JOINT COMMITTEE ON STREAM RESTORATION

AND SPECIES RECOVERY

June 5, 1999 Oregon Convention Center

2:00 PM Tapes 130 -134

MEMBERS PRESENT: Sen. Ted Ferrioli, Co-Chair

Rep. Ken Messerle, Co-Chair

Rep. Bob Jenson, Vice-Chair

Sen. Frank Shields

Rep. Al King

Rep. Jeff Kruse

Rep. Randy Leonard

MEMBER EXCUSED: Sen. Joan Dukes, Vice-Chair

Sen. David Nelson

Sen. Veral Tarno

Rep. Lynn Lundquist

Rep. Susan Morgan

Rep. Bruce Starr

Rep. Terry Thompson

STAFF PRESENT: Judith Callens, Administrator

Diane M. Lewis, Administrative Support

MEASURE/ISSUES HEARD: Multi-purpose Dam System Overview

Factors Influencing Fish Survival

Federal and State In-season Management/Decision-making

Immediate and Long-term Solutions to Fish Mortality

Public Comment

1999 Dam Removal Decision/Columbia River Compact

These minutes are in compliance with Senate and House Rules. Only text enclosed in quotation marks reports a speakerís exact words. For complete contents, please refer to the tapes.

TAPE/#	Speaker	Comments
TAPE 130, A		
004	Chair Ferrioli	Calls the committee to order at 2:00 PM. Informs participants that although most of the testimony to be heard has been invited, public testimony is welcome and encouraged. Opens an informational hearing on issues regarding the Columbia River System.
INFORMATIONAL HEARING ON COLUMBIA RIVER SYSTEMS		
025	Larry Ferres	United Power Trades Organization, submits and presents written testimony in regard to multi-purpose dam systems (**EXHIBIT B**). Refers to EXHIBIT B, page 1, and testifies in support of responsible river usage, including continued use of hydroelectric dam projects.
064	Doug Riggs	International Brotherhood of Electrical Workers (IBEW), refers to EXHIBIT B, page 2, and explains that electricity is a primary benefit of hydroelectric dams.
082	Claude Leinbach	Secretary, United Power Trades Organization, reports that the four Snake River dams have the capacity of 3,000 megawatts of electricity. States that last night the dams were generating 2,491 megawatts. Explains that the spring run-off is part of the reason that the dams are currently generating a great amount. Informs the committee that: • $21 per megawatt hour X 2,491= $52,311, this pencils out to approximately $1,200,000 per day.
098	Riggs	Refers to EXHIBIT B, page 2, and discusses power rates and added costs in the state. Reports that customers are paying higher fees for electricity. Explains that Bonneville Power Administration (BPA) rate payers are paying $435 million in higher costs in order to fund fish recovery efforts. Notes that additional costs are on the rise.
124	Riggs	Refers to EXHIBIT B, page 2, and discusses the effects of removing the four lower Snake River and John Day Dams.
140	Leinbach	Refers to EXHIBIT B, page 3, and discusses river navigation. Lists river facts regarding cargo shipments and transportation.

178	Leinbach	Refers to EXHIBIT B, page 4, and asserts that the river transportation systems translate into family wages and jobs.
207	Leinbach	Refers to EXHIBIT B, page 4, and discusses flood control.
217	Rep. King	Asks about the statistic reporting that 40 states are being served by the Columbia River navigation system.
225	Leinbach	Responds that the correct statistic is 4 not 40.
230	Chair Ferrioli	Comments that the Columbia River system is serving more than four states. Provides the example of corn being shipped from the Midwest. Asks for the size of the geographic area being served by the Columbia River system.
238	Ferres	Responds that the Columbia River is directly and indirectly serving states west of the Mississippi.
239	Riggs	Adds that a substantial volume of cargo from Canada uses the Columbia River systems.
250	Dale Rollins	United Power Trade Organization, Electrician at the Dalles/John Day Project. Refers to EXHIBIT B, page 4, and discusses environmental impact facts regarding hydropower.
294	Ferres	Concludes by referring to EXHIBIT B, page 5, and discusses the importance of continuing hydropower as well as educating the public of correct facts regarding dams and river systems.
345	Ferres	Refers to EXHIBIT B, page 6, and discusses the effects and possible consequences of breaching the dams.
390	Ferres	Refers to EXHIBIT B, page 6, and testifies that fish can be saved with better technology in hydropower systems.
405	Sen. Shields	Asks for additional information regarding the saving of fish with "better technology in hydrosystems."
413	Ferres	Responds that: • Operators on the main stem plants have been asked to hold their generators within a one percent efficiency rating of the unit. Explains that this keeps the turban blades in a steep position to allow fish to pass without being harmed. • Improved bypass systems are being tested. • Army Corps of Engineers is designing a new turban wheel.

