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of a preference right exercised by a regional aquaculture association (R, 049-051).

On January 20, 1986, ADF&G filed an application to appropriate for itself the same quantity of water requested by WAI. (This specific information appears to be absent from the record although it is obliquely referred to at 137 as one of four competing applications and at 077 where ADF&G requests "issuance of [their] water rights".)

On May 6, 1986, the Department of Law issued an opinion indicating that ADF&G could, in effect, override the preference right and develop its own hatchery at Warm Springs Bay.

On May 19, 1986, Deputy Commissioner Pennoyer advised WAI that ADF&G intended to "develop the Baranof Warm Spring site to its highest potential" (R, 075).

On May 30, 1986, ADF&G informed DLWM of this intention and requested that water rights be awarded to ADF&G instead of WAI (R, 077).

On June 12. 1986, DLWM issued a decision denying WAI's application for the requested water use permit and advising WAI of its right to appeal the decision (R, 085-086).

On July 3, 1986, WAI appealed this decision to the Commissioner (R, 087). The point on appeal before the Superior Court was raised in the appeal to the Commissioner in the brief filed by WAI (R, 089-100).

On October 14, 1986, DNR Commissioner Munnicke affirmed the decision of DLWM (R, 107-113).

WAI appeals to the Superior Court from this determination.

STATEMENT OF STANDARD OF REVIEW

The appropriate standard of review to be applied in this proceeding is the substitution of judgment test set forth in Jager v. State, 537 P. 2d 1100 (Alaska 1975) because this appeal does not ask the Superior Court to reweigh facts or review policy choices involving agency expertise. The appellant, WAI, contends only that DNR acted contrary to the statutes and applicable administrative regulations when it denied the water use permit.

ARGUMENT

When WAI purchased the Warm Springs Bay property and applied for the right to appropriate 200 cfs of water from the Baranof River, it contemplated a multi-purpose aquaculture operation. One purpose was ocean ranching which, in this case, would have involved the production of Chinook smolts for release into the common property fishery; WAI had originally hoped to contract with the State to do this on the State's behalf as part of the mitigation effort authorized by the recent treaty with Canada. Another purpose was the production of Chinook smolts for sale to a fledgling salmon farming industry. Still another was pen raising salmon and possibly other species for sale for human consumption. The protected location of the property and the

close availability of an abundant supply of unappropriated fresh water under a sufficient head of pressure made all of the contemplated purposes realistic.

When DLWM Director Hawkins denied the application for the water use permit requested by WAI he stated:

> ...the Department of Fish and Game has determined that there will be no permit issued to Wilderness Acquisitions, Inc. for development of an aquaculture facility at Warm Springs Bay. Now that it is clear that no permit will be issued, Wilderness Acquisitions, Inc. does not have the ability to complete the appropriation of water applied for under LAS #4068. Therefore, pursuant to AS 46.15.080(b)(7), application number LAS #4068 is found to be not in the public interest and therefore the issuance of a water use permit is denied and the casefile closed this 12th day of June, 1986. (R, 086)

In its effort to reverse or modify this decision, WAI divided its argument into two main components:[2]

The first argument, in essence, was that with respect to the ocean ranching aspect of its planned operation, WAI should have a reasonable period of time in which to secure a private non-profit hatchery (PNP) permit and that the public interest under the Water Use Act, AS 46.15, could be protected by conditioning the water use permit on the ability of WAI to secure the PNP permit within a reasonable period of time. Although the statutes and regulations, give the Commissioner ample authority to issue

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[2]A third argument dealing with administrative discretion and the political realities of aquaculture in Alaska was also addressed to the Commissioner. Since the argument was political in nature, it is not a proper subject for judicial review and is not raised on this appeal.

such a conditioned permit, she chose not to do so believing, on the basis of statements made to her by ADF&G personel, that WAI would not be able to obtain a PNP permit. This choice appears to have been made within the scope of the administrative authority delegated to her and could not successfully be appealed to this court. Since WAI cannot engage in ocean ranching without a PNP permit from ADF&G and ADF&G has indicated that no such permit is forthcoming, WAI does not contend that it can complete the appropriation by beneficially using water to rear fish that will be released into the common property fishery.

The second argument, which is the one pursued in this appeal, is that WAI does not, at this time, need a permit from ADF&G to engage in ocean farming, that it is in position to immediately begin building the improvements which will enable it to beneficially use the water for which it has applied and that WAI is entitled by law to receive a water use permit. In addressing this argument, the Commissioner stated:

> Clearly the operation of a fish farm without release into the common-property fishery does not meet the highest and best use determination of ADF&G Commissioner Collingsworth. In order to operate a fish farm, it is necessary to obtain a fish transport permit from ADF&G. Since that department intends to develop the site itself, and since fish farming without releasing the fish does not meet the highest and best use determination, it is clear that WAI does not at this time have the ability to complete the proposed water appropriation by means of fish farming. (R, 108)

It therefore appears that the logic DNR followed in denying WAI's application for a water use permit can be restated in

the following manner: Since fish farming is not the highest and best use of the Warm Springs Bay site, ADF&G will not give WAI a fish transport permit. Without that permit, WAI cannot farm fish. If WAI cannot farm fish, it cannot complete the appropriation. If it cannot complete the appropriation, the proposed appropriation is not in the public interest. If the proposed appropriation is not in the public interest, DNR is not required to issue the water use permit. WAI, for the reasons appearing below, disagrees.

Fish farming is an activity which has been specifically contemplated by the legislature. AS 16.05.940(12) defines fish or game farming as:

> ... the business of propogating, breeding, raising or producing fish or game in captivity for the purpose of marketing the fish or game or their products, and "captivity" means having the fish or game under positive control, as in a pen, pond or area of land or water which is completely enclosed by a generally escape-proof barrier.

ADF&G has finally and reluctantly agreed that fish farming is a legal activity. In a memorandum to Assistant Attorney General Larri Spengler dated February 6, 1987, ADF&G Commissioner Collingsworth states:

> The staff has reviewed existing Title 16 statutes and regulations dealing with fish farming, commercial fisheries, salmon hatcheries, research, and fish importation, transplantation and holding. That review indicates that some fish farming activities are legal, although the route one must follow through the law to reach that conclusion is complex. Other matters are not so clear. Set out below are the results of the review...

> Since it appears that fish farming, in general, is a legal activity, we must then look at the legal means of obtaining the fish to be farmed....
>
> A question that many find perplexing is how does one obtain, other than by importation, fish for placement in a farm? It seems clear to us that, at the present time, one must do this through commercial fishing operations. Since fish farming and the sale of fish to farms as brood stock are commercial operations, the taking of those fish cannot be done under sport, subsistence or personal use regulations. If one has all the proper permits and licenses, the season is open, and legal gear is used, the fish may be harvested and subsequently farmed....

Since fish farming is an authorized activity, the question becomes how and to what extent is ADF&G able to regulate such farming? In the same memorandum, Collingsworth goes on to state:

> Once a brood stock is available, the Department of Revenue (DOR) licensing and DF&G permitting processes for the fish farmer are relatively simple. The farmer would apply to DF&G, under 5 AAC 41, for a permit to transport and hold live fish. We would review the proposed operation for compliance with AS 16 and 5 AAC. Upon issuance of the permit, we would then recommend that DOR issue a fish farming license.

It is therefore the apparent intention of ADF&G to use the fish transport permit as the mechanism to regulate fish farming.

The regulations which create the fish transport permit system are set forth in 5 AAC 41.005 through 100. It is immediately apparent from a reading of these regulations that their primary, if not only, purpose is to protect against the transmission of disease from one fish population to another. These regulations specifically provide that the Commissioner will issue a permit

if ADF&G determines that the proposed transport, possession or release of fish will not adversely affect the continued health and perpetuation of native, wild, or hatchery stocks of fish. 5 AAC 41.030(a). The regulations do not authorize the Commissioner to deny a fish transport permit to an applicant because ADF&G has determined that it needs for its own project the water which the applicant is in the process of acquiring. In other words, the fish transport permit system has absolutely nothing to do with hatchery site identification and reservation; it is designed to protect existing fish stocks from disease. If WAI is able to show that it can carry forward with its operations without adversely affecting existing fish stocks, it is entitled by law to have a fish transport permit issued to it.

Commissioner Wunnicke, in denying the water use permit appeal, implied that ADF&G had the authority to determine the highest and best use of a proposed site and issue or deny a fish transport permit accordingly. More specifically, she indicated that if ADF&G determined that a proposed project did not meet ADF&G's idea of what constituted the highest and best use of a particular site, it could deny an application for such a fish transport permit. This "highest and best use" test originated in an attorney general's opinion[3] which dealt with the relationship between ADF&G and regional aquaculture associations when such an association had exercised a preference right to a hatchery site which ADF&G desired to develop. The opinion concluded

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[3]Op. Atty. Gen. No. 661-86-0282; May 5, 1986

that in deciding between a private non-profit applicant for a hatchery site and itself, ADF&G was to consider which of the two would make the best use of the site's potential. This conclusion derived from the language in 5 AAC 40.220(b)(2) which states:

> The operation of the proposed hatchery must make the best use of the site's potential to benefit the common property fishery. In order to achieve optimum public benefit from the state's private non-profit hatchery program and insure that the proposed hatchery is in the best interest of the public, enhancement sites must be developed to their fullest potential, with consideration to appropriate species and technological uses of the site. (emphasis added).

This regulation and the best use standard which, according to an assistant attorney general, arises in its language have absolutely nothing to do with fish farming projects. They are, by the terms of the regulation itself, limited to sites where there is competition among applicants who wish to operate private non-profit hatcheries designed to enhance the common property fishery. If Wunnicke's reasoning is carried to its logical end, ADF&G could prohibit private development of any aquaculture project in Alaska merely by determining that the highest and best use required the site to be reserved for state use. This result is not only absurd from a practical standpoint, it is entirely without legal foundation. There is no evidence that the legislature intended to confer such plenipotent power over aquaculture on ADF&G.

There exists, however, two methods by which ADF&G, when it has identified a site which it intend to develop in the future,

can act to insure that the water supply needed for the development will not be subject to private appropriation. First, it can apply for an instream reservation under AS 46.15.145. That statute authorizes DNR to reserve a specified instream flow or level of water at a particular point for purposes such as fish propogation. The reservation can be revoked when ADF&G commences enhancement at the site. A reservation will tie up the water for a minimum of 10 years. Second, ADF&G can apply for a water use permit just like anyone else. In fact, ADF&G did so in this situation not once, but twice.[4] In other words, ADF&G had plenty of opportunity to protects its interest in the site prior to the application by WAI if it desired to do so without relying on some convoluted notion of highest and best use to sweep aside the rights of persons or organizations such as WAI who had a higher priority to the water under AS 46.15.050.

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[4]The first application for water for a hatchery at Warm Springs Bay was received by DNR on May 24, 1978. It was terminated on November 18, 1983 because ADF&G failed to build the improvements necessary to begin beneficial use of the water. The second application was filed on January 14, 1986, approximately three weeks after WAI applied for the same water. Under AS 46.15.050, priority of appropriation gives prior right and priority of appropriation dates from the filing of an application for a water use permit. If, as indicated in the letter to Greg Young from Deputy Commissioner Pennoyer dated May 6, 1986 (R, 070-072), this site was identified "over ten years ago, even prior to the comprehensive planning effort in the region" as a "world class hatchery site for the production of chinook, coho and chum salmon", one wonders what form of egregious bureaucratic malfeasance allowed water rights initially dating from May 24, 1978 to revert to common property. If ADF&G had been diligent in protecting its interest in the site, WAI would have known that the water was unavailable and would not have invested $350,000 in the property.

The only question remaining is whether WAI must obtain a fish transport permit before the water use permit can be issued. It is immediately obvious from a reading of the regulations set forth in 5 AAC 41.005 through 100, that it would be premature and meaningless for DNR to require WAI or any other water use permit applicant at a similar stage of project development to obtain a fish transport permit before issuing the water use permit. For example, the regulation governing the content of the application for a fish transport permit, 5 AAC 41.010, requires the applicant to submit, among other information, identification of the stock to be transported or possessed, the number of fish and their life history, stage or age and a statement on the health or condition of the fish, including a disease history of the stock, any hatchery through which they may have passed and, possibly, a brood stock inspection certificate. It is going to be at least two years from the date the water use permit is granted before WAI's facility will be ready for operation. WAI has no way of being able to know what brood stock will be available at that time (particularly where, as here, the gametes will probably be acquired through commercial fishing) and if it did, the disease history of the stock could change before the facility is operable. Acquisition of a fish transport permit should be one of the last things a fish farmer does before beginning operation. DNR has no reasonable interest in and, in fact, would be proceeding in a counterproductive manner by requiring that the fish transport permit be obtained before issuing the

water use permit.

CONCLUSION

DNR denied WAI's application for a water use permit because it concluded that WAI would not be able to complete the appropriation. In so doing, it reasoned that WAI could not complete the appropriation because it would not be able to obtain a fish transport permit.

WAI is the owner of patented tidelands and an easement for a pipeline to the Baranof River. The necessary water is available for appropriation. In order to develop the planned fish farming facility, WAI must acquire a water use permit. In order to operate the facility, it must acquire a fish farm license from the Department of Revenue and a fish transport permit from ADF&G. It already has the license and will be entitled to receive the fish transport permit after the facility is completed and an acceptable brood stock is identified. WAI has done everything which it is able to do and which can be legally required of it at this time. WAI has the intent and the ability to complete the appropriation. WAI is therefore entitled to receive a water use permit from DNR.

This court should therefore reverse the decision of Commissioner Wunnicke and, under the authority of AS 44.62.560(e), order DNR to issue to WAI the water use permit for which it applied.

Respectfully submitted this 23rd day of February, 1987.

