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TABLE 2
World Farmed Salmon Production
(millions of pounds)

Year	Norway	Scotland	Chile	Canada	U.S.	Japan	Other	Total
1980	9.1	1.3	0.0	0.4	0.9	4.0	0.0	15.7
1981	18.5	2.9	0.0	0.5	1.9	2.5	0.0	26.3
1982	22.6	4.7	0.4	0.9	1.5	4.7	0.0	34.8
1983	37.4	5.6	0.2	0.7	0.8	3.9	0.0	48.6
1984	49.0	8.6	0.2	0.7	2.7	11.0	1.8	74.0
1985	63.0	15.0	1.1	0.9	4.0	14.1	3.9	102.0
1986	100.5	22.7	2.5	2.2	3.0	17.6	7.5	156.0
1987	123.6	27.9	2.6	6.0	5.5	26.8	17.6	210.0
1988	184.0	39.5	6.8	20.0	8.1	36.0	24.6	319.0
1989	252.7	68.2	18.0	38.8	12.3	40.9	48.1	479.0
1990	330.0	77.0	41.8	51.2	16.9	57.2	46.9	621.0

Note: The numbers may not always appear exactly as in the source document. These differences are due to rounding and discrepancies between original sources.

Source: Salmon 2000, Alaska Seafood Marketing Institute, March 1991. Body of the table is the bottom table on page 14, and the totals are from the top table on page 14 with some adjustments to avoid having negative numbers in the Other column.

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Fisheries

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Issues

CHAPTER IV. FISHERIES MANAGEMENT ISSUES

The success of the state's enhancement program has made managing Alaska's salmon fisheries more complicated. Much of this research project was initiated by a request from the Board of Fisheries to provide clearer legal and policy direction on the issues of

- managing fisheries for a wild stock priority;
- providing sufficient hatchery returns for broodstock; and
- providing cost recovery fisheries for hatchery operators.

These three issues encompass a number of legal questions and are addressed in Chapter V, Legal Issues. In this chapter a variety of other management issues are discussed.

MIXED-STOCK FISHERIES

A fundamental issue facing fisheries managers is how to control fishing effort in mixed-stock fisheries composed of both hatchery and wild stocks. The predominant management concern is that the weakest stocks will be overfished. In cases in which hatchery productivity is significantly greater than natural stock productivity, wild stocks face the risk of being depleted. In cases where hatchery stocks are smaller, these stocks run the risk of being lost among the wild stocks. Smaller stocks are more likely to be in danger of depletion in mixed-stock fisheries because there is a tendency to optimally harvest the larger stocks before quality declines in terminal fisheries.

The Department of Fish and Game has the constitutional responsibility to conserve and manage wild stocks of salmon for sustained yield. In a wild stock fishery, the conservation responsibility entails maintaining minimum spawning escapement levels for wild stocks. However, when hatcheries are established in wild stock salmon producing areas, the department has additional conservation responsibilities:

- maintaining the genetic diversity of wild stocks as stated in the ADF&G genetic policy;
- maintaining fish health and prohibiting the spread of fish disease; and
- providing sufficient returns of fish to the hatchery to provide for broodstock and cost recovery.

Strict regulations govern the selection of broodstock and the transporting and remote release of hatchery produced fry and smolt, requiring a comprehensive genetic monitoring and permitting process (see Biological Issues chapter).

Because salmon runs occur in a short period of time, field managers rely on early test fisheries or initial fishery performance as the indicators of run strength. When runs of hatchery or wild stocks are weak, commercial fishing effort must be reduced or re-directed. *The ability to determine the strength of various stocks requires some capability to distinguish wild fish from hatchery fish, which increases management costs.*

With large scale hatchery enhancement, ADF&G's Division of Commercial Fisheries is concerned that the additional costs of managing mixed stock commercial fisheries composed of wild and hatchery stocks are not always

This is a major issue throughout the entire project. There are no hatchery fish present.

accounted for in the planning and operation of hatchery facilities, and fisheries managers are often not given adequate funds to properly manage what can become a very complicated fishery.

It should be noted that the problems posed by mixed-stock fisheries are not new. Almost all Alaska salmon fisheries, composed entirely of wild stocks, had some degree of mixed stocks prior to the development of hatcheries. Prince William Sound, however, is the focus of the Division of Commercial Fisheries' current concern, largely because of the scale of the hatchery operations in the Sound, with hatchery stocks now responsible for over 80 percent of the total pink salmon production.

Managing the fisheries in Prince William Sound has also been made significantly more difficult as a result of the 1989 *Exxon Valdez* oil spill. Certain pink salmon stocks were greatly impacted by the oil spill and require intensive stock-specific management measures in order to protect and rebuild these populations. Additionally, most of the information gathered as a result of the recent influx of oil spill damage assessment funds is still confidential, and not available to the general public.

QUALITY

State law requires that fish returning to hatcheries and sold for public consumption be of comparable quality to fish harvested by commercial fishermen in the area. Prince William Sound is the major focal point for the issue of managing hatchery and wild stocks to optimize quality and marketability.

During the planning process for the Prince William Sound hatcheries, the Basic Management Plans that addressed the harvest of hatchery fish were developed cooperatively by the department and hatchery operators. *Returning adults were to be primarily harvested in terminal areas, thereby minimizing harvest conflicts with wild stocks.* Additional harvest management costs were not considered under this strategy. Initially, fish quality was not an issue as terminally caught fish were of high quality. However, as the program grew, processing capacities became fully utilized, sometimes forcing delays in harvesting terminal fish. Such delays resulted in poorer quality fish, and thus, the demand to harvest fish farther away from terminal areas. The 1989 oil spill also contributed to the concern over quality. The spill delayed harvest of the large 1989 pink salmon run, which resulted in an extremely poor quality pack and a public perception of oil contamination of the fish harvested.

Early in 1991, the Prince William Sound Aquaculture Corporation (PWSAC) expressed concern about the processing capacity in the Sound given the large forecasted pink return. PWSAC officials began exploring the possibility of bringing foreign processors into the Sound, but their request was denied when state officials and domestic processors insisted that existing processing capacity would be sufficient. A delay in the return of the majority of the run in 1991, large pink salmon runs statewide and overall low prices created a major problem for fishermen, hatchery operators, and fishery managers. To maximize the quality of the harvest, processors and fishermen asked to harvest returning adult pink salmon at the entrance areas to Prince William Sound. Fishery managers were reluctant to do so since at these locations, the wild stocks damaged by the *Exxon Valdez* spill are mixed with non-impacted wild stocks as well as the large returns of hatchery fish. ADF&G feared that harvesting in mixed-stock areas, while maximizing quality, would also jeopardize wild stocks through the risk of being overharvested. As a result, fishing was delayed, and

when it was finally opened, the season turned into a disaster with insufficient processing capacity and large quantities of salmon either being destroyed, or processed and given away.

During discussions at recent meetings of Governor Hickel's Salmon Strategy Task Force (see Marketing chapter), it became apparent that there is no definitive information on how close to their spawning areas salmon can be harvested without sacrificing quality. Some people believe that the concern for quality of terminal-area salmon is created by processors as part of a price-setting strategy. ADF&G has suggested a research project be funded to analyze salmon quality at various distances from their spawning areas in an effort to determine how best to manage fishing effort to produce a top-quality and marketable product.

TAGGING NEEDS

Since hatchery-produced fish often complicate fisheries management, a way to simplify management is to determine the mix of hatchery and wild stocks in a mixed-stock fishery. For most mixed-stock fisheries composed of hatchery fish, an adequate program of tagging, recovery and analysis is required.

The tagging method most commonly used now is the coded-wire tag (CWT). The CWT is typically a 1.0 mm long by 0.25 mm diameter stainless steel wire which has been etched with notches that represent a code of information. The CWT can be injected into the nasal cartilage in salmon smolts. Tags from returning fish are recovered by fishermen and field biologists and sent to a lab in Juneau for analysis. The Juneau lab has extremely poor working conditions, and ADF&G for years has attempted to improve lab conditions and expand its capabilities. In spite of these conditions however, the lab produces quality data. *ADF&G is seeking funds to build a new*

Scale analysis is another technique that has been used for years to reliably identify the country of origin for salmon in the north Pacific. However, the use of scale analysis has so far not been able to provide the detailed level of information necessary for management of specific fisheries.

Otolith marking is seen as the most viable mass marking technique on the horizon. Otolith bone development provides a daily record of the internal and external forces affecting fish growth beginning at the eyed-egg stage. This growth occurs in rings somewhat similar to the circuli of a fish scale or the rings of a tree. Growth of the otolith is in alternating rings of high and low concentrations of protein calcium carbonate. The optical density of these rings is easily manipulated to make an obvious visible change in structure. *One way to do this is by thermal marking - causing a rapid drop or elevation in water temperature.* The benefit of otolith marking is that virtually *all* hatchery fish can be marked at the same time.

ADF&G
FRED Division is also actively pursuing genetic stock identification (GSI) research and applications using both protein electrophoresis and deoxyribonucleic acid (DNA) analysis. This approach can be used for a variety of purposes, including measuring the contributions of unmarked but genetically identifiable hatchery fish to commercial fisheries. Biologists are already doing extensive work using this technique on salmon from the Yukon River. *A new GSI lab is being built with*

ADF&G is seeking funds in its FY94 budget for \$1.1m to build a new tag lab.
the \$500,000 in funds appropriated by the Legislature in FY 93.

Although otolith marking and GSI hold promise for the future, coded-wire tags will probably always have a place in the state's marking program. The CWT Lab currently supplies information for hatchery and natural stock evaluation, as well as for evaluation of U.S./Canada salmon interceptions. The CWT Lab is a vital link in the in-season management of fisheries in Southeast and Prince William Sound. Using coded-wire tag data, fishery managers are able to take in-season advantage of the hatchery add-on clause of the U.S./Canada Pacific Salmon Treaty. In 1991 the CWT tag lab processed over 76,000 heads, using a large number of seasonal staff because of the short salmon season and the need for in-season hatchery contribution estimates.

The extent of any particular tagging program is determined by funding. The general assumption is that the people who tag the fish pay for the tagging. In the case of hatchery operators, that usually means the state or the PNP operator. However, *the greater expense lies with the recovery and analysis of tags by the state, and the issue of who pays for that portion has never been resolved.* Commercial fisheries managers would like to see more tagging to enable increased management precision. The Board of Fisheries would like to see additional tagging in order to provide information for allocation disputes. Hatchery operators have been reluctant to pay for the recovery and analysis program. This issue has been debated for the past decade and is still unresolved.

At the time of the Exxon Valdez oil spill, the hatchery/wild stock assessment program in Prince William Sound was not fully developed nor was the funding for such a program in the Commercial Fisheries Division's base budget. As a result, the program was unable to assess the oil spill damage or provide the stock-specific information needed to protect and restore damaged pink salmon stocks. Fortunately, Natural Resource Damage Assessment funds provided ADF&G with sufficient resources to assess the population level response of Prince William Sound pink salmon to the oil spill. However, once oil spill funds expire, additional state money will be needed if a stock-specific harvest management program is to be implemented and maintained.

FRED Division is informing hatchery operators that new increments of hatchery production will be permitted with a requirement that the operator pay for tagging and analysis. Whether or not to require that of existing production is being debated. Some people, including some members of the Board of Fisheries, advocate for a requirement that all hatchery production be categorically tagged and analyzed. However, existing operations have permits that do not require tagging. These operations were planned, permitted and funded without accounting for tagging their costs. It is likely that imposing a tagging requirement on permitted facilities would be subject to legal challenge.

Another issue, however, is whether an all encompassing tagging requirement is necessary. In some cases, a multi-year tagging study to show migration patterns and run timing would be sufficient. In other cases, where tagging is intended for in-season management, a large tagging program would need to be maintained. Not all hatchery production results in complicated, mixed-stock fisheries that would necessitate extensive tagging, and would even be used. Although CWT data has been supplied to Prince William Sound fisheries managers on a daily and weekly basis for the past two years, it has yet to be used for in-season management.

OPTIONS FOR POSSIBLE CONSIDERATION:

- Development of a state policy on managing mixed-stock fisheries composed of hatchery and wild stocks.
- Requiring hatchery production to have tagging, recovery and analysis programs. This could range from a blanket requirement for all production to site-specific requirements.
- Development of a policy regarding funding for tagging, recovery, processing and analysis.
- Funding a study to analyze salmon quality at various distances from terminal streams to determine the effect of fishery management effort on product quality and marketability.
- Direction to the Board of Fisheries on how to factor managing for quality into fisheries management plans.
- Funding research and development of new tagging and marking techniques suitable for mass marking.
- Clarifying the roles and uses of tagging--for biological information, allocation, or management purposes.
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ADF&G is seeking funds in its FY 94 capital budget for \$1.1 million to build a new tag lab. ADF&G is also actively pursuing genetic stock identification (GSI) research and applications using both protein electrophoresis and deoxyribonucleic acid (DNA) analysis. This approach can be used for a variety of purposes, including measuring the contributions of unmarked but

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Legal

Issues

CHAPTER V. LEGAL ISSUES RAISED BY BOARD OF FISHERIES

In a May 6, 1991 letter to Senate President Richard Eliason, Fisheries Board Chairman Michael R. Martin stated the following:

In managing fisheries that involve hatchery raised salmon, the Board of Fisheries has encountered problems due to ambiguities in the current Alaska statutes. These problems commonly arise when the management of hatchery stocks conflicts with either the health of wild stocks or with the opportunity of fishermen to harvest wild stocks. Essentially, the statutes are not clear on the status of wild stock management.

State statutes are also not clear about the state's duty to provide fish for hatchery broodstock and cost recovery, and about hatcheries' obligations to contribute to the common property fisheries. We perceive that the development of state policy toward hatcheries may create a conflict of interest. On the one hand, the state manages fisheries as a common property resource for the benefit of all user groups. On the other hand, the state loans money to hatcheries with the expectation that the hatcheries will receive enough fish to be able to repay these loans.

