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To: Mme. Claire Dansereau  
À: Deputy Minister

Date:

Subject:  
Objet:

**PROPOSED TRANSITION LICENCING STRATEGY AND  
LICENCE CONDITIONS UNDER THE NEW AQUACULTURE  
REGULATORY REGIME IN BRITISH COLUMBIA**

(For the RDG's and ADM's Decision)

From: T. Swerdfager, Director General, Aquaculture Management Directorate

From: B. Antcliffe, A/Regional Director, Fisheries & Aquaculture Management

Your Signature  
Votre signature

Information

For Comments  
Observations

Material for the Minister  
Documents pour le Ministre

Remarks: A. Thomson, Director, Aquaculture Management Division  
Remarques: S. Ford, Director, Office of Sustainable Aquaculture

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2010-502-00209  
EKME # 2237599

MEMORANDUM FOR THE ASSISTANT DEPUTY MINISTER AND REGIONAL  
DIRECTOR GENERAL PACIFIC

**PROPOSED TRANSITION LICENCING STRATEGY AND LICENCE CONDITIONS  
UNDER THE NEW AQUACULTURE REGULATORY REGIME IN BRITISH COLUMBIA**

(Decision Sought / Signature Required)

**SUMMARY**

- A transition period licensing strategy (TAB A) and licence templates with conditions of licence (TAB B) have been drafted to support implementation of the new aquaculture Regulatory Regime in British Columbia.
- DFO's transition strategy is to generally continue with current practice already established by the relevant Provincial and/or Federal agencies with some changes where there is a need to merging of overlapping practices, to support increased transparency in environmental reporting, to make conditions more enforceable, and in a few cases, to address critical impact areas that had been previously unmanaged.
- An analysis of potential areas of change from current management practice that have been considered by staff has been provided along with brief analyses to support the recommendation on whether to incorporate the change or not (TAB C).
- A draft cover letter to accompany the information package is attached (TAB D).

**Background**

- National Headquarters and regional staff from Aquaculture Management, Resource Management and Habitat Management have been engaged in developing the proposed licensing strategy and licence templates.

## Analysis / DFO Comment

- The transition period licensing strategy outlines the legislation (*Fisheries Act*) and regulations (Pacific Aquaculture Regulations; Fisheries General Regulations) that support the implementation of the regulatory program and licence conditions (**TAB A**). It also outlines the proposed approach to administration of licences including:
  - Use of five licence categories, each expected to have a distinct set of licence conditions: salmon in marine waters; other marine finfish; shellfish; land-based and enhancement a phased in approach to licensing with non-government operating enhancement facilities not being licensed until March 2011 or later.
  - Staggering of licence durations (in order to stagger future DFO licensing workload throughout the year).
  - Inclusion of a statement in the strategy on what constitutes a major versus an administrative change, along with a statement that only changes of an administrative nature will be accepted for December 18, 2010 licence issuance.
  - The inclusion of general condition of licences to support DFO's public release of licence-holder data (e.g., environmental ....
  - OTHER?
  
- Licence templates with conditions of licence (COL) have been drafted based on the direction to generally reflect current regulatory practices in British Columbia where there is a need to merging of overlapping practices, to support increased transparency in environmental reporting, to make conditions more enforceable, and in a few cases, to address critical impact areas that had been previously unmanaged (**TAB B**).
  
- Staff has developed a list of potential areas for change in regulatory practice for 2010 licences. These have been grouped into:
  - Changes that staff recommend incorporation. These changes have been included in the attached draft licence templates. For the analysis, these changes have been marked according to expected level of controversy and/or internal debate on whether the change is critical for the interim period: Green indicates minimal controversy; Yellow some controversy or question); and Red high expected controversy.
  - Staff also identified a number of potential changes that are recommended to be deferred and considered in post-transition engagement. DFO has signaled externally that there will be a Post-transition engagement strategy to consult on the formation of Integrated Management of Aquaculture Plans and their related advisory committees, on any additional First Nations engagement and on the review of the policy framework.
  - All significant changes considered have been included in the analysis under **TAB C** with a brief analysis of each of the flagged items.

**Recommendations / Next Steps**

- It is recommended that you agree to the draft proposals for licence conditions by species group and the draft licencing strategy as presented.
- A draft cover letter to accompany the information package is attached for approval **(TAB D)**.