Jan Van Dort
Attorney For Appellant

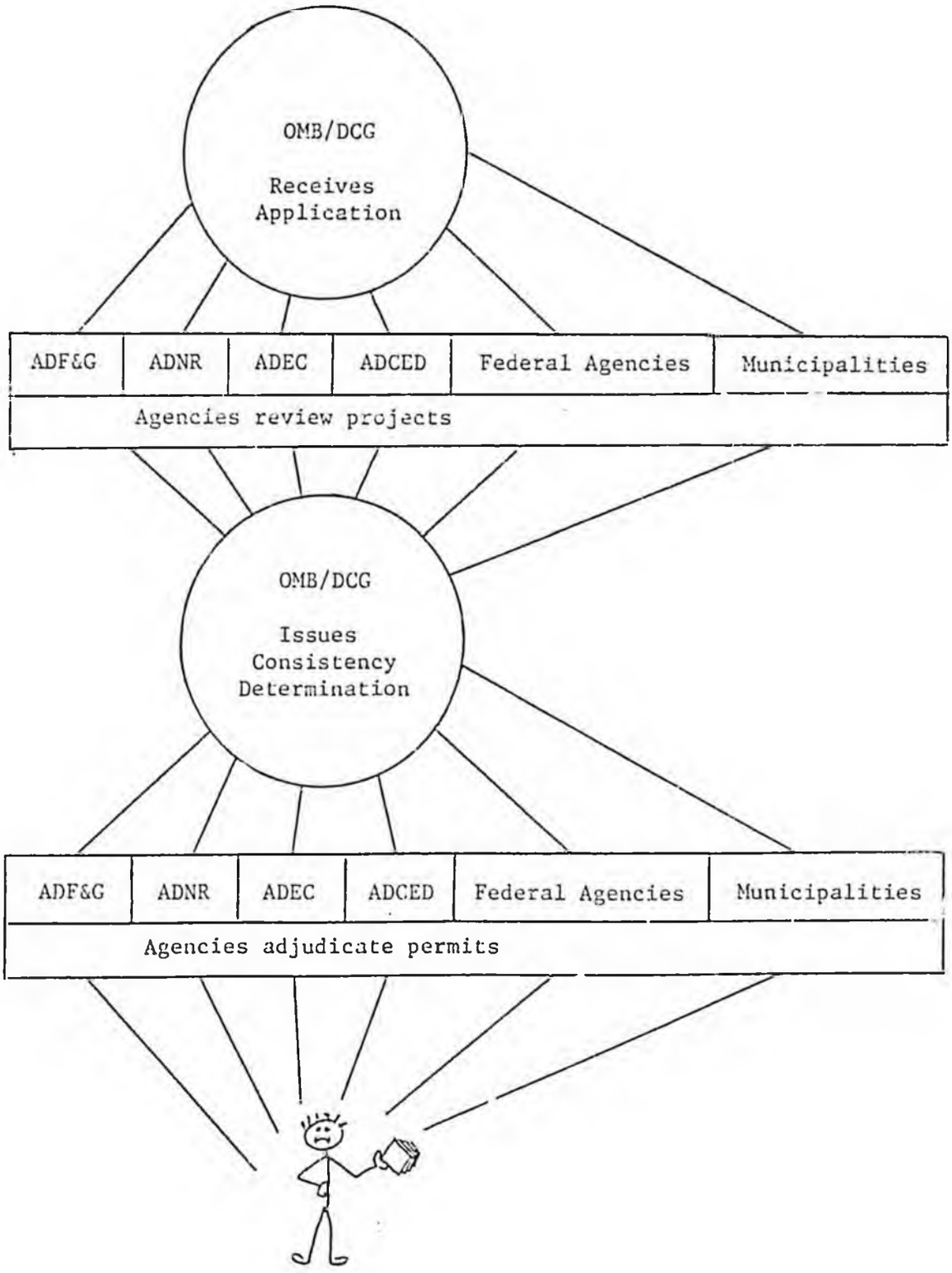
I hereby certify that a true and correct copy of the foregoing Brief of Appellant was served on the State of Alaska by delivery thereof to the office of Assistant Attorney General Joseph W. Geldhof on February 23, 1987.

Jan Van Dort

EXISTING PERMIT STRUCTURE

for

RESOURCE AGENCIES



3/24/87

Alaska Department of
NATURAL
RESOURCES

LEASING OF STATE LANDS AND TIDELANDS

A.S. 38.05.070

State land, including tide, submerged and shore land is available to lease by any member of the public, business or organization that can demonstrate a need for appropriate development. Leases may be offered competitively through public auction or negotiated directly with the applicant. If the fair market annual rental is determined to be less than $5000.00, the law allows the State to negotiate that lease directly with the applicant for 10 years or less. However, if it is determined that a competitive interest exists or if the annual rental is greater than $5000, the lease will be offered at a public auction to the highest bidder. The minimum bid will be the appraised fair market value annual rental.

Competitive leases can be issued for a term not to exceed 55 years, while negotiated leases can only be issued for a term of 10 years or less. Within those parameters, the determining factors are the estimated life of the project or the estimated time that the applicant thinks the land will be needed and the extent of the improvements. Land leases that are offered by competitive bid are renewable at the director's discretion. The renewal must be applied for in a timely manner. Leases negotiated under A.S. 38.05.070(b) are not eligible for renewal.

The owner or lessee of land that fronts on tide or submerged land is entitled to acquire a negotiated lease for the tide and submerged land if the requirements of A.S. 38.05.075(c) are met.

Negotiated leases may also be requested by: 1) commercial operators of fishing or hunting camps within an exclusive or joint use guiding area, 2) commercial operators of duck shacks, and 3) shore fishery setnetters seeking an upland lease for use in conjunction with their fishing sites. Parcel size should be limited to the minimum acreage needed. In the case of setnetters, they must provide evidence that they have necessary limited entry permit to participate in the local fishery and the term of the upland lease should coincide with the term of their shore fishery lease. If they do not have a shore fishery lease, they should apply during the filing period.

The development plan should contain the following information:

- A description of the type and location of the temporary and/or permanent structures and a scale drawing depicting all proposed structures.
- The intended access to the site.
- An explanation of any clearing or cutting of trees.
- A description of the intended power source and fuel storage area.
- An explanation of the intended solid waste and waste water disposal method.

Applicable statutes for reference:

A.S. 38.05.035 -- Powers and duties of the director.
A.S. 38.05.070-.105 -- Leasing of lands other than for the extraction of natural resources.
A.S. 38.05.840 -- Appraisal
A.S. 38.05.920 -- Assignment
A.S. 38.05.945 -- Notice

Additional information may be obtained from the local office of the Division of Land and Water Management, Department of Natural Resources.

South Central Regional Office
OFFICE LOCATION:
3601 "C" Street, Tenth Floor
Anchorage, Alaska
Phone: (907) 762-2202
MAILING ADDRESS:
P.O. Box 7005
Anchorage, Alaska 99510-7005

Mat-Su Area Office
OFFICE LOCATION:
Century Plaza, Suite 202
Mile .5 Knik Road
Wasilla, Alaska
Phone: (907) 376-45
MAILING ADDRESS:
P.O. Box 874008
Wasilla, Alaska 99687

Northern Regional Office
OFFICE LOCATION:
4420 Airport Way
Fairbanks, Alaska
Phone: (907) 479-2243
MAILING ADDRESS:
4420 Airport Way
Fairbanks, Alaska 99709

Southeast Regional Office
OFFICE LOCATION:
400 Willoughby Avenue,
Suite 400
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Phone: (907) 465-3400
MAILING ADDRESS:
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Suite 400
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CORRECTION

THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

Alaska Department of
NATURAL
RESOURCES

LEASING OF STATE LANDS AND TIDELANDS

A.S. 38.05.070

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Negotiated leases may also be requested by: 1) commercial operators of fishing or hunting camps within an exclusive or joint use guiding area, 2) commercial operators of duck shacks, and 3) shore fishery setnetters seeking an upland lease for use in conjunction with their fishing sites. Parcel size should be limited to the minimum acreage needed. In the case of setnetters, they must provide evidence that they have necessary limited entry permit to participate in the local fishery and the term of the upland lease should coincide with the term of their shore fishery lease. If they do not have a shore fishery lease, they should apply during the filing period.

Leases may be transferred by assignment with the approval of the chief of Contract Administration. Before approving an assignment of lease, the individual receiving the lease must be determined eligible to participate in the program under which the lease was created and the lease must be in good standing.

It is the responsibility of the applicant to arrange and pay for survey, appraisal and legal notice publication, and to see that these tasks are carried out in a timely manner when directed to do so by the State. Depending on the time of year, these tasks could be time consuming. If the lease is negotiated, the decision on whether or not to require a survey will be made on a case by case basis and will depend on the type and extent of existing monumentation, the existing uses of the surrounding land, the likelihood that the surrounding land will be developed during the lease term and any other pertinent factors which may apply to a particular parcel of state land.

The following is a general time table for processing a lease:

1.	Application received, serialized and photo copied.	*30 days
2.	In-house and agency review	30 days
3.	Preliminary decision	30 days
4.	.945 notice letters (AS 38.05.945(c)	30 days
5.	.945 public notice (newspaper ad) (AS 38.05.945(b)	30 days
6.	Survey and appraisal (11 AAC 58.400 - .410)	60 days
7.	Final decision	10 days
8.	.945 notice letters (if competitive offerings)	30 days
9.	.945 public notice (if competitive)	30 days
10.	Lease offering	10 days

In addition to the above mentioned times, applicants must take into consideration delays that may occur if the land is not classified or needs to be reclassified (approximately 90 days - 11 AAC 55). If the land is located within an organized borough, the survey plat must be approved by the local platting authority which requires additional time (11 AAC 53). Applications are processed in the order received and there is currently a backlog of over 2000 casefiles.

Applicants should include the following information with their completed application form:

- Filing fee.
- USGS map 1:63,360 scale with the location marked.
- Development plan and time schedule.
- A clear statement of the intended use of the property.
- Any applicable licenses.

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* Some upland leases and all tideland leases are within the "coastal zone" and other permits may be required from other agencies. These go through another review for consistency with the Alaska Coastal Management Plan or approved local coastal plans. Normal review period is 50 days.

The development plan should contain the following information:

- A description of the type and location of the temporary and/or permanent structures and a scale drawing depicting all proposed structures.
- The intended access to the site.
- An explanation of any clearing or cutting of trees.
- A description of the intended power source and fuel storage area.
- An explanation of the intended solid waste and waste water disposal method.

Applicable statutes for reference:

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A.S. 38.05.945 -- Notice

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Southcentral Regional Office
OFFICE LOCATION:
3601 "C" Street, Tenth Floor
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Wasilla, Alaska
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P.O. Box 874008
Wasilla, Alaska 99687

Northern Regional Office
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4420 Airport Way
Fairbanks, Alaska
Phone: (907) 479-2243
MAILING ADDRESS:
4420 Airport Way
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Southeast Regional Office
OFFICE LOCATION:
400 Willoughby Avenue,
Suite 400
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Phone: (907) 465-3400
MAILING ADDRESS:
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Suite 400
Juneau, Alaska 99801

Alaska Department of
NATURAL
RESOURCES

FACT SHEET - LAND USE PERMITS ON STATE LAND

Division of Land and Water Management
Southeast Regional Office
400 Willoughby Ave., Suite 400
Juneau, Alaska 99801
Tel, No. 465-3400

WHAT IS A LAND USE PERMIT?

A land use permit is authorization for the temporary use of state land, tideland or resources. It conveys no right in the land and is essentially a guarantee that so long as the activity is conducted under the terms of the permit the holder is immune from prosecution for trespass. All permits are revocable immediately with cause, and they are revocable without cause upon a thirty day notice. Permits are not transferable. Permanent structures are prohibited on a permit area. Therefore, any structure placed on the permit area must be readily removable.

FOR HOW LONG IS A PERMIT ISSUED?

It is division policy that a permit may not exceed one year in length. A permit may not be renewed, but it may be re-issued by submitting a new application.

HOW DO I OBTAIN A LAND USE PERMIT?

A permit may be obtained by making application to the Southeast Regional Office at the address listed above. The applicant must submit a completed land use permit application, a filing fee, a sketch map and a completed coastal project questionaire.

WHAT COSTS ARE INVOLVED?

An applicant must pay a fifty dollar filing fee. There are no user fees for non-exclusive permits, however, user fees of fifty dollars per acre per year with a one-hundred dollar minimum will be charged for all permits for exclusive use or commercial use.

WHAT IS THE PROCESSING TIME?

Normally the processing time is about thirty days. This allows time for review of the application by other state agencies and for a determination of consistency with coastal zone management statutes.

WHAT ARE GENERALLY PERMITTED ACTIVITIES?

Regulations specify certain activities which will be allowed on state lands without the issuance of a written permit. These are called generally permitted activities. A list of generally permitted activities is on the attached page.

Prepared 8/29/86

The following constitutes the list of generally permitted activities on state lands:

A. Hiking and backpacking, horse and dog team travel, cross-country skiing and snowmachining, camping and warming fires, mountain climbing.

B. Light plane and helicopter landing; use of water equipment such as boats, rafts and canoes.

C. Hunting, fishing and trapping; use of state land for setting up fish camps or hunting camps when such camps are for the individual's own temporary use and do not constitute a preference right. Placement of crab and shrimp pots in accord with fish and game regulations is allowed.

D. Harvesting small number of wild plants for personal use; securing dead or down firewood for personal use; harvesting mushrooms, berries and other plant materials for personal use as food.

E. Non-exclusive recreational use or other use that is temporary and has no noticeable effect on vegetation, drainage or soil stability nor involves any harassment of wildlife other than lawful hunting, trapping and fishing.

F. Recreational gold panning.

Although the following activities are generally permitted on the state public domain, a written permit is required for surface uses of lands designated as part of the state park system, fish and game sanctuaries, refuges, and critical habitat areas, or areas where use is limited by classification or special use designation including university grant lands:

A. Mineral prospecting using pick and shovel; hard rock prospecting by backpacking; gold or other mineral recovery utilizing small hand held or floating suction dredging apparatus.

B. Brushing survey lines or trails less than three feet wide where there is no disturbance of the root system and when such trails do not constitute a right-of-way.

C. A livestock drive of less than 100 animals.

D. Anchoring of mooring buoys or construction of private floats and docks by the upland owner for his own personal noncommercial use on state tide or shore lands.

E. Use of vehicles such as 4-wheel drive vehicles, pickups and all-terrain vehicles (wheeled and tracked) off established right-of-way easements.

2768134

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-8386

March 3, 1987

Mr. Bob Palmer
Department of Natural Resources
Division of Land and Water Management
400 Willoughby Avenue, Suite 400
Juneau, Alaska 99801

Dear Mr. Palmer:

This is in response to your request for information pertaining to the leasing of state water bottoms in California for aquaculture purposes.

Enclosed is a copy of our "Marine Aquaculture Leaflet" and a list of our registered marine aquaculturists. Also enclosed is an article on SB 1917, 1982, the legislation that led to our current aquaculture regulations. The provisions of SB 1917 are incorporated into the California Fish and Game Code, specifically Sections 15000-15908, pages 27-38 of the leaflet.

The authority for the leasing of state water bottoms for aquaculture purposes are contained in Sections 15400-15415, pages 30-33. Fish and Game Commission regulations that implement the aquaculture laws contained in the Fish and Game Code are contained in Title 14, California Administrative Code, Sections 235-245, pages 39-61.

