

APPENDIX II.

Historic Overview of DFO's Pacific Region Habitat Management's Workload from 1965 to 2008.

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(Background document for 'An Assessment of DFO's Pacific Region's Effectiveness in Meeting its Conservation Mandate'. David Suzuki Foundation. Nov. 2004. Revised for the OAG Audit on DFO Habitat Protection March 2008)

Introduction:

Prior to the late 1960's the Department of Fisheries* (to be referred to as DFO) did not have a dedicated habitat protection and/or management program. However, statute responsibilities to protect certain aspects of fish habitat have been in the first version of the Fisheries Act passed in 1868. The 1868 version of this Act was an amalgamation of the 1850's Fisheries Acts of Upper and Lower Canada. Even in those earlier versions of the Act there were provisions to protect fish and fish habitat from deleterious substances, stream obstructions and even from the use of fire to clear land (so as to protect riparian zones?).

The Fisheries Act has always had periodic amendments to update the penalties provisions or address problems encountered in the courts. However; until the 1970's the Act to relate to habitat concerns did not change significantly over the years. The single greatest change to the habitat provisions of the Act came in 1976 when a general provision to protect habitat was passed by Parliament i.e. the section to protect habitat from the harmful alteration, disruption or destruction of fish habitat (HADD).

Habitat protection was not recognized as a key function of DFO and a unit to address this shortcoming was not established until 1968. The need to protect habitat became obvious in about 1965 but at that and prior times the protection and conservation of habitat was very hit and miss and appeared optional even where protection statute law existed e.g. to protect fish from dams, obstructions, etc..

For instance in 1954 the Jones (Wahleach) Lake hydro dam was subjected to an early form of 'no net loss' (NNL) and a compensation spawning channel was built to conserve the spawning needs of 5000 adult pink salmon.. Whereas, in 1963 the Mission Dam was built on the very productive Bridge River and no DFO requirement was made to build any mitigation or compensation works or even allow for flow releases down the river. The Province tried to maintain the large Chinook run with a hatchery but failed. Large populations of Chinook, coho and pink salmon were decimated.

**chronology of name changes from 1969 to 2008 - Dept of Fisheries, Dept of Fisheries and Forestry, Department of the Environment – Fisheries Service, Dept. of Fisheries and*

now the Dept. of Fisheries and Oceans (DFO). The acronym DFO refers to all of the above in this paper.

This paper will outline the general legal mandates of DFO in habitat protection, how they changed over the past 40 years and relate that mandate to the kind of habitat conservation organization that DFO had in place at the time, its resources and workloads. The general time period breakout is in 10 year periods beginning in 1965. To pay some historical tribute to many of the staff that dedicated much of their life to habitat protection, I have added the names of many of the pioneering habitat practitioners. The reader must appreciate that this is an overview and a proper detailed review of this topic could fill a text book.

The Awakening and Pioneering Era - 1965 to 1975.

Legal Responsibilities.

Habitat responsibilities related to the pollution and dam/fishway sections of the Fisheries Act and an important provision that disallowed the introduction of land clearing or logging debris into fish bearing waters. A general provision to protect habitat (physical vs water quality) did not exist. To combat destructive gravel mining in streams such as the Coquitlam River, DFO did arrange for the passing of the BC Gravel Removal Order under the general fishery regulatory empowering section of the Act. It allowed DFO to review and regulate the mining of gravel in Order In Council (OIC) named streams. The named stream list reached about 30 streams by 1976 e.g. Coquitlam and Alouette Rivers.

Gravel pits and road builders were especially guilty for ‘stealing’ gravel off of salmon spawning beds and the Province took little or no action under their legislation to stop it . . . Whenever gravel removal was out of control and industry nor the Province could or would not cooperate in gravel management, DFO would list that stream to conserve its gravel. The listing of each stream resulted in much more work via the referral system that accompanied each application for approval however it was a very effective legal tool when habitat legislation did not exist.

Workload\Organization:

A. Pollution Control.

DFO had a well established pollution control unit (PCU) (Jackson, Schouwenburg, Goyette, Kussat, Webster, Brothers, Watkins, Knapp, Lawley, et al.) to administer section 33(2) of the Fisheries Act. The unit worked closely with International Pacific Salmon Fisheries Commission (e.g. Cooper, Servizi, Gordon, Martins) who did good focused work on the Fraser River to help protect pink and sockeye stocks. Major pollution projects were the GVRD raw sewage and the discharges of the many pulpmills into freshwater and the ocean.. The 1960’s saw the construction of a series of new

pulpmills built in Prince George and Kamloops areas to exploit relatively intact Fraser Basin forests.

The PCU unit consisted of about 15pys but most were voluntarily transferred to the government's newly created Department of Environment – Environmental Protection Service (DOE-EPS) in 1972. DOE was established with EPS in 1971 and section 33(2) of the Fisheries Act was transferred to DOE – EPS. DFO for a short time became a service in DOE – the Fisheries Service. This newly built empire, by the then Fisheries Minister Jack Davis, was reversed by Prime Minister Trudeau in the next federal election campaign due to Eastern Canada complaints that Fisheries had disappeared. DFO and DOE then became independent departments. That meant that the Fisheries Act habitat provisions (including WQ) would now be divided between two departments and that issue has plagued water quality protection in Canada for the past four decades.