I concur,

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Kevin Stringer  
A/Assistant Deputy Minister, Ecosystem and Fisheries Management

I concur,

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Susan Farlinger  
Regional Director General, Fisheries and Aquaculture Management

Att.(3): .  
TAB A – Draft Transition Period Licensing Strategy  
TAB B – Draft Licence templates for Salmon in Marine Waters and Shellfish  
TAB C - Analysis of potential areas of change from current management practice to support implementation of the new aquaculture Regulatory Regime in British Columbia

J. Aitken / S. Ford / A. Thomson / B. Antcliffe / T. Swerdfager / S. Farlinger / K. Stringer

## **Transition Licencing (add Enforcement?) and Other Authorization Strategy**

### *1. Introduction:*

The February 9, 2009 decision by the British Columbia Supreme Court (BCSC), in the case of *Morton v. British Columbia (Agriculture and Lands) 2009 BCSC 136*, struck down the British Columbia provincial regulations for aquaculture. Fisheries and Oceans Canada (DFO) is establishing (has established) the Pacific Aquaculture Regulations under the *Fisheries Act* for the proper management and control of aquaculture and the conservation and protection of fish and fish habitat as it relates to aquaculture in British Columbia and certain waters off its coast. The regulation will be delivered through a regulatory program.

Recognizing that regulatory development initiatives and implementation of new policies and programs typically occur over a time period of several years or more, and given the tight timelines imposed by the Court decision, the federal government's immediate goal is to ensure that the core elements for the new British Columbia (BC) aquaculture regulatory regime are in place when the regulation takes effect on December 18<sup>th</sup>, 2010. Consultations on policy and program design will continue post December 18th.

DFO's overall interim approach to management of aquaculture is therefore to generally continue the same practices used by the relevant Provincial and/or Federal agencies as of December 18, 2010, where these practices are consistent with the *Fisheries Act*, the Pacific Aquaculture Regulations, and applicable sections of the Fisheries General Regulations. This strategy is an interim strategy developed for licence issuance during the transition period covering approximately December 18, 2010, to March 31, 2011. During the interim implementation phase DFO will continue the process of reviewing policies and practices.

### *2. Governing Legislation and Regulations*

A number of federal and provincial Acts and Regulations regulate various aspects of the aquaculture industry in British Columbia, including, but not limited to:

#### Provincial:

- *BC Crown Land Act* which governs issuance and administration of tenures;
- *BC Environmental Act* related to management of waste discharges unless where otherwise regulated by DFO as part of the proper management and control of fisheries and fish habitat (the Province is currently considering legislative amendments to reflect this approach);
- BC labour, business and work place safety related Acts and regulations

## Federal:

- *Fisheries Act* (FA), which mandates the conservation and protection of fish and fish habitat and the proper management and control of fisheries. The following regulations under the FA apply to aquaculture activities, (further details provided in Annex 1):
  - Fisheries (General) Regulations (FGR), which set out provisions administration of fisheries licences, the placement of gear, conditions of fishing licences, release of fish, observer provisions, and aspects of enforcement of the FA;
  - the proposed Pacific Aquaculture Regulations (PAR) which will primarily set out the scope of activities to be managed as aquaculture under the PAR and additional areas for conditions of licence. the proper management and control of aquaculture and the conservation and protection of fish and fish habitat as it relates to aquaculture in BC; and
  - Management of Contaminated Fisheries Regulations, which addresses aspects of shellfish food safety.
- *Navigable Waters Protection Act* (NWPA), under which permits may be issued to aquaculture operations related to interference with navigation and the *Canadian Environmental Assessment Act* (CEAA) when a triggered by a decision under NWPA.
- Environment Canada Spill Regulations
- *Species at Risk Act*, which sets requirements for recovery plans with respect to listed species at risk.

For further clarification, the following federal regulatory provisions do not apply to aquaculture in BC:

- any provisions of the Pacific Fishery Regulations, continuing the previous exclusion of aquaculture from these regulations;
- any provisions of the Marine Mammals Regulations as nuisance seals permits are now managed under the PAR where oversight provisions have been increased;
- provisions under FGR related to fishermen's or fishing vessel registration process (e.g. FGR 18-20) - for other Pacific fisheries these are designated under Pacific Fisheries Regulations which do not apply to aquaculture.

### 3. Scope

The following types of activities fall outside of the scope of aquaculture and will not require a licence issued under the Pacific Aquaculture Regulations:

- In-stream incubators;
- Aquaria trade;

- Processing plants; and
- Transport vehicles.

#### 4. *DFO License Categories and Licence Requirements*

The following licences are expected to be required by aquaculture sector December 18<sup>th</sup> and beyond:

- Marine Salmon - PAR aquaculture licence
- Non-salmonid marine finfish (Sablefish, Rockfish, etc.)
  - PAR aquaculture licence
  - Access to Wild Broodstock licence
- Land-based and freshwater facilities – PAR aquaculture licence
- Shellfish culture
  - PAR aquaculture licence
  - MCFR if operating in conditionally open area
  - Access to Wild Broodstock licences (Geoduck only)
- Federally and Provincially-Operated Enhancement facilities
  - PAR aquaculture licence

All other licences (e.g., Introductions and Transfer permits; broodstock collection permits, management requirements (e.g., SEP letters), and authorizations (e.g., Harmful Alteration, Disruption, or Destruction of Fish Habitat) which have previously been issued to operations covered under the scope of PAR will be rescinded by DFO when the new aquaculture licence is issued.