TAPE 131, A		
010	Leinbach	Comments that better "dam bypassing" and "collection" methods are being developed. Maintains that the Corps and all entities involved in managing rivers take the situation of saving fish seriously. Adds that the Corps is looking at ways to improve how barging is conducted.
019	Rep. Jenson	Asks for the current mortality rate of fish passing through dam turbines.
021	Leinbach	Responds that rates are lower than they have been in the past. Reports that the mortality rate for fish is around 5 percent. Discusses public misconceptions of smolts passing through the dams.
036	Rep. Jenson	Comments that studies conducted at the McNarry Dam found that the mortality rate for fish going through their "worst" dam is three tenths of one percent.
041	Riggs	Reports that Roger Broden and Bob Boyd of the Chelan Public Utilities District in Washington state have been developing "fish friendly turbines" which will make a large difference in fish mortality.
054	Ferres	States that fish predators are also a problem for disoriented fish coming through the turbines.
065	Sen. Shields	Asks why fish friendly technology was not developed sooner.
071	Leinbach	Responds that it is highly expensive to change turbines. Remarks that technology was not understood nor was it available like it is today. Explains that many systems are requiring rebuilding and maintenance in succession with developments of new technologies. States that this situation is enabling power companies to upgrade their systems.
087	Ferres	Remarks on the time it takes to gain approvals and appropriations for beginning an upgrade on a project.
092	Chair Ferrioli	Mentions that he has seen pictures from activist groups of mangled and disfigured fish that have "allegedly" been through dam turbines. Confirms that these reports are exaggerated and untrue.
095	Rollins	Responds that misconceptions are driven by data that does not take into account all the factors influencing fish mortality, including predators.
106	Rep. King	Supports testimony that dam breaching will do more harm than good. Comments that without supporting fish recovery, the threat to dams will grow. Agrees with the cost benefits of barging and hydropower. Urges everyone in the room not to depend on hatchery supplementation alone. Maintains that costs for fish recovery must continue to be built into fees for all entities making use of the river systems.

158	Leinbach	Replies that fish screens have been an attempt at saving fish. Reports that BPA has $400 million allocated for fish restoration projects. Maintains that fish restoration is a try and try again system.
176	Rep. King	Comments that when BPA says, "weíre not dumping the water, thatís worth a couple hundred million" this money is not making it to the ways and means committee. Indicates that the legislature is given the task of making rules without adequate, concrete funding.
198	Rep. Messerle	States that his district has been fighting habitat issues for years. Mentions his concern that weather systems are playing a large role in fish restoration. Emphasizes that a great deal of money has been spent to study these issues and itís time to look at the returns. Asks about the mortality rate for fish in regard to river barging.
240	Riggs	Replies that panelists waiting to testify will be better able to answer the question of barging impacts on fish mortality.
248	Chair Ferrioli	Concurs with Rep. King that there are many different costs of running a river system. • Direct costs - - consumer use. • Opportunity costs - - forgone opportunities. • Imputed costs - - theoretical situations vs. real needs. Discusses differences between science and magic, policy and politics, and theoretical situations vs. doable situations.
282	Chair Ferrioli	Welcomes Sen. Kate Brown to the committee.
297	Tom Stahl	Project Leader, Oregon State University, submits and presents written information regarding reports that study fish survival and mortality rates (**EXHIBIT C**).
356	Stahl	Explains that the mortality rate for fish is linked to their behavior. Explains that fish behavior is directly effected by hydroelectric systems. Discusses radiotracking of fish.
385	Stahl	Reports that of fish starting above Lower Granite Dam on the Snake River, traveling past the eight dams, and ending at Bonneville Dam, approximately fifty percent are lost. States that this is a rough estimate. Refers to EXHIBIT C, page 3, and discusses avian colonies on Rice Island and E. Sand Island. States that the fish migration patterns puts them in range of the two islands and subsequently in range of predators.
TAPE 130, B		

