

Sustainable Salmon Fisheries Update

(ASL 2/1/99; NPFMC 2/2/99; BOF 2/3/99)

Sustainable salmon fisheries project

- Essence of the project: Establish a policy to guide ADFD&G and Board of Fisheries, to assure Alaska's salmon fisheries remain sustainable.
- This policy will serve as an objective standard for the department and board to use to evaluate key aspects of our salmon fisheries.
- The sustainable salmon fishing policy will assure the general public, seafood consumers, perhaps the Canadians that we are committed to maintaining our salmon stocks in a healthy condition.
- Applying the policy will enable us to efficiently focus on aspects of our salmon management program that may need improvement.
- Applying the policy will identify information gaps and help establish research priorities. The policy should help us assure the legislature we have a clear, thoughtful, and logical basis for our fisheries budget request.

History of the Project

- terms and definitions; outgrowth of escapement goal and mixed stock fisheries policy discussions
- awareness of increasing global sustainable fisheries conversation
- felt Alaska had something to contribute
- commissioned outside expert to suggest a framework for evaluating fisheries to determine if they are sustainable. This evolved into "Principles and Criteria for Sustainable Fisheries"
- also commissioned a review of current management practices and policies
- keen industry interest, some sensitive issues, some lack of definition in the project – led to emphasis on public process
- established problem statement, goals, objectives, tasks; established public and technical panels
- technical and public input focuses on potential use of the principles and criteria

Current Status of the Project

- principles and criteria will become basis for drafting a sustainable fisheries policy (now underway)
- by next fall we should have a draft state sustainable fisheries policy available for public and agency review

#4

Board of Fisheries/ADF&G Sustainable Salmon Fisheries Project

6/4/98

Problem Statement

Alaska has been highly successful in developing management strategies to meet the state's constitutional mandate that "fish . . . shall be utilized, developed, and maintained on the sustained yield principle" However, the combination of incremental habitat loss, budget and program reductions to the Department of Fish and Game, climatic change, increased commercial fleet efficiency, and increased freshwater fishing pressure pose a long-term threat to the sustainability of Alaska's salmon fisheries.

Alaska must develop a comprehensive policy that clearly states the principles for sustainable salmon management. In order to maintain optimal salmon production the state must develop a framework for periodic assessment of salmon habitat, management policies and practices, and the health of the stocks, to assure conformance with the policy. The lack of such a policy, combined with inconsistent use of important fishery management terms and concepts, such as "escapement goals," "conservation concerns," and "stock," is a problem for the Board of Fisheries, the Department of Fish and Game, and the public that increases the risks to Alaska's salmon fisheries.

Mission Statement

To ensure sustainable salmon fisheries at optimal yields, for all beneficial uses.

Project Goals

- Develop and adopt a comprehensive sustainable fisheries policy that clearly states the essential principles for sustainable salmon management
- Develop and adopt a framework that provides objective criteria and a structured process for periodic assessment of the state's policies, management practices, habitat protections, and the health of salmon resources.
- Continue and solidify Alaska's role as a major salmon producer and contributor to the current global sustainable fisheries dialog.

Project Objectives

Task One: Describe the current state of salmon management. Prepare a report that sets forth the history of and current approach to salmon fisheries management in Alaska, including describing the constitutional, statutory, regulatory, and policy foundations that contribute to sustainable fisheries. Also discuss salmon stock status, stock enhancement, stock assessment policies, methods, and programs, and overview basic management strategies used today. As part of the document summary, prepare a comprehensive list of these elements in a tabular format.

Task Two: Develop the essential sustained yield principles and criteria. Describe the essential principles and criteria for sustaining salmon fisheries, from habitat management to fishery management. The principles and criteria will result from a comprehensive review of contemporary

literature. The final document proposing the principles and criteria will explain how each provides for sustained yield, and will include a bibliography

Task Three: Review and agree on the essential principles, criteria, and terms. Review of the Task Two principles and criteria, by the Board of Fisheries, the department, and the public will help clarify use of the sustained yield principle referenced in the constitution, and will help define the policy framework and process to be used in subsequent analytical steps in this project. This Task will result in agreement on final principles and criteria, as well as technical terms used in salmon management.