Each licence referenced above will require its own application to be submitted. DFO will develop application templates.

#### 5. *PAR Licensing Issuance Priorities*

Licences will be issued to all of the following categories as a priority for December 18, 2010 where there are active operations and an application is submitted:

- All marine finfish operations
- All commercial freshwater and landbased operations
- All shellfish culture
- All DFO and provincially operated enhancement facilities
- For March 31, 2011, DFO will target issuance of licences to:
  - all non-government operated enhancement facilities, although the final deadline will be discussed over the next few weeks;

- any non-active operations that have not applied for a licence.

It is recognized that some aquaculture facility operators have had applications in to the province for significant licence amendments (e.g., changes to production limits) for varying lengths of time:

- Given DFO's limited resources and the short time frame for implementation, the priority will be given to ensuring all active operations are licenced for their existing licences activities as of 2010. Amendments or changes of an administrative nature will be considered (e.g., change of address or contact information; change of licence holder or shareholders; modifications to licence holder management plans and/or their supporting protocols where these changes are consistent with policies).
- Applications for non-administrative amendments (e.g., change in species; changes in peak biomass levels; changes in licence boundaries) will be only be considered after March 2011 and only after Integrated Management Planning processes and advisory structures have been initiated, and DFO's First Nations Engagement Strategy for Aquaculture in BC is in place.

#### 6. *Anticipated licence condition categories*

A series of interim aquaculture policies will provide the context for DFO's management measures and lay out typical licence conditions. The Minister retains the discretion to alter licence conditions for some or all sites; where this is done, however, a rationale will be placed on the licence records.

- All licences will include:
  - Tombstone data (licence holder name, address, contact info, etc);
  - A record-keeping section;
  - A general reporting & notification section with, among other conditions, DFO contacts to be used;
  - A condition of licence whereby the licence holder agrees to publicly post specified reports/information (in line with Public Reporting Policy)
  - A condition of licence whereby the licence holder agrees to have reported by government, regulatory data (in line with Public Reporting Policy).

- A statement on the licence that it is the responsibility of the licence holder to maintain compliance with all other applicable federal and provincial regulations and, where applicable, and to maintain a valid tenure or maintain permission from a holder of a valid tenure to operate on said tenure.
- Marine salmon operations licenced
  - All - A full list of major areas for condition of licence to be inserted once licence templates are more finalized (e.g., fish health section, sea lice section, benthic, etc.)
  - Unique to some licences - sea lice monitoring on wild fish (5 Nootka Sound licences only).
- All Sablefish and Other marine finfish licenced.
  - A full list of major condition of licence areas to be inserted once licence templates are more finalized. (expected to include most of salmon COL but not fish health plan requirements or sea lice)
  - Unique to some licences - any SARA-related provisions where species cultured is listed (e.g., sturgeon).
- All shellfish culture
  - A full list of major condition of licence areas to be inserted once licence templates are drafted (more limited than marine salmon, e.g., no fish health management plan requirements at this time)
  - Unique to some licences - any SARA-related provisions where species cultured is listed (e.g., abalone).
- All freshwater and land-based operations
  - A full list of major condition of licence areas to be inserted once licence templates are drafted
- All government operated (provincial and federal) enhancement facilities
  - A full list of major condition of licence areas to be inserted once licence templates are drafted. Fairly limited requirements reflecting current approaches but does include fish health management.
- Non-government operated enhancement facilities
  - Very limited requirements reflecting current approaches.

#### *7. Initial Duration of Licences (2010/early 2011 licences only)*

It is DFO's intention to issue licences for different durations in order to balance out future workloads across the calendar year. [DFO has yet to determine how durations for individual licences would be set within a range – may be a simple draw of licences or by area or by some other method]

- Marine salmon - 12 months
- Non-salmonid marine finfish - 12 months;
- Shellfish - 13-16 months duration;
- Freshwater and land-based - 16-20 months.
- Enhancement facilities - 38-40 months duration ending in spring;

In the longer term, it is DFO's intent to use the Integrated Management of Aquaculture Plan (IMAP) processes to establish appropriate duration periods for each category of licence holder.

#### *8. Licence holders*

Licences will be issued to the person who is operating the facility, not the tenure holder, as DFO will want to hold the appropriate person accountable. Where a tenure is required, the provincial tenure number must be provided; if the operator is a different person than the tenure holder then proof of permission to operate the tenure (e.g., letter from tenure holder; estate designation) must be provided to DFO and will form part of the licence records.

Licences are transferable only by application through DFO. A new licence would then be issued to the new licence holders.

