



FISH COLLECTION PERMIT
Research

File: 34770-20

Permit No.: NA-SU13-85151

Permit Holder: University of British Columbia, Zoology Department – Dolph Schluter
6270 University Boulevard
Vancouver BC V6T 1Z4

Client No.: 205

Authorized Persons: Dolph Schluter, Matt Arnegard, Seth Rudman, Diana Rennison, Sara Miller, Sam Huang, Catherine Peichel, Gina Conte, Monica Yau, Shaun McCann, Michael White, Kieren Samuk, Anna Greenwood

Pursuant to section 19 of the *Wildlife Act*, RSBC 1996, Chap. 488, and section 18 of the Angling and Scientific Regulations, BC Reg. 125/90, the above named persons are hereby authorized to collect fish for scientific purposes from non-tidal waters subject to the conditions set forth in this Permit:

Permitted Sampling Period: April 18, 2013 to December 31, 2013

Permitted Waterbodies: West Coast & South Coast Region – See Appendix C

Permitted Sampling Techniques: MT, AG, SN, DN (subject to permit terms and conditions)

Target Species: CAS, CCT, SB12, SB13, SB6, SB7, SBB, SBP, TSB (subject to permit terms and conditions)

Permitted Lethal Sampling: See Appendix D (subject to permit terms and conditions)

Provincial Conditions: (Permit holders must be aware of all terms and conditions):

See Appendix A.

Region Specific Conditions:

See Appendix A.

Authorized by: _____
Mike Stalberg
Regional Manager
Recreational Fisheries & Wildlife Programs
West Coast Region

Date: April 18, 2013

Permit Fee \$25

Authorized by:

Iain Lunn, Fisheries Biologist

A person authorized by the Regional Manager

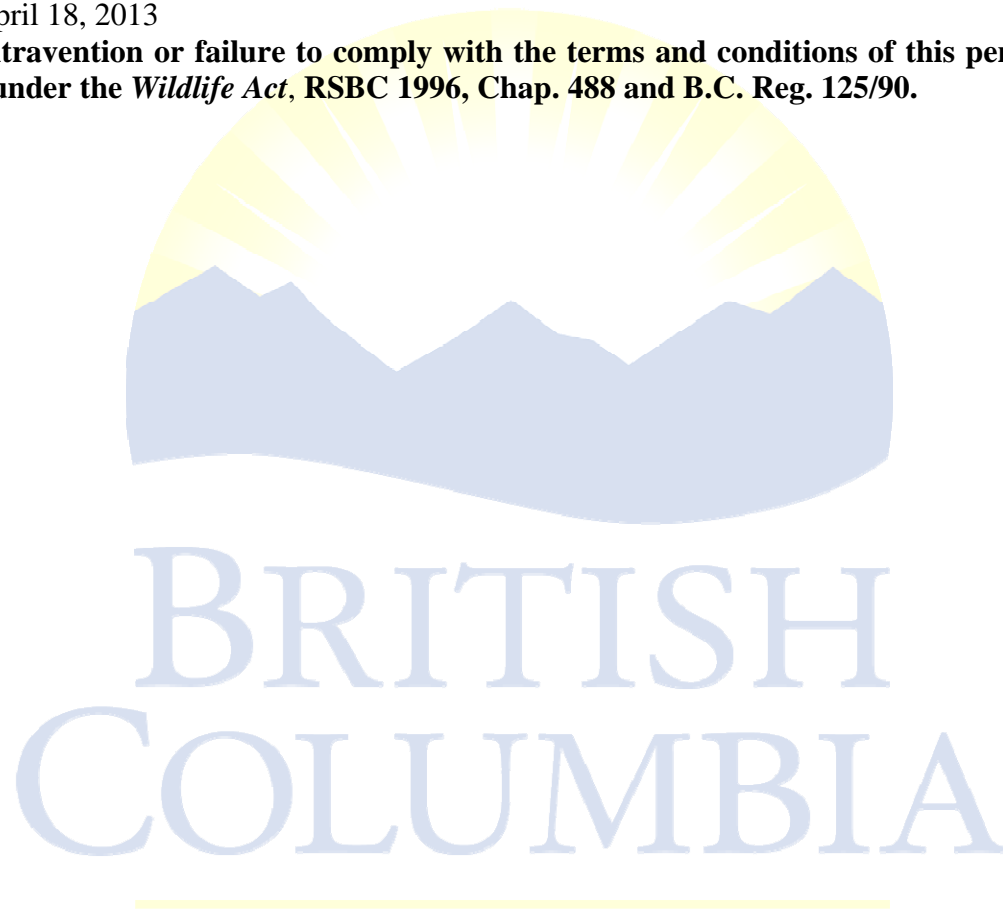
Recreational Fisheries & Wildlife Programs

South Coast Region



Date: April 18, 2013

Any contravention or failure to comply with the terms and conditions of this permit is an offense under the *Wildlife Act*, RSBC 1996, Chap. 488 and B.C. Reg. 125/90.



