



Board/Authority Authorized Course Columbia River Field School

School District/Independent School Authority Name: School District 8, Kootenay Lake	School District/Independent School Authority Number (e.g. SD43, Authority #432):
Developed by: Monica Nissen, BEd, Wildsight Education Program Manager, SD 8 TTOC Grace Broadfoot, BEd, SD8 Teacher, RCABC Flatwater Level 2 Canoe Instructor Graeme Lee-Rowlands, BA, Field School Co-ordinator Roger Warnatsch, RCABC Master Canoe Instructor	Date Developed: March 2019 (Piloted by Wildsight Summer 2018 without credit)
School Name: JV Humphries Elementary-Secondary	Principal's Name: Dan Rude
Superintendent Approval Date (for School Districts only):	Superintendent Signature (for School Districts only):
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course Name: Columbia River Field School	Grade Level of Course: 11
Number of Course Credits: 4	Number of Hours of Instruction: 120

Board/Authority Prerequisite(s):

Special Training, Facilities or Equipment Required: Recreational Canoeing Association of BC Canoe Instructors, Outdoor Education experience, Wilderness First Aid, familiarity with Columbia River and paddling routes, canoes and camping equipment, transportation

Course Synopsis: A place-based, immersive two-week canoe trip and learning adventure, the Columbia River Field School, offered in collaboration with Wildsight, explores important aspects of the Columbia River’s story through geography, ecology, hydrology, technology, economics, politics, history and indigenous perspectives. Students will paddle key sections of the river and visit important places, including the Columbia Wetlands, historic First Nations’ sites, dams and reservoirs. Along the way, students will learn first-hand and from a diverse selection of highly qualified guest speakers including indigenous leaders, local and provincial government officials, ecologists, hydrologists, water managers, fisheries biologists, climate scientists, writers, artists, film-makers, and other lifelong residents. The Field School is designed to give students a much-needed understanding of the complex issues of the Columbia. Students will be challenged to think about their own connections to place; personal passions and skills; study and career paths; and to consider ways in which to become engaged in creating a positive and sustainable future for the Columbia River and its watershed.

The Field School is a 4-credit course.

Goals and Rationale: The Columbia River watershed is a powerful lens through which to look at topics from social studies, science, language arts, outdoor education and leadership. As citizens of the Columbia Basin, students will have the opportunity to learn experientially about a variety of subjects through the study of the past, present and future of the river, its ecosystems and communities. With the renegotiation of the Columbia River Treaty in process, and with challenges ahead which include reconciliation with indigenous communities, climate change, water management, energy and resources, loss of anadromous fish, invasive species, and many more, students are learning about topics and thinking about solutions that are rooted in place and relevant to their own lives.

In the predominantly rural region of the Columbia River Basin of BC, the environmental, cultural and economic challenges of the region are tied to the history and future of the Columbia River. The youth of today have opportunities to become informed, trained, skilled citizens, workers and leaders to tackle these interconnected issues. Students will learn skills such as canoeing, navigation, camping, water quality testing, species identification and data collection. They will also build connections and networks, consider diverging opinions, and reflect on issues. They will develop competencies including critical thinking, communication, leadership, collaboration, responsibility and resilience.

Aboriginal Worldviews and Perspectives:

The Field School begins with origin stories of the place told by indigenous elders, and weaves worldviews and perspectives into the entire curriculum, engaging several indigenous speakers. First Peoples’ Principles of Learning are observed and embodied. This is reflected in *how* learning happens: in community; on the land; and through storytelling, hands-on experiences and personal reflection; as well as *what* is learned: that the memory, history and culture are deeply tied to place and the land, water people and other life that are connected to it.

- *Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.*
- *Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).*
- *Learning involves recognizing the consequences of one’s actions.*
- *Learning involves generational roles and responsibilities.*
- *Learning recognizes the role of indigenous knowledge.*
- *Learning is embedded in memory, history, and story.*

- *Learning involves patience and time.*
- *Learning requires exploration of one's identity.*
- *Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.*

BIG IDEAS

The **Columbia River** connects ecosystems and human communities in its watershed

Geology, hydrology, and ecology intersect with history, culture, politics and economics in the **Columbia Basin watershed**

The **Columbia River Treaty** is a transboundary agreement with multiple benefits as well as social and environmental impacts

Leadership includes communication, planning, safety, collaboration and personal and social responsibility