#### *9. Notification to licence holders of upcoming need for licence and application procedures*

Recognizing tight, Court-imposed deadlines and the importance of issuing licences to priority sectors, DFO intends to proceed in the following fashion:

- A first notice of intent to require DFO licences will be sent by registered mail in mid-October to all current provincial and potential federal licencees. The package will contain a covering letter, draft interim licence templates with conditions of licence and the draft licensing strategy. In the covering letter, DFO will offer to meet with potential licence holders to discuss the draft licence conditions.
- An anticipatory request to submit applications will be sent to all identified potential licence holders in early-November). The package will contain a letter informing them of anticipated requirements to hold a licence, updated licence templates and interim licensing strategy, an application form, instructions on how to apply and resources to assist with completion of application, as well as draft interim policies. DFO is working to provide assistance with application completion through on-line resources and call-in options. Information will also be distributed more broadly both online and

through newspaper ads in targeted areas of BC where aquaculture activities take place.

- Once the Pacific Aquaculture Regulations have been published in Canada Gazette II, another letter will be set to all potential licencees who have not yet submitted an application informing them that a licence is now required.
- Letters will continue to be sent to outstanding licence holders regularly over the next year.

#### *10. PAR Licence Enforcement Priorities*

Related to the requirement for licences under PAR, enforcement priorities to March 31, 2011 will be placed on:

- Unlicensed active marine finfish operations;
- Unlicensed active commercial salmon freshwater operations; and
- Unlicensed active shellfish culture with sales of product.

**Annex 1:** A General Guide to the Expected Application of the *Fisheries Act* and its Regulations to BC aquaculture post December 2010.

\* Note any errors or omissions in this table do not in any way limit the application of the Acts and Regulations listed

| Activity  | FA                     | PAR         | FGR                                   | MCFR |
|---|------------------------|-------------|---------------------------------------|------|
| Scope of aquaculture activities encompassed   | s.2                    | s.1         | s.3(1), (3),(4)                       |      |
| Scope of geographic area encompassed  |                        | s.2         |                                       |      |
| Requirement to have a licence to carry out aquaculture activities in BC   | s.32                   | s.9         |                                       |      |
| Authorization for Minister to issue aquaculture licences  | s.7                    | s.3         |                                       |      |
| Scope of types of conditions of licence that may be imposed, with Ministerial discretion on which are applicable to given situation (e.g., sector, area, species, cultivation methods, site specific)   | s.43                   | s.4         | s.22(1)                               |      |
| Administration of documentation including licences (application for, issuance process, use, transfer, duration, cancellation, amendment, etc.)  |                        |             | s.8-10; s.14-18<br>s.22(2-5); s.23-24 |      |
| Provisions that retention of incidental catch may be authorized by Regulations  |                        | s.1; s.4(c) | s.33(2)                               |      |
| Provisions that Fishery officers may designate gurry (fish offal/waste) grounds   | s.57                   |             |                                       |      |
| Provisions to authorize selling of fish caught and retained under authority of licence  | s.33                   |             |                                       |      |
| Provision to allow a Fishery officer to authorize placement of net in waters for purposes of cleaning it  |                        |             | s.38                                  |      |
| Requirements should licence be suspended or cancelled   |                        |             | s.25                                  |      |
| Requirement to carry a licence (or a certified copy? – PAR amendment?)  |                        |             | s.11                                  |      |
| Requirement to comply with Act and applicable regulations   |                        |             | s.22(6)                               |      |
| Requirement to comply with COL  |                        |             | s.22(7)                               |      |
| Requirement for identification of fishing gear  |                        |             | s.27 & s.29                           |      |
| Requirement to release in manner that causes the least harm   |                        |             | s.33(2)(b)                            |      |
| Requirement to keep fish (before reaching processing plants) in a manner that species, quantity and weight can be identified  |                        |             | s.36(2)                               |      |
| Requirement to assist persons engaged in enforcement or administration of Act (Fishery officers, fishery guardians, inspectors, observers) on fishing vessels, aquaculture facilities or landing stations   | s.39(10)<br>s.62       |             | s.41<br>s.43-48                       |      |
| Requirement to keep records and provide such information to fishery officers/guardians  | s.61-63                |             |                                       |      |
| Requirement to have and hold a MCFR licence and have a decontamination plan if fishing activity is going on involving fish, which RDCG has reason to believe are contaminated   |                        |             |                                       | s. 3 |
| Prohibition on obstruction of mesh  |                        |             | s.30                                  |      |
| Prohibition on transshipment of fish to an unlicensed foreign vessel  |                        |             | s.32                                  |      |
| Prohibition against dumping and wasting of fish   |                        |             | s.34(2)                               |      |
| Prohibition of non-authorized people from fishing in or removing fish from or being within specified distance of a hatchery, rearing facility, holding or collection facility operated by Department or provinces (s.23-24); Authorizing of area to be “set apart” (s.57) | s.23-24<br>s.57        |             | s.37 (1-2)                            |      |
| Prohibitions on using certain methods to kill fish  | s.28                   |             |                                       |      |
| Powers of fishery officers and fishery guardians to inspect, seize, enter premises, etc.  | s.49-53                |             |                                       |      |
| Minister’s authority to designate Inspectors and Analysts for purposes of section 35 – 43, and their powers   | s.38(1-8)<br>38(11-13) |             |                                       |      |

