The Rusted Shield:
government's failure to enforce—or obey—our system of environmental law threatens the recovery of Puget Sound's wild salmon

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> *Our government is the potent, the omnipresent teacher. For good or ill, it teaches the whole people by its example. . . . If government becomes a lawbreaker, it breeds contempt for law; it invites every man to become a law unto himself; it invites anarchy.*
> Justice Louis Brandeis[1]

> *[M]y primary emotion when recalling the past 20 years of environmental law is one of profound disappointment. This disappointment is due to the continuing failure of federal agencies and officials to do a better job of implementing and enforcing our environmental laws.…[G]overnment is all too often the environment's worst enemy. Agencies and officials charged with implementing and enforcing our environmental laws frequently fail to do so. They miss statutory deadlines, water down strict legal requirements, or simply refuse to use their enforcement powers, even when faced with blatant violations of the law.… [T]he current situation, where laws are implemented, if at all, only half-heartedly . . . fosters cynicism and serves to undermine faith in our system of law.*
> Rick Sutherland[2]

Before we spend a fortune and disrupt people's lives to restore wild salmon runs in Puget Sound, we should take a long look in the mirror. The same government agencies that have started tapping the cornucopia of federal salmon restoration money have ignored, selectively enforced, or actively violated the laws that are already supposed to protect salmon and salmon habitat. Investing more money in business as usual will not save the fish.

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[1] (dissenting) *Olmstead v. United States*, 277 U.S. 438 (1928).
[2] Rick Sutherland, a nationally acclaimed environmental attorney for two decades, served as head of what was then the Sierra Club Legal Defense Fund. He died in a tragic accident in 1991. This quote comes from his last talk, to a group of U.S. Department of Justice attorneys.

Studies, court transcripts, expert observations and dismal anecdotes add up to a broad picture of government failure. Many good people in government try hard to protect fish and habitat. But the institutions that employ them do not respect either the letter or the spirit of the law.

Of course, there are exceptions. But one cannot escape the conclusion that, as a society:

We do not enforce the law. The state Department of Ecology refused for decades to enforce the Clean Water Act against dairies. The federal Environmental Protection Agency stood by and watched. The state Department of Transportation installs and maintains highway culverts that actually violate the law.

We ask the wrong questions. The state does not measure the biological health of its rivers and streams.

We do not consider cumulative impacts. The state legislature has refused money to develop water quality standards that would help control the non-point pollution that threatens spawning streams. The EPA has given the state another decade to develop such standards for commercial timber harvesting.

We do not insist on means that will enable us to reach our stated ends. Studies indicate that wetland "mitigation" projects seldom work, yet those projects absorb millions of dollars and create a false sense that wetland functions are being preserved.

We do not monitor enough to make sure people do what the law requires, much less whether or not it works. A typical local government does not have even one full-time employee monitoring wetland mitigation projects. According to one estimate, the equivalent of only one-quarter full-time employee monitors water withdrawals statewide.

We have treated salmon as if they were fungible. Economically and politically, one fish is as good as another. In some areas, the state permits people to harvest hatchery salmon knowing that they will deplete or destroy wild runs. A former head of harvest management for the Washington Department of Fish and Wildlife calls this "a policy of extinction."

We have permitted government agencies to see their constituents as the fishers and developers, rather than the fish. In order to speed up a dam relicensing process, the Department of Ecology has not objected to plans that it acknowledges would violate the Coastal Zone Management Act.

We do not coordinate the management of all the various jurisdictions and agencies responsible for protecting salmon at different stages of the fishes' life cycles. For example, more than 50 different jurisdictions manage pieces of Puget Sound's shoreline. An international study concluded that "[e]ach jurisdiction regulates its piece of Puget Sound shoreline differently."

Recent headlines and sound bites make the long slide of wild salmon toward extinction sound like a recent discovery. It is not. This "crisis" has developed over 150 years. During that time, many people have seen clearly what was happening. "The salmon crisis didn't come about because we wanted it to," explains fisheries biologist Jim Lichatowich, author of *Salmon without Rivers,* and co-author of the influential 1991 article, "Pacific Salmon at the Crossroads."[3] "Government passed all kinds of statutes…to prevent what occurred. It didn't work."[4] A National Academy of Sciences committee observed in 1996 that "for more than a century, overfishing, habitat destruction and degradation, and substitution of naturally reproducing fish runs with hatchery-produced fish ha[ve] depleted the genetic diversity and abundance of salmon."[5]

This has happened despite an elaborate network of laws and regulations designed to protect salmon and their habitat. Good intentions and bad results have characterized the salmon laws and regulations of Washington State and its predecessors from the beginning. "Salmon protection has been part of [the political landscape] since the first territorial legislature of 1848," Lichatowich says. "We knew since 1875…what was going to cause the collapse. We put in all these things to prevent it."[6] Clearly, we failed.

Eight years ago, the authors of "Pacific Salmon at the Crossroads," all members of the American Fisheries Society's Endangered Species Committee, identified "214 native naturally-spawning Pacific salmon and steelhead stocks in California, Oregon, Washington, and Idaho that appear to be facing a high or moderate risk of extinction, or are of special concern."[7] The 1999 listing of Puget Sound chinook as a threatened species merely confirmed what had long been obvious.

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[3] Lichatowich, Jim, *Salmon without Rivers: A History of the Pacific Salmon Crisis*, Island Press (1999); Nehlsen, Willa, et. al., "Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington," *Fisheries*, vol. 16, No. 2 (March-April 1991).
[4] Lichatowich, Jim, personal communication.
[5] Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, Board on Environmental Studies and Toxicology, Commission on Life Sciences, *Upstream: Salmon and Society in the Pacific Northwest*, National Academy Press (1996).
[6] *ibid.*
[7] Nehlsen, *et.. al., op. cit.*

Wild salmon are not in trouble because individual government officials, past or present, have ignored the law or bent it to serve the interests of favored constituents. They are in trouble because those individuals fit into a pattern that did not end with the 19th century or the New Deal, and may not end with the listing of Puget Sound chinook. Getting rid of a few rogue officials would be easy. Changing an historical pattern—changing a part of regional culture—will be hard. And yet, if we do not change it, there is little point in pretending to save the fish.

HOW WE GOT HERE

Denial, Faith, and Hatcheries

"The hardest thing to convey in writing history or teaching history," the historian David McCullough recently observed, "is that nothing ever had to happen the way it happened."[8] Euro-American society did not *have* to destroy the great wild salmon runs of the Pacific Northwest. People made choices. But they preserved an illusion that they were not choosing—that, in fact, they did not have to choose. They continue to make choices, and continue to preserve the illusion.

The illusion has been sustained by denial and hatcheries. The two have been intimately related. University of Washington environmental law scholar William Rodgers has written that on California's Trinity River, before European civilization arrived, local tribes harvested salmon for ten days each year at the Kepil Weir, then dismantled the weir so that upstream tribes could get their share. If there were not enough salmon, they dismantled it earlier. "No fish meant no fishing," Rodgers has written. "This was cause for regret not denial as it tended to be in the fisheries that followed."[9]

The denial started early. In the 1880s, a regional magazine observed that on the Columbia River, "The large pack and the fact that the run of fish in July was very great are pointed to as evidences that the supply of salmon in the river is not becoming exhausted. To achieve this result a greater number of boats, larger nets and more assiduous fishing were necessary, and it is pretty certain that the proportion of salmon running in April, May and June, the ones which go to the headwaters and become the chief propagators, that escaped the miles of meshes spread for them, was very small….[I]n spite of the increase in the size of nets, the number of boats and the skill of the fishermen, the average caught by each boat has largely decreased."[10]

A frontier society did not willingly forego opportunities for economic gain.[11] Psychologically, it rested on the premise that there was plenty of everything.

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[8] quoted in, Mudd, Roger, "There Isn't Any Such Thing as the Past," *American Heritage*, February-March 1999.

[9] Rodgers, William H. Jr., *Scales of Justice: Salmon, Indians, Property, Law and Evolutionary History on the Columbia River*, unpublished m.s. (1999).

[10] *West Shore Magazine* in Gates, Charles Marvin, ed., *Readings in Pacific History*, University Bookstore (1941).

[11] And, in general, it saw no need to conserve. "For most of the nineteenth century . . . [l]ooking upon our [natural] wealth, we found it obviously 'inexhaustible'—the adjective appears ritually in public and private documents—and drew the conclusion that we should press our present ambitions by whatever seemed the

The goal was amassing golden eggs, not preserving the goose that laid them. Politicians shared this attitude, and seldom interfered with their constituents' exploitation of natural resources. "[I]n Western affairs, business and government were interdependent and symbiotic, and only a pathologically subtle mind could find a line dividing them," the Western historian Patricia Nelson Limerick has written. "It does not take much exposure to Western political history to lead one to a basic fact: 'conflict of interest' has not always been an issue of political sensitivity."[12]

In the case of salmon, hatcheries let generations of Northwesterners believe that no conflict existed. "[I]n a system where people make gains through trade-offs and accommodation, there need be no agreement on goals for mutually beneficial decisions," political scientist Robert Bish wrote in *Governing Puget Sound* , well before the survival of wild fish became an issue. "Each party needs only to be satisfied that its goals are fostered. For example, there is no reason to expect agreement on goals by power companies and the Department of Fisheries, but they were still able to come to a mutually beneficial accommodation with the power company financing fish hatcheries to replace natural runs lost from the construction of power-producing dams."[13]

Today, true believers in hatcheries must ignore both experience and evidence. Three generations ago they needed only the technological optimism of their time. Americans of the late 19th and early 20th centuries believed in scientific and technological progress—without needing to know a lot about science, and without any ambivalence about technology's darker side.[14] Many presumed that human beings could produce salmon much more efficiently than nature could.

Their faith in human ingenuity was characteristic of their time—and very convenient. The 19th-century magazine writer who cast a skeptical eye on claims that overfishing had not diminished the Columbia River's salmon runs concluded, "All these things point to the necessity of a propagating establishment."[15] In other words, people had to do *something*, but they did not have to stop fishing.

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quickest route." Hurst , James Willard, *Law and the Conditions of Freedom in the Nineteenth-Century United States*, University of Wisconsin Press (1956).

