

**ENDANGERED INFORMATION:
GREY LITERATURE, THE COLUMBIA RIVER SALMON, AND
THE ENDANGERED SPECIES ACT**

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ABSTRACT: The endangered salmon crisis in the Pacific Northwest has researchers scouring the scientific and institutional literature for data, analysis, and information. The accessible publications are the foundation for much of the current work and debate. But, older materials and institutionally-generated information containing unique data, are harder to locate. To accurately document the history of the Columbia River salmon, all information-- historical, contemporary, obscure, and mainstream-- should be studied. One librarian's concerns with the interdisciplinary nature of the issue, the variety of information sources, and the amount of information generated are discussed, and related to developing a small special collection on the ESA salmon literature.

INTRODUCTION

In 1990, various groups petitioned the National Marine Fisheries Service (NMFS) to list Snake River spring, summer and fall chinook, Snake River sockeye, and Lower Columbia River coho as threatened or endangered under the United States' Endangered Species Act (ESA) of 1973. These actions focused the attention of many of us on the relationship between the salmon and the Columbia River System. The consequent rulings in 1991 of sockeye as endangered and the chinook stocks as threatened mandated the development and implementation of a recovery plan. Many are waiting with bated breath for the plan scheduled to be out later this year or early in 1994, as it will affect many aspects of life in the Pacific Northwest.

This ESA process generates a wealth of literature which is not being collected or archived in any coherent fashion. Tracking and making the literature available to the public, students, and policy makers are difficult, yet essential tasks for ensuring the efficacy and validity of the debate and its decisions. The salmon issue's plethora of viewpoints and opinions combined with its geographic breadth, its history, the greyness

of much of the literature, and the time constraints for decision-making create a difficult environment for the participants to work within.

After lengthy reflection on the Columbia River salmon issue, I have decided that I have a responsibility as the fisheries librarian of Oregon State University (OSU) to make much of the issue's literature available to those currently interested as well as future users. I accept this responsibility believing that this issue, indicative of other environmental issues where politics, science, and lifestyles collide, can provide a model for tackling the ESA process that is different from the litigious Spotted Owl saga. As other species and stocks, such as the coastal coho salmon and the marbled murrelet, are listed, a different model is welcome. The salmon issue is persistent, pervasive, and political: a day rarely passes that I do not read about it, hear it mentioned, or discuss it with someone. The literature documents and fuels the process.

So, being surrounded by the issue, I have started working on understanding its breadth, identifying resources, and crafting a collection development strategy for a small special collection. The collection should combine archival and gateway functions to enhance its usefulness now, and ten years from now when we refer back to this particular decision making process. It should utilize existing institutional infrastructure, such as OSU's online catalogue, while connecting to other regional resources.

The following begins with a brief background on the ESA process, and then discusses three collection development concerns: the interdisciplinary nature of the issue, the variety of information sources, and the amount of information. Examples of the literature and the resources are included. The variety and the complexity of the literature should make all of us librarians consider our own biases as well as those of our collections. This particular issue will not be solved using the scientific literature alone. Careful consideration of the diversity of my collection concerns indicates that science librarians should encourage students and researchers to look at many disciplines before drawing conclusions and making decision.

A Geographic Aside

The Columbia River is one of the world's major rivers, and its complex ecosystems are widely studied. It begins in British Columbia and eventually flows into the Pacific Ocean between the states of Oregon and Washington. The Snake River is a major tributary, flowing from Montana, through Idaho, and joining the Columbia in Washington. The mainstream of the Columbia is about 1,200 miles (1,930 kilometers) long. The 259,000 square mile (671,000 square kilometers) drainage basin includes seven states and one Canadian province (Ebel et al. 1989). The average discharge is about 185,000 cubic feet per second, twice that of the Nile River in Egypt (van der Leeden et al. 1990). (See figure 1.)



Fig. 1: The Columbia River System (From: Queirolo & McNamee 1981)

ESA PROCESS

The ESA, the United States' response to conserving endangered or threatened species, encompasses three major steps: petitioning, making a determination, and creating a recovery plan. The Columbia River salmon were first petitioned in the late 1970s (Wilkerson 1992). These early petitions were not pursued due to the passing of the Northwest Power Planning Act of 1980 with its promise of addressing fish and wildlife concerns. But, certain stocks continued to dwindle throughout the 1980s. In 1990, the Shoshone-Bannock Tribe, Oregon Trout, and several other environmental groups submitted new petitions to NMFS to list Snake River spring, summer, and fall chinook, Snake River sockeye, and lower Columbia River coho (Bancroft 1991, C-4).