The state's marine aquaculture laws and regulations also provide for revenue to support the Department's aquaculture program. This revenue comes from a registration fee for all aquaculturists (Section 15101), rental rates for tideland acreage (Section 15406.5) and royalty fees for products produced on the leases (Section 8045 pages 25 and 26, and Section 15406.7, page 32).

I hope this information will be useful to you. If I can provide additional assistance, please let me know.

Sincerely,

Emil J. Smith, Jr.

Emil J. Smith, Jr.
Marine Resources Supervisor
Marine Resources Division

EJS:gs

Enclosures

The bag limit on such clams is 50 per day, in the aggregate. Not more than one daily bag limit of such clams may be possessed by any person during one day.

Clams of the species herein designated, when legally taken outside the state and brought within the state pursuant to this code, may be possessed, transported and sold without restrictions, except that all shipments of such clams into this state shall be accompanied by a bill of lading, or invoice, showing the species, total number or weight, and the origin of the clams.

8345. It is unlawful for any person to sell or purchase any rock scallops (Hinnites multirugosus) or scallops (Pecten circularis), except that scallops cultivated pursuant to Division 12 (commencing with Section 15000) which may be sold or purchased subject to regulations of the commission.

DIVISION 9. FINES AND PENALTIES

Chapter 1. GENERAL PROVISIONS

12000. The violation of any provision of this code, other than Sections 3009 and 12001, or of any rule, regulation, or order made or adopted under this code, is a misdemeanor.

12002. The maximum punishment for a violation constituting a misdemeanor is a fine of one thousand dollars ($1,000) or imprisonment in the county jail for six months, or both, except as follows:

12010. Notwithstanding Section 12000, the maximum penalty for a violation of Sections 15202 or 15509 is a fine of two thousand dollars ($2,000) or imprisonment in the county jail for one year, or both the fine and imprisonment.

DIVISION 12. AQUACULTURE

Chapter 1. GENERAL PROVISIONS

15000. The business of aquaculture is governed by this division. Aquaculture and its products are exempt from those provisions of this code dealing with commercial fishing and harvesting.

15001. The cultured progeny of wild plants and animals lawfully obtained under Section 15300 are the exclusive property of that person who cultured them or that person's successor in interest.

15002. Any person who takes aquaculture products without lawful entitlement is subject to prosecution for theft.

15003. (a) The department may assess a fee on persons growing aquaculture products on public lands and in public waters based on the price per pound of the products sold. the fees, if imposed, shall be

set at amounts necessary to defray the costs of the commission the department in administering this division. however, the fees if any, may not exceed the privilege taxes as provided in section 8045.

(b) the price per pound for these taxation purposes shall be based on the whole product weight or its equivalent as taken by the lessee.

(c) the privilege tax imposed by this section shall be paid monthly to the department within 30 days after the close of each month. if not paid within 60 days after the close of the month in which it is due, a 10 percent penalty shall be paid.

15004. aquaculturists operating under this division shall pay all costs incurred by the department when conducting any inspections of plants, animals, facilities, or culture areas required by this division, or by regulations made pursuant to it, when requested by the aquaculturists.

15005. (a) When necessary for the protection of native wildlife, the commission may regulate the transportation, purchase, possession, and sale of specific aquaculture products as provided for in this section.

(b) The commission may determine that aquaculture products shall be accompanied by a document containing any of the following information:

(1) The name, address and registration number of the aquaculture producer.
(2) The species.
(3) The weight, volume or count within the container.
(4) The date of the shipment.
(5) The name and address of the intended receiver.

(c) The commission may require that certain aquaculture products shall be additionally identified as being aquaculture produced, except for the following:

(1) Trout.
(2) Catfish.
(3) Kelp and aquatic plants.
(4) Frogs and amphibia.
(5) All bivalve mollusks (except littleneck clams).
(6) All members of the family Centrarchidae.
(7) Crayfish.
(8) Sea urchins.
(9) Shrimp and freshwater prawns.
(10) Crab.

15006. Nothing in this division applies to authorized species of ornamental marine or freshwater plants and animals not utilized for human consumption or bait purposes that are maintained in closed systems for personal, pet industry, or hobby purposes.

15007. Except as specifically authorized in Chapter 10 (commencing with Section 15900), nothing in this division permits ocean ranching.

Chapter 2. AQUACULTURE DEVELOPMENT SECTION

15100. There is within the department the Aquaculture Development Section. The Aquaculture Development Section shall perform all of the following duties:

(a) Promote understanding of aquaculture among public agencies and the general public.

(b) Propose methods of reducing the negative impact of public regulation at all levels of government on the aquaculture industry.

(c) Provide information on all aspects of regulatory compliance to the various sectors of the aquaculture industry.

(d) Provide such advice to aquaculturists on project siting and facility design that may be needed to comply with regulatory requirements.

15101. The owner of each aquaculture facility shall register all of the following information with the department by March 1 of each year.

(a) The owner's name.

(b) The species grown.

(c) The location or locations of each operation or operations. The department may provide registration forms for this purpose and may impose a registration fee not to exceed one hundred dollars ($100). Anyone failing to register under this section shall be operating unlawfully.

15102. The department may prohibit an aquaculture operation or the culturing of any species at any location where it is determined it would be detrimental to adjacent native wildlife.

Chapter 3. STOCKING AQUATIC ORGANISMS

15200. The commission may regulate the placing of aquatic plants and animals in waters of the state. Movement of live fish between two registered aquaculturists who are registered for those species does not require a permit.

15201. A permit is required to place fish on public or private land or water in any watershed above an established public or private fish hatchery. The department shall deny the permit if there is evidence that water quality and potential disease transfers will be adverse to the established hatchery.

15202. The commission may prohibit the placement of specific species of aquatic plants or animals in designated waters of the state. The prohibition may not include species that are found to be native or that are stocked by the state in a location where prohibition is contemplated.

Chapter 4. BROOD STOCK ACQUISITION

15300. Aquatic plants or animals may be legally obtained for use as brood stock from all of the following sources:

(a) A holder of a commercial fishing license.

(b) A registered aquaculturist.

(c) The department.

(d) Imported sources authorized by Chapter 7 (commencing with Section 15600).

15301. (a) The department may sell wild aquatic plants or animals, except rare, endangered, or fully protected species, for aquaculture use at a price approximating the administrative cost to the department for collection or sale of the plants or animals. The commission shall set this price.

(b) Aquatic plants and animals may be collected by a registered aquaculturist only with the written approval of the department. The department may specify the time, place, and manner of collection and may collect a fee from the aquaculturist in an amount sufficient to cover the cost of processing the approval.

Chapter 5. LEASING OF STATE WATER BOTTOMS

15400. The commission may lease state water bottoms to any person for aquaculture. The commission may adopt regulations governing the terms of the leases. No state water bottoms shall be leased, unless the commission determines that the lease is in the public interest.

15401. Areas used by the public for digging clams shall not be leased. The department shall designate those areas.

15402. A lessee of a state water bottom owns all lawfully cultivated organisms that are described in the application for the lease and produced in the area leased. The lessee has the exclusive right to cultivate and harvest the aquatic organisms in the area leased.

15403. Persons wishing to lease a state water bottom shall make a written application to the commission. An application shall contain all of the following information:

(a) A map showing the area to be leased, its general vicinity, and all

ownership and boundary lines in the vicinity.

(b) A description of the organisms to be grown and the culture techniques to be used.

(c) An estimate of the acreage to be leased.

(d) A nonrefundable one hundred dollar ($100) filing fee.

The lessee shall assume responsibility for any infringement on privately owned water bottoms, or water bottoms owned by, or under the jurisdiction of any city, county, or district.

15404. (a) If the commission finds that the area applied for is available for lease and that the lease would be in the public interest, it shall publish a notice that the area is being considered for leasing.

(b) The commission shall have legal notices published in a newspaper of general circulation in each county where the water bottom, or any part thereof, is located, describing the area to be leased and the type of operation to be conducted. The publication shall comply with Sections 6060 and 6066 of the Government code.

15405. No initial term of a state water bottom lease shall exceed 25 years.

15406. (a) Each state water bottom lease shall specify a period prior to expiration when renewal of the lease may be requested by the lessee. If during this period the lessee is still actively engaged in aquaculture, as determined by the commission, the lessee shall have a prior right to renew the lease on terms agreed upon between the commission and the lessee. If terms are not agreed upon, the commission shall advertise for bids on the lease. If a request for renewal is not made by the lessee, the commission shall advertise for bids on the lease. The commission shall consider bids only from aquaculturists registered pursuant to Section 15101.

(b) Notwithstanding subdivision (a), with respect to any lease of state water bottoms in effect on January 1, 1983, the lessee shall have a prior right to renew the lease. If the lessee does not renew the lease, the commission shall advertise for bids on the lease. The commission shall consider bids only from aquaculturists registered pursuant to Section 15101.

(c) A lease may be renewed for additional periods not to exceed 25 years each.

15406.5 The commission shall award water bottom leases to the highest responsible bidder, if the bid meets or exceed the minimum annual rent established by the commission, which shall not be less than two dollars ($2) per acre, for all species cultivated, unless the acreage applied for is 10 acres or less, in which case the minimum acceptable rent shall be ten dollars ($10) per acre. The annual rent for any lease in effect on January 1, 1985, for the cultivation of oysters

shall be one dollar ($1) per acre until the expiration thereof. commission may reject any or all bids for the lease of state water bottoms if it deems the rejection to be in the public interest.

15406.7 In addition to the rent provided for in Section 15406.5, every person operating under an oyster lease shall pay a privilege tax of two cents ($0.02) per packed gallon or fraction thereof of shucked oysters harvested by the lessee.

If the oysters are marketed in the shell, the tax shall be based on the equivalent yield of shucked oyster meat. In determining the yield of oysters, it shall be deemed that 100 oysters are equivalent to one packed gallon of shucked oyster meat.

The tax imposed by this section is the exclusive privilege tax that shall be imposed on lessees of state water bottoms for oyster cultivation, notwithstanding subdivision (a) of Section 15003.

15407. The annual rent shall be paid to the department within 30 days of the commencement of the lease and within 30 days of the anniversary thereof. The commission may establish penalty fees for late payment and may cancel the lease if rent is not paid within 90 days of the commencement of the lease or within 90 days of any anniversary thereof.

15408. The commission shall promulgate regulations governing the termination of leases due to failure to pay rent or improper use of the leasehold.

15409. Upon termination of a lease, for any reason, all structures will be removed at the lessee's expense from the leasehold, and the area shall be restored to its original condition. If the lessee fails to remove the structures, the state may remove them and the lessee shall pay the removal costs so incurred.

15410. All leases shall be subject to the power of the Legislature to increase or decrease the rents, fees, taxes, and other charges relating to the lease, but no increase in rent shall be applicable to an existing lease until it is renewed.

15411. Lessees under a state water bottom lease may not unreasonably impede public access to state waters for purpose of fishing, navigation, commerce, or recreation. The lessee may, however, limit public access to the extent necessary to avoid damage to the leasehold and the aquatic life culture therein.

The commission may prohibit any recreational activity in any aquaculture area subject to a state water bottom lease if it determines that the activity is detrimental to the enhancement of the resource.

15412. No water bottom lease may be assigned without the prior approval of the commission. Application for approval of a lease assignment shall comply with all of the requirements for an original lease.

15413. No person may enter upon any area subject to a water bottom lease in which aquatic life is cultivated, or remove the aquatic life therefrom without the consent of the lessee, or willfully destroy the cultivated aquatic life or any markers intended to designate the boundaries and limits of the leased area.

15414. A water bottom lease may require periodic reports that the commission deems necessary for the proper administration of the state's water bottoms.

15415. The department shall notify the State Lands Commission of all applications for water bottom leases.

The department shall inform the State Lands Commission of all leases executed, renewed, or assigned pursuant to this chapter, and shall furnish the State Lands Commission with such information concerning these leases that it may require.

Chapter 6. DISEASE CONTROL

15500. Upon the recommendation of the department and after consultation with the Aquaculture Disease Committee created pursuant to this chapter, the commission shall compile a list of diseases and parasites and the aquatic plants and animals they are known to infect or parasitize. All government activities relating to aquaculture disease detection, control, and eradication that do not affect human health and safety are the responsibility of the department.

15501. The department may enter, under an inspection warrant issued pursuant to Title 5 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure, at any time, any car, warehouse, depot, ship, or growing area where any aquatic plants or animals are held or stored, for the purpose of making an examination to ascertain whether the aquatic plants or animals are infected, diseased, or parasitized.

15502. The director, in consultation with the Aquaculture Industry Advisory Committee and the Interagency committee for Aquaculture Development, shall appoint an 11-member Aquaculture Disease Committee consisting of at least six industry producers selected to represent geographic, species, and other diverse aspects of the industry; two to represent the department; one to represent the Department of Food and Agriculture; and academic scientist who is an expert in aquatic diseases; and one representative of the University of California Cooperative Extension. Members of the committee shall serve without compensation, but shall be paid their necessary expenses.

15503. The Aquaculture Disease Committee may recommend regulations to the commission designed to safeguard wild and cultured organisms from the list of harmful organisms compiled pursuant to Section 15500.

15504. Regulations recommended under Section 15503 and adopted by the commission may include all of the following:

(a) Routine monitoring procedures.

(b) Standardized diagnostic procedures.

(c) A requirement for the confirmation of the diagnosis by the state through at least one other independent and qualified laboratory.

(d) Criteria for ordering quarantine, condemnation, or destruction.

(e) A stated maximum time period between diagnosis and destruction.

(f) Methods to be employed in animal destruction and facility cleanup.

(g) Procedures for determining fair and rapid compensation.

(h) Any other related procedures that the commission may determine are necessary.

15505. If any of the diseases or parasites listed pursuant to Section 15500 is found to exist which the director, in consultation with the Aquaculture Disease Committee and consistent with the regulations adopted under Section 15504, deems to be detrimental to the aquaculture industry or to wild stocks of aquatic plants and animals, the director may do any of the following:

(a) Establish the area to be quarantined and list the aquatic plants and animals affected by it.

(b) Post notices describing, as nearly as possible, the boundaries of an area within which specific disease or parasite infestations are found. Notices posted pursuant to this subdivision shall be published once a week for four successive weeks in a newspaper of general circulation in the county in which the infected area is located. If there is no newspaper of general circulation in that county, then the notice shall be published in a newspaper of general circulation published in an adjoining county.

(c) Hold and impound diseased or parasitized plants and animals.

