



**PRCC Habitat Subcommittee
 Conference Call**

**Thursday, 10 October 2024
 1:00 p.m. – 3:00 p.m.**

Meeting Minutes

PRCC Habitat Subcommittee Members

Kate Terrell, Shelby Fowler (alt), USFWS	Chris Fisher, CTCR
Dave Duvall, Deanne Pavlik-Kunkel (alt), GPUD	Brandon Rogers, Hans Smith (alt), YN
Justin Yeager, NMFS	Carl Merkle, CTUIR
Jeremy Cram, Amanda Barg (alt), WDFW	Erin Harris, GPUD
Nathan and Clayton Buck, Wanapum	Tracy Hillman, BioAnalysts, Chair

Meeting Attendees¹

Kate Terrell, USFWS	Dave Duvall, GPUD
Amanda Barg, WDFW	Justin Yeager, NMFS
Brandon Rogers, YN	Jeremy Cram, WDFW
Deanne Pavlik-Kunkel, GPUD	Tracy Hillman, BioAnalysts

Action Items:

- Tracy Hillman will share the updated Specification Sheet with project sponsors.
- Dave Duvall will do some research on whether American West Ag Appraisals could potentially serve as an alternate appraiser and reviewer.

¹ Chris Fisher was unable to attend the meeting; however, he provided his votes on decision items before and after the meeting.

Decision Items²:

- PRCC Habitat Subcommittee members approved \$475,000 (plus appraisal costs) for the White River Ohme Acquisition Project. Funding for this project will come from Fund 602.
- PRCC Habitat Subcommittee members declined the opportunity to fund the Okanagan River Restoration Initiative – Vaseux Floodplain Re-engagement Project.
- PRCC Habitat Subcommittee members approved \$1,199,417.21 (U.S. dollars) for the Okanagan Lake Dam East Salmon Passage Project. Funding for this project will come from Fund 602.
- PRCC Habitat Subcommittee members approved the proposed language to the Specification Sheet describing insurance requirements.

I. Welcome and Introductions

Tracy Hillman welcomed everyone to the meeting and participants introduced themselves.

II. Agenda Review

The PRCC HabSC reviewed and approved the October agenda.

III. September Meeting Notes

PRCC HabSC members reviewed and approved the 12 September 2024 meeting notes on 25 September 2024.

IV. Review Action Items

The PRCC HabSC reviewed the following action items from the September meeting:

- Tracy Hillman will ask Chelan-Douglas Land Trust (CDLT) for a copy of the SRFB Deed of Right for the Entiat Mainstem Parcel. **Complete. CDLT provided the Salmon Recovery Funding Board Manual 3, which provides their Deed of Right language.**
- Comments on the Okanagan Lake Dam East Salmon Passage Design report are due to Tracy Hillman by Tuesday, 17 September 2024. **Complete. Comments received were shared with the Okanagan Nation Alliance on 17 September.**
- Tracy Hillman will let Carlos Polivka know that the PRCC HabSC is not interested in funding food web studies on floodplains at this time. **Complete.**
- Tracy Hillman and Dave Duvall will add language in the Specification Sheet (under Final Comments and Instructions) describing Grant PUD's insurance requirements for implementing restoration projects. **Complete. The PRCC HabSC will review the language during the meeting.**
- Chris Fisher will work with Okanagan Nation Alliance on a time for tours in Canada. **Complete. Tracy Hillman indicated that Chris has been coordinating with the Okanagan Nation Alliance on a field tour in Canada. The plan is to hold the tours in March or April in 2025. The reason for the late winter or early spring tour is because ONA will have completed several large projects, which should be of interest to the PRCC HabSC. In his communication to Tracy, Chris said the PRCC HabSC can identify specific dates for the tour after the New Year.**

² All decision items listed here were approved by PRCC HabSC members.

- Tracy Hillman will let Carmen Andonaegui (WDFW) know that the PRCC HabSC elected to not add Cody Gillin to the PRCC HabSC distribution list. **Complete.**

V. Project Updates

Members of the PRCC HabSC provided the following updates on funded projects:

- **Alternate Primary Appraiser** – Dave Duvall reported that there are no new updates on the appraisals but indicated that one of the agenda items today is to discuss and identify primary and alternate appraisers.
- **ORRI VDS Backwatering Project** – No new updates on this project. Okanagan Nation Alliance (ONA) is planning to complete riffle construction this November.
- **Lower Wenatchee Instream Flow Enhancement Project, Phase II Project** – Kate Terrell reported that the sponsor (Trout Unlimited; TU) will begin construction on 7 October, with the demolition of the existing pump station and construction of the new pump station. The Army Corps of Engineers permit is ongoing.
- **Cascade Orchards Icicle Creek (COIC) Flow Restoration Project** – Justin Yeager said the concrete walls of the pump station structure have been poured. They completed in-water work, which included the installation of the fish screen, intake structure, and piping. Once the coffer dam was removed and the streambank was reconstructed, they installed pipe from the control manhole to the settling basin. Work on the delivery pipelines included welding pipes and preparing for installation along the laterals and main canal.
- **Okanagan Lake Dam East Salmon Passage Project** – Dave Duvall said that last month the PRCC HabSC approved additional funding for the design of this project. He added that the PRCC HabSC received a specification sheet for implementing the project. This project is discussed under Section VI.
- **Peshastin Creek RM 2.5 Project** – Kate Terrell indicated that Cascade Fisheries (CF) continues to work on permitting. The Joint Aquatic Resources Permit Application has been submitted to WDFW, ACOE, Ecology, and Chelan County. The sponsor continued to work on the Conditional Letter of Map Revision (CLOMR) application package. In October, they will meet with USFWS, NOAA, and WDFW to discuss a potential extension to the in-water work window.
- **Bockoven Entiat Acquisition Project** – Dave Duvall said there is no update on this project at this time. After the meeting, Kate Terrell reported that the Bockoven's are reviewing the appraisal.
- **Bockoven Stormy Acquisition Project** – Dave Duvall said there is no update on this project at this time. After the meeting, Kate Terrell reported that the Bockoven's are reviewing the appraisal.
- **Canyon Creek Culvert Design and Construction Project** – Kate Terrell indicated that Cascade Fisheries is currently working on the 30% design. Geotechnical work will be completed soon.
- **Eagle Rocks Habitat Enhancement Project** – Kate Terrell said that construction and site cleanup are complete. The sponsor (Methow Salmon Recovery Foundation) will plant riparian vegetation and reseed the staging and stockpiling areas in October. A photo showing restoration work is provided in Attachment 1.
- **Kedrowski Acquisition Project** – Kate Terrell indicated that the sponsor (Methow Salmon Recovery Foundation) is waiting on the completion of the appraisal.

- **Shuttleworth Creek Diversion Removal Project** – Dave Duvall indicated that the Okanagan Nation Alliance completed the removal of the concrete diversion and piping. The Okanagan Nation Alliance report on this project is provided in Attachment 2. This project is complete.
- **Bartsch Acquisition – Lower Twisp River – Reach 2A Project** – Kate Terrell said the appraisal was initiated by Pacific Appraisal Associates and the sponsor (Methow Salmon Recovery Foundation) has ordered the Title.
- **Skyline Screen and Fish Return Project** – Kate Terrell said this project is under construction. A photo showing restoration work is provided in Attachment 3.

VI. Restoration/Protection Projects

White River Ohme Acquisition Project

Kate Terrell introduced the White River Ohme Acquisition Project. The purpose of the project is to acquire 60 acres of floodplain/wetland habitat along the White River near RM 6.25. Kate said the floodplain/wetland is in excellent condition. The acquisition will also protect about 10 acres of upland forest that drains cold water onto the floodplain. Importantly, the property is surrounded on three sides by public lands. The west side of the property (20 acres), which is uplands, will be retained by the Ohme family. No funds from this acquisition will be used to add roads to the upland property. The existing Sears Creek Road allows access to the upland property. The total cost of the project is \$475,000. The sponsor requested the full amount (plus appraisal costs) from the PRCC HabSC. After review and discussion, the PRCC HabSC agreed to provide \$475,000 (plus appraisal costs) for the project.

Justin Yeager commented that acquisition of this property will provide an excellent opportunity to better manage roads in the area and reconnect the floodplain to the river.

Decision: PRCC Habitat Subcommittee members approved \$475,000 (plus appraisal costs) for the White River Ohme Acquisition Project. Funding for this project will come from Fund 602.

Okanagan River Restoration Initiative – Vaseux Floodplain Re-engagement Project

Dave Duvall introduced the Okanagan River Restoration Initiative – Vaseux Floodplain Re-engagement Project. The purpose of this project is to reconnect a portion of the large floodplain that exists between Skaha and Vaseux lakes along the Okanagan River within the Vaseux Bighorn Nation Wildlife Area. Restoration work will include excavating a relatively large pond for Chinook Salmon rearing, a pond for amphibians, a single culvert connection from the river to the pond, berm construction around wetted areas to limit fish entry into pre-existing ponds, gravel placement on the bottom of wetted areas to prevent establishment of Eurasian milfoil, boulder placement in the main channel to help direct fish into the pond, and riparian planting and seeding on the berms. The following figure shows the project before and after the proposed restoration work is implemented.



