



**DFO Species at Risk Program  
Proposed Amended Recovery Strategy for Northern  
and Southern Resident Killer Whales  
September 26, 2018**

# Webinar details

## Agenda:

1. Presentation – Background on Resident Killer Whales, SARA process, and critical habitat (15 mins)
2. Presentation – Science behind identification of critical habitat for Northern and Southern Resident Killer Whales (10 mins)
3. Q & A

## Webinar tips:

On your phone:

\*6 for mute

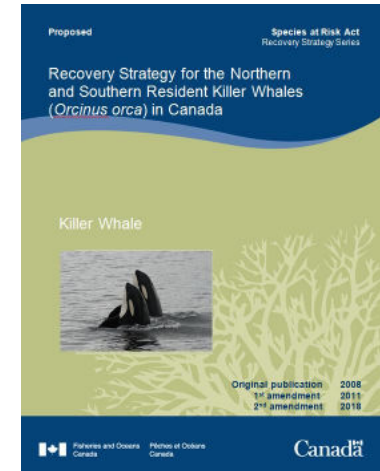
\*7 for unmute

To ask a question:

- Press on the hand icon beside your name
- If your question has been answered, please deselect the hand icon

# Purpose

- Provide an overview of the SARA process, the science advice that supports identification of the new proposed areas of critical habitat; and the amendments to section 7 of the proposed amended Recovery Strategy
- Provide the opportunity to address any remaining questions that may help to inform input on the proposed amended Recovery Strategy for Northern and Southern Resident Killer Whales



## Proposed Amended Recovery Strategy

- Public comment period through November 3, 2018
- Comments can be provided via e-mail to:

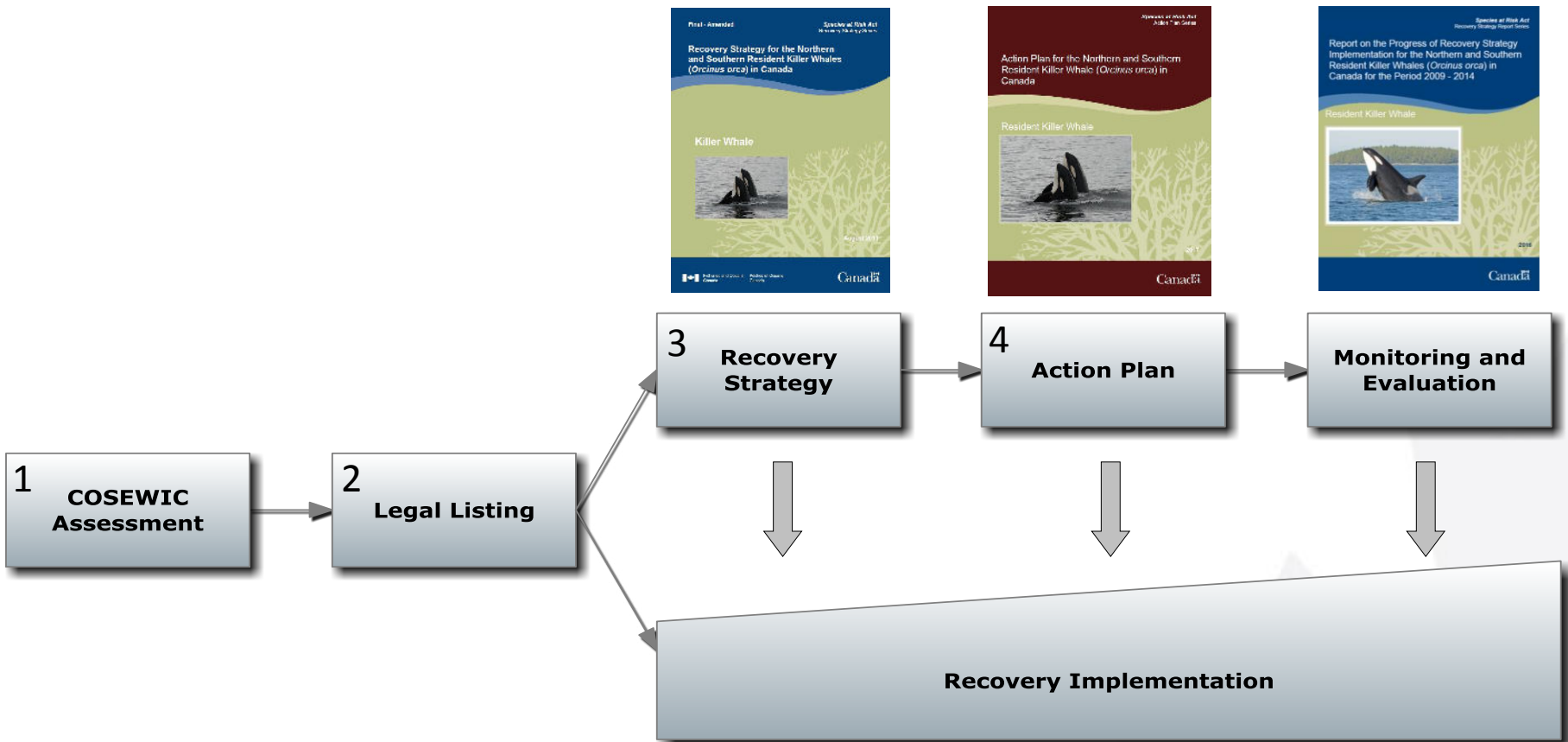
[SARA/LEP.XNCR@dfo-mpo.gc.ca](mailto:SARA/LEP.XNCR@dfo-mpo.gc.ca)



# Species at Risk Act (SARA)

- Purpose
  - Prevent wildlife from becoming extinct in Canada
  - Secure the recovery of Extirpated, Endangered and Threatened species
  - Manage species of Special Concern to prevent them from becoming further at risk
- Provides legal protection to species listed as Extirpated, Endangered and Threatened

# SARA Process: Northern and Southern Resident Killer Whales



# 1. COSEWIC Assessment

- Assessed by COSEWIC in 2001
  - Northern Resident Killer Whales (NRKW) – Threatened;  
Southern Resident Killer Whales (SRKW) – Endangered
  - Small population sizes, low reproductive rates, variety of human-caused threats
  - Status re-assessed and confirmed in 2008



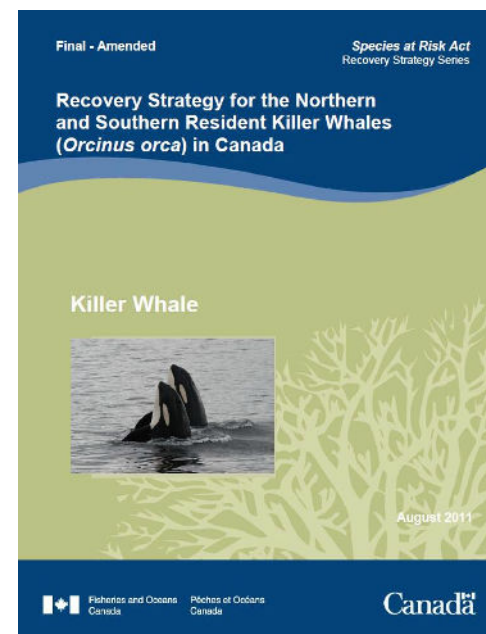
## 2. Legal Listing

- Listed under SARA in 2003

May 2018 – SRKW face imminent threats to survival and recovery

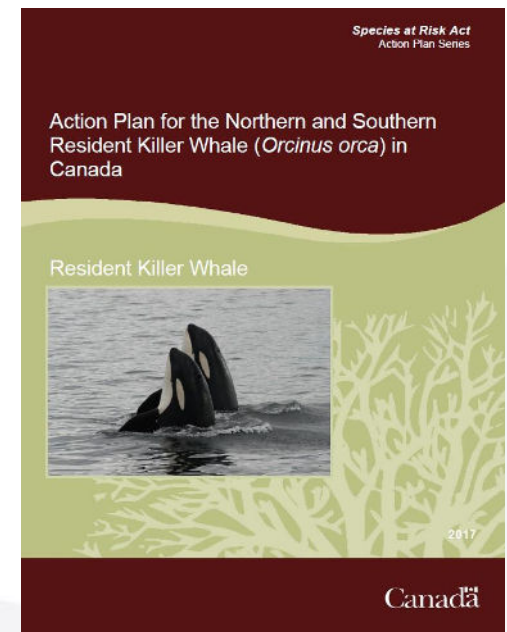
# 3. Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada

