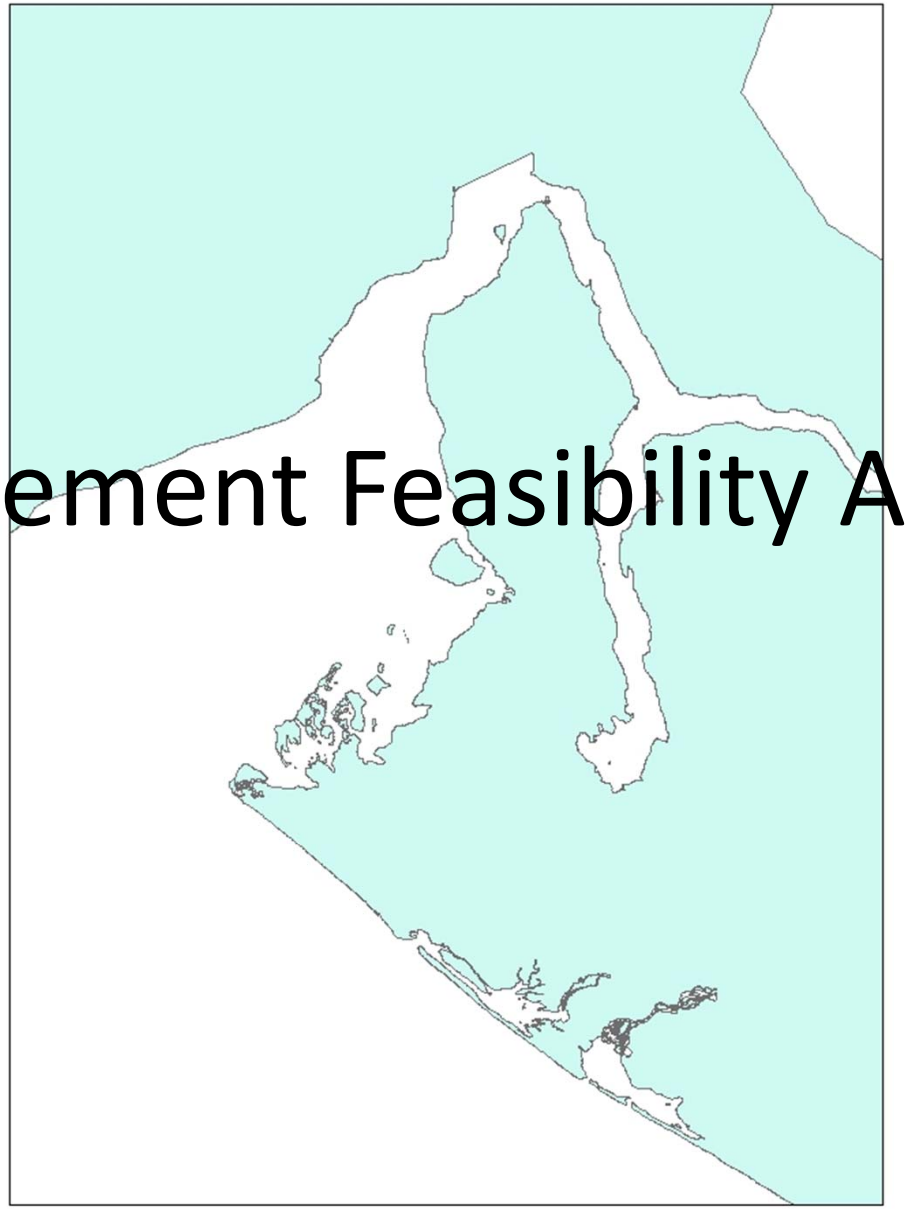
Management Feasibility Analysis



By
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October 6 2012
For YRAA BOD

5 AAC 40.130 Management Feasibility Analysis

- (a) The department will assist an applicant by preparing a management feasibility analysis for each proposed hatchery site. The analysis will be completed before submittal of an application for a private nonprofit salmon hatchery permit. An analysis is based on information provided by the applicant to the PNP coordinator, including
  - (1) the location of the facility
  - (2) the species desired for hatchery production
  - (3) the run timing by species
  - (4) the incubation and rearing levels desired during the first reproductive cycle by species
  - (5) the incubation and rearing levels desired at full capacity, by species