When petitions are filed, the federal agency with jurisdiction (usually United States Fish and Wildlife Service) solicits input, and makes the determination. A different step appeared in the Columbia River salmon process; Senator Hatfield of Oregon called for a regional discussion of solutions to the declining salmon stocks. The 'Salmon Summit' attempted to lay the groundwork for a regional approach that would avoid an immediate rush to litigation while jump-starting a viable recovery plan. The group of over 30 met from late fall 1990 to the spring of 1991. The participants represented a broad spectrum of regional interests including emissaries from the governors of Idaho, Montana, Oregon, and Washington; federal, state, and tribal fishery agencies; federal operating agencies such as the Corps of Engineers, the Bureau of Reclamation, and the Bonneville Power Administration; the United States Forest Service; the Bureau of Land Management; environmental interests; public and private utility interests; aluminum and other industrial interests; agricultural interests; and navigational concerns (Wilkerson 1992). The 'Salmon Summit' developed a comprehensive set of recommendations for a regional approach to saving the salmon, but failed to reach a consensus (Offices of the Governors of Idaho, Montana, Oregon, & Washington 1991).

NMFS, the agency with jurisdiction over anadromous species, was considering the petitions as the 'Salmon Summit' met. The agency faced an immediate dilemma in the definition of species. The ESA defines species as "any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" 16 U.S.C. §1532 (15). Applying such a definition to salmon would imply a myriad of unique populations (Bancroft 1991, C-5). Consequently, NMFS issued an interim policy requiring a stock to be an "evolutionary significant unit" which is reproductively isolated and represents "an important component in the evolutionary legacy of the species" (56 Federal Register 10542 (March 13, 1991)). This policy allowed NMFS to disallow lower Columbia River coho as endangered or threatened as hatchery fish have long intermingled with the wild stocks creating a polyglot community. NMFS did list the Snake River sockeye as endangered in April 1991, and the chinook stocks as threatened in June 1991 (Bancroft 1991, C-6).

Since the listing, work is progressing on recovery plans to ensure the survival of the salmon in the Columbia River (Harrison 1992). Most anticipate the plans to build from

the work of the 'Salmon Summit' as well as that of the Northwest Power Planning Council (Offices of the Governors of Idaho, Oregon, & Washington 1991; Northwest Power Planning Council 1992). There is no statutory deadline for completion of the plans, but a fear of extensive litigation and a regional commitment to salmon push the process. Plans should be released late in 1993 or early in 1994.

COLLECTION DEVELOPMENT CONCERNS

To create any collection, discipline boundaries must be explored and set, primary and secondary resources identified, and size determined. Disciplines would appear to be prescribed in a science library; but, politics and environmental ethics force the perimeters to include perspectives from other disciplines. These new perspectives suggest different sources of information. New and renewed contacts with researchers and agencies tap into varied types of information. Finally, the size of the collection, while flexible as physical space is not problematic, is limited by economics.

The Disciplines

Biology

Salmon are an anadromous species, and so, the research and management literature covers freshwater, estuarine, and marine environments. This wide range of habitats coupled with complex life stages creates a rich biological literature with major gaps, principally the marine ecology of the salmon (Pearcy 1992). The information gaps allow ESA participants to debate the biology. Do marine mammals have a major impact on salmonid populations? Which has a greater influence on juvenile salmonid migration, stream flow or water temperature? These types of biological questions become the stuff of policy and actions. Much of the existing biological literature is well catalogued and accessible if people know where and how to look.

Station-generated data and internal reports rarely circulate outside of an agency or a small group of researchers. The Pacific Biological Station in Nanaimo, British Columbia maintains an archive of salmon data (Simpson et al. 1978; Simpson et al. 1985). The archive was created "to provide a secure place to store unpublished data and original research material...and to improve access to previously unavailable data" (Simpson et al. 1978; Simpson et al. 1985). Given the migratory nature of salmon, this Canadian archive could have useful data. The Columbia River Inter-Tribal Commission is currently compiling a database of fisheries information; this should eventually provide an electronic archive of scanned documents. On the other hand, ocean salmon managers at the Oregon Department of Fish and Wildlife Marine Region write copious reports which are stored in file cabinets in inaccessible offices. Even though much of the biological information is available, management plans and models are less so. Attention should be paid to finding this information.