- Finalized in 2008
- Identified the key threats:
  - Reduced prey availability
  - Acoustic and physical disturbance
  - Environmental contaminants
- Recovery goal and objectives
- Identified partial critical habitat (CH) for NRKW and SRKW
  - Amended in 2011 to further describe & protect CH



# 4. Action Plan for the Northern and Southern Resident Killer Whale in Canada

- Finalized in 2017
- Identified 98 Recovery Measures to address threats and recover both populations
  - Includes measures to identify additional CH
- Multiple recovery initiatives currently underway for RKW



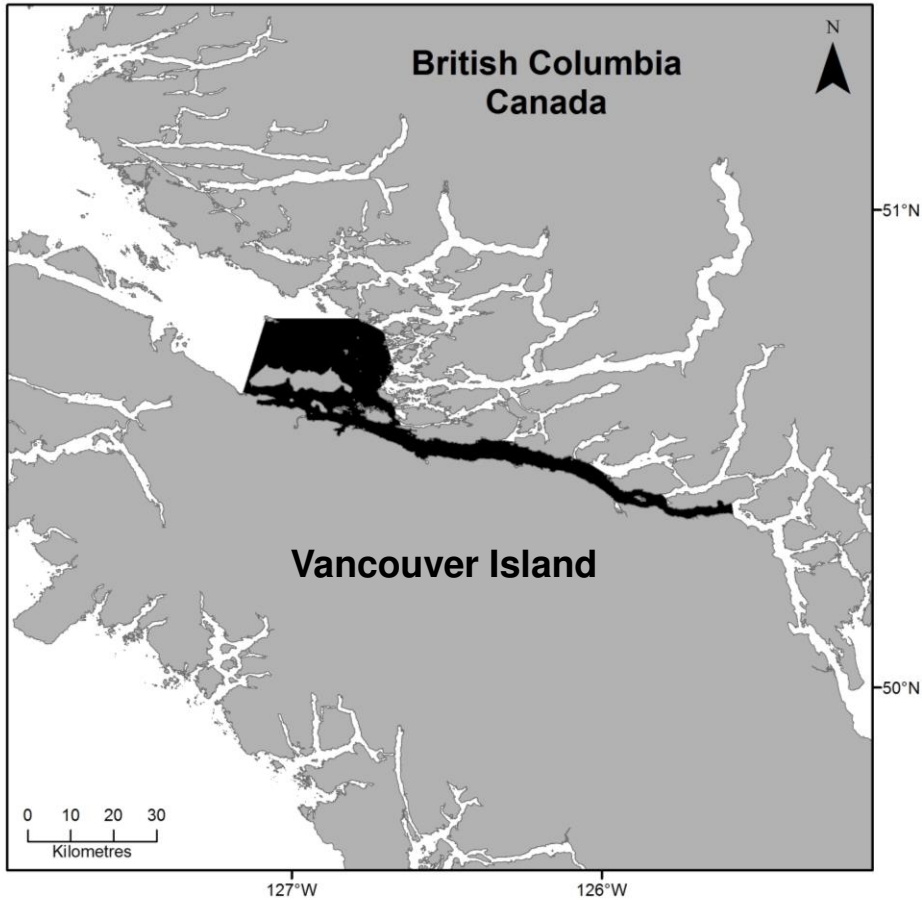
# Critical Habitat



- SARA requires that CH be identified to the extent possible for all endangered, threatened and extirpated species
- Habitat necessary for survival or recovery of these species
- Identification of CH is often an iterative process
- Partial CH for NRKW and SRKW was identified in the SARA 2008 RS and protected under a Critical Habitat Order in 2009

# Existing RKW Critical Habitat

## NRKW



## SRKW



# SARA RKW Recovery Strategy Amendment

## Process:

- New science advice – spring 2017
  - Scientific research: [DFO Research Document 2017/035](#)
  - Science advice: [DFO Science Advisory Report 2017/011](#)
- CH must be identified in a recovery strategy or action plan
  - Amendment to RKW Recovery Strategy
  - 30-day external review of draft amended RS (June 12 – July 11, 2018)
  - **60-day public comment period on section 7 (CH) of proposed amended RS (September 4 – November 3, 2018)**
  - Final amended RS posted to public registry (anticipated by end of 2018)
- Legal protection of CH
  - Within 180 days

# SARA RKW Recovery Strategy Amendment

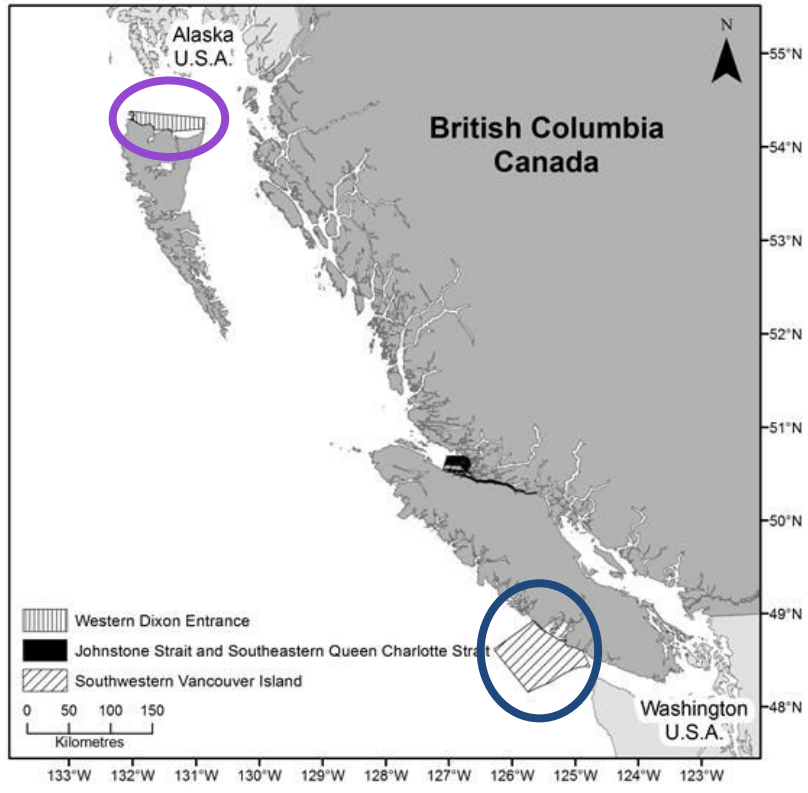
## RKW RS amendment (section 7):

- Identifies two additional areas as proposed CH:
  - waters of western Dixon Entrance along the north coast of Graham Island from Langara Island to Rose Spit (NRKW)
  - waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (NRKW and SRKW)
- Clarifications for all RKW CH (features, functions, attributes)