While Chairman Martin went on to note other concerns,¹ *an overriding problem for the board appeared to be the perceived statutory ambiguities which lead to difficulty in resolving conflict between wild stock protection and broodstock/cost recovery.*

ALASKA STATUTES AND ADF&G REGULATIONS

The board was created "for purposes of the conservation and development of the fishery resources of the state . . ." (AS 16.05.221 (a)). In order to carry out that charge, the board may "adopt regulations it considers advisable in accordance with the Administrative Procedures Act (AS 44.62)." (AS 16.05.251(a)).²

¹/These included potential changes to the statutes relating to regional salmon plans (AS 16.10.375), regional associations (AS 16.10.380), and definition of various words and phrases used in Title 16.

²/AS 16.05.251 (b) lists the purposes for which the board may exercise this power, including

- . . . (2) establishing open and closed seasons and areas for the taking of fish;
- (3) setting quotas, bag limits, harvest levels, and sex and size limitations on the taking of fish;
- (4) establishing the means and methods employed in the pursuit, capture and transport of fish; . . .
- (6) classifying as commercial fish, sport fish, personal use fish, subsistence fish, or predators or other categories essential for regulatory purposes;

The board has adopted a number of regulations relating to private nonprofit hatcheries. Codified at 05 AAC 40.005 - 05 AAC 40.900, they include: delegating to the commissioner the authority to specify gear type and fishing periods for hatchery cost recovery; requiring hatchery permit holders who harvest salmon to comply with fish purchaser reporting requirements; allowing hatchery permit holders who harvest salmon for broodstock exemptions from the salmon "waste" statute and the regulations concerning "closed waters" and vessel area registration; designating special harvest areas; procedures for permit application, application review, public hearings, review and determination, and reconsideration; establishing regional comprehensive planning teams and procedures to be followed by them; prohibiting permit transfers; requiring hatchery management plans, inspections, and performance reviews; establishing criteria for the sale of surplus salmon eggs.

A number of these regulations contain references to wild stock protection.³ However, any regulation may be successfully challenged in court if it falls outside the statutory authority granted to the state agency that adopted it,⁴ or if it conflicts with other statutes,⁵ or the constitution.

The statutes governing the private nonprofit hatchery system are AS 16.10.375 - AS 16.10.470. They provide for: regional salmon plans; regional associations; criteria for the issuance of hatchery permits; public hearings prior to permit issuance; permit conditions; criteria for permit alteration, suspension or revocation; board regulation authority; department assistance and cooperation for permit applicants and holders; salmon egg sources; salmon egg sales; hatchery inspection; and an annual report to the department by permittees.

There are only two direct references in statute to the protection of wild stocks from harm due to hatchery operations. The first, AS 16.10.400(g) ("Permits for salmon hatcheries"), provides:

During the development of a comprehensive plan for a region, no permit may be issued for a hatchery unless the commissioner determines that such an action would

(7) watershed and habitat improvement, and management, conservation, protection, use, disposal, propagation and stocking of fish;

(8) investigating and determine the extent and effect of disease, predation, and competition among fish in the state, exercising control measures considered necessary to the resources of the state;

(9) prohibiting and regulating live capture, possession, transport, or release of native or exotic fish or their eggs; . . .

(12) regulating commercial, sport, subsistence, and personal use fishing as needed for the conservation, development, and utilization of fisheries...

AS 16.05.251(b).

³/See e.g., 5 AAC 40.005 (c) (segregation of hatchery fish from natural runs), 5 AAC 40.170 (2) (regional planning team review of hatchery permit application to determine extent of wild stock protection),

⁴/See, Beran v. State, 705 P.2d 1280 (Alaska App. 1985)

⁵/Id.

result in substantial public benefits and would not jeopardize natural stocks.
(emphasis added)

The second, AS 16.10.420(10) ("Conditions of a permit"), states:

The department shall require, in a permit issued to hatchery operator, that . . . a hatchery be located in an area where a reasonable segregation from natural stocks occurs, but, when feasible, in an area where returning hatchery fish will pass through traditional salmon fisheries.

The board is concerned that these statutes require the department to make a judgment concerning the potential harm to wild stocks only prior to the issuance of a hatchery permit; the inference being that once a judgment is made and a hatchery permit is issued, there is no statutory "protection" for wild stocks that are jeopardized by hatchery-related dangers arising after a permit is issued.⁶ This raises the possibility that a management regime which protects wild stocks to the detriment of hatchery operations would conflict with existing statutes that indicate the state should manage hatchery fish for broodstock and cost recovery.

An additional concern, not raised in Chairman Martin's letter, is whether the state constitution requires that hatchery fish be managed for broodstock and cost recovery.

RECENT LEGAL OPINIONS

Hatchery Fish and "Sustained Yield"

Article VIII, section 4, of the Alaska Constitution states:

Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial users.

The Alaska Supreme Court has stated that wild salmon, while they are in the natural waters of the State, "belong" to the State. Metlakatla Indian Community, Annette Island Reserve v. Egan, 362 P.2d 901, 914-915 (Alaska 1961). Because wild salmon belonged to the State while in our waters, they are subject to Article VIII, Section 4, of the Constitution, and thus must be managed on the sustained yield principle. Whether hatchery-reared salmon share the same status is less clear, and has been the subject of disagreement among attorneys who have recently written on that issue. The issue is important in the context of Chairman Martin's concerns because if hatchery fish must be managed on the sustained yield principle, that implies the Board of Fish *must* manage fisheries to provide hatcheries with broodstock, and possibly cost-recovery fish, even if the board does not believe that to be in state's best interest.

In an August 1990 letter to Alaska Department of Fish & Game Commissioner Don Collinsworth, Assistant Attorney General Steve White concluded that the Department of Fish & Game and the Board of Fish had the legal authority, and were in fact directed by law, to manage fisheries so that salmon hatcheries receive broodstock and cost recovery fish for their operations. He based these conclusions in part on the assumption that the

⁶/See Martin letter, p. 2.

law, to manage fisheries so that salmon hatcheries receive broodstock and cost recovery fish for their operations. He based these conclusions in part on the assumption that the above quoted section of the Alaska Constitution mandates that hatchery fish be managed in the same manner as wild stocks. Two other attorneys, George Utermohle of the Legislative Affairs Agency's Legal Services Division, and Juneau attorney Michael Stanley, later called that assumption into question. Sometime after that, Anchorage attorney A. William Saupe analyzed the three prior opinions and concluded that Mr. White's initial assumption was correct.⁷ What follows is a summary, extracted from the four opinions, of the arguments on both sides of the question of whether sustained yield management requirement of art. VIII, sec. 4 of the Alaska Constitution applies to hatchery-raised fish.

First is the issue of "ownership." On its face, sec. 4 of art. VIII applies only to resources "belonging" to the state. Are hatchery-raised fish in that category? Stanley and Utermohle argue that they may not be.

Stanley points out that the framers of the Alaska Constitution did make distinctions between resources "occurring in their natural state" and those that are "subject to intensive culture," at least for the purpose of exempting the latter from the requirements of art. VIII, sec. 3 (the "common use clause").⁸ Because humans play a substantial role in the growth and development of hatchery fish, Stanley reasons that they may not be the "natural resources" the drafters of article VIII had in mind.

George Utermohle points to the fact that the legislature, when it created the private nonprofit hatchery system, used the following language (AS 16.10.440(a)) to provide for the common use of hatchery fish:

Fish released into the natural waters of the state by a hatchery operated under AS 16.10.400 - 16.10.470 are available to the people for common use and are subject to regulation under applicable law in the same way as fish occurring in their natural state until they return to the specific location designated by the department for harvest by the hatchery operator.

Utermohle finds the above language significant in a number of respects: first, while the statute provides for the common use of hatchery fish, it is silent as to state ownership and makes no mention of sustained yield; second, the fact that hatchery fish are to be treated "in the same way" as fish occurring in their natural state "until they return to the specific location. . ." suggests that the legislature did not consider them a common property resource belonging to state, but merely felt they should be treated as if they were until they returned to the hatchery for harvest; finally, Utermohle suggests that the provision for harvest by the hatchery operator indicates "some lingering private property interest in the hatchery fish by the hatchery," another indicator that these fish may not "belong" to the state for purposes of the sustained yield section of art. VIII.

In his lengthy memorandum to PWSAC President John McMullen, attorney A. William Saupe disagreed with the arguments made by Stanley and Utermohle that the sustained yield clause may not apply to hatchery fish.

⁷/Copies of the four legal opinions are attached to this memorandum.

⁸/Art. VIII, sec. 3 provides: "Common Use. Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for their common use."

Initially, Saupe relies on legislative history to refute the "ownership" argument. He quotes this passage from a Legislative Research Agency memorandum by Linda J. Snow (July 31, 1991) to Senator Eliason:

Consensus is that the legislature had always intended that the fish from PNP hatcheries belong to the common property fishery until such time as they return to the hatchery, and then they belong to the hatchery for broodstock and cost recovery. Testimony by Senator Dick Eliason at a 1975 Senate Resources Committee hearing on SB 180 indicates that the initial concept of a private hatchery system considered profit-making corporate ownership. However, a profit-making corporation might advance a claim to exclusive ownership of everything it produced. Thus, it was felt that private, nonprofit ownership of hatcheries would be more consistent with the concept of publicly-owned hatchery fish. This opinion is echoed by former Representative Terry Gardiner.

At a March 7, 1977 House Resources Committee hearing, Jack Milnes, Executive Director of Souther Southeast Regional Aquaculture Association testified: "I wish to recognize the fact that these are common property fish, that they belong to the state of Alaska and to the people of Alaska and therefore they should be protected by the representatives of the people of the state of Alaska." At a 1979 Senate Resources Committee hearing on HB 48, Don Clocksin, attorney with Alaska Legal Services, discussed the question of ownership of hatchery fish. In his testimony, he asked "When are fish no longer common property fish?" He felt that constitutionally, they were to be considered common property fish at all times. Consequently, it appears there was never any question that hatchery fish were common property of the people of the state while in Alaska waters, and they may or may not be the property of the PNP hatchery operator at the hatchery, but that they be allowed to harvest a sufficient number for broodstock and cost recovery.

(Emphasis his).

Saupe also relies on certain portions of the commentary of the Committee on Resources of the Alaska Constitutional Convention. The first concerns the common use clause:

Game fish, wildlife, fisheries, and water are recognized as belonging to the state so long as in a natural state. These resources are subject to a private right only when they have been acquired or utilized as provided by law. (emphasis his).

Saupe asserts that this passage indicates the framers' belief that fish reserved for common use "belonged" to the state. Because hatchery fish are reserved for common use by AS 16.10.440 (a), Saupe reasons that they must be owned by the state and be subject to the sustained yield principle.

The second commentary is the sustained yield clause itself:

Sustained yield is recognized as a principle applicable to the administration of plant and animal life subject to the immediate authority of the state. (emphasis his).

Because hatchery fish are subject to the authority of the state by AS 16.10.440(a), Saupe reasons, they are subject to the sustained yield clause.

This conclusion, he asserts, "also comports with common sense" because

[i]f they did not belong to the State, it could not reserve hatchery fish for use by others without paying for them. Moreover, if the mere expectation that a hatchery will later be allowed to harvest some unidentified fraction of the returning fish constitutes an ownership interest in all of its fish, then every other limited entry permit holder could be said to have the same "lingering property interest," leading to the false conclusion that none of the fish in Alaska's waters ever belong to the State or are subject to the sustained yield principle of management.

A more reasonable interpretation of these related statutory and constitutional provisions is that, once released, hatchery fish become like wild stocks in every legal respect. They belong to the state, are reserved to the people for common use and must be managed for sustained yield. . .

Saupe, pp. 10-11.

However, even if the state "owns" the hatchery fish, it does not automatically follow that the state must manage those fish on a sustained yield basis. As George Utermohle notes, the drafters of our constitution chose to make sustained yield requirement subject to "beneficial uses". The commentary on Article VIII, Natural Resources, at page 98, states:

This principle [sustained yield] is qualified in terms of "the highest beneficial public use" in recognition of its not being in the public interest to preserve certain parasitic or predatory organisms destructive of more beneficial plant and animal life.

And, during the debate on the sustained yield clause, Delegate Riley explained:

. . . we have in mind no narrow definition of "sustained yield," as is used for example, in forestry, but the broad premise that insofar as possible a principle of sustained yield shall be used with respect to administration of those resources which are susceptible of sustained yield, and where it is desirable. For example, predators would not be maintained on a sustained yield basis. (Alaska Constitutional Convention Proceedings, p. 2451.)

Utermohle argues that:

The delegates understood that the concept of preferences among beneficial uses would allow the state to make reasoned decisions to prefer certain renewable resources over other renewable resources to achieve a more beneficial public purpose. The authority to establish preference among beneficial uses may permit the state to harvest hatchery fish without providing for a sustained yield from the hatchery, provided that those who have vested rights in hatchery fish are compensated for those rights that are taken by the state.

The ability of the state to establish preferences among beneficial users is reflected in AS 16.10.430(b) which allows the commissioner of Fish and Game to terminate the operation of a hatchery in the best interests of the public, if the adverse effects of the operation of the hatchery are irreversible and cannot be mitigated. (Utermohle memo, pp. 3-4.)

Saupe, on the other hand, argues that AS 16.10.430(b) is not merely a reflection of the state's ability to establish preferences among beneficial uses but is in fact the only basis upon which a hatchery permit may be terminated. He also argues that the contribution made by PWSAC to the growth of the commercial fishing industry in Alaska demonstrates its beneficial use to the state, and that "short of the extreme situation envisioned by AS

14.10.430(b) it is hard to conceive how denial of a reasonable hatchery harvest in favor of other beneficial uses could achieve a greater public purpose." Saupe memo, p. 14.

It is unfortunate that our supreme court has never defined "sustained yield," much less taken up the question whether hatchery raised fish must be managed on that principle. Suffice to say that knowledgeable people disagree on this issue and it would probably take a constitutional amendment to guarantee an unassailable legal conclusion one way or the other.

No one would seriously argue that the preservation of wild stocks is not a "beneficial use" of the fishery resource, and there apparently is a concern that managing hatchery fish for broodstock and cost recovery may, in some instances, be harmful to that beneficial use. The difficulty with such a conclusion is that it probably raises more questions than it answers. How significant must the harm be? Can it be clearly substantiated? Is not the continued health and development of hatchery raised fish also a "beneficial use" of the resource?