|  |  |           |                                  |  |
|--|--|-----------|----------------------------------|--|
| Observer designation and duties  |  |           | s.39 (1-6);<br>s.39.1-39.3; s.40 |  |
| Prohibitions against undue obstruction of navigation or waterways  |  | s.24,29   |                                  |  |
| Offences of contravening Act or its Regulations and Consequences   |  | s.40-41   |                                  |  |
| • for an offence punishable on summary conviction, fines of up to \$100,000 and/or imprisonment not exceeding 1 year plus provisions for additional fines  |  | s.66      |                                  |  |
| • for an indictable offence, fines of up to \$500,000 and/or imprisonment not exceeding 2 years plus provisions for additional fines                       |  | s.70-77   |                                  |  |
| • cancellation or suspension of licence (as ordered by a Court)  |  | s.78-79.6 |                                  |  |
| • other prohibitions, directions or requirements (e.g., remedial actions, community service, compensation to Crown, publishing information on the offence) |  |           |                                  |  |
| Ticketable offences  |  | s.79.7    | s.64                             |  |



**TAB C: Analysis of potential areas of change from current management practice to support implementation of the new aquaculture Regulatory Regime in British Columbia**

Colour code:

- Green – recommended for inclusion in licensing strategy/conditions of licence; minimal controversy expected
- Yellow – recommended for inclusion in licensing strategy/conditions of licence; some controversy expected
- Red – may or may not be recommended for inclusion in licensing strategy/conditions of licence, but high controversy expected regardless
- Blue – recommended for future consideration post-December.

**Proposed Changes with Respect to Salmon in Marine Waters**

Changes considered with respect to licences in this area included:

- **Licence holder Management Plan approval** – The province has required aquaculture operations to have such plans in a number of areas such as fish health, benthic management, facility integrity, but not for proposed production plans (although parts of the production plan were required through transfer applications). In present practice, some plans are submitted to the appropriate provincial staff, but only fish health plans are actually reviewed and approved by staff. DFO staff have also reviewed and accepted the fish health plans as part of the provincial review. The requirement for proposed production plans is entirely new. Plans that are not approved may not be considered a requirement, and may be more difficult to enforce.

It is recommended that:

- Licence holders be required to submit their current fish health management plans and associated documentation as part of the application process for December. It is proposed that a condition of licence will require that these plans be implemented.
  - A condition(s) of licence requires other plans be submitted to DFO within 3 (?) months. Once the plans are approved DFO would then issue a licence amendment to require their implementation.
- **Maximum production allowable** - The province has been setting production limits on licences using a complicated formula to calculate Maximum Total Production; where DFO has been issuing HADD authorizations, DFO has used a simpler “maximum peak biomass” level for maximum production. As another issue, some have pointed out that setting a maximum production limit is a redundant regulatory requirement which (1) is inefficient, and (2) may lessen enforceability given inherent potential contradiction in requirements when duplication exists – e.g., if sulfide limits are exceeded at monitoring perimeters but conditions of licence with respect to production limits are respected then it may be difficult to successfully charge a licence

holder); on the other hand, production limits are a highly visible regulatory requirement.

It is recommended that DFO include a condition of licence setting maximum production limits and that this COL be based on the peak biomass on site.

- **Requirement of some licence holders to continue wild salmon sea lice monitoring**  
One company has been required by DFO (? Confirm? as part of a HADD authorization?) to conduct monitoring of sea lice incident rates on wild salmon stocks near their 5 sites in the Nootka Sound area (Williamson Passage and Muchalat Inlet) since 2003. Voluntary sea lice monitoring programs have also been negotiated with other companies in other areas (does this involve all sites? What %?) There are high costs associated with these programs. ENGOs (and First Nations?) are expected to like the concept of mandatory monitoring programs for all areas but would want the conditions changes to require involvement of ENGOs.

It is recommended that the current wild salmon sea lice monitoring be included as a unique COL for the 5 sites operating in Nootka Sound. WHY? Rationale not clear enough – is it because this has been the only mandatory one?

- **Monitoring the use of lights and noise** - Underwater lights are used on marine salmon sites in BC as are surface predator noise deterrents. Underwater acoustic devices are apparently not; the province has banned their use (true?). The province has had no management measures pertaining to lights or surface predator noise deterrents. During the consultations, concerns have been raised that lights attract wild fish into finfish netpens, and some concern has been expressed about surface predator noise deterrents affecting marine animals. Availability of accurate information on extent of these practices would help in future assessment of their utility from a farm perspective and impacts. Information on usage could also be analyzed against incidental catch records and predator incidence records to assess for any correlations.