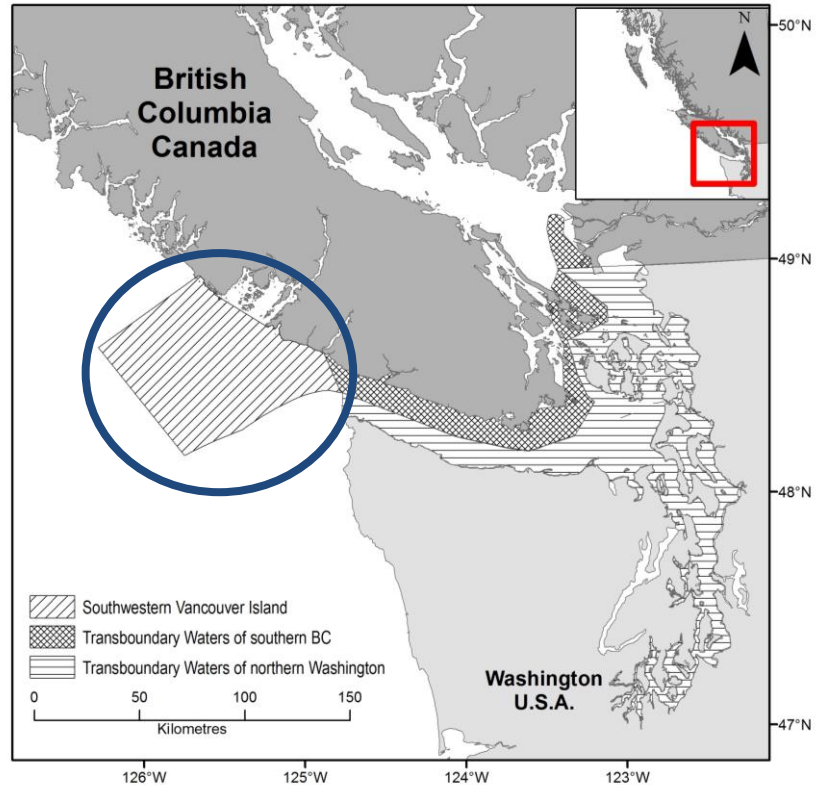
# SARA RKW Recovery Strategy Amendment

➤ Two additional areas identified for consideration as CH

## NRKW



## SRKW



# SARA RKW Recovery Strategy Amendment



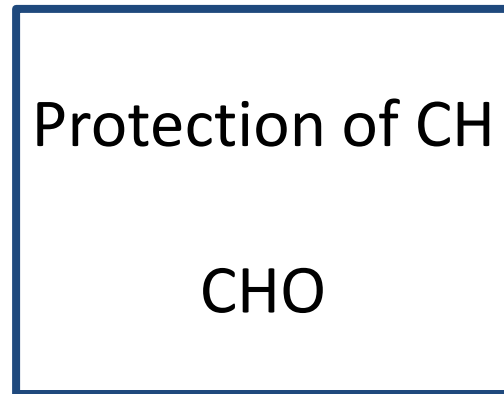
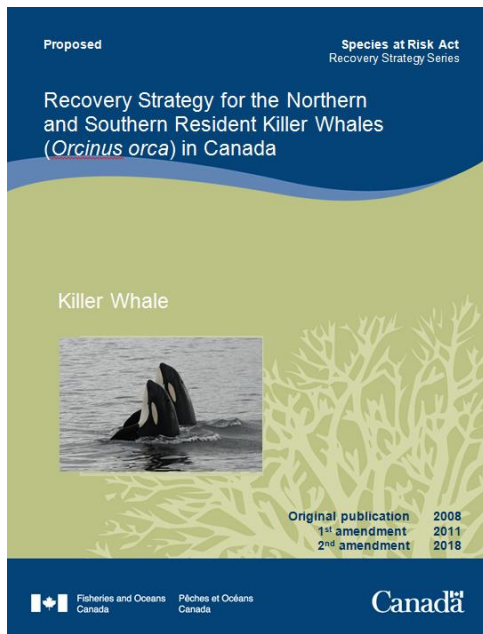
- Provides clarification of the functions, features and attributes for all CH identified for NRKW and SRKW
  - Features/attributes:
    - Availability of Chinook Salmon, Chum Salmon and other important prey species
    - Acoustic environment
    - Water quality
    - Physical space around whales (200m)
    - For NRKW: suitable physical habitat to allow for beach rubbing behaviour
  - Support the feeding and foraging, reproduction, socializing, resting and beach rubbing functions of NRKW and SRKW CH
  - Applies to the existing and proposed CH areas

# SARA RKW Recovery Strategy Amendment

- CH legal protection process
  - Existing RKW CH is protected under a Critical Habitat Order (CHO)
  - Anticipated that additional RKW CH will also be legally protected under CHO
- A CHO prohibits destruction of the features, functions, and attributes of identified CH
  - RS provides examples of human activities likely to destroy CH if unmitigated
  - Activities are not automatically prohibited
  - Destruction is considered to occur when there is a loss of a function when it is required by the species

# CH Protection and Threat Mitigation Processes

## Identification of CH

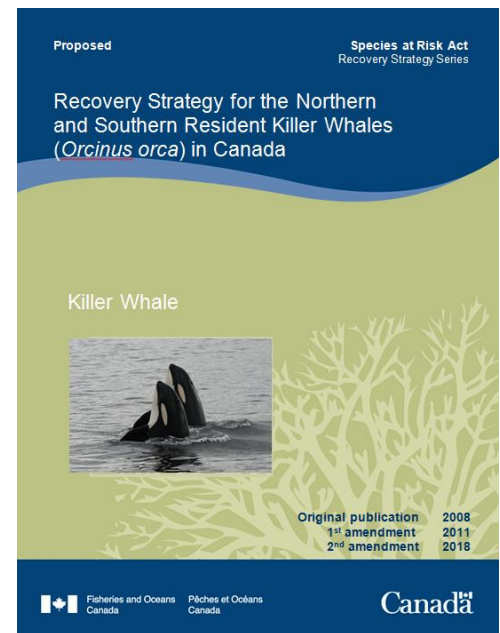


# SARA RKW Recovery Strategy Amendment – We want to hear from you!

- 60-day online public comment period for section 7 (critical habitat) of the proposed amended Recovery Strategy (through November 3, 2018)

Document is available on the Species at Risk Public Registry:  
[http://registrelep-sararegistry.gc.ca/document/default\\_e.cfm?documentID=1341](http://registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=1341)

Comments can be provided via e-mail to:  
[SARA/LEP.XNCR@dfo-mpo.gc.ca](mailto:SARA/LEP.XNCR@dfo-mpo.gc.ca)