Task Four: Draft a sustainable salmon management policy; BOF adopts. The ADF&G/BOF sustainable fisheries committee will draft a sustainable salmon management policy for adoption by the board. This policy will be based on the Task Three final principles and criteria and may consist of an umbrella policy and other "implementing" policies. The draft policy will incorporate department review and will go to the public and technical advisory panels for their review and comment prior to its submission for adoption by the Board of Fisheries. Adoption of the principles, criteria, and terms as board policy will provide policy guidance for the next tasks.

Task Five:

(a) **Develop the salmon fisheries policy evaluation framework.** Use the principles, criteria and terms described in Task Two, Three and Four as the basis for an explicit analytical framework, including criteria and an implementation process, to use for evaluating Alaska's current salmon management policies.

(b) **Conduct the salmon management policy gap analysis.** The ADF&G/BOF committee will use the Task Four sustainable fisheries policy (principles, criteria, terms) and the task Five framework to evaluate the Task One description of the salmon management regime, at the policy, or "big picture" level of analysis. The goal is to identify any gaps in the state's current salmon management policies, statutes, and regulations. Feedback to make necessary changes to management policies.

Task Six:

(a) **Develop the management practices evaluation framework.** Develop a framework to evaluate specific salmon fisheries management programs and practices including assessment of salmon stocks, habitat protection, and in-season management practices. Use results of Tasks Five and Six as a guide.

(b) **Conduct the management practices gap analysis.** Apply the "Task Six" framework to the specific fisheries statewide as these fisheries are considered in the ongoing Board of Fisheries process. Identify strengths, weaknesses in specific fisheries management plans and practices. Feedback to make necessary changes to management practices.

Task Seven (ongoing): Develop and implement a public information and education effort. develop a public information and education effort that will articulate fishery management concepts, principles and procedures used in Alaska, including the sustainability principles and criteria developed through this project. I&E components will include topics such as "the management cycle of a sustainable fishery." This material will be prepared for a variety of statewide, national, and international audiences, including schools.

Technical Panel Report To Sustainable Fisheries Committee, December 31, 1998.

The Panel will be prepared to report and discuss its findings at the next meeting of the Sustainable Fisheries Committee and the Alaska Board of Fisheries.

PRINCIPLES AND CRITERIA

for a Sustainable Salmon Fisheries Policy

Five principles for sustaining salmon stocks, and fisheries upon them, are presented. For each principle, a number of criteria are presented against which human knowledge and actions can be compared for each stock, fishery, or habitat in order to judge the likely sustainability of affected resources.

Principle I. Protect wild salmon populations and their habitats to maintain resource productivity.

Criteria:

1. Salmon spawning, rearing, and migratory habitats are protected.
 - A. Salmon habitats are not perturbed beyond natural boundaries of variation.
 - B. Scientific assessments of possible adverse ecological effects of proposed habitat alterations and their impacts on salmon populations are conducted prior to approval of such proposals.
 - C. Adverse environmental impacts on wild salmon and their habitats are assessed.
 - D. All essential salmon habitat in marine, estuarine and freshwater ecosystems are protected, as is access of salmon to these habitats. Essential habitats include:
 - i. Spawning and incubating areas.
 - ii. Freshwater rearing areas.
 - iii. Estuarine/nearshore rearing areas.
 - iv. Offshore rearing areas.
 - v. Migratory pathways.
 - E. Salmon habitat in freshwater is protected on a watershed basis, including appropriate management of riparian zones, water quality and water quantity.

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2. Salmon are protected within spawning, incubating, rearing, and migratory habitats.
3. Collateral mortality resulting from habitat loss is understood, considered, and controlled by affected user groups, regulatory agencies, and boards when making conservation and allocation decisions.
4. Degraded salmon spawning, incubating, rearing, and migratory habitats are restored to full productivity. Ongoing monitoring is conducted to determine current status of the habitat and effectiveness of the restoration activities.
5. Depleted salmon stocks are allowed to recover or, where appropriate, are actively restored.
6. Diversity is maintained at the genetic, population, species, and ecosystem levels.

Principle II. Manage fisheries to allow escapements within ranges necessary to conserve and protect potential salmon production and maintain normal ecosystem functioning.