008	Rep. King	Asks for clarification of which fish were released at what points.
010	Stahl	Responds that the "barged" fish were radiotagged and started at Lower Granite Dam. Explains that the fish were barged through all eight dams and released below Bonneville Dam. Explains that efforts were made to have the "run-of-the-river" fish come from the Snake River. Recounts that this group was collected, tagged, and released just below the Bonneville Dam.
017	Stahl	Reports that there were no differences in results between the two groups of fish.
020	Stahl	Refers to EXHIBIT C, pages 7 and 8, and discusses predation affects for the estuary of radiotagged fish.
044	Rep. King	Refers to page 7, and asks if the barged fish were heard more than the run-of-the-river fish.
047	Stahl	Responds that there were no statistically substantial differences between the two groups.
051	Rep. King	Refers to page 7, and comments that there seems to be a substantial difference on May 22.
053	Stahl	Replies that there was a large difference between heard and unheard fish on the date of May 22, but overall there was no great scientific difference between the two groups.
057	Rep. King	Comments that he agrees with Stahlís statements, but not with his conclusions.
064	Stahl	Maintains that statistically the facts cannot be disputed. Continues discussing avian predation results. Reiterates that behaviors of fish out of the Columbia River estuary are being effected by dam activity in the Snake River, and that these behavioral changes is making them more susceptible to predators.
088	Stahl	Continues by discussing a fish tagging pilot study on Nehalem Bay at the northern Oregon coast.
110	Stahl	Refers to EXHIBIT C, page 10, and discusses preliminary results of Nehalem Bay study of fish mortality.
145	Rep. King	Asks if there were any studies on wild fish that could be used as a comparison control group.
149	Stahl	Responds that this year there was only enough funding to work with hatchery fish. Explains that if there is funding to continue research, the University would like to work with wild fish in the year 2000.

169	Stahl	Remarks that the study was not clear regarding whether the predation on smolts had an impact on the adult population.
177	Jim Anderson	School of Fisheries Professor, University of Washington, testifies in regard to studies conducted to determine factors influencing fish survival. States that he has been involved in research regarding the Columbia River since the early eighties. Explains that he is involved with current research being conducted on the John Day drawdown. Discusses the Columbia Basin Research Group developing harvest models and looking at barging impacts.
200	Anderson	Relates two ways of looking at fish recovery: • Take out the dams - - unrealistic consequences. • Address the multitude of problems that hydropower and barging create - - recovery is slow. Concurs that legislative oversight has the responsibility to ensure that funds are spent wisely on programs that are not detrimental to fish. Discusses history of the Columbia River prior to the Snake River system. Maintains that poor survival of fish today can be traced back to past periods of poor conditions resulting from mining, dams, grazing, and low flow years. Discusses problems for fish going through dam spills and the attempts to correct this problem using screens. Adds that there was a great deal of trash surrounding dams in the past.
260	Anderson	Discusses smolt-to-adult return (SAR): • 1960ís - - 4 percent of fish at top of hydro system came back as adults. • 1970ís - - .2 percent of fish at top of hydro system came back as adults. • 1990ís - - .2 percent of fish at top of hydro system are coming back. Discusses weather cycles and their effects on fish habitat. Advocates for leaving dams in operation because removing them may create too great a disruption for fish survival. Explains that 1999 has seen the highest return of Jack Salmon, currently numbering over 9,000. Concludes that realistic solutions will not be found if focus is too narrowly placed on dams.
397	Rep. Messerle	Asks about the effects of changes occurring in the ocean and habitat locations on SAR. Asks about the time-frame that scientists are discovering it will take for adequate fish recovery.
410	Anderson	Responds that climate changes are dramatic factors impacting the oceanís food-chain. Relates that studies exist connecting temperature changes in the Atlantic Ocean to Atlantic salmon survival. Explains that scientists can use this data to predict future fish populations. States that creating habitat in the ocean may not be the most effective use of funds.
455	Rep. Kruse	Comments that dam mortality is not as high as it has been in the past and yet scientists are linking fish mortality with behavior changes of fish passing through dam systems. Asks if the Plan for Analyzing and Testing Hypotheses (PATH) Commission looked at other predation factors such as man-made islands housing large populations of avian predators.