As the above arguments, conclusions and questions demonstrate, there is no clear answer to the question whether there is a constitutional mandate that hatchery fish be managed on a sustained yield basis. That is not to say, however, that the legislature should not exercise its constitutional law making authority in this area. As Chairman Martin's letter makes clear, the Board of Fisheries is struggling with statutory ambiguities, and the board is obviously looking for legislative action.

Allocating for Broodstock and Cost Recovery

As noted earlier, assistant attorney general Steve White concluded that the board and the department are authorized and directed by law to allocate fishery resources for broodstock. He also concluded that the board has the authority, but is not required, to manage for cost recovery. White memo., p. 7. Going a step further, Mr. Saupe reached the conclusion that the board and the department must manage for both broodstock and cost recovery. Saupe memo., p. 16. In reaching their conclusions, White and Saupe both rely on the notion that hatchery fish must be managed on the principle of sustained yield, discussed above, and on the a number of statutes and court decisions which point to legislative approval for such activity.

As noted, the board is to provide for "the conservation and development of of the fishery resource of the state." AS 16.05.221(a). The Alaska Supreme Court, in Kenai Peninsula Salmon Producers Ass'n v. State, 628 P. 2d 897, 903 (Alaska 1981), defined "conservation" as "controlled utilization of a resource to prevent its exploitation, destruction or neglect." Steven White argues that, since managing for broodstock helps to perpetuate the fishery resource (i.e., prevents its "exploitation, destruction or neglect"), managing for broodstock is analogous to managing for escapement of wild fish. Therefore, the board has the power to adopt regulations that will provide for hatchery broodstock. White memo., p. 2.

Saupe argues that, in addition to the constitutional mandates, managing for broodstock is required by AS 16.10.443, which states:

Department assistance and cooperation. (a) Before and after permit issuance under AS 16.10.440 - 16.10.470, the department shall make every effort, within the limits of time and resources, to advise and assist applicants or permit holders, as appropriate, in the planning, construction, or operation of salmon hatcheries.

Saupe concludes that, because broodstock recovery is essential to hatchery operations, and the department is required to assist in hatchery operations, any regulation or action of the department that denies broodstock recovery would be invalid as inconsistent with the above-quoted statute. Saupe memo., p. 15.

Whether the board has the authority to manage for cost recovery is less clear than it is for broodstock. The board does have the authority to allocate fish to various user groups.⁹ However, private nonprofit hatcheries are not specifically designated in law as a user group. Nevertheless, Steve White has concluded that private nonprofit hatcheries could be considered a "subgroup" of commercial users. Because the Alaska Supreme Court has upheld the board's power to allocate among subgroups (e.g., drift gillnetters and set gillnetters),¹⁰ White concludes that the board could make a valid allocation to hatchery operators as a "subgroup."¹¹

Michael Stanley, on the other hand, argues that the statutory definition of "commercial fishing" leads to a different conclusion. AS 16.05.940(5) states:

the taking, fishing for, or possession of fish, shellfish, or other fishery resources with the intent of disposing of them for profit, or by sale, barter, trade, or in commercial channels . . .

Stanley asserts that hatchery operators do not sell cost recovery fish "for profit." He does acknowledge that cost recovery sales may be "in commercial channels," but argues that a reading of that phrase broad enough to include hatchery operators would also have to include other users, such as salmon derby operators. The inference he makes is that the legislature did not intend hatchery operators to be included in either definition, and therefore hatchery operators cannot be allocated to as a subgroup. Stanley also points to the statutory definition of "commercial fisherman, AS 16.10.940 (5), which states that they are "individuals," meaning natural persons and not corporations.

Saupe, on the other hand, argues that cost recovery is essential to sustain hatchery yields and to promote aquaculture, two requirements of the state constitution.¹² He also points to a number of statutes which he believes evince a legislative mandate for cost recovery. Principal among these is AS 16.10.450 (a), which provides:

⁹/See AS 16.05.251(e).

¹⁰/Meier v. State, 739 P.2d 172, 174 (Alaska 1987)

¹¹/White op., p. 3.

¹²/Along with the sustained yield requirement already discussed, Saupe relies on art. VIII, sec. 15, which states:

No Exclusive Right of Fishery. No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the State. This section does not restrict the power of the state to limit entry into any fishery for the purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the State. (emphasis added).

Sale of salmon and salmon eggs by hatchery. (a) Except as otherwise provided in a contract for the operation of a hatchery under AS 16.10.480, a hatchery operator who sells salmon returning from the natural waters of the state, or sells salmon eggs to another hatchery operating under AS 16.10.400 - 16.10.470, after utilizing the funds for reasonable operating costs, including debt retirement, expanding its facilities, salmon rehabilitation projects, fisheries research, or costs of operating the qualified regional association for the area in which the hatchery is located, shall expend the remaining funds on other fisheries activities of the qualified regional association.

Also cited by Saupe as evidence of the legislature's mandate for cost recovery: AS 16.43.420 (Limited Entry Act provision allowing sale of fish caught under special harvest area entry permit); AS 16.10.430 (b) (allowing a holder of a terminated hatchery permit to harvest salmon during the termination period); AS 16.05.020 (requiring the commissioner of Fish & Game to "improve and extend" the fish resources of the state in the interest of the state's economy and general well-being).

Restricting Hatchery Output

The Saupe memorandum also discusses the authority of the board to restrict individual hatchery output. Based in part on Linda Snow's legislative history memorandum, and in part on a review of the board's authorizing statute, Saupe concluded that there is "little or no basis for regulation of hatchery output by the board." Saupe memo., p. 28. He asserts that AS 16.10.440 (b), which allows the board to amend the terms of a hatchery permit,¹³ speaks only to regulation of harvest, not production. Saupe memo., p. 30.

As to whether the board can set regional production limits, such as by capping the hatchery sockeye output in Prince William Sound to maintain historical levels relative to Bristol Bay sockeye production, Saupe is not as sure. However, he does suggest that the board's authority to regulate propagation and stocking¹⁴ is a "very slender thread from which to hang an unprecedented, statewide regulatory program of production allocations." He also asserts that serious practical and policy problems would arise when the board attempts to allocate between regions of the state.¹⁵

¹³/AS 16.10.440(b) allows the board to amend "the terms of the permit relating to the source and number of salmon eggs, the harvest of fish by hatchery operators, and the specific locations designated by the department for harvest."

¹⁴/AS 16.05.251(7)

¹⁵/Saupe memo., p. 31-32.

CONCLUSIONS

This chapter illustrates some of the ambiguities in Alaska law relating to the authority of the Board of Fisheries to manage hatchery fish and leads to several conclusions:

1. There is no specific statutory mandate directing the board to give wild stocks preferential management treatment relative to hatchery raised fish.
2. The Alaska Constitution may require that hatchery fish be managed to allow for broodstock and cost recovery by the hatcheries, but that requirement may be invalidated by a determination that the sustained yield of hatchery fish is not as "beneficial" a "use" of the fishery resource as that of protecting the health of the wild stocks.
3. Existing statutes appear to allow the board to allocate to hatcheries fish for broodstock, but are less clear as to the authority for cost recovery.
4. Existing statutes are not clear on the board's authority to restrict hatchery production on a local or regional basis.

OPTIONS FOR POSSIBLE CONSIDERATION

- *Placing a wild stock priority into state statutes; or alternatively, making the status of wild and hatchery stocks of equal priority, or leaving the statutes ambiguous.*
- *Clarifying in state statutes whether or not the Board of Fisheries is required to provide for hatchery broodstock or for cost-recovery fisheries.*
- *Clarifying the Board of Fisheries' authority to restrict hatchery production.*

* [UPDATE
In May, 1992 the Alaska Legislature responded to concerns described in this chapter by passing SB 457, establishing a wild fish stock priority.

Attachments
to Chapter II.

LETTER
BD. OF FISHERIES FROM

May 6, 1991

The Honorable Richard Eliason
President
Alaska State Senate
P.O. Box V
Juneau, AK 99811

Dear President Eliason:

This letter is in response to a request by the Senate Resources Committee and the Special Senate Fisheries Committee when Board of Fisheries members appeared before the committee in March. We appreciated the opportunity to sit down with the committee and discuss items which will improve the board's ability to serve the people of Alaska.

In managing fisheries that involve hatchery raised salmon, the Board of Fisheries has encountered problems due to ambiguities in the current Alaska statutes. These problems commonly arise when the management of hatchery stocks conflicts with either the health of wild stocks or with the opportunity of fishermen to harvest wild stocks. Essentially, the statutes are not clear on the status of wild stock management.

State statutes also are not clear about the state's duty to provide fish for hatchery broodstock and cost recovery, and about the hatcheries' obligations to contribute to the common property fisheries. We perceive that the development of state policy toward hatcheries may have created a conflict of interest. On one hand, the state manages fisheries as a common property resource for the benefit of all user groups. On the other hand, the state loans money to hatcheries with the expectation that the hatcheries will receive enough fish to be able to repay these loans.

The board has the following comments on the existing statutes:

1. AS 16.10.375 Regional Salmon Plan. Should new language require a review or synthesis of the regional plans to give a statewide perspective on hatchery production?

President Richard Eliason
May 6, 1991
Page Two

2. AS 16.10.380 Regional Associations. One of the great strengths of the regional associations is the representation of all user groups on their boards of director. However, the PNP's have no such requirement. Should all hatcheries and enhancement activities in a region be under the control of the regional associations?

Should state laws apply to all hatcheries and enhancement activities in Alaska and not just private non-profit hatcheries? Other activities that might be covered include state-owned hatcheries, regional hatcheries, and the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the National Marine Fisheries Service. Should all these activities be included in the Regional Comprehensive Plan?

Should the role of the regional associations be to coordinate region wide production and allocation subject to biological review by the Regional Planning Team and allocative review by the Board of Fisheries?

Given an expanded role for the regional associations, should their means and levels of funding be re-examined by the legislature?

3. AS 16.10.400 Permits for Salmon Hatcheries. The legislature should re-examine (g) of this section: "During the development of a comprehensive plan for a region no permit may be issued for a hatchery unless the commissioner determines that such an action would result in substantial public benefits and would not jeopardize natural stocks."

The first ten words of this section, "During. . . region . . .", suggest that once the plan is completed, the prohibited actions could be allowed. Perhaps this wording should be deleted. Also, we believe that there should be more specific grounds and procedures for terminating hatchery permits after they have been issued.

President Richard Eliason
May 6, 1991
Page Three

Legislators should note that 5 AAC 40.860 provides generic standards for performance review of hatchery success in producing smolt from broodstock. There are no statutory standards, however, for performance review of hatchery contribution to common property fisheries. If a hatchery cannot demonstrate that it is providing "substantial public benefit", is the state required to continue to provide for returns to the hatchery for broodstock or cost recovery purposes?

In this subsection, "substantial public benefit" is not clearly defined. The board recommends that the legislature consider linking the number of eggs taken as broodstock or the number of smolt released by a hatchery to that hatchery's required contribution to the common property fisheries.

The board may contribute to clarifying "substantial public benefit" by requiring the marking of hatchery fish. While we believe that the board has the authority to require this, it would be helpful to have this authority specifically provided by statute. Should the cost of implementing a marking program be borne by the producers of hatchery fish or by the state?

The last five words of this subsection, ". . . would not jeopardize natural stocks", is one of only two places (the other is AS 16.10.420(10)) which declares that it is the legislature's intent that the conduct of the entire state hatchery system is conditional on the protection of natural stocks. Perhaps because our hatcheries have flourished over time, and given some of the intense debate occurring in Oregon, Washington and Canada on how hatchery stocks have impacted natural systems, it is especially timely for the legislature to review the treatment natural stocks receive.

4. The necessity of protecting Alaska's vigorous natural stock populations is recognized by Department of Fish and Game regulations and policies. The regulations are in 5 AAC 40. For example, some of the strongest language exists in 5 AAC 40.220(b)(1), "the proposed hatchery returns may not unreasonably or adversely affect management of natural stocks. . .". Additional language exists in 5 AAC 40.005(a), (c), and (e), 5 AAC 40.007(b), 5 AAC 40.170 (2), 5 AAC 40.220 (b)(1), (3) and (7), and 5 AAC 40.860 (b)(2) and (4). As this issue of natural stock protection is examined by the legislature, the board recommends that the legislature seek input from the Commissioner of the Department of Fish and Game.

President Richard Eliason
May 6, 1991
Page Four

5. The legislature may wish to further clarify their intent in additional and more concise definitions of terms used in Title 16. For example, the following terms should be clarified: "escapement", "brood stock", "cost recovery", "substantial public benefit", and "private non-profit."

Should escapement apply strictly to natural stocks returning to natural systems?

Should broodstock be defined as the number of eggs authorized by permit to meet the production levels of the hatchery and to contribute to the common property fisheries? Some wording to this effect would be valuable in light of AS 16.10.420 and AS 16.10.450 which allow for the sale of salmon and salmon eggs for cost recovery. Fish which return to the hatchery for broodstock should be differentiated from fish which return and may be taken for cost recovery.

Does the legislature wish to rank or prioritize escapement to natural systems compared to return of broodstock to hatcheries?

"Cost recovery" is another term which warrants some further clarification. However, a clear definition of broodstock, coupled with a definition of substantial public benefits in terms of what is contributed to common property fisheries from broodstock, would provide a de facto identification of fish available for cost recovery as long as identification of hatchery stocks can be achieved.

These concerns of the Board of Fisheries are presented for your consideration. Your interest, and past support, in these resource issues has been greatly appreciated.

Should you have further questions, please feel free to call me.

Sincerely,

Michael R. Martin
Chair
Alaska Board of Fisheries

cc: Board of Fisheries members
Carl Rosier, Commissioner, ADF&G

MEMORANDUM

State of Alaska

Department of Law

TO: Hon. Don W. Collinsworth
Commissioner
Department of Fish and Game

DATE August 1, 1990

FILE NO 663-90-0327

TEL NO 465-3600

SUBJECT ADF&G authority to manage
fisheries for hatchery
broodstock and cost
recovery

FROM *Stephen M. White*
Stephen M. White
Assistant Attorney General
Natural Resources Section

You have asked whether the Department of Fish and Game has legal authority to manage fisheries so that salmon hatcheries receive broodstock and cost recovery fish for their operations. You also asked whether the department is required to manage fisheries for these results. Your staff has also asked us to compare the department's authority with that of the Board of Fisheries.