[12] Limerick, Patricia Nelson, *The Legacy of Conquest*, Washington Sea Grant (1982).

[13] Bish, Robert L., *Governing Puget Sound*, Washington Sea Grant (1982).

[14] Technological optimism was part of a broader faith in human progress and a broader failure to recognize limits. "[T]he much too simple and absolute, overoptimistic, late-nineteenth-century liberal theory of progress greatly exaggerated the power or ability of the best intellectual and spiritual achievements to control the actual conduct and course of practical affairs." Taylor, Overton H., *A History of Economic Thought*, McGraw-Hill (1960).

[15] Gates, *op. cit.*

Laws to Protect Salmon

Nineteenth-century Northwesterners may have nurtured illusions about fishing, but they knew from experience that if one blocked rivers and streams, salmon disappeared. The Oregon territorial constitution of 1848 stated explicitly that "river and streams…in which salmon are found or to which they resort shall not be obstructed by dams or otherwise, unless such dams or obstructions are so constructed as to allow salmon to pass freely up and down such rivers and streams."[16] The first Washington state legislature forbade anyone to block salmon passage up a river or stream.[17] However, Lichatowich writes, "these laws—like most laws intended to protect salmon habitat—were poorly enforced."[18]

Before long the state actually created a legal fiction in order to circumvent its laws to protect salmon streams. In 1912, a Canadian-born entrepreneur named Thomas Aldwell used money from a Chicago investment bank to build a dam across the Elwha River—which contained populations of virtually all salmon species, including 100-pound chinook and biennial runs of up to 275,000 pinks. Aldwell felt he could turn a profit by building a supply of electric power for local markets that did not yet exist. Built without fish passage of any kind, the dam blatantly violated state law. It also violated some principles of engineering, and it soon blew out. It was quickly rebuilt, again without the required fish passage.[19] Rather than enforce the law, state fish commissioner Leslie Darwin (who had been appointed by newly-elected Governor Ernest Lister) came up with a solution to Aldwell's potential legal problem: "[In an]August 1913 letter from Darwin to Olympic Power," Bruce Brown writes, "he proposed for the first time that the owners of the dam build a hatchery in lieu of a fishway. While acknowledging that 'no officer of the state has any right to waive one of the state's statutory requirements,' Darwin went on to say that the law could be circumvented if the hatchery physically adjoined the dam, which could then be considered a state obstruction for the taking of eggs to supply the hatchery." (This was, at best, a leap of faith; the value of artificial propagation had not been proven.) In any case, at Darwin's urging Aldwell agreed to donate land for a hatchery and provide $2,500 for its construction. In 1915—well after the fact—Lister persuaded the state legislature to legalize building hatcheries in lieu of fishways. The Elwha hatchery started up in 1915; not surprisingly, it was an utter failure. Seven years later, in 1922, "the Department of fisheries abandoned the Elwha hatchery….A subsequent title search revealed that ownership of the

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[16] cited in Lichatowich, *op. cit.*
[17] *ibid.*
[18] *ibid.*
[19] Brown, Bruce, Mount*ain in the Clouds*, Collier Books, 1982

hatchery site had never actually been transferred to the state."[20] The whole thing was a sham, from beginning to end. The Department of Fisheries not only found a way to keep from enforcing the law; it did not even enforce the terms of its own contractual agreement. ("In 1971 the Department of Fisheries calculated that the loss of the Elwha salmon runs had cost the people of Washington $500,000 annually," with nothing of value in return. In today's dollars the figure would be roughly $2 million per year, for 87 years. If compounded at even a modest rate of annual interest, it would make quite a prodigious sum.)[21]

This sham set a precedent. "When the fish agencies started accepting money in lieu of habitat," they developed a vested interest in business as usual, Lichatowich says. "As long as water flowed downhill and turned turbines, the agencies got their checks. It didn't matter whether they produced any salmon or not."[22] Accordingly, in spite of the dismal history, until very recently the Department of Fisheries' reliance on hatcheries was waxing, rather than waning. Washington has thrown a great deal of good money after bad in an attempt to avoid dealing with habitat decline and overfishing. "The extreme example of a recently expanded stocking program may be Washington State," Ray White and colleagues have written. "In 1960, state and federal hatcheries in Washington stocked less than .5 million kg of salmon in addition to an unknown weight of steelhead and other trout….In 1990, 121 state, federal and tribal fish hatcheries and over 140 smaller satellite and volunteer-operated facilities in Washington released…4.67 million kg. Despite, and perhaps partly because of, such substantial annual stocking in Washington, and other large programs in Oregon and Idaho, the salmon declines continued."[23]

By this time, some people have acknowledged that hatcheries have helped cause the decline of wild salmon runs. "[I]t is clear," the authors of *Upstream* observe, "that hatcheries have caused biological and social problems."[24] If released into a stream with naturally spawning wild fish, hatchery fish compete with the wild fish for a limited food supply. They also may compete for food in the ocean. If significantly larger than wild salmon fry when they are released, the hatchery fish actually devour the wild fish.[25] They can spread disease to the wild population.[26] They can interbreed with wild fish and alter the natural gene pool.

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[20] *ibid.*
[21] *ibid.*
[22] Lichatowich, personal communication.
[23] White, Ray J., *et. al., Better Rules for Fish Stocking in Aquatic Resource Management.* American Fisheries Society Symposium 15:527-547 (1995).
[24] Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, *op. cit.*
[25] "[H]atchery-reared salmon are often more aggressive (and larger) than their wild counterparts….Efforts to use hatchery-produced underyearling coho salmon to rebuild populations in Oregon had the worst possible result….The hatchery fish displaced the wild coho that were in the streams." *ibid.*
[26] "Disease is thought to be directly or indirectly responsible for substantial post-release mortality of hatchery fish….[T]here is little evidence of transmission of disease from infected hatchery fish to naturally

As the authors of *Upstream* write, "many local breeding populations have been swamped by introgression from hatchery salmon, the original local breeding population having been replaced by genetic material from straying hatchery fish."[27]

Finally, they put pressure on fishery managers to let fishers deplete wild salmon runs. If a relatively large hatchery run mingles with a relatively small wild run, and people are allowed to catch a reasonable percentage of the hatchery fish, they likely will catch an unreasonable percentage of the wild ones. "If fishing responds to apparent abundance without consideration of the stock composition (i.e., the mixture of portions of stock from source populations) or if fishing levels are based on hatchery production, the natural population will be overfished and its production will, on the average, decline."[28]

The misplaced faith in fish hatcheries has not only helped justify the destruction of wild runs by dams built for other purposes; it also has justified blocking of fish passage by the hatcheries themselves. "[A] common practice at many fish hatcheries has been to block upstream migration at or near the hatchery to aid in collecting returning adults or to isolate adults, possibly carrying diseases, from the hatchery's water supply."[29]

The handwriting appeared on the wall fairly early, but most decision makers chose to ignore it. In 1917, John N. Cobb, who would soon become the first director of the University of Washington's college of fisheries, described "an almost idolatrous faith in the efficacy of artificial culture of fish for replenishing the ravages of man," and warned that "nothing has done more harm than the prevalence of such an idea."[30]

But the faith has persisted. Seventy-seven years later, University of Washington fisheries and zoology professor James R. Karr wrote, "Worst of all, hatcheries lull people into thinking that the causes of fishery declines have been 'fixed' when, in fact, they have not. Yet the public pressure to maintain hatcheries persists."[31]

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reproduced fish….However, there has not been much research on this question, and most disease-related losses in natural environments would probably go undetected." *ibid.*

[27] *ibid*.
[28] "The result of regulating fishing on a metapopulation basis and ignoring the reproductive units that make up a metapopulation is the disappearance or extirpation of some of the local breeding populations and the eventual collapse of the metapopulation's production." *ibid*.
[29] Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, *op. cit.*
[30] quoted in White, Ray J., *et. al.*, *op. cit.*
[31] Karr, James R., "Restoring Wild Salmon: We Must Do Better," *illahee* 10:4 (winter, 1994).

It has persisted for a reason. Fish culture was never simply a technology. In a society that has wanted to avoid making choices, hatcheries have been the key to avoidance. "Fish culture became the only way that western fish and game commissions saw to override the onslaught of overharvest and habitat degradation," Lichatowich has written. "Hatcheries offered a ready alternative to strict regulations and an easy way to avoid confrontation with irrigators, timber companies and polluters."[32] Fish culture fit into a regional world view. "Hatcheries supported [the 19th-century] development ideology," Lichatowich says. He suggests that they still have an ideological basis—and he cites physicist Freeman Dyson's idea that if a technology is ideologically driven, it is not allowed to fail because "if the ideologically-driven technology fails, then it calls into question the ideology. That's sort of the root" of our ingrained faith in hatcheries.[33]

Dams, Electric Power, and Political Power

For many years, dam-building—which symbolized progress in the Pacific Northwest—did not even need the fig leaf of hatcheries to violate laws that were supposed to protect salmon. The Elwha dams were not unique. In 1901, the city of Seattle dammed the Cedar River and diverted water through wooden pipes to supply its growing population. Water supply dams for other cities and dams built to produce hydroelectric power blocked salmon spawning runs in clear violation of the law. Some dams did bring safe water supplies to the cities and electric light to people who had read by coal oil lamps, but they also brought death to entire salmon runs—often because it was easier and cheaper to ignore the law than to try saving fish.