B. Special Projects Unit (Habitat Protection).

The first DFO 'physical habitat' (versus water quality) conservation unit was formed in 1968 and initially was directed into influencing unacceptable industrial practices that were harming habitat such as gravel mining in streams or the building of dams on almost any stream. Despite the lack of a general habitat protection statute the unit did its best to get after relatively uncontrolled activities such as the filling of estuaries (Squamish – BC Rail, Fraser Estuary – Roberts Bank fill), gravel removal from the Fraser and its lower mainland tributaries, dams (e.g. Moran, Shuswap, Kemanoo II), road construction (e.g. highway to Port Hardy) and increased logging especially on the coast.. Logging impact studies were initiated at Rivers Inlet and abandoned and then moved to Carnation Creek. Log drives on the Nass, Quesnel and Stellako Rivers were prominent defining issues of the rights of logs to water vs. the rights of fish to water i.e. one of the many BC vs. Federal jurisdictional squabbles.

Habitat Staff and Organization in 1969. (Boyd, Bird, Buchwald, Langer – techs Elvidge, MacIndoe) and engineering staff - Kupka, Robertson, Finnigan, Payne, Egar and Lill and engineering technicians including Arsenault, Dane, Eliason, Sookachoff, et al). **Total habitat staff in 1970 – 18 permanent staff** – most of an engineering background.

Staff grew quickly from 1970 to 1974 (Robertson, Slaney, Brownlee, Hamilton, Chamberlain, Tutty, Goodman, Hinton, et al). By 1974 Habitat filled an entire floor at 1090 West Pender and had a forestry, WQ, estuary and an engineering group – about 40 staff and many casual staff. Casual staff were a big part of the organization (about 30%) and they were there one day and gone the next as temporary salary dollars came and went. Funding was never stable or certain at anytime over most of the habitat unit's history – from the 1960s to the present time. This was a real handicap in terms of planning any strategic habitat protection efforts. Habitat work was almost 90% ad hoc in nature i.e. reacted to impacts or issues as they evolved.

In response to the formation of DOE-EPS and the loss of almost all WQ staff to DOE, DFO began the development of their own water quality (pollution) unit. It developed from 4 pys (Langer, Taylor, Pearce, Lochbaum) in 1972 to 9pys by 1975 (added secretary, Birtwell, Harbo and Nassichuck and casuals). Some felt that recreating the WQ unit was the wrong move in that if the government wanted DOE to look after that section of the Act, DFO should cut them loose and force them to swim or sink! The division was not well received by staff and regional managers but they were ignored by Ottawa.

Superimposed on this DOE-DFO split was the concurrent 1971 division of DFO Pacific Region into the Northern (NOB) and Southern (SOB) Operations Branches. This did not help habitat to develop a vision and a strategic plan. Bill Schouwenburg headed up the NOB habitat unit and Forbes Boyd the SOB. The first article of business was to fight with DOE over the spoils. This struggle carried on for more than a year and the problems of that split have never been resolved. Then there was the scrap over staff between NOB and SOB. Projects in the north that were handles by staff that ended up in SOB were abandoned eg (Rivers Inlet logging study, Kemano II, etc). NOB refused to do any pollution work and insisted that EPS had the entire mandate to administer that section of the Act. SOB took a very different approach. In that SOB refused to trust EPS in 1972 they established their own water quality unit (Langer etc). By 1976 this SOB-NOB decentralized organization was determined to not work well and in 1976 DFO went back to a centralized organization especially for habitat.

Partnerships: DFO worked very closely with BC Department of Recreation and Conservation. The Fish and Wildlife branch of Recreation and Conservation and DFO were joined at the hips on many issues. This relationship under F&W directors Withler, Hern and Vernon continued with DFO until the Bill Bennett Socreds come into power in 1976.

Bennett amalgamated Fish and Wildlife into the new MOE and the Province began to develop a provincial position on industrial projects and the old Fish and Wildlife branch lost their independence to assist DFO Habitat in their common battles with BC agencies that were causing a great deal of habitat damage e.g. forestry, BC Development Corp., BC Rail, B.C. Hydro, Highways, etc. Early referral systems were developed so DFO could have input into the permits (water rights, land and water leases, PCB pollution, etc) that the Province usually issues and most often impacted or harmed water quality or habitat.

To understand the importance of having the Province on side the reader must appreciate that at least 85% of habitat damage in BC is caused by; a) a provincial Department (e.g. Ministry of Transportation and Highways, Water Rights and Water Management), b) a provincial crown agency (e.g. BC Hydro, BC Development Corp. or the past BC Rail), c) a provincial creation – the local government, or d) a permit or license issued by the Province to a private party for logging, water diversions, etc.

