored. ***Native trees and shrubs were be planted along the river and on the floodplain to enhance the riparian zone. Fencing and plant protectors will prevent wildlife and livestock browse on the new plantings until the plants become established. The landowner purchased a variety of native riparian plants including White Pine, Grand Fir, Western Larch, Black Cottonwood, Pacific Ninebark, Ocean Spray, Red-osier Dogwood, common Snowberry, Blue Elderberry, common Chokecherry, Service Berry, and Western Red Cedar. The landowner performed site preparation prior to planting. The landowner planted 3,200 trees and shrubs over 8 acres of riparian area as well as installed protection tubes and fencing. Approximately 250 willow cuttings were planted during the Fall 2020 using cuttings supplied by Idaho Department of Fish and Game (IDFG). In the spring of 2021, the landowner purchased and laid 23 tons of straw and wet straw around the base of all trees. In the summer of 2021, the landowner lost some of the trues due to the excessive heat wave. In the fall of 2021, the landowner has purchased additional trees to replace the ones that were lost.***

2) Describe any challenges encountered and how those challenges were overcome. Describe any changes to the project from the original application. ***One of the first challenges was setting up a monetary value on the cost share for the landowner for the work he was providing. We implemented the cost share amounts based on the NRCS standards. The original application had funds of $5000.00 set up for salary/fringe. This was later amended to decrease $1,500.00 from the salary/fringe category to the supplies category. We also deducted $350.00 from the equipment category and moved into supplies as well. This was done so the district would be able to reimburse the landowner for additional expenditures used for browse protection and plant or trees.***

3) Please provide images to represent the project, including digital image files as .jpg or similar. For habitat restoration projects, include before and after photographs at a minimum. These should be taken from the same vantage point and there should be a set of photos from each property, if multiple properties are involved. ***See attached***

C. EXPENDITURES

1) Please describe any unforeseen expenditures. ***There we no unforeseen expenditures***

2) Please describe cost share or other contributions. ***Natural Resources Conservation Service (NRCS) and Idaho Soil & Water Commission (ISWCC) staff have been working closely with the district on this project providing technical support for project planning and implementation. NRCS is providing funding from the EQIP program to support irrigation improvements on the property and tree planting. Idaho Department of Fish and Game (IDFG) provided willow cuttings. The Palouse Land Trust holds and monitors the conservation easement for this property.***

Project Expenditures:
Please include expenditures for the entire project period, round to the nearest dollar, and do not leave any cells blank. Do not alter the rows or columns without pre-approval from DEQ.

	RP Funds/Actual	Cost Share/Actual	Total Budgeted	Total Actual Expenditures	Difference	Comments
Salaries/Fringe	$3,500/$3,500	$1,700/$2,943	$5,200	$6,443	$1,243	In kind match was over budgeted
Travel	$300/$55	$0/$0	$300	$55	($245)	Did not use all travel, approved to move balance to supplies
Supplies	$7,350/$7,566	$5,000/$5,000	$12,350	$12,566	$216	Did not use all travel,

						approved to move balance to supplies
Equipment	$0	$0/$0	$0	$0	$0	
Contractual	$0	$39,520/$56,597	$39,520	$56,597	$17,077	Landowner in kind match was over budgeted
Total Direct Costs	$11,150/$11,121	$46,220/$64,540	$57,370	$75,661	$18,291	
Indirect Costs	$1,115/$1,115	$0/$0	$1,115	$1,115	$0	
Total	$12,265/$12,236	$46,220/$64,540	$58,485	$76,776	$18,291	

**** Approved to move balance from travel to supplies per Bob Steed.**

***** All in kind match went well over the budgeted amounts**

D. PROJECT PARTNERS

3) Please describe the involvement of project partners, if applicable. ***Natural Resources Conservation Service (NRCS) and Idaho Soil & Water Commission (ISWCC) staff have been working closely with the district on this project providing technical support for project planning and implementation. NRCS is providing funding from the EQIP program to support irrigation improvements on the property and tree planting. Idaho Department of Fish and Game (IDFG) provided willow cuttings. The Palouse Land Trust holds and monitors the conservation easement for this property.***