Canoeing is a lifelong outdoor activity that can support healthy active living and local exploration

Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <p><i>The Columbia River Watershed</i></p> <ul style="list-style-type: none"> -Consider the complex meaning of “watershed” including physical, environmental and human elements -Map the Columbia River watershed in geographical, cultural and personal contexts. Develop sense of place as an inhabitant of the Columbia River watershed. <p><i>Physical and cultural origins: The river and its original stewards</i></p> <ul style="list-style-type: none"> -Conceptualize landscape change at various time and geographic scales - Describe the interconnection of human and physical geography of the watershed and changes through time <p>-Appreciate Indigenous perspectives and worldviews on the human and physical history of the Columbia River</p>	<p><i>Students are expected to know the following:</i></p> <p><i>The Columbia River Watershed</i></p> <ul style="list-style-type: none"> -Geographical context of the Columbia River watershed <ul style="list-style-type: none"> • headwaters, mouth, direction of flow, tributaries, land base, ecosystems • communities, boundaries, river use and development <p><i>Physical and cultural origins: The river and its original stewards</i></p> <ul style="list-style-type: none"> - Geologic history and processes of the Columbia Basin <ul style="list-style-type: none"> • plate tectonics, terranes, subduction, volcanism, glaciation, erosion, flooding - Human history of the watershed, including <ul style="list-style-type: none"> • distribution and culture of indigenous peoples, • colonization and impacts in the Canada/United States <p>-Indigenous perspectives of the local landscapes, history and people</p>

Intact River Ecosystems: Ecology and Hydrology in the Columbia

- Understand the different ways that humans and other life forms use and are interconnected with the river and how these different uses can conflict with or enhance each other
- Read and interpret a river hydrograph, as well as vegetation patterns to understand water levels and change
- Paddle and experience the Columbia Wetlands
- Present first-hand observations and reflections about wetland ecosystems and their function
- Identify different kinds of wetlands, based on substrate, plant communities and wildlife
- Demonstrate proper specimen collection techniques
- Describe the concept of ecosystem services

River Development: Dams, Reservoirs, and the Columbia River Treaty (CRT)-Arrow Lakes

- Appreciate the complexities of the Columbia River Treaty (CRT) and its impacts on human communities and the watershed.
- Consider how land-use decisions were made as a result of the CRT and the resulting impacts on individuals and communities
- Experience the magnitude of the dam by standing on its crest, looking upstream and downstream to compare and contrast
- Understand the importance of using scientific methodology as well as first hand observation, stories and personal lived experiences of residents in studying landscape change and in making watershed management decisions

Intact River Ecosystems: Ecology and Hydrology in the Columbia

-Function and Forces of change in riverine ecosystems

- flow, water level, seasonal change
- river hydrograph
- biotic factors
- anthropogenic factors

-Biodiversity of the Upper Columbia Wetlands

- Complexity and **ecosystem function** of intact **wetlands**
- Types of wetlands
- concept of '**ecosystem services**'
- Ecosystem impacts of the large hydro dams on the Columbia mainstem

River Development: Dams, Reservoirs, and the Columbia River Treaty

-Columbia River Treaty- Past, Present and Future

- history, development
- flood control, storage, energy, downstream power benefits, Canadian entitlement
- renegotiation- flood risk management, power, recreation, fisheries, wildlife, economic activities, ecosystem services, indigenous cultural and land-use values

-Basic function and workings of a **hydroelectric dam**

- Reservoir, intake, penstock, turbine, generator, transmission, tailrace

-Changes and consequences to riverine ecosystems as a result of river development

- reservoir, drawdown zone
- water level regulation
- storage and run-of-river dams

-Water management challenges including cost and benefits, associated with hydro dams and reservoirs from environmental, (and social and economic) perspectives

-Paddle and experience the Arrow Reservoir, comparing and contrasting it to the other stretches of the Columbia River

-Reflect on cultural and ecological significance of loss of fish species, and discuss challenges and solutions to current situation
-Describe lifecycles of some common Columbia fish species
-Identify fish habitat enhancement and restoration technologies and cultural implications

-Use practical tools and techniques to identify common species in the field

-Perform water quality testing, data-sharing and analysis
-Discover opportunities to volunteer for community stewardship groups doing monitoring and other citizen science projects

The Future of the Watershed: Climate change, reconciliation, and the CRT renegotiation

-Consider the impacts of climate change from global, regional, local standpoints, and be able to describe mitigation and adaptation actions.

