

20+ Years

Specialized Training and Experience

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# WATERSHED RESTORATION AND HABITAT OFFSETTING/COMPENSATION

Rob Heibein gained valuable mentoring and training from recognized experts in fish habitat restoration and off-channel habitat creation beginning in 1994 during the Squamish Watershed Restoration Demonstration Project. Rob received further specialized training from leading experts in off-channel fish habitat creation including site selection, design consideration and construction logistics. Rob has continued increasing his experience and knowledge as a lead on numerous other fish habitat restoration assessments and stream restoration/compensation projects and; a wider range of upslope watershed restoration experience including roads, landslides and gullies.

As a watershed rehabilitation instructor for Northwest Community College, Rob provided standard assessment methodologies, up-to-date reviews of stream restoration and off-channel projects in other locations of the province and practical field visits to watershed restoration sites in the Kalum Forest District.

## Specialized Training:

Stream Restoration Design	Coastal Fish Habitat Assessment and	Rehabilitation Prescriptions (Pilot)
Offchannel Habitat Creation	Landslide Assessment and Rehabilit	ation Standard Road Deactivation
Advanced Road Deactivation	Gully Assessment Procedures	andslide Prone Terrain Management
Winch Systems for Stream Restora	ation Geosynthetics for Soil Stabil	lization Erosion and Sediment Control

## Featured Project Experience:

### Daudet Creek Habitat Restoration Project, Kitimat, BC

Reconstruction of a riffle-pool profile within a channelized stream over 900 meters and habitat complexing over an additional 600 meters including:

- Pool excavations and cobble riffle construction;
- Large Woody Debris and boulder placement;
- Student employment, training and community involvement.

#### **Primary Roles and Responsibilities:**

Responsible for the project design, securing funding, legal landowner agreement, instream work permits, project coordination, project donations, project supervision, restoration training, fish salvage, sediment control and report author. Partners in the project included the Kitimat Chamber of Commerce, Oviatt Contracting, City of Kitimat, Pacific Salmon Foundation, Alcan, Mt. Elizabeth Sr. Secondary and BC Student Summer Works. Employer: DFO Terrace Branch



### Other representative projects

**Cecil Creek Rearing Ponds Habitat Offsetting, Kitimat, BC** – Fish habitat offsetting as part of the Kitimat LNG project commitments. Responsibilities included identification and investigation of numerous potential site candidates within the Kitimat River and Bish Creek watersheds, site selection, biological sampling, First Nations and regulatory agency consultation, execution planning and permitting support. Employer: Chevron Canada.

**Dougherty Creek Alluvial Fan Restoration Plan, Prince George, BC** – Responsibilities included site assessments and preparation of a restoration plan in consultation with leading experts in alluvial fan and stream restoration. Employer: EDI Environmental Consultants Ltd.

**Killutsal Creek Rearing Pond Construction Project, Terrace, BC.** - Responsibilities included liaison between the Kalum Band and DFO's restoration team, project planning, instream work approvals, layout of 2 large rearing pond berms, environmental monitoring, supervision of heavy equipment, fish salvage and sediment control. Employer: DFO Terrace Branch

**Kofoed Creek Habitat Restoration Project, Terrace, BC.** – Responsibilities included preparation of restoration plans, instream work permits, legal landowner agreements, project coordination, project donations and crew/heavy equipment over-site during the 2000 & 2001 field seasons. Employer: DFO Terrace Branch.

**Connex Creek & Clements Creek Habitat Restoration, Stewart, BC.** -Responsible for supporting the Bear River Salmonid Enhancement Society in their efforts to restore fish habitat. Responsibilities included habitat assessment training, preparation of habitat restoration plans, instream work permits, project planning and supervision of 1.3km of instream restoration works. Employer: DFO Terrace Branch.

**Shop Creek Stream Restoration and Offchannel Development, Squamish, BC.** – Instream restoration works including LWD placement, boulder placement, pool excavation and construction of 2 groundwater sidedchannels. Responsibilities included instream work labour and assistant for the construction of 2 sidechannels with leading experts in offchannel development. Employer: Triton Environmental Consultants Ltd/Steelhead Society of BC.

**21 Mile Creek, Shovelnose Creek, and Highfalls Creek Stream Restoration Planning, Squamish, BC** – Participated in site visits and restoration planning with leading experts in stream restoration and offchannel habitat creation as part of the Squamish Watershed Restoration Demonstration Project. Employer: Triton Environmental Consultants Ltd/Steelhead Society of BC.

