Agency Summaries of Review Comments - DFO

September 18, 2012

Workshop #3

Outline

Substantive comments on:

- Status of SRKW
- Feeding habits
- Fisheries & prey availability

Status of SRKW (1)

- Population Growth
  - Panel inference: SRKW increasing/not declining
  - Likely more uncertainty in this inference than communicated
  - Velez presentation provides detailed examination

Status of SRKW (2)

- Causation vs correlation of population dynamics with Chinook salmon
  - Link between RKW population dynamics and Chinook much stronger when NRKW are included
  - Independent lines of evidence:
    - Changes in social bond strength and group size declines with Chinook abundance
    - Body condition and growth rates may be affected by Chinook abundance
    - CPUE of foraging whales drops with Chinook abundance
  - Further discussion with panel later on day 2

Status of SRKW (3)

- Development of RKW life stage models
  - Influence of Chinook & Chum abundance
  - Analyses for SRKW & NRKW
    - contribute knowledge about mechanisms associated with different RKW population growth patterns
  - Quantify the sensitivity of these relationships for demographic life stages
  - Antonio Velez-Espino has 2 presentations

Feeding Habits (1)

- Winter ecology
  - Information presented at workshops 1 & 2 can be synthesized to strengthen inferences
  - Some observations from acoustic monitoring & visual sightings
  - absence from Salish Sea may imply food resources are insufficient or migration occurs for other reasons

Feeding Habits (2)

- Winter Ecology (cont'd)
  - Diet data for December through April are scarce
  - What is available suggests year-round focus on Chinook as primary prey
  - Winter diet remains key data gap – priority for future

Feeding Habits (3)

- Studies about the spatial-temporal distribution of SRKW
  - Year-round monitoring is needed
  - Tend to generalize about summer distribution but finer scale movements in a season occur.
    - SRKW often move to SWVI during summer period
    - at Swiftsure Bank (WCVI AABM area) & Barkley Sound (Robertson C. hatchery)
  - Representative habitat use information valuable
    - Develop weighting factors for diet samples if sampling effort is unbalanced

Feeding Habitats (4)

- Statistical design of diet studies
  - Some SRKW samples collected opportunistically or with unequal sampling effort
    - Concerns inferences may not be representative
  - Statistically based study design would improve confidence in diet information
    - Improve representativeness
  - Study could be linked to findings from a spatial-temporal RKW distribution study
    - Identify winter habitats

Fisheries & Prey Availability

- Fraser Chinook
  - Vast majority of Chinook eaten by SRKW in the Southern entrance in May-Sep from the Fraser
  - But only a weak association between terminal run of Fraser Chinook & SRKW vital rates
  - Possible reasons?
    - Low quality (noisy) abundance data for Fraser Chinook
    - Abundance of Fraser Chinook sufficient for SRKW at current population sizes
    - Other factors with greater influence on SRKW population growth