There also were real problems with the formation of DOE and its Inland Waters Service(IWD) and the Environmental Protection Service(EPS). The former had the

mandate to represent the feds on flood agreements such as on the Lower Fraser River Flood control Agreement and often what IWD did was at odds with what should be good habitat protection practices (e.g. the building of a dyke across the Roberts Bank marshes or shutting off Tilbury Slough by a dyke). A never ending spat began between EPS and DFO. Significant disagreements appeared on the application of the pollution control section of the Fisheries Act and on spill response, coordination and in the handling of referral systems. At times DOE did not meet the expectations of DFO staff and Ottawa has constantly and consistently refused to address this problem.

Habitat Reaches Maturity – 1974 to 1984

Legal Responsibilities.

Habitat made its first big inroads into habitat protection via the development of referral systems and supporting early guidelines (Coastal Forestry, Land Development, Dredging, Pesticide, Placer Mining, Stream Crossing etc. guidelines). Early court work and habitat protection legislation (HADD) was passed by Parliament in 1976 – implemented in 1977. DFO staff had difficulty in properly enforcing initial HADD cases but first cases won by 1980. First riparian destruction case won in 1978. Numerous pollution cases were being prosecuted and won most often without DOE input - especially oil and pesticide spills and sediment releases. DOE and their lack of leadership was a real issue for DFO and the issue was never resolved. Concept of ‘no net loss’ developed in Fraser Estuary and put on National agenda in about 1980. First attempt to control estuary development implemented in the Cowichan, Port Hardy, Squamish and Fraser Estuaries.

The pressure on the Fraser River estuary was at a peak. The BC Development Corporation had bought the Tilbury Island area and was filling it in for industrial development. In 1976 DFO seized the bulldozers and passed a special OIC regulation preventing BCDC from working in the Tilbury area. A while later it was repealed once BCDC agreed to protect habitat and donated the remaining part of Tilbury Slough to DFO – one of the few pieces of habitat that DFO owns in Canada.. This incident did much to convince Ottawa that a habitat protection law was needed. This issue also again confirmed conclusions that the Province or agents of the province were major developers that often harmed habitat.

The federal government had no environmental assessment law but the Regional Screening and Coordination Committee (RSCC) was formed as a mainly DOE\DFO tool to deal with significant federal or private projects that affected the fishery, migratory bird resources and related responsibilities of the Federal Government.

Workload\Organization.

A setback for habitat was the NOB, SOB arrangement. However, the joining of NOB-SOB staff in 1976 forced DFO Habitat to take a longer view of what they had to do and how they should be organized.

Additional staff recruitment began in 1972 and staff expansion continued into the rest of the 1970s (eg. Tutty, Delaney, Patterson, Farrell, Ennis, et al) to address forestry, urban, WQ, estuary and dam issues. The staff level reached about 60 pys. -- more or less reached the level that we now see DFO trying to get back to i.e. from 118 to 68ys). They were all located in Vancouver and attempts to get some of them into field offices was hotly contested by the habitat managers for some unknown reason. As part of the 1976 NOB-SOB amalgamation, Habitat was re-organized into Land Use, Water Use, Water Quality and a Planning Group.

After re-organization at RHQ in 1977, the DFO Pacific Region executive forced the decision to decentralize habitat field operations to Nanaimo, New Westminster and Prince Rupert. Most Habitat managers opposed this move. New pys from the Pearce Royal Commission were given to habitat for inventory work and select decentralized positions.

The new New Westminster Fraser River, Northern BC and Yukon office (Langer, Conlin, Helm, Clark, Elvidge, Dane, MacIndoe, Johanson, Chang) habitat office further decentralized staff to Whitehorse (von Finster), Prince George (MacDonald) and Kamloops (Kosakoski). The North Coast office in Prince Rupert was staffed by Rowse, Hamilton, Orr, Pendray, etc. and the South Coast office in Nanaimo by Higgins, Tutty, Russell, Eliason, Hillaby, Lamb, etc.

RHQ habitat decentralization stretched out over a year and was handled very poorly and significant disagreements occurred between field units and RHQ managers that had lost their staff but tried to hang on to all important decision making powers (as Ottawa DFO now does) but refused to leave Vancouver. RHQ decentralized thousands of habitat referrals but wanted to retain all control over how work was done. Further, as soon as habitat staff reported to area offices, the Fisheries Officers began to abandon habitat work. They switched their efforts to the growing AFS work and developed SWAT teams for dealing with fishery violations. Habitat became a distant third priority for them. As one unnamed supervisory FO noted – “Why would I spend weeks on a habitat investigation that will cost \$10,000 and give rise to a \$200 when I can go down to the river and nab an illegal fisherman and get just a great a fine for 15 minutes of court work”.

DFO began to push for a resolution of unsatisfactory placer mining practices in the Yukon. BC placer mining was partially but inadequately brought under control by a 1974 stream classification scheme that allowed them to destroy 30 streams and cause damage to many more. .

Partnerships:

First urban referral systems developed with local governments (e.g. Surrey) to counter the significant loss of urban streams. In 1982-84 new local relationships developed with local governments, local provincial fisheries staff and harbor authorities at the field level. The RSCC became an important collaborating mechanism between DFO, CWS, etc. In response to great pressures on the Fraser Estuary the Fraser River Estuary Study began in

1978 and was implemented as the Fraser River Estuary Management Plan (FREMP) in 1983. This FREMP partnership seemed to greatly reduce years of conflict between DFO and the harbor authorities. It was one of the few partnerships that worked well.