E. MEASURES OF SUCCESS

1) Describe monitoring activities, if applicable, to measure or evaluate the effectiveness of the project. Please provide copies of monitoring plans and associated reports. ***Photo monitoring and continued communication with landowner will continue until the end of 2022.***

2) Describe performance standards used to measure the success of the project and how the goals and objectives were met. ***Plant survivability and increased biodiversity in the riparian area.***

3) Describe the expectations for long-term viability and sustainability of the project. Identify risks and include short-term and long-term operation and maintenance planned for the project, if

applicable***. N/A***

4) Adaptive management – Describe lessons learned from the project and how this information can be used to improve outcomes of future projects. ***The addition of fencing greatly improved the survivability above the normal browse protection tubes.***

Project Title:

Project Approval Date: 1/11/2020
Trustee Council Resolution #: 52

Reporting Quarter/FY: Quarter 4 – FY 2021 (July 1, 2021 – September 30, 2021)

Partnership Funds Expenditures

Total Amount Awarded:	**$ 1,908,450.00**
Partnership Funds Spent this Quarter:	**$ 53,752.71**
Partnership Funds Spent this Fiscal Year:	**$ $128,729.72**

A. GENERAL INFORMATION

Project Proponent Name: Idaho Forest Group – Reid Ahlf
Primary Telephone Number: (208) 762-2969
Email: rahlf@ifg.com

Project Sponsor: Idaho Department of Environmental Quality
Primary Telephone Number: (208) 666-4633
Email: robert.steed@deq.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

Restoration Planning:

Restoration planning has been moving along at the anticipated pace with InterFluve (IFI) completing the required field analysis in July and working on development of the phased preliminary restoration plan for the whole project area. This plan should be complete by the end of 2021. IFI, IFG and TU have been working in close coordination with IFI to accomplish all the tasks necessary for this design.
The RP authorized the use of funds to complete 30% design for Phase 1 and remaining field investigations at the end of September. Phase 1 includes four stretches of stream. This authorization came with the caveat that IFI give a virtual presentation on the design before authorization for the rest of design and construction. This meeting has been set for Oct. 26th and IFI is prepared to present. There will likely be another RP meeting in December where IFI will go through the alternatives for the phased preliminary design for the whole project area.

Metals Characterization:

In previous metals testing on Prichard Creek, one sample taken downstream of Bear

Gulch showed a much higher reading of copper than any other samples. In order to get a better understanding of whether this reading is accurate or was an error, DEQ put together another Task Order with Alta to pull three samples around the Bear Creek confluence with Prichard Creek. Sampling will occur in October.

IDFG Fish Surveys:

In July, Idaho Department of Fish and Game (IDFG) was able to get to Prichard and snorkel survey five pools for cutthroat trout. The water levels were very low and there were fires burning around the area. The surveys found a total of 34 cutthroat trout, individuals were found in four of the five sites. These sites have now been added to IDFG's annual snorkel surveys.

Cultural Resources Analysis:

Historical Research Associates (HRA) turned in a final copy of the "Prichard Creek Cultural Resources Background Investigations" in July. This analysis shows that there have been numerous surveys within the project area over the last forty years. Nine resources were documented in the project area with one documented as eligible for listing and three undetermined to be eligible for listing in the National Register of Historic Places. The entirety of the historic railroad is eligible for listing. The railroad ran along the stream up to Paragon Gulch. Two of the undetermined as eligible resources, a cemetery and a debris scatter, were incorrectly identified as within the project boundaries and they actually fall outside of IFG property lines and are at no risk of impact from construction activities. The third undetermined resource is described as "a partially collapsed, rectangular, wooden structure that likely represents the remnants of a mill." This structure appears to be above the Phase 1 construction but may be within the Area of Potential Effect of future phases of restoration.

Invasive Species Management

IFG began treatment of four populations of Bohemian knotweed using herbicide donated by Shoshone County. IFG donated the time of one of their contract applicators to complete treatment. More annual treatments are expected to be required to provide control.
Next steps will include weed mapping of the project area next summer, management of blue weed in the Phase 1 area and ongoing maintenance of knotweed throughout the entire project area.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.
There were no delays in project work this summer. This is surprising because the Character Complex Fire kept the project area inaccessible for a portion of the summer. The fire burned a narrow swath through the project area above Eagle and below Murray. Luckily most of the project work in the field was able to schedule around the closures and no impact on the implementation timeline is currently anticipated.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

The only unforeseen expenditure that arose this quarter was the extra metals testing being completed by Alta. There was enough funding remaining from previous metals work that an extra funding request was unnecessary.