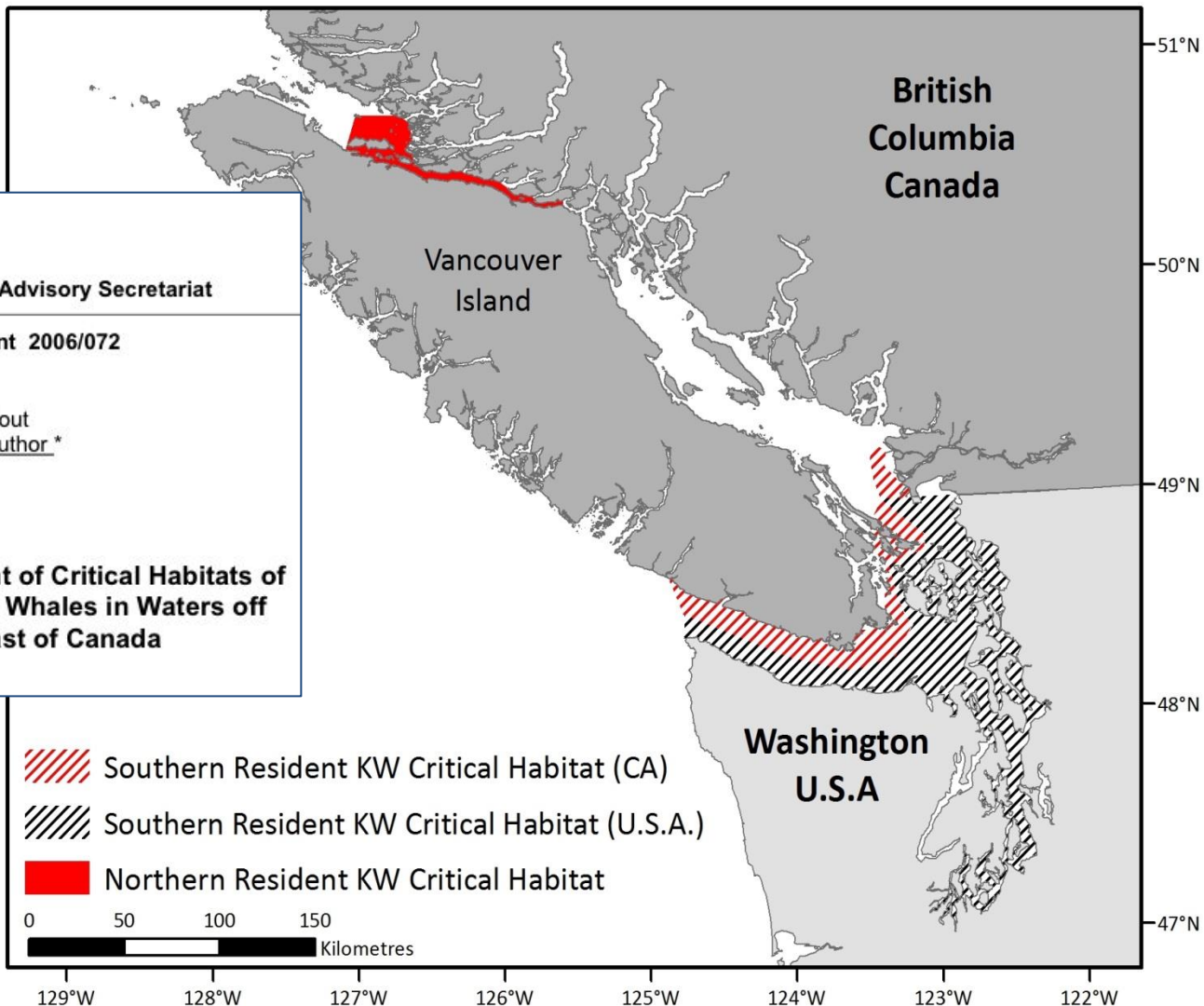
**CSAS**

Canadian Science Advisory Secretariat

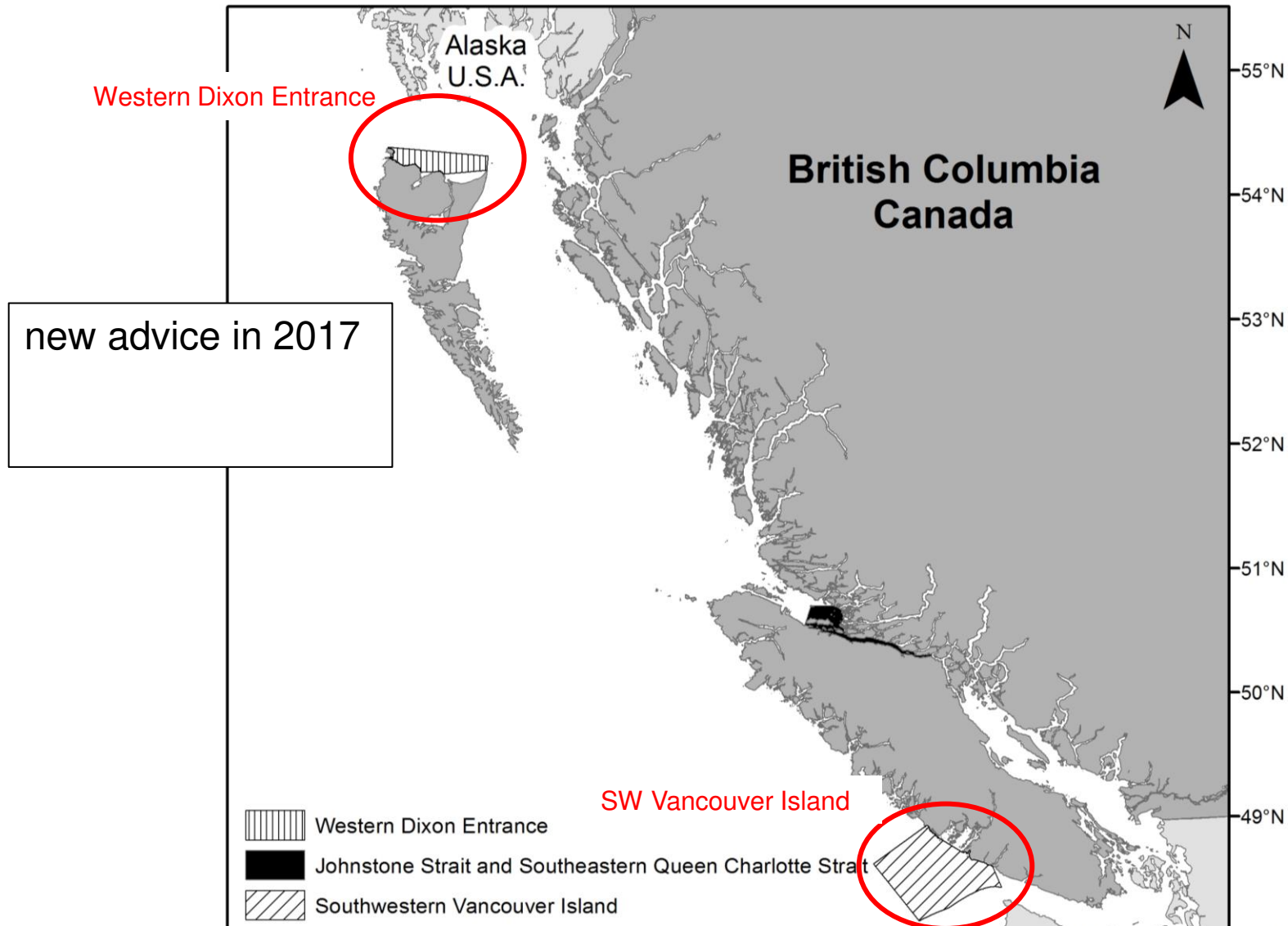
Research Document 2006/072

Not to be cited without  
permission of the author \*

**An Assessment of Critical Habitats of  
Resident Killer Whales in Waters off  
the Pacific Coast of Canada**



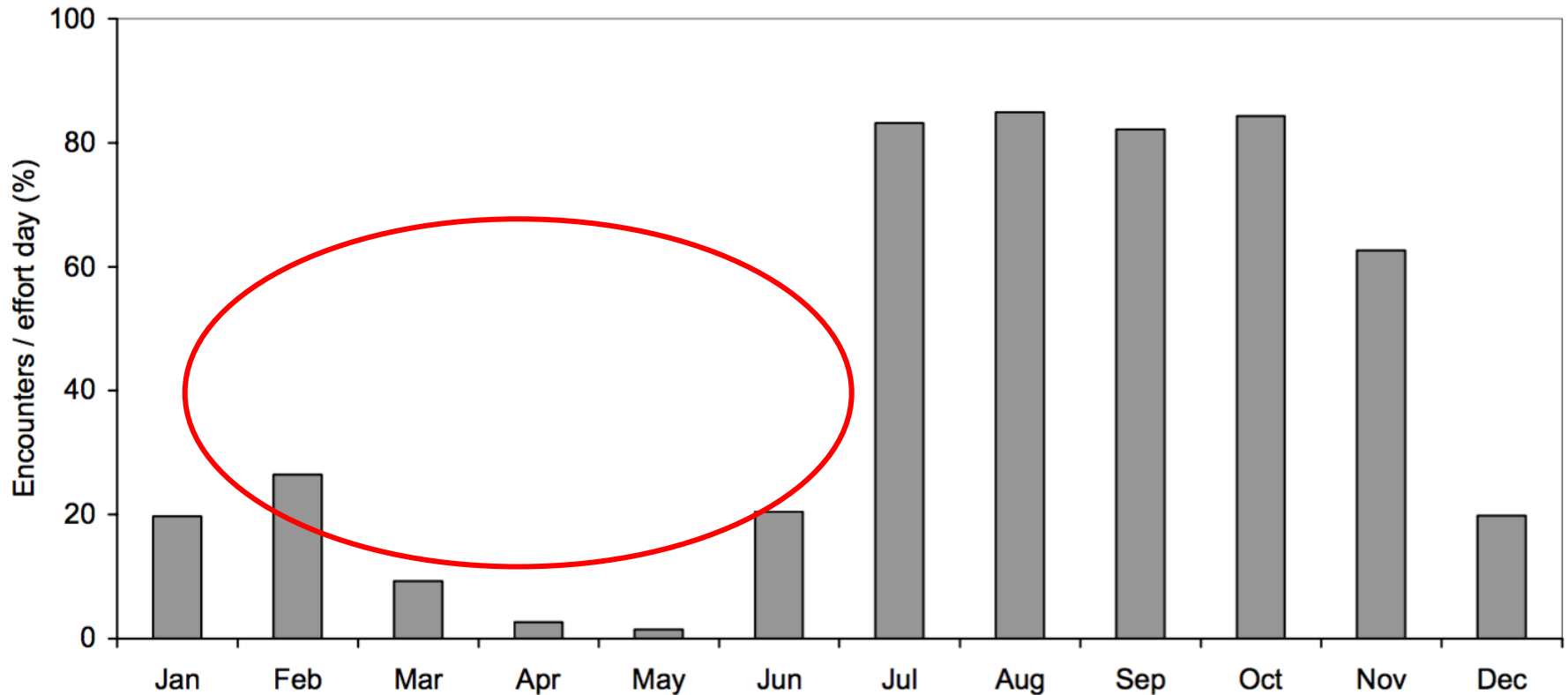
Resident Killer Whale critical habitat already  
partially identified (→ designated in 2009)