Partnerships with BC Mines\MOE helped resolve some placer mine issues in BC in the mid 1970's. In the early 1980's a similar partnership in the Yukon attempted to do the same thing but it seemed impossible to get DIAND and the industry on side despite a month long federal formal hearing before an independent panel. Implementation of the report fell apart. DFO was largely responsible for that failure in that the DFO area manager and DFO Vancouver habitat chief could not agree on positive action to adopt the commissioner's report in the face of confusing political expectations at the Ottawa level. The undesirable outcome was that key habitat staff was told their scientific views were not wanted and Ottawa appointed a one person committee to meet with the placer industry and find a happy compromise.

Due to a poorly implemented decentralization many positive habitat initiatives were undermined by a bitterness between the new area habitat units and Vancouver HQ Habitat. The terms of reference about who was responsible for what was constantly debated and often the work of the area staff were interfered with by HQ staff. The Director of Fisheries (Jones) who was responsible for habitat seemed to ignore the problems that greatly interfered with habitat protection and when a solution could not be found for Yukon placer mining, that could be scientifically supported, DFO habitat and sediment experts were declared 'persona non-grata' on sediment issues.

Need to Respond to a Changing World - 1985 to 1995

Legal Responsibilities.

The legal basis and mandate remained relatively unchanged other than the development of the National Habitat Policy of Net Gain (1986). Tremendous work required to make it work and much of the implementation became academic and that helped confuse many who needed to work with a simple concept – protect what you have, if technologically sound rebuild common habitat that you allow to be impacted in the national interest and restore the rest.

By 1983 the concept of Cooperative Resource Management (CRM) promoted within DFO to support National Policy which was to be a first step to 'sustainable development'. To make land use planning work there had to be unity within DFO and the Province. This never took place and limited CRM successes only came about due to DFO legislation changes that gave the Fisheries Act some habitat teeth (i.e. HADD and enforcement). Enforcement of the Act was most often a very important partnership building tool. By 1986 the first industry\DFO habitat management plan (North Fraser Harbor Environmental Management Plan) was signed and first habitat bank in Canada established in Fraser Estuary. This type of plan was expanded to rest of estuary by 1991 and called the FREMP Habitat Management Plan.

There was no effective land use planning or CRM process in BC. However some concepts such as better inventory and mapping were advanced. Although helpful, the inventory mapping exercise was never in the detail required and not translated into management plans. It did not succeed to improve habitat protection. New schemes seemed to have developed and then disappeared with each new BC government. Development usually continued as industry directed it.

In 1990 the LRMP process began in Kamloops and over the next decade DFO put significant resources into this NDP directed land use conflict resolution process. Some gains in some areas but as it proceeded DFO had less influence and often dropped out of the process due to a lack of staff although they were a near peak staffing. Also many more non-DFO watershed staff as funded by the Canada Green Plan and then CFAR (1998) helped put effort into land use planning processes to protect the ecosystem in spite of the new Forest Practices Code.

In 1987 DFO Ottawa (Faulkner and then Deans) took over Yukon Placer mining control regime and developed the Yukon Placer Mine Regulations under the HADD provisions of the Fisheries Act. This set an embarrassing precedent whereby the industry seems to have more say than DFO on what is a salmon stream and how it should be protected. As part of the later EPMP program, in a 2004 DFO press release, DFO announced the development of 'smart regulations' with industry. This new approach seemed to follow the bad precedent set in 1987 which undermines the Fisheries Act and resulted in more legalized stream losses than at any recent time prior to this 'smart' regulation. The 1987 regulation passed under the HADD sections of the Act allowed the number of placer mine destroyed streams in the Yukon to go from about 30 to 80.

In 1986 the National Habitat Policy was implemented. It has stalled under the Conservative government and a helicopter trip over the Lower Fraser with an ADM unfroze it and it was approved by Minister Siddon. Pacific staff felt the policy of NNL and NG would help a great deal but the policy document was overly long and confusing to many. The new RHQ habitat chief (Deans) felt the policy did not allow staff to say 'no' to any development and once an application was in place to build in or on habitat, DFO was obligated to give the developer an acceptable end product. This interpretation was not received well by most staff and caused great internal conflict in DFO and left the door open to great political interference in Fraser River and estuary projects including the Nechako - Alcan project fiasco and the foreshore filling of Salmon Arm (Shuswap Lake)..

By 1987 DFO began to learn legal lessons on what is a formal habitat approval ie. proper Ministers HADD Authorization. As part of the NNL approach many companies refused to build compensation habitat after they built on 'their' piece of habitat. A simple understanding in a signed letter to a developer was not considered a binding contract.