-Participate in CRT renegotiation role-play and consider various viewpoints, and perspectives

-Formulate questions and input for **‘Future of the Watershed’ symposium**

-Articulate personal views and perspectives on the Columbia River Treaty, its renegotiation and possible motivations/opportunities for engagement

-Arrow Lakes reservoir history

- local legacy of the CRT (ecosystems, communities, agriculture)

-Columbia River fisheries

- history, current state, and future potential
- loss of **anadromous** salmon and other species, salmon restoration, status of kokanee
- status of endangered sturgeon and recovery efforts; status of burbot, white sturgeon
- significance to indigenous peoples

-Stewardship activities

- research, **citizen science**
- monitoring species populations (wetland birds, mammals, plants, fish)
- **water quality monitoring and assessment** (physical
- habitat maintenance and enhancement projects

The Future of the Watershed: Climate change, reconciliation, and the CRT renegotiation

Climate Change in the Columbia River Watershed

-Regional **climate change** impacts, including on water quality and quantity, as well as ecosystem changes and wildfire occurrence

- climate modelling, water availability, flood regimes, drought

-First Nations consultation and involvement in CRT renegotiation and implications for reconciliation

-Columbia River Treaty renegotiation

- public engagement
- flood risk management, power, recreation, fisheries, wildlife, ecosystem services concerns

Leadership, Communication and Personal Development

- Practice **leading and supporting peers** through 'leader-of-the-day' opportunities
- Participate in group discussion, reflective journaling activities
- Practice **listening to and balancing divergent perspectives** on an issue

Recreational Canoeing Association of BC (RCABC) Lakewater Tandem Paddler Level 1

- Understand the canoe, parts, terminology and required safety equipment
- Demonstrate manoeuvres and actions necessary for safe and effective canoe transport, travel, trip planning and rescue
- Demonstrate appropriate respect and care for self, others and environment

Leadership, Communication and Personal Development

- Styles and forms of leadership
- Communication about issues-based topics
- Listening to and considering a variety of opinions, reflection and formulation of opinions

Recreational Canoeing Association of BC (RCABC) Lakewater Tandem Paddler Level 1

Theory

- Canoe Parts and Terminology Paddle-Types, Parts, Materials & Size PFDs Types, Fitting and Approvals Safety Procedures & Equipment Canoe Clothing (re: Hypothermia) Waterproofing and Storing

Practical On-Land

- Multiple Carries (2 & 4 person) Transporting Canoes on a Vehicle Launch, Embark/Disembark (Shore or Dock)

Practical On-Water

- Paddling positions and trim
- Change ends in deep water
- Paddling skills/precautions

Strokes

- Tandem (Bow and Stern)
- Forward and reverse
- Draw (underwater recovery)
- Pry (push away)
- Sweeps (forward, reverse, bow and stern)
- “J” stroke
- Stopping

Required Manoeuvres

- Tandem Paddle 30 metres in a straight line
- Basic turns and sideslip

Rescue

- Canoe over canoe rescue
- Rafting up to rescue swimmers

RCABC Canoe Tripping Paddler

Theory:

- Safety issues (including hypothermia and first aid training needs)
- Environmental ethics and practices
- Leadership responsibilities: pre-trip and daily group planning
- Basic map-reading
- Trip kit- personal and group equipment
- Basic menu and food planning

Practical On-Land Skills

- Loading canoes
- Portaging gear and canoes
- Tents, shelters: site selection, types
- Fire-building, site selection, and management
- Portable stoves
- Trip packing
- Repair kits

Practical On-Water Skills

- Weather interpretation
- Rescuing loaded canoes

Big Ideas – Elaborations

Columbia River

Sample questions to support inquiry with students

What is your personal connection to the Columbia river?

What does it mean when we say “we all live downstream”?

Columbia Basin watershed

Sample questions to support inquiry with students

What are the factors contributing to change in a riverine ecosystem?

What are some benefits and consequences of river development of the Columbia?

What is the legacy of the development of the Columbia River for different peoples?

How have the Columbia Basin ecosystems changed over time, in terms of productivity and biodiversity?

Columbia River Treaty

Sample questions to support inquiry with students

What are the similarities and differences in the life experiences between Columbia basin residents in Canada and the United States, with regard to the development of the river?

How has the development of the Columbia River impacted Indigenous peoples in the Basin?