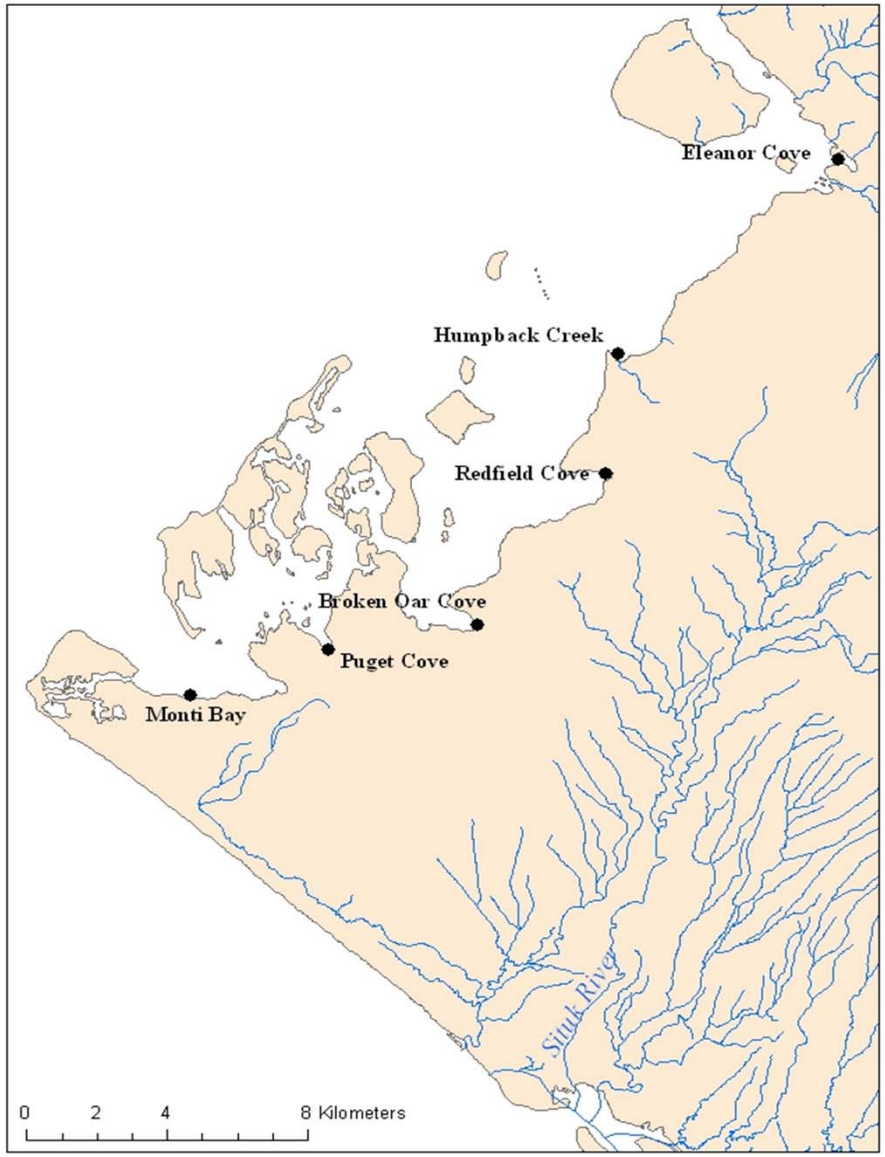
5 AAC 40.130 Management Feasibility Analysis

- (b) Within 30 days after receipt by the PNP coordinator of the information described in (a) of this section, the department will complete a management feasibility analysis of the proposed hatchery. A management feasibility analysis includes, at a minimum, the following information:
  - (1) an estimate of potential contributions to the common property fishery
  - (2) potential size and location of a special harvest area
  - (3) special management considerations or the need for additional studies
  - (4) potential broodstock sources
  - (5) an assessment of production potentials for each species
  - (6) additional factors considered by the department to be relevant to the proposed hatchery operation

The Department Received an MFA Request With:

- (1) the location of six potential release sites
- (2) a desire for fall run pink salmon and summer run chum salmon production
- (3) start up levels of 10 million eggs of each species
- (4) full production levels of 200 million green pink salmon eggs and 78 million green chum salmon eggs

Proposed YRAA Release Sites Sept. 2012



Department Review

- **(1) an estimate of potential contributions to the common property fishery**

Start: 10 million pink/chum eggs = @ 9 million fry = 270,000 – 540,000 adults for each species (3%-6% ocean survival).