The total cost of the project is \$623,316.10 (U.S. dollars). The sponsor requested \$189,506.90 (U.S. Dollars) from the PRCC HabSC. Following review and discussion, the PRCC HabSC declined the opportunity to fund this project.

Although the PRCC Habitat Subcommittee sees value in reconnecting floodplains, they believe this project as proposed will have little benefit to Covered Species. The Vaseux Floodplain is a large floodplain with a lot of potential to benefit Covered Species. Creating a shallow pond with a single access point does not capture the full potential of restoration at this site. The PRCC Habitat Subcommittee believes the shallow pond could develop into an ecological trap in which Covered Species are subjected to high predation rates. They do see how the proposed project will benefit waterfowl and amphibians; however, those are not Covered Species and PRCC habitat Subcommittee funds cannot be used to benefit those species. Members said they are open to discussing this project with the sponsor and would entertain a revised specification sheet provided the proposed work takes greater advantage of the restoration potential at this site.

Decision: *PRCC Habitat Subcommittee members declined the opportunity to fund the Okanagan River Restoration Initiative – Vaseux Floodplain Re-engagement Project.*

Okanagan Lake Dam East Salmon Passage Project

Dave Duvall introduced the Okanagan Lake Dam East Salmon Passage Project. The Okanagan Nation Alliance also provided the PRCC HabSC with the revised Okanagan Lake Dam Fish Passage Design Report, supporting figures, and signed landowner willingness forms. Dave said the purpose of the project is to provide permanent and volitional passage for adult and juvenile Chinook Salmon, Sockeye Salmon, steelhead, and Rainbow Trout throughout all migration periods (March through November) at Okanagan Lake Dam (aka Penticton Dam) in Canada. Access into Okanagan Lake and its 14 tributaries will restore previously fragmented habitat and will provide access to important rearing and spawning habitat. The total cost of the project is \$3,226,093.33 (U.S. dollars). The sponsor requested \$1,075,364.44 (U.S. Dollars) from the PRCC HabSC.

After carefully reviewing the application and the design report, the PRCC HabSC realized they needed more information before they could vote on the project. Members noticed that the amount requested in the current application was the same as the amount requested in the July (original) application to the HCP Tributary Committees.³ Indeed, the July and October applications were nearly identical, which led to a discussion about whether the recommendations offered by the PRCC HabSC, HCP Tributary Committees, and Bryan Nordlund, and as detailed in the design report on pages 39-42, would be implemented. Based on an email exchange that occurred just before the meeting between Tracy Hillman and Zoe Eyjolfson (ONA) regarding the proposed budget, Zoe stated: *Since it's a phased approach, we added the budget for the high channel approach within the recommendations I believe. It's about 150K more than the original budget. If it's determined that the high flow entrance channel is required, then we would go back the following year to build it. However, we are including the connection points in the original budget and construction so in the event we need to go back, it will be easier for construction to add the high flow entrance.*

The PRCC HabSC found Zoe's email both helpful and confusing. The PRCC HabSC did not realize the project would be implemented in phases and were under the impression the project would be implemented as shown on page 40 in the design report. Consequently, they identified the following questions for ONA:

³ The PRCC HabSC did not receive a specification sheet requesting funding for this project in July.

1. What exactly will be constructed with the requested funding? It appears the high-flow entrance channel will not be constructed with the requested funds. Will the other recommendations from Bryan Nordlund and the PRCC HabSC (e.g., pushing the fishway as far as possible to the east and the gradual bend in the fishway) be implemented with the current funds? Please provide a design drawing that shows what will be constructed during Phase 1. It would be helpful to know which items recommended by Bryan Nordlund and the PRCC HabSC will be implemented in Phase 1, which ones will be implemented in Phase 2, and which ones will not be implemented (and why).
2. Why was the project split into two phases? Why was the high-flow entrance channel not included in Phase 1?
3. ONA's email indicates that the high-flow entrance channel will be constructed if it is required. What is meant by "required?" What "specific criteria" will be used to determine whether the high-flow entrance will be constructed? If it is determined that the high-flow entrance is needed, will the sponsor ask the PRCC HabSC to fund it, or is there some other source of funding for it?
4. Is the intent that Phase 1 will be funded entirely by the PRCC HabSC? Are there any other cost shares? If so, the sponsor should identify those cost shares.

Because the PRCC HabSC understands that this is a time sensitive project with construction proposed to begin in November, they agreed to vote on the application as soon as they receive responses to their questions. They directed Tracy Hillman to send the questions to ONA as soon as possible.

Tracy sent the questions to ONA on Friday, 11 October. ONA provided their responses to the questions by late Friday, 11 October. That evening, Tracy sent the responses to the PRCC HabSC for their review and asked members to cast their votes on the project by Wednesday, 16 October.