What can be done differently in the upcoming Columbia River Treaty negotiations to appropriately remember and respond to historical injustices in this decision making process?

Leadership

Sample questions to support inquiry with students

How can effective leadership contribute to building a positive, supportive and safe environment?

What is your personal leadership style?

How can local leaders and decision-makers in the Columbia Basin benefit from youth perspectives and voices?

Canoeing

Sample questions to support inquiry with students

What are the physical, social, cultural and environmental benefits of canoe travel?

Curricular Competencies – Elaborations

- consider complex meaning** used in various fields of knowledge and worldviews about watersheds and the Columbia River watershed
- map**- geographical and personal ‘mapping’ representing the river, the watershed and personal connections and learnings
- use practical tools and techniques**- for species identification (observation, field guides, morphology, behavior, habitat)
- appreciate indigenous perspectives and world views**- e.g. at the Columbia River headwaters, the Ktunaxa traditional origin story provides an explanation for the existence of the world and its inhabitants as well as the origin of some local topographical features, place names and value system
- practice leading and supporting peers**- with supervision, perform canoe and equipment safety checks, assist with route planning and leading, motivate and support group, ensure group chores are done and group collaborates effectively
- ‘Future of the Watershed’ symposium**-culminating event involving opportunity for students to speak with panel of experts on history and future of the Columbia sharing their questions, concerns, ideas and perspectives

Content – Elaborations

-**watershed**- Also called a drainage basin, an area of land in which all rain, melted snow and ice and small tributaries drain into a common body of water like a creek, river or lake. While primarily describing the geologic/geographic drainage patterns of water, a more holistic view incorporates all the biotic and abiotic communities and processes contained in the drainage basin; therefore a watershed may be referred to as the sum of the area, drainage patterns and environment of a given waterway or waterway segment.

-**Columbia River watershed**- The Columbia Basin is the fourth largest watershed in North America, and covers 671,200 km² in BC, Washington, Idaho, Montana, Oregon, Nevada, Utah and Wyoming. Only 15 per cent of the Basin is in Canada. However, the Canadian portion contributes about 40 per cent of average river flows and about 40 per cent of runoff for the entire Basin. High peaks, steep valleys and snowpack from four mountain ranges contribute to the power of the Columbia River system. The Basin’s waterways and mountains create a wide range of ecosystems, including grasslands, dry pine forests, interior rainforests, alpine meadows and glaciers. The region is home to over 700 species of birds, mammals, fish and reptiles.

-**Indigenous peoples**- There are many indigenous peoples whose traditional territories lie within the Columbia Basin. Our focus is on the Upper Columbia region, which would include the Ktunaxa, Okanagan Nation Alliance/Sylix, Secwepemc, and Sinixt First Nations, as well as the Tribes of the Coeur d’Alene, Colville, Kalispel, Kooteani, Spokane in in the US, with the recognition that the border is a construct of colonization.

-**geologic history and processes** of the Columbia Basin

- plate tectonics, terranes, subduction, volcanism
- glaciation, erosion, flooding

Content – Elaborations

-function and forces of change in riverine ecosystems

- flow, water level, seasonal change
- biotic factors
- anthropogenic factors

-biodiversity- the variety and variability of life on Earth. Measures variation at the genetic, species and ecosystem level. 67% of vertebrate species in British Columbia and 48% of total vertebrate species in Canada live in the Columbia Basin region.

-ecosystem services of wetlands: Wetlands provide a number of important ecological functions ranging from water purifiers and fish nurseries to carbon sinks and wildlife breeding grounds. Most wildlife in the province use wetland habitat at some point in their life cycle, and many red- and blue-listed species are wetland-dependent.

-anadromous- from the Greek word meaning “to go or run uphill”, anadromous species of fish live in the ocean but swim upstream to spawn. Damming caused the loss of these biologically and culturally important species, including Chinook and Coho salmon and steelhead

-citizen science - Scientific research conducted, in whole or in part, by amateur scientists. Sometimes described as “public participation in scientific research” or “participatory monitoring.” Columbia Wetlands Waterbird Survey, local water stewardship groups other local initiatives are highlighted

-water quality monitoring and assessment- physical (aquatic habitat parameters, temperature, turbidity)), biological (e.g benthic macroinvertebrates) and chemical (nitrates, phosphates, pH, dissolved oxygen)

-hydrograph- a graph showing the rate of flow (discharge) with respect to time past a specific point in a river, channel or conduit carrying flow. The rate of flow is typically expressed in cubic metres or cubic feet per second (cms or cfs).