Full: 200 million pink eggs = @ 180 million fry = 5,400,000 – 10,800,000 adult pink salmon

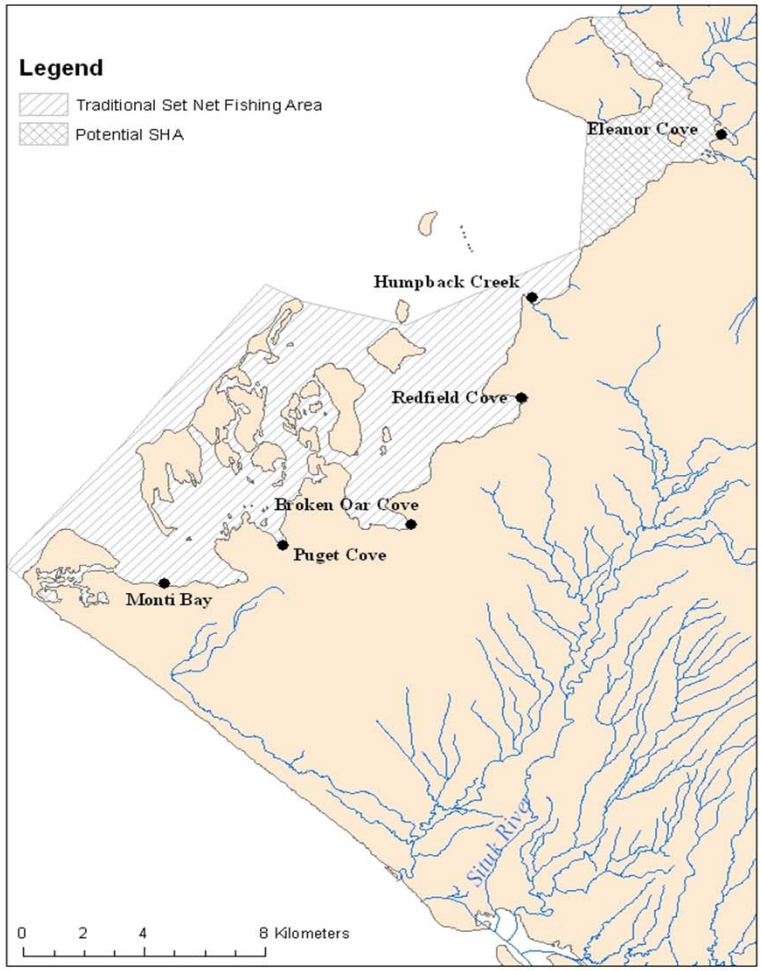
78 million chum eggs = @ 70.2 million fry = 2,106,000 – 4,212,000 adult chum salmon

(2) potential size and location of a special harvest area

Each of the release sites will be given an SHA similar to what is illustrated for Eleanor Cove. More than one release site will require a larger area.

Fishing in an SHA can be closed for broodstock and/or cost recovery concerns, which may be problematic if an SHA is placed in a traditional fishing area.