(d) Forbid, prevent, or restrict the movement of all plants and animals subject to the disease or parasite from or into the area, or from place to place within it, during the existence of the quarantine.

(e) Order the destruction and disposal of diseased or parasitized plants and animals consistent with Section 15504.

15506. Except for those diseases in the list compiled pursuant to Section 15500, intected plants or animals shall not be quarantined or destroyed, unless the director, in consultation with the Aquaculture Disease Committee, finds that an outbreak of aquatic disease among privately cultured plants or animals presents a threat to the aquaculture industry or to fish life or plant life.

15507. If the director, in consultation with the Aquaculture Disease Committee, finds that a disease is present in a nearby government operated facility or in nearby wild stocks, infected plants or animals in a private aquaculture facility shall not be quarantined or destroyed unless similar action is taken with respect to the government facility and wild stocks.

15508. Reports of those diseases and parasites compiled pursuant to Section 15500 shall be immediately forwarded by the director to the Aquaculture Disease Committee and shall be promptly investigated by the department.

15509. No person may move, or allow to be moved, any of the aquatic plants or animals which are subject to a quarantine established pursuant to Section 15505 across the quarantine line which is established, unless the person has first obtained a permit from the director authorizing the movement.

The director may issue a permit after inspection, if the aquatic plants or animals, premises, transportation vehicles, and equipment which are subject to the quarantine established pursuant to Section 15505 are properly cleaned and disinfected.

15510. If the director determines that any disease designated pursuant to Section 15500 exists among domestic aquatic plants and animals, or that aquatic plants and animals have been exposed, or may have been exposed, to the disease, or to the vectors of the disease, in any other state or territory in the United States or in any foreign country, and the importation of aquatic plants or animals from the state, territory, or foreign country may transmit, carry, or disseminate the disease to domestic plants and animals within this state, the director shall notify the commission which may, after consulting the State Department of Health Services and the Department of Food and Agriculture, issue a regulation restricting or prohibiting the importation of the diseased or infected aquatic plants or animals into this state from any other state, territory, or foreign country.

15512. (a) If aquatic plants or animals are destroyed pursuant to subdivision (e) of Section 15505, the owner shall be promptly paid from the General Fund an amount equal to 75 percent of the replacement value of the plants or animals, less the value determined by the department of any replacement stock provided by the department under subdivision (b) if the claim is submitted pursuant to Section 15513. If the replacement value is not settled between the owner and the department, the replacement value shall be determined by an appraiser appointed by the director and an appraiser appointed by the owner. Appraiser's fees shall be paid by the appointing party. Disputes between these two appraisers shall be submitted to arbitration under the commercial Arbitration Rules of the American Arbitration Association.

(b) If the department provides replacement stock to an aquaculturist whose plants or animals are destroyed pursuant to subdivision (e) of Section 15505, the amount to be paid to the aquaculturist

pursuant to this section shall be reduced by the value of the replacement stock, as determined by the department.

(c) The result of the arbitration or the amount settled between the owner and the department, reduced by the value determined by the department of any replacement stock provided under subdivision (b), may be submitted as a claim by the owner to the Board of Control pursuant to Section 15513.

15513. Claims against the department arising under this chapter may be submitted pursuant to Section 905.2 of the Government Code.

15514. No claim arising under this chapter shall be paid where the director, in consultation with the Aquaculture Disease Committee, finds that the claimant's management practices were negligent or in violation of law, and that the negligence or violation was the proximate cause of the disease or infection prompting the order of destruction or finds the claimant willfully violated any provision of Section 15505.

15515. The owner of an aquaculture product who does not diligently pursue the eradication of a disease from its facility when ordered to do so by the director shall be responsible for paying to the director the full costs of the department for all disease eradication efforts conducted by the department to eradicate the disease. Payment of the costs under this section shall not excuse compliance with the provisions of law, regulations of the commission, and orders of the director, nor be a defense in any criminal or civil proceedings.

Chapter 7. IMPORTATION OF AQUATIC PLANTS AND ANIMALS

15600. No live aquatic plant or animal may be imported into this state by a registered aquaculturist without the prior written approval of the department pursuant to the regulations adopted by the commission.

15601. A written application for the importation submitted in conformance with the procedural requirements established by the commission is deemed to be approved where it has not been denied within 60 days.

Chapter 10. OCEAN RANCHING

15900. A registered aquaculturist may be granted a permit by the commission, under any terms and conditions that the commission may prescribe, to release and capture anadromous fish in state waters which have been reared in an aquaculture facility.

15901. Prior to the issuance of any permit by the commission, a public hearing shall be held in the county or counties affected. Notice of the hearing shall be published at least once, and at least 10 days prior to the hearing, in a newspaper of general circulation in each of the counties in which the hearing is to be held, or if no such newspaper is published in that county or counties then in such a newspaper in an adjoining county. The hearing shall be conducted by

Fisheries and Oceans
Pêches et Océans

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1090 West Pender Street
Vancouver, B.C.
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Pêches - Région du Pacifique
1090 rue Pender ouest
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V6E 2P1

Your file Votre référence

Our file Notre référence

March 2, 1987

Mr. Brent Paine
Representative, Steve Rieger
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Mr. Paine:

In response to your telephone request, attached please find a draft copy of the Department of Fisheries and Oceans Guidelines. As I mentioned over the telephone, you must be cautioned that these guidelines are indeed draft and may as yet be changed, especially with respect to distances between farms.

As I mentioned to you, the Department of Fisheries and Oceans has not yet enacted any specific aquaculture regulations for Pacific Region, however, the Department does plan to do so in the near future.

Yours truly,

Frances Dickson
Shellfish Coordinator
Fisheries Branch

Encl:

Canada

CONFIDENTIAL

JANUARY 9, 1987

FINAL DRAFT

DEPARTMENT OF FISHERIES AND OCEANS

GUIDELINES

FOR DEVELOPMENT AND OPERATION OF AQUACULTURE FACILITIES

The Department of Fisheries and Oceans Canada

Pacific Region

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APPENDICES

I INTRODUCTION

1.1 PURPOSE AND SCOPE

Aquaculture - the farming and husbandry of marine and freshwater plants and animals is a rapidly expanding industry in B.C. The recent growth in the industry has placed new demands on both freshwater and marine environments which may be incompatible with existing resource uses. The characteristics which make sites attractive for aquaculture purposes are often the same characteristics that make these areas productive fish habitat or important fishery areas; with the increased demand for aquaculture sites and the potentially significant impacts which can result from intensive culturing and processing activities, the likelihood of resource conflicts and impacts increases.

The Department of Fisheries and Oceans maintains that an aquaculture industry can be developed in British Columbia in conjunction with continued maintenance of wild fisheries provided that great care is taken to ensure that aquaculture facilities are properly sited. These guidelines have been developed by the Department of Fisheries and Oceans (DFO) to prevent or minimize impacts to wild fish and fish habitats and to avoid conflicts between aquaculture and fishery activities by outlining requirements for siting, development, operation, and abandonment of freshwater and marine salmon culture and processing operations.

While these guidelines pertain specifically to hatcheries, seapens, and processing facilities, other culture activities (Table 1) also may have significant impacts, and individuals are therefore advised to contact the local DFO offices for information regarding requirements which pertain to their proposed operation.

TABLE 1 - Culture Techniques and Facilities for Shellfish, Finfish and Marine Plants

Molluscs/Crustaceans/Marine Plants	Finfish
- bottom culture	- freshwater hatcheries
- offbottom line or raft culture	- freshwater impoundments
- impoundments (pens or cages)	- instream incubation
- marine hatcheries	- land based seawater rearing facilities
	- marine impoundments

1.2 ENVIRONMENTAL IMPACTS

The Department of Fisheries and Oceans is concerned that salmon culture and processing operations proceed in such a manner that they do not negatively impact on other fisheries resources or fish habitats.

Hatcheries and other land-based operations have the potential to restrict and pollute streamflows and elevate waste concentrations and numbers of disease organisms in the marine environment adjacent to effluent discharges.

Salmon net pens, unless located properly, may cause smothering of valuable fish habitats such as herring spawning substrates, geoduck beds or intertidal clam or oyster beds. Net pens may attract juvenile wild salmon and herring in the vicinity of migration routes resulting in predation on the small fish by penned stocks or disease transfer between wild and cultured fish. Salmon in pens may also attract predators such as otters, seals or sealions and birds; these animals are often harassed, injured and sometimes illegally destroyed by salmon farmers anxious to protect their fish.

Less obvious, but also potentially harmful are the effects of antifoulants used on nets on adjacent shellfish and fish resources. Although research on this topic is still preliminary, initial indications are that oysters accumulate chemicals used to treat the nets with the result that their rate of growth is reduced and their flesh is rendered poisonous or unpalatable. No research on antifoulant accumulation in farm fish flesh is available yet, but this may also be of concern to potential farmers.

Finally, when antibiotics are administered to cultured fish, what effects do the often major additions of disease treatment chemicals have on the surrounding environment? Could the antibiotics eventually result in treatment-resistant strains of certain pathogens previously not encountered by wild fish stocks in the vicinity? This may be a very real and dangerous possibility.

It is for these reasons that the following guidelines have been developed. Many of these concerns and impacts can be minimized or avoided by: carefully selecting sites, mitigating or preventing impacts associated with site development and adopting appropriate operational or abandonment procedures.

1.3 LEGISLATIVE MANDATES AND RESPONSIBILITIES

The Department of Fisheries and Oceans (DFO) has jurisdictional responsibility for management of coastal and inland fisheries, fish health protection, product quality for exported fish and fish products, and protection of fish and marine mammals and their associated habitats.

The Department of the Environment, Conservation and Protection, Environmental Protection (EP) shares responsibility with DFO for Section 33 of the Fisheries Act which deals with water quality. In addition, EP is also responsible for classifying shellfish growing waters on the basis of sanitary quality.

The legislative mandates of DFO and EP which pertain to aquaculture are based on a number of federal statutes, regulations and international agreements which have been listed in Appendix I.

The guidelines presented herein have been developed pursuant to these legislative mandates and reflect DFO and EP requirements for protection of existing fish and shellfish resources, their habitats and the fisheries they support.

These guidelines are not, however, intended to address requirements of other federal, provincial and municipal agencies who also have jurisdiction for aspects of aquaculture development.

II AQUACULTURE LICENCE

An Aquaculture Licence will be issued to an applicant when, in the opinion of the Director General, Fisheries and Oceans, the facility does not violate or constitute a potential violation of federal regulations respecting (i) conservation and protection of fish, (ii) obstruction and pollution of waters frequented by fish, (iii) conservation and protection of spawning grounds and fish habitat and (iv) fish health protection.

The conditions of the Aquaculture Licence try to anticipate environmental and disease problems which might negatively affect both the wild fishery resource and habitat and the aquaculture venture, and they are structured to prevent or minimize such negative affects. The Aquaculture Licence signifies that a preliminary review of the site suggests that culture of fish, as proposed at the site, should result in minimal problems unless specified. The Aquaculture Licence is not a site certification; the Department of Fisheries and Oceans accepts no liability. An Aquaculture Licence may be modified, suspended or cancelled at any time when (a) the licence holder fails to comply with the terms and conditions of that licence, (b) aquaculture facilities under licence are found to have significant adverse effect on fish stock or fish habitat, or (c) any disease or disease organism that poses a hazard to fish stocks or adjacent aquaculture facilities is not reported to the Director General of Fisheries and Oceans. The licence is issued by the Department of Fisheries and Oceans for a one year term and it is renewable upon application. Currently there is no fee attached to the licence.

2.1 LICENCING PROCEDURES

: the applicant must submit an application for an Aquaculture Licence and a document establishing that all requisite approvals for a licence have been obtained or that the terms and conditions of the aquaculture licence held by the applicant in the preceding licence year have been complied with.

2.2 LICENCE ELIGIBILITY

: persons who

(a) obtain approval from the Department of Fisheries and Oceans for the net pen site or the hatchery site. - Note: approval would depend on meeting current Department of Fisheries and Oceans guidelines - See Sections III and IV, Siting Criteria.

(b) obtain, where applicable, the following from the Province - For salmon net pens:
- approval of a farm production plan for an aquaculture enterprise (Ministry of Environment and Parks);
- Crown Land tenure (Ministry of Forests and Lands);

For hatcheries:
- a water licence (Ministry of Environment and Parks);
- a waste management permit (Ministry of Environment and Parks);
- a provincial Commercial Fish Culture Permit (Ministry of Environment and Parks).

(c) receive Navigation Compliance from Department of Transport under Navigable Waters Protection Act

2.3 TERMS AND CONDITIONS

The following terms and conditions are presently included in the Aquaculture Licence issued by the Department of Fisheries and Oceans:

(a) the area and location of the aquaculture facility;
(b) the species of fish or eggs cultured
(c) the manner of disposing of any ailing or dead fish from the aquaculture enterprise;
(d) the reporting of fish diseases, drugs used and mortalities incurred;
(e) the transporting of live eggs or fish;
(f) the submission of commercial fish farm annual reports;
(g) compliance with Fish Health Protection Regulations;
(k) other terms or considerations that may be deemed necessary for the facility being licenced.

The following terms and conditions may be included in Aquaculture Licences:

(a) capture of brood stock;
(b) reporting of chemicals utilized;
(c) The size of and/or number of net pens, rafts or hatcheries being licenced.

2.4 LICENCE FEATURES

: the licence may be issued to an individual, company or corporation (referred to as the licencee) - in the case of a company or corporation, documents establishing company or corporate status must be provided together with a list of signing officers and specimen signatures (annually).
: the licencee is responsible for ensuring compliance with all terms and conditions of the licence.
: an aquaculture enterprise licence shall be valid from date of issue to December 31 of the licence year.
: a person may be issued a renewal licence annually, upon application.

: eligibility for a licence may be revoked or the licence cancelled for failure to comply with the terms and conditions of the licence or for failure to comply with the Fisheries Act and regulations made thereunder.

: a licence may not be transferred to another person without prior approval of the Department of Fisheries and Oceans

III MARINE FISH REARING FACILITIES

3.1 ENVIRONMENTAL ASSESSMENT

An environmental assessment must be completed for every potential net pen site as outlined in the Department of Fisheries and Oceans Aquaculture Licence Application to assess sensitivity and suitability of sites. Additional information may be required including descriptions of current patterns, sub-tidal vegetation mapping, invertebrate surveys and pre-installation water quality. Where sites are deeper than 20 metres, a SCUBA assessment would not normally be required. A complete description of information required for the purpose of evaluating marine aquaculture facility proposals appears in Appendix II.