**Rigging Winch Systems Course for Stream Restoration, Terrace, BC.** - Responsible for supporting Northwest Community College in delivering 2 courses on rigging winch systems for stream restoration. Responsibilities included proposal preparation for funding, site selection, project coordination, preparation of stream restoration plans, instream work approvals and project reporting. Employer: DFO Terrace Branch.

**Spring Creek Restoration & Stewardship Project, Terrace, BC.** - Responsible for supporting Triton Environmental Consultants and Northwest Community College in their efforts to restore Spring Creek's fish habitat. Responsibilities included providing technical support and labour for instream works, landslide rehabilitation and riparian planting. Employer: DFO Terrace Branch.

**Michaulde Creek Habitat Restoration, Terrace, BC.** - Responsible for supporting the Northwest Watershed Guardian Society in their efforts to restore fish habitat on Michaulde Creek. Responsibilities Included instream work permits, legal landowner agreements, stream restoration plans, project coordination and supervision. Employer: DFO Terrace Branch.

**Salmon Creek E-Team Restoration Project, Terrace, BC.** - Responsible for coordinating and supervising instream restoration works including stream restoration training, instream work permits and installing LWD. Employer: DFO Terrace Branch.

**Bella Coola Style Beaver Dam Fish Pass, Terrace, BC.** - Responsible for supporting Northwest Watershed Guardian Society to restore fish access on Clearwater Creek near Terrace. Responsibilities included site selection, project coordination, instream work permitting, donation of helicopter time and manual labour during installation. Employer: DFO Terrace Branch.

**MoTH Culvert Mitigation Works, Terrace, BC.** - Responsible for assisting Ministry of Highways during the construction of culvert tailwater step-pools to restore fish access at Spring Creek and Egan Creek. Employer: DFO Terrace Branch.

**Powerline Creek WRP Level II Stream Restoration Prescriptions, Terrace, BC.** – Assessment of fish habitat following WRP Fish Habitat Assessment Procedures. Responsibilities include proposal preparation, project management, sr. technical work, crew supervision and primary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**West Kalum WRP Level II Road Deactivation, Gully and Landslide Prescriptions, Terrace, BC.** - Assessment of approximately 90 km of roads on steep coastal terrain, prescribing permanent, semi-permanent and temporary road deactivation prescriptions. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and primary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**Mayo Creek WRP Level IV Road Deactivation Monitoring, Terrace, BC.** -Developed and implemented road deactivation monitoring procedures for approximately 24 km of deactivated roads. Responsibilities included proposal preparation, project management, sr. technical work, and secondary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**Copper River WRP Level II Road Deactivation Audits and Prescriptions, Terrace, BC.** - Conducted audits of previously deactivated roads and prescribed deactivation prescriptions for approximately 30 km of coastal resource roads. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and secondary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

Northwest Babine WRP Level I Integrated Watershed Restoration Plans, Smithers, BC. - Assessment of forestry related upslope and stream impacts within several watersheds northwest of Babine Lake. Tasks included Equivalent Clear-cut Area calculations, air photo interpretation, Access Management Plans, Sediment Source Survey, erosion potential mapping and Micro-station GIS Mapping. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and primary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**Mayo Creek WRP Level II Road Deactivation Prescriptions, Terrace, BC.** -Assessment of approximately 38 km of road on steep coastal terrain and prescribed permanent, semi-permanent and temporary deactivation. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**Kitsumkalum WRP Level I Overview Assessment of Roads, Hillslopes and Gullies, Terrace, BC.** - Overview assessment of forestry related impacts within the 2,200 sq/km Kitsumkalum River Watershed. Tasks included air photo interpretation, geological review, access management plan, equivalent clear-cut calculations, landslide inventories and Arc Info GIS Mapping. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and reporting. Employer: McElhanney Consultants Ltd. Terrace Branch.

Lakelse WRP Level I Overview Assessment of Roads, Hillslopes and Gullies, Terrace, BC. - Overview assessment of forestry related impacts within the 585 sq/km Lakelse River Watershed. Tasks included air photo interpretation, geological review, access management plan, equivalent clear-cut calculations, landslide inventories and Arc Info GIS Mapping. Responsibilities included proposal preparation, project management, sr. technical work, crew supervision and primary report author. Employer: McElhanney Consultants Ltd. Terrace Branch.

**CN Rail Culvert Replacement on Steinhoe Creek, Terrace, BC.** - Responsible for coordinating a major culvert replacement and mitigation works with CN rail to restore fish access to Steinhoe Creek. Employer: DFO Terrace Branch.

**Cache Creek Slump Removal and Streambank Bioengineering, Peace River, AB** –Responsibilities included supervision of instream slump removal, rip rap placement and streambank bioengineering on the DMI East Haul Road. Employer: EDI Environmental Consultants Ltd.