

Table of Contents

Acknowledgments	vii
Table of Cases	ix
Table of Treaties	xi
Table of Statutes	xii
Preface	xiii
Section I—The Salmon and Their Significance	1
Chapter 1—The Salmon	3
Section II—The Indian Treaties	25
Chapter 2—The Pre-Treaty Fishery	27
Chapter 3—The Stevens Treaties	31
Chapter 4—Treaty Rights as Property Rights	35
Chapter 5—The <i>Winans</i> Legacy in the Courts	39
Chapter 6—Indian Treaty Rights as a Harvest Share: The <i>Belloni</i> and <i>Boldt</i> Decisions	43
Chapter 7—Treaty Fishing Rights and the Environment: The <i>Martinez</i> Decision	49
Section III—The Hydroelectric Dynamo	57
Chapter 8—Origins of the Dam-Building Era	61
Chapter 9—Salmon Hatcheries: The Faustian Bargain	65
Chapter 10—The Columbia River Treaty With Canada	75
Chapter 11—The Rise and Fall of the Hydrothermal Power Program	81
Chapter 12—The Northwest Power Act	85
Chapter 13—The Endangered Species Act	95
Chapter 14—The Clean Water Act	105

Chapter 15—State Water Laws and Salmon Recovery 117

Chapter 16—Dam Removal..... 125

Section IV—Managing Salmon Harvests Equitably 139

Chapter 17—The Pacific Salmon Treaty 141

Chapter 18—The Columbia River Comprehensive Plan 149

Chapter 19—Inter-Tribal Disputes Over Fishing Sites 153

Chapter 20—Predator Control: Extirpating Sea Lions,
Cormorants, and Northern Pike 155

Chapter 21—Saving Southern Resident Orca Whales 161

Chapter 22—The Uncertain Future of Idaho’s Wild Salmon 169

Section V—Salmon, Climate Change, and the Future 177

Chapter 23—The Effects of Climate Change on Salmon 179

Chapter 24—Legal Responses to Climate Change 187

Chapter 25—Salmon and The Public Trust Doctrine 197

Chapter 26—The Future of Wild Pacific Salmon in a Climate-
Changed World 201

Appendix 1—The Salmon Harvesters 209

Appendix 2—The Salmon Regulators 217

 Federal Agencies 217

 State, Tribal, and Intergovernmental Entities 220

Appendix 3—The Salmon Advocates 223

Bibliographical Essays 227

List of Acronyms 279

Index 281

About the Author 283

Acknowledgments

I first got started on the Pacific salmon trail as a result of a conversation with Ollie Houck and Pat Parenteau in the National Wildlife Federation's Washington office in 1978. That was just after I accepted a natural resources law fellowship at Lewis and Clark Law School, due to the farsightedness of Jim Huffman (later, dean of the school for a record 13 years). The late William Q. Wick, head of Oregon State's Sea Grant program at the time, maintained my attention through funding many research assistants (one of whom became a U.S. senator), and which helped produce 50 issues of the *Anadromous Fish Law Memo* between 1979 and 1990. The *Memo* would never have been possible without the word processing wizardry of my assistant and dear friend, the late Lenair Mulford. I miss her enthusiastic support and will never forget it.

I maintained my interest in Pacific salmon law over the years, frequently teaching the only law school course in the country on the subject. Twenty years ago, I wrote *Sacrificing the Salmon: A Legal and Policy History of the Decline of Columbia Basin Salmon* (2002). This current book is, however, completely different from the earlier one, not simply because it includes the significant legal developments of the last two decades, but also because it is broader in scope, often including Pacific salmon law outside the Columbia Basin, as well as examining new issues such as predator control measures, inter-tribal allocation law, Orca whale preservation and, of course, climate change and its effects on Pacific salmon.

This is a book about salmon *law* and its chronology, with the goal of educating the public on the legal issues confronting salmon restoration efforts in the future. Therefore, it is not principally arguing about underlying contemporary political, economic, or social issues affecting salmon restoration, although it may reference some of those, since law is an inevitable reflection of those issues. My aim here is to explain the underlying law. I don't believe a similar effort exists to explain salmon law in as comprehensive a fashion as this book does, and my hope is that it will provide reliable referent for those confronting salmon law issues in the future, of which there will be many.