2) Please describe other cost share or contributing funds.

Cost share is currently totaling $69,200. The most significant contribution has come from time and travel from IFG. Other large contributions have been from BLM for a revegetation project on Prichard Creek, Trout Unlimited funding for metals testing on Granite Creek, and IDFG expenses to complete a snorkel survey. IFG also paid for an appraisal of the property for the development of the conservation easement, contractor time applying herbicide and moving blow down logs to a staging area for use in the restoration work.

Project Expenditures:

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					
Travel					
Supplies					
Equipment					
Contractual (Honorarium)	$49,013.26	$12,178.10	$13,785.65	$53,752.71	$128,729.72
Permitting					
Long-term operation and maintenance					
Monitoring					
Other (Community Activities)					
Total Direct Costs					
Indirect Costs					

Total	$49,013.26	$12,178.10	$13,785.65	$53,752.71	$128,729.72

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

This reporting marked a significant change for the Prichard Project because Kajsa Van de Reit left DEQ. TU and IFG have been continuing to keep the project moving forward with Bob Steed filling in for Kajsa where necessary. Ongoing project partners such as Mike Stevenson (BLM) and Carla Burnside (USFWS) have been invaluable for consulting. Kaniksu Land Trust has been working in coordination with IFG to get the conservation easement completed and in place throughout the year. Shoshone County and the USFS have been active partners offering support and collaboration when the opportunity arises. DEQ's Mine Waste Team has been working in coordination with the local DEQ office to define metals contamination management requirements for the project area.

Although there have not been new partners brought into the project this last quarter, these previously built partnerships remain essential to keeping all of the Prichard cogs moving.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]
Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

In development of the Scope of Work for the Prichard Creek Restoration Project there were five broad goals defined for the project.

1. ***Protect: Ensure long-term protection of natural resources and restoration investments.***
2. ***Connect: Improve connectivity and aquatic organism passage in migratory corridors for westslope cutthroat trout and other aquatic life.***
3. ***Restore: Establish functional stream channels and floodplains to provide high quality, complex habitats and water quality that fully supports cold water aquatic life.***
4. ***Enhance Communities: Improve economic vitality, recreational value and educational opportunity for the local communities.***
5. ***Collaborate: Collaborate successfully among diverse private companies, public entities, and non-governmental organizations.***

This last year has taken us closer to each of these goals. IFG is getting close to completion of the conservation easement with Kaniksu Land Trust having completed the required appraisal and field reconnaissance. The phased restoration planning and the Phase 1 design is taking us closer to improving connectivity and restoration. The project has begun to add value to the local communities by the development of permanent public access and through hiring of local contractors to complete work on the project. The project has already proven very collaborative already involving numerous public entities, private companies and non-profit organizations. The Project Partners have taken a number of groups on tours of the project area which has helped bring transparency to the project and to bring in new supporters. This diverse set of partners is sure to grow along with the project.

The restoration work measures of success will be defined once the restoration plan is completed.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.
Performance standards will be decided as a team after the phased preliminary restoration plan has been adopted and the phases are defined.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Trapper Creek Bridge and Fish Passage Enhancement

Project Approval Date: 1-11-20
Trustee Council Resolution: #52

Reporting Quarter/FY: FY2021-Annual/Final

Partnership Funds Expenditures
Funds Allocated: $135,000
Funds Spent this Quarter: $90,167.21
Funds Spent this Fiscal Year: $90,167.21

A. GENERAL INFORMATION

Project Proponent Name: Mike Stevenson, USDI-BLM
Primary Telephone Number: 208-769-5024
Email: cstevenson@blm.gov

Project Sponsor: Idaho Department of Fish and Game
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

All remaining permitting was completed/secured this quarter. Construction including the removal of the inadequate culverts, installation of the new bridge, and final bank and channel grading were completed.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

No unexpected challenges were encountered. The project was executed as planned with the desired results.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

No unforeseen expenditures this quarter. The project proposal anticipated a $176,370.40 project cost. Total project expenditures were $135,708.47.