TAPE 131, B

010	Anderson	Responds that researchers did not address how passage through hydropower systems would effect fish survival in the ocean. Discusses hypotheses considered by PATH and explains that the PATH commission focused on statistical correlation and not on "mechanisms."
035	Rep. Kruse	Comments that the assumption connecting fish behavior resulting from dams to fish mortality occurring one hundred miles away is a difficult connection for him to swallow.
045	Anderson	Responds that connections are only hypothetical.
060	Rep. Kruse	Comments that the changes from fresh water to salt water must play a part in fish mortality.
065	Anderson	Replies that there is little research in how river systems have effected fish ability to handle the transition to salt water. Discusses discovery of some pesticides that mimic estrogen and reduce the ability of fish to handle salt water.
070	Stahl	Comments that fish are going from fresh water to salt water in the estuary. Explains the hypothesis that fish are being stressed by going through the dams and as a result may not be smolting enough or able to fight disease. Discusses possibility of fish avoiding the salt water and remaining in fresh water where they are more susceptible to predators. Discusses additional relationships between dam activity and fish survival.
093	Rep. Kruse	Comments that there are many other factors that effect fish which could be impacting fish survival. States that in order to ensure correct results as many factors as possible must be considered. Maintains that he is bothered by the broad assumption that dams are at fault.
111	Stahl	Concurs and states that fish mortality is the result of a whole system of problems.
112	Rep. King	Asks if in the 1960ís there was a difference between wild fish survival and hatchery fish survival.
120	Anderson	Responds affirmatively. State that in the 1960ís 90% fish survival was wild fish and today 90% fish survival is hatchery.
123	Rep. King	Asks if it is safe to assume that wild fish are heartier.
125	Anderson	Responds that there is not a great difference. Explains that wild fish may have a bit of an edge because they have gone through "survival of the fittest" where the weaker fish have died off. Hatchery fish are dumped into the system with weak and strong fish combined.

153	Rep. King	Asks what the high priority should be if it is not habitat.
156	Anderson	Responds that research is important. States that cutting back fish harvest would play a big role in fish restoration.
166	Rep. King	Asks if Rice Island and E. Sand Island were man-made to assist in barge and river traffic.
170	Anderson	Responds affirmatively.
171	Rep. King	Asks for barge conditions.
174	Anderson	Responds that barging fish requires a tremendous amount of water. Explains that conditions are watched closely and fish survival rate is upwards of 98%.
187	Rep. King	Asks for confirmation that fish are not being traumatized by poor barge conditions that throw the fish into extreme environmental conditions. • Warm water to cold water. • High nitrogen water to high oxygen water.
191	Anderson	Responds affirmatively. Maintains that barging in 1999 is improved and good for fish.
193	Chair Ferrioli	Asks if species of fish are being mixed in barges.
194	Anderson	Responds affirmatively. Discusses the importance of avoiding the handling of fish by humans. States that this weakens fish. Suggests that improved turbines will be a benefit to fish survival.
207	Paul Lumley	Watershed Department Manager, Columbia River Intertribal Fish Commission, discusses the Umatilla Tribe Supplementation Program. Submits articles regarding salmon enhancement and information in support of HB 3609 (**EXHIBIT D**). Reports that the Columbia River Treaty Tribes are in support of dam breaching. Understands that the issues surrounding dam breaching are complicated and controversial.
244	Lumley	Discusses the hatchery system in the Columbia River. States that the system is connected to the dams through "mitigation." Explains that the mitigation program was implemented through state and federal agencies. Reports that expected benefits from the hatcheries did not go to the tribes. Discusses positive contributions that hatcheries can make with proper care and guidance.
284	Chair Ferrioli	Asks about marking hatchery fish that are spawning in areas with wild fish.

289	Lumley	Responds that hatchery fish are uniquely marked.
294	Chair Ferrioli	Asks if hatchery fish are being counted as returning spawners.
298	Lumley	Responds affirmatively. States that hatchery fish are making a contribution to natural reproduction. Explains that the National Marine Fishery Service will only count hatchery fish progeny, once they spawn. Adds that the National Marine Fishery Service reports that 60%-80% of hatchery supplementation fish will contribute to natural production.
312	Chair Ferrioli	Commends the tribes in their efforts and would like to have information regarding how supplementation fish are contributing to natural production. Believes that researchers and river system managers have a great deal to learn from the work done by the tribes.
325	Lumley	Welcomes the Chairís support. Continues by discussing problems contributing to the regionís struggle with supplementation. Explains the process of using hatchery fish for sport and commercial fishing and the tremendous cash flow that comes with these activities. States that supplementation programs upset this financially benefited system. Maintains that poor support of supplementation programs is a money issue.
375	Lumley	Discusses the termination of the Sandy River Spring Chinook Supplementation Program started in 1976. Reports that this program doubled the amount of naturally spawning spring Chinook in 1986. Explains that the program was discontinued because the state wanted to implement mass-marketing and selective fisheries programs.
400	Chair Ferrioli	Assures Lumley that he is not the only person who is concerned about inconsistencies in the administration of the hatchery and wild fish programs.
404	Rep. King	Asks if removing the dams would be contrary to improving the fish habitat.
411	Lumley	Responds that breaching the dams might improve the fish habitat. Explains that removing the supplementation program was contrary to improving fish habitat.
435	Rep. Kruse	States his support of HB 3609. Asks for comments regarding the differences between wild and hatchery fish generations that are both spawning in the same places.
TAPE 132, A		
018	Anderson	Responds that one generation living in wild waters and returning to spawn defines "wild fish."
020	Rep. Kruse	Comments that this issue is still debatable. Maintains that tribal practices have been moving in the right direction and he supports legislation that continues