Appendix A: Fish Collection Permit Conditions

Any Variation of the following terms and conditions will require explicit authorization by the appropriate regional Fish & Wildlife Section Head.

Provincial Conditions

1. This collecting permit is not valid
 - in national parks,
 - in provincial parks unless a Park Use Permit is also obtained,
 - in tidal waters,
 - for eulachon or for salmon* other than kokanee, or
 - for collecting fish by angling unless the permit holder and crew members possess a valid angling licence.

This collecting permit is **only** valid for species listed as threatened, endangered or extirpated under the Species at Risk Act (SARA) **in conjunction with a permit issued under Section 73 of SARA from Fisheries and Oceans Canada.**

*Contact the Department of Fisheries and Oceans for fish collecting permits for salmon, eulachon or SARA listed species (see Appendix B).

2. The permit holder (or the project supervisor) named on the application for a scientific collection permit will carry a copy of this permit while engaged in fish collecting and produce it upon request of a conservation officer, fisheries officer or constable.
3. Any specimens surplus to scientific requirements and any species not authorized for collection in this permit shall be immediately and carefully released at the point of capture.
4. Fish collected under authority of this permit shall not be used for food or any purpose other than the objectives set out in the approved application for a scientific collection permit. The permit holder shall not sell, barter, trade, or give away, or offer to sell, barter, trade or give away fish collected under authority of this permit. Dead fish shall be disposed of in a manner that will not constitute a health hazard, nuisance or a threat to wildlife.
5. No fish collected under authority of this permit shall be
 - transported alive unless authorized by this permit, or
 - transplanted unless separately authorized by the Federal/Provincial Fish Transplant Committee.
6. The permit holder shall, within 90 days of the expiry of this permit, submit a report of fish collection activities. Interim reports may also be required and shall be submitted as required by the permit issuer. All submissions must be filed electronically to: http://www.env.gov.bc.ca/fish_data_sub/index.html

Reporting specifications, information and templates are available from this website and outline the mandatory information requirements. Prior notification of submission or questions regarding data report standards can be made to: fishdatasub@gov.bc.ca

7. This collecting permit is subject to cancellation at any time and shall be surrendered to a conservation officer on demand or to the issuer upon written notice of its cancellation.
8. This permit is valid only for the activities approved on the application form and in accordance with any restrictions set out therein.
9. This permit is valid only for trained, qualified staff named in the Application. The permit holder will comply with all Worker's Compensation Board requirements and other regulatory requirements. Permit holders are responsible for ensuring staff members listed on the permit are properly certified for specific sampling methods or activities (e.g. electroshocking).
10. Any workers not listed on the permit must be supervised by the permit holder or one of the additional persons as named on the permit.

Appendix A: Fish Collection Permit Conditions Continued

11. All sampling equipment that has been previously used outside of B.C. must be cleaned of mud and dirt and disinfected with 100mg/L chlorine bleach before using in any water course to prevent the spread of fish pathogens (e.g. Whirling disease) and / or invasive plant species. Any washed off dirt or mud must be disposed of in a manner such that it cannot enter a watercourse untreated.
12. No electrofishing is to take place in waters below five degrees C.
13. Electrofishing may not be conducted in the vicinity of spawning gravel, redds, or spawning fish, or around gravels which are capable of supporting eggs or developing embryos of any species of salmonid at a time of year when such eggs or embryos may be present.
14. Angling must only occur in accordance with the regulations specified in the current BC Freshwater Fishing Regulations Synopsis.