I. ANALYSIS

A. Factual and Legal Background

There are two types of salmon hatcheries in Alaska. These are private, nonprofit hatcheries and state-owned hatcheries.

The regulation of private, nonprofit hatcheries is provided for in AS 16.10.400 - 16.10.470. These hatcheries have received a significant amount of public funds, principally in the form of loans from the state's fisheries enhancement revolving loan fund established by AS 16.10.507. 1/ Until fish raised by private, nonprofit hatcheries return to a location where they can be harvested by the hatchery operators, these fish "are available to the people for common use and are subject to regulation under applicable law in the same way as fish occurring in their natural state." AS 16.10.440(a).

The only law that deals with state-owned hatcheries is the one that gives the commissioner of the Department of Fish and Game authority to design and construct public hatcheries. AS 16.05.050(3).

1/ According to the Department of Commerce and Economic Development, the current amount owed to the state by private, nonprofit hatcheries is approximately \$63.1 million.

B. Board of Fisheries' Authority to Manage for Hatchery Returns

1. Board's authority to manage for broodstock fish

The Board of Fisheries was created "for purposes of the conservation and development of the fishery resources of the state." AS 16.05.221(a) (emphasis added). The board has authority to "adopt regulations it considers advisable in accordance with the Administrative Procedure Act (AS 44.62) for . . . regulating commercial, sport, subsistence, and personal use fishing as needed for the conservation, development, and utilization of fisheries." AS 16.05.251(a)(12) (emphasis added).

The Alaska Supreme Court has defined "conservation" as "controlled utilization of a resource to prevent its exploitation, destruction, or neglect." Kenai Peninsula Fisherman's Coop. Ass'n v. State, 628 P.2d 897, 903 (Alaska 1981). We believe that the board's authority to conserve the fishery resource of the state, that is, to prevent its "exploitation, destruction, or neglect," is an expression of the constitutional requirement that fish be "utilized, developed, and maintained on the sustained yield principle." Alaska Const. art. VIII, § 4.

We understand that the term "broodstock" means the portion of returning fish that a hatchery uses to provide eggs for raising its next contribution to the common-property fishery. Because broodstock helps to perpetuate the fishery resource, we believe that managing for broodstock is analogous to managing for escapement of wild fish to achieve sustained yield. It follows, therefore, that the Board of Fisheries is empowered to adopt regulations that will provide brood stock to the hatcheries. Furthermore, because management for sustained yield is required by article VIII, section 4, of the Alaska Constitution, we believe that the law directs the board to manage for this result.

2. The Board's Authority to Manage for Cost Recovery Fish

We understand that "cost recovery fish" are the portion of returning fish that a private, nonprofit hatchery harvests and sells to help meet its financial obligations. We also understand that state-owned hatcheries do not presently harvest fish for cost

Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 663-90-0327

August 1, 1990

Page 3

recovery. Thus, the question of managing fish for cost recovery concerns only private, nonprofit hatcheries. 2/

As noted above, the Board of Fisheries has authority to adopt regulations for development as well as for conservation of the fisheries. AS 16.05.221(a); AS 16.05.251(a)(12). The Alaska Supreme Court has defined "development" as "management of a resource to make it available for use." Kenai Peninsula, 628 P.2d at 903.

We have previously advised that this authority empowers the board to allocate fish that are beyond those needed to assure sustained yield. This power is established by AS 16.05.251(d), which mandates that the board provide "a fair and reasonable opportunity for the taking of fishery resources" by fishery user groups and by AS 16.05.251(e), which requires that the board adopt criteria for making allocations among these groups. 1990 Inf. Op. Att'y Gen. (Jan. 12; 663-90-0227); 1989 Inf. Op. Att'y Gen. (Apr. 7; 663-89-0465).

The courts have endorsed various forms of allocation. These have included allocations between the various overall user groups identified in the fish and game code -- personal use, sport, and commercial fishers. For example, in the Kenai Peninsula case, the Alaska Supreme Court said that the board could establish priorities of use between recreational and commercial fishers. Kenai Peninsula, 628 P.2d at 903. In other cases, the courts have upheld regulations that allocate harvest between competing subgroups of a particular user group. For example, the court upheld the board's allocation of fish between drift gillnet fishers and set gillnet fishers, both of whom are commercial users. Meier v. State, 739 P.2d 172, 174 (Alaska 1987).

Private, nonprofit hatcheries are not identified in the law as an overall user group. Nevertheless, we know of no reason why they could not be considered a subgroup of commercial users and thus be targeted for allocations like any other distinct subgroup of commercial harvesters.

The law establishes seven criteria that the board may consider when making allocations. AS 16.05.251(e). See also 05 AAC 39.205, 05 AAC 75.017, and 05 AAC 77.007. We have

2/ If state-owned hatcheries, operated by the state or by private contractors, harvest cost-recovery fish, this would raise issues that are beyond the scope of this memorandum. In that event, we would be pleased to provide you with further analyses of those issues.

Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 663-90-0327

August 1, 1990
Page 4

previously noted that the board is not limited to just these factors. We cautioned, however, that if the board considers additional factors, it should insure that the resulting allocation satisfies constitutional requirements of substantive due process and of equal protection. 1990 Inf. Op. Att'y Gen. (Jan. 12; 663-90-0227). 3/

To satisfy substantive due process, an allocation cannot be arbitrary and it must further a legitimate governmental purpose. Mobile Oil Corp. v. Local Boundary Comm'n, 518 P.2d 92 (Alaska 1974). To satisfy equal protection, a distinction between competing users must be "based on a legitimate public purpose and . . . be reasonable, not arbitrary, and . . . rest upon some ground of difference having a fair and substantial relation to the object of the [allocation scheme]." State v. Ostrovsky, 667 P.2d 1184, 1193 (Alaska 1983) (citation omitted).

Earlier we noted that private, nonprofit hatcheries have received substantial loans from the state. We assume that cost recovery fish are a significant, if not essential, source of income for meeting these hatcheries' debt service. If the borrowers do not receive sufficient cost recovery fish, it may not only threaten their ability to contribute to the common-property fishery, but also their ability to repay state loans. Accordingly, we believe that preventing the economic failure of borrower hatcheries would certainly be a "legitimate government purpose."

We also believe that distinguishing between private, nonprofit hatcheries, who make a direct contribution to sustained yield, and other users who do not make such a contribution bears a "fair and substantial relationship" to the goals of sustaining common-property fisheries and replenishing the loan fund. Thus, we believe that an allocation to provide cost recovery fish would satisfy the requirements of substantive due process and equal protection.

We note, however, that none of the present criteria in AS 16.05.251(e) precisely describe the positive attributes of hatcheries. Factors (5) (economic importance) and (6) (regional importance) could, under narrow circumstances, justify an

3/ We also opined that allocations must satisfy the provisions of article VIII of the Alaska Constitution. Specifically, these are section 1 (maximum use), section 2 (maximum benefit), section 3 (common use), section 15 (no exclusive right of fishing), and section 17 (equal application). 1990 Inf. Op. Att'y Gen. (Jan. 12; 663-90-0227). We do not believe that an allocation for cost-recovery would violate any of these sections.

Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 663-90-0327

August 1, 1990
Page 5

allocation that provides for cost recovery. 1/ Although the board is not limited to using these criteria, they still affect the public and implement a legislative mandate. Thus, any unlisted criteria that the board wishes to use should be adopted by regulation. See Kenai Peninsula, 628 P.2d at 905, 906. In other words, if the board intends to allocate for cost recovery, it should adopt by regulation criteria that more closely describe the special attributes of private, nonprofit hatcheries.

The board's authority to allocate for cost recovery, then, is based upon characterizing private, nonprofit hatcheries as another type of commercial subgroup. But, there is nothing in the law that requires the board to allocate to a particular group or subgroup. Accordingly, we do not believe that the board is required by law to allocate cost recovery fish to this subgroup.

C. Department's Authority to Manage for Hatchery Returns

1. Department's authority to manage for broodstock

The commissioner of the Department of Fish and Game has limited tools for managing commercial fisheries independently of the board. This authority is contained in AS 16.05.060(a). It allows the commissioner to use emergency orders "when the circumstances require" to summarily open and close seasons or areas or to summarily change weekly closed periods.

The law does not define what circumstances will enable the commissioner to use his or her emergency order power. However, we have previously advised that in light of the commissioner's statutory charge to "manage, protect, maintain, improve, and extend the fish . . . resources of the state," emergency orders can be issued to protect sustained yield, based on conservation concerns. AS 16.05.020(2); 1989 Inf. Op. Att'y Gen. (Apr. 7; 663-89-0465).

Earlier we recognized an analogy between managing escapement of wild stocks for conservation/sustained yield and managing for hatchery broodstock in order to serve the same purposes. Thus, we believe that the department, acting through the commissioner's power to issue emergency orders, can independently

1/ For example, if (1) a certain fishery were an important segment of an economy, (2) a hatchery made a critical contribution to the perpetuation of this fishery, and (3) the hatchery could not survive to make this contribution without an allocation of cost-recovery fish, the board could conclude that the allocation would be very important to that economy. - - -

Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 563-90-0327

August 1, 1990
Page 6

manage fisheries to provide broodstock to hatcheries. In the same way that the Alaska Constitution directs the Board of Fisheries to manage for the return of broodstock, we believe that the law also directs the department to manage for the same result.

2. Department's authority to manage for cost recovery fish

The law is not clear on the question of whether the department, through the commissioner's emergency order power, is authorized to independently manage fisheries for cost recovery fish. It is also not clear whether it is required to do so.

On one hand, it can be argued that the commissioner's statutory charge in AS 16.05.020(2) to "maintain and improve" the resource authorizes actions that will enable private, nonprofit hatcheries to survive. Unless they are able to meet financial obligations, hatcheries will not be able to raise broodstock, and thereby not be able to contribute to the "maintenance and improvement" of the resource. It can also be argued that it is unlikely that the legislature would have created a program for financing the hatcheries and yet not intended for fisheries to be managed so that these hatcheries could pay back their loans and contribute to the fishery resource.

On the other hand, cost recovery fish, unlike broodstock fish, do not directly contribute to the perpetuation of the resource. They are sold to meet economic needs of a user subgroup. Thus, they can be likened to fish that exceed the amount needed for sustained yield and are thus available for allocation among various users.

In the past, we have opined that the commissioner probably cannot allocate fish through his or her emergency order power. Only the board can allocate fish among competing fisheries or user groups. 1990 Inf. Op. Att'y Gen. (Jan. 12; 663-90-0227); 1989 Inf. Op. Att'y Gen. (Apr. 7; 663-89-0465). According to this argument, the department could not independently manage fish for cost recovery because it is not authorized to allocate fish among users. 5/

5/ Although it is not clear whether the department, independent of the board, is authorized or required to allocate fish for cost recovery, we note that there are several ways that the department, in conjunction with the board, could manage for this purpose. First, under AS 16.05.270 the board could delegate to the department its own authority to allocate for certain fisheries. Next,

(continued...)

Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 663-90-0127

August 1, 1990
Page 7

The arguments on both sides of this question depend upon implication and analogy. The law does not clearly point to one answer or the other. Although we believe we could defend an emergency order that was issued to provide cost recovery fish, we hesitate to predict the outcome of any challenge. Accordingly, if the department wishes to independently manage for cost recovery fish, we recommend that it seek clear authority from the legislature to do so.

II. CONCLUSION

The Board of Fisheries and the Department of Fish and Game are authorized, and in fact are directed, to manage fisheries so that broodstock returns to hatcheries. The board can manage through its power to adopt regulations and the commissioner, when he or she acts independently of the board, can manage through the power to issue emergency orders. The authority of both is based upon statutory provisions for managing for conservation and on constitutional mandates for managing for sustained yield.

The board has the statutory authority to manage fisheries so that cost recovery fish return to a private, nonprofit hatchery. However, it is not clear that the present allocation criteria recognize the special attributes of hatcheries. If the board adopts such criteria, the board's regulatory authority to manage for cost recovery would be clear as well. On the other hand, there is no basis to conclude that the board is required to allocate fish for this purpose.

Absent the board's delegation of allocation authority to the department, it is not clear that the latter is authorized or required to independently manage for cost recovery, even by emergency order. Although we believe we could defend such an action, we could not predict the outcome of such suit. Therefore, we recommend that the department seek legislation that more clearly establishes this power.

We hope this answers your questions. Please do not hesitate to contact us if we can be of further help.

SMW:tg

5/ (...continued)

the board could by regulation direct the department to manage a particular fishery for this purpose. Examples of this are in 5 AAC 24.365 and 5 AAC 24.366. Finally, the board could by regulation establish an allocation framework that the department could implement through emergency orders.

8
Hon. Don W. Collinsworth, Commissioner
Department of Fish and Game
AGO file: 663-90-0327

August 1, 1990
Page 3

cc: Bonnie Harris, Assistant Attorney General
Anchorage

8

MICHAEL A. D. STANLEY

ATTORNEY AT LAW

OFFICE 130 SEWARD STREET, SUITE 413
MAILING PO BOX 020449, JUNEAU, ALASKA 99802

PHONE (907) 586-6077
FAX (907) 463-2111

DATE: February 28, 1991

TO: Kate Troll, Executive Director
Southeast Alaska Seiners

FROM: Michael A. D. Stanley *MS*

SUBJ: Department of Law Opinion Re Management Of Fisheries
For Hatchery Broodstock And Cost Recovery

You have asked me to review an opinion authored by Assistant Attorney General Stephen White, dated August 1, 1990, concerning the legal authority of the Board of Fisheries ("Board") and the Alaska Department of Fish and Game ("ADF&G") to manage fisheries for return of hatchery broodstock and cost recovery.

This memo is not intended as a lengthy analysis of Mr. White's conclusions or the issues presented, but is instead meant to identify questions raised by his opinion.