Examples:

Berggren, T.J. & M.J. Filardo. 1993. An analysis of variables influencing the migration of juvenile salmonids in the Columbia River Basin. *North American Journal of Fisheries Management* 13:48-63.

Miller, P.J. & E.L. Brannon. 1982. The origin and development of life history patterns in Pacific salmonids. In *Salmon and Trout Migratory Behavior Symposium*, edited by E.L. Brannon & E.O. Salo. Seattle: University of Washington.

Schoning, R.W., T.R. Merrell & D.R. Johnson. 1951. *The Indian Dip Net Fishery at Celilo Falls on the Columbia River*. Oregon Fish Commission Contribution no. 17.

History

Salmon have always been a part of lives in the Pacific Northwest, throughout Native American history to our contemporary era. This presents the problem of where to start investigation, how far back to go. Historical sources are often overlooked in the quest for the most current data or the latest projections. Anecdotal information can provide new perspectives on the issue, and is most appropriately collected by historical societies, either local or statewide.

Historical statistics and survey information present problems with consistency and accuracy. Rarely are older data well-documented as to methods of collection and analysis. Any field observation data are valuable as long as methodology is considered.

Examples:

Cramer, F.K. 1974. Recollections of a salmon dipnetter. *Oregon Historical Quarterly* 75:23-231.

Columbia River Fisheries Development Association. 1946. *Wealth of the River: A presentation of fact concerning the Columbia River salmon industry and a petition for the conservation of this industry submitted with reference to proposals to construct various high dams on the Columbia River and its tributaries*. Astoria: The Association.

Columbia River Fishermen's Protective Union. 1890. *Minutes, October 7, 1890*. Portland: Oregon Historical Society.

Everman, B.H. & S.E. Meek. 1898. *A Report Upon Salmon Investigation in the Columbia River Basin and Elsewhere on the Pacific Coast in 1896*. Washington, D.C.: Government Printing Office.

Hume, R.D. 1893. *Salmon of the Pacific Coast*. San Francisco: Schmidt Label & Lithographic Co.

Anthropology and Sociology

Salmon are a cultural symbol in the Pacific Northwest. Almost everybody has some tie to salmon: visiting the fish ladders at the Bonneville Dam as a school child; remembering the awesome Celilo Falls with its leaping fish; or, ocean fishing on a misty day in July. Salmon are very real for people, unlike some endangered species which few have ever heard of, let alone seen or handled. These ties reflect the emotions and passions which permeate the ESA process. Some of them are documented and studied in literature far removed from biology. Researchers should be reminded that there is much more to the Columbia River issue than biology, and should be encouraged to use indexes in other disciplines.

Examples:

Brown, B. 1982. *Mountain in the Clouds: A search for the wild salmon*. New York: Simon & Schuster.

Ellis, D.V. (ed.) 1977. *Pacific Salmon: Management for people*. Vancouver, B.C.: University of Victoria Press.

Scarnescchio, D.L. 1988. Salmon management and the search for values. *Canadian Journal of Fisheries and Aquatic Sciences* 45:2042-2050.

Smith, C.L. 1977. *Fish or Cut Bait*. Corvallis, OR: Sea Grant College Program, ORESU-T-77-006.

Economics

Parallel to efforts to conserve the salmon stocks are efforts to conserve the region's economy which, when closely examined, is intertwined with the Columbia River. The Pacific Northwest thrived in large part because of rich, seemingly inexhaustible natural resources, and cheap hydroelectricity. Now, it must re-examine its priorities. Economists are helping craft the recovery plan by examining the costs of different recovery options, while pursuing the sustainability of complex human and fish lifestyles. Much of the economic information appears in report form, in part because of the timeliness of the issue--peer-reviewed journals take too long.

Examples:

Davis, S., H. Radtke & L. Snow. 1993. *Oregon Department of Fish & Wildlife- Revenues and Costs: Sources, uses and benefits*. Corvallis, OR: Oregon Coastal Zone Management Association.