It is recommended that a COL be included to require reporting on use of underwater lights and predator noise deterrents.

- **Benthic management issues**
  - **Benthic-Use of specified sampling stations** – Current provincial practice is to require operators with sites located over soft-ocean bottom to determine the most appropriate benthic sampling stations based on location of highest expected benthic impacts. Provincial staff have been informed of these locations but have not reviewed nor approved these stations. Recent provincial audit sampling is indicating that provincial staff would have chosen different locations. The vagueness of the current approach could result in the monitoring programs not identifying the most impacted areas and put in question their reliability. Enforcement action with respect to “sampling in an

appropriate location” would also be difficult.

It is recommended that a condition of licence require that the licence holder with sites located over soft-ocean bottom submit proposed sampling locations to DFO within 3 (?) months. Once the locations are approved DFO would then issue a licence amendment specifying that these locations be used for benthic sampling.

- **Benthic - Baseline monitoring surveys** – Baseline monitoring surveys are more intensive than the monitoring required under FAWCR at the time of peak biomass. Monitoring results are used to identify any sensitive fish habitat (?), to ascertain appropriate sampling stations for future monitoring, and to assess compensation requirements for loss of habitat. Since 2002, this information has been required to be submitted with applications for new sites located over soft-ocean bottom or requests for increases in biomass or changes in tenure boundaries. Sites established prior to 2002, that have been active, that have not asked for significant licence changes and that do not have DFO HADD authorizations (verify) have not had to do these baseline surveys – instead the province has relied on the regulator monitoring and provincial benthic surveillance activities and only to judge the appropriateness of sampling stations.

Moving forward post-December, it is recommended that baseline monitoring surveys be required for all sites as part of:

- non-administrative applications for licence amendment, and
  - applications to re-commence aquaculture activities on a site fallowed since 2002.
- **Benthic - Enhanced monitoring of existing active sites** – As noted above there is a gap in benthic information for soft-ocean bottom sites active before and since 2002. In addition, neither baseline or peak biomass monitoring of hard ocean bottom has been required, although the province was just in the process of putting new FAWCR requirements in place in 2009 after extensive consultations with DFO, industry and others. One-time (?) enhanced monitoring surveys for existing sites would provide licence holders and DFO with more comprehensive information to support the selection of appropriate sampling stations for ongoing monitoring (this monitoring would be very similar to baseline monitoring except that technically it is not baseline data when the site has been operating). Such enhanced sampling would also provide information on fish habitat on all sites for public reporting. Finally, if DFO decides to pursue compensation from sites, this survey information will provide better data for determining levels. While DFO benthic surveillance audits could/would generate this data, DFO is not likely to conduct the audits on all active farms in within the next one to two years based on budget and output expectations.

It is recommended that a condition of licence require the licence holder to conduct enhanced benthic surveys according to specified protocols, and submit these to DFO for review and acceptance with respect completeness and consistency with protocols.

- **Benthic - Requirement for response plans when regulatory thresholds being approached** – The province does require that a specified benthic standard be met before restocking may occur. The province does not specifically state that response plans be put in place.

It is recommended that:

- A condition of licence state that transfer of new fish to the facility may not occur before specified thresholds at 30 m and 125 m (verify those; both?) are met.
  - A condition of licence require that if, over two production cycles, peak biomass monitoring indicates a trend whereby compliance standards are being approached, the licence holder must submit a remedial action plan to DFO, and implement it once it is approved. (“If DFO analysis indicates an increase in sulphide concentrations over time and these concentrations are approaching regulatory thresholds licence, holders will be required to submit a remedial action plan and take action to reverse the trend.”)
- **Benthic- Requirement to add biological sampling** – A proposed amendment under FAWCR was to require biological sampling if benthic thresholds (sulphide) standards are exceeded. WHAT WAS PURPOSE OF THIS? – BERNIE The information will assist in the understanding of the extent of benthic impact (so what??, i.e., what would that change? For laying of charges?) and the benthic recovery (same question). It would also be an indirect penalty for poor performance.

It is recommended that a COL requiring biological sampling following a specified protocol be included, triggered by a breaching of a sulfide standard at 30 m (and 125 m) monitoring stations?

- **Benthic - Use of 0 metre station** - A proposed amendment under FAWCR was the addition of benthic monitoring station at a 0 metre. The information obtained would assist in the understanding of the degree of benthic impact, benthic recovery. While this would increase company benthic monitoring costs, it has been consulted on by the province leading up to 2010. Monitoring would include the typical benthic monitoring required at other sampling stations as well as monitoring for specified potential contaminants whose deposit at certain levels could be regarded as harmful to fish habitat.