This came to a head when the BC Government, under the auspices of Expo 86, refused to compensate or properly clean-up habitat that DFO had approved for interim loss subject to restoration after Expo 86. This legal mess and the Alcan - Nechako fiasco brought non-

prosecuting lawyers into habitat work and made it much more complex. Soon all HADDs had to have legally binding contracts associated with them and notes of credit and bonding mechanisms were pioneered.. The workload mushroomed from a simple written 'gentleman's agreement' to a more complex legal agreement. DFO did not have accountants to keep tract of legal letter of credit etc. Many staff did not appreciate what they had gotten into. Little did they know that CEAA, HRTS, ATIPS, enhanced briefing notes and other high resource consuming processes were also soon to hit them.

Workload\Organization:

In 1985 the IPSFC habitat staff were incorporated into DFO. Habitat gained a staff (Fretwell) and other Salmon Commission staff that worked on dedicated habitat matters on the Fraser River were transferred to SEP (Saxvik), Fisheries Management (Seito) and Science (Servizi, Gordon, Martens).

In 1991 the Fraser River Green Plan (FRAP) was developed (\$50M). Two years later the Habitat Action Plan (\$10M) was implemented for the rest of B.C. These plans, expiring in 1997, were to develop new ways of doing business such as education, partnerships, better data and science, better decisions and more enforcement. Significant effort was put into inventory, assessment and partnerships e.g. development of watershed etc. groups and working with local government. The most lasting legacy of that work was probably the creation of the Stewardship Series of education documents and the eventual Stewardship Centre and some of the first evaluations of the success of the DFO NNL work.

Unfortunately the leadership did not exist to convert new ways of doing business into what should have been adopted and implemented by all staff e.g. better input into the land use planning exercise. Some new resources sent into doing more referrals. Field staff felt planning was academic when they were buried in paper from too many HADD applications and the new needs of CEAA, ATIPs, etc.

Also new initiatives like FRAP and successes were isolated from the old but accepted work load i.e. mainly doing project reviews (referrals). Although FRAP was to put dedicated Fishery Officers (FOs) into habitat work the FO organization would not approve of such. The leadership to implement new ways of doing business did not exist. Habitat work did not seem to be an important issue with the Fisheries – Habitat Director and Area Managers.

Much of the money from the Green Plans was scalped off and put into hiring new staff to expand old ways of doing business (more referral reviews). The Green Plan work did not seem to be welcomed by the existing habitat organization in Vancouver and collaboration was almost non-existent. Field staff felt the only way to protect habitat was to hire more staff! This did not prepare them for the changes that was about to take place in the failed National Blueprint(1998) and the present EPMP program as supported by significant staff cuts that have forced the reduction of project review.

Unfortunately the dedicated habitat staff of the day could not see into the future and appreciate that DFO could not have staff monitoring every bulldozer! New staffing was bound to come to an end in the foreseeable future. Without a transition with new resources Habitat was setting itself up to maintain the old ways and they were bound to hit the wall at a high speed before they sensed reality. Unfortunately, the CFAR HCSP program came along (1998-2003) to replace B base dollars lost in 1997 and this allowed habitat staff to hire even more staff to do more referrals as well as do more interceded stewardship work. This resulted in staff reaching 118 permanent person years (pys) by 2003.

During this phase of habitat protection, significant fish farming activities began along the BC coast. Habitat responded in a very confused manner in that DFO seemed to promote that activity via an aquaculture chief in Fisheries Branch. Habitat staff, also reporting to Fisheries Branch, documented many violations from beach loss to organic deposits under salmon farms but did not take the initiative or get the direction to deal with these impacts despite support from DOJ. This set a bad precedent that allowed such activities to get out of control. Such ball fumbling continues to haunt DFO and will continue to undermine wild fish populations and habitat into the foreseeable future. Experience has shown that its easy to set a bad precedent but near impossible to reverse them.

It was also in this time period that court work began to become more complex. The new Constitution and even the countless DFO documents on NNL confused the basic proven approach to protecting habitat and even affected habitat prosecutions. Habitat prosecutions also became very complex. In the 1970s a habitat or pollution case could be over in 2-4 days (preparation time was equal to that time). By the late 1980s this had increased to at least two fold and by 1988 the Cewe gravel mining case took 26 days of trial time and about three times that in preparation time. Cases in the 1970s rarely had defense experts. Now defense experts were attached to most habitat or pollution trials and many were hired to support that habitat destruct as being of no impact.

Age of Complexity and Questionable Focus – 1995 to 2005

Legal Responsibilities.

The legal world of habitat and its workload changed more substantially in this time period than at any other time in the past. Much of that change greatly increased the workload but did not necessarily relate to enhanced habitat protection. Also, management stability became a big issue. From 1968 to 1997, the habitat unit had two unit heads. From 1996 to 2005 HEB had no less than eight different directors with no one lasting more than two years. This gave rise to little stability, less continuity and no real leadership to allow this function to be prepared for the new challenges of that decade and the future..