Eisgruber, L.M. 1993. *Sustainable Development, Ethics and the Endangered Species Act*. Staff Papers in Economics no. AREC 93-201. Corvallis: Department of Agricultural Resource Economics, Oregon State University.

University Task Force on Salmon and the Columbia River System. 1992. *Alternative Actions for Restoring and Maintaining Salmonid Populations on the Columbia River System*. (Corvallis, OR): (Agricultural Communications, Oregon State University), *PNW Bulletin* 407.

Law

All of the discussion, and hence the literature, is predicated on federal law. Not having an awareness of the legal literature is problematic to any researcher or decision-maker. The legal perspective includes various state and provincial laws and rules.

International treaties and agreements add another layer of complexity to the process and the literature. Particular attention should be given to the Pacific Salmon Treaty between the U.S. and Canada as well as hydroelectric agreements which affect streamflow. Besides Canada, the U.S. also has agreements with various tribes with salmon interests and rights. Finally, there is a growing litigation record.

Examples:

Blumm, M.C. 1981. Hydropower vs. salmon: the struggle of the Pacific Northwest's anadromous fish resources for a peaceful coexistence with federal Columbia River power system. *Environmental Law* 11:212-300.

Burke, W.T. Anadromous species and the new international Law of the Sea. *Ocean Development and International Law* 22:95-131.

Wilkinson, C.F. & D.K. Connor. 1983. The law of the Pacific Salmon fishery conservation and allocation of a transboundary common property resource. *The University of Kansas Law Review* 32(1):17-109.

Information Sources

Information from each of the above disciplines can be generated from any number of sources.

Mainstream and Peer-Reviewed Literature

This is the easiest to find, and the most likely to be used. Standard indexes in any of the disciplines indicate what has been published, and much of the information indexed is readily available. Timeliness is problematic; the decisions in the Columbia River issue are often made long before peer-reviewed information appears in print.

Examples:

Nehlsen, W., J.E. Williams & J.A. Lichatovich. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. *Fisheries* 16(2):4-21.

Other Academic Literature

University task forces, extension faculty, and students generate diverse information on the Columbia River issue. Sea Grant publications from Oregon and Washington, and extension publications from Oregon, Washington and Idaho are visible examples of this source category. While Sea Grant publications are well distributed and archived, extension publications continue to be problematic; often scantily distributed, and rarely fully indexed or catalogued, these can be lost. Masters' theses usually appear in the appropriate university catalog; but non-theses majors produce final project papers with valuable information that rarely go beyond the candidates' committee. Maintaining contact with departments and faculty is often the only way to get material, and even then, complete coverage is not assured.

Examples:

Barroon, J.C. & G. Thorgaard. 1991. *Salmon and the Columbia River System*. (Corvallis, OR): (Agricultural Communications, Oregon State University), *PNW Bulletin* 362.

Beatty, R.E. 1992. *Changes in Size and Age at Maturity of Columbia River Upriver Bright Fall Chinook Salmon (*Oncorhynchus tshawytscha*): Implications for stock fitness, commercial value and management*. Master's thesis. Corvallis, OR: Oregon State University.

Cone, J. 1991. *Endangered Salmon: A radio chronicle of the emerging crisis, Fall 1990-Summer 1991*. Corvallis, OR: Oregon Sea Grant, ORESU-F-91-002.

Government Reports

All levels of government--local to federal--seem to have an opinion on the salmon issue, and all seem to want to voice those opinions. Problematic distribution plagues most government produced information. The state libraries have a statutory responsibility to collect and archive state agency documents. None of the three state libraries in the

Pacific Northwest is confident that it is indeed collecting everything consistently. (See figure 2.) In part, this is due to lack of staffing in the libraries, and in part due to state agencies' ignorance of their responsibility to share information.

<p>Idaho State Library Documents 325 W. State Street Boise, ID 83702-6072 tel:(800) 533-6923 (208) 334-2150 Publication: <i>Monthly Checklist of Idaho Government Publications</i></p>
<p>Oregon State Library Documents State Library Building Salem, OR 97310 tel:(503) 378-4277 x248</p>
<p>Washington State Library Documents Capitol Campus Olympia, WA 98504-0111 tel:(206)753-4027 Publication: <i>Washington State Library Monthly Checklist</i></p>

Fig. 2: State Libraries in the Pacific Northwest

Federal agency information goes into the Federal Depository system, if it is published by the United States Government Printing Office. Many agencies publish internally, so distribution is again problematic.