**Information in Support of the Identification of Additional Critical Habitat for Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada**

John K.B. Ford<sup>1</sup>, James F. Pilkington<sup>1</sup>, [Amalis Reira](#)<sup>2</sup>, [Mayuko Otsuki](#), Brian Gisborne, Robin M. Abernethy<sup>1</sup>, Eva H. Stredulinsky<sup>1</sup>, Jared R. Towers<sup>1</sup>, and Graeme M. Ellis<sup>1</sup>

KW use of existing critical habitat highly seasonal  
→ Gaps in knowledge in winter/spring critical habitat



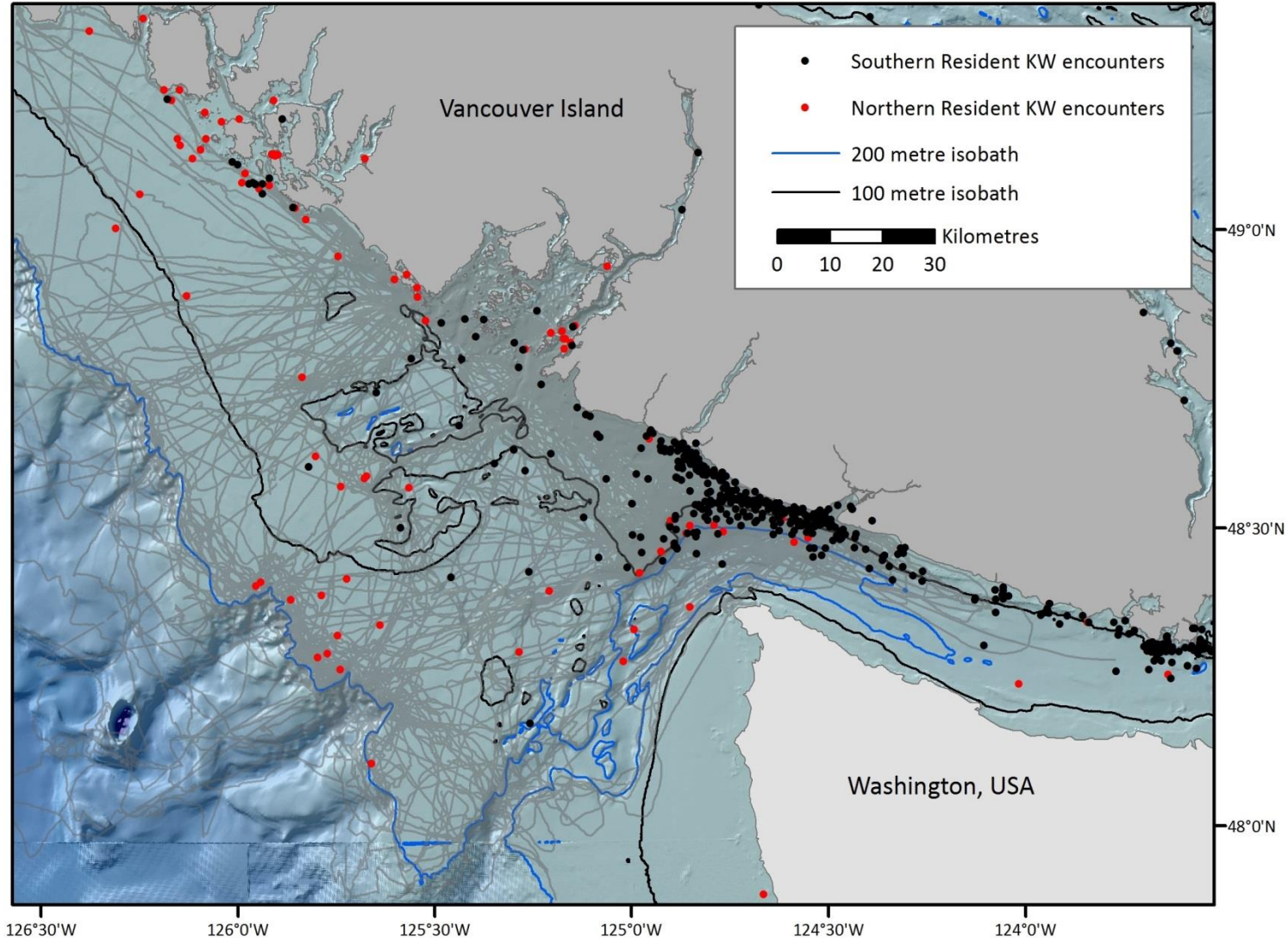
# Assessment of new potential critical habitat areas

## Three approaches:

- Photo-ID from opportunistic encounters and directed surveys
- Diet analysis from scales and tissue recovered from kills
- Passive acoustic monitoring

