Evaluating the Effects of Salmon Fisheries on Southern Resident Killer Whales

Introduction to the 2nd Workshop

March 13-15, 2012

Coast Coal Harbour Hotel
1180 West Hastings Street
Vancouver, BC

David Marmorek, ESSA Technologies Ltd.
Outline

- Where we are in workshop process
- Objectives & agenda for workshop 2
- Principles, procedures, roles

http://www.kunamokstmural.com/
NOAA/DFO: Bilateral Workshop Process to Consider Effects of Fisheries on Southern Resident Killer Whales (as updated March 2, 2012)

**Workshop 1: Sept 21-23, 2011**
- Context setting presentations
- KW ecology
- Fishery impact analyses by NOAA, DFO, and invited others
- Structured discussions of presentations involving SP, presenters, participants

**Workshop 2: March 13-15, 2012**
- New and/or revised fishery impact analyses by NOAA, DFO, other scientists
- Panel and participants review and discuss presentations and their implications
- Panel meets separately at conclusion of workshop to begin shaping their draft report

**Workshop 3: Sept 18-20, 2012**
- Review public and agency comments on Draft 1 of SP report
- Review/comment on NOAA’s alternative fishery scenarios analyses
- Identify information/data gaps

**By June 17, 2011:**
- Identify Science Panel (SP) candidates
- SPC Chair and Facilitator selected
- SP members selected
- NOAA/DFO contract with SP members
- Workshop Participants identified and invited
- Reading list compiled and distributed

**By Aug. 19, 2011:**
- NOAA/DFO prepare Fishery profiles
- NOAA/DFO update energy requirements, coastal prey needs

**By June 17, 2011:**
- Identify Science Panel (SP) candidates
- SPC Chair and Facilitator selected
- SP members selected
- NOAA/DFO contract with SP members
- Workshop Participants identified and invited
- Reading list compiled and distributed

**By mid Oct. 2011:**
- Participants submit written comments re: Workshop 1 presentations

**By mid Nov. 2011:**
- Panel identifies more analysis by NOAA, DFO for Workshop 2

**By Feb. 3, 2012:**
- Other participants identify analysis they wish to present at W2

**By March 7, 2012:**
- NOAA & DFO complete and post additional analyses as requested by SP
- Others complete analyses they want to present at Workshop 2; results posted
- NOAA documents marine mammal performance metrics for SP review

**By April 30, 2012:**
- SP produces first draft of report with:
  - Preliminary findings
  - KW performance metrics review
  - Information/data gaps, uncertainties identified
- Draft report posted for public comment

**By June 15, 2012:**
- Deadline for receipt of public comments on draft report of SP

**By Aug. 15, 2012:**
- NOAA/DFO comment on Draft 1
- Public comments compiled/categorized by NOAA/DFO for discussion at W3 among SP and W3 participants
- NOAA develops, analyzes, reports results of alternative fishing scenarios

**By Nov. 30, 2012, Science Panel produces its Final Report**

**By Jan. 31, 2013:**
- NOAA finalizes Alt. Fishing Regimes report.

**By Mar. 31, 2013:**
- NOAA initiates or reinitiates ESA fishery consultations if necessary
Process

June 2011: Select Science Panel (SP) and participants

Aug. 2011: NOAA/DFO analyses

Workshop 1: Sept 21-23, 2011 (Seattle)

Oct 2011 - Mar 2012 Participant comments
SP suggests analyses
Participants identify & do analyses

By March 7, 2012: NOAA, DFO, others complete / post additional analyses, metrics

Workshop 2: March 13-15, 2012 (here)
SP & participants review new analyses
SP starts draft report

April 30, 2012: SP produces first draft
June 15, 2012: deadline for public comments on draft SP report

By Aug. 15, 2012:
- NOAA/DFO comments on SP Draft, analyzes fishing scenarios
- Public comments compiled/categorized

Workshop 3: Sept 18-20, 2012
- Review all comments on SP Draft, NOAA’s scenario analyses
- Identify gaps