Without even a gesture toward the law, the city of Tacoma's Cushman power dams blocked the whole north fork of the Skokomish River and deprived the lower mainstem Skokomish of roughly half its natural flow. "The [Cushman] Project destroyed the salmon and steelhead productivity of what the Washington Department of Fisheries called 'among the most important and valuable food salmon spawning streams in the State of Washington.'"[34] Tacoma obtained a federal license to flood 8.8 acres of federal land. It then "used the license as a pretext to build unlicensed, unregulated hydroelectric facilities, including two dams, two reservoirs, diversion works, two power houses, transmission lines, and appurtenances; to flood 30-plus acres of federal land within a total project

[32] Lichatowich, personal communication.
[33] *ibid.*
[34] brief of Skokomish Indian Tribe, Skokomish Indian Tribe v. Tom Fitzsimmons *et. al.*, No. 23367-3-II, Court of Appeals, Division II, State of Washington (October 12, 1998).

area of about 4700 acres; and to divert the entire North Fork Skokomish River from its watershed."[35]

This formed part of a pattern. "[D]uring the 1930s and 1940s the public power interests turned against their former allies in the fishing industry and sought to avoid all laws for the protection of salmon," Brown writes. "Tacoma City Light led the way in 1926 when it built Cushman Dam on the Skokomish River without fish ladders or a hatchery. Milo Bell, retired professor of fisheries at the University of Washington, recalled that 'the Department [of Fisheries] tried for years and could never get anywhere with Tacoma City Light. They wouldn't even meet with us.'"[36] Yet the department did not try to block construction of the dam and never took legal action against Tacoma.

Large concrete power dams were the exception. Most of the damage was done by more modest structures. Lichatowich has written, "even before the 1930s [when the first big dams were built on the Columbia River], hundreds of smaller dams were built for municipal water supplies, stock watering, irrigation, placer mining and power generation. Like their large counterparts, these small dams also prevented salmon from reaching spawning areas, flooded upstream habitat and degraded salmon habitat downstream by altering flow patterns."[37] Despite the laws against blocking fish passage, timber companies in the late 19th and early 20th centuries routinely built destructive "splash dams" that stored water to float logs down small streams. "On northern Puget Sound…reliance was placed on river drives [of logs] until well into the twentieth century," forest historian Robert Ficken has written. "Logs were gathered in booms to await the production of high water by nature or by specially built splash dams."[38] The water "would be released suddenly to 'flash-float' logs down the river," according to a description of one dam. The dams kept fish from getting upstream. Worse, they destroyed habitat and disrupted spawning for miles below. "The sudden wall of water and logs crashing downstream was like a spring freshet occurring several times during the spawning and incubation periods. The salmon didn't stand a chance of spawning effectively, for they were carried downstream with the flood each time it was released. In between floods the stream bed was nearly dry and in the winter the eggs were exposed and frozen."[39]

Of course, this happened many years ago. But the philosopher George Santayana said, "those who cannot remember the past are condemned to repeat

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[35] *ibid.*
[36] Brown, *op. cit.*
[37] Lichatowich, *op. cit.*
[38] Ficken, Robert, *This Forested Land*, University of Washington Press (1987).
[39] International Pacific Salmon Fisheries Commission, *Salute to the Sockeye* (1958).

it."[40] In our treatment of wild salmon, we have been repeating it, one way or another, for generations. Now, with fish runs on the brink of extinction, we must decide whether or not to break the cycle. As a first step, we must see why our efforts to date have failed.

WHERE WE STAND

A Critique of Salmon Protection Efforts

The government does not enforce laws to protect salmon habitat

Even at the turn of the century, people knew that the laws were not being enforced. Little was done about it. "In 1899, the U.S. fish commissioner's report to Congress noted that 'in Washington, while the throwing of sawdust into streams is prohibited, it is reported that the regulations have not been well enforced,'" Bruce Brown writes in *Mountain in the Clouds*. "The same report was appalled that laws regulating the commercial salmon fishing seasons were not enforced outside southern Puget Sound in the vicinity of the state capital. One early state fish commissioner even issued a public mea culpa for the non-enforcement of laws to protect the salmon. In 1911, a disgusted British Columbia commissioner of fisheries described Washington fishery law as simply a 'dead letter.'"[41]

People for Puget Sound reported in 1993 that in the two previous fiscal years, "Ecology applied formal enforcement about 15 percent of the time….Penalties were assessed on approximately 6% of these violations in 1991 and on 5% in 1992. Even if penalties were assessed at twice the rate of this estimate, the current enforcement system does not appear to provide a strong incentive for compliance."[42]

For two decades, the Department of Ecology simply refused to restrain egregious violations of the federal Clean Water Act by dairies. The Environmental Protection Agency was aware of this non-enforcement, but did nothing. In sworn testimony before a federal court, DOE regional water quality manager Robert Barwin was asked recently, "the amendments to the Clean Water Act in

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[40] Santayana, George, *The Life of Reason*, cited in *Bartlett's Familiar Quotations*, Little, Brown & Co. (1992).
[41] Brown, *op. cit.*
[42] People for Puget Sound, "An Analysis of the Department of Ecology's Water Quality Enforcement Program: Conclusions and Recommendations" (December 20, 1993).

1977…defined concentrated animal feeding operations as point sources, didn't [they]?"

"Yes, [they] did."

"And point sources are required to have NPDES [National Pollution Discharge Elimination System] permits, aren't they?"

"Yes, they are."

"[But] some 20 years [elapsed] after the law went into effect before Mr. Hosma's facility, which had been operating that entire period of time, obtained a permit; isn't that correct?"

"That's correct," the witness agreed. Later, the judge asked, "you had the ability to issue individual permits, didn't you?"

"Yes."

"And you had the obligation to, in fact, when there were discharges, didn't you?"

"Yes."

"And you didn't do that, did you?"

"No…"[43]

The testimony is unambiguous.

Even when permits are required, the state does a poor job of applying the law. *Toxic Soup*, a 1996 study of industrial water pollution in Puget Sound, found that, "Permit limits for given pollutants are inadequate and outdated," and that the "use of dilution zones [mixing zones around the point of discharge] is inappropriate….The combination of basing permits on inadequate limits and allowing dilution zones…prevents these toxic discharges from being considered a problem."[44]

Enforcement is not an end in itself. Government may accomplish more by helping citizens, businesses, dairies, and other parties to solve problems than by treating them as antagonists. Officials should not be indifferent to the risk of, for example, forcing farmers out of business. If western Washington farms disappear, they will probably not be replaced by anything more environmentally benign. But executive agencies have no authority to ignore the law. Through non-enforcement, government not only fails to protect the resource, it also misleads the public—which assumes the resource is being protected—and in effect penalizes all the citizens and businesses that obey the law.

In one Puget Sound county, for example, a series of housing developers preserved the required buffer along a small non-fish-bearing stream that flows into a lake, which in turn feeds a chinook stream. But then another developer,

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[43] *Community Association for the Restoration of the Environment v. Henry Hosma Dairy et. al.*, CY-98-3011-EFS (Eastern District, Washington, 1999).

[44] People for Puget Sound, "Toxic Soup" (December 1996).

acting as property manager for an elderly absentee owner, cleared, filled and leveled the wetland in which the stream naturally rose. He subsequently acquired the property and now intends to build a road and houses on it. County government has taken no action against him, so the conscientious behavior of neighboring developers and property owners has been largely in vain. "I thought the salmon rules would protect it more," an indignant neighbor says. "The rules are not protecting anything."[45] The situation "typifies and exemplifies everything that is not working," says a county watershed steward who monitored the wetland for three years. "The big guys get away with bloody murder and the little guys stand in line to get a permit." He says, "it's all about money . . . and a lack of respect for the public trust."[46]

Under the state's widely violated hydraulics code, anyone who performs work that will "use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state,' must "secure the approval of the department as to the adequacy of the means proposed for the protection of fish life."[47] In other words, one must get a hydraulics permit from the Department of Fish and Wildlife. That's the law. If anyone installs a dam or even a culvert that blocks fish without including an approved, effective fishway—or building and providing the money to operate a hatchery—the Department of Fish and Wildlife can order him to remove the obstacle or install a fishway. If he refuses, the department may destroy the obstruction as a nuisance or may remove or replace it at the owner's expense.[48] But the law is rarely enforced. Much of the public does not even know it exists. And government itself has violated the law thousands of times, often by not providing adequate fish passage when it builds roads.

In all too many places wild fish cannot get past the state's own highway culverts. In a recent study of Washington State's Hydraulic Code, the Center for Natural Resource Policy concluded that "the Department [of Fish and Wildlife] places a low priority on implementing the Hydraulic Project Approval [HPA] process and its enforcement…[which] contributes to the demise of our salmon and steelhead resources."[49] The report continues,

> *There are potentially thousands of impassable fish blocking culverts in Washington State. These impassable culverts affect hundreds of miles of fish habitat and the production of tens of thousands of salmon and steelhead. In addition, these barriers affect the lives and livelihoods of thousands of commercial*

[45] Personal conversation. The source, a public employee, asked to remain anonymous, to avoid retribution.
[46] *ibid.*
[47] RCW 75.20.100.
[48] RCW 75.20.060.
[49] Center for Natural Resource Policy, *Critique of the State's Hydraulics Code*, June 1999.

> *and recreational fishers throughout the State. Unfortunately, the legislature does not fully fund nor does the Department place a high priority in its funding and enforcement authorities to the HPA process….*
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> *The Department of Fish and Wildlife has statutory and common law authorities to hold those that own impassable culverts both civil and criminally liable. However, the Department has negligibly used these authorities. Ideally, the strategy to comprehensively address fish passage problems throughout the state should include an aggressive enforcement and compliance program by the Department. In addition, the Department should discontinue issuing HPAs for road culverts in areas that have listed fish species, at least to the extent to those individuals that still own impassable fish blocking culverts. However, it is unlikely the Department will alter its approach of "idly sitting by" while thousands of culverts illegally prevent salmon from reaching their historic spawning and rearing habitats. The only feasible recourse may lie with various interest groups or members of the general public to hold the agency or those that own impassable culverts accountable*[50].