Members provided their votes by 16 October. Four members supported the project, one member supported the project only if the high-flow fishway entrance is included in Phase 1, and one member abstained. Thus, the PRCC HabSC declined the opportunity to fund the project as proposed because consensus was not reached.

After Tracy shared the PRCC HabSC's decision with the sponsor, ONA met with the Province to discuss the status of the project and the PRCC HabSC's decision to support the project only if the high-flow fishway entrance is constructed during Phase 1. On 23 October, ONA reported to Tracy that the Province agreed that their concerns can be mitigated and therefore the Province agreed to allow the construction of the high-flow fishway entrance during Phase 1. On 24 October, ONA provided the PRCC HabSC with a revised budget, which included the cost to install the high-flow fishway entrance (see Attachment 4). The total cost of the project is \$3,598,251.64 (U.S. dollars). The sponsor requested \$1,199,417.21 (U.S. Dollars) from the PRCC HabSC. On 24 October, via email, Tracy asked members whether they supported the revised budget, which included the installation of the high-flow fishway entrance. By 25 October, voting members of the PRCC HabSC agreed to provide \$1,199,417.21 (U.S. dollars) for the Okanagan Lake Dam East Salmon Passage Project; one member abstained.

Decision: *PRCC Habitat Subcommittee members approved \$1,199,417.21 (U.S. dollars) for the Okanagan Lake Dam East Salmon Passage Project. Funding for this project will come from Fund 602.*

VII. Administration and Information Updates

PRCC Habitat Subcommittee Second Quarter 2024 Expenditures and Unencumbered Balances – Tracy Hillman shared the following financial information with the HabSC:

Habitat Fund	Expenditures through 30 June 2024	Unencumbered Balance
601	\$892,981	\$5,848,019
602	\$824,785	\$10,122,803
603	\$1,132,492	\$2,223,860
Total	\$2,850,258	\$18,194,682

Add Grant PUD Insurance Requirements to the Specification Sheet

Dave Duvall reported that during the last meeting, members thought it would be a good idea to include language in the Specification Sheet (under Final Comments and Instructions) describing Grant PUD’s insurance requirements for implementing restoration projects. The purpose is to provide project sponsors with an understanding of the types and amounts of insurance Grant PUD may require on a given restoration project. This information will be especially useful to new sponsors. Dave said he and Tracy Hillman drafted language identifying the types and amounts of insurance that Grant PUD Contracting and Risk may require for implementing restoration projects.

Members discussed whether it would be most useful to show the minimum amount of coverage needed for each type of insurance, the maximum amount, or a range of amounts. Because Grant PUD will determine the amount of coverage required after being approved by the PRCC HabSC and based on the scope of the project, the PRCC HabSC agreed that it is best to show a range of coverage for each insurance type. Adding the range of potential insurance requirements in the specification sheet will provide the sponsors with some idea of the coverage they may need to implement their proposed restoration project. The PRCC HabSC agreed to include the following language under the “Final Comments and Instructions” section of the specification sheet:

Sponsors need to be aware that Grant PUD Contracting and Risk require certain amounts of insurance coverage for implementing restoration projects. Every project is unique and not all insurance coverage will be required if not found applicable (e.g., pollution, watercraft, aircraft, etc.). Also, depending on the nature of the project, there may be times when the maximum amounts listed below may not be sufficient. To avoid delays in contracting, sponsors should include cost estimates for these requirements in their proposed budget. These requirements include:

- *General Liability Umbrella Insurance (range \$1M to \$10M)*
- *Pollution Insurance (range \$1M to \$5M)*
- *Watercraft Insurance (range \$1M to \$5M)*
- *Workers’ Compensation and Stop Gap Employers Liability Insurance (range \$1M to \$5M for each accident, each employee, and policy limit)*
- *Automobility Liability Insurance (range \$1M to \$10M)*
- *Professional Liability Insurance (range \$1M to \$5M)*
- *Aircraft Insurance (minimum limit \$10M)*

Decision: PRCC Habitat Subcommittee members approved the proposed language to the Specification Sheet describing insurance requirements.

Identify Alternate Appraisers and Reviewers

Tracy Hillman noted that he reached out to Chelan-Douglas Land Trust (CDLT) and the Methow Salmon Recovery Foundation for their recommendations on a list of appraisers and reviewers. Only CDLT responded to his request. In an email from Caitlyn Evans (CDLT), she indicated that CDLT has used Pacific Appraisal Associates (Kirk Dossler, Brian Vincent, and Mike Thomason) for appraisals in Chelan and Douglas counties. She added that they recently used Kristen Kallstrom Los with American West Ag Appraisals. Kristen is based out of Ephrata and works throughout Chelan, Douglas, Okanogan, and Grant counties. She is yellow book certified and did the appraisal on the Landin Property for the Salmon Recovery Funding Board.