Region Specific Conditions

West Coast Region

- Within the boundaries of Management Units 1-1 through 1-13, there shall be no electrofishing in streams above 630 meters in elevation, in anadromous waters, or in lake tributaries from January 1 to June 30.
- All sampling gear follow Association of Professional Biologists' advisory practice bulletin #5. Practice Advisory – Didymo, see: <http://www.apbbc.bc.ca/files/Didymo.pdf>
- The permit holder must advise the West Coast Region of sampling activities 48 hrs prior to field operations. Please complete the following notification form: http://www.env.gov.bc.ca/pasb/reports/fish/permit_notify1.html

South Coast Region

- All streams sampled, for which a watershed code does not presently exist, will require a map showing the location of the stream and sampling location with the map scale identified at time of reporting.
- Electrofishing and minnow trapping can harm or kill non-target species of management concern such as the endangered Coastal Giant Salamander (within the Chilliwack River drainage system) and Pacific Water Shrew (within the lower Fraser River Valley). Any incidental captures (alive or dead) of any red- or blue-listed wildlife species must be reported to the Ministry of Environment, Lower Mainland Region. For further information on these species or to report incidental captures, please call Kym Welstead, Species at Risk Biologist, MOE, Surrey at (604) 582-5200 or by e-mail at Kym.Welstead@gov.bc.ca.
- Please refer to the following website for the least risk in-stream work windows: http://www.env.gov.bc.ca/wsd/water_rights/licence_application/section9/index.html
Where possible, collection should be conducted during the least risk work windows identified. The exception is seasonal or ephemeral streams where sampling may not be possible during the prescribed window due to flow conditions.
- The permit holder must refer to the following when sampling Salish Sucker, Nooksack Dace and Stickleback species.
Salish sucker sampling guidelines - http://www.zoology.ubc.ca/~schluter/stickleback/Salish_sucker/Guidelines%20for%20collection%20of%20Salish%20sucker.pdf
Nooksack dace sampling guidelines – http://www.zoology.ubc.ca/~schluter/stickleback/Nooksack_dace/non-password%20protected%20files/Guidelines%20for%20the%20Collection%20of%20Nooksack%20Dace.pdf
Stickleback species pairs sampling guidelines - http://www.zoology.ubc.ca/~schluter/stickleback/stickleback_species_pairs/other%20stickleback%20files/Guidelines%20for%20the%20Collection%20and%20In%20Situ%20Scientific%20Study%20of%20Stickleback%20Species%20Pairs.pdf

Appendix B: Table 1 - Species at Risk

The following are species at risk that have been listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as either endangered, threatened or a species of special concern. Species also listed under the Species at Risk Act (SARA) are identified with an asterisk, and are subject to additional permitting requirements through the Federal Department of Fisheries and Oceans (DFO).

Common Name	Scientific Name
Benthic Paxton Lake Stickleback	* <i>Gasterosteus sp.</i>
Benthic Vananda Creek Stickleback	* <i>Gasterosteus sp.</i>
Limnetic Paxton Lake Stickleback	* <i>Gasterosteus sp.</i>
Limnetic Vananda Creek Stickleback	* <i>Gasterosteus sp.</i>
Nooksack Dace	* <i>Rhinichthys sp.</i>
Morrison Creek Lamprey	* <i>Lampetra richardsoni</i>
Vancouver Lamprey (Cowichan Lake Lamprey)	* <i>Lampetra macrostoma</i>
Cultus Pygmy Sculpin	* <i>Cottus sp.</i>
Shorthead Sculpin	* <i>Cottus confusus</i>
Hotwater Physa	* <i>Physella wrighti</i>
Limnetic Enos Lake Stickleback	<i>Gasterosteus sp.</i>
Benthic Enos Lake Stickleback	<i>Gasterosteus sp.</i>
Salish Sucker	<i>Catostomus sp.</i>
Speckled Dace	<i>Rhinichthys osculus</i>
Charlotte Unarmoured Stickleback	<i>Gasterosteus aculeatus</i>
Columbia Mottled Sculpin	<i>Cottus bairdi hubbsi</i>
Giant Stickleback	<i>Gasterosteus sp.</i>
Green Sturgeon	<i>Acipenser medirostris</i>
Umatilla Dace	<i>Rhinichthys umatilla</i>
White Sturgeon	<i>Acipenser transmontanus</i>

Applications for permits to specifically collect and retain listed species must be reviewed by the appropriate Recovery Team, who will screen permits to ensure that any impacts on listed species are acceptable. For white sturgeon the contact is Steve McAdam (steve.mcadam@gov.bc.ca). For listed non-game freshwater fish the contact is Jordan Rosenfeld (jordan.rosenfeld@gov.bc.ca), co-chair of the Non-Game Freshwater Fish Recovery Team.