It is recommended that a COL be established requiring benthic sampling per the usual for 30 and 125 m stations and adding analysis for specified chemical compounds.

- **Benthic - Requirement to use DFO-qualified (or listed) data collectors and analysts** – Requiring the use of qualified data collectors and analysts for activities such as fish health activities, sea lice counting and benthic sampling could increase regulators' and the public's confidence in the data and analyses that are data generated through licence-holder monitoring programs. To date the only provincial requirement has been to use fish health veterinarians for some aspects of the fish health management plans. Similarly, taxonomic analysis of biological samples must be carried out by recognized taxonomists where this type of analysis has been required (where is it required?). While DFO will have the ability to qualify data collectors/analysts under the FGR sections on observers, DFO will not be in the position to qualify people or companies as of December 2010.

It is recommended that no COL be specified with respect to qualifications of data collectors / analysts for 2010 but that DFO raise the concept of qualifying data collectors / analysts for some or all monitoring programs as one of the consultation areas post-December.

- **Product and/or substance storage or containment and spill response plans for salmon farms in marine waters** - Spill prevention and response plans have been required of marine salmon farms for some products (e.g., feed and medicated feed storage guidelines; disinfectant requirements) but seem to have been voluntary for others (e.g., fuel spill response – verify the latter with Bernie – maybe FAWCR required it). Kerra H. will get back to us with the EC CEAA guidelines & how they were implemented. On the other hand, costs would not be high to licence holders, and most if not all facilities would likely have plans in place or could rapidly articulate them.

It is recommended that a COL require that plans be submitted to DFO for approval, including specified template, within 3 (?) months of licence issuance for the following:

- Medicated and non-medicated feed storage, inventory control and disposal plans with requirement to notify DFO of spills or predator events;
- Disinfectant storage, containment, inventory control, disposal and spill response plans with requirement to notify DFO of spills;
- Bloodwater containment and disposal plans with requirement to notify DFO of spills;
- Transport water containment and disposal plans with requirement to notify DFO of spills;
- Fuel and lubricant storage, inventory control, disposal and spill response plans with requirement to notify DFO of spills;

- **Benthic - Requirement to use 3rd parties for some or all monitoring programs** – DFO will have the ability to require use of 3<sup>rd</sup> parties under the FGR sections on observers and requiring the use qualified of 3<sup>rd</sup> parties to collect and/or analyze data for fish health, sea lice counting and benthic sampling programs could increase the public's confidence in the data and analyses that are data generated through licence-holder monitoring programs, as well as regulators' confidence. There would likely be significant licence holder cost implications and concerns. As well, the 2 months remaining would likely be insufficient to allow qualified individuals or companies to establish business, or for DFO to assess qualifications.

It is recommended that no COL be specified with respect to qualifications of data collectors / analysts for 2010 but that DFO raise the concept of requiring 3<sup>rd</sup> party data collectors/analysts for some or all monitoring programs as one of the consultation areas post-December.

### **Proposed Changes with Respect to Non-salmonids finfish in Marine Waters**

- **Access to wild stock for broodstock or grow-out trials** – The current DFO Policy on Access to Wild Fish Resources for Aquaculture Purposes states that this access will be permitted for finfish as routine where the request is of a limited duration and the quantities of fish involved would not impact fishers' quotas. Inclusion of this permission, however, as a standard licence condition would indicate a long-term access which is not the intent of the Policy. Staff are concerned that even including it as an option under the aquaculture licence application would be encouraging requests for such access. Issuance of a separate licence would deviate from the objective of limiting the number of separate authorizations.

It is recommended that permission to access wild stock for broodstock or grow-out trials be granted through a separate licence (legal advice being sought to confirm that this will not be problematic).

- Other COLs for non-salmonid finfish in marine waters are being reviewed but staff are not yet in a position to make recommendations. For example, these facilities are not currently required to have fish health management plans. They are required to follow FAWCR requirements with respect to benthic monitoring and thresholds.

### **Proposed Changes with Respect to Shellfish**

- **Banning wet storage** - When processing plants are at full capacity, a fishery and aquaculture (does this apply also to wild harvesters?) practice has been to hold shellfish waiting to be processed in the water column or in the intertidal zone nearby the processing plant on an aquaculture tenure(?). Transport to a plant usually requires crossing a shellfish zone established to minimize the movement of aquatic invasive species (e.g. green crabs and tunicates). Such temporary wet storage is seen to be a

risk factor in the incidental transferring of these species and DFO has a draft regional shellfish introductions and transfer policy that proposes banning the practice (however, no? consultation on policy to date and no implementation of its proposed ban). There are also enforcement concerns that this practice makes it difficult to track the origin of shellfish and contribute to laundering of illegally harvested shellfish.

It is recommended that no COL be specified with respect to banning wet storage for 2010 but that DFO raise this concept as one of the consultation areas post-December.