The Columbia River situation has spawned several working groups which transcend state and national borders, making their information production difficult to track and procure. Often, distribution is limited to those in the working group.

Examples:

Bonneville Power Administration. 1992. *Biological Assessment: 1991 operation of the Federal Columbia River Power System.* (Portland, OR): The Administration.

----- 1987. The world's biggest fish story: The Columbia River salmon. *Backgrounder* July 1987.

Northwest Power Planning Council. 1986. *Technical Discussion Paper: Columbia River Basin Fishery Planning Model*. Portland: The Council.

Oregon Department of Fish and Wildlife. 1991. *Lower Columbia River salmon: Evaluation of stock status, causes of decline, and critical habitat--part 2*. Portland: The Agency.

U.S. Department of Energy/Bonneville Power Administration, U.S. Department of the Army/Corps of Engineers & U.S. Department of the Interior/Bureau of Reclamation. 1991. *The Columbia River System: The inside story*. Portland: Columbia River System Operations Review.

Industry Reports

The aluminum, forestry, utility, fishing, agriculture, and transportation industries share concern with the fate of Columbia River salmon. Each group has generated internal and external reports with varying circulation. Often considered biased, these reports reflect very real concerns by major economic forces in the region. Besides reports, the trade journals offer news and insights into the issue. These journals are usually poorly indexed, but quite readily available.

Examples:

Gay, J. 1993. Trollers hit by Endangered Species Act. *Pacific Fishing* 14(8):19-21.

Kaczynski, V.W. & J.F. Palmisano. 1992. *A Review of Management and Environmental Factors Responsible for the Decline and Lack of Recovery of Oregon's Wild Anadromous Salmonids*. Salem, OR: Oregon Forest Industries Council.

Pacific Northwest Utilities Conference Committee. 1991. *Salmon Currents: A PNUCC update on Northwest salmon issues*. Portland, OR: The Committee.

Non-Profit Interest Groups Literature

Some of these groups are extensions of industry groups, but many represent environmental perspectives. Their literature tends to focus current messages on target audiences. Newsletters provide a timely, if ephemeral, mechanism for communicating information on the Columbia River debate. Most non-profit groups are willing to share their information once contacted; they do not seek out libraries as logical distribution points.

Examples:

Alkire, C. (Draft, 1993). The economic value of wild salmon: accounting for future generations. N.A.: The Wilderness Society.

Chason, D.J. 1991. Goodbye wild salmon? *Defenders: Magazine of Defenders of Wildlife* 66(5):16-33.

Engelmeyer, P. Coastal coho survey flawed. *Riverkeeper (Oregon Trout)* 9(1): 1,8.

Evergreen Foundation. 1993. The Mighty Columbia: I am life. *Evergreen* March/April.

Opinions, Responses, and Immediate Information

Newspapers and press releases cover the immediate situation. Letters to the Editor, editorials, and special series provide yet another perspective on the issue. Online access to the *Seattle Times* and Portland's *Oregonian* make clipping files from these major newspapers archives obsolete, although the access is limited to 1989 forward. Given the geographic breadth of the salmon issue, many smaller, regional papers carry information reflecting differences and similarities of opinions and values throughout the region. These papers are poorly indexed, a fact which some federal agencies overcome through use of clipping services.

Press releases and meeting announcements are even more ephemeral than newspapers and newsletters. Few libraries actively collect and archive these. The Fisheries and Oceans Library at the University of Washington does maintain an active archive of meeting notices of the Pacific Fisheries Management Council.

Examples:

Cohn, L. & S. Henjum. 1991. Salmon savior. *Oregonian Northwest Magazine* February 24:8-13.

Oregonian Editor. 1993. Don't trade trout to save salmon. *Oregonian* July 25: B02.

Trebon, M. 1993. Some NW interests see upside to salmon plan. *Capital Press* (Salem, OR) 10/29/93:5.

ESA Administrative Record

Both a resource and a collection, this record is maintained by the Portland NMFS office as a mechanism for collecting and distributing comments on the ESA process. Not all material sent to NMFS on the salmon issue finds its way into the record; selection

focuses on pertinence to the decision-making process. A wide variety of information is included such as letters from local chambers of commerce, reprints of scholarly articles, industry reports, and memorandums documenting the process.