The Canadian Coast Guard joined DFO and Navigable Waters Protection Act (NWPA) became a DFO responsibility and habitat staff had to implement proper NWPA reviews and permitting in the region (can a boat get under the bridge etc.). As of year 2000, 60%

of logging bridges had not been referred to or permitted through NWPA and the decentralized habitat staff network was ideally located (but not resourced) to absorb a system that had been historically centralized in Vancouver and run by a few staff in the Ministry of Transport. The new NWPA system was using habitat to solve their severe lack of staff to do their job. The then DFO RDG Petrochenko fell into this trap – “There was no reason why habitat staff could not do a CEAA screening one day and run a herring fishery the next day, The day of the specialist is over.” In reality most in the scientific and habitat protection community knew that the opposite was the case. Once again it was a political statement to address the rationale of the day to do more with less.

In 1995 CEAA was implemented. To handle CEAA activities, resources were pulled back from DFO habitat and re-distributed to handle CEAA screening and assessment and permitting responsibilities. CEAA caused much new tracking and paper work. Each time habitat harm was authorized under the habitat provisions of the Fisheries Act or a bridge is permitted under NWPA, CEAA is triggered. Staff spent much wasted effort trying to avoid these new bureaucratic responsibilities and large new workload. Some refused to call harm to habitat a HADD so as to not trigger a CEAA review. This totally confused many staff and one office would call an impact a HADD and properly authorize it and do the CEAA paperwork and arrange for compensation. Another Pacific Region office would not want to trip CEAA so they avoided to admit an impact to habitat was a HADD and invented mitigation agreements so as to avoid a proper legal ‘authorizations’. Inconsistency was very common from one office to another.

As part of CEAA implementation Ottawa DFO developed a habitat referral tracking system (HERTS) to nationally tract all habitat referrals. Habitat could not respond to this need in terms of not having the technical equipment or the staff to enter all information into this tracking system let alone get out into the field to review what was being proposed by developers or to review what had been done i.e. post construction monitoring.

In 1998 the Oceans Act was implemented. No new resources accompanied this new work and Habitat staff had to absorb its confused intent and early implementation, most often in an indifferent way. A new Oceans Directorate was established in 1999 with ‘new’ resources. This often caused great confusion in that Habitat where still responsible for oceans protection and planning and this new branch caused great over-laps and at times conflict such as that seen between Habitat and Aquaculture. However, by 2004 those responsibilities were transferred back to the Habitat Enhancement Division.

The Federal Government developed a 1995 National Aquaculture Policy and delegated it to DFO to implement. This caused great problems for DFO Habitat in that they had let that issue get out of control over the years and now had a real conflict on their hands with no new resources to deal with the issue until 2001. DFO created an independent NHQ office (Office of the Commissioner of Aquaculture Development – Commissioner Bastien) reporting directly to the Minister and that office devoted its efforts to promote the government’s aquaculture agenda.

To more confuse the matter, Ottawa then created another aquaculture office in the Oceans –Habitat organization in NHQ – Office of Sustainable Aquaculture (Wex). The two offices seems to have the same promotional agenda even though the less political office, that created within the bureaucracy, should have more related to the Fisheries Act and the conservation of fish habitat thereby ensuring that any aquaculture would be truly sustainable. It did not do that and the word ‘sustainability’ became a meaningless term in DFO. DFO Pacific Region then transferred the Aquaculture Section to HEB and in 2003 began to greatly expand it at the cost of other field programs.

In 2002 the Species At Risk Act was implemented with token resources. Habitat was expected to take a lead on this new legislation. How it related to the fishery was very confused and is only being defined in 2004 (sockeye runs at risk have been left out of the initial listing of SARA species).

In 1998 CFAR is implemented and HEB is given \$100M over five years for restoration and stewardship projects. Implementation was very disjointed and the purpose of the program was skewed and many of the resources are used to again build-up or maintain A base programs and enhance old ways of doing business (referrals vs. education and stewardship).

Finally it became apparent that the implementation of the National Habitat Policy was hit and miss across Canada. In 1998 NHQ developed a \$28M National Blue Print to upgrade habitat protection across Canada. The rest of Canada is to be modeled after how Pacific Region generally protected habitat. About 200 new habitat positions were staffed from Alberta to Newfoundland including dedicated habitat Fishery Officers – something staff always wanted in Pacific Region.

Pacific Habitat staff put significant effort into making the Blue Print program work but the region does not get a cent from that program even though Federal Court decisions (Old Man River and Rafferty) forced DFO Pacific to almost triple the amount of habitat they now had to protect.

Staff and Organization.

In 1996 SEP, Fraser River Action Plan and Habitat is joined to form HEB. During the next 6 years HEB will go through 8 directors, constant reorganization and never receive the firm leadership it needed to face the unprecedented challenges dumped on it in the midst of greater habitat pressures (population and industrial growth), provincial de-regulation and much more complexity. HEB was organized into units such as Major SEP Projects, Hatcheries, Restoration, Small Projects, Habitat Planning, Policy, Water Quality and Public Involvement Program. With CFAR, a new unit, Habitat Conservation and Stewardship Program was established.

With the implementation of CEAA and precedent court decision out of Alberta (old Man River dam) and Saskatchewan (Rafferty\Almeda dams) DFO is directed to take on all habitat responsibilities for freshwater systems in the Yukon, Peace River and Kootenay blocs. MELP staff (that never did implement the Fisheries Act properly) are directed in

writing to leave habitat protection to DFO. This doubles DFO's habitat protection workload and DFO cannot respond to the learning curve and large new workload in the Kootenays and Peace River areas. Existing staff are designated to those areas and offices are opened up in Nelson and Cranbrook. New habitat office is also put into Williams Lake. Staff are hired even though DFO has no assurance of long term funding to address this new workload.