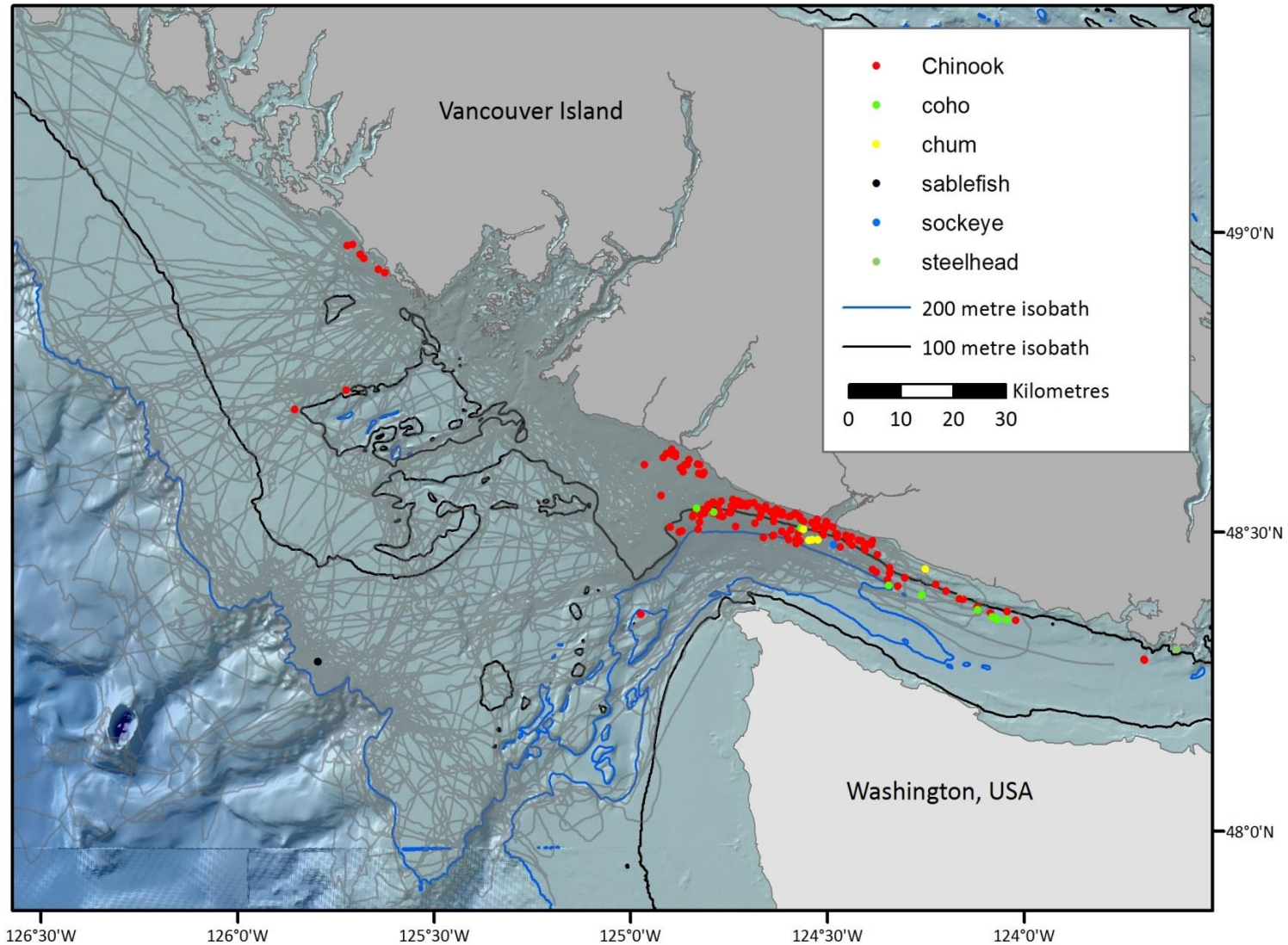


# Encounters with SRKW and NRKW

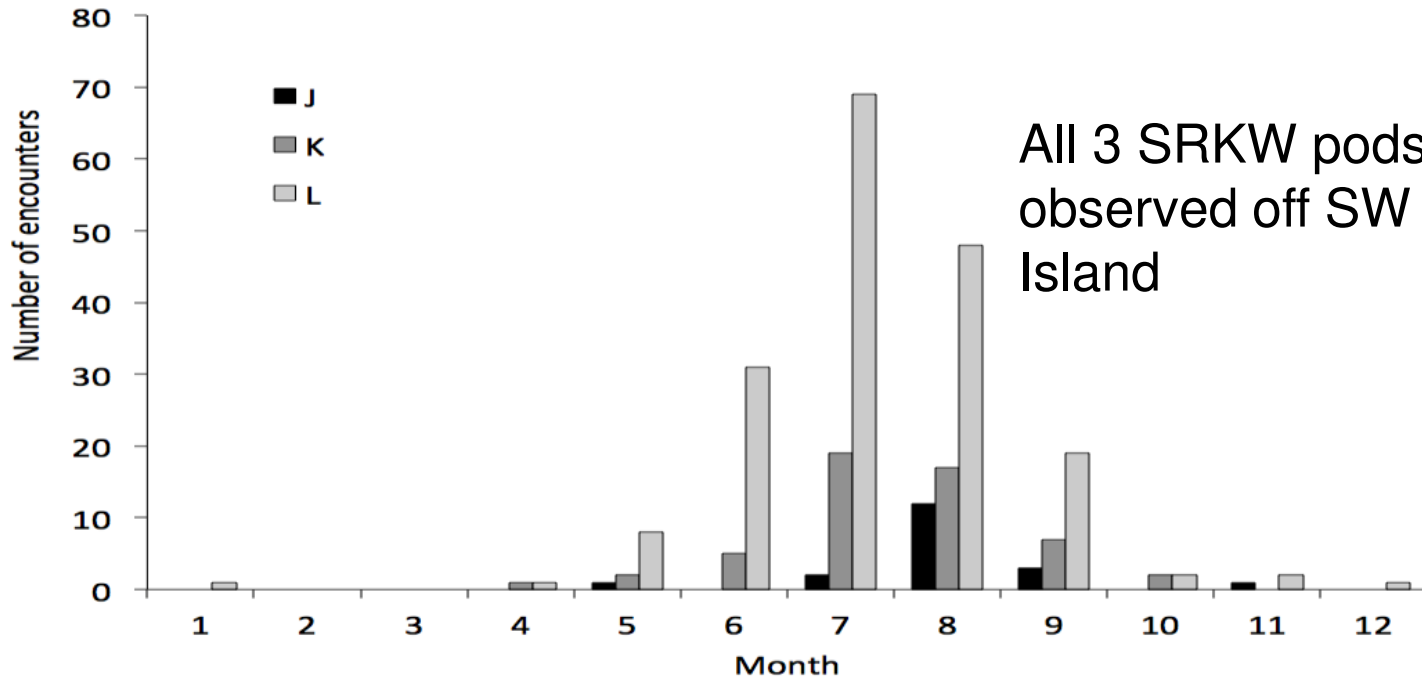


Locations of encounters with Southern Resident (black dots) and Northern Resident (red dots) Killer Whales in western Juan de Fuca Strait and off southwest Vancouver Island, 1974–2014. N = 196 SRKW encounters, 96 NRKW encounters. Survey effort tracklines are shown in light grey.