Briefly stated, White's conclusions are as follows:

1. The Board has the authority and, under article VIII, section 4 of the Alaska Constitution (the sustained yield clause), the obligation to manage fisheries to provide broodstock to hatcheries.
2. The Board has the authority to allocate fish to nonprofit hatcheries for cost recovery, as a subgroup of commercial users.
3. Like the Board, ADF&G has the authority and the obligation to use its management powers -- i.e., its emergency order authority -- to assure return of broodstock to hatcheries.
4. ADF&G does not have clear authority to use its emergency order authority to manage for cost recovery, which is a form of allocation among competing users, but could achieve such result
 - a. by working in conjunction with the Board (e.g., receiving a delegation of the Board's authority or implementing a Board regulation requiring such allocation), or
 - b. by seeking legislation that clearly establishes such power.

DISCUSSION

The difficulty I have with Mr. White's opinion is not so much what he says, but what he doesn't say; that is, assumptions or legal inferences that are implicitly made but not discussed. Once these are understood, it can be seen that his conclusions regarding the Board's and ADF&G's authority to manage for broodstock and cost recovery are subject to some question.

1. Are Hatchery Stocks Subject To Article VIII?

White's memo is premised on the assumption that hatchery fish are necessarily subject to the provisions of article VIII of the Alaska Constitution. This leads him, among other things, to conclude that the Board and ADF&G are required to manage fisheries for return of hatchery broodstock, just the same as they are required to manage for escapement of wild stocks. I believe there is reason to question this assumption.

Article VIII does not use a single term for what it covers, but all seem to have a similar meaning: "natural" resources, resources in their "natural state," and "replenishable resources belonging to the state." The question is, do these terms encompass man-made hatchery fish? Put another way, does the state "own" hatchery fish in the same way as it "owns" wild fish and game. If the answer to that question is no, then it may well be that hatchery fish are not subject to the requirements of article VIII at all.

I have not studied this "ownership" question for hatchery stocks at length, but I have run across items that suggest they might be different from wild stocks. For instance, in the commentary on what became section 3 of article VIII (the common use clause), the framers indicate that it "does not apply to the domestication of fur-bearing animals or other animals subject to intensive culture, to fish in private ponds, or to registered trap lines if authorized by law." Commentary on Article on State Lands and Natural Resources, January 16, 1956, Alaska Constitutional Convention Proceedings, Part 6, Appendix V, p. 98 (emphasis mine). Although the examples mentioned do not include hatchery fish, a common thread is creatures which man plays a substantial role in propagating.

Further, it could be argued that the legislature itself, when it passed the statutes authorizing private nonprofit hatcheries, did not view hatchery fish as subject to article VIII. As White points out, AS 16.10.440(a) provides that hatchery fish are "available for common use and are subject to regulation under applicable law in the same way as fish occurring in their natural state." However, this legislation would not have been necessary if hatchery fish were already believed to be subject to article VIII. The very fact that

AS 16.10.440 was enacted suggests that, in a constitutional sense, hatchery fish may be different from wild stocks.

Similarly, the sustained yield clause surely prohibits the Board or ADF&G from extinguishing a wild run. Yet, under certain circumstances hatchery permits may be revoked and production stopped. AS 16.10.430. Assuming hatchery fish were subject to section 4's command to sustain production, wouldn't terminating operation of a hatchery likewise be a constitutional violation? The answer may be that section 4 does not apply to hatchery fish.

The point simply is, White's conclusion that the Board and ADF&G are constitutionally mandated to manage for broodstock, just as they are required to manage for escapement of wild stocks, is subject to some question or, at the least, further analysis.

2. Are Nonprofit Hatcheries Engaged In Commercial Fishing?

In concluding that the Board can allocate fish to private nonprofit hatcheries for cost recovery, White states that "we know of no reason why they could not be considered a subgroup of commercial users and thus be targeted for allocations like any other distinct subgroup of commercial users." He conspicuously fails to refer to the definition of "commercial fishing" in articulating this premise. "Commercial fishing" is defined in AS 16.05.940(5) as

the taking, fishing for, or possession of fish, shellfish, or other fishery resources with the intent of disposing of them for profit, or by sale, barter, trade, or in commercial channels...

Nonprofit hatcheries do not take cost recovery fish "for profit." Are such fish nonetheless taken "with the intent" of disposing of them "by sale...or in commercial channels?" Although it could be argued that they are, that leads to a fairly expansive definition of commercial fishing. Salmon derbies possess fish with the intent of selling them; are they engaged in commercial fishing, too? Could the Board make an allocation to a fishing derby as subgroup of commercial users? At some point such an interpretation of "commercial fishing" becomes rather strained.

The definition of "commercial fisherman" in AS 16.10.940(4) may also provide guidance. That term is defined in terms of an "individual" -- i.e., a natural person -- and would not appear to include a nonprofit corporation.

Thus, there is a question whether nonprofit hatcheries are indeed engaged in "commercial fishing." If not, then White's conclusion that they may be the recipients of an allocation is undermined.

3. May Nonprofit Hatcheries Receive An Allocation?

The conclusion that the Board can allocate hatchery fish to a hatchery for cost recovery is, as White's memo states, "based upon characterizing private, nonprofit hatcheries as another type of commercial subgroup." I discussed above my doubts that hatcheries can really be said to be engaged in "commercial fishing."

There is another basis for questioning whether hatchery fish can be the subject of a specific allocation to a hatchery. AS 16.10.440(a) provides that hatchery fish are subject to regulation in the same manner as wild stocks "until they return to the specific location designated by the department for harvest by the hatchery operator." This suggests two things: (1) it is the department, not the Board, which is responsible for "allocating" hatchery fish to a hatchery through designation of special harvest areas, and (2) such allocation occurs only after those fish have traversed the common property fisheries and returned to the specific location designated for hatchery harvest. This statutory scheme is circumvented if the Board takes it upon itself to make an allocation to a hatchery prior to those fish returning to the designated area, while they are still in the common property fisheries.

Similarly, the statute which governs allocation of fisheries resources -- AS 16.05.251(e) -- does not really square with the idea of an allocation to a hatchery. The various factors which may be considered as allocation criteria are all tied to the term "fishery." But the definition of "fishery" in AS 16.05.940(12) does not include a hatchery. This suggests that a hatchery was never intended as the recipient of an allocation by the Board under AS 16.05.251(e).

Thus, the structure of applicable legislation suggests that hatchery operators may receive an allocation only through the procedures set forth in AS 16.10.440 (after leaving the common property fishery and in an area designated by ADF&G) and not from the Board pursuant to AS 16.05.251(e).

I must emphasize that the foregoing -- especially the discussion of the constitutional issue -- are not intended as definitive legal advice on whether the Board or ADF&G have the authority and/or the obligation to manage fisheries in order to assure the return of broodstock to nonprofit hatcheries or to provide for cost recovery. More analysis remains to be done. But I do think that this points up some significant problems with the Department of Law's opinion.

DIVISION OF LEGAL SERVICES

LEGISLATIVE AFFAIRS AGENCY STATE OF ALASKA

P.O. Box Y, Juneau, Alaska 99811
(907) 465-3867 or 465-2450
FAX (907) 465-2029

Deliveries to: 240 Main Street
Court Plaza, Room 500
Mail Stop 3101

MEMORANDUM

April 8, 1991

SUBJECT: Sustained Yield Management of Salmon Produced by Private Nonprofit Hatcheries (Work Order 7LS0990)

TO: Senator Dick Eliason

FROM: George Utermohle *GU*
Legislative Counsel

You have asked whether the state must manage salmon produced by private nonprofit hatcheries according to principles of sustained yield.

The Department of Law in its consideration of this issue has concluded that the sustained yield section of the Alaska Constitution (art. VIII, sec. 4) is applicable to private hatchery stocks of salmon and that the Board of Fisheries is required to manage private hatchery stocks of salmon according to sustained yield principles in order to provide broodstock to the hatcheries. Memorandum to Don W. Collinsworth file no. 663-90-0327, August 1, 1990. The Department of Law reached this conclusion by finding that the return of hatchery-bred salmon to the hatchery for use as broodstock, like the escapement of wild salmon to the spawning grounds, is necessary to achieve sustained yield of the salmon resource.

The sustained yield section can be reasonably construed as supporting the conclusion reached by the Department of Law, however the section is also open to other interpretations which would support different conclusions. Article VIII, sec. 4 states:

SUSTAINED YIELD. Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

Of particular significance is the fact that this section applies to fish "belonging to the State" and that utilization, development, and maintenance of fish on the sustained yield principle is "subject to preferences among beneficial uses."

Fish belonging to the state are clearly to be managed according to sustained yield principles. The general rule is that salmon while in state water are property of the state and are held in trust for the benefit of all people of the state. Metlakatla Indian Community, Annette Island Reserve v. Egan, 362 P.2d 901, 914-915 (Alaska 1961). Part of the state's trust responsibility includes the management of salmon according to sustained yield principles. However it is unclear whether the sustained yield requirement applies to salmon raised by a private nonprofit hatchery, because the ownership of hatchery salmon is uncertain.

Private nonprofit salmon hatcheries are authorized under AS 16.10.375 - 16.10.470. AS 16.10.375 - 16.10.470 that does not answer the question of who owns hatchery stocks of salmon, though a number of provisions do suggest that some property interest in hatchery salmon stocks may pass to the hatchery under the terms of the hatchery permit. There are at least four references to salmon eggs or fry being sold to or by a hatchery. AS 16.10.420(3), (7), and (8); 16.10.450. The ability to sell salmon eggs and fry implies an ability to transfer property rights in the eggs and fry.

AS 16.10.440, which provides for the common use of hatchery fish while the fish are in the natural water of the state, is silent as to whether hatchery fish belong to the state. AS 16.10.440(a) provides

Fish released into the natural waters of the state by a hatchery operated under AS 16.10.400 - 16.10.470 are available to the people for common use and are subject to regulation under applicable law in the same way as fish occurring in their natural state until they return to the specific location designated by the department for harvest by the hatchery operator.

The phrase "occurring in their natural state" used in AS 16.10.440(a) mirrors the language of the common use section of the state constitution (art. VIII, sec. 3) in order to assure that while in the water of the state hatchery fish are to be subject to common use. However providing that hatchery fish are available for common use neither implies state ownership of the hatchery fish nor entails a concomitant responsibility to manage hatchery fish for sustained yield, because the requirements for common use and sustained yield are separate provisions of the constitution.

AS 16.10.440(a) does not use the important phrase "belonging to the state" which would invoke the sustained yield section. According to AS 16.10.440(a), hatchery fish are to be treated "in the same way as fish occurring in their natural state until they return to the specific location. . ."; this language does not say that hatchery fish are a common property resource belonging to the state, but only that they are to be treated as though they were a common property resource until they return to the designated location, at which time the fish become subject to private use by the hatchery. This language suggests some form of lingering private property interest in

Senator Dick Eliason

April 8, 1991

Page 3

hatchery fish by the hatchery even after the hatchery releases the fish into the wild. If there is a latent private property interest in hatchery fish while they are in the wild, then those fish may not necessarily be fish belonging to the state. If the fish do not belong to the state then they are not subject to the requirements for sustained yield management under the state constitution. This could permit the state through the Board of Fisheries and the Department of Fish and Game to manage fisheries through which hatchery fish pass without regard to assuring a sustained yield escapement to the hatchery.

Even if the hatchery fish do belong to the state for the purposes of the sustained yield section, the requirement of the sustained yield section of the state constitution is not absolute, because the management of fish and other replenishable resources belonging to the state shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses. The delegates to the Alaska Constitutional Convention considered this qualifying language to be necessary because they found that the sustained yield principle becomes meaningless and ineffective, if it is not qualified by the concept of beneficial use. Alaska Constitutional Convention Proceedings, Delegate Riley, p. 3054-55. The delegates to the convention did not discuss in detail how they felt the concept of preferences among beneficial uses would be applied in the context of sustained yield management of replenishable resources, except to say that certain kinds of resources (e.g. predators and parasites) should not be maintained on a sustained yield basis. Alaska Constitutional Convention Proceedings, Delegate Riley, p. 2451; Commentary on Article on State Lands and Natural Resources, 6 Proceedings of the Alaska Constitutional Convention at 98. However the delegates did discuss the concept of beneficial uses in regard to water rights. Section 13 of article VIII, relating to water rights, contains the same "subject to preferences among beneficial uses" language that is contained in the sustained yield section. The delegates understood preference among beneficial uses to allow the state to choose among competing beneficial uses of water in order to achieve the greatest public good, even if it meant eliminating other existing, vested beneficial uses of water, provided that the owner of those rights are compensated for the loss of the rights. Commentary on Article on State Lands and Natural Resources, 6 Proceedings of the Alaska Constitutional Convention at 102. Thus the delegates understood that the concept of preferences among beneficial uses would also allow the state to make reasoned decisions to prefer certain renewable resources over other renewable resources to achieve a more beneficial public purpose. The authority to establish preference among beneficial uses may permit the state to harvest hatchery fish without providing for a sustained yield from the hatchery, provided that those who have vested rights in hatchery fish are compensated for those rights that are taken by the state.

The ability of the state to establish preferences among beneficial uses is reflected in AS 16.10.430(b) which allows the commissioner of fish and game to terminate the

Senator Dick Eliason

April 8, 1991

Page 4

operation of a hatchery in the best interests of the public, if the adverse effects of the operation of the hatchery are irreversible and cannot be mitigated.

If I can provide further assistance, please advise.

GU:pl

91-235.plm

ASHBURN AND MASON

LAWYERS

A PROFESSIONAL CORPORATION

1130 WEST SIXTH AVENUE, SUITE 100
ANCHORAGE, ALASKA 99501

MARK E. ASHBURN
LEWIS F. GORDON
JULIAN L. MASON III
JOHN C. McCARRON
DONALD W. McCLINTOCK III
A. WILLIAM SAUPE
KIRSTEN TINGLUM

TELEPHONE
(907) 276-4331
TELECOPIER
(907) 277-8235

October 17, 1991

PRINCE WILLIAM
SOUND AQUACULTURE

OCT 21 1991

Mr. John McMullen, President
Prince William Sound Aquaculture Corporation
Box 1110
Cordova, AK 99574

RE: Proposed Hatchery Regulations
Our File No. 91-7618

Dear John:

Enclosed is the long memorandum that I promised on the cost recovery and production limitations issues that you raised. I would be happy to discuss these matters with PWSAC at any time that is convenient for you.