-Columbia River Treaty-The 1964 Columbia River Treaty (CRT) is an international agreement between Canada and the United States to coordinate flood control and optimize hydroelectric energy production on both sides of the border.

Recommended Instructional Components:

- Experiential learning
- Inquiry
- Direct instruction (including from guest speakers)
- Demonstrations and modeling
- Experiments

- Peer teaching/ peer leadership
- Discussions and Knowledge-building circles
- Writing/developing questions for guest speakers
- Role play/debate/simulation

Recommended Assessment Components: Ensure alignment with the [Principles of Quality Assessment](#)

- Pre-trip reading response
- 'My Columbia Basin' map
- Personal learning journey- trip journal
- On-trip reading responses
- Group member/Leader of the Day- self- and peer- assessment
- Field activities participation
- Symposium participation (preparation of questions, engagement with guest speakers, summarizing key points, presenting personal opinions)
- Final project (video, essay, presentation or other self-selected project)
- Presentation of final project

Learning Resources:

READINGS

Canoeing

- *Path of the Paddle*, Bill Mason
- *Basic Canoeing* by Jon Rounds, Stackpole Books, 2003
- *Song of the Paddle*, Bill Mason

General

- *Braiding Sweetgrass* by Robin Wall Kimmerer - <https://milkweed.org/book/braiding-sweetgrass>
- *For the Love of Rivers: A Scientist's Journey* by Kurt Fausch - <http://fortheloveofrivers.com/>

- *A Sand County Almanac* by Aldo Leopold - <https://www.amazon.ca/Sand-County-Almanac-Essays-Conservation/dp/0345345053>
- *Discover a Watershed: Watershed Manager*; Project WET Foundation, 2002

Columbia River Treaty:

- *The Columbia River Treaty: A Primer* by Sandford, Harford, and O’Riordan - <https://rmbooks.com/book/the-columbia-river-treaty/>
- *A River Captured: The Columbia River Treaty and Catastrophic Change* by Eileen Delehanty Pearkes - <https://rmbooks.com/book/a-river-captured/>

Story of the Columbia River:

- *River Relations: A Beholder’s Share of the Columbia River* (the collaborative artist project): <http://www.riverrelations.ca/>
- Ecologist Greg Utzig’s scientific studies. Technical scientific reports (ecology, climate change)
 - *The Dam Footprint Report*, which inventories the impact of historic dam development on biodiversity in the Kootenay region - http://www.sgrc.selkirk.ca/bioatlas/pdf/FWCP-CB_Impacts_Summary.pdf
 - *The Mid Arrow Report*, which proposes an alternative way of operating Hugh Keenleyside Dam to maximize the ecological health of the area - https://engage.gov.bc.ca/app/uploads/sites/6/2017/07/Mid-Arrow-Report_REV3.0_MEM-Review_Apr_13_17.pdf
- *The Organic Machine: The Remaking of the Columbia River* by Richard White - <https://www.amazon.ca/Organic-Machine-Remaking-Columbia-River/dp/0809015838>
- *White Grizzly Bear’s Legacy: Learning to Be Indian* by Lawney Reyes - <http://www.washington.edu/uwpress/search/books/REYWHI.html>
- *A River Lost: The Life and Death of the Columbia* by Blaine Harden (revised and updated version) - https://www.amazon.com/River-Lost-Columbia-Revised-Updated/dp/0393342565/ref=dp_ob_title_bk?dpID=5160RwZoWkL&preST= SY291 BO1,204,203,200 QL40 &dpSrc=detail
- *Sources of the River: Tracking David Thompson across Western North America* by Jack Nisbet - <https://www.amazon.ca/Sources-River-2nd-Tracking-Thompson/dp/1570615225>
- *River of Memory: The Everlasting Columbia* by William D. Layman - <https://www.ubcpres.ca/river-of-memory>
- *The Heart of A River* by Eileen Delehanty Pearkes - <http://shop.pinkdogdesigns.com/?product=heart-of-a-river-full-book>
- *The Geography of Memory: Recovering Stories of a Landscape’s First People* by Eileen Delehanty Pearkes - <https://www.amazon.ca/Geography-Memory-Recovering-Stories-Landscapes/dp/097312220X>
- *Death of Celilo Falls* by Katrine Barber - <http://www.washington.edu/uwpress/search/books/BARDEA.html>