The PRCC HabSC currently uses Pacific Appraisal Associates. At this time, they have no review or alternate appraisers under contract. The PRCC HabSC will continue to use Pacific Appraisal Associates as their primary appraiser. Dave Duvall said he will do some research on American West Ag Appraisals. It is possible they could serve as the alternate. Depending on which one conducts the appraisal, the other could serve as the reviewer.

WDFW Representation on the PRCC HabSC

Amanda Barg reported that she has accepted a position with the Washington Department of Transportation. Her last day with WDFW will be 14 October. Therefore, she will no longer serve as WDFW's alternate on the PRCC HabSC. Jeremy Cram said that it is likely that Cody Gillin will serve as WDFW's alternate on the PRCC HabSC. Everyone thanked Amanda for her participation on the PRCC HabSC. She will be missed.

VIII. Adjourn

Tracy Hillman adjourned the meeting at 3:30 pm.

IX. Next Meeting

The next meeting of the PRCC HabSC will be on 14 November 2024.

Attachment 1

Photo from the Eagle Rocks Habitat Enhancement Project.



Attachment 2

Report from the Okanagan Nation Alliance on the Shuttleworth Creek Diversion Removal Project.

Shuttleworth Creek Point Of Diversion Removal Update October 2024

PROJECT BACKGROUND

- All point of diversion (POD) infrastructure related to the AWUC works along Shuttleworth Creek was removed as the next step in the water license abandonment process.
- Works occurred early August deconstructing infrastructure on the property of the Nature Trust.
- Site repair following construction includes re-grading the left bank of Shuttleworth Creek at the POD site using natural materials



Figure 1 Basemap highlighting Shuttleworth POD infrastructure to be removed (red). The construction site (yellow) and diversion ditch (white) are included for reference

TIMELINE

Construction preparation August 2nd, 2024.

Environmental monitoring, construction and site repair August 6th-7th, 2024



Figure 2 Shuttleworth POD infrastructure photos looking upstream (left) and downstream (right)

CONSTRUCTION WORKS

Pre and post construction photos of the work site are included in Figure 3. Construction started on August 6th, 2024 following an intense rainstorm on August 5th, 2024. Prior to machinery moving to site, turbidity in Shuttleworth Creek was above the measurable range of monitoring equipment. Turbidity remained above measurable limits, upstream of works, for the duration in-stream construction. In-stream construction was finished in a single day on August 6th, 2024. Site cleanup was completed August 7th, 2024. Final reporting is in progress and will be submitted in December, 2024.



Figure 3 Top: Preconstruction photo of diversion infrastructure August 6th, 2024. Bottom: Postconstruction photo of diversion infrastructure site looking downstream at re graded left bank August 7th, 2024. An undisturbed patch of grass is highlighted as a reference point in both photos.

Attachment 3

Photo from the Skyline Screen and Fish Return Project.



Attachment 4

Revised Budget (U.S. dollars) from the Okanagan Nation Alliance on the Okanagan Lake Dam East Passage Project.