In short, as local, county, and state road builders routinely violate state law by blocking fish passage, the Department of Fish and Wildlife takes little or no initiative to protect the fish. The state legislature compounds the problem. "[T]he legislature does not fully fund nor does the Department place a high priority in its funding and enforcement authorities [on] the HPA process."[51] At the current levels of funding and commitment, the Department predicts "it will take over 75 years just to inventory all the fish blocking culverts statewide."[52]

Salmon need water; the state fails to provide it or protect it

The Department of Fish and Wildlife may object to applications for permission to divert water, if the diversions will reduce the flow below the level that salmon need. (The Department of Ecology is the agency that actually grants the permits for water diversions.) Even on the west side of the Cascades, water withdrawals threaten salmon. "We are going to see that inadequate flow is one of the so-called 'limiting factors' preventing the recovery of salmon," water rights attorney Rachael Paschal explains. "There are times of the year, some years, when there's not enough." While many people in the rainy Puget Sound basin may doubt this, "the utilities are very worried."[53] Nevertheless, objecting to new diversions has become almost a moot point; the state already has granted approximately

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[50] *ibid.*
[51] *ibid.*
[52] *ibid.*
[53] Paschal, Rachael, personal communication

225,000 water rights and claims. In many cases, people have rights to withdraw more water from a river than the river contains. Virtually none of the rights was granted with any consideration of in-stream flow.[54] The state failed to protect in-stream flows prior to granting water rights, then the state supreme court ruled that current statutes prevent the Department of Ecology from enforcing in-stream flow requirements on the water it has given away. The legislature can remedy that situation, but shows no inclination to do so.[55]

Individuals, farmers, and corporations have rights to withdraw only specified amounts of water--theoretically. If they do not put the water to "beneficial use" within any five-year periods, they lose their rights--theoretically. Are people withdrawing more water than they are entitled to take? Have they let their rights lapse? No one knows—because no one has collected even minimal information. People have not been forced to meter their withdrawals, and they have not done so. Requirements for metering have been largely ignored by water users, and almost entirely unenforced.[56] The entire state has only an estimated .25 FTE people devoted to water rights enforcement.[57] On February 11, 2000, a Thurston County Superior Court judge ruled that by not requiring water users to meter withdrawals, the DOE had been violating the law since 1993.[58]

Ecology is not the only agency that does less than the law allows. Existing statutes permit the Department of Fish and Wildlife to shut down unscreened water diversions, which direct salmon into irrigation ditches, where they die.[59] The Department virtually never does.

Why do state agencies do so little to enforce the laws? One reason—hardly the whole story but not just a self-serving alibi--is that they lack resources. WDFW does not have enough trained people on its staff to write hydraulic permits that will protect anadromous fish.[60] And it has not always received much support

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[54] *ibid.*
[55] *ibid.*
[56] This is not a trivial problem. Experience in Oregon suggests that stopping illegal water withdrawals can lead to major habitat improvements. Several years ago, WaterWatch of Oregon started trying to identify water from the Wood River that was being wasted and to see if that water could be returned to the stream. WaterWatch found that waste was a secondary problem; so much water was being stolen—because no one metered withdrawals or enforced the law—that stream flows would increase significantly if water users simply stopped stealing. In 1997, pressured by WaterWatch, the state ordered all irrigators to install control structures. Water theft has stopped, restoring 15 million gallons a day—10 percent of the upper Wood River's natural flow. Benson, Reed, executive director of WaterWatch of Oregon, personal communication.
[57] Some people estimate the number as high as 1. Paschal.
[58] see Ashton, Linda, "State told to keep track of water withdrawals," *Seattle Post-Intelligencer*, February 17, 2000, B1.
[59] RCW 75.20,040.
[60] Wright, Sam, personal communication.

from the society it is supposed to serve. The state Department of Fisheries observed long ago that, "A reoccurring problem is the attitude of the local courts when the Department attempts to prosecute a hydraulic violation. Convictions are rarely obtained and when favorable judgements do occur the penalties are usually so low that they provide little if any deterrent to future violations."[61]

Politics work against enforcement, too. Former director of Fish and Wildlife Bern Shanks said that every time his agency tried to enforce the hydraulics code, it received a call from the state legislature.[62] In his federal court testimony about the Department of Ecology's failure to enforce the Clean Water Act against dairies, DOE official Robert Barwin was asked, "Was the legislature trying to direct how the agency was enforcing or implementing the Clean Water Act?" Barwin answered, "Yes." He was then asked if his agency was "receiving pressure."

"I think that it was, yes."

"And what evidence do you have for that?"

"At the last…of five public hearings on what was then the draft NPDES permit [covering the entire dairy industry]…several legislators got up and testified in essence that…our budget was perhaps in danger if we moved forward without clear legislative direction to do so."[63]

In plain language, the legislators said that if the department enforced the law, the legislature would cut its funding.

The influence of politics is nothing new. Early in the century, it played an important part in the state's response to the illegal building of the Elwha dam. The state was prepared to threaten a smaller business venture with no political clout for a similar transgression. "[W]riting to the bankrupt owner of a small mill dam on a tributary of the Elwha, [state fish commissioner Leslie] Darwin put the matter bluntly," Bruce Brown explains: "'Unless the dam is immediately equipped with a fishway in accordance with [the law], we shall have to proceed under statute to blow it out.'[64] "Regarding the much larger and more damaging…dam on the mainstem Elwha, however," Brown continues, "Darwin found the situation 'perplexing.' Although the dam, which was being rebuilt, still lacked fishways, Darwin never seems to have considered applying the law with the same rigor as in the case of the small mill dam on the nearby Elwha tributary. The [dam's] influential…backers (among them banker Joshua Green)

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[61] Washington Department of Fisheries, *op. cit*.
[62] Fletcher, Kathy, executive director, People for Puget Sound, personal communication.
[63] *Community Association for the Restoration of the Environment v. Henry Hosma Dairy et. al*.
[64] Brown, *op. cit*.

and the governor's own infatuation with hydroelectric power …encouraged Darwin to attempt a more exotic solution."[65]

Political influence has hampered enforcement at the county level as well. A landowner, a former King County official, created an industrial staging area on agriculturally zoned land in eastern King County, beside a small fish-bearing stream. Companies with building projects in the area have parked trucks and heavy equipment and stored supplies there. Although the county's sensitive areas ordinance requires a 100-foot setback, trucks and equipment park within ten feet of the stream. Diesel fuel and asphalt have been stored within the 100-foot riparian buffer zone. A diesel spill reached the stream. The offences were reported to county government, but the sensitive areas ordinance is still being violated in clear sight of the county road.[66]

The same land owner "was issued a permit by WDFW to dredge [the] salmon bearing stream during spawning season," Washington Trout reported. The agency's "rationale for the dredging was 'it was an emergency to help fish passage' yet…the Department allowed the same developer to block fish passage on another stream a quarter mile away. In cases like this it appears that the Department is handing out [hydraulic permits] solely to assist developers in meeting their objectives with little regard for state law, or the needs of fish."[67]

In fairness to the DOE and other agencies, they might enforce the law more zealously if legislators gave them not only more encouragement but also more money. This year, the state legislature did give the DOE's Water Resources Program four more enforcement employees, tripling the number of people DOE had available to enforce water laws. Perhaps not just coincidentally, DOE has subsequently filed two enforcement actions and is trying to levy $59,000 in fines against two allegedly illegal water users in eastern Washington.[68] It has also issued a highly publicized cease and desist order against the Willows Run golf course, partly owned by Paul Allen, which had pumped water from the Sammamish River to irrigate its grass.[69]

Despite recent good examples, institutional culture has not encouraged people to buck political pressures. No one wants to be the "bad cop." More than one-third of the state Department of Ecology personnel who responded to a 1994 survey

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[65] *ibid*.
[66] Washington Trout, "Salmon Habitat Protection in King County is Failing."
[67] Washington Trout, "Washington Department of Fish and Wildlife's HPA Process Fails to Protect Salmon Habitat."
[68] Caldwell, Rob, Center for Environmental Law & Policy, personal communication.
[69] Sorenson, Eric, "Willow Run Fighting For Water Rights," *The Seattle Times* (August 21, 1999) A1. "'Ecology is starting to realize that enforcing the water code is a very important component to the recovery of salmon,' [Rob Caldwell, executive director of the Center for Environmental Law & Policy] said." *ibid*.

said that management did not support enforcement. One-half said there was a lack of clear direction or agreement on the role enforcement plays at Ecology.[70]

Some people assume that the laws are enforced more vigorously in the national forests, where a great deal of the best remaining spawning habitat lies, ostensibly protected by federal statutes that include the National Forest Management Act and the Northwest Forest Plan. But the Forest Service has a history of regarding itself primarily as a timber producer, so it commonly fails to enforce environmental requirements for timber sales.[71] In an audit of environmental requirements for twelve sales outside the Northwest, the US Department of Agriculture's inspector general concluded recently that the "Forest Service's administrative controls over the preparation of environmental documents and implementation of mitigation measures applicable to timber sales have not been effective….The Forest Service could not ensure the integrity of its environmental decisions and the supporting environmental assessments."[72]

Government asks the wrong questions

When the state assesses water quality, it measures chemical purity rather than biological health. The Clean Water Act explicitly calls for protecting the "biological integrity" of the nation's waters,[73] and calls for "an analysis of the extent to which all navigable waters of each state provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife." Yet most states approach water quality as if chemical purity were the only goal. As James Karr has written, "Current programs are not protecting rivers or their biological resources because the Clean Water Act has been implemented as if crystal clear distilled water running down concrete conduits were enough."[74] In 1990, the EPA told the states to develop biological standards. Generally, they have failed to do so; Washington has been particularly recalcitrant.[75]

And yet, as Karr has written, "The status of living systems provides the most direct and most effective measure of the condition of water bodies and, thus, the information critical to charting a course for federal and state programs to protect the economic and ecological interests of society."[76] But the truth could be

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[70] "Enforcement survey results tallied," *Ecology Today* (May 1994).
[71] On August 2, 1999, US District Court Judge William Dwyer held that the US Forest Service and Bureau of Land Management have failed to survey threatened plants and wildlife prior to timber sales, as required by and agreed to in the Northwest Forest Plan.
[72] U.S. Department of Agriculture, Office of Inspector General, "Forest Service Timber Sale Environmental Analysis Requirements" (January 1999).
[73] 33 U.S.C. sec. 1251.
[74] Karr, James,
[75] Karr, James, personal communication.
[76] Karr, James, "Clean Water Is Not Enough," *illahee*, Spring-Summer 1995

inconvenient: "When compared with strictly chemical assessments of water resources," Karr writes, "assessments using biological criteria typically double the proportion of stream miles that violate water quality standards."[77]

However much money we spend to save Puget Sound's wild salmon, if we do not spend some of it on biological monitoring, we will not know whether or not any given stream provides the biological foundation for a healthy salmon population. "We cannot predict which other organisms are critical to the persistence of commercial or otherwise desired species," Karr has written. "Failing to protect phytoplankton, zooplankton, insects, higher plants, bacteria, or fungi ignores the key contributions of these taxa to fully functioning, healthy biotic communities."[78]

Without biological monitoring, even if we know that a salmon population is in trouble, we may not know why. People who want to log or build in the watershed can blame harvest as the problem. People who want to fish can point to habitat degradation. Government cannot decide rationally where to focus its attention.