		tribal efforts.
032	Chair Ferrioli	Comments that there is a shared sense of frustration with the inconsistencies in the science vs. policy debates.
040	Lumley	Reports on the number of Imnaha and steelhead that have been killed as a result of the Oregon Wild Fish Policy: • 61 fish in 1991 • 177 fish in 1992 • 1,416 fish in 1993 • 41 fish killed in 1995 • 43 fish killed in 1996 Reads quote from Oregon Department of Fish and Wildlife (ODFW) staff admitting the policy is flawed. States that the tribes are trying to negotiate a new fish management plan. Maintains that the likelihood that this will happen with the current Wild Fish Policy is small.
070	Lumley	Discusses the Section 4(d) rule process under the Endangered Species Act. Explains that the plan requires taking remaining wild fish, putting them in a hatchery, clipping them, calling them unlisted, and giving them to a sport fishery. Believes that this is inconsistent with original intent of Endangered Species Act.
080	Chair Ferrioli	Asks for additional information on the 4(d) rule process.
081	Lumley	Responds affirmatively.
083	Lumley	Continues by discussing the de-listing of the Upper Columbia steelhead. States that the hatchery system is so convoluted that the public and the tribes donít find out about fish kills until long after the fact.
106	Lumley	States that the tribes are asking for in-kind in-place mitigation. Asks the committee to support the tribes efforts in restoring fish.
118	Rep. Kruse	Comments that he had understood that the National Marine Fisheries and the state Executive Branch had verbally agreed to include the legislature in drafting 4(d) rules. Expresses his distress that these commitments have been broken.
128	Chair Ferrioli	Explains that there is a panel of witnesses in the hearing room to address the 4(d) rule issue.
145	John Brogoitti	Northwest Power Planning Council, submits written information regarding the Multi-Species Framework Project (MSFP) (**EXHIBITS E and F**). Refers to EXHIBIT E, page 1, and discusses how MSFP was started and its goals. Notes on page 2, components of the projectís seven alternatives for determining the future of the river are listed.

184	Brogoitti	Refers to EXHIBIT E, page 2, and discusses the scientific and systematic process of MSFP. States that the MSFP process is not a decision making process but an information gathering process.
254	Rep. Messerle	Asks how the different state legislatures are to be incorporated in MSFP.
256	Brogoitti	Responds that state legislatures are one of the groups that have been contacted repeatedly to join in the process. Comments that Sen. Ferrioli and Rep. Jenson are familiar with the program. Explains how the Western Legislative Task Force is set up.
273	Rep. Messerle	Responds that he is part of the task force, but has not received copies of information.
278	Brogoitti	Replies that he is sure all committee members received information by electronic mail. States that he will follow-up on what mail has been sent to whom.
285	Eric Bloch	Northwest Power Planning Council and Chair of Columbia River Basin Forum, reports on June 1997 meeting of four state governors, 13 federally recognized tribes, and one federal representative from the Whitehouse Council on Environmental Quality. Explains that the Columbia River Basin Forum was created as a result of this meeting. Discusses the recognition that the represented governmental authorities had overlapping responsibilities.
322	Bloch	Discusses the "1999 Decision." • Reconfiguring the hydropower systems on the Columbia/Snake Rivers - - taking into account regional perspectives, region preferences, and regional views.
390	Bloch	Relates that the forum is looking at all the elements contributing to fish mortality: • Hydropower facilities • Harvest • Habitat • Hatcheries
420	Bloch	Explains that the forum is looking at what its goals and objectives must be. Testifies that creating partnerships between executive and legislative branches of governments must take place.
TAPE 133, A		
037	Rep. Messerle	Commends the Columbia Basin Forum for the work it is engaging in. Relates that he checked with his office staff and his office is receiving meeting notices from MSFP, but not receiving drafts.