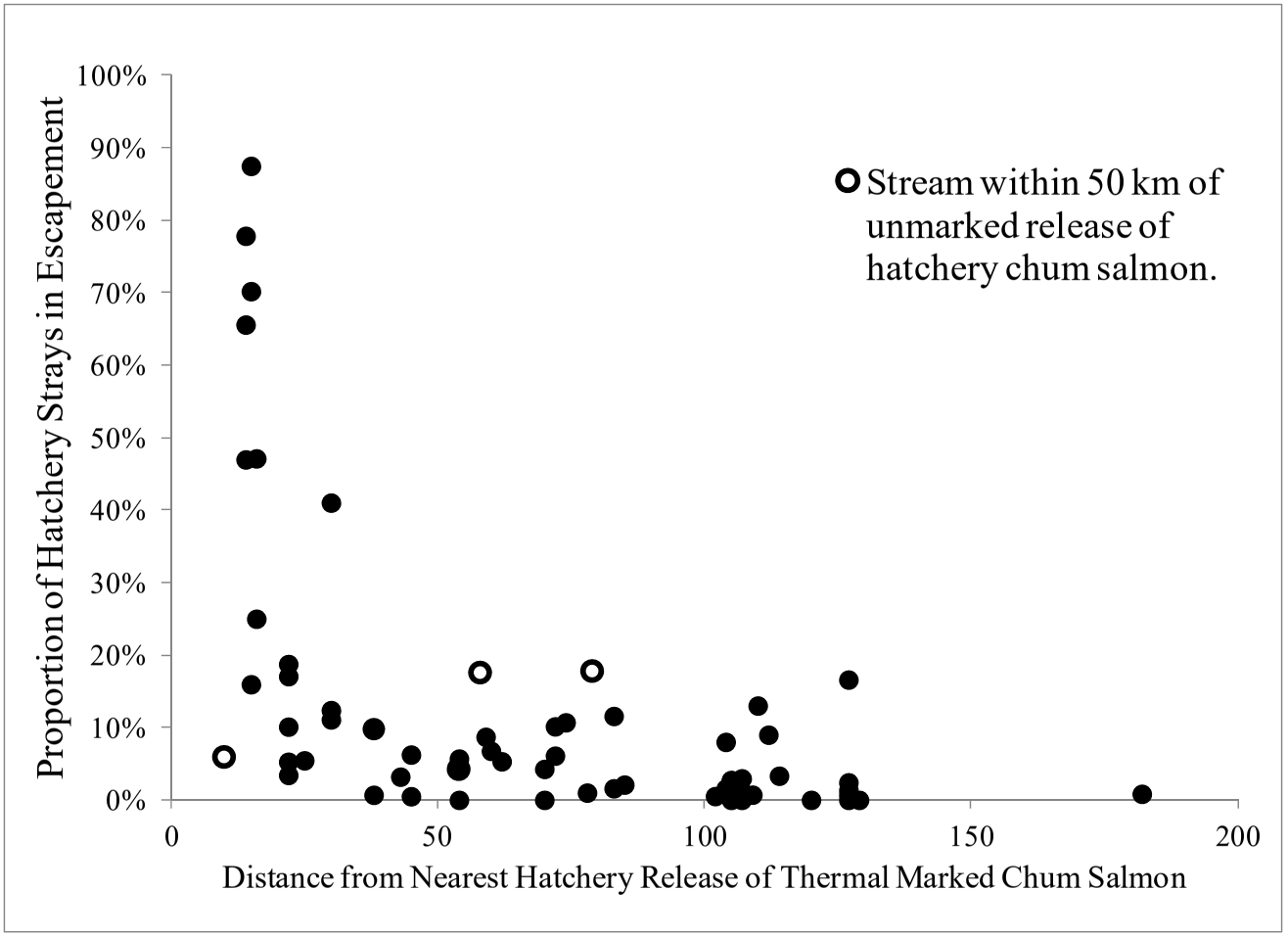
Fishing Area, Proposed Release Sites, and Potential SHA



