OCEAN
TRACKING NETWORK

OTN Canada - Project Plan

Fraser River Array

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Version: 2.0

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1. Background

Array Name: ***Fraser River Array***, British Columbia, Canada

Concept: The 'Fraser River Array' constitutes a series of receiver systems which includes receivers situated near the Fraser River estuary (in all of the major arms of the Fraser River mouth and several locales immediately upstream of there) and in upper river locales adjacent to freshwater rearing and spawning locations for anadromous salmonids. The current configuration of the array has been used in recent years to track juvenile salmonids leaving the Fraser system and adults returing into it. The Fraser River Array is an integral component of OTN Pacific Arena tracking endeavours and has been, and will continue to be, used in conjunction with the POST lines. The Fraser River array partly exists at present though is about to be expanded this year and next to its full state. The Fraser River Array is NOT a POST line nor is its expansion related to POST.

At present, a series of VR2W-069k receivers (n=14) are situated in and around the Fraser River estuary. These receivers are owned by Kintama Ltd and have been maintained in these locales for at least 5 years. Kintama is in the process of 'pairing' these receivers with comparable numbers of VR2W-180k receivers at the same locations. These new receivers are already owned by, and will be maintained by, Kintama Ltd however UBC OTN Canada investigators have had direct access to all data acquired by these previously existing (and will for their new) receivers.

At present UBC investigators own and maintain a series of VR2W-069k receivers (n=14) which are situated adjacent to key salmonid rearing/spawning locales. As part of the expansion of the Fraser River Array, with a focus on research being conducted this spring 2011 on juvenile outmigrating sockeye salmon, we intend on pairing these VR2W-069k receivers with 14 new VR2W-180k receivers supplied by Dalhousie. In so doing, we can track fish out of freshwater and into marine environments using both typical V7 tags and the newly developed and smaller V6 tags.

2. Initial Array Design

a. **Equipment and Services**:
   i. Dalhousie will provide:
      - 14 acoustic receivers: Vemco VR2W-180k, with lithium batteries;
      - 500 tags (443 V7 and 57 V6);
      - Moorings – not applicable;
   ii. ***partner*** will provide:
      - Moorings;
      - Boat time for deployments;

- Qualified personnel for deployment (including divers if necessary);
- Boat time for maintenance and uploading of data;
- Replacement batteries for acoustic receivers; and
- Range testing boat time with dedicated technical staff.

b. Proposed Array Location:

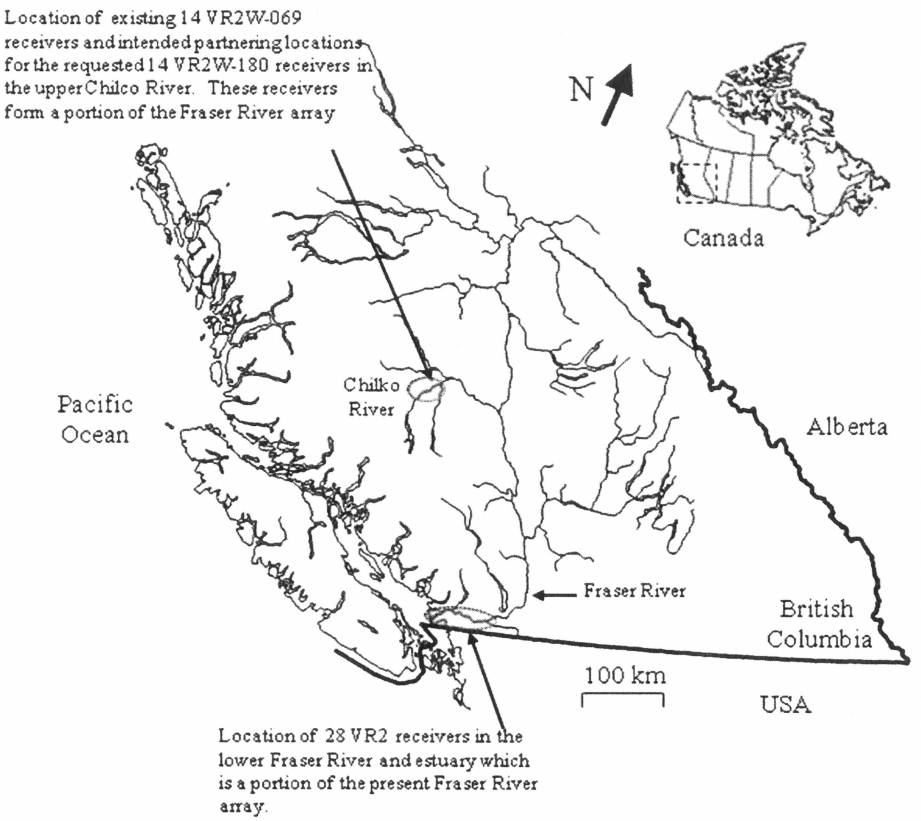

Figure 1. Map of Canada with inset showing southern half of British Columbia. The Fraser River mainstem and its main tributaries are indicated. Circled and labelled are VR2W receiver locations as part of the Fraser River array.

Proposed Receiver Locations:

These proposed receiver locations are approximations and are subject to change.

The depth for all of the receivers would range from 1-5 metres. The receivers would be located along an 90 km section of the upper Chilco River. The first site is located at Latitude 51.626542529786 Longitude -124.1379547119140604, the final downriver site is located at Latitude 51.97472977494965 Longitude -123.6895751953125. All other sites are located in between these. Specific details on each receiver location can be provided.

PROPOSED OTN STATION LOCATIONS [version 1.0]

OTN_REGION Pacific **OTN_ARRAY** Fraser River

STATION (#)	STATION_NAME	DEPTH (m)	PROPOSED_LAT (dd.ddddd)	PROPOSED_LONG ddd.ddddd)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

3. Deployment Schedule

The deployment of the 14 acoustic receivers is planned for mid-April 2011. These dates are firm.