I cannot count the number of students who have helped to educate me on salmon law and policy over the years. So, I won't try here. But I need

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Table of Cases

- Alesea Valley Alliance v. Evans*, 161 F. Supp. 2d 1154 (D. Or. 2001), 96
- Baley v. United States*, 942 F.3d 1312 (Fed. Cir. 2019), 123
- Casitas Municipal Water District v. United States*, 543 F.3d 1276 (Fed. Cir. 2008), 123
- Center for Environmental Law & Policy v. U.S. Fish & Wildlife Service*, No. 2:15-CV-0264-SMJ, 2017 WL 1731706 (E.D. Wash. May 3, 2017), 113-14
- Columbia Riverkeeper v. Wheeler*, 944 F.3d 1204 (9th Cir. 2019), 110, 188
- Klamath Irrigation District v. United States*, 67 Fed. Cl. 504 (2005), 123
- National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C. Cir. 1982), 106-07
- National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d 917 (9th Cir. 2008), 189
- Northwest Resource Information Center v. Northwest Power Planning Council*, 730 F.3d 1008 (9th Cir. 2013), 87-88
- PUD No. 1 v. Wash. Dept. of Ecology*, 511 U.S. 700 (1994), 111
- Puyallup Tribe v. Washington Game Department* (Puyallup I), 391 U.S. 392 (1968); *Washington Game Department v. Puyallup Tribe* (Puyallup II), 414 U.S. 44 (1973); and *Puyallup Tribe v. Washington Game Department* (Puyallup III), 433 U.S. 165 (1977), 40-41
- Seattle Master Builders v. Northwest Power Planning Council*, 786 F.2d 1359 (9th Cir. 1986), 86
- Seufort Brothers. v. United States*, 249 U.S. 194 (1919), 39
- Sohappy v. Smith* (Belloni Decision), 302 F. Supp. 899 (D. Or. 1969), 43-44
- Tulee v. Washington*, 315 U.S. 681 (1942), 39-40
- Tulare Lake Water Storage Dist. v. United States*, 59 Fed. Cl. 246 (2003), 122
- United States v. Confederated Tribes of the Colville Reservation*, 606 F.3d 698 (9th Cir. 2010), 154
- United States v. Lummi Indian Tribe*, 235 F.3d 443 (9th Cir. 2000), 154
- United States v. Muckleshoot Tribe*, 235 F.3d 429 (9th Cir. 2000), 153-54
- United States v. Taylor*, 3 Wash. Terr. 88 (1887), 35, 37
- United States v. Washington*, 235 F.3d 438 (9th Cir. 2000), 154
- United States v. Washington* (Boldt Decision), 384 F. Supp. 312 (W.D. Wash. 1974), 44-46, 153
- United States v. Washington* (Culverts Decision/Martinez Decision), 20 F. Supp. 3d 828 (W.D. Wash. 2007), 51-55, 57-58
- United States v. Washington* (Orrick Decision), 506 F. Supp. 187 (W.D. Wash. 1980), 49-50
- United States v. Winans*, 198 U.S. 371 (1905), 36-38

Upper Skagit Tribe v. Suquamish Tribe, 871 F.3d 844 (9th Cir. 2017), 153
Whatcom County v. Hirst, 186 Wash. 2d 648 (2016), 193

Table of Treaties

Columbia River Treaty with Canada (Treaty Relating to Cooperative Development of the Water Resources of the Columbia River Basin), U.S.-Can., Jan. 17, 1961, 15 U.S.T. 1555, 542 U.N.T.S. 244

Generally, 75-79, 202

Treaty provisions, 76-77

Renegotiating the Treaty, 78-79

Pacific Salmon Treaty (Treaty between the Government of the United States and the Government of Canada Concerning Pacific Salmon), Jan 28, 1985, U.S.-Can, T.I.A.S. 11091