In addition to the questions addressed in the enclosed memorandum, you also asked whether the Board of Fisheries could change the Prince William Sound Allocation Policy this year, out of its normal sequence. My understanding is that the policy has been implemented in the form of regulations, which are codified at SAAC 24.370. To my knowledge, there is no absolute bar that would prevent the Board from amending or repealing its regulations at any time, so long as it fulfills the statutory requirements for promulgating regulations. Those detailed requirements are included in the Administrative Procedures Act.

However, any new regulations must be consistent with existing statutes, within the scope of the authorizing statute, and reasonably necessary to carry out the purpose of the statute. As with any law or regulation, any amending regulations must also be "reasonable and not arbitrary." Kelly v. Zamarello, 486 P.2d 906 (Alaska 1971).

Given the substantial public testimony in favor of the allocation policy, and the exhaustive back-up documentation that supported the allocation regulations adopted last year, it seems highly unlikely that the Board could make significant amendments that would be "reasonable and not arbitrary." An extensive record would have to be developed showing a dramatic change in circumstances and public support in order to support a change in the policy.

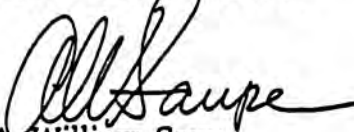
Mr. John McMullen
Page 2
October 17, 1991

Even if such a record were to be made, any new regulations would have to preserve PWSAC's ability to continue a reasonable level of broodstock and cost recovery, for all of the reasons stated in my memorandum. For the same reasons, any new policy that attempted to limit PWSAC's salmon production would be vulnerable to legal challenge.

If you have further questions, please give us a call.

Very truly yours,

ASHBURN & MASON



A. William Saupe

AWS/nk

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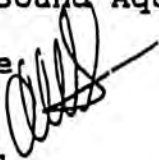
1130 WEST SIXTH AVENUE, SUITE 100
ANCHORAGE, ALASKA 99501

MARK E. ASHBURN
LEWIS F. GORDON
JULIAN L. MASON III
JOHN C. MCCARRON
DONALD W. MCCLINTOCK III
A. WILLIAM SAUPE
KIRSTEN TINGLUM

TELEPHONE
(907) 278-4331
—
TELECOPIER
(907) 277-8235

MEMORANDUM

TO: John McMullen, President
Prince William Sound Aquaculture Corporation

FROM: A. William Saupe,
Ashburn & Mason 

DATE: October 16, 1991

RE: Regulation of Private Hatcheries

I. Issues Presented

You have asked us to research several legal issues that go to heart of PWSAC's ability to conduct its business as it has for the past 14 years. First, you asked for the legal basis for of PWSAC's right to conduct broodstock and cost recovery harvests, and an analysis of the degree to which the Department of Fish and Game (the "Department") and the Board of Fisheries (the "Board") can regulate broodstock recovery and cost recovery by private non-profit hatcheries. In that connection, you requested an analysis of an Attorney General's Opinion by Stephen White (Op. No. 663-90-0327, August 1, 1990) and two other opinions on the same topic. One is a memorandum written to Senator Eliason by George Utermohle, Legislative Counsel, dated April 8, 1991, and the other is a

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

February 28, 1991 memorandum from Michael A. D. Stanley to Kate Troll, Executive Director of the Southeast Alaska Seiners.

You also asked for an evaluation of the extent of the Board's authority to regulate hatchery production levels on a regional or individual hatchery basis, with specific reference to AS 16.05.440(b), regarding salmon egg take.

The analysis and arguments that we would make follow.

II. Brief Conclusion

Based upon the relevant provisions of the Alaska Constitution, applicable statutes, and related legislative history, we would argue that PWSAC has a constitutional and statutory right to continue a reasonable level of broodstock and cost recovery harvest. Any regulation by the Board or Department that significantly restricted PWSAC's ability to continue its present broodstock and cost recovery practices would be inconsistent with an extensive statutory scheme that explicitly authorizes broodstock and cost recovery by private non-profit hatcheries and regional aquaculture associations. Any such restriction would also conflict with Article VIII, Section 4, of the Alaska Constitution (requiring fish resources belonging to the State to be "utilized,

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

developed, and maintained on the sustained yield principle"), Article VIII, Section 15 of the Alaska Constitution (prohibiting any exclusive right or special privilege of fishery, except insofar as limited entry may be imposed by the State "to promote the efficient development of aquaculture in the State").

On the related question of the Board's authority to restrict hatchery production (as distinct from its authority to regulate harvests), the Board is statutorily authorized to regulate such things as the "propagation and stocking of fish" (AS 16.05.251(7)), and the "source and number of salmon eggs" taken by a hatchery (AS 16.10.440(b)), which suggests that it might have some measure of control over individual hatchery output. However, the available legislative history strongly suggests that the legislature never intended to give the Board the power to limit hatchery production on either a local, regional or statewide basis. Nothing in the current law would permit regional production ceilings designed to restore historical market share percentages, which we understand to have been proposed.

If the Board does have power to regulate production, at some point it would come into conflict with the constitutional provisions mentioned above and the numerous other statutes, such as

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

the statutes creating the FRED Division, the Limited Entry Act, and the State Hatchery Loan Program, which together evidence a strong policy in favor of hatchery development as well as enhancement and extension of the State's fisheries. Because there are no court decisions interpreting the Board's power to regulate propagation or egg take, and because the Alaska Supreme Court has not elucidated either the meaning of the constitutional reference to "efficient development of aquaculture," or the meaning and application of the sustained yield concept, there is no sure way to know precisely where the collision might occur until a specific restriction is imposed and challenged in court.

It would seem reasonable to conclude, however, that in the absence of a strong factual showing that hatchery production posed a serious genetic or disease threat to wild salmon stocks or perhaps was causing severe economic distress, neither the Department nor the Board could legally restrict PWSAC's output below a level necessary to sustain hatchery yields, to efficiently develop aquaculture, to repay state loans and to recover its costs.

III. Discussion

A. The Board And The Department Are Required By The

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

Alaska Constitution And Numerous Statutes To Manage
For Broodstock Recovery

In its August 1990 opinion, the Attorney General's Office advanced the argument that the Board is obligated to manage Alaska's fisheries to provide for broodstock recovery by hatcheries. Analogizing broodstock fish to wild stock escapement, the Assistant Attorney General Stephen White reasoned that Article VIII, Section 4 of the Alaska Constitution mandates that conclusion. That section provides as follows:

Sustained Yield. Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

Alaska Const. Art. VIII, §4. White implicitly assumes that hatchery fish "belong to the State" and argues that without broodstock harvests, hatchery stocks obviously could not be sustained.

In an opinion on this subject requested by Senator Eliason, Legislative Counsel George Utermohle questioned White's conclusion that the sustained yield principle applies to hatchery

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

fish, on the grounds that they may not "belong to the State." He bases his argument entirely on AS 16.10.440(a), which provides:

Fish released into the natural waters of the state by a hatchery operated under AS 16.10.400 - 16.10.470 are available to the people for common use and are subject to regulation under applicable law in the same way as fish occurring in their natural state until they return to the specific location designated by the department for harvest by the hatchery operator.

AS 16.10.440(a).

Utermohle points out that the phrase "occurring in their natural state" used in this section mirrors the language of the common use clause of the constitution (Art. VIII, Sec. 3).¹ He then argues that merely providing that hatchery fish are available for common use "neither implies state ownership of the hatchery fish nor entails a concomitant responsibility to manage hatchery fish for sustained yield, because the requirements for common use and sustained yield are separate provisions of the constitution." Next, Utermohle asserts that AS 16.10.440(a) does not use the phrase "belonging to the state," which would invoke the sustained

¹Article VIII, Sec. 3 provides: "Common Use. Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use."

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

yield clause. Instead, he argues that the statute requires only that hatchery fish be treated in the same way as fish occurring in their natural state until they return to the specific hatchery location. Utermohle Memo. p. 2.

From this phrasing in AS 16.10.440(a), Utermohle reasons that there may be "some form of lingering private property interest in the hatchery fish even after the hatchery releases the fish into the wild." Id. at 3. If the fish do not "belong to the State," Utermohle concludes that they are not subject to the sustained yield requirement and neither the Board nor the Department is required to manage hatchery fish to assure a sustained yield escapement to the hatcheries.

Utermohle's ownership argument does not stand up to closer analysis and is contradicted by the available legislative and constitutional history. Certainly PWSAC has understood since its creation in 1975 that once it releases its fish, it no longer owns or controls them. From the point of release forward, they are "fish occurring in their natural state" and, as Utermohle acknowledges, Article VIII, Section 3 of the constitution reserves them to the people for common use. This is consistent with the general rule, which he also cites, that salmon while in state water

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

are property of the state and held in trust for the benefit of all people of the state. Metlakatla Indian Community v. Egan, 362 P.2d 901, 914-915 (Alaska 1961).

That hatchery fish belong to the State is also consistent with the views of the legislature that created the nonprofit hatchery program. In her July 31, 1991 memorandum to Senator Eliason, Linda J. Snow, a Legislative Analyst, wrote as follows:

Consensus is that the legislature had always intended that the fish from PNP hatcheries belong to the common property fishery until such time as they return to the hatchery, and then they belong to the hatchery for broodstock and cost recovery. Testimony by Senator Dick Eliason at a 1975 Senate Resources Committee hearing on SB 180 indicates that the initial concept of a private hatchery system considered profit-making corporate ownership. However, a profit-making corporation might advance a claim to exclusive ownership of everything it produced. Thus, it was felt that private, nonprofit ownership of hatcheries would be more consistent with the concept of publicly owned hatchery fish. This opinion is echoed by former Representative Terry Gardiner.

At a March 7, 1977 House Resources Committee hearing, Jack Milnes, executive director of Southern Southeast Regional Aquaculture Association testified: "I wish to recognize the fact that these are common property fish, that they belong to the state of Alaska and to the people of Alaska and therefore they should be protected by the representatives of the

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

people of the state of Alaska." At a 1979 Senate Resources Committee hearing on HB 48, Don Clockson, an attorney with Alaska Legal Services discussed the question of ownership of hatchery fish. In his testimony, he asked "When are fish no longer common property fish?" He felt that constitutionally, they were considered to be common property at all times. Consequently, it appears there was never any question that hatchery fish were common property of the people of the state while in Alaska waters, and they may or may not be the property of the PNP hatchery operator at the hatchery, but that he is allowed to harvest a sufficient number for broodstock and cost recovery.

Snow Memo. p. 14 (attached as Attachment A) (emphasis added). These statements effectively answer the "ownership" issue. When the legislature created private hatcheries, it intended that the fish would belong to the State, contrary to Utermohle's supposition.

The commentary of the Committee on Resources of the Alaska Constitutional Convention is also significant on this point. Referring specifically to the "common use" clause, which Utermohle seeks to distinguish from the sustained yield clause, the commentary states in relevant part as follows:

Game fish, wildlife, fisheries, and water are recognized as belonging to the state so long as in a natural state. These resources are subject to a private right only when they have been acquired or utilized as provided by law.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

Alaska Constitutional Convention Proceedings, Part 6, p. 98 (emphasis added). Thus, the framers of the common use clause thought that the fish being reserved for common use "belonged" to the State. Hatchery fish are reserved for common use by AS 16.10.440(a) and the common use clause itself. Therefore, they must belong to the State and be subject to the sustained yield principle.

Also significant is the commentary to the sustained yield clause, which states in relevant part:

Sustained yield is recognized as a principle applicable to the administration of plant and animal life subject to the immediate authority of the state.

Id. (emphasis added). Because hatchery fish are subjected to the authority of the State by AS 16.10.440(a), among other provisions, it follows that they are subject to the sustained yield clause.

This conclusion also comports with common sense. If they did not belong to the State, it could not reserve hatchery fish for use by others without paying for them. Moreover, if the mere expectation that a hatchery will later be allowed to harvest some unidentified fraction of the returning fish constitutes an ownership interest in all of its fish, then every other limited entry permit holder could be said to have the same "lingering

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

property interest," leading to the false conclusion that none of the fish in Alaska's waters ever belong to the State or are subject to the sustained yield principle of management.

A more reasonable interpretation of these related statutory and constitutional provisions is that, once released, hatchery fish become like wild stocks in every legal respect. They belong to the State, are reserved to the people for common use and must be managed for sustained yield. Therefore, broodstock recovery must be permitted by the Board and the Department at a level sufficient to produce a sustained yield of hatchery stocks.

Even if this is true, Utermohle goes on to argue that the sustained yield principle in Article VIII, Section 4 is not absolute and is "subject to preferences among beneficial uses." He suggests that this phrase implies the power on the part of State regulators to deny hatchery harvests altogether, in order to achieve a "more beneficial public purpose." According to Utermohle, the ability of the State to establish preferences among beneficial uses is reflected in AS 16.10.430(b), which allows the Commissioner of Fish and Game to terminate the operation of a

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

hatchery if its adverse effects are irreversible and cannot be mitigated. Utermohle Memo., p. 4.²

A more plausible interpretation of AS 16.10.430(b) is that the listed conditions under which a hatchery operation may be terminated are the only bases upon which termination is permitted. In other words, unless there are irreversible adverse effects that cannot be mitigated, a licensed hatchery operation cannot be terminated, directly through a termination order, or indirectly through a denial of broodstock or cost recovery funds.

Utermohle's argument also overlooks, among other things, Article VIII, Section 15 of the constitution, which provides:

²AS 16.10.430(b) provides as follows: "If the commissioner finds that the operation of the hatchery is not in the best interests of the public, the commissioner may alter the conditions of the permit to mitigate the adverse effects of the operation, or, if the adverse effects are irreversible and cannot be mitigated sufficiently, initiate a termination of the operation under the permit over a reasonable period of time under the circumstances, not to exceed four years. During the period of time that the operation is being terminated, the permit holder may harvest salmon under the terms of the permit but may not release additional fish."

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the State. This section does not restrict the power of the State to limit entry into any fishery for purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the State.