The reorganization of HEB comes to semi closure in 2002. Additional staff (especially SEP staff) were decentralized and HEB RHQ are organized into a policy, bio-engineering, stewardship, aquaculture and major projects group. This is altered to absorb oceans in 2004.

The Habitat/HEB organization hit a financial wall when the \$10M per year of CFAR and other funding ran out on April 1, 2003. Due to lack of staffing controls, many staff were hired without secured salary dollars and the resources available could not cover salaries for the 118 staff Habitat had expanded to with temporary funding programs. What was especially difficult was that DFO spent millions creating an expectation of what public stewardship would accomplish for protecting habitat and this program was allowed to wither on the vine just a few years after being funded. To combat setting any new expectations of this new program, RDG Petrachenko often vetoed good news press releases because she noted that the program had to be buried and not publicized or it would create public expectations. It was highly unusual for government communications staff to not get out good news stories.

It did not appear that anyone in Ottawa or Vancouver had the insight nor saw the need to see that a public stewardship program would take more than four years to develop and would require many years of funding to sustain it. It was irresponsible to develop such expectations only to let everyone including the promotion of new ways of doing business die a quick death. Such a program could not survive unless there was a generous program of seed monies to help it along.

DFO Habitat, for all the wrong reasons, will now have to develop new ways of doing the business of the equivalent of about 150 staff with just 70 staff and fewer financial resources. They have determined that they must now change in an atmosphere of desperation in that they squandered opportunities for change in the Green Plan, HAP and CFAR which was to set them up for the new challenges that many knew would come with budget cutting governments of the later 1990s and of the present time. In desperation DFO had to simply dump much of the workload. Unfortunately this is just a few years after MELP dumped their habitat protection workload. Both agencies, in independent decisions decided to more defer to industry to do the right thing to protect habitat in a new joint DFO-industry partnerships.

On Oct 26, 2004 DFO's new Minister, Geoff Regan, signed an agreement with seven of Canada's largest industrial trade associations to take a joint approach to protecting habitat. This new approach is cloaked in a term 'smart regulations'. Although details were sparse it had a predictable high probability of failing in better protecting habitat.

Such a program will fail unless it can fit only into a DFO well organized and funded stewardship program. Further to support that stewardship program, DFO has to maintain and expand their research, monitoring and especially their enforcement programs.

Habitat will not be protected by buzz words and associated rhetoric, convenient partnerships and hollow agreements and a lack of implementation tools and resources. Further DFO Habitat has to increase its human skill sets. Staff have been promoted for too many of the wrong reasons and are not up to the job that requires great will and determination – not just an understanding of politics and appearances. It is truly unfortunate that HEB now wants to change when a most recent decade of opportune time to change i.e. the 1990's) has passed.

Considering the above problems in DFO many good habitat staff left DFO and others took early retirements. In addition many experienced staff that did not leave Habitat in the past few years have now been sidelined or have joined other branches of DFO or PFRCC e.g. three experienced habitat staff have joined AFS – an unlikely fit. Those with no experience in fish farming were transferred into heading up a salmon farming group. Their past responsibilities such as forest harvesting and foreshore protection have been allowed to slip. Those that were doing their best to get salmon farming under control were moved off to the side. Those that made salmon farming such a mess are now assisting the Habitat director to chart a new way of doing business. Habitat has not been in such a mess since it began some 40 years ago.

Conclusions:

- 1. A habitat protection unit was established in 1968 and developed from Special Projects to Habitat Protection to a Habitat Management Unit to the Habitat Enhancement Branch and is presently known as the Oceans and Habitat Management Branch.**
- 2. Over the past 35 years (from 1969 to 2005) the habitat workload and complexity of work indicators has increased from about 20 and 40 times respectively as the work objective moved from a 'minimizing' to a 'no net loss' of habitat or habitat capacity.**
- 3. The much greater complexity of work has not necessarily improved overall habitat protection in the past decade.**
- 4. The habitat staffing, not including the pre -1972 pollution unit, has increased from 21 pys in 1969 to about 118 pys in 2000 and is to decrease to 75 in 2008.**
- 5. Considering the complexity and workload habitat protection staff is not adequately resourced so as to move the DFO success rating from 'slow net loss' to a true 'no net loss' of habitat or habitat capacity.**

6. DFO must greatly improve its management so as to use resources more efficiently such as reducing excessive administrative exercises and avoiding often poorly thought out re-organizations and excessive time spend on making the Minister look good versus doing what is best for fish.

7. Habitat often depends on casual staff and Budget B monies and allocations to get the basic A Base job done. This does not allow for long term stability in planning work.

8. The overall goal of DFO habitat protection in Pacific Region must be publicly articulated as it relates to the Fisheries Act and its habitat policies and the resources available to do the job.