2) Please describe other cost share or contributing funds.

The project proposal anticipated a $41,370.40 (23%) Shoshone County cost share in construction equipment time and labor costs. Actual Shoshone County's expenditures totaled $45,541.26 and represent 33.6% of project costs. Anticipated cost share has been met and exceeded.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					$0.00
Travel					$0.00
Supplies				$57,252.86	$57,252.86
Equipment					$0.00
Contractual (Honorarium)				$32,914.35	$32,914.35
Permitting					$0.00
Long-term operation and maintenance					$0.00
Monitoring					$0.00
Other (Community Activities)					$0.00
Total Direct Costs				$90,167.21	$90,167.21
Indirect Costs					$0.00
Total					**$90,167.21**

The project came in $44,832.79 under the RP budget mostly due to cost savings on the bridge purchase itself.. This balance of funds is currently held in an IDFG (Sponsor) account and the TC needs to direct IDFG on final disposition of excess funds.

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

BLM assisted with the permitting process and performed regular site inspections during construction to check progress and ensure fidelity to plans. Shoshone County provided equipment and labor to execute the work. They proved professional, did quality work, took active interest in the work, and were easy to work with.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

Completion of infrastructure projects as designed will satisfy the project goal and are deemed successful. The project replaced hydraulically inefficient and undersized crossing culverts that created velocity barriers during high flows and excessive bed load deposition at low flows and created a man-made barrier to aquatic organism passage. Culverts were replaced with a bridge properly sized to accommodate all anticipated hydraulic regimes through the crossing and eliminate the man-made barrier to aquatic organism passage.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Construction performance is verified through transmittal review and regular site inspections by Proponent/Sponsor construction managers for conformance to project technical specifications. Because of the nature of this project infrastructure development in conformance with design standards is considered successful.

Before Upstream

Before Downstream

Temporary Crossing

Removal

Install Bridge Footings

New Travel Surface Placed. Temporary Crossing Ready for Removal.

After Downstream

After Upstream

After Upstream

After Downstream

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Phase 1 - Dam Removal

Project Approval Date: June 2019
Trustee Council Resolution #: 52

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $30,000.00
Funds Spent this Quarter: $0
Funds Spent this Fiscal Year: $0

A. GENERAL INFORMATION

Project Proponent Name: USFS/Wade Jerome
Primary Telephone Number: (Cell) 208 512-5097
Email: terry.jerome@usda.gov

Project Sponsor: USFS/Wade Jerome
Primary Telephone Number: (Cell) 208 512-5097
Email: terry.jerome@usda.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

   The initial implementation for the removal of the abandoned hydroelectric dam to provide unimpeded juvenile and adult passage has been completed and will be monitored through cross section, longitudinal profiles, and photos. Two hundred feet of stream bank and fish habitat improvement were also completed utilizing native materials (boulders, large woody debris, native willow staking). Most of the work occurred along the north bank (roadside).

   Permitting agencies have been notified through e-mail of completion of the this initial phase of the Red Ives Creek project.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

   Only miner delays occurred during implementation. First, was getting equipment to the site

during high fire activity resulting from the Tumbledown Fire which resulted in the loss of a couple days of production with needed equipment. Second, was maintaining compliance

with turbidity standards. Due to the narrow valley and full spanning dam, it was challenging to keep turbidity under 50 NTU's (Nephelometric Turbidity Unit) during the diversion process and during some of the structure installation due to interstitial flows through the gravels. Operations were halted until compliance could be met, which resulted in several hours of delays over the course of the 8 days of implementation.

C. EXPENDITURES

1) Please describe any unforeseen expenditures.

No unforeseen expenditures occurred

2) Please describe other cost share or contributing funds.