BUDGET ITEM	PRCC-HSC REQUEST	OTHER CONTRIBUTIONS	TOTAL COST
General Requirements	\$120,450.00	\$240,900.00	\$361,350.00
Survey Layout and Project Record Documents	\$4,866.67	\$9,733.33	\$14,600.00
Project Safety Documentation	\$2,433.33	\$4,866.67	\$7,300.00
Temporary Utilities and Lighting	\$3,650.00	\$7,300.00	\$10,950.00
Temporary Facilities	\$6,083.33	\$12,166.67	\$18,250.00
Mobilization / De-Mobilization	\$12,166.67	\$24,333.33	\$36,500.00
Dust Control	\$1,216.67	\$2,433.33	\$3,650.00
Traffic Control, Vehicle Access and Parking (w/ Fencing)	\$12,166.67	\$24,333.33	\$36,500.00
Excavation Dewatering	\$19,466.67	\$38,933.33	\$58,400.00
Temporary Isolation on Okanagan Lake	\$19,466.67	\$38,933.33	\$58,400.00
Temporary Isolation in Okanagan River w/ Pumping	\$6,083.33	\$12,166.67	\$18,250.00
Staging Area Restoration of Trails, Parking Area, Landscaping	\$12,166.67	\$24,333.33	\$36,500.00
Tree Protection (160 LM.)	\$3,650.00	\$7,300.00	\$10,950.00
Tree Pruning	\$1,216.67	\$2,433.33	\$3,650.00
Post Project Identification Educational Signs	\$3,650.00	\$7,300.00	\$10,950.00
Project Identification	\$1,216.67	\$2,433.33	\$3,650.00
Concrete	\$101,839.87	\$203,679.73	\$305,519.60
100mm Reinforced Concrete Slab - Sampling Station Compound	\$1,946.67	\$3,893.33	\$5,840.00
Lean-to Column Reinforced Footings	\$1,460.00	\$2,920.00	\$4,380.00
Channel Type A - Concrete Walls (0.15 to 0.560m Thickness) c/w nelson studs and reinforcing	\$51,100.00	\$102,200.00	\$153,300.00
Concrete Channel Slab (100mm thick) c/w drain rock base	\$4,453.00	\$8,906.00	\$13,359.00
Concrete Pile cap (150mm thick)	\$1,241.00	\$2,482.00	\$3,723.00
300mm Reinforced BCL-625 Suspended Slab Bridge Deck c/w Wheel Curb	\$19,447.20	\$38,894.40	\$58,341.60
500mmx 400mm Reinforced Concrete Bridge Beam	\$7,786.67	\$15,573.33	\$23,360.00
250mm x 900mm Bridge Abutment Reinforced Footing	\$2,920.00	\$5,840.00	\$8,760.00
200mm x 1.65m Bridge Abutment Reinforced Concrete Wall c/w Excavation and Backfill	\$4,672.00	\$9,344.00	\$14,016.00
Pedestrian Bridge 300mm Sono tube Reinforced Concrete Footings	\$2,433.33	\$4,866.67	\$7,300.00
Channel Type A - Trash Rack Footing	\$1,216.67	\$2,433.33	\$3,650.00
Channel Type A - 200mm x 600mm x 200mm Conc. Wall	\$1,460.00	\$2,920.00	\$4,380.00
Channel Isolation Concrete Sills	\$1,703.33	\$3,406.67	\$5,110.00
Electrical	\$39,371.33	\$78,742.67	\$118,114.00
Electrical Kiosk - c/w Pre-Cast Concrete Slab	\$8,516.67	\$17,033.33	\$25,550.00
City of Penticton Electrical Single Phase Service	\$9,733.33	\$19,466.67	\$29,200.00

BUDGET ITEM	PRCC-HSC REQUEST	OTHER CONTRIBUTIONS	TOTAL COST
75mm DB2 Conduit 2 runs	\$4,282.67	\$8,565.33	\$12,848.00
2-50mm 1 Comm , 1 Power Servicing Conduit	\$1,460.00	\$2,920.00	\$4,380.00
50mm Long Radius Sweeps c/w perforation through sheet pile	\$3,406.67	\$6,813.33	\$10,220.00
Lighting and Outlets	\$1,216.67	\$2,433.33	\$3,650.00
Outdoor Electrical Control Panel	\$1,216.67	\$2,433.33	\$3,650.00
Hydrostatic Level Transducer	\$1,460.00	\$2,920.00	\$4,380.00
78mm Communications Conduit c/w Excavation and Backfill	\$3,942.00	\$7,884.00	\$11,826.00
50mm Comm./Power River Watcher Service c/w Sheet Pile Perforation	\$365.00	\$730.00	\$1,095.00
1 Ton Chain Hoist Winch	\$1,216.67	\$2,433.33	\$3,650.00
Security Camera	\$608.33	\$1,216.67	\$1,825.00
1/4 HP Centrifugal Self-Priming Pump c/w Controls and Watertight Basin	\$1,946.67	\$3,893.33	\$5,840.00
Earthwork	\$326,507.10	\$653,014.20	\$979,521.30
8m H1907-700 Sheet Piles - Or Approved Equivalent Type "A" Sheet Pile	\$33,166.33	\$66,332.67	\$99,499.00
8m H1907-700 Sheet Piles - Or Approved Equivalent Type "B" Sheet Pile c/w Cutting to Grade	\$166,440.00	\$332,880.00	\$499,320.00
219mm dia. Shed 40 Steel Pipe Pile	\$38,933.33	\$77,866.67	\$116,800.00
Clearing and Grubbing	\$1,752.00	\$3,504.00	\$5,256.00
Removal of Existing Fountain and Walkway	\$1,460.00	\$2,920.00	\$4,380.00
Tree Removal x 5 and Dispose Offsite	\$4,866.67	\$9,733.33	\$14,600.00
Okanagan Lakeshore Tree Removal and Cottonwood Stump Salvage	\$4,866.67	\$9,733.33	\$14,600.00
Timber Crib Wall and Abutments and Beaver Dam Removal	\$3,650.00	\$7,300.00	\$10,950.00
Ex Chain link Fence removal and dispose offsite	\$547.50	\$1,095.00	\$1,642.50
Excavate 1.5m Depth - Staging Pool in Okanagan River w/ Sediment Containment	\$4,866.67	\$9,733.33	\$14,600.00
Fish Channel Controlled Excavation in 100mm Lifts for Archaeology Assessment	\$30,416.67	\$60,833.33	\$91,250.00
Okanagan River Re-grading Approach Channel to Holding Pool	\$2,433.33	\$4,866.67	\$7,300.00
Hydrovac Pipe Location for Dam	\$1,216.67	\$2,433.33	\$3,650.00
Excavate and Re-grade Okanagan Lake Bank at 2H : 1V Slope,	\$5,110.00	\$10,220.00	\$15,330.00
1.0m Boulders, Washed, Supply & Place in Okanagan River	\$1,216.67	\$2,433.33	\$3,650.00
500mm Riffle Crest Boulders in Channel, Washed and/or Screened, Supply & Place	\$827.33	\$1,654.67	\$2,482.00
1000mm x 500mm dia. Rounded Boulders for Step Pool, Washed and/or Screened, Supply & Place	\$973.33	\$1,946.67	\$2,920.00
Class 10kg Angular Riprap - c/w 75mm Minus to fill Voids , Washed and/or Screened, Supply & Place	\$8,322.00	\$16,644.00	\$24,966.00
19mm-75mm Clean Choking Gravel	\$1,387.00	\$2,774.00	\$4,161.00
100mm of 75mm sub base	\$233.60	\$467.20	\$700.80
Okanagan Lakeshore Class 250kg Angular Riprap, Supply & Place	\$8,516.67	\$17,033.33	\$25,550.00
Remove, Store, & Re-installed - Okanagan River Bank - Class 250kg Angular Riprap.	\$5,304.67	\$10,609.33	\$15,914.00