Government may not want to know the truth of the biological condition of rivers and streams. Public Employees for Environmental Responsibility assert, "The fact that using biological criteria will reveal more water quality problems than previously reported explains why biological integrity indicators [have not been] used."[79]

Government does not consider cumulative impacts

In general, we view the impact of each development project in isolation. By applying technological standards to pollution control, we have inevitably narrowed our focus. The Clean Water Act was designed primarily to deal with point sources of pollution—i.e., pipes that lead into the water from industrial or municipal sewage plants. It requires National Pollution Discharge Elimination System permits for major point sources.[80] It does not require permits for "non-point" sources—the kinds of generalized impacts that stem from suburban development, farming, or logging. Yet the cumulative effects of non-point sources pose the major problem in spawning streams and many larger channels.

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[77] *ibid.*
[78] *ibid.*
[79] Public Employees for Environmental Responsibility, *Murky Waters: Official Water Quality Reports Are All Wet* (May 1999).
[80] 33 U.S.C. sec. 1342.

Non-industrial sources are not untouchable; the state could deal with many of them under existing law. Any pollution—which includes excessive sediment—that flows from a pipe or culvert is effectively a point source, and has been accepted as such by a number of courts. The pipe need not come from a factory or sewage treatment plant. If it drains a development or logging site, it can be regulated as a point source, thus dramatically reducing the challenge of dealing with so-called non-point sources. TMDL standards—the "total maximum daily load" of pollutants for each water body—can also be used to address non-point problems. They provide a mechanism for applying the Clean Water Act to the impacts of logging, farming, suburban development, and urban land-use decisions. But individual states must establish and enforce their own TMDL standards, and the states have been slow to do so. Partly because of this, in 22 states citizen organizations have sued the states and EPA for failuring to enforce the Clean Water Act. So far the citizens are winning, 22-0. Under the terms of an out-of-court settlement and a memorandum of understanding with the EPA, Washington agreed to establish a legal TMDL implementation plan. But instead of moving to comply with the law--and with its commitment to the court--the state has dragged its feet. Legislation that would have funded the application of TMDL standards has failed twice,[81] and EPA has agreed to let the state wait 10 years before it develops standards for logging operations. The wheels of justice grind slowly, if at all.

The state has not dealt well with cumulative effects along its shorelines, either. An international task force has explained that, "In 1972, when the Shoreline Management Act was enacted, docks, piers and bulkheads were considered 'normal, protective and common appurtenances for single family residences' that aroused minimal concern."[82] While any one single-family bulkhead does little harm, in the aggregate they have drastically altered the near-shore environment. But the law provides no way to address their collective impact. "The biggest gap in the current regulatory system is that it does not allow for consideration of the cumulative effects of individual development projects. It encourages development associated with single-family homes….Shoreline regulations at all levels of government are out of date and do not reflect our current understanding of marine resources and the effects of development."[83] Because the act is applied locally by dozens of municipalities and tribes, the approach is piecemeal. No single jurisdiction is in a position to tackle the problem.

The US Army Corps of Engineers has authority to consider cumulative impacts when it issues permits, but the Corps lacks the will to use it: "Under the federal

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[81] Bell, Nina, Northwest Environmental Advocates, personal communication.
[82] Broadhurst, Ginny, *Puget Sound Nearshore Habitat Regulatory Perspective: A Review of Issues and Obstacles*, Puget Sound/Georgia Basin International Task Force, March 1998.
[83] *ibid*., executive summary.

Clean Water Act and the National Environmental Policy Act (NEPA), the Corps has the authority and, in fact, the responsibility to consider cumulative impacts of specific activities to the environment. As a practical matter, however, Corps staff say that they do not have the time or funding to take on such a project."[84]

The Corps is not alone. "[M]ost laws require regulators to consider cumulative impacts in permitting decisions," the Washington Nearshore Habitat Loss Work Group noted, but "in actual practice, these programs usually continue to review only the immediate and direct impacts of a narrow range of activities."[85]

In the national forests, the inspector general found that, "Cumulative effects analyses for 10 of 12 environmental assessments reviewed were either incomplete or not performed….[S]ome Forest Service personnel believed that if the public did not raise an issue involving a specific resource, it need not be analyzed in the environmental assessment."[86]

Government does not insist on means that will enable lead to its stated ends

Government often condones or requires actions that are ineffective or counter-productive. For instance, the Department of Fish and Wildlife issued a permit for a sediment retention pond in eastern King County, designed to minimize the impacts of construction on a small fish-bearing stream. The design was fatally flawed, with the stream perched on an unstable bank above the pond. Predictably, when winter storms came the bank collapsed, the stream flowed into and through the pond, and the sediment problem was compounded.[87]

As required by the Growth Management Act (GMA), every county on Puget Sound has adopted a sensitive areas ordinance.[88] The GMA also requires counties and cities to "include the best available science in development policies and development regulations to protect the functions and values of critical areas."[89] If any one wants to destroy wetlands, critical areas ordinances require "mitigation". The more valuable the wetlands, the more habitat the developer must create elsewhere. That costs money. But in the case of Class I and II

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[84] *ibid.*
[85] Lynn, Bryan, Washington Nearshore Habitat Loss Work Group, "Nearshore Habitat in Puget Sound: Recommendations for Improved Management," Puget Sound/Georgia Basin International Task Force (November 1998).
[86] U.S. Department of Agriculture, *op. cit.*
[87] Washington Trout, "Washington Department of Fish and Wildlife's HPA Process Fails to Protect Salmon Habitat."
[88] RCW 36.70A.170 (1)(d).
[89] RCW 36.70A.172(1); The statute also requires "special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries." *ibid.*

wetlands it turns out to be essentially futile, because their functions are virtually irreplaceable.[90]

Actually, virtually all mitigation attempts may be futile. A 1998 King County study of 38 mitigation projects found that 97 percent did not work. At 9 sites the required mitigation was never done. At 23 others, the mitigation did not meet the County's performance standards. Five of the six projects that met the standards did not actually replace the *functions* of the wetlands that had been destroyed. If replacing the function of lost wetlands was the criterion, only one of 38 mitigation projects succeeded.[91] A study of *recent* mitigation projects might find a higher success rate. Or it might not. No one knows. We do know that developers have destroyed habitat. We know that some of the same developers have spent money to replace that habitat. And we know that in many cases, they might as well have used their money as part of the fill. It was wasted.

King County's experience with wetlands mitigation has been replicated in other jurisdictions. A federal study of mitigation projects in the Northwest reached similarly dismal conclusions. Researchers from the Environmental Protection Agency and the US Fish and Wildlife Service looked at 17 mitigation sites in the Northwest. "[I]t was not possible to determine whether compliance had been obtained in over half (53%)," they wrote, "whereas 29% of projects were determined to be clearly out of compliance, and 65% were judged not to be functioning well ecologically. Of projects investigated only 18% were judged to be in compliance with regulatory requirements."[92] That of course begs the question of whether the regulatory requirements were adequate in the first place.

The very concept of mitigating wetland loss seems seriously flawed. It reflects an assumption that natural systems can be destroyed with impunity, for financial gain, then recreated in less valuable sites. Some people find that assumption arrogant. James Karr says that mitigation amounts to "a license to kill wetlands," and warns that the idea of mitigation has started appearing in discussions about salmon restoration.[93]

Federal mitigation requirements are not well enforced in national forests, either. The US Department of Agriculture's inspector general found that, "Mitigation measures contained in 10 of the 12 environmental assessments reviewed were not always implemented. In addition, mitigation measures were either omitted

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[90] *WETNET Citizen's Report: Local Wetland Protection in Puget Sound*, December 1994

[91] Mockler, Anna, et. al., King County Department of Development and Environmental Services, *Results of Monitoring King county Wetland and Stream Mitigations* (August 4, 1998).

[92] Linda Storm, U.S. Environmental Protection Agency, Region 10 and Joanne Stellini, U.S. Fish and Wildlife Service, Interagency Follow-Through Investigation of Compensatory Wetland Mitigation Sites (May 1994).

[93] Karr, personal communication.

or incorrectly incorporated into 4 of 12 accompanying timber sale contacts…. Generally, mitigation measures were not implemented because district personnel were not familiar with the measures contained in the environmental documents, did not adequately monitor the actual implementation, or did not compare timber sale contracts with the environmental documents."[94]

Mitigation aside, the federal agency responsible for protecting wetlands--the U.S. Army Corps of Engineers--has done little to stem their disappearance. An up-to-date review of Corps records reveals that the agency has cut inspections for possible violations by 40 percent since 1992. In 1998 it rejected only 3.2 percent of applications for major wetlands projects—while the nation is losing more than 100,000 acres of wetlands annually. Congressional budget freezes have forced cutbacks in wetlands staff, and Corps employees report that they are pressured to process applications faster and avoid costly enforcement efforts.[95]

Government does not monitor enough to make sure that people obey the law, or that efforts to restore natural systems accomplish anything

Without consistent monitoring government cannot measure progress, and therefore does not know whether the accomplishments it claims are real or illusory. The public is fed the impression that the nation's waters are healthier than they used to be, but the quality of monitoring and the lack of honest reporting casts a dark shadow on that presumption: "[N]either the EPA nor its State regulatory partners can produce reliable data that accurately measure water quality trends to support claims that our waters are getting cleaner," charges Public Employees for Environmental Responsibility. "[T]he nation's water quality monitoring and assessment system is badly broken and is not taken seriously by the governmental agencies charged with carrying it out….States…manipulate numbers in order to falsely portray continuing progress in water quality when, in fact, what fragmentary reliable information that exists often suggests the exact opposite….Although requirements for accurately reporting the quality of the nation's waters are quite clear in the legislative and regulatory framework, EPA simply does not enforce these requirements."[96]

The report singles Washington out for special notice. "In 1988," it notes, "EPA issued a guidance document suggesting that States could count hundreds of miles of rivers and streams as a single waterbody with a single assessment based

[94] U.S. Department of Agriculture, *op. cit.*
[95] *Boston Globe*, August 8, 1999.