Columbia River Guidebooks:

- *Voyage of a Summer Sun: Canoeing the Columbia* by Robin Cody - <https://www.amazon.ca/Voyage-Summer-Sun-Canoeing-Columbia/dp/0870716611>
- *Paddling the Columbia: A Guide to all 1,200 Miles of Our Scenic & Historical River* by John Roskelley - <https://www.amazon.ca/Paddling-Columbia-Guide-Scenic-Historical/dp/1594857784>

VIDEOS

Treaty Talks

- Watchable here: <https://vimeo.com/116831814>

United By Water

- (by special permission from Director Derrick LaMer)

GUEST SPEAKERS (example list from 2018 Field School)

- Chief Alfred Joseph, Chief of the Akisqnuq Band of the Ktunaxa Nation. Alfred represents his community on the Ktunaxa Lands and Resources Council and the Ktunaxa Nation Executive Council. Alfred is a respected Ktunaxa knowledge-keeper, rancher, horseman and teacher.
- Dr. Will Warnock, Aquatic biologist for the Ktunaxa Nation. Will heads CCRIFC's scientific efforts to evaluate the feasibility of, and restore anadromous fish to the Canadian Columbia River basin.
- Dr. Annette Luttermann, Ecologist who primarily works with indigenous communities to assess the impacts of large hydroelectric projects
- Dr. Suzanne Bayley, World expert in wetlands and President of the Columbia Wetlands Stewardship Partners
- Rachel Darvill, Conservation biologist who manages citizen-science-driven research on birds in the Columbia Wetlands
- Kindy Gosal, Director of Special Initiatives for the Columbia Basin Trust, a core funder of the Columbia River Field School
- Larry Nolan, Lifelong resident of the Golden/Kinbasket area with extensive experience on the Columbia River before and after the construction of Mica Dam

- Karen Bray (with Greg and Jaq), Natural Resource Specialist for BC Hydro with a background in ecology who thinks about how dam operations can be modified to enhance ecosystem health. Greg is the plant operator at the Revelstoke Dam. Jaq is an intern / co-op student who has been working with the dam since she was in Secondary School.
- Janet Spicer, Farmer in Nakusp who has lived there her entire life and experienced the flooding from Hugh Keenleyside Dam when she was 19.
- Shelly Boyd (with Monique and Shenaya), Sinixt facilitator who is appointed to represent the Sinixt / Arrow Lakes People north of the international boundary. She is the Co-founder and President of the Inchelium Language and Culture Association in Inchelium, WA on the Colville Confederated Tribes Reservation. Monique and Shenaya work at the Language House.
- Minister Katrine Conroy, MLA of Kootenay West and Minister of Children and Family Development. Also oversees the Columbia River Treaty, Columbia Basin Trust and Columbia Power Corporation.
- DR Michel, Sinixt person and Executive Director of the Upper Columbia United Tribes
- Deb Kozak, (former) Mayor of Nelson and Chair of the CRT Local Government's Committee.
- Eileen Delehanty Pearkes, author, researcher, and speaker who, among other publications, has written three books about the Columbia River
- Genevieve Robertson, artist who has done extensive work related to the Fraser and Columbia Rivers and also works as the Executive Director of the Oxygen Art Centre in Nelson.
- Greg Utzig, local scientist with a multi-decade history of doing important research on ecology and climate change in the Kootenays. He has authored several key studies related to the Columbia River and Columbia River Treaty.
- Adam Wicks-Arshack, Director and leader of 2000 km upriver canoe journey in the film Treaty Talks. He is also a river guide, pursuing a joint law degree and PhD on the relationship between law and science in the realms of social justice and environmental management.

Additional Information:

The Columbia River Field School was developed and delivered in 2018 by Wildsight.

Alumni from the 2018 Columbia River Field School have been invited to present and share their experiences and perspectives at conferences including One River: Ethics Matter (Selkirk College, May 2019) and the Columbia River Transboundary Conference (Kimberley, 2019), as well as with the Columbia Basin Regional Advisory Committee.

Wildsight has 30 years of leading and training stewardship groups, delivering classroom environmental education and running backcountry youth wilderness trips. Since 2000, we have taken more than 70,000 students outside and have received several awards for our programs, including from the Canadian Network for Environmental Education (EECOM).