By Mar. 31, 2013, NOAA initiates or reinitiates ESA fishery consultations if necessary
OBJECTIVES  (see agenda for details)

1. NOAA/DFO scientists present analyses prepared in response to feedback from Workshop 1.
2. Other scientists give presentations in response to Workshop 1 or other pertinent issues.
3. Science Panel and participants discuss new information, ideas and analyses presented during Workshop 2.
4. Science Panel forms tentative conclusions, identifies key uncertainties in discussions with participants.
5. Science Panel and Facilitator meet after workshop to synthesize ideas and begin writing their draft report.
What the workshop IS and ISN’T

- **It is meant to provide:**
  - rigorous examination of:
    - scientific research (i.e., factual context)
    - strengths and weaknesses of analyses conducted to date
  - collaborative discussions of future steps

- **It is not meant to address:**
  - policy implications of scientific findings
  - recommended management actions
  - management agreements
AGENDA OVERVIEW

Day 1:
Introduction
Status of Killer Whales
    LUNCH
Estimating Chinook Abundance & Potential Changes in Prey Availability

Day 2:
Chinook Fisheries, Other Prey, and Other Predators
    LUNCH
Relationship between Chinook Abundance & KW Population Dynamics

Day 3:
Looking Forward [BREAK AT 10:30]
Science Panel
PRINCIPLES

- Be hard on the problem, easy on the people
- First understand the pattern, then explore analyses of potential factors / causes
- Justify comments based on evidence
- Be explicit about assumptions & uncertainties
- Be open to alternative approaches
- Respect the agenda time lines
- State ideas concisely
QUESTIONS & DISCUSSION

- Questions and Discussion
  - After presentations and/or after set of presentations
  - Science Panel priority for first half
  - Discussion open to all participants for second half

- Discussion of Next Steps on Day 3
ROLES

- **Facilitators**
  - Keep group focused on agenda topics and on schedule
  - Facilitate and track discussion
  - Facilitate report-writing with Science Panel

- **Presenters**
  - Present your findings to the group
  - Respect timelines

- **Science Panel**
  - Provide constructive feedback; probe evidence/analyses
  - Suggest other analyses, future steps
  - Collaboratively review & synthesize research presented

- **Participants**
  - Provide constructive feedback in discussion
  - Provide written feedback if desired
Any questions?

Photo Credit:
Astrid Van Ginneken,
Center for Whale Research
AGENDA OVERVIEW (Day 2)

Day 1:
Introduction
Status of Killer Whales
Estimating Chinook Abundance and Potential Changes in Prey Availability

Day 2:
8:30–12:40 pm: Chinook Fisheries, Other Prey, and Other Predators
   12:40–1:50 pm: LUNCH
1:50–5:00 pm: Relationship between Chinook Abundance and Killer Whale Population Dynamics

Day 3:
Looking Forward
Science Panel
AGENDA OVERVIEW (Day 3)

Day 1:
Introduction
Status of Killer Whales
Estimating Chinook Abundance and Potential Changes in Prey Availability

Day 2:
Chinook Fisheries, Other Prey, and Other Predators
Relationship between Chinook Abundance and Killer Whale Population Dynamics

Day 3:
8:20–10:40 am: Looking Forward
10:55 am–5:00 pm: Science Panel
## Effects of Assumptions

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KW Prey Consumption / Foraging Efficiency / Energy Budget

KW Growth / Condition

KW Survival / Reproduction

Annual KW Pop Growth Rates

KW Abundance over Time

KW Population Viability

Factors other than fishing (vessels, toxic chemicals)

Nutrition & Cumulative Effects

Diet / Daily Prey Energy Req.’s

Distribution of Chinook

Factors other than fishing (hydro, habitat, hatcheries, climate)

Chinook Fisheries

Chinook Abundance

Δ Chinook Abundance

Δ KW Prey Consumption / Foraging Efficiency / Energy Budget

Δ KW Survival / Reproduction

Δ KW Abundance over Time

Δ Annual KW Pop Growth Rates

Δ KW Population Viability