[96] Public Employees for Environmental Responsibility, *op. cit.*

on as little as one sample (and, in some cases, even none)….The State of Washington wins the prize for the largest waterbody, reporting a river more than 3,900 miles long (with no monitoring data whatsoever associated with it) and 30 water bodies each more than 1,000 miles long….[T]he State of Washington [Index of Watershed Indicators—IWI] shows only 14 of its 73 watersheds not meeting the data sufficiency threshold, when the National Assessment Database, upon which the State IWI is largely based, reveals that Washington used no monitoring data to base findings of more than 28,000 miles being unimpaired and more than 41,000 miles being impaired."[97]

At the local level, virtually no one ever finds out whether the ordinances that should be protecting salmon habitat do any good. It is cheaper—and politically easier—not to know. As of 1994, Puget Sound-area county staff allocated to monitoring wetlands ranged from .005 FTE (Thurston) to 1.5 (Kitsap) with King below the median at .31.[98] The *Citizens' Report on Wetland Protection* observes that, "The only way for a jurisdiction to evaluate the success of mitigation…is to assign staff to monitor permits awarded. Our survey shows that only three jurisdictions have one full time equivalent (FTE) staff or more to monitor wetland projects. In fact, the total reported FTE for monitoring in the twenty-five jurisdictions surveyed is approximately eight."[99]

In general, King County does not even check to see whether people do what they are required to do, much less go back in five years to see whether or not it works. This lack of attention is not limited to wetland mitigation projects. Anyone whose building project will cover more than 5,000 square feet with impervious materials must submit a drainage plan. The county reviews the drainage plans—but it does not inspect projects to see whether the plans are actually carried out.[100]

There is no reason to believe that King County does any worse than its neighbors—or that the federal government does any better. The same EPA and USFWS researchers who found that wetlands mitigation projects had a dismal success rate found that "of the 17 files examined, 5 totally lacked baseline data….Monitoring was required in 53% of the projects….Of these 9 projects monitoring was conducted at only 3 sites."[101] In short, only 18% of the projects had any monitoring at all.

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[97] *ibid.*

[98] *WETNET Citizen's Report.*

[99] *ibid.*

[100] Multiple speakers, meeting to review proposed King County Rural Drainage Package, Vashon Island (July 28, 1999).

[101] Storm, *op. cit.*

Regulators typically lose interest beyond the stage at which a permit is granted. At best, they may check to see if the permitee actually did what he or she was supposed to do. They do not check sites years later. The problem goes beyond enforcing permit conditions. County and state governments allocate little if any money for monitoring. Therefore, they do not have people out in the field looking; they are flying blind and don't know what's going on. Again, the federal government does not set a better example. The same EPA and USFWS researchers observed that "follow-through work has not been an agency priority through allocation of staff or resources at the level necessary to assure that the… benefits are institutionalized."[102]

The recently passed Forests and Fish legislation creates a vast, new unmet need to monitor Washington's rivers and streams. Most environmental groups and many scientists believe the Forests and Fish agreement concluded earlier this year and ratified by the legislature is inadequate—or, at best, that it provides little or no margin of safety.[103] The legislation largely exempts forest practices from environmental laws in exchange for an agreement to modify those practices in ways that give salmon habitat greater protection. But streamside buffers will be less than one-third as wide as those imposed on national forests by the Northwest Forest Plan.[104] Comparing the Forests and Fish buffers to those in a rejected option for the Northwest Forest Plan, a group of 28 independent scientists concluded that "the [Forests and Fish] Report has a low probability of achieving its goals."[105] In theory, that should not matter, because the agreement enshrines the concept of "adaptive management:" scientists are supposed to monitor the new rules' actual impact on salmon populations and recommend changes in the rules as called for. But adaptive management cannot work without years of careful monitoring, and so far, there is neither a mechanism nor

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[102] *ibid.*

[103] "This bill is a sell out to the timber industry, pure and simple." Dave Mann, president, Washington Environmental Council, "Governor Locke Chooses Timber Deal Over Salmon Recovery," Washington Environmental Council (June 7, 1999).

[104] The Northwest Forest Plan requires 330-foot buffers beside year-round, fish-bearing streams. Buffers for similar streams under the Forests and Fish plan are only 100 feet.

[105] "[A]n independent scientific review of one riparian management approach—Option 8 of the Federal Ecosystem Management Team's (FEMAT) Aquatic Conservation Strategy for federal lands—determined that key salmonid species had only a 28% chance (on average) of being well-distributed across federal lands (Sedell et. al. 1993). Option 8 was found to have a low probability of success, in part, because buffers proposed for non fish bearing streams were narrow (i.e. 33-100 feet for typical forest conditions). Assuming that [non-fish-bearing streams under the Forests and Fish plan will have buffers of no more than 50 feet], the Forests and fish Report will provide considerably less protection than Option 8. Since the goals of the Report are to ensure that salmon do not go extinct and that there are harvestable levels of salmon—a higher standard than 'well-distributed'—this would suggest that the Report has a low probability of achieving its goals." Pollock, Michael M., *et. al.*, letter to governor Gary Locke and Commissioner of Public Lands Jennifer Belcher, April 1, 1999.

a funding source for the process.[106] The *Seattle Times* editorialized that the plan will be "an environmental sham if the Legislature fails to pay for the scientific review specified by the legislation."[107] Experience does not inspire confidence that the legislature will provide enough funds over the next five years, much less the next fifty.

No level of government devotes much money or staff to monitoring. Clearly, some individuals and institutions do not want government to know the true state of water quality or water use. And government always has fewer resources than it would need to do all the things that society expects it to do, and monitoring alone does not actually accomplish anything. Even so, without monitoring, no one knows whether or not the laws are being followed, or whether remedial actions taken by government or private actors do any good. As we start to deal with the Puget Sound chinook listing, a lack of monitoring threatens to give us the worst of all possible worlds: we may make large investments in restoring wild salmon runs, sacrifice some profits and amenities, narrow our legal options--and lose wild salmon anyway.

No level of government coordinates management of the many jurisdictions and agencies responsible for protecting salmon at different stages of the fishes' life cycles

"The crux of the fishery management problem…is that a single stock of salmon or steelhead may be harvested in many different fisheries in many different political jurisdictions, all of which may have goals and policies that are not only different, but incompatible."[108] This problem has been recognized but not remedied for generations. "In his State of the Union message for 1908, President Theodore Roosevelt called the nation's attention to…the deplorable state of fishery management in interstate and international waters. He called particular attention to the Columbia River and Puget Sound salmon fisheries. Because the various state legislatures seemed incapable of reaching agreement on regulations that protected both fish and the fishermen, Roosevelt threatened to federalize management….[T]he *Portland Oregonian*…said it would be better to take

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[106] Baldi, Josh, Washington Environmental Council, personal communication; Even if the state did not formally embrace adaptive management, some one would have to monitor the impact of logging on fish-bearing and other streams. "Intensive monitoring is required to enable planning of harvest activities such that the water quality limits are not exceeded or approached so rapidly that there is a danger they would be exceeded before managers could respond. The complexity of the task is multiplied when there are several types of activities going on in the watershed simultaneously." Sample, V. Alaric, "Assessing Cumulative Environmental Impacts: The Case of National Forest Planning," 21 *Environmental Law* 839 (1991).

[107] *Seattle Times*, May 21, 1999.

[108] Salmon and Steelhead Advisory Commission, *A New Management Structure for Anadromous Salmon and Steelhead Resources and Fisheries of the Washington and Columbia River Conservation Areas*. (July 1984).

management responsibility away from the states rather than to let the salmon be destroyed."[109]

Even individual portions of salmon habitat suffer from piecemeal management. A 1998 study prepared for the Puget Sound / Georgia Basin International Task Force observed that, "Above ordinary high-water line, the nearshore area is divided into 12 counties, 34 cities, eight tribal reservations, several federal facilities, and numerous state-owned parks…. Each jurisdiction regulates its piece of Puget Sound shoreline differently ….This piecemeal approach to managing the shoreline does not allow for Puget Sound to be managed as an ecosystem."[110] Addressing the same problem, the Washington Nearshore Habitat Loss Work Group reported in 1998 that coordination and leadership were "overarching needs."[111] It observed that, "There are many agencies and organizations involved in the management and protection of nearshore habitats, yet there is no one leader nor is there a formal structure for coordination."[112]

The three counties around Hood Canal are trying to take a coordinated approach to the endangered species listings. Kitsap County's first big step was establishing 200-foot streamside buffers. The other two counties are contemplating different steps. Mason County imposed 150-foot buffers, then created so many exceptions that the Skokomish tribe has objected. Local politics have so far prevented any real coordination.[113]

Agencies consider fishers, developers, and power companies as their constituents, rather than the fish.