062	Douglas DeHart	Fish Division Director, Oregon Fish and Wildlife, testifies on the role of river operations in the protection, restoration, and in-season management of fish in the Columbia river system. States that there are several major factors that influence fish survival: • River flow - - effected by changes in the river cross-section and amount of water. • Physical and chemical changes in river - - temperature and gases, turbines and spillways. Discusses how factors can be affected: • Manipulate river flow from storage reservoirs. • Manipulate spill and flow operations at dam sites. Discusses individual management actions for avoiding adverse effects of dam structures: • Fish ladders and screens. • By-pass facilities. • Special spill operations. • Barge transportation systems. Discusses action taken to reduce effects of reservoirs: • Squaw fish management to reduce predation. • Management of spills to reduce dissolved gas levels.
120	DeHart	Reports on the in-season management efforts and states that there is a cooperative approach involving: public utility districts, state and federal natural resource agencies, and regional Indian tribes.
145	DeHart	States that upriver runs are being lost under current operations and large changes must occur soon or wild salmon runs will no longer be possible to maintain.
153	Rep. Messerle	Asks if ODFW has a position on dam removal.
156	DeHart	Responds that the Governor has not voiced an opinion. Explains that ODFW has not taken a position. States that ODFW has provided a biological review process that shows benefits of alternatives.
177	Rep. Messerle	Asks if ODFW has prioritized certain actions that should be taken from this point forward.
178	DeHart	Responds negatively. Explains that ODFW has identified a number of specific actions working with other fishery managers and has recommended them to the Northwest Power Planning Council.
186	Rep. Messerle	Asks why ODFW has not prioritized actions it recommends.
187	DeHart	Responds that ODFW does not have information regarding what the best action

		is for achieving fish restoration. States that this issue is a "learn by doing" approach.
199	Rep. Messerle	Comments that because ODFW does not know what the best actions are, it is dangerous to continue moving forward. Emphasizes the need for moving slowly to ensure that action is not hurting fish more than it is helping.
207	Rep. Kruse	Asks where ODFW came up with the standards it uses to measure how it will proceed with fish recovery projects.
215	DeHart	Responds that ODFW has not written a biological opinion, nor has it set standards by which it measures correct action. Explains that the National Marine Fisheries Service has set standards, under the Endangered Species Act. Lists goals of ODFW: • Rebuilding the populations of a small number of fish species. • Regaining fishing opportunities. • Meeting tribal treaty obligations. • Regaining flexibility in land and water management.
231	Rep. Kruse	Asks how ODFW is arriving at the standards it is using, as it takes action on existing goals.
242	DeHart	Discusses ODFWís approach to main stem operations using the PATH report. • Investigating the abilities of fish populations to rebuild and sustain themselves in various conditions.
264	Rep. Kruse	Questions whether the PATH report is the most unbiased resource that science has at its disposal. Maintains that the PATH report was conducted to build a case for dam removal.
274	Chair Ferrioli	Asks what the effect would be to shut down the re-regulating dams in Idaho.
283	DeHart	Responds that the four lower snake dams below Lewiston store no water for river operations and have very little re-regulation ability. States that the closure of these dams would have little effect on system flows.
290	Chair Ferrioli	Asks why there is little coordination between tribal operations and ODFW.
296	DeHart	Responds that it is unfair to state that there is little coordination between the tribes and ODFW. Cites the example of the Umatilla River operation as a cooperative venture. Discusses two roles that hatcheries play: • Returning adult fish. • Rebuild the number of spawners.

376	Chair Ferrioli	Comments that he has begun to see the relationship between the Department of Fish and Wildlife and the Columbia River Treaty Tribes as adversarial. States that he is not hearing a mutuality in the description of cooperation.
409	Rep. Jenson	Asks if initial cooperation with the Umatilla tribes preceded the wild fish policy.
415	DeHart	Responds that the first Oregon wild fish policy went into effect in 1979. States that it was replaced by a similar policy in 1990, which was further amended in 1992.
425	Rep. King	Comments that it was his understanding that shutting down the "re-regulatory" dams would impact river flow and subsequently barge traffic.
TAPE 132, B		
010	DeHart	Responds that he did not mean to imply that drawing down the reservoirs would have no impact on the river system. Concurs that there would be other implications.
021	Rep. Messerle	Asks if ODFW is sharing information with the tribes and if good communication is being used by both parties.
028	DeHart	Responds affirmatively. Explains that there is only one fish recovery program and it involves cooperation between both parties.
034	Rep. Messerle	Asks for the source of DeHartís information regarding his comments on the minimal impact of removing the dams.
037	DeHart	Responds that his comment that removing the dams would have a minimal impact was in regard to upstream storage flow. Explains that he did not intend to state that the breaching of dams would have no effect on the rest of the system.
050	Chair Ferrioli	Asks Lumley to comment.
074	Lumley	States that the Spring Chinook in the Umatilla were extirpated so the Oregon Wild Fish Policy did not apply for that supplementation program. Points out that in the recent past the state of Oregon has killed a large number of Coho salmon to keep them from mixing with other species. Explains that the tribes have never been able to operate a supplementation program the way that they want. Maintains that the state has always taken charge and laid out the rules. Asks if the state intends to kill fish from the Umatilla program if the numbers exceed fifty-percent.
088	Chair Ferrioli	Comments that the committee will forward this question on to ODFW on behalf of Mr. Lumley.

