

**Testimony of Deputy Commissioner David Bedford,**  
**Alaska Department of Fish and Game**  
**Before the Senate Committee on Commerce, Science and Transportation**  
**Subcommittee on National Ocean Policy Study**  
**June 8, 2006**

Good morning Mr. Chairman and Members of the Committee. For the record, my name is David Bedford. I serve as Deputy Commissioner of the Alaska Department of Fish and Game focusing on fishery issues. I also serve as the Commissioner for the State of Alaska on the Pacific Salmon Commission, the body responsible for developing conservation and harvest sharing agreements for Pacific salmon under a treaty between the United States and Canada. I am appearing on behalf of Fish and Game Commissioner McKie Campbell. He appreciates your invitation but is participating in a meeting of the North Pacific Fisheries Management Council, on which he serves as a voting member;

The committee has asked that I focus my testimony on Alaska's effective fishery management and conservation of its marine fishery resources. Alaska developed sustained yield management of its fishery resources as a matter of necessity. Alaska's people depend on our fisheries for their livelihood, recreation and as a source of nutrition. Alaskans take advantage of our fishery resources in subsistence, commercial, sport and personal use fisheries. Over half of the total harvest of fish in the United States is taken from the waters off Alaska. Our fisheries support half of the jobs in Alaska fully or in part. With a total economic output of more than 4.6 billion dollars per year, Alaska's seafood industry is one its largest private sector employers, and is the largest employer in a number of fishery-dependent coastal communities.

Given the interests of Alaska and other states in marine resources and fisheries it is vital that any effort to develop off shore aquaculture coordinate with and utilize the expertise of state management programs.

**Alaska Fisheries Management:**

Alaskan fishery management is grounded on obligations set in the state constitution requiring management of fish and wildlife to provide for sustained yield and reserving fish and wildlife for the common use of the people. Thus, the constitution sets the standard for conservation of the resource with the objective of allowing for human use of that resource in perpetuity. We provide a healthy resource for fishing families while ensuring environmental protections. Alaska has developed a number of strategies employed in resource management which enable the state to achieve these ends:

- *The resource comes first.* To assure long-term use and sustained yield, management must begin by setting conservation objectives and controlling harvest to ensure that these objectives are met. Unique amongst state constitutions, Alaska's actually requires sustainable management of its renewable natural resources.

- *Management is based on science.* Fishery resources are studied to determine life history; long-term conservation requirements are determined and harvests are permitted only on the resource that is surplus. Long-term conservation management includes strict policies to preserve genetic integrity, control spread of disease, control transport of fish, and prevent introduction of non-native species.
- *Where possible, management is adaptive and uses current information.* Alaskan managers monitor the fishery and respond with fishery openings and closures or other modifications as new information becomes available. If there is no source of current information, the harvest is set at conservative levels.
- *Harvest allocation and resource management are distinct.* The managers responsible for monitoring the fishery resource and making decisions on when and where the public can harvest must make objective decisions based on science and dictated by resource status. Decisions on allocating the available harvest among various uses should be, and are, made by another body, the Alaska Board of Fisheries.
- *The public has a meaningful role in allocation and management decisions.* Alaskans have a stake in, and responsibility for, the conservation of their resources. The resource allocation process conducted by the Alaska Board of Fisheries is open to the public with the issues debated and decisions made in public session. In addition, the Department of Fish and Game has established 82 local advisory committees comprised of resource users to help develop strategies to implement fishery management plans. Meaningful public involvement in resource management engenders support for resource conservation and helps in the development of harvest plans that increase efficient use.

Offshore aquaculture would be a new industry. To assure effective development of the industry it should be coordinated with existing resource uses and management programs. There are a number of the lessons learned by Alaska that would be helpful to a nascent aquaculture industry.

- To assure long-term conservation of marine resources, management should be local, not an exercise by a distant national regulatory agency.
- Development should be based on sound science which can specify the impact of proposed development on the local environment, resources, and human communities.
- Decision making that provides for the economic well-being of the industry should be separated from the scientific evaluation of the impact of any development.
- The public should be involved in the regulatory process. Where people have a meaningful role agencies will be motivated to manage effectively.

### **The Effects of Fish Farming**

Alaska has some experience with marine finfish aquaculture both from the introduction of an invasive species into Alaskan waters with the escape of Atlantic salmon from marine aquaculture facilities in British Columbia and from the effect on world salmon markets caused by the growth of the salmon farming industry. These experiences lead us to sound a cautionary note regarding the development of offshore aquaculture in the United States.

Finfish farming is illegal in Alaska, and has been since statehood. Fish farms, whether in Alaskan waters, in the Exclusive Economic Zone or in Canada, pose a potential threat to the health of Alaska's fisheries, our economy and our way of life.

Fish farms in British Columbia and the Pacific Northwest cultivate Atlantic salmon, a species not native to the North Pacific. For a variety of reasons, some of these fish escape the farms and mingle with wild salmon populations. Despite the efforts of fish farmers, there is no technology that can prevent these escapes. Since 1994, Atlantic salmon have been found in Alaska's waters, including freshwater systems such as the Copper and Situk rivers.