Generally, 139-45, 205

Background, 141-42

Treaty implementation, 145

Treaty negotiations, 142-44

Treaty provisions, 144

1999 amendments, 145-46

2009, 2014 amendments, 146

Stevens Treaties (Treaty with Nisquallys), Nisqually-U.S., Dec. 26, 1854, 10 Stat 1132

Generally, 25, 31

Columbia River Comprehensive (Harvest) Plan, 149-50

Gift Economy, 28

Habitat protection, xvi, 49

Negotiations, 31

Pre-treaty world, 27-28

Treaty fishing right, xiv, 201-02

Table of Statutes

Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. §1251–1388 (2018)

Generally, 187

Exempting dams from permits, 106-07

Permits for salmon hatcheries, 113

Section 401 water quality certification, 111-13, 114

Total maximum daily loads, 109-11, 188

Water quality standards, 109, 114, 187-88

Endangered Species Act of 1973, 16 U.S.C. §§1531–1544 (2018), xv, 78, 95-103, 189

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–1891d (2018), 167

Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361–1421h (2018), 155-56

Northwest Power Act (Pacific Northwest Electric Power Planning and Conservation Act), 16 U.S.C. §§ 839-839h (2018), 85-90, 92, 202-03

Regional Preference Act (Pacific Northwest Consumer Power Preference Act of 1964), 16 U.S.C. §§ 837–837h (2018), 77

Oregon Donation Act (Donation Land Claim Act of 1850), 9 Stat. 496 (1950), 29-30

Rivers and Harbors Act of 1945, Pub. L. No. 79–14, 59 Stat. 10, (1945), 63-64

Preface

Salmonids¹ define the very essence of the Pacific Northwest. Their awe-inspiring life journey can take them from the Central Idaho wilderness to the Pacific Ocean and back, surmounting man-made and other hazards, and climbing thousands of feet in altitude on their return. Residents of the Northwest have long depended on salmon for subsistence, commerce, and culture. During the pre-colonial era, salmon harvests gave the native people of the region the highest standard of living of any of the tribes of North America. After white settlement, enormous fortunes were made packing and shipping salmon for distant markets—while dispossessing native harvesters.

Salmon are not just economically prized; they also serve as prominent indicators of the health of the watersheds they inhabit. They require high quality, flowing water, as well as unpolluted gravel beds suitable for spawning. Many of the riverbeds that historically supported salmon have been destroyed by dams throughout the region, but especially in the Columbia Basin. Salmon habitat has also been damaged by shoreside land developments and poor timber harvesting and grazing practices. A Faustian bargain with salmon hatcheries—begun over a century ago—masked this widespread habitat destruction and, in a noteworthy example of the law of unintended consequences, substantially damaged the spawning salmon runs. This ironic result was not widely understood for more than 100 years—and still is resisted by many to this day.

The significance of salmon to their existence was not lost on native harvesters who preceded white settlement by thousands of years. They had been salmon traders for centuries, giving them considerable wealth in a subsistence world. When confronted first by traders from the British Hudson's Bay Company in the 18th century, the native people perceived no immediate threats from white merchants wishing to purchase their harvests.

1. Salmonids are any of a family of Salmonidae, elongate bony fishes that have the last three vertebrae upturned. Salmon are anadromous salmonids, meaning they ascend the streams to spawn after living most of their lives in the ocean. Pacific salmon include chinook, coho, sockeye, chum, and pink salmon and typically die after spawning. Steelhead trout are anadromous rainbow trout of the same family which also spawn in freshwater, migrate to the ocean, and return. Steelhead, however, can survive spawning. They are also prized by sportsmen because unlike salmon, steelhead will eat after entering freshwater. But native harvesters did not distinguish between steelhead and other anadromous salmonids, and neither does this book.