BUDGET ITEM	PRCC-HSC REQUEST	OTHER CONTRIBUTIONS	TOTAL COST
Roads and Site Improvements	\$157,832.08	\$315,664.17	\$473,496.25
Granular Sub-Base (specify) 150mm Thickness for Roads or Sidewalks	\$3,650.00	\$7,300.00	\$10,950.00
Granular Base 19mm Minus - 150mm Thickness for Viewing Area	\$778.67	\$1,557.33	\$2,336.00
50mm Asphalt paving for Pedestrian Trail	\$1,216.67	\$2,433.33	\$3,650.00
Chain Link Fence (1.83m)	\$1,885.83	\$3,771.67	\$5,657.50
Chain Link Fence (3.048m) c/w 200mm Cut Out for Piping	\$3,406.67	\$6,813.33	\$10,220.00
Cedar Split Rail Fence (2 Rail, 1.025m)	\$4,866.67	\$9,733.33	\$14,600.00
Chain Link Fence Gates - 2.5m opening - 3.048m Height	\$730.00	\$1,460.00	\$2,190.00
Chain Link Fence Gates - 3.0m opening - 1.83m Height	\$608.33	\$1,216.67	\$1,825.00
Remove & Replace Okanagan Lakeshore Chain Link Fence (1.83m)	\$2,993.00	\$5,986.00	\$8,979.00
Shrubs & Ground Cover (As per ONA Planting Plan)	\$14,600.00	\$29,200.00	\$43,800.00
Trash Rack - 2.0m x 5.5m c/w 200mm Open Spacing	\$4,866.67	\$9,733.33	\$14,600.00
3m Span aluminum gantry crane	\$2,433.33	\$4,866.67	\$7,300.00
River Watcher	\$26,766.67	\$53,533.33	\$80,300.00
Wave Eater c/w Four Conc. Anchors, Chains and Connections	\$17,033.33	\$34,066.67	\$51,100.00
Lean To Building	\$12,166.67	\$24,333.33	\$36,500.00
Stop Logs	\$29,200.00	\$58,400.00	\$87,600.00
River Watcher Exclusion fence/V Trap, Floor and Ladder	\$15,816.67	\$31,633.33	\$47,450.00
Steel Grates (30x102x4.8) 1m W x 2.9m L c/w Welded Angel Backing w/ 76x76x6.4 Angle	\$11,892.92	\$23,785.83	\$35,678.75
1.5m Steel Grating (30x102x4.8) Bridge w/ Safety Railing	\$608.33	\$1,216.67	\$1,825.00
River Channel Exclusion Fencing 50x50 HSS w 25mm Round Tubing 25mm spacing	\$851.67	\$1,703.33	\$2,555.00
Channel Aluminum Isolation Bulkheads	\$1,460.00	\$2,920.00	\$4,380.00
Utilities	\$4,173.17	\$8,346.33	\$12,519.50
Water Service Connection - 19mm diam PVC	\$377.17	\$754.33	\$1,131.50
50mm Water Service Sleeve c/s Screen and 2- Long Radius Vertical Bends, Sheet pile Perforation	\$438.00	\$876.00	\$1,314.00
Drainage Pipe PVC - 100mm diameter, 1.2m depth of main	\$389.33	\$778.67	\$1,168.00
Drainage Pipe PVC - 200mm diameter, Overland to HDPE, c/w Pipe Stands	\$219.00	\$438.00	\$657.00
Drainage Pipe HDPE - 200mm diameter, Overland to Lake	\$316.33	\$632.67	\$949.00
6.35mm (1/4") Stainless Steel Live Well Holding Tank 1.0m(L) x 3.0m(W) x 1.0m(H) c/w 200mm rounded pipe inlet (r/D=0.15) at Top of Tank with Flange Connection	\$2,433.33	\$4,866.67	\$7,300.00
Structural Steel	\$42,741.50	\$85,483.00	\$128,224.50
1m Stainless Steel working table	\$1,216.67	\$2,433.33	\$3,650.00
4m Fir Pedestrian Bridge c/w 14" Wood Stringers	\$9,733.33	\$19,466.67	\$29,200.00
Channel Type A Bracing at 1.3m - 2-W8x48 Steel Beam c/w 102x102x95 HSS Steel Brace at 2.808m, 150mmx150mm HSS Spacer & 330mmx200mm Steel Shim Plates & Web Stiffeners	\$5,718.33	\$11,436.67	\$17,155.00
Channel Type B - W8x48 Steel Beam c/w 102x102x95 HSS Steel Brace at 2.808m, 330mmx200mm Steel Shim Plates and Web Stiffeners	\$23,214.00	\$46,428.00	\$69,642.00