3.2 SITING CRITERIA

(i) A finfish pe farm will be located no closer than a 1 km radius from the mouth of a stream populated by anadromous fish, to minimize disease transmission concerns and to protect highly sensitive estuarine fish habitat. Coastal areas adjacent to stream mouths and their estuaries are considered to be sensitive because of the concentrations of juvenile and adult salmon in their vicinity at various times of the year, the possible susceptibility to disease during saltwater/freshwater acclimation periods, and potential for disruption of residency, holding or migration behaviour patterns. The chemical storage characteristics of estuary deltas are documented and mechanisms may also exist for pathogen cycling. Isolation of pen sites from stream mouths may also protect farmed stock from river water transported disease arising out of the decay of wild stock carcasses. Distances may be increased depending on wild fish populations.

Facilities within a 5 km radius of such streams must have prior approval of the Federal/Provincial Transplant Committee and may require additional specific studies as per Appendix II.

The zero tideline will be the start of the stream mouth for measurement purposes. A net pen farm is an operation under a single licence of occupation or a foreshore lease issued under the Provincial Lands Act.

(ii) A finfish net pen must be located so as to provide a minimum of 30 metres clearance from the edge of the approach channel to a Small Craft Harbour, Department of Fisheries and Oceans wharf or dock.

(iii) Net pens shall not be located within 125 metres of molluscan beds where there may be recreational, native food-fish or commercial harvests or within 125 metres of existing molluscan culture operations. This restriction is to prevent

contamination of molluscs and is to safeguard health to humans. Salmon farms have the potential to transfer pathogenic organisms and chemicals to shellfish.

(iv) Net pen facilities must have a minimum of 5 km distance between the lease boundaries, to minimize risk of disease transfer. Maximizing distances between facilities is also advisable to minimize potential cumulative water quality impacts.

(v) Net pens shall not be located over or near areas of sensitive fish habitat as defined by Section 31(5) of the Fisheries Act. This includes spawning, rearing, food supply and migration areas upon which fish and shellfish depend directly or indirectly to carry out their life processes.

The rapid expansion of salmon farms and other mariculture operations on the Pacific coast has raised concerns about possible environmental impacts on herring spawning areas. There are also concerns about impacts on herring roe-fishery sites which occur mainly in the vicinity of spawning areas. Salmon farms and herring could interact in several ways. Organic waste from netpens could contaminate nearby spawning locations and force herring to spawn in other secondary locations or it could jeopardize egg survival after spawning. Alternately, herring will spawn on fishing nets and netpens, and heavy egg deposition on salmon netpens could be deleterious to fish farm operators. Some diseases may be transmitted between wild herring stocks and salmon in farms. Further, if netpens were located in the vicinity of near-shore herring gillnet fisheries, there could be mutual gear interference during the fishing season.

(vi) Net pens shall not be located or anchored in an area with a depth less than 10 metres at zero tide to minimize impacts on sensitive, productive littoral fish habitats. In addition, there must be a minimum of two metres between bottom of net pen and sea bottom.

(vii) Net pens or fish rearing facilities will not be located in areas where they would directly interfere with important commercial, recreational or native food-fish fisheries. These fisheries include seine tie-up spots, gillnet drift areas, trap fishing areas, traditional trawl sites, bivalve shellfish beaches and areas of sport fish activity.

3.3 OPERATIONAL REQUIREMENTS

(i) Monitoring of Approved Net Pen Operations

Pursuant to Section 33.1(i) of the Fisheries Act authorized net pen operators may be required to provide the Department with

information on substrate quality, water quality, amount of feed used or other information on a site specific basis. Appendix II Section 2 identifies operational information requirements for all net pen operations, whereas Section 3 outlines information which may be required in a monitoring program.

(ii) Clean-up of Substrate and Disposal of Dead Fish

a. Waste deposits under net pens cannot be discharged from the site without review and approval from the Department of Fisheries and Oceans and the Environmental Protection Service, Department of Environment.

b. No dead cultured fish or offal may be disposed of at sea. All dead cultured fish or offal must be disposed in a manner acceptable to the Waste Management Branch and the Department of Fisheries and Oceans e.g., landfill site and incineration. This regulation is for disease control purposes.

(iii) Predator Control

No person shall destroy seals or sea lions without a special permit issued by the Minister of Fisheries and Oceans. In addition, other predators such as herons, kingfishers, gulls, terns, mink and ot ·rs which are attracted to fish farms may not be indiscriminately shot or trapped; they are protected species.

(iv) Feed

No person shall collect marine plants or animals (including euphausids) for fish food by any means unless the appropriate permits or licences have been obtained.

(v) Herring Spawn on Net Pens

In accordance with Section 30 of the Fisheries Act, any net upon which herring have spawned may be removed from the pen but it must remain suspended in the water column until such time as hatching of eggs is completed.

(vi) Reporting on Fish Mortalities and Treatments Used

Refer to Pacific Region Fish Health Policy, Section 6.3.

(vii) Fish Health Report

Annual health report shall be submitted by January 31st to the Transplant Committee - refer to Pacific Region Fish Health Policy, Section 6.3.

(viii) Fish Escapements

No fish shall be released deliberately from the licensed facility into Canadian waters. Any inadvertent release of fish shall be immediately reported by the Licencee to the appropriate Area Manager, Fisheries Operations Branch, Department of Fisheries and Oceans, followed by the full written account of the inadvertent release. Any fish that escape the net pens or are released become part of the common property resources. Fish releases will be considered cause for non-renewal of the Aquaculture Licence.

(ix) Movement of Fish

The transport of live seawater-reared salmonids, their eggs or milt must be approved by the Transplant Committee. A copy of the Committee's Transplant permit must accompany each shipment. No fish shall be allowed to escape during transport and no dumping of dead fish en route is permitted. All dead fish must be disposed of in an approved manner.

3.4 ABANDONMENT REQUIREMENTS

All nets, in-water structures, fuel tanks or chemical storage containers must be removed from the site immediately upon cessation of the operation. Any live fish must be moved to a location or facility that has received prior approval from the Transplant Committee.

IV LAND BASED FACILITIES

4.1 ENVIRONMENTAL ASSESSMENT

(i) Applicants for hatcheries must provide information pursuant to Section 33.1(1) of the Fisheries Act. This will require that the applicant provide information on water supply requirements, anticipated effluent quality and quantity, location of intakes, outlets and sanitary facilities and any filling, dyking or stream bank protection work required as outlined in the Department of Fisheries and Oceans Licence Application. A complete description of information required for the purposes of evaluating proposed hatchery facilities appears in Appendix II.

4.2 SITING CRITERIA

(i) No privately operated freshwater fishculture facility may discharge effluent within a 5 km radius of the mouth of a stream supporting anadromous species unless prior approval of the Transplant Committee has been received.

(ii) Water intakes should not be located within wild stock salmon and trout spawning beds, and must meet all current requirements for screening as described in the most recent revision of the Departmental Screening Guidelines. Special siting and screening provision may be specified for marine intakes.

(iii) No new facility for culture of chinook, steelhead or rainbow trout may be established where sockeye or kokanee are present in the hatchery water supply for disease prevention reasons.

(iv) No outfall from a private hatchery will be allowed within an upstream distance of 5 km of a publicly funded fish culture operation unless effluent is treated in a manner acceptable to the Department of Fisheries and Oceans.

(v) No private hatchery will be allowed upstream of a publicly funded hatchery designated as a major facility.

(vi) It is recommended that a 10 m natural vegetation leave strip be maintained adjacent to all streams and flood channels as it is recognized as important fish habitat and may also serve to protect the site from erosion.

4.3 OPERATIONAL GUIDELINES

(i) Monitoring of approved Hatchery operations

Pursuant to Section 33.1 of the Fisheries Act, hatchery operations may be required to conduct routine effluent and receiving water monitoring programs. Appendix III Section 2 identifies operational requirements for all hatchery facilities,

whereas Section 3 outlines information which may be required in a monitoring program for information which may be required.

(ii) No effluent may be discharged directly onto salmonid spawning grounds. Effluent discharged to salmonid streams must be treated in a manner acceptable to the Department of Fisheries and Oceans. Settling ponds with sludge removal provision or isolation of tank cleaning wastes will normally be required for direct discharges.

(iii) No facility shall culture sockeye with any other salmonid species.

(iv) No modifications may be made to intake or discharge facilities or volumes without prior review and approval by the Department of Fisheries and Oceans.

(v) All discharges must be screened to prevent escapes or entries of fish.

(vi) No dead fish may be disposed of in the aquatic environment. All dead fish must be disposed of in a manner acceptable to the Waste Management Branch and Department of Fisheries and Oceans. e.g. landfill site, incinceration.

(vii) All fish mortalities, drugs, chemicals and vaccines used must be reported.

Refer to Pacific Region Fish Health Policy, Section 6.3 and operational reporting requirement sections of Appendix II and III.

(viii) An annual fish health report shall be submitted by January 31st to the Transplant Committee. Refer to Pacific Region Fish Health Policy, Section 6.3.

(ix) Reporting of Fish Escapements

No fish shall be released deliberately from the licenced facility into Canadian waters and any release of salmon shall be immediately reported by the Licencee to the Appropriate Area Manager, Fisheries Operation Branch, Department of Fisheries and Oceans, followed by a full written account of the inadvertent release. Fish releases will be considered cause for non-renewal of the Aquaculture Licence.

(x) Movement of Fish

The transport of live freshwater reared salmonids or eggs must be approved by the Transplant Committee. A copy of the Committee's Transplant permit must accompany each shipment. No

replenishing or discharge of water is permitted. All dead fish must be disposed of in an approved manner. No dumping of dead fish en route is permitted.

(xi) Fish Eggs Used

Fish eggs utilized in this licenced facility or location shall be obtained from broodstock determined to be free of the following diseases by techniques acceptable to the Department of Fisheries and Oceans:

a) Chinook salmon and rainbow trout

- any filterable replicating agent capable of causing cytopathological effects in tissue culture cells
- bacterial kidney disease (BKD)
- any infectious agent which may be deemed to be a threat to wild stocks or other cultured stocks.

b) Coho salmon

- bacterial kidney disease (BKD)
- any infectious agent which may be deemed to be a threat to wild stocks or other cultured stocks.

c) Atlantic salmon

- refer to Federal-Provincial Policy for Importation of Live Salmonids into British Columbia. Section VII.

(xii) Surplus eggs from federal hatcheries may only be distributed to approved hatcheries with current licences. Approvals and licenses must be in place by September 30 of any given year.

(xiii) Private hatcheries which do not meet current guideline requirements may be requested to achieve compliance in those areas that are deficient within a one year period from date of notification. If compliance is not achieved, licenses may be suspended which would affect future access to surplus eggs from federal hatcheries.

(xiv) No person may sell surplus eggs originally received from federal hatcheries to a private hatchery that is not currently licensed, at risk of suspension of their own license.

4.4 ABANDONMENT REQUIREMENTS

All intakes and outlets must be sealed and all fuel tanks, feed supplies, pharmaceuticals and toxic chemicals must be removed from the site upon cessation of the operation.

V FISH INSPECTION AND PROCESSING

5.1 ENVIRONMENTAL ASSESSMENT

An environmental assessment may be required for proposed facilities. A complete description of information required for the purpose of evaluating marine fish processing proposals appears in Appendix II.

5.2 SITING CRITERIA

Processing facilities shall not be located over or near areas of sensitive fish habitat as defined by Section 31(5) of the Fisheries Act. This includes spawning, rearing, food supply and migration areas upon which fish and shellfish depend directly or indirectly to carry out their life processes.

5.3 FISH HANDLING AND PROCESSING REQUIREMENTS

Farm fish and wild fish are treated equally under the processing requirements of both the Federal and Provincial Fish Inspection Regulations. Due to a higher incidence of diseases in farmed fish it is proposed that this be changed and farmed fish be processed separately with effluent treatment to reduce disease risks to wild fish. Processing includes cleaning, filleting, icing, packing, canning, freezing, smoking, salting, cooking, pickling, drying or preparing fish for market in any other manner.

When handling or processing farmed fish, the requirements of the Fish Health Protection Regulations must also be met. Section 4 of these regulations state that live and fresh cultured salmonids crossing a provincial boundary must be from a facility inspected and found to be free of certain named diseases.

(i) Bleeding of live fish on site: The fish farmer may stun and bleed his own fish by cutting the gills prior to delivery for processing. The fish must, however, not be dressed or otherwise cut. There must be no direct discharge of liquid effluent (e.g. blood and slime) or disposal of solid waste (e.g. gills, dead fish) into the marine or freshwater environment. Direct discharges may become a fish disease vector.

(ii) Processing of fish for interprovincial sales: If the fish are marketed within the province only, the fish must be processed in a provincially registered plant pursuant to Section 14 of the Fish Inspection Regulations of B.C.. Under the fresh and frozen category, processing would include holding, washing, dressing, grading, freezing and packing.

(iii) Processing of fish for interprovincial or export sales: All fish must be processed in an establishment registered pursuant to Section 15 of the Federal Inspection Regulations. Federal

inspection officers will carry out inspection duties at federally registered facilities only.

Schedules I and II of the Fish Inspection Regulations contain requirements dealing with construction, equipment and operation of registered processing and packing plants. For further information concerning the requirements, you may wish to contact the nearest Field Inspection Office.

5.4 OPERATIONAL REQUIREMENTS

(i) Processing Plant Effluents

A permit from the Waste Management Branch, Ministry of Environment and Parks, is required for any discharge of liquid effluents from processing plants.The quality of processing plant effluents will be determined pursuant to Waste Management Branch pollution control objectives and Environment Canada Fish Processing Guidelines. In addition, the Department of Fisheries and Oceans may require that no effluent water from plant handling cultured fish may be discharged unless effluent is treated in an approved manner to kill infectious agents.

5.5 LIVE TRANSPORT OF FISH

At the present time the Department of Fisheries and Oceans is prepared to authorize live transport of fish from marine net pen facilities to land based processing plants in open or RSW systems. Written approval from the Department must be received.

VI PACIFIC REGION FISH HEALTH POLICY

The Pacific Region Fish Health Policy is an extension of the Fish Health Protection Regulations which are established under the Fisheries Act.

6.1 REASONS FOR FISH HEALTH POLICY

(1) For the protection of the fisheries resource and the aquatic environment.
(2) Possibility of quick spread of infectious agents in aquatic environment.
(3) Development of aquaculture industry.
(4) Primitive state of knowledge of infectious diseases.

This policy will be in addition to the Fisheries Act and other fisheries laws.