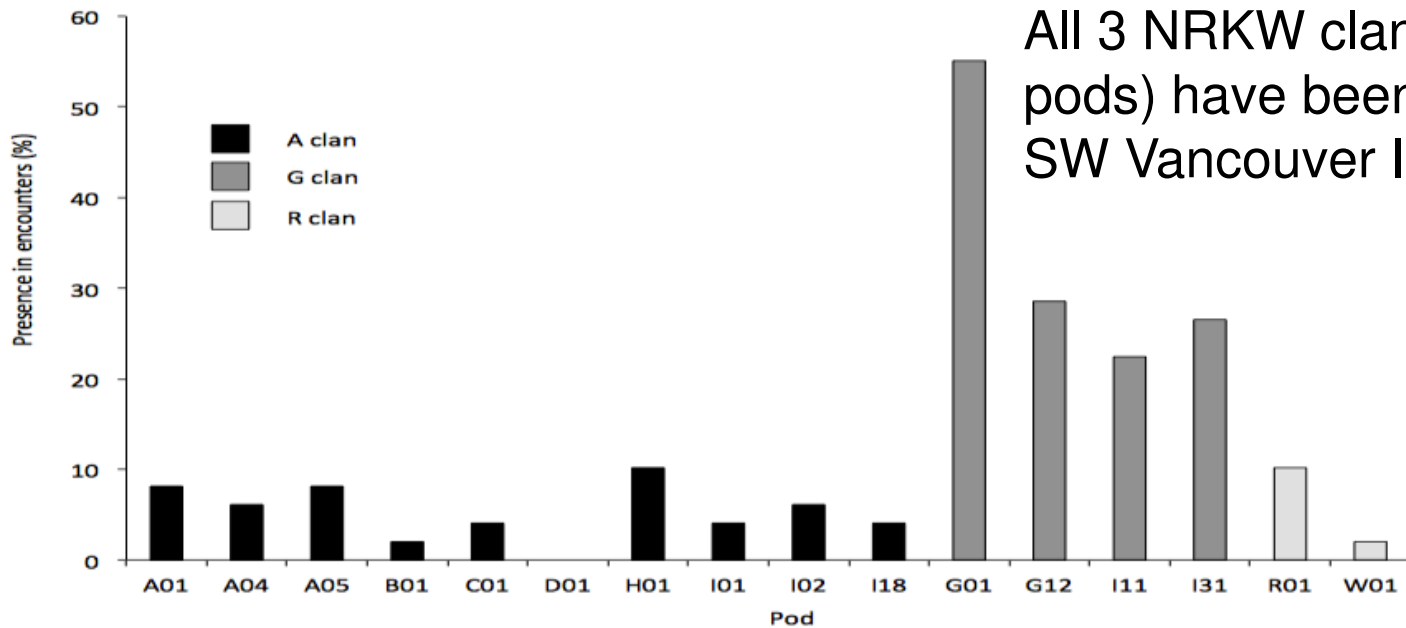
# Location of predation events



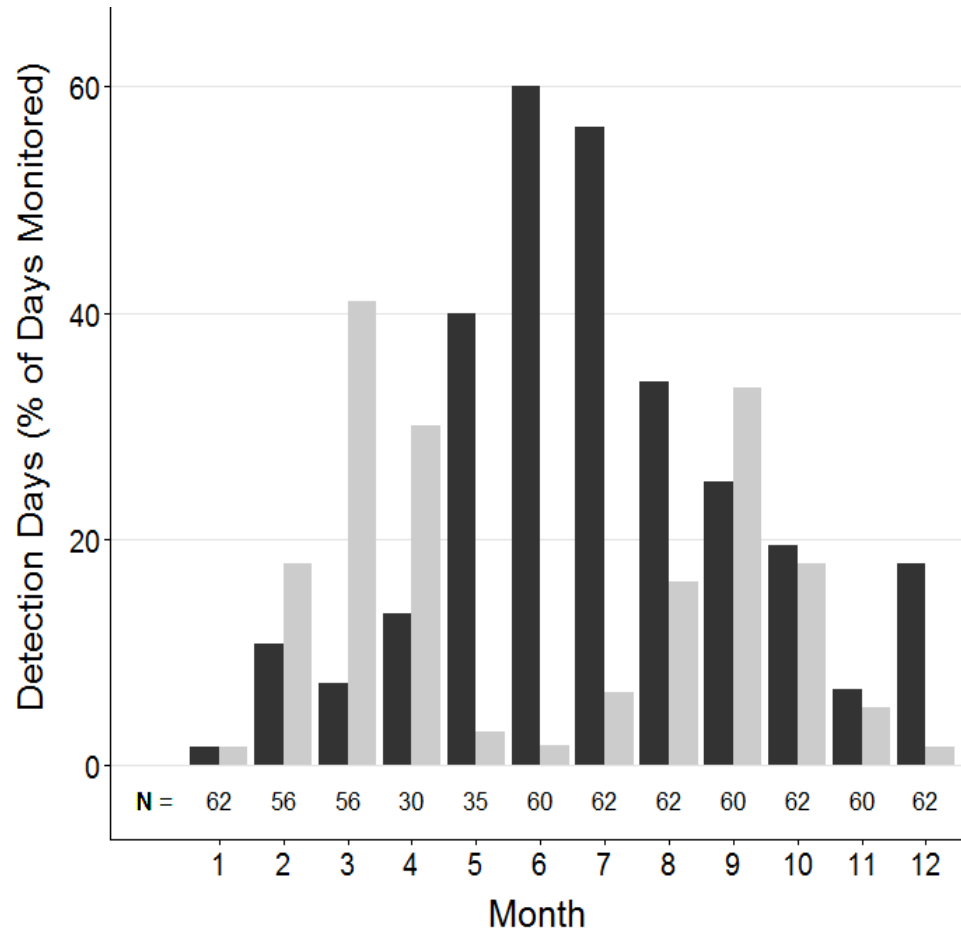
Locations of Resident Killer Whale predation events ( $n = 184$ ) in western Juan de Fuca Strait and off southwest Vancouver Island. Identified prey species distinguished with coloured dots. Survey effort tracklines are shown in light grey.



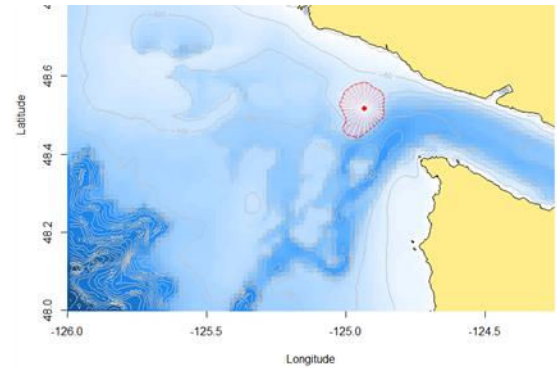
All 3 SRKW pods have been observed off SW Vancouver Island



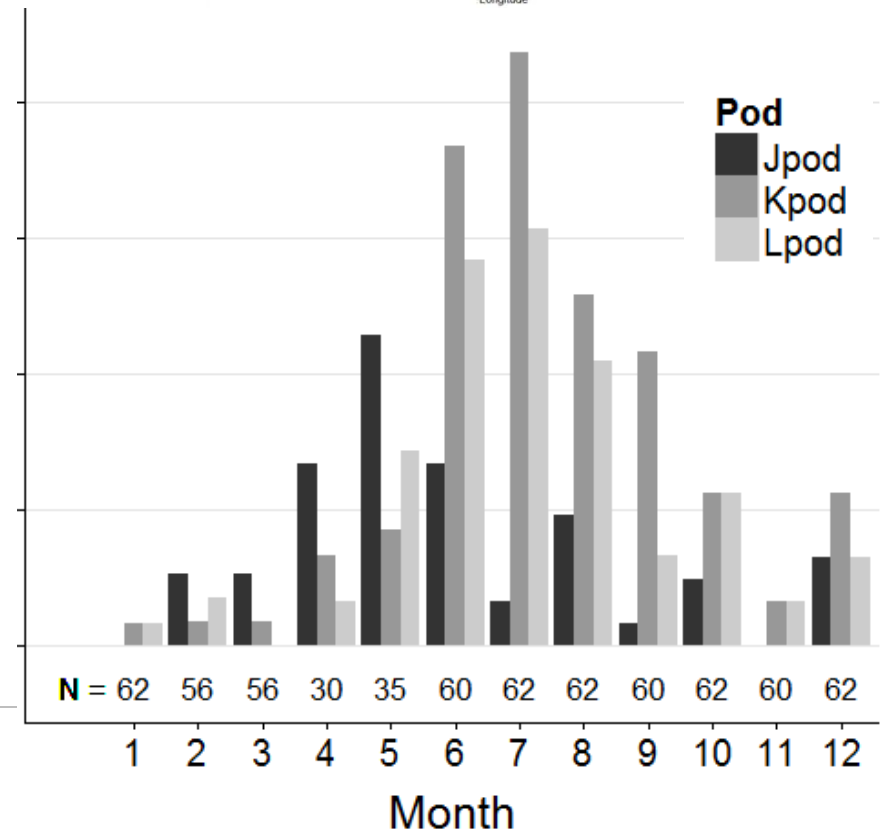
All 3 NRKW clans (and most pods) have been observed off SW Vancouver Island