Criteria:

1. Temporal and geographic magnitudes of spawning escapements are measured; escapement-monitoring programs are appropriate to the scale and intensity of each stock's use.
2. Escapement goals are established in a manner consistent with sustained yield.
3. Escapement goal ranges incorporate uncertainty associated with measurement techniques, observed variability in the population measured, and varying abundance within related sub-stocks of the population measured.
4. Escapement goals are achieved in a manner to maintain genetic and phenotypic characteristics of the population, by assuring appropriate geographic and temporal distribution of spawners as well as consideration of size range, sex ratio, and other population attributes.
5. The various sources and impacts of fishing, and other human-induced, mortality are understood and considered in harvest management decisions.

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6. Escapements are achieved, and harvest management decisions are made, in a manner consistent with protection of non-target stocks or species.
7. The role of salmon in normal ecosystem functioning (fish, wildlife, and their habitat) is understood and provided for in harvest management decisions.
8. Population trends of salmon and allied species are monitored and appropriately considered in harvest management decisions.

Principle III. Establish and apply an effective salmon management system to regulate human activities that affect salmon.

Criteria:

1. Salmon management objectives are appropriate to the scale and intensity of various uses.
2. Management objectives are provided in the form of harvest management plans, strategies, guiding principles, and policies (e.g., for mixed stock harvests, fish disease, and genetics) which are subject to periodic review.
3. Management agencies have clear authority (in statute and regulation) to control all sources of fishing mortality on salmon.
4. Management agencies have clear authority (in statute and regulation) to protect salmon habitats and control collateral sources of mortality.
5. Management programs are effective in controlling human-induced sources of fishing mortality, and incorporate appropriate procedures to assure effective monitoring, compliance, control, and enforcement.
6. Management programs are effective in protecting salmon habitats and controlling collateral mortality, and incorporate appropriate procedures to assure effective monitoring, compliance, control, and enforcement.
7. Fisheries management implementation and outcomes are consistent with regulations, regulations are consistent with statutes, and the purpose of established policy and law is effectively carried out.
8. Effective joint assessment and management arrangements are in place for stocks that cross jurisdictional boundaries; appropriate procedures for effective monitoring,

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compliance, control, and enforcement are coordinated with those of other agencies, states, or nations.

9. Management activities are accomplished in a timely and adaptive fashion to implement objectives on the basis of the best available scientific information.
10. Effective mechanisms for the collection and dissemination of information and data necessary to carry out management activities are available and utilized.
11. Management programs and decision-making procedures are able to clearly distinguish and effectively deal with biological and allocation issues.
12. Adequate staff and budget for research, management, and enforcement activities are available to fully implement sustainable fisheries principles.
13. Management programs and decision-making procedures effectively evaluate and control potential adverse consequences of artificial propagation of salmon on natural stocks.
14. Proposals for salmon fisheries development or expansion include assessments required for sustainable management of existing fisheries and stocks.
15. Effective processes for controlling excess fishing capacity exist.
16. Procedures are implemented to regularly evaluate the effectiveness of fishery management and habitat protection actions in sustaining salmon populations, fisheries and habitat and to resolve any problems or deficiencies.

Principle IV. Maintain public support and involvement for sustained use and protection of salmon resources.

Criteria:

1. Effective mechanisms exist and are used for the resolution of disputes.
2. Pertinent information and decisions are effectively disseminated to all interested parties in a timely fashion.
3. Regulatory decisions addressing management and allocation decisions are made in an open public-involvement process.

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4. An understanding of the proportion of mortality inflicted on each stock by each user group, and an allocation of the burden of conservation across user groups, is promoted and achieved.
5. Adequately funded public information and education programs provide timely materials on salmon habitat requirements, threats to salmon habitat, value of salmon and habitat to the public and ecosystem (fish and wildlife), natural variability and population dynamics, status of fish stocks and fisheries, and the regulatory process.

Principle V. In the face of uncertainty, manage salmon stocks, fisheries, and essential habitats conservatively.

Criteria:

1. Research and data collection are undertaken in order to improve scientific and technical knowledge of salmon fisheries, including ecosystem interactions, status of populations, and the condition of salmon habitats.
2. A precautionary approach is applied to the regulation of activities that affect essential salmon habitat.
3. A precautionary approach, based upon an assessment of risk and uncertainty, is applied to the regulation and control of harvest and other human-induced sources of salmon mortality.
4. Conservation and management decisions for fisheries take into account the best available information on biological, environmental, economic, social, and resource use factors.
5. The best available scientific information on the status of populations and the condition of their habitats is routinely updated and peer reviewed.
6. Proposals for development or expansion of salmon fisheries effectively document resource assessments and other information needed to assure sustainable management.