The Transplant Committee which is a combined Federal/Provincial fisheries body, is responsible for coordinating fish disease control in the Pacific Region.

This section of the Pacific Region Fish Health Policy applies to finfish only and their transplants as well as the control of fish diseases in all holding, culture and processing facilities in the Pacific Region of Canada (British Columbia and Yukon).

6.2 OBJECTIVES OF FISH HEALTH POLICY

(1) To provide guidelines to managers of fisheries resource and to the aquaculture industry for the control of infectious diseases of fish.
(2) To prevent the introduction of new diseases into the Region.
(3) To protect wild stocks of fish from serious infectious disease and to prevent the spread of infectious diseases among both cultured and wild stocks.
(4) To prevent the escape or release of seriously infected fish and to discourage and finally eliminate the culture of seriously diseased fish.
(5) To improve the health of fish cultured in this Region.

6.3 DISEASES

There are two categories of diseases depending on their seriousness and potential threat.

A. Emergency diseases
These diseases are not treatable and/or are not known to occur in this area.
a) Infectious hematopoietic necrosis (IHN)
b) Infectious pancreatic necrosis (IPN)
c) Viral hemorrhagic septicemia (VHS)

d) Herpes virus salmonis
e) Spring viremia of carp (SVC)
f) Oncorhynchus masou virus (OMV)
g) Any filtrable agent causing cytopathic effects in tissue culture (other than above)
h) Whirling disease
i) Hitra disease
j) Any infectious agent causing losses in excess of 1%/day for 4 consecutive days

Action:

When any emergency disease or its causative agent is encountered, the Transplant Committee must be informed immediately by telephone.

It is the Transplant Committee's responsibility to spell out actions to be taken which may include destruction of the stock (at the expense of the owner). The Transplant Committee will undertake confirmation of the disease/agent encountered.

For the following diseases, depopulation and sanitation of the facility are mandatory: VHS, IPN, OMV, Herpes virus, Whirling disease and any disease of sufficient seriousness as designated by the Director General (DFO) or Director, Fisheries Branch (B.C. Ministry of the Environment and Parks).

(ii) Serious diseases
a) Bacterial Kidney Disease (BKD)
b) Furunculosis
c) Vibriosis
d) Enteric Redmouth Disease
e) Sea Lice
f) Diseases caused by the Flexibacter/Myxobacterial group
g) Other infectious agents designated by DFO/MOE staff

Action:

When a serious disease is identified in fish, movement and distribution of these fish shall be restricted to the geographic zone in which the disease occurred. Fish can be moved between zones only when found free of causative agent after appropriate sampling by a person approved by the Transplant Committee. Zones in which fish can move freely will be designated and mapped. In addition, all operators of finfish culture facilities must report the occurrences of these diseases/agents to the Transplant Committee annually on a fish health report.

6.4 INTRODUCTION OF SALMONIDS INTO THE PACIFIC REGION

Refer to Section VII Federal Provincial Policy for Importation of Live Salmonids into British Columbia - Section VII.

6.5 TRANSPLANTS OF FINFISH WITHIN B.C.

(i) There may be no movement or release of fish from a facility or site with a past record of VHS, IPN, whirling disease or any disease with no previous occurrence in the Pacific Region.

(ii) No movement of live fish between zones (see above) is permitted without a permit issued by the Transplant Committee.

(iii) No live fish may be transferred from a population suffering an estimated loss of more than 3%/week.

(iv) Screening of eggs (salmonids only): All eggs for the private industry must be derived from fish that have been screened for diseases in a manner approved by DFO and Ministry of Environment.

(v) Treatment of eggs (salmonids only): All eggs must be surface disinfected before they are moved from the site at which they were collected.

6.6 SITING OF FISH CULTURE FACILITIES

Definition of facility: All fish culture units/containers on a single land use permit, or site as defined in a private or commercial fish culture permit or foreshore lease. (refer Sections 3.2 and 4.2)

(i) General:
No privately operated fish culture facility may be established within a 1 km radius of the mouth of a stream containing anadromous species to minimize disease transmission concerns and to protect highly sensitive estuarian fish habitat.

Coastal areas adjacent to stream mouths and their estuaries are considered to be sensitive because of the concentrations of juvenile and adult salmon in their vicinity at various times of the year, the possible susceptibility to disease during saltwater/freshwater acclimation periods, and potential for disruption of residency, holding or migration behaviour patterns. The chemical storage characteristics of estuary deltas are documented and mechanisms may also exist for pathogen cycling.

(ii) Freshwater:
1) No privately operated facility may discharge effluent into the water supply of a publicly funded facility.
2) Any facility discharging effluent into a stream must be located a minimum of 5 km upstream of a privately owned facility using river water and must demonstrate that such

effluent will not pose a risk to fish of downstream operations.

3) For lake based netpens: there must be a minimum distance of 2 km between facilities or between a facility and any wild salmonid spawning and migrating areas. (Note: this may be revised depending on MOE policy.)

(iii) Seawater:

1) No fish culture facility will be permitted within a 5 km distance (by water) of another operation.

6.7 PROCESSING PLANTS

No effluent from a plant handling cultured fish may be discharged unless effluent is treated in an approved manner to kill infectious agents.

6.8 DISPOSAL OF DEAD FISH AND OFFAL

No dead cultured fish or offal may be discharged into the aquatic environment. All dead fish all offal must be treated in a manner acceptable to the Department of Fisheries and Oceans e.g., land fill site, incineration, etc.

6.9 DIET OF FISH

No unprocessed fish products of the same family should be used in the diet of cultured fish e.g., dead salmon should not be fed to cultured salmon.

6.10 CO-CULTURE OF SPECIES

(i) No facility shall culture sockeye and kokanee with any other salmonid species. This prohibition is necessary to prevent spread of IHN to other species in a culture situation.

(ii) No new facility for culture of chinook, steelhead or rainbow trout may be established where sockeye or kokanee are present in the hatchery water supply.

6.11 REPORTING OF FISH DISEASES

An annual fish health report must be completed listing all diseases encountered and treatments utilized.

VII FEDERAL-PROVINCIAL POLICY FOR THE IMPORTATION OF LIVE SALMONIDS INTO BRITISH COLUMBIA

In recognition of the commercial and recreational value of wild and cultured native salmonid stocks in British Columbia and the Yukon Territory, it is essential to protect their genetic integrity and freedom from exotic diseases.

Therefore, no importations of fish belonging to the family Salmonidae will be authorized by Federal or Provincial fisheries management agents which are not in compliance with this policy, effective on date of signing.

7.1 GENERAL

(i) Approved importation of live salmonids must comply with the Canadian Fish Health Protection Regulations (CFHPR).

(ii) Only surface-disinfected, fertilized eggs will be imported. No live fish or unfertilized eggs or milt will be allowed.

(iii) Only Atlantic salmon (Salmo salar) and non-anadromous rainbow trout (Salmo gairdneri) will be considered for importation.

(iv) Importation of rainbow trout will be considered only from Canada and continental U.S.A.

(v) As of April 1, 1987, egg imports will be limited to 100,000 eggs per year per licence and allowed only from brood stock that has been held at the source facility (hatchery and sea pen), separate from other stocks for one full generation.

7.2 ATLANTIC SALMON

(i) No direct importation of Atlantic salmon eggs will be permitted from continental Europe, from the southern hemisphere, or from countries where viral hemorrhagic septicemia (VHS) is known or suspected to occur. Importation will be considered only from sites that (i) a Canadian Local Fish Health Officer has approved after a site inspection; (ii) can demonstrate a thorough record of disease history to the satisfaction of Canadian Local Fish Health Officer; (iii) can document and demonstrate a fish-free water supply system; and (iv) can document and demonstrate the capability of the physical plant to isolate stocks and prevent disease transfer between stocks.

(ii) Importation of Atlantic salmon eggs will be for the purpose of developing aquaculture brood stocks in British Columbia. Importers must propose a number or percent of fish to be held to maturity for reproduction and collection of sex products and demonstrate progress and intent to establish brood stocks.

(iii) Consideration for import will be given particularly to stocks that are demonstrably adapted for commercial aquaculture pen rearing, assuming that all other conditions are met.

(iv) After March 31, 1989, no further imports of Atlantic salmon eggs will be permitted.

(v) All Atlantic salmon must be held under strict quarantine (see 7.4).

7.3 LIVE SALMONIDS RESEARCH

(i) Notwithstanding sections 7.1 and 7.2, exceptions may be permitted for such activities as research or brood stock development and improvement when work is to be conducted under strict supervision of government fisheries agencies. Approval for exceptions must be obtained from the Director General, Pacific Region, Department of Fisheries and Oceans and the Director, Fisheries Branch, British Columbia Ministry of Environment and Parks.

7.4 ATLANTIC SALMON QUARANTINE CONDITIONS

(i) Prior to the arrival of any eggs, a quarantine facility must be inspected and approved by designated government personnel according to the following conditions as judged by the designated Fish Health Officer.

The quarantine facility must:
a) be an adequately enclosed area, physically separated from any other hatchery operation;
b) have restricted access;
c) have approved facilities for disinfection of effluent

(ii) All eggs and resultant fish must be held in quarantine for a minimum of 12 months after arrival.

(iii) All stocks in the initial year and thereafter all stock kept for brood stock must be inspected and sampled according to the CFHPR Manual of Compliance. Fish must be sampled 3 times in their quarantine and once just after transfer to salt water. Brood stock must be sampled at maturity.

(iv) Destruction of the stock by prescribed means will be required if any disease listed in Schedule II of the CFHPR is detected. Also detection of any other disease designated by Federal and Provincial fisheries management agencies may lead to the same requirement for stock destruction or to further quarantine of stock.

(v) Failure to comply with importation or quarantine conditions will result in suspension of the Commercial Fish Farm Licence of the facility.

7.5 MARINE REARING OF FIRST GENERATION ATLANTIC SALMON

(i) First generation Atlantic salmon hatched from imported eggs shall be confined to marine net pens:
   a) at the Pacific Biological Station
   b) in Jervis Inlet and associated bays and inlets east of its mouth; and,
   c) coastal waters between Latitudes 50° and 51° EXCEPT Broughton and Johnstone Straits and Discovery Passage and waters within 5 km of them.

   Such movements from hatchery to salt water will be by Federal-Provincial Transplant Committee approval only.

(ii) Second generation Atlantic salmon, whose parents are disease free, may be transplanted to marine net pens anywhere along the British Columbia coast with standard Federal-Provincial Transplant Committee approval.

The precautions taken above are designed to maximize the chances for detection of any exotic fish diseases that may be carried by the stock. It therefore follows that the first generation transplants to saltwater should be localized to ensure that all salmon stocks in British Columbia are not exposed and also to simplify the logistics of the rigorous sampling program that is scheduled under Section 7.4(iii).

7.6 PROCEDURES

(i) All requests for permission to import live salmonids are to be addressed to the Canada-British Columbia Transplant Committee, c/o Fish Health Officer, Pacific Biological Station, Hammond Bay Road, Nanaimo, British Columbia V9R 5K6.

(ii) In recognition of the importance of managing fish disease upon the orderly development of aquaculture in British Columbia; and recognizing the lead role of the Ministry of Agriculture and Fisheries and Oceans in aquaculture, the Department of Fisheries and Oceans and the Ministry of Environment and Parks will confer with the Ministry of Agriculture and Fisheries:
   a) prior to any decision being made by the parties regarding item II requests;
   b) prior to any amendments to the policy under item 20;

(iii) at least semi-annually regarding the nature and status of requests to the Canada-British Columbia Transplant Committee to import live salmonids to British Columbia.

APPENDIX I
FEDERAL LEGISLATIVE MANDATES PERTAINING TO AQUACULTURE

FISHERIES ACT

FISHERIES DEVELOPMENT ACT

FISH INSPECTION ACT

FISH HEALTH PROTECTION REGULATIONS

SEAL PROTECTION REGULATIONS

SANITARY CONTROL OF SHELLFISH FISHERIES REGULATIONS

FISH PROCESSING OPERATIONS - LIQUID EFFLUENT GUIDELINES
1975 DEPARTMENT OF ENVIRONMENT

APPENDIX II

DFO INFORMATION REQUIREMENTS FOR EVALUATING PROPOSED MARINE AQUACULTURE FACILITIES

1.0 PRE-DEVELOPMENT INFORMATION REQUIREMENTS

This information is required for the purposes of evaluating marine aquaculture or processing proposals. On the basis of its evaluation of this information, the Department will decide whether to approve a proposal and issue an Aquaculture Licence. The following information must be provided for all proposed marine aquaculture and proposed fish processing facilities and must accompany all Aquaculture Licence applications for marine aquaculture facilities.

1.1 A marine chart copy and a site plan showing the general location and boundaries of the proposed fish farm including depth contours within the lease area and the numbers, size and configuration of rearing pens expected at full production.

1.2 A scuba survey of all portions of the lease area shallower than a depth of 20 meters, describing substrate, vegetation and faunal presence as required on the scuba survey form that will accompany the license application (example following).

1.3 A description of all foreshore construction or beach alteration works that are being considered. Note that such works must be in compliance with Section 31 of the Fisheries Act that prohibits harmful alteration of fish habitat. Review and approval is required before such works are initiated.

1.4 A production plan of numbers, species and size of fish to be reared estimated on a monthly basis through one complete representative production cycle, at maximum production. Include estimates of monthly food use.

1.5 A description of associated activities being considered for this site including bleeding, processing, hatcheries or acclimation tanks.

1.6 A description of the freshwater supply system, if one will be developed. A description of sites or methods that will be used to dispose of dead fish, offal, refuse and sewage.

1.7 In areas deemed sensitive, additional information requirements of the prospective fish farmer may include seasonal assessment of oceanographic characteristics, identification of other effluent discharges in the same area, measurements of background water quality and sediment quality characteristics, vegetation mapping, and compilation of fisheries resource information for the site. Requests

for such information may be made under authority of Section 33.1(1) of the Fisheries Act.

2.0 OPERATIONAL INFORMATION REQUIREMENTS

Annual reporting of operational information may also be required as a condition of the Aquaculture License. This may be expected for sites exceeding 200 tonnes average annual production, and also for smaller operations located in areas deemed environmentally sensitive by this Department. Operational information reporting requirements may include but are not limited to the following:

2.1 An operational log including monthly or quarterly production figures and feed supply use figures, identifying the use of antifouling preparations on nets, and describing local environmental events such as plankton blooms, incidence of herring spawn on nets, predator control problems, and accidental fish releases.