## Swiftsure Bank hydrophone



SRKW  
NRKW



Important for both populations, all pods, year-round

# Satellite tags confirm importance of the area in winter: SRKW K33 – 31 Dec 2015 to 4 Jan 2016



# Satellite tracks (J27) confirm importance of La Pérouse

6–8 February 2015

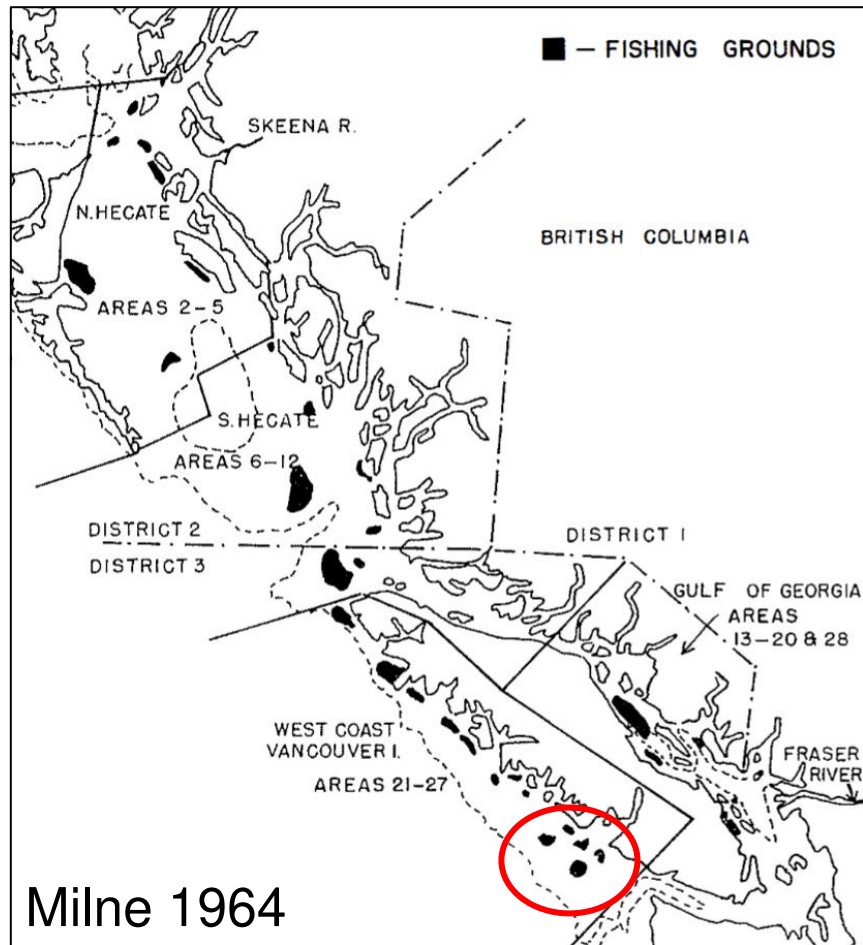


8–11 February 2015

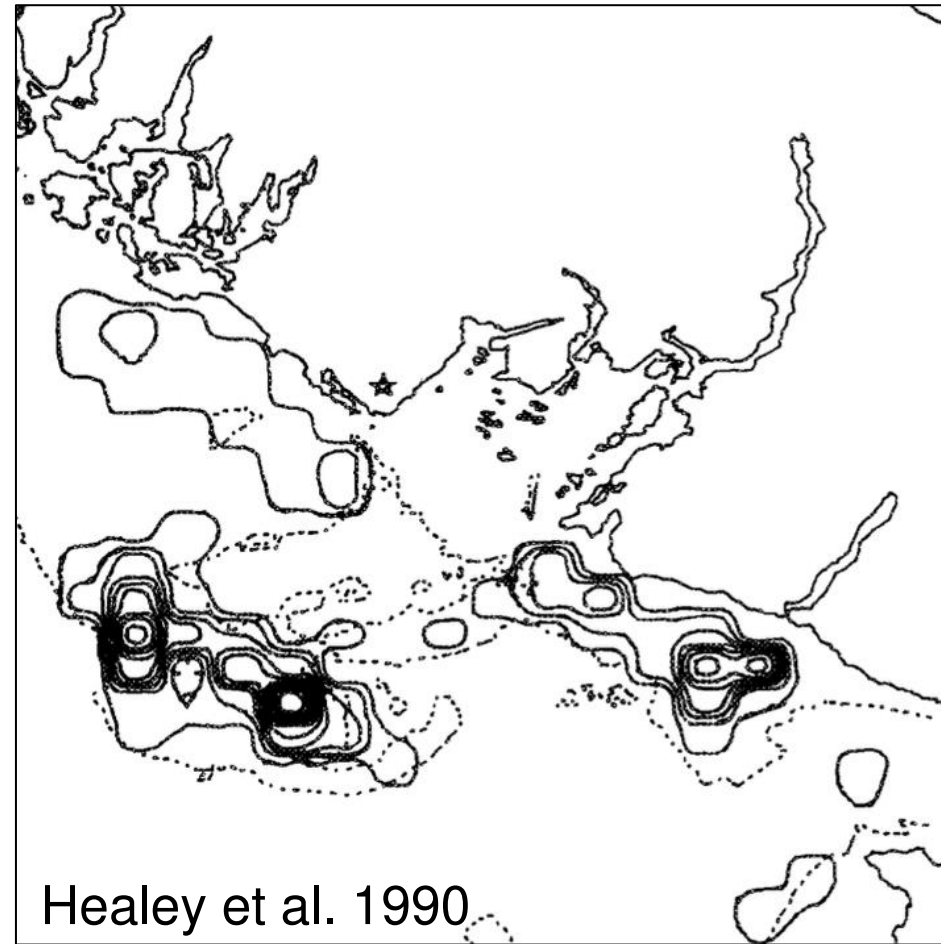


Source: NOAA

## Other important salmon areas

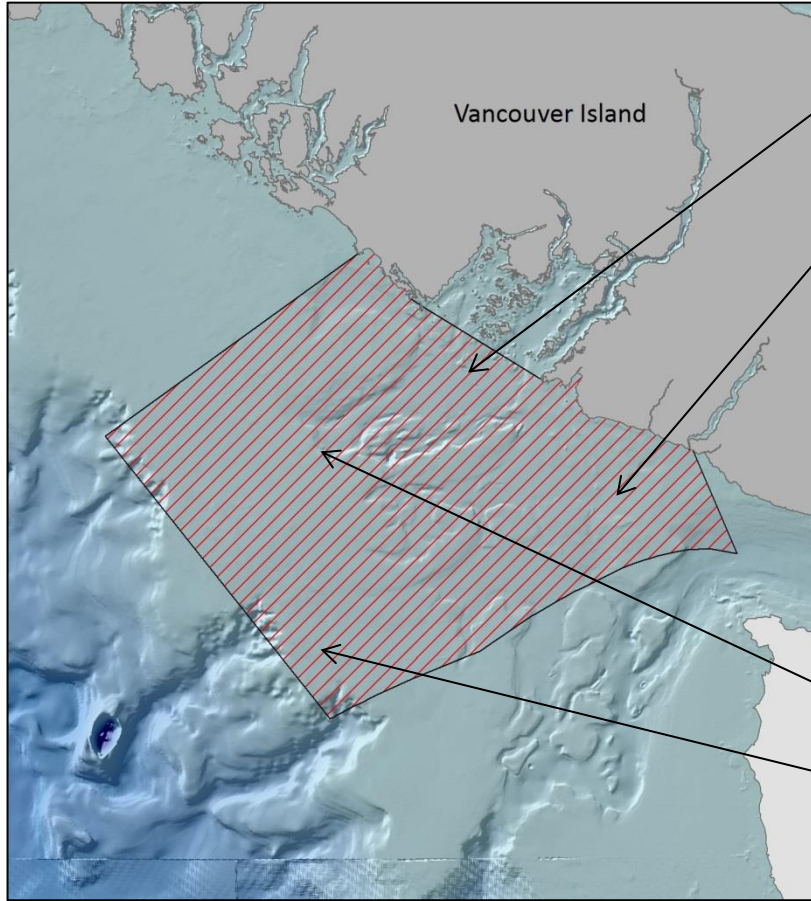


## Commercial troller density



→ Swiftsure Banks and La Pérouse Banks are highly productive, important salmon trolling areas (mostly targeting Chinook, secondarily coho salmon)

## Summary: significance of SW Vancouver Island



- 90% of encounters with SRKWs off the west coast of Vancouver Island
- RKWs detected 1 out of every 3 days on average throughout year
- SWVI important to NRKW in spring, when absent in designated CH
- SWVI used frequently by K and L pods during winter and spring, when absent from existing CH
- SRKWs detected 43% of monitoring days May–September, when whales also using existing CH
- Predation on Chinook salmon important activity in SWVI area
- Highly productive, important salmon areas
- Half of predation events between 100m & 200 m

- Area of year-round importance for a large proportion of both populations
- These data were submitted to peer-review → represent areas of special importance
- Provided as input to SARA for consideration as additional Critical Habitat