- **Product and/or substance storage or containment and spill response plans** – No plans have been required of shellfish facilities in the past; it is likely that facilities do not have plans in place even for fuel, and may cost implications may be relatively high to production value to develop them. The association's best management plans may have provisions, but these have not been widely adopted.

It is recommended that no COL be specified with respect to substance storage, containment and spill response plans for 2010 but that DFO raise the concept particularly related to fuel and lubricants as one of the consultation areas post-December.

- **Off-tenure collection of seed** - Some oyster growers collect natural oyster spat from outside the boundaries of their licensed area (primarily Pendrell Sound and Pipestem Inlet) to transfer to their licensed area for on-growing (in other words, collecting 'seed' from a natural spawn event off-tenure, and subsequently growing it out on-tenure for commercial sale under their aquaculture licence). There are concerns that the practice may contribute to the spread of the invasive 'oyster drill' snail. Currently there are no authorizations allowing this practice and there are no management measures in place. DFO and the province have minimal data on the importance of this activity to the shellfish sector.

It is recommended that:

- permission to undertake remote set activities be included as a COL in 2010 with reporting required using a specified template (to be developed by DFO).
  - DFO put this practice on the list as one of the consultation areas post-December.
- **Sale of varnish clams** - The province has been including varnish clams as a licenced species on their aquaculture licences even though the clams have not been planted (the licence holders do "tend" to them in a fashion through the use of predator nets deployed to protect the main harvest species. The varnish clam is an aquatic invasive species and its removal could be considered beneficial. Allowing its sale would encourage their collection and removal. It is uncertain, however, that the provincial practice of listing the species as a licenced aquaculture species would be legally viable under the Fisheries Acts and applicable regulations (verifying).

It is recommended that:

- Shellfish licences permit the harvest and sale of varnish clams within the site boundaries (either through listing varnish clams as a farmed species or through a COL with a requirement to record harvest and sale and to report annually; and
  - DFO add the potential for inclusion of permission to sell of other nuisance species on the list as one of the consultation areas post-December.
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- **Temporary removal of shellfish from a lease** – A few operators are currently temporarily removing shellfish from their aquaculture sites for grading, and replaced back onto the site. Although there appears to be movement towards on-site facilities, capital costs would be required and this capacity will not be in place in 2010. Enforcement has concerns that allowing the removing and replacement of stock increases risk of laundering shellfish into the site. In some circumstances where the site is in a conditionally managed area, such removals may be contrary to the Management of Contaminated Fisheries Regulations (MCFR) (discussions have been held on amendments to the MCFR to allow for removal under strict conditions but any regulatory changes are at least 12-18 months away; MCFR trumps the PAR). Outright disallowance of this activity would potentially set a national precedence without a provision for non-BC input, and this issue is very much a concern on the East Coast.

It is recommended that:

- a COL be included to allow for such temporary removal, where it does not contravene MCFR, and that there be requirement for reporting and tracking of the shellfish (if specifics on traceability can be developed by December 2010?)  
OR
  - DFO add the potential for permissions to allow this activity as one of the consultation areas post-December, with options being a move over time towards on-site grading or more stringent traceability requirements.
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- **Marking gear** - The province had been negotiating voluntary compliance with the marking of all shellfish aquaculture, but the province had never implemented the program. The province is still in possession of the marking tags and DFO will attempt to get the tags if the marking is consistent with FGR gear marking requirements. It is less likely that marked gear would be intentionally abandoned, and delinquent licence holders would be more easily identified.

It is recommended that no COL be specified with respect to marking of gear for 2010 but that DFO raise the as one of the consultation areas post-December.

**Proposed Changes with Respect to Freshwater and Enhancement** – still under development

**Proposed Changes Generally Across All Licences:**

- **Notification requirements** – Provincial requirements for notification varied. It is recommended that for the DFO licences, notification be required as follows:
  - 5 days prior to harvest of fish (templates to be developed); this condition could be met by filing an annual harvest days, if patterns of harvest are expected to be routine (e.g. every Monday and Thursday between 8 AM and noon).
  - 5 days prior to transfer of fish to or from a site.
  - Immediately on a high mortalities (minimum to be specified), diagnoses of an disease outbreak not reported to CFIA (CFIA will manage reporting related to diseases listed under the HAA), signifant damage to containment arrays (“significant” to be defined by Dec 18), or escapes.

Licence holders may question the need for advance notifications and see it as an unproductive administrative burden, a work and plan disruptor, and precursor to future requirements. However, requirement for notifications will aid in enforcement planning.

**Items of note for licensing strategy:**

- Under current provincial practice, many of the aquaculture tenures have technically expired. When aquaculture tenures expire, however, tenures are automatically renewed for 30-days unless they are explicitly cancelled by the province. DFO will be granting licences to operators who are receiving these 30-day tenure extensions.