Although the Dam removal is complete, invoicing from Trout Unlimited has not occurred but is expected soon. Appropriate reporting on the expenditures of funds is expected to occur in Quarter 1 of Fiscal Year 2022
None of the $30,000 NRDA funds (Trustee Council Resolution 52) have been expended and remain in a FS account ready for use.
Cost share with Trout unlimited be identified based on the total project cost.
The Forest Service has contributed retained receipts through a stewardship agreement.
Idaho Conservation League has contributed funds for multiple phases of Red Ives Creek restoration.
Fish and Wildlife Service grant monies are also contributing.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					
Travel					
Supplies					
Equipment					

Contractual (Honorarium)					
Permitting					
Long-term operation and maintenance					
Monitoring					
Other (Community Activities)					
Total Direct Costs					
Indirect Costs					
Total					

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

The Idaho Panhandle National Forest has a partnership with Trout Unlimited (TU). TU is a non-profit corporation whose stated mission is to conserve, protect, and restore North America's cold-water fisheries and their watersheds. TU and the USDA Forest Service entered into a Service Wide Master Challenge Cost Share Agreement for activities to maintain and enhance the productivity of cold-water habitats on or affecting National Forest System (NFS) lands.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. *For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.*

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

Red Ives Creek restoration planning and implementation is on-going.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

Red Ives Creek restoration planning and implementation is on-going.

Restoration Partnership

Quarter 4/ Annual Project Update Form

Project Title: Rehart Conservation Easement

Project Approval Date: 12-21-20
Trustee Council Resolution #: TBD – Approved funding is contingent on TBD acceptable CE

Reporting Quarter/FY: Quarter 4 / FY2021-Annual

Partnership Funds Expenditures
Funds Allocated: $600,000
Funds Spent this Quarter: $0
Funds Spent this Fiscal Year: $0

A. GENERAL INFORMATION

Project Proponent Name: Andy Dux
Primary Telephone Number: 208-769-1414
Email: andy.dux@idfg.idaho.gov

Project Sponsor: Idaho Department of Fish and Game
Primary Telephone Number: 208-769-1414
Email: david.leptich@idfg.idaho.gov

B. PROGRESS DESCRIPTION

1) Include a description of project accomplishments this reporting period. Describe progress in securing required permits, quantify, as appropriate, x number of acres or habitat restored, and completion of any compliance documents as described in your original application.

Project proponents have met with the land owner and are continuing to negotiate details of the CE. An appraisal has been ordered and is expected to be complete by the end of the calendar year. Once the appraised value is known and how that compares to the committed funding it will be easier to negotiate the extent of the CE provisions and the final CE cost.

2) Describe any challenges which may have delayed progress this quarter, and how those challenges were/may be overcome. Include any changes to project specifications originally proposed in your application.

A different appraiser was initially contracted but withdrew due to an overwhelming workload and substantial delays as a result of a very active Northern Idaho real estate market.

C. EXPENDITURES

1) Please describe any unforeseen expenditures. No unexpected expenditures.

2) Please describe other cost share or contributing funds.

AVISTA's real estate contractor continues to facilitate negotiations with the family and contractor scheduling.

Project Expenditures: **FY20 Oct 1, 2020- September 30, 2021**

	Q1 Oct - Dec	Q2 Jan - Mar	Q3 Apr - Jun	Q4 July-Sept	Annual
Salaries/Fringe					$0.00
Travel					$0.00
Supplies					$0.00
Equipment					$0.00
Contractual (Honorarium)					$0.00
Permitting					$0.00
Long-term operation and maintenance					$0.00
Monitoring					$0.00
Other (Community Activities)					$0.00
Total Direct Costs					$0.00
Indirect Costs					$0.00
Total					$0.00

D. PROJECT PARTNERS

1) Please describe the involvement of project partners (or new partners acquired) this reporting period, if applicable.

No new project partners this quarter.

E. MEASURES OF SUCCESS – [Annual and Project Close-out reports only]

Describe monitoring efforts (if completed) that measures or evaluates the success and the effectiveness of the restoration project. The success, viability and sustainability of the restoration project should be documented at completion. For example, one of the identified restoration goals for this Solicitation includes restoring wetland habitat. Therefore, restoration projects attempting to restore wetland resources will need to document a long term, quantitative increase in wetland habitat quality and/or corresponding migratory waterfowl use of the restored area.

1) Describe measures of success and how each is related to the goals and objectives of the proposed project.

Permanent protection of the natural floodplain communities and cold water hyporheic flow.

2) Describe performance standards for all phases of the restoration project and describe how the project will be certified as complete and successful.

A signed and monitored conservation easement providing specific protections and agreeable to all parties is viewed as successful.