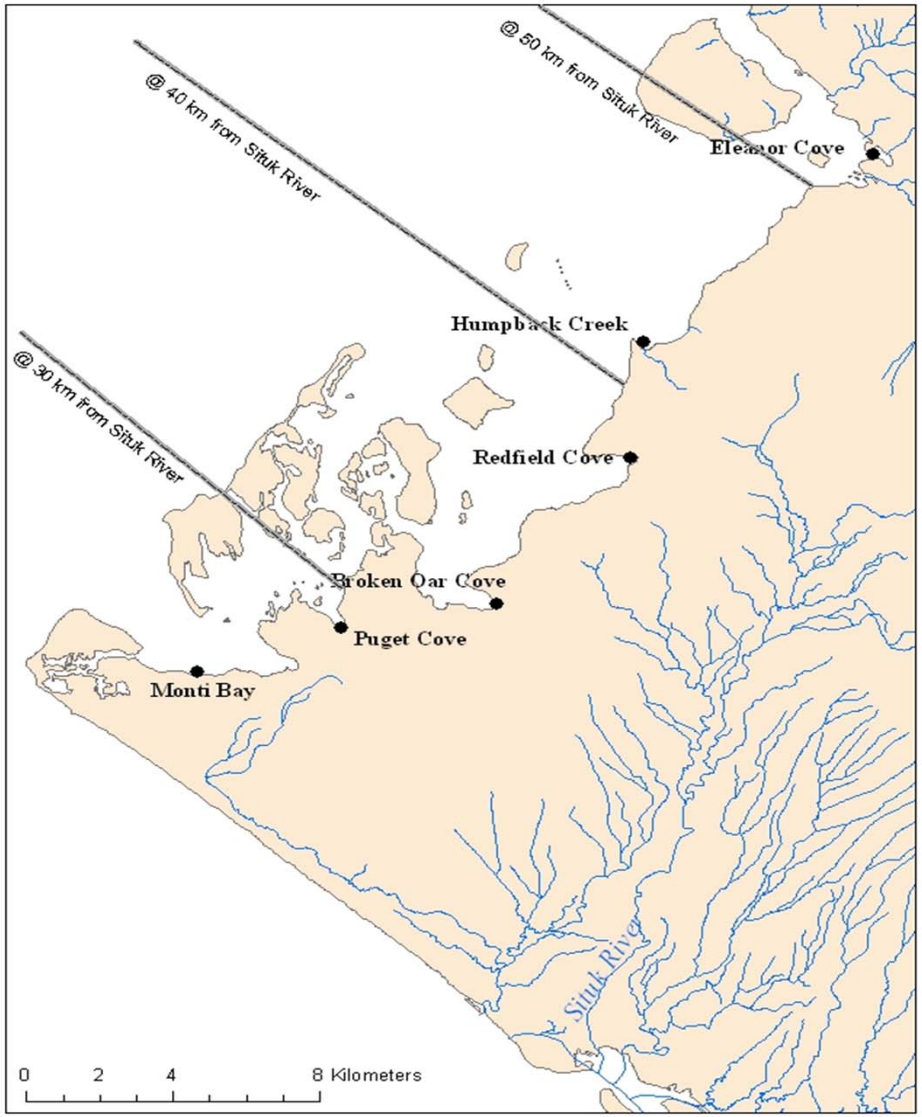
(3) special management considerations or the need for additional studies

- **Management considerations you are likely to see:**
  - Straying: location selection to minimize straying (includes freshwater influence and distance from any wild stock streams), a need for marking and monitoring production, potential limits on production until returning adults can be evaluated, etc.
  - Efficiency of gear and need for terminal “clean up”.
  - Wild stock interception or changes to wild stock fisheries

Hatchery Chum Salmon Straying in Southeast Alaska, 2008-2011



Proposed YRAA Release Sites Distance From Situk River



(4) potential broodstock sources

- **There are big questions that need to be answered with broodstock:**
  - Can an outside brood source be used? If so, what is the best option?
  - If outside brood sources can not be used, what are the local stock options?
  - How would an outside brood source be transported (boat, air, etc.)? At what stage would they be transported (fry, eyed eggs, etc.)?
  - What infrastructure would need to be in place for either option?

(5) an assessment of production potentials for each species

- This section is going to start tying the previous sections together

(6) additional factors considered by the department to be relevant to the proposed hatchery operation

Need water before all else

- A hatchery permit requires a water right
- Water is a limiting factor of production (example: 20M eggs will require approximately 300 gpm or @ ½ cfs for incubation. 278M eggs will require approximately 4,170 gpm or @ 9 cfs incubation. Broodstock collection could easily double water demands.)
- How will water be acquired? (gravity fed, pumped, etc.)

At this point, the project is reviewed at a regional level. When a hatchery application is submitted, there is some review at the state level (i.e. Genetics Department, Pathology Department, etc.)