Farmed Atlantic salmon, when released into Alaska's fresh and marine waters, are an invasive species. These invasions raise serious ecological and economic concerns. The Atlantic salmon can compete with our abundant salmon stocks and threaten them with disease.

We are also concerned about ensuring the genetic diversity and viability of our wild salmon stocks. In hatchery operations and in all management decisions, we have strict guidelines:

- Live salmonids, including gametes, will not be imported from sources outside the state;
- Stocks will not be transported between major geographic areas;
- Stocks cannot be introduced to sites where significant negative interaction or impact on wild stocks will occur; and
- Genetic diversity is stressed with a single wild donor stock contributing to more than three hatchery stocks.

Invasive species can introduce new disease organisms, including pathogens that are new to Alaska, and might be resistant to antibiotics. They can promote the spread of existing pathogens, such as sea lice. We also have concerns that new species could be cultured, with the potential for introducing new pathogens.

The growth and development of the global salmon industry caused a severe decline in the value of Alaska salmon over the last fifteen years. The value of the Alaskan salmon harvest averaged \$500 million at first point of sale from 1990 – 1995, but fell below \$200 million in 2001 and 2002. Increased production of farmed salmon was the primary reason for the collapse.

Although farmed salmon are treated with heavy doses of antibiotics and artificial coloring agents, farmed salmon raised in Chile compete directly in market places around the world with wild Alaska salmon. Farmed salmon have provided a cheaper alternative to wild Alaska salmon, and as a result, has depressed salmon prices around the globe. This is not surprising given the low cost of labor and minimal environmental standards for the Chilean salmon farming industry.

In the face of off shore competition, Alaskan fishermen and the State of Alaska have been working diligently to promote the benefits of eating wild Alaskan salmon, focusing on industry restructuring to improve product quality, and new product development. Our promotional efforts are yielding impressive results.

We pride ourselves on the high quality of our wild seafood, and Governor Frank Murkowski has been leading a concerted effort in recent years to establish “Wild Alaska Salmon” as a successful brand. This is a key component of the state’s efforts to counter the painful effect that fish farming elsewhere in the world has had on the domestic salmon production in the last fifteen years.

Should offshore aquaculture develop there are concerns that it could be less stringently regulated Alaska standards would call for. It has the potential to detrimentally impact Alaska wild stocks and their markets, and may undermine the state regulatory program if state input is not included.

### **Recommendations:**

Therefore, Alaska urges that any offshore aquaculture legislation include several components:

- **Governors and state management agencies should determine** what types of aquaculture activities, if any, occur in the waters off their states' coastlines.
- **A five-year moratorium on new aquaculture operations** to ensure that adequate scientific and socio-economic analyses of the impacts of aquaculture can be done: Some structured studies have been conducted on the scientific and socio-economic impacts of aquaculture, in addition to the multitudes of anecdotal evidence that have been compiled in recent years. The State believes that a comprehensive study should be undertaken to understand how aquaculture would affect the ecology of American waters as well as the socio-economic impacts it would have on coastal communities. A moratorium on new operations should be enforced for at least five years while this study is being conducted and results evaluated.
- **Regional Fishery Management Councils must have jurisdiction over aquaculture operations:** Success in managing the federal fisheries off of Alaska’s coasts can, in large measure, be attributed to the strong role of the North Pacific Fisheries Management Council (NPFMC). The NPFMC, like its counterparts around the country, has developed expertise and the necessary

judgment for dealing with issues of biological, economic, and social importance to the region's fisheries. The current draft of aquaculture legislation leaves it to the Secretary to determine whether aquaculture will interfere with other fisheries and only recommends consultation between the Secretary and relevant federal agencies before permitting an aquaculture facility. The amendment proposed by Senator Inouye requiring consultation between the Secretary and the regional fishery management councils on environmental regulations is a good beginning; however, the State would prefer more council oversight and decision-making over all parts of offshore aquaculture management.

- **Statutory prohibitions of aquaculture for certain species:** Prohibitions on farming of certain species, particularly salmon, halibut, and black cod, would prevent the tainting of the wild Alaska branding image and impacts to the consequent recent increases in commodity value. Moreover, the introduction of mass-produced, farmed fish has already severely impacted economies of rural Alaska communities. Species-specific prohibitions on aquaculture would allow these communities to survive and maintain traditional lifestyles.
- **As the federal government works to develop aquaculture as a competing interest to wild fisheries, it should develop programs to maintain the economic vitality of wild capture fisheries.** Fish farming around the world has caused a significant downfall in the value of Alaska's salmon. To mitigate impacts on the other Alaska fisheries, worth an estimated \$700 to \$800 million harvest value, programs should be set in place that focus on market and product diversification for wild capture fisheries, with an emphasis on highlighting the important characteristics of wild seafood. These types of programs may provide improvement to harvesting and processing infrastructure, quality improvement investments, value-added equipment, and marketing funds. Programs could also be put in place that limit the growth of farm fish production to a scale that does not flood the market with product in a manner that leads to excessive downward prices in both the aquaculture and wild capture fishery industries.