This provision strongly suggests that the framers of our constitution considered the efficient development of aquaculture to be an important value to be protected. It also indicates read to mean that the efficient development of aquaculture is one of the purposes of limited entry, a principle that is central to fisheries management in Alaska.

Hatchery harvests for broodstock (and cost recovery) are absolutely essential to conservation of the resource and to the efficient development of aquaculture. If deprived of broodstock (or the funds generated by cost recovery), PWSAC could not continue in existence, much less develop efficiently. Furthermore, other beneficial uses, such as the harvest of PWSAC produced fish by commercial, sport and subsistence users, would be seriously harmed, not helped by a restriction on broodstock harvest. Over the past 14 years, PWSAC has harvested an average of less than 30% of the

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

salmon returning to its hatcheries. During the period from 1986 through 1990, PWSAC fish constituted 50 percent of the total commercial harvest. During that period PWSAC contributed an average of approximately \$15.4 million annually in value to the common property fishery, while costing the State little or nothing. PWSAC harvests have consistently sustained other user groups throughout the region, while causing no demonstrable harm to wild stocks. Short of the extreme situation envisioned by AS 16.10.430(b), it is hard to conceive how denial of a reasonable hatchery harvest in favor of other beneficial uses could achieve a greater public purpose.

Any regulation that severely limited or denied PWSAC's right to harvest a reasonable number of fish would violate both Section 4 (sustained yield) and infringe on the values reflected in Section 15 (limited entry and efficient development of aquaculture) of Article VIII and the Limited Entry Act, of which hatchery harvests are an integral part.

Utermohle's argument also overlooks an extensive web of statutory provisions that evidence an unwavering legislative intent to sustain and expand hatchery operations through hatchery harvests. A good example is the very provision that Utermohle

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

cites, AS 16.10.440(a), which provides that hatchery fish are available for common use "until they return to the specific location designated by the department for harvest by the hatchery operator." This indicates a legislative expectation and intent that hatchery harvests are necessary.

The obligation of the Department to affirmatively assist with broodstock recovery is embodied in AS 16.10.443, which states:

Department assistance and cooperative. (a)
Before and after permit issuance under AS 16.10.440 - 16.10.470, the department shall make every effort, within the limits of time and resources, to advise and assist applicants or permit holders, as appropriate, in the planning, construction, or operation of salmon hatcheries.

As explained above, broodstock recovery is essential to hatchery operations. Without it, they could not exist. The Department is obligated under AS 16.10.443 to assist in the operation of hatcheries. Any departmental regulation, action or order that denied broodstock recovery would be inconsistent with this obligation and would be invalid.

Other relevant statutory provisions that establish the obligation of the Department and the Board to manage for hatchery harvests are discussed below, in relation to cost recovery.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

B. The Board And The Department Must Also
Manage For Cost Recovery Harvests

Assistant Attorney General White concluded that the Board and the Department "are authorized, and in fact directed, to manage fisheries so that broodstock returns to hatcheries." Both the reasons given by White and the additional reasons set forth above support this conclusion. On the related issue of whether the Board and the Department must manage for cost recovery, White is less certain. He believes that the arguments on both sides of the question "depend upon implication and analogy" and concludes that "the law does not clearly point to one answer or the other." White Memo., p. 7. However, we would argue that the Alaska Constitution and an extensive statutory scheme require the Board and the Department to manage for hatchery cost recovery.

As an initial matter, it is important to remember that the Board and the Department manage the fisheries primarily through regulations and orders. In order to be valid, a regulation must be within the scope of the authorizing statute and it must be "consistent with standards prescribed by other provisions of law." Beran v. State, 705 P.2d 1280 (Alaska App. 1985), citing AS 44.62.020. In Beran, the court struck down a Board regulation on

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

the basis that it was inconsistent with other provisions of law and therefore invalid. Id. at 1289. If the Board or the Department were to issue regulations that curtailed PWSAC's ability to conduct a cost recovery harvest, the regulations would be inconsistent with numerous provisions of law and could be successfully challenged in court.

The first section of this memorandum focused on the requirements of Article VIII of our constitution. The same constitutional provisions that protect broodstock recovery also protect cost recovery, because cost recovery is also absolutely essential to sustain hatchery yields (Section 4) and to promote the efficient development of aquaculture (Section 15). This discussion will not repeat those arguments, but will focus instead on the legislative mandate for cost recovery. Numerous statutes express the legislative intent that hatcheries must be permitted to conduct cost recovery harvests in order to generate funds for operation, debt retirement, and expansion.

The most obvious such provision is AS 16.10.450(a), which could hardly be clearer on this point. It states:

Sale of salmon and salmon eggs by hatchery.
(a) Except as otherwise provided in a contract for the operation of a hatchery under

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

AS 16.10.480, a hatchery operator who sells salmon returning from the natural waters of the state, or sells salmon eggs to another hatchery operating under AS 16.10.400 - 16.10.470, after utilizing the funds for reasonable operating costs, including debt retirement, expanding its facilities, salmon rehabilitation projects, fisheries research, or costs of operating the qualified regional association for the area in which the hatchery is located, shall expend the remaining funds on other fisheries activities of the qualified regional association.

AS 16.10.450(a).³

The Limited Entry Act, AS 16.43.400, et. seq., permits the Commercial Fisheries Entry Commission to issue "special harvest area entry permits" to holders of private, nonprofit hatchery permits issued by the Department. Section 420 of the Act, noted above in connection with the ownership issue, specifically authorizes cost recovery harvest by permit holders, such as PWSAC:

Disposition of fish. Fish caught under the authority of a special harvest area entry

³The intent of this provision is reiterated in AS 16.40.210, the recently enacted statute that bans mariculture. It provides in section (b)(2) that "this section does not restrict the ability of a nonprofit corporation that holds a salmon hatchery permit under 16.10.400 to sell salmon returning from the natural waters of the state, as authorized under 16.10.450, or surplus salmon eggs, as authorized under 16.10.420 and .450."

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

permit are the property of the permit holder. The permit holder may sell the fish if the proceeds are used in the manner described in AS 16.10.450.

AS 16.43.420. PWSAC, of course, holds a special harvest area entry permit under AS 16.43.400, and its cost recovery funds are used for the purposes listed in AS 16.10.450. It thus has a statutory right to cost recovery that cannot be curtailed through regulation.⁴

PWSAC also conducts cost recovery harvests at Main Bay and Cannery Creek under authority of contracts entered pursuant to AS 16.10.480, enacted by the legislature in 1988. That section authorizes the Department to enter into hatchery management contracts for certain state-owned hatcheries, which allow harvest of adult salmon "in a quantity sufficient to allow the contractor to recover all or part of the contractor's costs of operating the hatchery." While this provision is permissive, rather than

⁴It could also be argued that cost recovery is guaranteed to permit holders such as PWSAC by the Limited Entry Act itself. In Johns v. CFEC, 758 P.2d 1256, 1263 (Alaska 1988) the court stated: "The Limited Entry Act has two purposes - enabling fishermen to receive adequate remuneration and conserving the fishery," citing, Art. VIII, Sec. 15, Alaska Const., AS 16.43.010; CFEC v. Apokedak, 606 P.2d 1255, 1265 (Alaska 1980). Without cost recovery, PWSAC would not receive adequate remuneration or be able to help conserve the fishery.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

mandatory, it is further evidence of the legislature's expectation and intent to permit cost recovery harvests at state-owned but privately operated hatcheries.⁵

Another statutory provision that is quite clear on this point is AS 16.10.430(b), discussed above. This provision permits the Commissioner of Fish and Game to terminate a hatchery permit if he finds that continued operation is no longer in the public interest. Presumably, termination could be ordered if a hatchery failed to sustain itself economically, or more likely, if it produced diseased or genetically damaged fish that might threaten other stocks. See Snow Memo., pp. 12-13, 16. In any case, the relevant point is that termination is to be phased over time.

During the period of time that the operation is being terminated, the permit holder may harvest salmon under the terms of the permit but may not release additional fish.

AS 16.10.430(b). Logically, this provision can only contemplate cost recovery harvest. In the context of hatchery termination,

⁵Both the Main Bay and the Cannery Creek contracts provide that PWSAC shall have the right to conduct cost recovery harvests during the terms of the contracts.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

broodstock harvest would not be necessary since no new fish could be released.

Under AS 16.05.020, the Commissioner of Fish and Game is required to "manage, protect, maintain, improve, and extend the fish, game... of the state in the interest of the economy and general well-being of the State." The FRED Division has been charged with the duty, "through rehabilitation, enhancement and development programs" to do everything "necessary to insure perpetual and increasing production and use of the food resources of Alaska's waters and continental shelf areas." AS 16.05.092. Also significant is AS 16.10.443, cited above, which requires the Department to do everything possible to assist with hatchery operations. Any regulation or order that prevented a reasonable level of cost recovery would hardly be consistent with these duties on the part of the Commissioner or with the myriad of other statutes that authorize cost recovery harvests by hatcheries. Under Beran v. State, supra, and numerous other cases, regulations are invalid if they are inconsistent with other provisions of law.

The statutory provisions discussed above lead to the conclusion that the legislature intended cost recovery harvest to be the primary method of funding private nonprofit hatcheries. The

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

Snow Memorandum on the legislative history of the hatchery program supports this conclusion:

At this time [1973-974], legislators were coming to the view that the private sector would be more efficient than the government in the operation of hatcheries. Also, nongovernmental hatcheries had much to recommend them from the perspective of public finance issues: the operation of private hatcheries could be funded from the harvest of returning fish and from tax assessments on the fishermen who had access to hatchery production, thus shifting the cost of the facilities from the shoulders of the general public to the people who derived benefits directly from them.

Snow Memo., p. 5. (emphasis added). Snow goes on to point out that in 1974 "there was great enthusiasm about the prospect of PNP hatcheries from fishermen's groups, education centers, Native corporations, and the legislature itself." Id.

An attorney for the Southeast Alaska Seiners, Michael D. Stanley, seems less enthusiastic about cost recovery. He has approached the issue from a different direction, acknowledging the Department's primary responsibility for control of hatchery harvests, but questioning whether the Board has the statutory authority to allocate fish to private hatcheries. See Memorandum from Michael Stanley to Kate Troll, Executive Director Southeast

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

Alaska Seiners, dated February 28, 1991. Stanley bases his argument on AS 16.05.440(a), cited above at page 5. He focuses on the statutory language subjecting hatchery fish to regulation in the same manner as wild stocks, "until they return to the specific location designated by the department for harvest by the hatchery operator." From this he concludes (1) it is the Department, not the Board, which is responsible for "allocating" hatchery fish to a hatchery through designation of special harvest areas, and (2) such allocation occurs only after those fish have traversed the common property fisheries and returned to the specific location designated for hatchery harvest. Stanley Memo., p. 4.

One flaw in this reasoning is that it confuses allocation of fish to be harvested with designation of a special harvest area and harvest timing. There is no logical reason that the Board cannot allocate a portion of the return to a hatchery and the Department designate the specific time and place for the harvest of that allocation. In fact, my understanding is that that is how the system has always worked.

This scheme also appears to be in harmony with subsection (b) of AS 16.10.440, which gives the Board the authority "to amend by regulation... the terms of the permit relating to the harvest of

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

fish by hatchery operators, and the specific locations designated by the department for harvest." This provision gives the Department primary responsibility to regulate cost recovery harvests, but also confers sufficient statutory authority on the Board to allocate fish to be harvested. The legislative history of AS 16.10.440, quoted at length below, indicates that the role of the Board extends to regulating the harvest of "those fish which are returning as a result of releases from natural systems and also from hatchery releases." House Journal, March 15, 1979, pp. 601-602.

Another difficulty with Stanley's theory that the Board does not have the power to allocate fish for hatchery harvest is that it seems to be inconsistent with two specific provisions of the Limited Entry Act, under which hatcheries are granted limited entry permits. AS 16.43.440 provides that: "use privileges granted under AS 16.43.400 - .440 are subject to the regulations of the Board of Fisheries." Also, AS 16.43.950 states that "... Holders of ... entry permits issued under this chapter are subject to all regulations adopted by the Board of Fisheries." These provisions

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

also could be read to authorize the Board to allocate fish to hatcheries.⁶

As a final point in response to the Stanley Memorandum, the Board's primary authorizing statute, AS 16.05.251(a), is quite broad and seems to give the Board ample authority to allocate fish for cost recovery and broodstock harvest. Examples of the types of regulations the Board may adopt are found in Section 251(a)(5) (classifying as commercial fish, sport fish, personal use fish, subsistence fish, or predators or other categories essential for regulatory purposes); Section 251(a)(12) (regulating commercial, sport, subsistence, and personal use fishing as needed for the conservation, development, and utilization of fisheries); Section 251 (a)(14) (establishing nonexclusive, exclusive, and superexclusive registration and use areas for regulating commercial fishing.) See also, AS 16.05.251(e) (Board shall establish criteria for allocation of fishery resources among personal use,

⁶As we have argued elsewhere, the power of the Board to allocate to hatcheries does not include the power to deny a reasonable allocation altogether.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

sport and commercial fishing). These provisions are broad enough to allow the Board to allocate to hatcheries.

The idea that hatchery harvests do not qualify as "commercial fishing", and therefore not covered by these statutory sections, is directly contrary to the plain meaning of the definition found in the statute.

"Commercial fishing" means the taking, fishing for, or possession of fish... with the intent of disposing of them for profit, or by sale, barter, trade, or in commercial channels;

As 16.05.940(4). There can be no doubt that PWSAC takes and possesses fish with the intent of disposing of them by sale in commercial channels, and is thus engaged in commercial fishing within the meaning of AS 16.05.251. Commercial fishing is precisely what a cost recovery harvest is. PWSAC's conduct in this regard is indistinguishable from that of any other commercial fisherman. (Ironically, one of the objections that is raised by hatchery opponents is that it is inappropriate, for some reason, for hatcheries to "compete" in the commercial market with other fishermen trying to sell their fish to the same customers).

If PWSAC is engaged in commercial fishing, AS 16.05.251 and the case law cited in the White Memorandum (e.g., Meier v.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

State Bd. of Fisheries, 739 P.2d 172 (Alaska App. 1987)) support the conclusion that the Board has ample power to make allocations for hatchery harvests. The Board not only has the authority, but it also has an obligation to do so. See, AS 16.05.251(d) (requiring the Board to provide a fair and reasonable opportunity for the taking of fishery resources by personal use, sport and commercial fishermen).