097	Susan Carlson	Reynolds Metals Co., Troutdale OR, testifies in opposition to dam breaching.
133	Greg Smith	Port of Morrow, testifies in opposition to dam breaching. Emphasizes that the rural natural resource-based economy is at stake in eastern Oregon. Lists elements that are at stake: • Fuel efficient, environmentally friendly, barge transportation. • Renewable, non-polluting hydroelectric power. • Irrigation. • Wildlife preservation. • Flood control. Reports that citizens of Morrow County are tired of the National Marine Fisheries Services, the Corps of Engineers, and the Department of Fish and Wildlife and Water Resources. States that these agencies have not found workable solutions. Reminds the committee that "people also count."
184	Captain Mike Simonsen	International Organization of Master Mates and Pilots, testifies in opposition to dam breaching. Explains that four generations of his family have worked in the river system. Reports that residents of the lower Columbia River basin pay almost 90% of fish and wildlife mitigation efforts on Ice Harbor Dam, Lower Monumental Dam, Little Goose Dam, and Lower Granite Dam. Emphasizes that breaching these four facilities could cost up to $360 million dollars in power costs per year. Discusses the economic impact that breaching the dams will have for families working on the river system. Discusses the environmental impact of drawing down dams. Underlines the devastation that will occur throughout the state should dam removal occur.
277	Roy Hemmingway	Governorís Salmon Advisor, discusses the recently announced agreement under the Pacific Salmon Treaty. States that the original treaty was signed in 1985 and has experienced year to year disputes regarding harvest amounts. Submits graph demonstrating Terminal Run Sizes for Evolutionary Significant Units (**EXHIBIT G**). Refers to EXHIBIT G, and explains that 0% represents the average catch of Puget Sound, Lower Columbia, and Snake Fall stocks since the treaty was signed. Refers to EXHIBIT G, and discusses expected "increases in abundance" of the various stocks listed.
345	Hemmingway	Reports that the federal government has agreed to establish two funds: • $75 million for northern fisheries. • $65 million for Canada, Washington, and Oregon habitat restoration.
370	Rep. Messerle	Asks if the Governorís Office has had communication with the Legislative Assembly or ODFW prior to signing the new agreement.
371	Hemmingway	Responds that the negotiator for the southern states (Oregon and Washington) has been primarily a Washington person appointed by the President. Explains that the alternate negotiator is from Oregon. Explains that ODFW provides technical assistance to the Oregon representative. States that the Governorís Office has been recently brought into the picture and admits he has not made legislative contact until today.

397	Rep. Messerle	Comments that he would have appreciated being better informed about the treaty negotiations.
421	Rep. Kruse	Asks how much the United States is paying Canada not to catch our fish.
423	Hemmingway	Responds that funds of $140 million will be administered jointly and the interest is split between Canada and the United States. Maintains that Canada has been cut-back enormously and has made great effort to comply with treaty agreements.
TAPE 133, B		
014	Rep. King	Asks if more money is being spent on recovery than on commercial harvest.
017	Hemmingway	Responds that the commercial value of salmon does not measure up to the cost of salmon recovery programs.
042	Rep. Jenson	Asks for the status of the salmon runs in the Fraizer River.
043	Hemmingway	Responds that the salmon runs in the Fraizer River are quite healthy.
050	Chair Ferrioli	Commends the Governorís Office for participating in the treaty negotiations.
060	Rep. Messerle	Asks what kind of arrangement was made with Alaska.
063	Hemmingway	Responds that Alaska agreed to reduce their harvest of Canadian Chinook by a little. Explains that Canada agreed to take the largest cut if Washington took a large Sock eye salmon cut on the Fraizer River.
075	Bob Willis	Chief of Environmental Resources Branch, Portland District Corps of Engineers, discusses the work of the Caspian Tern Workgroup regarding the tern population on Rice Island. Explains that Rice Island was built in 1962 and is approximately 220 acres. States that prior to 1984 there were no Caspian Terns in the Columbia River Estuary. Explains that in 1995 the National Marine Fisheries Services asked the Corps to conduct an evaluation on the impact that the terns have on fish mortality. Discusses research contracts the Corps made with Oregon State University and Columbia River Intertribal Fish Commission. Reports that approximately 6 million to 26 million fish were being taken by the tern colony. States that the Caspian Tern Workgroup was formed in 1997 and included the Army Corps of Engineers, National Marine Fisheries Services, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, and the Intertribal Fish Commission. Discusses the workgroup plan to initiate a pilot study to move the birds from Rice Island to E. Sand Island. Steps to move the colony included discouraging birds from nesting on Rice Island except for a one acre area. Lists strategies for discouraging nesting:

		• Seeding nesting grounds. • Visual fencing. • Harassment. • Reestablishing habitat on E. Sand Island.
159	Willis	Discusses current status of the workgroup pilot plan. • Rice Island has 7,200 birds on one acre site as of May 1999. • Additional satellite colony of 2,000 birds located on bare areas of Rice Island. • E. Sand Island has 1,300 birds as of May 1999. Explains that birds on Rice Island make fish 96% of their diet, and the birds on E. Sand Island make fish 61% of their diet.
180	Rep. Kruse	Asks why the tern, which is a non-native species, is protected.
190	Willis	Responds that the tern is a native species in that much of its nesting has occurred inland. Explains that there has been significant habitat loss for the birds. States that the colony of terns on Rice and E. Sand Islands is approximately 25% of the worldís population and the largest population in North America.
214	Rep. Kruse	Comments that he continues to ask the question "What does one do when one discovers an endangered animal eating an endangered plant?"
225	Chair Ferrioli	Comments that the working group can take management action while the birds are not nesting. States that he was under the impression that Oregon was the southern most reach of the Caspian Tern habitat.
244	Willis	Responds that many of the birds have come from northern Washington. Explains that habitat has also been lost to the terns in the Klamath Basin.
248	Chair Ferrioli	Asks if the birds are also found in Alaska and Canada.
249	Willis	Responds affirmatively.
270	Glen Vanselow	Executive Director, Pacific Northwest Waterways Association (PNWA), submits and presents written information regarding benefits of the Columbia / Snake River System (**EXHIBIT H**). Testifies in opposition to dam breaching. Refers to EXHIBIT H, page 1, and lists benefits of the river system.
310	Vanselow	Refers to EXHIBIT H, page 3, and discusses impacts of dam breaching and alternatives. Submits photos of drawdown tests (**EXHIBIT I**). Maintains that dam breaching and reservoir drawdowns do little, if anything, for fish restoration and are extreme and risky measures.

373	Vanselow	Recommends that the committee and all entities in the region dispense with the divisive debate on dam breaching, and focus efforts on affordable measures that can actually help fish.
387	Gary Neal	General Manager, Port of Morrow, testifies in regard to economic development of the Snake River System. States that the Snake River directly effects the Columbia River system. Testifies in opposition to dam breaching and drawdowns. Maintains that there are multiple solutions that do not include dam removal. Discusses pass through improvements for fish that are not being implemented at dam sites because operators are uncertain if dams are going to be removed.
TAPE 134, A		
018	Rep. Jenson	Recommends that the committee look at the study conducted by the Port of Morrow.
034	Vanselow	Explains how the Port of Morrow is a microcosm to the whole river system.
046	Rep. Jenson	Asks if the Port of Morrow is the largest inland container dock in America.
048	Neal	Responds affirmatively. Reports that the port moves 2,000 containers per month.
062	Chair Ferrioli	Encourages all participants to continue efforts for finding solutions to fish recovery while maintaining economic stability. Thanks committee staff for working to support committee members and the public process.
073	Chair Ferrioli	Closes the hearing and adjourns the meeting at 6:00 PM.

Submitted By, Reviewed By,

Diane M. Lewis, Judith Callens,

Administrative Support Administrator

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EXHIBIT SUMMARY

A ñ Written testimony regarding dam breaching and fish recovery efforts, Sen. Joan Dukes, 2 pp.

B ñ Written testimony regarding the impact of river systems, Larry Ferres, 6 pp.

C ñ Written information regarding predation upon salmonid smolts in Oregon Estuaries, Tom Stahl, 10 pp.

D ñ Written information regarding support for HB 3609 and tribal hatchery programs, Paul Lumley, 2 pp.

E ñ Written information regarding Multi-species Framework Project, John Brogoitti, 3 pp.

F ñ Written information regarding Multi-species Framework Project alternatives and updates, 4 pp.

G ñ Graph demonstrating Terminal Run Sizes for Listed Evolutionary Significant Units, Roy Hemmingway, 1 p.

H ñ Written information from Pacific Northwest Waterways Association, Glen Vanselow, 4pp.

I ñ Photographs of reservoir drawdowns, Glen Vanselow, 1 p.