But the situation changed after the Lewis and Clark expedition of 1804-05, which encouraged the white settlement that accelerated over the Oregon Trail beginning in the 1830s. By the 1850s, white settlers had brought diseases like smallpox for which the natives lacked immunity. Along the Columbia River native populations plummeted by 90%. That catastrophic decline induced native leaders to negotiate treaties with the United States—in which the natives conveyed some 64 million acres to the federal government but secured promises that the native hunting, fishing, and gathering practices could continue, even off the relatively small land reservations reserved to the newly created Indian tribes.

The intent of the treaty negotiators was for tribal salmon harvests to play an integral role in the pioneer economy by providing food for white settlers, which would also promote native economic self-sufficiency without federal subsidies. Within a few decades, however, white settlers were displacing native harvesters, using locational advantages, technological innovations like fish wheels, and legal means of disadvantaging them. This preemption of native harvests succeeded for most of the 20th century until gradually undermined by federal court decisions. But the court cases first filed in the 19th century began an evolutionary shifting of salmon harvests not achieved for 100 years—and then only over the strenuous objections of the states, especially Washington. State resistance failed in the federal courts, which rejected state claims that the treaties gave the tribes only the right to an equal opportunity to harvest under state laws. Instead, the courts—including six decisions of the U.S. Supreme Court—ruled that the treaties reserved tribal property rights to harvest salmon at their usual and accustomed fishing places free from state discrimination. A seventh decision in 1979 upheld the tribes' right to one-half of the salmon harvests.

At the same time that the first treaty rights controversies began, efforts began to increase the number of salmon available for harvest. These efforts took the form of salmon hatcheries which, in the Columbia Basin, date to the 1880s. These early artificial enhancement efforts were unsuccessful, but those failures did not stop efforts to boost harvestable salmon through fishery “science.” When the federal government committed to aggressive dam building in the 1930s and 1940s, salmon hatcheries became the means by which proponents of hydropower could claim that the region could have both cheap electric power and continued salmon available for harvest. Those claims proved to be a Faustian bargain. While hatcheries have sometimes maintained harvests for a while, they have never been able to boost—or even maintain—spawning salmon. Worse, studies in recent years have revealed

that hatcheries practices do not enhance run sizes; instead, they actually damage naturally spawning fish.

During the evolution of the treaty harvest right over the first three-quarters of the 20th century, the environment for migratory salmon deteriorated considerably. The federal government began building and regulating hydropower dams in the 1920s, which accelerated during the 1930s as a response to the Great Depression and World War II. Dam building continued until the 1970s (largely under 1940s authorizations), providing the Northwest with cheap electricity and navigation but devastating salmon habitat. This destruction was especially pronounced in the Columbia Basin, now home to the largest interconnected hydroelectric system in the world. Hydropower's preeminent status in project operations, if not in law, was cemented by the 1964 Columbia River Treaty with Canada. The treaty authorized large storage dams in the upper basin that doubled its storage capacity and increased its hydroelectric generating capability considerably.

In 1980, the year after the Supreme Court upheld the tribes' right to 50% of salmon harvests, Congress called a halt to the assumed hydropower dominance in the Columbia Basin by passing the Northwest Power Act. The statute authorized a basinwide interstate salmon restoration program which would elevate fish and wildlife protection and restoration to "coequal" status with hydropower and created a new interstate agency to promulgate it. The ensuing interstate program promised a doubling of salmon runs, relying heavily on hatchery fish to reach that goal. But soon spawning salmon would be protected under the Endangered Species Act (ESA), and the processes required by that statute, resulting in several so-called biological opinions (BiOps), would soon eclipse the interstate program.

Annual BiOps were soon replaced by five-year BiOps, although, in a remarkable development, three different federal judges found six different BiOps deficient. So, for nearly two decades, the region operated without an ESA-compliant plan to protect listed salmon. It still does to this day. But two federal judges have ordered the federal agencies operating the Columbia Basin dams to spill water over the dams to facilitate juvenile salmon passage while the agencies worked toward compliance with federal law. The results of this colossal failure to comply with the ESA, somewhat surprisingly after some 20 years of ESA violations, have yet to be seen in significantly changed hydroelectric operations, apart from the court-ordered spills. The judge now overseeing the case gave the agencies another five years to comply with federal law in 2016. In 2017, several members of Congress took aim at the court-ordered spills. They succeeded in convincing a majority of the U.S.