9. The separation of pollution issues from habitat issues in 1971 still undermines an integrated approach to fish habitat environmental management and any new form of ecosystem management.

10. Obvious habitat protection needs, including those requested by staff such as dedicated habitat Fishery Officers, have been largely ignored by management over many decades.

**O. E. Langer R.P. Bio
March 25, 2008**

Figure 1. Summary of habitat workload indicators over the past four decades and the staff (person years – pys) available to do the job. Workload indicator of ‘1’ represents that work that was done in 1968/69. It does not represent the work that had to be done to achieve to certain end result e.g. achievement of ‘no net loss’. The guiding habitat protection principle from 1968 to 1986 was to ‘minimize losses’. From 1986 to the present it is a ‘net gain’ wrapped around the principle of ‘no net loss’ The priority work items for each year are listed from highest priority (first) to lowest priority.

YEAR	WORKLOAD TYPE	INDICATORS		STAFF
		Workload	Complexity	Available
1968	pollution*, forestry, dams, log drives	1	1	8 (+10*)
1970	pollution*, forestry, estuaries, flows, dams, log drives, gravel removal	2	2	18 (+15*)
1975	estuaries, forestry, pollution, dredging, flows, roads, enforcement urban, , EIAs	4	4	50
1985	dams, flows, forestry, roads, pollution, placer mining, railways, urban, dredging, pollution, enforcement, EIAs	6	8	70
1995	CEAA, LUP, forestry, dams, flows, urban, agriculture, stewardship, reorganization AFS, aquaculture, pollution, enforcement	8	12**	90
2000	stewardship, CEAA, LUP, NWPA, roads, aquaculture, forestry, national blueprint, reorganization, pollution, Oceans Act, enforcement, First Nations issues	12	16	120
2005	aquaculture, CEAA, new directions-EPMP, stewardship, oceans, LUP, SARA, NWPA, agriculture, urban, mining, forestry, First Nations issues, roads, pollution, enforcement	20	16	85
2008				75

* Most pollution staff transferred to DOE-EPS after 1972. Due to loss of staff and initiatives to EPS, pollution slipped as a DFO priority.

** About this time an unpublished DFO study was done by B. Lister. He determined that the complexity of habitat work had increased by about 10 times since early 1970’s.

Figure 2. Relative workload indicators in habitat protection and management work categories for select years from 1970 to 2008. A rating of ‘1’ refers to a very basic level of involvement. Staff was not dedicated to the work and it was often handled as an ad on or treated as nice to know or often ignored. This was often an area of significant habitat loss. A rating of ‘2’ indicates a work area of concern and significant DFO involvement but the issue or industrial activity impacting habitat is not under control due to resources, politics, etc. This is an area of significant habitat loss. A rating of ‘3’ means that DFO was in control of that habitat protection work and had made it a priority. Habitat protection in this category was more effective so as to ensure at least a ‘slow net loss’. If a relatively exceptional amount of resources of that available was put into a work category, it was rated as a ‘4’.

SECTOR	1970	1975	1980	1985	1990	1995	2000	2005
Agriculture	1	1	1	2	2	3	4	2
Aquaculture	1	1	1	1	2	2	3	4
ATIPS	1	1	1	1	2	3	4	4
Dams/flows	3	3	3	4	3	3	3	3
EIA\CEAA	1	1	1	2	3	3	4	4
Enforcement	2	3	3	3	2	2	2	2
Estuaries	3	4	3	3	3	3	3	3
Forestry	3	3	4	4	4	2	2	2
Linear (roads, RR)	3	3	3	4	3	3	2	2
Oceans	1	1	1	1	2	2	3	2
SARA	1	1	1	1	1	1	2	2
Stewardship	1	1	1	2	2	3	4	2
Water Quality	4	4	3	2	2	2	2	2
Management	2	3	3	3	3	4	4	4
Reorganization	1	2	3	2	2	4	4	4

Figure 3. Relative amount of effort put into the major geographic areas of Pacific Region in terms of habitat protection work for the 1970 to 2005 time period. Percentage of total human population in each Pacific Region area is indicated. Relative work input is rated as: 1 - minimal, 2 – modest, 3 – significant and 4 - high priority.

AREA	(% of pop.)	1970	1975	1980	1985	1990	1995	2000	2005
Yukon	(1%)	1	2	3	3	3	3	3	3
NW BC	(1%)	1	1	1	1	1	2	2	2
North Coast (+Skeena R.)	(2%)	1	2	2	3	3	3	3	3
Central Coast	(1%)	1	1	1	1	1	2	2	2
West Coast	(2%)	1	2	2	3	3	3	3	3
G.of Georgia	(15%)	2	3	4	4	4	4	4	3
Lower Fraser	(60%)	2	3	4	4	4	4	4	3
Southern BC Interior (Thompson)	(3%)	2	2	2	2	3	3	4	3
Okanagan	(8%)	2	1	1	2	2	2	3	3
Cariboo\Chilcotin	(3%)	1	2	2	2	3	3	3	3
NE BC (Peace)	(1%)	1	1	1	1	2	3	3	3
Kootenays	(3%)	1	1	1	1	1	2	3	2