The record is hierarchically organized by species, steps in the ESA process (status review, critical habitat, proposed rules, etc.), and finally, affiliation of the author (federal, state, local, tribal, etc.). The obtuse print index is also available in WordPerfect on diskette (which is at least searchable by keyword). Four libraries are designated as depositories where the public can have ready access to the record. (See figure 3.) The record represents an excellent regional attempt to keep the Columbia River ESA process public and open to debate.

IDAHO

Bureau of Reclamation
3380 Americana Terrace
Boise 83706
208-384-3001

OREGON

Bonneville Power Administration
Public Involvement Information Center
905 NE 11th Ave
Portland 97232
503-230-4171

Marilyn Potts Guin Library
Hatfield Marine Science Center
Oregon State University
2030 Marine Science Drive
Newport 97365
503-867-0249

Lewis & Clark Northwestern School of Law
Paul L. Boley Law Library
10015 SW Terwilliger
Portland 97219
503-244-1181

WASHINGTON

National Marine Fisheries Center
Northwest Fisheries Center Library
2727 Montlake Boulevard, E.
Seattle 98112
206-860-3210

Amount of Information

The variety of disciplines concerned, and the sources involved suggest a large amount of print literature, but it is difficult to say how much. In the 1960s, Galen Maxfield and colleagues at the Bureau of Commercial Fisheries, Seattle, Washington, examined the literature of the Pacific salmon from 1900 to 1960, and published an extensive index entitled *The Pacific Salmon Literature Compilation*. Fourteen hundred articles with a primary emphasis on the Pacific salmon or one of the five species, *Onchorynchus nerka* (sockeye), *O. keta* (chum), *O. kisutch* (coho), *O. tshawytscha* (chinook), or *O. gorbuscha* (pink), were included.

A cursory search of *Biological Abstracts*, *Aquatic Sciences and Fisheries Abstracts*, *Zoological Record*, and *Agricola* using the same terms for the time periods 1970-1990 produced around 9700 items. This mainstream literature most likely represents the tip of the literary iceberg.

CONCLUSIONS

Building a collection on the Columbia River salmon and the ESA has neither a snappy nor an elegant solution. It involves identifying diverse perspectives, tapping unexpected resources, and maintaining control over a paper stream.

Adding to a local database of Oregon Department of Fisheries and Wildlife documents compiled using Papyrus software is a step towards archiving information; but, users then need to know the database exists. Planting short records in Oregon State University's online catalogue would at least indicate that a special collection exists, and could provide a user with clues on how to get more help, or more access to resources. There is a fine line with building a collection between practicality and over-commitment. Using existing institutional resources, and establishing links to other libraries and agencies in the region with bibliographic interests are valid mechanisms for collection building. (See figure 4.)

Collecting biological and scientific material is only one aspect of the librarian's role in this political/environmental/biological issue. Any of us in the marine sciences involved in political issues have a responsibility to look beyond the scientific literature, and include, or at least be familiar with, the literature of other disciplines. This example of the United States's ESA and the Columbia River salmon illustrates the complexity of current environmental issues. Similar complexity and diversity of opinion haunt other issues facing the marine science community. Whaling, global warming, and the demise of certain fisheries stocks are other examples where science, politics, and lifestyles collide. Marine science librarians have a responsibility to collect, preserve, and provide access to the literature which will help the current and future decision-makers craft informed decisions.

There is a provision in the ESA for convening what has been referred to as the God Squad--a panel of experts charged with making the ultimate decision on the fate of a species when the process is deadlocked. Creating a collection and maintaining access to the information involve similar decisions on what is saved and what is deemed unnecessary. While not the God Squad, Pacific Northwest librarians have great power in structuring what literature survives, and what information people will find in years to come. We should all take this power and its implied responsibility seriously. Perhaps if we do, the literature has a better chance of survival than many of the salmon stocks.

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van der Leeden, F., F.L. Troise, & D.K. Todd. 1990. *The Water Encyclopedia*.
Chelsea, MI: Lewis Publishers, Inc.

Wilkerson, W.R. 1992. The Endangered Species Act and the Pacific Northwest salmon
policy overview. In *The Endangered Species Act*. Seattle: Continuing Legal
Education International.