2.2 A water quality monitoring program with sampling measures, replicates and frequency to be specified on a site specific basis by this Department, sufficient to demonstrate distribution of dissolved and suspended solids, nutrients, pathogens, bacteria, antibiotics and chemicals including antifouling treatment contaminants, as may be considered warranted and to the satisfaction of this Department. In most cases this will require sample analysis by an independent laboratory. Such programs would continue until completion of one full maximum production cycle, or longer as required to characterize operational impacts and absence of negative effects.

2.3 Monitoring programs describing accumulation patterns of organic deposits under pens sites, alterations in vegetation distribution patterns in the vicinity of pen sites, or changes in benthic invertebrate community structure.

2.4 Once a site has been operational for some time, information reporting requirements may be required if the site has increased production, appears to be negatively affecting the environment, or if it is selected to be part of a more general coastwide aquaculture impact assessment program.

APPENDIX III

DFO INFORMATION REQUIREMENTS FOR EVALUATING PROPOSED LAND BASED FACILITIES

1.0 PRE-DEVELOPMENT INFORMATION REQUIREMENTS

This information is required for the purpose of evaluating hatchery proposals. On the basis of its evaluation of this information, the Department will decide whether to approve the proposal and issue on Aquaculture Enterprise Licence.

APPLICATION INFORMATION

The following information must accompany all applications for an Aquaculture Enterprise Licence.

1.1 A topographical map or equivalent, with scale, showing the general site location. If the facility will discharge to the marine environment, including a nautical chart, photocopy or equivalent with scale.

1.2 A scale drawing or engineering plan of the site showing the location of adjacent streams, floodchannels, location of water supply structures, and location of water discharges. If the facility is at a river mouth, show the high water and low water lines, and the 20m below low water depth contour. (This will bear on marine outfall placement requirements.)

1.3 For sites on floodplains, prepare a site elevation survey to show ground elevations relative to historic flood levels. Identify areas that will be filled and the source of fill materials. Gravel removal from streams is generally not acceptable.

1.4 A production plan estimating the maximum stock density at full production in terms of the numbers of fish, species and expected average weight that will be achieved before off site transfer. This will permit assessment of wastewater characteristics.

1.5 For all proposed stream intakes or infiltration galleries including emergency water supplies and saltwater intakes, provide drawings including full engineering specifications and descriptions of intake structures and screens. Estimate maximum withdrawals for each month. Provide information on the streamflow volume available both during low flow periods and during periods of maximum water withdrawal for hatchery use. If this information is not available or cannot be reasonably estimated from existing records, then hatchery development may be delayed until low flow studies can be completed.

1.6 Provide a description of the intended treatment system and point of discharge of the hatchery and rearing effluent. Include retention time and cleaning procedures for settling basins, or alternately describe control and disposal measures that will be taken to isolate tank cleaning wastes from the general effluent. Identify the location and describe the screens that will be used to prevent accidental escapements.

1.7 Provide a description of the other waste facilities, structures and disposal procedures for sewage, lab wastewater, refuse, dead fish and offal.

1.8 For marine effluent discharges, estimate the distance if net pens will be located nearby. State if fish processing is also being considered for this site.

1.9 Provide a proposed construction schedule. This Department may require modification of scheduling in respect to critical periods for wild fish stocks that may be affected by instream works. In stream construction is generally limited to summer low flow periods.

2.0 OPERATIONAL INFORMATION REQUIREMENTS

Annual reporting of operational information may also be required as a condition of the Aquaculture License. This may be expected for hatcheries exceeding 1,000,000 smolts average annual production, and also for smaller operations located in areas deemed environmentally sensitive by this Department. Operational information reporting requirements may include but are not limited to the following:

2.1 An operational log including monthly or quarterly production figures, feeding rates, weights, survival rates, water flow volumes extracted from supply streams, quantities and types of chemicals or disinfectants used by date, and occurrence of accidental fish releases.

2.2 A water quality monitoring program with sampling measures, replicates and frequency to be specified on a site specific basis by this Department, sufficient to demonstrate distribution of dissolved and suspended solids, nutrients, pathogens, bacteria, antibiotics and chemicals, as may be considered warranted and to the satisfaction of this Department. In most cases this will require sample analysis by an independent laboratory. Such programs would continue until completion of one full maximum production cycle, or longer as required to characterize operational impacts and absence of negative effects.

2.3 Monitoring programs describing accumulation patterns of organic deposits, bacterial growths, periphyton or algal mat growths, changes in the benthic invertebrate community and changes in interstitial water characteristics downstream of freshwater discharges, as compared to upstream control sites; or for hatchery discharges to marine

environments, monitoring programs describing accumulation patterns of organic deposits and changes in vegetation and benthic invertebrate communities in the vicinity of the marine outfall.

2.4 Operational information and monitoring programs may be required of hatcheries that have been licensed and operating for some time, if they have expanded smolt production capabilities, are perceived to be negatively affecting fish habitat, have demonstrated poor husbandry or site operational practices, are out of compliance with current guidelines or if they are requested to take part in a more general survey of aquaculture industry impacts.

3.0 COMPLIANCE

A compliance schedule may be established for existing licenced freshwater facilities that are presently licenced but whose current operation fails to meet current Departmental standards as published in these guidelines.

Appendix IV

RECOMMENDATIONS RESPECTING SITING AND OPERATION OF AQUACULTURE FACILITIES

(i) Net pens should be located in areas of good circulation and tidal flushing.

(ii) Net pens should not be located in traditional anchorage areas or safe harbours or within one kilometer of major shipping lanes i.e., B.C. Ferry routes or oceanliner routes,

(iii) There should be no direct sewage discharge from living quarters on the lease site.

(iv) Net pens should not be located in an area adjacent to a facility which is routinely dredged in order to protect cultured fish from dredgate.

(v) No unprocessed fish products of the same family should be used in the diet of cultured fish to minimize disease transfer.

Appendix V

DEPARTMENT OF FISHERIES AND OCEANS KEY CONTACTS

A. Regional Aquaculture Coordinator (research, training, egg supply)
Fisheries Research Branch
Pacific Biological Station
Nanaimo, B.C. V9R 5K5 — 756-7046

B. Chief, Aquaculture Division (licencing, general information)
Fisheries Operations
1090 West Pender Street
Vancouver, B.C. V6E 2P1 — Ron Ginetz

C. Area Managers

South Coast
Department of Fisheries and Oceans, Field Services Branch
(Port Alberni, Campbell River, Victoria & Nanaimo Districts)
3225 Stephenson Point Road
Nanaimo, B.C. V9T 1K3 — Larry Duke — 756-7280

North Coast
(Kitimat, Prince Rupert, Queen Charlotte City Districts)
114-417 2nd Avenue West
Prince Rupert, B.C. V8J 1G8 — Paul Sprout — 624-0416

Fraser River, Northern B.C. and Yukon Division
(Kamloops, New Westminster, Whitehorse Districts)
Room 32380 6th Street
New Westminster, B.C. V3L 5B3 — Fred Fraser — 666-6478

D. Transplant Committee
Fisheries Research Branch
Pacific Biological Station
Nanaimo, B.C. V9R 5K6 — Dorothee Kieser — 756-7069

E. Diagnostics Service, Fish Health Section
Fisheries Research Branch
Pacific Biological Station — 756-7069
Nanaimo, B.C. V9R 5K6 — 756-7062

DEPARTMENT OF FISHERIES AND OCEANS KEY CONTACTS CONT'D

C. Inspection Division Offices

Fraser River, Northern B.C. and Yukon Division 2250 South Boundary Road Burnaby, B.C. V5M 4L9	Dale Paterson	298-4114
South Coast Division Ste 5 - 1537 Hillside Ave Victoria, B.C. V8T 4Y2	Wayne Holmes	388-3455
North Coast Room 224 - 417 2nd Ave. West Prince Rupert, B.C. V8J 1G8	Leslie Pozer	624-0439

PERMIT AND LICENCE STRUCTURE FOR MARINE FINFISH CULTURE

F = Federal
P = Provincial
M = Municipal

STEP 1

INITIAL CONTACTS
all of the agencies listed in step 3 should be contacted at the outset

STEP 2

P) **COMPANY REGISTRATION**
Registrar of Companies, Ministry of Consumer and Corporate Affairs;
Application Period: Immediate

P) **BUSINESS PLAN**
Ministry of Industry and Small Business offers free counselling (needed for applications, etc.)

STEP 3

M) **ZONING**
Municipality;
Application Period: 1 month to 1 year

P) **CROWN LAND LEASE, LICENCE OF OCCUPATION OR SECTION 10 LICENCE**
Lands Branch, Ministry of Lands, Parks, & Housing;
Application Period: 3 months to 1 year

F) **NAVIGATION COMPLIANCE**
Coast Guard, Department of Transport;
Application Period: up to 3 months

F) **Aquaculture Licence**
Field Services Branch, Dept. of Fisheries and Oceans;
Application Period: Issued after all other Documentation is in place

P) **MARINE FISH FARM PRODUCTION PLAN**
Marine Resources Section, Fisheries Branch, Ministry of Environment;
Application Period: 2 to 6 months

F) **FEDERAL WATERLOT LEASE OR LICENCE**
Canada Ports Corp. or Harbour Commission or Harbours & Ports Directorate
Application Period: 1 to 3 months

M) **SEWAGE DISPOSAL PERMIT**
Ministry of Health or Community Health Services;
Application Period: up to 1 month

P) **WATER LICENCE**
Water Management Branch, Ministry of Environment;
Application Period: 6 month to 2 years

P) **WASTE MANAGEMENT PERMIT**
Waste Management Branch, Ministry of Environment;
Application Period: up to 1 year

STEP 4

F & P) **TRANSPLANT COMMITTEE APPROVAL**
Transplant Committee, Dept. of Fisheries and Oceans and Min. of Environment;
Application Period: up to 1 month

M) **BUSINESS LICENCE**
Municipality;
Application Period: Immediate

F) **IMPORT PERMIT**
Fisheries Research Branch, Dept. of Fisheries and Oceans;
Application Period: 2 weeks

Note:

1) Attached are contact names, addresses, and telephone numbers along with brief explanations of each permit or licence.

2) Permits or licences listed are not required in all instances. Contact the agencies indicated to determine the individual requirements for specific farms.

3) Marine Fish Farm Production Plan was previously called Salmon Farm Mangement Plan.

PERMIT AND LICENCE STRUCTURE FOR MARINE FINFISH FARMING

Permit/Licence	Agency
STEP 1	
Initial Contacts - all of the agencies that will be approached for approvals should be contacted at the outset to determine what concerns they may have with regard to the location of a particular proposal. In particular, the agencies listed in step 3 should be contacted prior to submitting applications. NOTE: Only the Department of Transport, Ministry of Lands, Parks, and Housing, and Municipal (Zoning) governments have authority to allow or disallow a fish farm at a particular site.	
STEP 2	
Business Plan - needed when making application for loans, etc. This agency offers free counselling throughout the province, for business plan development.	Small Business Counselling Section Ministry of Industry & Small Business Development 4th Floor 1405 Douglas St. Victoria, British Columbia V8W 3C1 Telephone: 383-1612 or Suite 140 Robson Square 800 Hornby St. Vancouver, British Columbia V6Z 2C5 Telephone: 666-3900
Company Registration - all applications should be submitted under the same name. Crown Land applications and Marine Fish Farm Production Plans (previously called Salmon Farm Management Plan) must be under the same name.	Registrar of Companies Ministry of Consumer and Corporate Affairs 940 Blanshard St. Victoria, British Columbia Telephone: 387-4471

Permit/Licence	Agency
Federal Waterlot Lease or Licence - foreshore and offshore tenures are usually administered by the Provincial Ministry of Lands, Parks, and Housing but public harbours and ports are administered by Federal regulatory agencies and Harbour Commissions. Application for a lease or licence in a public harbour or port must be made to the agency in charge.	a) Canada Ports Corporation Vancouver Port Corporation Manager of Real Estate 1900 - 200 Granville St. Vancouver, British Columbia V6C 2P9 Telephone: 666-6785 Prince Rupert Port Corporation Manager of Finance and Administration 110 - 3rd Avenue W. Prince Rupert, British Columbia V8J 1K8 Telephone: 627-7545 b) Harbour Commissions Port Alberni Harbour Commission Property Manager P.O. Box 99, 2750 Harbour Rd. Port Alberni, British Columbia Telephone: 723-5312 Nanaimo Harbour Commission Port Manager 104 Front St. Nanaimo, British Columbia V9R 5K4 Telephone: 753-4146 Fraser River Harbour Commission 505 - 713 Columbia St. New Westminister, British Columbia V3M 1B2 Telephone: 524-6655 North Fraser Harbour Commission 2020 Airport Rd. Richmond, British Columbia V7B 1C6 Telephone: 273-1866

Permit/Licence	Agency
STEP 3	
NOTE: If your proposed site is in the vicinity of a shellfish growing area, either wild or cultured, contact Environment Canada before submitting applications to the agencies listed below. This agency has the responsibility for monitoring water quality standards for shellfish harvesting.	Environmental Protection Agency Environment Canada Room 8, 1801 Welch St. North Vancouver, B.C. V7P 1B7 Telephone: 985-6723 Bruce Kay Bert Kooi
Aquaculture Licence - all marine commercial aquaculture facilities must annually obtain a licence from this agency. Application should be made at the same time other applications are submitted, however, a licence will not be issued until all other approvals are in place.	Field Services Branch Dept. of Fisheries and Oceans 1090 West Pender St. Vancouver, British Columbia V6E 2P1 Telephone: 666-0519 Francis Dickson
Crown Land Lease, Licence of Occupation or Section 10 Licence - stipulates the use to which Crown Land can be put. The water lot that will house the net pens is usually "Crown Land". Approval of a Marine Fish Farm Production Plan (MFFPP) (previously called a Salmon Farm Management Plan) by the Marine Resources Section, Fisheries Branch, Ministry of Environment, is required before a Lease or Licence of Occupation will be issued. These two forms of tenure allow for improvements (net pen construction, etc.) to the leased or licenced area. A one year Section 10 Licence may be issued without an approved Production Plan; however, little or no improvements may be made to the licenced area. This licence allows the applicant time to study the site to determine locational and biophysical suitability. An application for Crown Land must be on file at the Lands Branch before a Marine Fish Farm Production Plan will be accepted for review by the Marine Resources Section. A separate MFFPP is require for each proposed site.	Land Administration Ministry of Lands, Parks and Housing Vancouver Island Region 851 Yates St. Victoria, British Columbia V8W 1M1 Telephone: 387-5011 Lower Mainland Region 210 - 4240 Manor St. Burnaby, British Columbia V5G 1B2 Telephone: 660-5500 North Coast Region Bag 5000, 3793 Alfred Ave. Smithers, British Columbia V0J 2N0 Telephone: 847-7334

Permit/Licence	Agency
	c) Harbours & Ports Directorate Property Manager Harbours & Ports Directorate Transport Canada, Marine 224 West Esplanade North Vancouver, British Columbia V7M 3J7 Telephone: 984-3803
Marine Fish Farm Production Plan (Salmon Farm Mangement Plan) - this plan becomes a legal part of the Crown Land Lease or Licence of Occupation, and sets out the production strategies and improvements schedule for the prospective farm. Approval is required before a Lease or Licence of Occupation will be issued. This plan must be submitted to the Marine Resources Section, Fisheries Branch after an application for Crown Land has been filed.	Marine Resources Section Fisheries Branch Ministry of Environment 780 Blanshard St. Victoria, British Columbia V8V 1X5 Telephone: 387-4573
Navigation Compliance - all structures or "improvements" that may interfere with navigation in Canadian waters must be approved by the Coast Guard. Often applicants are required to mark structures to make them more visible or install lights and/or buoys.	Ministry of Transport Coast Guard 224 West Esplanade North Vancouver British Columbia V7M 3J7 Telephone: 984-3731 John Duduman Herb Adrian
Sewage Disposal Permit - may be required if septic wastes are to be disposed of on land.	Ministry of Health (or) Community Health Services (call Community Health Services for the area in which the farm is to be located. If the farm is to be outside community boundaries, call the Provincial Health Services Branch.)