If the short-term interests of traditional "stakeholders" and the long-term interests of wild salmon coincided, there would be no endangered species listing, no sense of crisis. They do not coincide.[114] But salmon do not call their legislators to complain. A desire to please—or at least not antagonize—certain key stakeholders is deeply ingrained in the responsible agencies

Lichatowich says, "When I worked for the state institutions what I heard over and over again was that our constituents were hunters and fishermen." However, he

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[109] Lichatowich, op. cit.
[110] Broadhurst, *op. cit*.
[111] Lynn, *op. cit*.
[112] *ibid*.
[113] Daniels, Betsy, Hood Canal coordinating council, personal communication.
[114] Because they do not, the desire to involve stakeholders in the decision-making process has often compromised salmon management. *Upstream* quotes Sam Wright's observation that, "Fishermen make poor management allies due to their perpetual optimism about strengths of the salmon runs and their understandable preoccupation with short-term economic considerations." Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, *op. cit*.

notes that fishing and hunting license fees contributed only a small percentage of the agency budget, so non-sportsmen, mere taxpaying citizens, paid most of the bills, but were not considered to be constituents.[115]

The Federal Power Commission has been conducting a "relicensing" process for the City of Tacoma's illegal Cushman Dam. The process has dragged on for years. The Skokomish tribe, which has a treaty right to salmon in the Skokomish River, has intervened, and has sued the city for $5.7 billion. The state Department of Ecology has been involved. Ecology told the Federal Power Commission frankly that Cushman relicensing would violate the Coastal Zone Management Act —but in the interests of avoiding delay for Tacoma, Ecology declined to object. Ecology stated that "the project as proposed by Tacoma does not comply with Washington's Coastal Zone Program, and will not be conducted in a manner consistent with the program requirements." Nevertheless, "in order to avoid any additional delay to the licensing of this project, Ecology hereby declines its right to take action under its Coastal Zone Management authority."[116]

Not long ago an engineer received a call from a Washington Department of Fish and Wildlife official soliciting his help for a landowner who was trying to secure Fish and Wildlife approval for a project. The engineer was surprised; he would have expected the landowner himself to call—not a representative of the agency that would subsequently review his work.[117]

The Department of Fish and Wildlife has actually drained wetlands to provide pheasant habitat convenient to Seattle-area hunters.[118]

Salmon are treated as if they were fungible

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[115] Lichatowich, personal communication.

[116] Washington Department of Ecology letter to Federal Energy Regulatory Commission, May 6, 1997, cited in brief of Skokomish Indian Tribe; The Federal Power Act makes dam licensing a federal prerogative, but a state can use its own prerogatives under other federal laws to influence the process—if it wants to. "In ruling that the state could impose minimum flow conditions on a FERC-licensed project, through section 401 of the Clean Water Act, Justice O'Connor's opinion for the [U.S. Supreme] Court referred to an attempted separation of water quantity concerns (as reflected in the FERC licensing process) and water quality concerns (under the Clean Water Act) as an 'artificial distinction.' She noted that '[i]n many cases, water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery.' Advocates of water law reform should adopt Justice O'Connor's holistic view of the water resource and view the FERC relicensing process as a central element in restoring water flows in many Northwest river basins." Blumm, Michael, "Seven Myths of Northwest Water Law and Associated Stories," 26 *Environmental Law* 141, 149 (quoting *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 114 S. Ct. 1900) (1996).

[117] Beardslee, Kurt, Washington Trout, personal communication.

[118] *ibid*.

As a society, our goal has been to put fish in the nets of commercial fishers and on the hooks of sport fishers. Government has tried to distribute the fish among political "constituents." Hatchery fish serve just as well as wild ones for this: a constituent can catch, sell or barbecue one as well as the other. If small wild runs mingle in the Sound or the ocean with larger hatchery runs, the state has often let fishermen take so many hatchery fish that the smaller run of wild fish has been endangered. "Harvest areas are 'zoned' by species for specific wild stock or hatchery fish management emphasis," former Washington Department of Fisheries scientist Sam Wright has written. "What this means is that any commingled wild stock in a hatchery fish management zone will be harvested at the high fishing rate necessary to fully harvest hatchery fish. In virtually all cases, severe overfishing results [on] wild stocks."[119] The state has knowingly sacrificed wild runs. In 1997, the environmental impact statement for the Department of Fish and Wildlife's Wild Salmonid Policy states bluntly that "current fish management plans and practices overfish 89 wild stocks in order to harvest co-mingled hatchery fish at rates that are not sustainable by wild populations."[120]

"Most people do not believe that a fish management agency should condone extinctions or at least not until a formal environmental review process has occurred," Wright has written. "The extinction plans are, unfortunately, working."[121]

Harvest and hatchery problems are not treated as seriously as habitat problems

In the current discussions of saving wild salmon, many people have suggested that harvest is not really much of an issue, and have avoided dealing forthrightly with hatcheries. Environmental groups soft-pedal harvest issues to avoid alienating commercial fishermen or tribes, and to focus attention on the habitat losses that are their traditional concerns. Government takes much the same tack. One high-ranking federal official has described the remaining harvest problems as "a piece of cake." The idea that we can take harvest and hatcheries off the table, Lichatowich suggests, enables fishery management agencies to pretend that *they* are not part of the problem.[122]

There is not much commercial fishing in the Sound any more and Lichatowich says one can argue that harvest is not a problem because "at the [harvest] levels they're talking about, they're only going to catch a few wild fish." But managers

[119] Wright, Sam, "Fishery Management of Wild Pacific Salmon Stocks to Prevent Extinction," *Fisheries*, Vol. 18, No. 5 (May, 1993).
[120] Washington Department of Fish and Wildlife, *Final Environmental Impact Statement for the Wild Salmonid Policy* (September 1997).
[121] Wright, *op. cit.*
[122] Lichatowich, personal communication.

"treat [the incidental wild catch] as though it's a harvestable surplus. That's dumbfounding to me. Where you're down to the last 5%, to talk as if there's a harvestable surplus is just mind-boggling."[123]

The sport catch is not what it used to be, either, but sport fishing for salmon in Puget Sound has long been considered a kind of birthright, and it retains a very vocal constituency. Sport fishing for blackmouth in the Sound has been a particularly hallowed local institution. But sport fishing regulations ignore the fact that "blackmouth" are actually immature chinook, and that when chinook spend years in the Sound, the blackmouth fishery may deplete the migrating salmon population for two years running *before* the fish are ever officially harvested.[124]

WHERE WE MUST GO NEXT

Recommendations

The idea that government does not enforce or even obey its own environmental laws is hardly a revelation, and Puget Sound salmon have not been the only victims. Logging in Northwestern national forests ground to a halt in the early 1990s because a federal court refused to let the federal government keep ignoring a law that protected habitat for the northern spotted owl. "[M]ore is involved here than a simple failure by an agency to comply with its governing statute," Judge William Dwyer wrote. "The most recent violation of the [National Forest Management Act] exemplifies a deliberate and systematic refusal by the Forest Service . . . to comply with the laws protecting wildlife. This is not the doing of scientists, foresters, rangers, and others at the working levels of these agencies. It reflects decisions made by higher authorities in the executive branch of government."[125]

Higher authorities in federal, state and local agencies have made similar decisions about Puget Sound salmon.[126] There are gaps in the law, but most observers think they pose less of a problem than the misinterpretation and non-enforcement of existing laws. William Rodgers argues that the state's hydraulics

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[123] *ibid.*
[124] Wright, personal communication
[125] *Seattle Audubon Society v. Evans*, 771 F.Supp 1081 (W.D. Wash.) (1991).
[126] In fact, they have made such decisions about salmon throughout the Northwest. In the Columbia River basin, "[i]f salmon recovery is now the primary environmental issue in the nation, this distinction is due to repeated failures to achieve what Congress ordered [in the explicit terms of the Northwest Power Planning Act] a decade and a half ago." Blumm, Michael C., et. al., "Beyond the Parity Promise: Struggling to Save Columbia Basin Salmon in the Mid-1990s," 27 *Environmental Law* 21 (1997).

code, which includes the law against blocking fish passage, *could* give the state control over virtually all activities that disrupt salmon habitat— but virtually no one takes an expansive view of the law's potential.[127] "We have plenty of good law," suggests Rachael Paschal. "People say that all the time. They're right. We have to enforce the laws that are on the books."[128]

On the federal level, we seem to have little choice. Although some people believe the Clean Water Act needs improvement, no one expects the current Congress to make positive changes in major environmental laws. And environmental groups will not risk opening any major law to Congressional tinkering. We cannot expect substantive improvements in federal legislation any time soon. Congress must fund the new fishing treaty with Canada and appropriate money to remove the Elwha dams. Beyond that, we must simply do better with the laws we already have. Respect for law, not new legislative initiatives, should be the federal government's focus.

The federal government has limited ability to save Puget Sound's wild salmon anyway. Habitat must be preserved and fishing regulated at the state and local levels. The Endangered Species Act listing of Puget Sound chinook does not change that. The ESA primarily limits action taken or authorized by the federal government. Exactly how it will limit private behavior or force local government to act depends on how the National Marine Fisheries Service and ultimately the courts define a "take" of threatened salmon.[129]
It also depends on how aggressively NMFS is willing to confront institutions and practices that are bad for fish. On Oregon's Rogue River, NMFS has concluded that the Savage Rapids diversion dam "takes" threatened coho, and has won a restraining order that prevents the Grants Pass Irrigation District, which owns the dam, from diverting water until juvenile coho have made their way downstream.[130] The irrigation district built the Savage Rapids dam in 1921. Thirty-nine feet high and 500 feet long, built with inadequate fish passage, the dam has reduced salmon and steelhead runs on the Rogue River by an estimated 22 percent.[131] NMFS has called it "the biggest fish killer on the Rogue."[132] Studies released in 1994 by irrigation district consultants and the federal Bureau of Reclamation said that removing the dam and replacing it with pumps would be the best way to solve fish passage problems.[133] The Oregon Water Resources Commission extended the irrigation district's temporary permit to withdraw

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[127] Rodgers, personal communication.
[128] Paschal.
[129] True, Todd, Earthjustice Legal Foundation, personal communication.
[130] Hunter, Robert G., "Water diversions and Salmon: Pressure Mounts to remove Savage Rapids Dam," *Western Water Law & Policy Reporter* (December 1998).
[131] *ibid.*
[132] *ibid.*
[133] *ibid.*

additional water on the strength of the district's promise to move toward removing the dam. Then, the district changed its mind. The Oregon Water Resources Board consequently cut its water allocation by roughly one-third.[134] And NMFS ordered it to let the fish get through.[135]

The Savage Rapids dam case is particularly egregious: the dam provides very limited economic benefit—it generates no electricity does not help to control floods--causes obvious environmental harm, and is operated by a political entity that has openly violated a formal agreement. The situation has not yet been finally resolved. Nevertheless, some western environmental lawyers, asked for an example of a government agency doing things right, point without hesitation to the Savage Rapids Dam. But they quickly add that it is more the exception than the rule. One says, "you can say that Savage Rapids Dam is very unusual . . . if not unique."[136] Another says that it is "the only example I know of where the government has gone against [local economic interests,] especially irrigators."[137] A law journal article calls the case "highly unusual."[138]

There is no reason to expect such draconian action on the periphery of Puget Sound. One top federal fisheries attorney suggests, "I have heard it said that without a dead fish and a pretty strong link to causation, we can't make a 'take' case."