Appendix C: Permitted Waterbodies

<u>REGION</u>	<u>WATERBODY</u>	<u>WATERSHED CODE</u>
1	BLACK LAKE	930-081200
1	BONSALL CREEK	920-298700
1	CEDAR LAKE	920-700700-84700-22300
1	CECIL LAKE	920-700700-58100-71800
1	COTTLE LAKE	920-427000
1	PACHENA LAKE	930-085500
1	ROSSEAU LAKE	930-085500-39200
1	TRIANGLE LAKE	(531507 / 5463311)
2	AMBROSE LAKE	900-147300-93700
2	BLANEY LAKE	100-026700-06000-06400-0860
2	BROWN LAKE	900-154100
2	BURNABY MOUNTAIN GOLF COURSE POND	(504193 / 5456986)
2	CRANBY LAKE	905-126000-31000
2	GARDEN BAY LAKE	900-147300-18900
2	HEISHOLT LAKE	(426145 / 5500270)

2	JERICO PARK POND	(385070 / 5514569)
2	KANAKA CREEK	100-037400
2	KIRK LAKE	905-126000-61600-75600
2	CAMPBELL RIVER	900-000500
2	LITTLE QUARRY LAKE	905-145000-08500
2	LOON LAKE	100-026700-06000-06400-0860-6540
2	JACOBS LAKE	100-026700-06000-06400-6710
2	MURDO-FRAZER PARK POND	(530228 / 5461117)
2	NORTH LAKE	900-152008
2	LILY LAKE	900-141100
2	PAXTON LAKE	905-126000-66000-97900
2	PLACID LAKE	100-026700-06000-06400-0860
2	PRIEST LAKE	905-126000-61600
2	SALMON RIVER	100-038800
2	SASAMAT LAKE	900-050500
2	TROUT LAKE	900-126800
2	WEST CREEK	100-041600

Appendix D: Permitted Lethal Sampling

<u>REGION</u>	<u>SPECIES</u>	<u># of FISH</u>	<u>WATERBODY</u>	<u>WATERSHED CODE</u>
1	TSB	100	BLACK LAKE	930-081200
1	TSB	100	BONSALL CREEK	920-298700
1	TSB	100	CEDAR LAKE	920-700700-84700-22300
1	CAS	20	CEDAR LAKE	920-700700-84700-22300
1	TSB	100	CECIL LAKE	920-700700-58100-71800
1	TSB	100	COTTLE LAKE	920-427000
1	TSB	100	PACHENA LAKE	930-085500
1	TSB	100	ROSSEAU LAKE	930-085500-39200
1	CAS	20	ROSSEAU LAKE	930-085500-39200
1	TSB	200	TRIANGLE LAKE	(531507 / 5463311)
2	TSB	100	AMBROSE LAKE	900-147300-93700
2	CCT	20	BLANEY LAKE	100-026700-06000-06400-0860
2	TSB	100	BROWN LAKE	900-154100
2	TSB	100	BURNABY MOUNTAIN GOLF COURSE POND	(504193 / 5456986)
2	TSB	150	CRANBY LAKE	905-126000-31000
2	TSB	100	GARDEN BAY LAKE	900-147300-18900
2	TSB	200	HEISHOLT LAKE	(426145 / 5500270)
2	TSB	300	JERICO PARK POND	(385070 / 5514569)
2	TSB	50	KANAKA CREEK	100-037400
2	TSB	150	KIRK LAKE	905-126000-61600-75600
2	TSB	200	CAMPBELL RIVER	900-000500
2	TSB	300	LITTLE QUARRY LAKE	905-145000-08500
2	TSB	300	LITTLE QUARRY LAKE	905-145000-08500
2	CCT	20	LOON LAKE	100-026700-06000-06400-0860-6540
2	TSB	100	JACOBS LAKE	100-026700-06000-06400-6710
2	TSB	100	MURDO-FRAZER PARK POND	(530228 / 5461117)
2	TSB	100	NORTH LAKE	900-152008

2	CAS	20	NORTH LAKE	900-152008
2	TSB	100	LILY LAKE	900-141100
2	CAS	20	LILY LAKE	900-141100
2	SB12	228	PAXTON LAKE	905-126000-66000-97900
2	SB13	228	PAXTON LAKE	905-126000-66000-97900
2	CCT	20	PLACID LAKE	100-026700-06000-06400-0860
2	SBB	211	PRIEST LAKE	905-126000-61600
2	SBP	211	PRIEST LAKE	905-126000-61600
2	TSB	50	SALMON RIVER	100-038800
2	TSB	100	SASAMAT LAKE	900-050500
2	TSB	150	TROUT LAKE	900-126800
2	TSB	50	WEST CREEK	100-041600