BUDGET ITEM	PRCC-HSC REQUEST	OTHER CONTRIBUTIONS	TOTAL COST
1.07m Removable Safety Railing c/w Inset Sleeves in Conc. Pile Cap	\$2,287.33	\$4,574.67	\$6,862.00
Bolted Angle Gantry Crane Guide/Wheel Stop 76x76x6.4 Angle	\$571.83	\$1,143.67	\$1,715.50
PM, Contracting & Consulting	\$151,136.28	\$302,272.56	\$453,408.84
IFC Designs, Specifications Tendering Contracting and PM	\$20,805.00	\$41,610.00	\$62,415.00
Consultant Inspections & Monitoring During Construction	\$23,116.67	\$46,233.33	\$69,350.00
PIB (TEKK sessions, EM, expenses, document review, etc)	\$17,033.33	\$34,066.67	\$51,100.00
Communications Outreach	\$2,433.33	\$4,866.67	\$7,300.00
Archaeology Monitoring and Controlled Excavation Supervision	\$43,800.00	\$87,600.00	\$131,400.00
Commissioning and Operation Plan and Manual	\$17,033.33	\$34,066.67	\$51,100.00
ONA Project oversight - senior bio	\$1,874.64	\$3,749.28	\$5,623.92
ONA Project management through construction, coordination, reporting, etc. - bio	\$15,271.60	\$30,543.20	\$45,814.80
ONA Mileage	\$87.60	\$175.20	\$262.80
Misc. supplies	\$121.67	\$243.33	\$365.00
ONA Safety coordinator	\$156.22	\$312.44	\$468.66
ONA Monitoring and maintenance - bio	\$2,545.27	\$5,090.53	\$7,635.80
ONA Monitoring and maintenance - tech	\$6,073.60	\$12,147.20	\$18,220.80
ONA Monitoring mileage	\$2.92	\$5.84	\$8.76
ONA Communications	\$781.10	\$1,562.20	\$2,343.30

BUDGET ITEM	PRCC-HSC REQUEST	OTHER CONTRIBUTIONS	TOTAL COST
General Requirements	\$120,450.00	\$240,900.00	\$361,350.00
Concrete	\$101,839.87	\$203,679.73	\$305,519.60
Electrical	\$39,371.33	\$78,742.67	\$118,114.00
Earthwork	\$326,507.10	\$653,014.20	\$979,521.30
Roads and Site Improvements	\$157,832.08	\$315,664.17	\$473,496.25
Utilities	\$4,173.17	\$8,346.33	\$12,519.50
Structural Steel	\$42,741.50	\$85,483.00	\$128,224.50
PM, Contracting & Consulting	\$151,136.28	\$302,272.56	\$453,408.84
Contingency Allowance	\$94,405.13	\$188,810.27	\$283,215.40
Subtotal including GST	\$1,090,379.29	\$2,180,758.57	\$3,271,137.86
Admin 10%	\$109,037.93	\$218,075.86	\$327,113.79
Total	\$1,199,417.21	\$2,398,834.43	\$3,598,251.64