Many people believe that the Clean Water Act, despite its current flaws, provides a better tool for protecting salmon.[139] If one takes the legislative language seriously, it protects the biological health of all the nation's waters; therefore, it focuses not simply on salmon—which cannot live in isolation—but on the complex aquatic systems that salmon need. But since the federal Environmental Protection Agency has delegated enforcement of the Clean Water Act to the states, the law joins the list of statutes and ordinances that depend on state or local interpretation, enforcement and monitoring—which is precisely where most of the current problem lies.

Some state laws and local ordinances do contain significant gaps. But we should not need new legislation to:

> Require state agencies themselves to follow the law. (Citizens will probably applaud a decision that the people whose salaries they pay

[134] *ibid.*
[135] *ibid.*
[136] Benson.
[137] Lucas, Laird, Land and Water Fund of the Rockies, personal communication.
[138] Hunter, *op. cit.*
[139] Bayles, David, Pacific Rivers Council, personal communication.

are not immune to the laws they themselves must obey.)
Hold state agencies accountable for enforcing the law. (Whenever possible, agencies should use public education and incentives to minimize the need for sanctions, but the bottom line remains that if people do not follow the law, the agencies should not be able to pretend that they are doing their jobs.)
Require biological monitoring of the state's rivers and streams. (This will not require much money. Once a process is set up, high school students and citizen volunteers can do the field work.[140])
Require more and longer-term monitoring of permitted activities at all levels of government. (It should not be hard to win public support for an effort to make sure that developers actually do what they say they will do, or that what government tells people to do actually accomplishes some good. Polls indicate overwhelming public support for enforcing water quality laws.)

- Expand the definition of point source pollution. (Government does not have to throw up its hands at the difficulty of dealing with non-point sources.)

New legislation would be useful in a few areas:

Coordinate efforts to protect the nearshore. Legislation may be needed to coordinate the efforts of all the cities, counties and towns that are individually responsible for pieces of the Sound's nearshore habitat. The same legislation could set up a central clearinghouse for data so that the various jurisdictions would have some way of tracking cumulative impacts.
Fine-tune the Growth Management Act. No jurisdiction should allow further subdivision on flood plains. All jurisdictions should require riparian buffers wide enough to protect fish. No jurisdiction should pretend that mitigation projects will replicate the functions of natural Class I and II wetlands.
Provide money for programs crucial to salmon restoration and withhold money from programs that endanger wild fish. There should be a long-term, dedicated source of state funding for salmon recovery. Neither state nor county government has money for salmon recovery over the long haul. In addition:
The legislature must pay for setting and enforcing TMDL levels.
Funding legislation should divorce the Department of Fish and Wildlife from fishing license fees, so the department no longer has a vested interest in fishing.

[140] Karr, personal communication

The legislature must stop channeling money into the existing hatchery system. Old-style hatcheries should all be sunsetted. The Department of Fish and Wildlife should have to specifically justify any future hatchery operation.

The legislature must fully fund the adaptive management process on which the Forests and Fish agreement rests.

Create incentives for better monitoring and assessment. Any agency or local government that receives money for salmon restoration should spend a set portion (preferably 15 percent) of that money on biological and other monitoring. Ideally, the monitoring would be done by a neutral third party; the agency doing the restoration work would not be responsible for measuring its own success. In addition, legislation that creates a new, long-term funding source should set up an independent assessment panel that can monitor the performance of local governments and state agencies and let the public know whether or not they are doing their jobs.

The laws and their enforcement must become more transparent. "Transparency" basically means that what you see is what you get. Applied to trade policy, it means that non-tariff barriers, as well as tariffs, are made clear, so that everyone knows the full range of costs and impediments. Applied to salmon protection, it would mean just the opposite: making visible not the defenses, but the gaps in the defenses. This could be done through better—and better-publicized—monitoring and assessment.

CONCLUSION

We cannot legislate political will. If responsible institutions and political leaders wanted to make the laws work for salmon, they could have done so long ago. They have not. The threat of the Endangered Species Act may have temporarily strengthened their resolve—and the resolve of ordinary citizens--but the current window of opportunity will not stay open for long.[141] We must take advantage of it while we can.

That means all of us. We cannot expect government to change on its own initiative. And we cannot count on the traditional "stakeholders" to demand the

[141] Arguably, endangered species listings have created a similar window in the Columbia Basin. "The problem with fish and wildlife recovery as we see it is not . . . lack of organization[] or lack of authority. All that has changed now that we have 12 populations of salmon and steelhead in the Columbia Basin listed as endangered or threatened. The region is energized to prevent the extinction of these Northwest icons and will accept nothing less than success." Karier, Tom, and F.L. Cassidy, Jr., "Regional Overseers Are Not Necessary for Northwest Resources," *Seattle Post-Intelligencer* (October 1, 1999) A15.

changes we need. Government has often gone out of its way to involve those stakeholders in decision-making. The result has been the continued decline of wild salmon populations and the listing of Puget Sound chinook. No one should be surprised. Most traditional stakeholders are people who profit from destroying wild fish and habitat. The foxes have been guarding the chicken coop too long. Besides, the traditional stakeholders do not include the majority of taxpayers and citizens without whose money and cooperation wild salmon cannot survive.[142] Government must recognize that we are all stakeholders now.[143]

This does not mean that government should dump the problem into the laps of citizens' groups without first setting priorities and establishing a framework of policy and funding. Asking people to commit years of time and effort without any assurance that money will be available to do what they decide should be done—or, indeed, any assurance that what they want done has any place in a coherent regional plan—is unconscionable. Yet government is already doing it. We do not need more of the same.

We do need to act like stakeholders. We must demand information.[144] And we must demand institutional change. Up to now, salmon protection has largely been a charade. The current exercise in hand-wringing may be simply the latest chapter—for many wild fish populations the final chapter--in a long saga of self-interest and political cowardice. But it does not have to be. If we try, we can write a new ending for our regional history of law-breaking and neglect.

The stakes are high. They go far beyond whatever the National Marine Fisheries

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[142] Polls suggest that a large majority of Washington residents cares about wild salmon—and does not care much about either commercial or sport fishing.

[143] Just as the issue should not be left to the traditional stakeholders, it should also not be left to the technical experts. One could easily substitute "Puget Sound" for "Columbia Basin" in Michael Blumm's statement that "[i]n the end, neither science nor economics will spare endangered Columbia Basin salmon from extinction. . . . [How much scientific certainty should be required before the region moves ahead to save the runs] is fundamentally a question of values, a subject in which scientists possess no special expertise. Similarly, economists can offer no special insights as to how much the region should be willing to pay for restored Columbia Basin salmon runs. That is a policy question that ought not to be left to specialized technicians. . .. . [I]t is a question to be resolved by the public." Blumm, *op. cit.* There is no point in committing resources to a strategy that will not work. Scientists must figure out what the fish need, what approaches are likely to bear the most fruit. But as Blumm argues, the fate of wild salmon is not a technical problem. To solve it, we must enlist broad public support, and we must redefine the significance of salmon to the Puget Sound region. "[R]ational salmon management is not just a search for technologies, it is a search for values." Scarnecchia, D.L., "Salmon Management and the Search for Values," *Canadian Journal of Fisheries and Aquatic Sciences*, 45: 2042 (1988).

[144] We should all have access to current information about how our representatives vote on legislation crucial to salmon and about how our state agencies do their jobs. For example, how widespread is illegal water use? Where is it most prevalent? How many people does the Department of Ecology commit to enforcing the water laws? What enforcement action has it taken? What have been the results?

Service may or may not do to enforce the Endangered Species Act. They go to the heart of what it means to live near Puget Sound. Old-timers talked about streams so thick with spawning salmon that you could walk across on their backs without getting your feet wet. Those stories may have been apocryphal, but the abundance they described was absolutely real. It shaped the natural character of the Puget Sound region and the human experience of living here.

The region's historic abundance did not exist in some misty, half-legendary past. A few generations back, it was a commonplace of daily life.

In 1976, Ed Sampson, a 73-year-old member of the Lower Elwha S'Klallam tribe whose father had farmed near the mouth of the Elwha River, recalled that before the Elwha was dammed, "the river was filled with fish. When I went out fishing with my grandmother, I would catch 50 fish. She would catch 100. We'd carry them back in a wheelbarrow."[145]

A couple of years ago, an old man stood in a little fish store only a few miles from the Sound, looking at the salmon lying behind glass in a cooler case and marveling at how much they cost. When the old man was a boy living near the Duwamish River, he said, he could stand on a wooden bridge across the river, look down into the water, and see hordes of salmon swimming back to their spawning beds upstream. He would catch big salmon and take them home to his mother. After a while, she told him to stop. So he caught big salmon and gave them to the neighbors. After a while, they told him to stop. There were so many big chinook salmon in the Duwamish that he literally couldn't give them away.

The wild salmon runs, like the ancient forests, were not larger than life. This was a place in which life itself grew awe-inspiringly large.

We can recapture at least a part of that natural heritage. We cannot erase a century of development. Most of us would not want to do so. But we can give our children and grandchildren a chance to see great wild salmon runs in familiar rivers, to experience Puget Sound as the cornucopia it used to be.

It will be a long journey, fraught with political and scientific uncertainty. We will not reach our destination by making pious statements, using salmon restoration as a pretext for snaring extra public works money, or squabbling over who gets to catch the remaining fish. We will not get there if our attention wanders or our energy flags. But we can do it. A journey of 1000 miles begins with the first step. Our own first step should be obvious: respect the environmental laws we already have. Americans like to think of themselves as "a

[145] Chasan, Daniel Jack, "The Plan to Undam the Elwha," *Defenders* vol. 67, no. 3 (May/June 1992).

nation of laws." In our own corner of the United States, we can start acting like one.

This research report was commissioned by the Bullitt Foundation. The paper was reviewed by ten former agency managers, independent scientists, environmental attorneys, and a legal scholar. Daniel Jack Chasan is a veteran reporter on natural resource issues, and is trained in the law.