Permit/Licence	Agency
Waste Management Permit - required if septic waste will be disposed of in a body of water (fresh or marine).	Waste Management Branch Ministry of Environment Lower Mainland 15326 - 103A Avenue Surrey, British Columbia V3R 7A2 Telephone: 584-8822 North Coast Region 3726 Alfred St. Smithers, British Columbia V0J 2N0 Telephone: 847-7250 Central Coast Region 540 Borland St. Williams Lake V2G 1R8 Telephone: 398-4532 Vancouver Island Region 2569 Kenworth Rd. Nanaimo, British Columbia V9T 4P7 Telephone: 758-3951
Water Licence - required if water is to be diverted from a stream, river or lake, e.g. for hatchery operation or domestic use.	Licencing Section Ministry of Environment Water Management Branch Lower Mainland 15326 - 103A Avenue Surrey, British Columbia V3R 7A2 Telephone: 584-8822 North Coast Region 3726 Alfred St. Smithers, British Columbia V0J 2N0 Telephone: 847-7250 Central Coast Region 540 Borland St. Williams Lake V2G 1R8 Telephone: 398-4532

Permit/Licence	Agency
	Vancouver Island Region 2569 Kenworth Rd. Nanaimo, British Columbia V9T 4P7 Telephone: 758-3951
Zoning - required when a farm is to be located within a Municipality or Regional District. Where zoning bylaws are in place, check to ensure that the zoning provides for aquaculture as a designated use. Many areas of the coast are not zoned.	Municipality, Regional District or Island Trust responsible for zoning bylaws.
STEP 4	
Business Licence - required in order to operate a commercial enterprise in British Columbia.	Depending upon the location of the farm this is issued by the Municipality or Regional District.
Import Permit - live cultured salmonid eggs, smolts or fish imported into British Columbia must come from a certified facility approved by a Fish Health Officer. Customs requires presentation of an Import Permit before the goods are permitted into Canada.	Fisheries Research Branch Dept. of Fisheries and Oceans Pacific Biological Station P.O. Box 100 Nanaimo, British Columbia V9R 5K6 Telephone: 756-7000 Gary Hoskins
Transplant Permit - required to move live eggs, smolts or fish to or from the farm site if the distance of transfer is greater than 50 kilometers.	(Federal) Dept. of Fisheries and Oceans and (Provincial) Ministry of Environment Telephone: Leif Sunde 387-4573 Dorothy Keiser 756-7000 Robin Harrison 666-6478

NEW PROCEDURE FOR OBTAINING A MARINE LANDS LEASE OR LICENCE FOR AQUACULTURE PURPOSES

In December, 1985, the Ministries of Environment and Lands, Parks and Housing agreed to a change in the procedure for obtaining a marine lands lease or licence for aquaculture purposes.

OPTIONS FOR TENURE

The Ministry of Lands, Parks and Housing may accept applications for a Section 10 licence, licence of occupation or lease (see attached flowchart). Receipt of a management plan approved by the Ministry of Environment is not a prerequisite to acceptance of an application for tenure.

USE OF TENURES

(a) A lease is no longer the primary form of tenure. The Ministry of Lands, Parks and Housing may issue either a lease or licence of occupation upon completion of a management plan for production which has been approved by the Ministry of Environment.

(b) A Section 10 licence may be used when studies or additional data are needed in order for a management plan to be approved or when the Ministry of Environment indicates, in the initial referral process, that it will require more than 60 days to approve a management plan being prepared by the applicant.

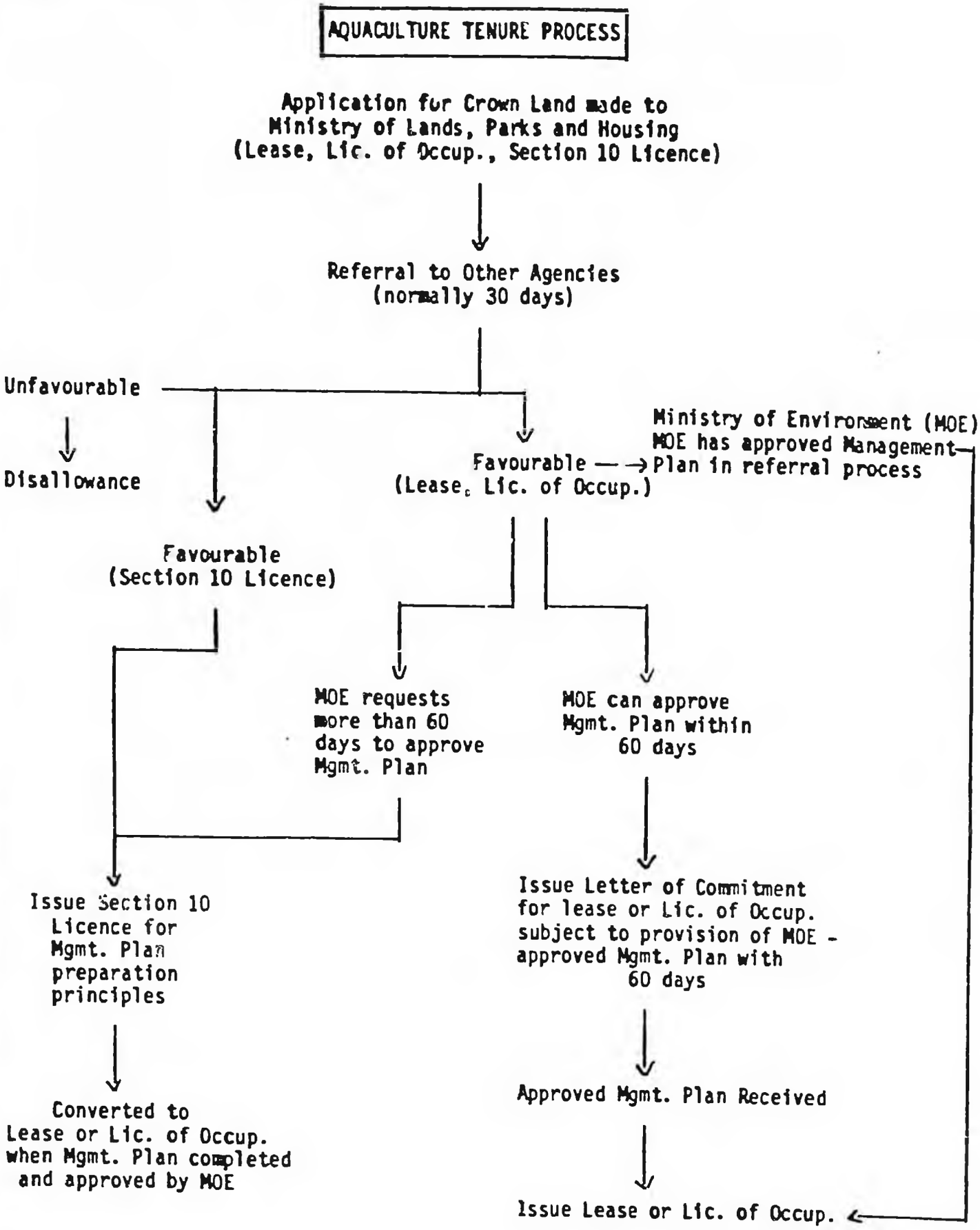
(c) The Section 10 licence is not to be used to authorize the commercial culture of harvesting of aquatic plants or animals, nor permanent residential habitation.

(d) The Ministry of Lands, Parks and Housing will not issue any other Land Act lease or licence (S.10, S.35 or S.36) over the subject area for any purpose while a Section 10 licence term is in effect.

(e) The applicant for a Section 10 licence shall provide a $25 application fee, $25 documentation fee, an outline of proposed operations, including a sketch plan showing the location and size of the area, and a description of any activities including temporary improvements necessary for the development of a management plan. The annual rental is $100, payable in advance.

(f) The Section 10 licence is non-assignable. The term is for a maximum of one year.

(g) When the Section 10 licensee has completed a management plan for production endorsed by the Ministry of Environment, the licensee may submit an application to convert the licence to a licence of occupation or lease for production purposes to be processed in accordance with normal procedures.


AQUACULTURE TENURE PROCESS
Application for Crown Land made to Ministry of Lands, Parks and Housing (Lease, Lic. of Occup., Section 10 Licence)
Referral to Other Agencies (normally 30 days)
Unfavourable
Disallowance
Favourable (Lease, Lic. of Occup.)
Ministry of Environment (MOE) MOE has approved Management Plan in referral process
Favourable (Section 10 Licence)
MOE requests more than 60 days to approve Mgmt. Plan
MOE can approve Mgmt. Plan within 60 days
Issue Section 10 Licence for Mgmt. Plan preparation principles
Converted to Lease or Lic. of Occup. when Mgmt. Plan completed and approved by MOE
Issue Letter of Commitment for lease or Lic. of Occup. subject to provision of MOE - approved Mgmt. Plan with 60 days
Approved Mgmt. Plan Received
Issue Lease or Lic. of Occup.

SALMON EGGS AND SMOLT SUPPLY

Persons planning to initiate a salmon farm should thoroughly investigate the availability of eggs and/or smolts as a part of their business planning and development of their Marine Fish Farm Production Plans (formerly Salmon Farm Management Plans).

Applicants should be aware that limited quantities of salmon eggs are produced each year. Egg supplies originate as surplus production from the Federal Department of Fisheries and Oceans hatcheries and from commercial salmon farmers. To date virtually all coho and the majority of chinook eggs have come from D.F.O. hatcheries. Over the next 3-4 years, D.F.O. will likely be able to supply coho eggs to meet the demand but chinook eggs will continue to be in short supply. Over the next decade it is expected that commercial suppliers will provide an increasing proportion of eggs which will leave D.F.O. as a supplier of last resort. Applicants should be prepared to make down payments on egg supplies about ten months prior to placing smolts in net pen; i.e. in September 1986 for a projected June, 1987 start date. Unless they have their own hatchery, most applicants will also have to make arrangements to have these eggs reared in a commercial hatchery to the smolt stage and their subsequent transfer to the net pen site.

For more information contact:

Mr. Bob Nelles, Manager
B.C. Salmon Farmers' Association
201 - 1760 Marine Drive
West Vancouver, B.C.
V7V 1J4
Phone: 922-4525

Department of Fisheries and Oceans
Fisheries Research Branch
Pacific Biological Station
Nanaimo, B.C.
Phone 756-7000

(revised 15/04/85)

INFORMATION FOR FISH FARMERS

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Summer extension courses for Growers:

A. Culture of salmonids
B. Culture of molluscs (oysters, mussels, clams, scallops, abalone)

Contact:

Bill Pennell or Eunice Lam
Phone: 753-3245

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*Available for study at Pacific Biological Station (not for loan)

**Copies available on request to:

Aquaculture Program
Attention: B. Damon
Pacific Biological Station
Department of Fisheries and Oceans
Nanaimo, B.C.
V9R 5K6
Phone: 756-7012

MARINE FISH FARM SITE EVALUATION CRITERIA

BIOPHYSICAL CAPABILITY	HIGH	MEDIUM	LOW
1. Water temperature (single incident)	Summer $\leq$ 16°C Winter $\geq$ 7°C	Summer 17-20°C Winter 5-6°C	Summer $\geq$ 21°C Winter $\leq$ 4°C
2. Salinity	$\geq$ 24°/oo	15-23°/oo	< 15°/o
3. Circulation in seapen @ 8-10/m^3 stocking density	> 2 cm/sec	2 cm/sec	< 2 cm/sec
4. Protection	well protected < 2' wave	moderate protection < 3' wave	risky > 3' wave
5. Predators	no known observations; seals, otters, sea lions, mink	observations noted	known haul-out or colony nearby
6. Depth below seapen bottom at 0'	> 10 m	2-10 m	< 2 m
7. Pollution	no known sources; future impacts unlikely	no sources at present; some future impact possible	industrial or septic pollution nearby
8. Plankton	no record of chaetocerus or heavy plankton blooms	location suspect	known plankton blooms

.../2

Modified Jan./86

LOCATIONAL SUITABILITY	HIGH	MEDIUM	LOW
9. Hydro	B.C. hydro available on site	potential small hydro	generator only option
10. Road access	to - site	nearby with potential to connect	no access
11. Boat access	protected waters to nearest road	mostly protected waters to nearest road	exposed waters to nearest road
12. Proximity to markets total travel time by boat or vehicle	< 5 hrs. i.e. there and back in one day	5-10 hrs. there in time to ship same day	> 10 hrs. ship day following
13. Proximity to labour pool	employees drive to work	employer provides daily boat transport	employee housing provided
14. Communication	B.C. telephone	radiotelephone	single side band
15. Freshwater	sufficient for all salmon farm requirements such as drinking water, equipment cleaning, etc.	partially sufficient for salmon farm operation	insufficient for salmon operation

SALMON FARM MANAGEMENT PLAN

NAME _____

ADDRESS _____

_____

POSTAL CODE _____

TELEPHONE (604) _____

OFFICE USE ONLY

Land File _____

Our File _____

Date Received _____

January 10, 1985