C. The Board's Power To Restrict Hatchery Output Is Unclear, But Must Be Limited By The Same Constitutional And Statutory Restrictions That Apply To Cost Recovery

Your second question concerns the extent of the Board's authority to regulate hatchery output, as opposed to allocation of harvests. The Snow Memorandum (Attachment A) addresses this issue. It directly responds to a question posed by Senator Eliason as to whether the legislature ever considered limiting hatchery production because of: (1) adverse impacts on wild stocks; or (2) adverse impacts on salmon market prices. Snow's answer is revealing. Her memorandum states as follows:

We found no discussion in the legislative record that hatchery production should be restrained to a predetermined level for either biological or economic reasons. While the legislature was presumably prepared to take whatever corrective measures were necessary in the face of persuasive evidence that the hatchery program

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

was causing serious biological problems, there appears to have been no discussion of establishing a ceiling on the production of fish from hatcheries.

There also appears to have been no contemplation of imposing a ceiling on the production of hatchery fish to support market prices. According to Terry Gardiner, salmon stocks were so depressed in the 1970's that there was no thought given to the possibility of oversupply.

* * * *

Clem Tillion told us that the legislature did not anticipate dependence on hatchery salmon by Alaska's commercial fishermen, and if adverse impacts on salmon market price were suspected by any legislators, it was not a widespread feeling, for they did not take steps to be able to limit production if that occurred.

Snow Memo., pp. 13-14 (emphasis added).

Consistent with Snow's conclusions, a review of the Board's authorizing statute as well as the other statutes relating to hatcheries finds little or no basis for regulation of hatchery output by the Board.

You specifically asked whether AS 16.10.440(b), which provides, among other things, that the Board has the authority to regulate "the terms of [a hatchery] permit relating to the source and number of salmon eggs...",⁷ authorizes the Board to limit

⁷Section 440(b) goes on to say that the Board may not "adopt regulations or take any action regarding the issuance or denial of any permits required in AS 16.10.400 - 16.10.470." This suggests that the Board does not have the power to completely deny a cost

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

hatchery production levels. The legislative history of this provision indicates that it does not. The Resources Committee's letter of intent on HB 359, which included the language in question, states as follows:

There are three other major changes made by the bill:

(1) Section 2 of the bill amends AS 16.10.440(a)(b). The amendment clarifies the role of the Board of Fisheries. The role of the Board of Fisheries as envisioned by the original legislation was to regulate the harvest of salmon returning to the waters of the state. That role extends to regulating those fish which are returning as a result of releases from natural systems and also from hatchery releases. There are provisions in other portions of the non-profit hatchery Act which allow the designation of specific locations for the harvest of salmon by the hatchery operator for sale, and use of the money from that sale, for the specific purposes as stated in AS 16.10.450. The added language clarifies that the Board of Fisheries may adopt regulations relating to the harvest of the fish by hatchery operators at the specifically designated locations. The Board of Fisheries in the past year or two has enacted regulations relating to those harvests for several of the private non-profit hatcheries in the state.

recovery harvest permit.

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

House Journal, March 15, 1979, pp. 601-602 (emphasis added). The exclusive reference to regulation of harvest, and the absence of any mention of production controls, corroborates the conclusion reached by the Snow Memorandum that the legislature never intended to authorize the Board to limit hatchery production. The Board's traditional function has always been to allocate harvests.

The only other statutory provision that suggests otherwise is found at AS 16.05.251(7), which authorizes the Board to regulate the "propagation and stocking of fish," which tends to suggest the power to regulate production, not just harvest levels and allocations. The most plausible explanation of this language is that it was included to permit regulation of such activities as stocking lakes with trout or perhaps even raising fish in ponds. There is regrettably no legislative history available to aid in the interpretation of this language. Because it runs counter to the Board's traditional role and is inconsistent with the conclusions in the Snow Memorandum, it would be wrong to assign much importance to this provision.

Apart from the issue of whether the Board could regulate hatchery output on a local basis, you have asked also whether the Board has the authority to set regional production limits for the

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

purpose of adjusting relative market shares between different regions of the State. Can the Board, for example, legally cap hatchery sockeye output in Prince William Sound to keep it at the historical position it has held in relation to Bristol Bay sockeye production?

There is no short and simple legal answer to this question. The authority to regulate propagation and stocking is a very slender thread from which to hang an unprecedented, statewide regulatory program of production allocation, which has not been specifically authorized or even contemplated by the legislature. Certainly any such regulatory regime would raise serious questions as to its consistency with the Board's statutory duty to "conserve and develop" the State's fisheries. Such a policy might further conflict with a number of the other statutory provisions already discussed. It would also run up against the sustained yield concept (Section 4) and the maximum use (Section 1) and maximum benefit (Section 2) policies at the heart of Article VIII of our constitution.

Perhaps more significant than the legal impediments, which are considerable, there would be serious practical and policy problems with any attempt by the Board to allocate production

John McMullen, President
RE: Regulation of Private Hatcheries
October 17, 1991

between regions of the State. For example, which historical moment would serve as the reference point for assignment of regional quotas? Would it be before or after establishment of the hatchery program? Would new hatchery programs (such as the Main Bay sockeye facility) be automatically precluded if they would alter the historical balance of harvest levels between regions? How could hatcheries plan their budgets and production levels from year to year, given the inherent unpredictability of natural returns? Would a direct consequence of such a policy be to reward stagnant regions and to stifle initiative on the part of any region that is efficient, well-organized and capable of growth? Would the anticompetitive aspects of regional limits outweigh the asserted benefits? What are the asserted benefits? Do they go beyond mere regional jealousy and have some statewide economic rationale? While the answers to these questions are unknown, it may be very difficult for the Board to identify a defensible, rational basis for any such plan.

Planning/

Permitting

Biological

Issues

check
attachments

CHAPTER VII. BIOLOGICAL/GENETIC ISSUES

In November 1991, in Cordova, Alaska, the Prince William Sound Science Center (PWSSC) and the School of Fisheries and Ocean Sciences, University of Alaska Fairbanks, convened a group of world-renowned experts to examine "The Biological Basis for Maintaining Strong Co-existing Stocks of Natural and Enhanced Salmon Populations in Alaska." This workshop followed a series of international symposiums on this topic during the past two years. Top fisheries biologists, ecologists and geneticists from the United States, Norway, Sweden, the Soviet Union and Japan were present at the Cordova workshop. As a follow-up to the workshop, the group ~~intends to produce a summary~~ *interview* report and list of recommended policies and procedures to be considered by the state of Alaska in managing its wild and enhanced salmon stocks. ~~That report is expected in late February.~~ *Attachment A*

The cumulative effect of hydroelectric dams, habitat destruction, overfishing, and large-scale hatcheries has led to the decimation of many wild salmon stocks in Pacific Northwest states. Biologists in states with a long history of hatchery programs are generally less enthusiastic about these programs than biologists in areas such as Alaska and British Columbia with comparatively recent programs. *Although poor hatchery practices can clearly endanger wild salmon populations, scientists do not agree on the extent to which hatcheries with sound practices can co-exist with sustained healthy runs of wild salmon.*

The lack of consensus among scientists largely results from insufficient data and research, and at times, professional bias. Even where information exists, however, it is often subject to conflicting interpretations. To complicate matters, results of specific studies may not be transferable to other areas or salmon species, and year-to-year environmental changes may affect the results of these studies.

THE GENETIC EFFECTS OF HATCHERIES

Most scientists agree that it is essential to have healthy wild stocks to maintain the health and genetic diversity of both wild and hatchery stocks; genetic diversity must be preserved. Scientific knowledge about the genetic impact on wild stocks of hatchery fish, however, is still incomplete. Reduction in the fitness of salmon stocks, to the extent it has been documented, may involve numerous factors. Most scientists agree that hatcheries can complicate mixed-stock fisheries and affect the genetic composition of wild fish stocks. Scientists do not agree on the extent to which genetic changes affect the short- or long-run fitness of wild stocks.

Straying and intermingling of stocks is a major concern to scientists. The extent of straying, the variables involved in imprinting, and the effects of interbreeding are largely unknown. Large-scale ocean ranching appears to set the stage for straying of wild stocks in the harvest areas of enhanced stocks and also for hatchery fish to stray into the natural streams. What impact this has on the genetic diversity of salmon stocks in a given region is a question that remains to be answered. However, the concern is that intermingling may reduce the fitness of the locally adapted populations.

It is known that the greater the distance between the donor stream or hatchery and the release site, the greater the amount of straying. Many scientists are concerned about the extensive releases at remote sites practiced by many hatchery operations today, with many more planned for the future. They fear that such

straying could potentially, in time, destroy genetic diversity -- resulting in a permanent, irreversible loss. Some scientists believe remote releases should be banned altogether. Others believe they should be permitted with stringent controls and careful monitoring.

OCEAN CARRYING CAPACITY

Some scientists suspect that the carrying capacity of nearshore marine waters and the high seas for salmon may be exceeded by large-scale releases of hatchery salmon. A reduction in the average size of salmon was reported throughout the Pacific region in 1991, but various factors may be responsible. Since 95 percent of the growth of salmon occurs at sea, some researchers believe ocean conditions affect the size of salmon more than competition. Much evidence, however, supports the theory of density-dependent growth for some salmon species, although there is considerable debate regarding its occurrence. More information is needed on the effects of predation and competitors.

DISEASE

Few studies document the transmittal of diseases between hatchery and wild salmon, and there is no documentation of such transmittal in Alaska. Where transmittal of a disease by hatchery salmon has been documented, it occurred after fish were transplanted long distances. Hatchery fish appear to be more vulnerable to disease than wild fish because of the stress of hatchery conditions and large concentrations of eggs and fry. Norway has had considerable problems with disease transmitted by farmed salmon that have escaped and mixed with wild stocks.

Active fish pathology laboratories are maintained by the FRED Division in both Juneau and Anchorage. Their basic function is to implement policies and procedures that guard against the spread of fish and shellfish diseases in Alaska. Reviewing fish transport permits in order to reduce the occurrence of disease is a major task of the labs, as is examining each broodstock for disease prior to its use in a hatchery.

STATE GENETICS PROGRAM AND POLICY

The state genetics program is intended to implement policies and procedures that protect and maintain the genetic uniqueness of Alaska's wild salmon stocks in the face of North America's largest salmon enhancement program. The state's fish genetics policy, considered to be one of the most stringent in the world, was last revised in 1985, and ~~will be~~ *is currently being* reexamined and updated, ~~this year.~~

Alaska's genetic policy contains guidelines and restrictions intended to protect the genetic integrity of wild stocks. The *goal* is to maintain adequate genetic variability, ensuring that the enhanced stock will be able to adapt to changing environmental conditions.

Geneticists have two primary concerns in protecting wild stocks and implementing a successful enhancement program. The first is possible genetic impacts due to gene flow between wild or enhanced stocks; the primary concern being, of course, for wild stocks. The second concern is the loss of genetic variation within or among stocks. Both impacts

can potentially cause the reduction of total fitness in wild stocks and hatchery broodstocks. These problems are addressed in the policy's three main topic areas: stock transport, protection of wild stocks, and the maintenance of genetic variation.

Since specific knowledge of salmon population genetics and the genetic impacts of salmon enhancement on wild stocks was limited, the 1985 genetic policy was based primarily on information from agricultural genetics and research on other species. As a result, the policy contains guidelines that are rather flexible. The policy suggests that because scientific knowledge is limited, fish transport should be evaluated conservatively. For example, if genetic similarity decreases with distance, arbitrary limits must be set on the distance a stock can be transported. For that reason, the Fish Transport Permit process is the prime regulatory tool in the genetic policy. *ADF&G is attempting to clarify some of the flexible guidelines in the revised policy by incorporating knowledge gained from recent studies of the population genetics of salmonids.*

The genetic policy also acknowledges that all salmon runs are not of equal importance. The effect of a salmon enhancement project depends to some degree on the relative value of the stock that might be impacted. However, the policy says that the concept of "significant stock" only relates to the size of a fish population in the context of local importance and use. A population that would be considered insignificant in size in one region, may be of vital importance in another region.

OPTIONS FOR POSSIBLE CONSIDERATION:

Although a report of recommended management actions resulting from the Cordova workshop is expected in late February, some preliminary options for consideration include:

- Evaluation of how well the current hatchery program protects wild salmon from possible negative effects of hatchery salmon. Such a review would help policy makers determine the risk of various alternatives for the future of Alaska's hatchery program.
- Increasing the amount of genetic monitoring required of hatchery operators, and directing ADF&G to continuously review and analyze resulting data statewide.
- Obtaining consensus about research priorities concerning the interaction of hatchery and wild fish in Alaska, coordinating future studies, and deciding how and when to apply the results of those studies to current management practices.
- Conducting research to define the minimum conditions for imprinting for remote release programs.
- Review of current and future programs for their compliance with the state genetics policy.
- Placing greater emphasis on management concerns in the permitting process in order to protect wild stocks.
- Re-examination of escapement goals in order to maximize wild productivity.

- *Consider ~~regional~~ creation of ~~hatchery~~ genetic sanctuaries that are "enhancement-free".*

- Increased use of marking and tagging programs to monitor interactions between hatchery and wild populations.
- Policy development to minimize inbreeding and straying, including an evaluation of remote releases.
- Treating a remote release site as a de facto hatchery site in terms of broodstock and hatchery site guidelines, even if all fish are expected to be harvested.
- Identification of genetic population structures to determine what populations are genetically distinct.
- Survey of populations prior to any enhancement activity to provide a baseline for subsequent genetic monitoring. Evaluation of genetic consequences of hatchery production on adjacent populations during phased-in expansion, with production increases halted if adverse impacts are noted.
- Monitoring wild and hatchery stocks to determine extent of straying and intermingling.
- Continuing to build on cooperative UAF ADFWG, and hatchery studies of environmental factors affecting regional-level production of salmon in southeast, southcentral and western Alaska.
- Funding a joint state and federal workshop on salmon ecology in Prince William Sound, using ~~at~~ recently released oil spill research.