House of Representatives to overturn the district court's injunction, which was affirmed in 2018 by the U.S. Court of Appeals for the Ninth Circuit. But the Senate killed the measure.

While the challenges to ESA compliance were playing out, the tribes proceeded to claim—as they had since 1970—that their treaties included an implicit right of environmental protection. In 2007, a federal judge agreed and, after long-stalled negotiations proved fruitless, imposed an injunction in 2013, requiring restoration of numerous so-called barrier culverts (road culverts blocking salmon migration). In 2016, the Ninth Circuit upheld the district judge, in a resounding affirmation of first principles of Indian law, and the Supreme Court, which surprisingly accepted review, divided 4-4 without an opinion, thereby affirming the lower court. The decision will prompt considerable changes not only in road culverts but perhaps also of other activities damaging salmon habitat like hydroelectric operations, timber harvests, and grazing practices.

Another possibility for restoring salmon habitat is removing dams. Various government agencies have removed several small- and mid-size dams in recent years, the most notable being the dams on the Elwha and White Salmon Rivers. The largest dam-removal project in history—involving four dams on the Klamath River—is slated to begin in 2023. The ecological benefits of dam removal are enormous, but the politics are hazardous. For example, the removal of the Klamath projects, if it occurs, will be over the objections of local Republican congressmen on both sides of the Oregon-California border. One of the congressional opponents of the Klamath Dam removals, Greg Walden (R-OR), former chair of the House Energy and Commerce Committee, called for “streamlined” procedures to encourage new hydropower projects. So, the planned Klamath removals cannot be considered to be a sure thing.

This book discusses all of these issues in some detail. It follows my 2002 book, *Sacrificing the Salmon: A Legal and Policy History of the Decline of Columbia Basin Salmon*, but it is a much different account, with two decades of developments and without footnotes, aiming at both a legal and nonlegal audience. For researchers I have included bibliographic notes for each chapter with sources, including many of my writings (which are full of documentary footnotes). But my aim here was not to provide citations for every detail, but instead to engage a wider audience in an accessible fashion, in the legal and policy issues facing the Northwest's salmon resource in the early 21st century. My hope is to reach interested citizens and make the complexities of the law and policy of salmon protection and restoration accessible to the public,

because the stakes are high—the fate of salmon in the Pacific Northwest in the climate-challenged 21st century—too high to leave to government agencies and the economic interests they manage without active and informed public involvement and oversight.

The book's chapters are organized into five sections, beginning with chapters on the salmon resource and its environment, those who harvest salmon, and those who have responsibility for regulating salmon harvests and salmon habitat. Section II discusses the 19th-century treaties with Indian tribes and the interpretation of the treaties in landmark cases, including decisions that concluded the treaties reserve to the tribes an equal harvest share and protection against habitat damage. Section III turns to the evolution of the Columbia Basin hydroelectric system, the largest interconnected system in the world and a chief cause of the decline of Columbia Basin salmon. The section includes chapters on salmon management under federal statutes like the Northwest Power Act, the ESA, and the Clean Water Act; the effects on salmon of state water laws; and the role of other statutes like the Federal Power Act which have encouraged a number of dam removals in the Pacific Northwest. Section IV turns to harvest management issues under the Pacific Salmon Treaty with Canada and under a court-approved Columbia River Comprehensive Plan. The section also has chapters on predator control measures that euthanize sea lions, cormorants, and northern pike, aimed at assisting in salmon management; inter-tribal disputes over fishing sites; and the relationship between efforts to preserve Orca killer whales and salmon management. Section V assesses the effects of ongoing climate change on salmon, including legal responses to climate change, the possibilities the enforcement of the public trust doctrine could play in salmon recovery, and the prospects for wild salmon recovery in the Pacific Northwest's future.

The Appendices survey salmon harvesters, regulators, and advocates. There is also an extensive series of bibliographic essays for researchers, and even a glossary of acronyms.