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*189 RESTORING THE ELWHA, WHITE SALMON, AND ROGUE RIVERS: A COMPARISON OF
DAM REMOVAL PROPOSALS IN THE PACIFIC NORTHWEST [\[FNd1\]](#)

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"(R)ivers are the ultimate metaphors of existence, and dams destroy rivers." [\[FN1\]](#)

"To have a deep blue lake

Where no lake was before

Seems to bring man

A little closer to God." [\[FN2\]](#)

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*192 I. Introduction

Rivers no longer run free through the mountains, forests and basins of the Pacific Northwest. From mighty rivers like the Columbia to tributaries like the White Salmon to coastal rivers like the Rogue and the Elwha, dams block rivers throughout the region. [FN3] Many of these dams were built during the dam-building boom that began at the turn of the century and continued well into the 1960's, with purposes that ranged from flood control to irrigation, from hydropower generation to recreation. [FN4] While these dams may have served human interests well, the ecosystems and species dependent on the natural cycles of free-flowing rivers suffered greatly. Central among these species is the salmon, the signature species of the region and an indicator species [FN5] for the health of the ecosystems of which these rivers are a part.

Dams kill salmon. [FN6] By obstructing the natural flow of a river, they place a wall across the most crucial times in the salmon's life cycle, the migration to the sea and the return to the spawning beds. [FN7] In some *193 cases, dams were built without fish passage facilities, walling off entire watersheds and destroying the salmon runs that lived there. [FN8] As a result of these obstacles to salmon migration, salmon populations in the Pacific Northwest have experienced a precipitous decline since the era of dam building began. [FN9]

The decline of the salmon is not the only ecological crisis precipitated by the damming of the West. Dams have widespread detrimental effects on upstream and downstream ecosystems; [FN10] stream bank habitat is drowned beneath reservoirs, water temperatures rise due to slower flow and the increase in slack water, sediments, nutrients, and organic matter are captured instead of flushed downriver, and predatory species often invade. [FN11] The growing awareness of these effects

has resulted in a reassessment of the value of dams and the proper role of government in regulating them.

A once-in-fifty-years battle over the wisdom of relicensing hydropower projects by the Federal Energy Regulatory Commission (FERC) is gaining momentum in the Pacific Northwest, as licenses for more than 850 dams are to expire in the coming decade. [FN12] Many river *194 advocates feel that this battle offers an opportunity to restore riverine ecosystems that have been damaged by hydropower development, [FN13] such as the White Salmon and the Elwha Rivers in Washington state. In addition to FERC licensing proceedings, water rights adjudications and other water allocation processes offer another forum for river advocates to propose removal, restoration or increased flows, as in the case of the Savage Rapids Dam on the Rogue River in Oregon. In recent years, dam removal has appeared as a viable solution to the problems caused by the damming of the West. [FN14]

Dam removal has the potential to renew salmon populations by again making historical spawning habitat available to returning adults, decreasing water temperatures to levels safe for juvenile salmon, increasing the nutrients and organic matter crucial to the health of the lower river, increasing food sources, and decreasing the prevalence of diseases among fish. [FN15] Dam removal also offers the opportunity to restore degraded ecosystems, [FN16] though not without some short-term risks. [FN17] Land currently inundated by reservoirs would rise from the *195 waters, providing increased riparian habitat and allowing plant and animal species to recolonize the renewed riverbanks. [FN18]

Dam removal would also benefit human communities. Unsafe dams threaten public safety and can cause significant harm in the event of failure. [FN19] The economic burdens of maintaining obsolete dams can also weigh towards dam removal. [FN20] Finally, dam removal proposals represent a radical change in Western attitudes about the land, from Manifest Destiny urging us to "conquer" or "win" the West, [FN21] to the understanding that natural systems have intrinsic value and are worthy of restoration and protection, not simply exploitation. [FN22]

*196 Beginning in the 1980's, politicians and agency decisionmakers began to take proposals for dam removal seriously and to consider removal as a potential solution to ongoing fish passage problems, the loss of river habitat, and the economic burdens and dangers of maintaining decrepit or out-of-date dams. [FN23] The most well known of these proposals recommends the removal of two dams on the Elwha River on the Olympic peninsula in the State of Washington. River advocates have also proposed removing the **Condit Dam** on the White Salmon River in southern Washington, a small FERC licensed hydropower project. [FN24] In an Environmental Impact Statement (EIS), the U.S. Bureau of Reclamation has also proposed removal of the Savage Rapids Dam on the Rogue River near Grant's Pass, Oregon. [FN25] Each of these proposals offers a lesson in the politics of water development and management in the West. Taken together, these cases illustrate the obstacles that dam removal proposals face, especially the political effectiveness of entrenched, ideologically-driven, and well-organized local opposition groups. [FN26]

This Article uses the three dam removal proposals cited above as lenses through which to examine the administrative and political conflicts that arise when government agencies propose to remove dams, and the laws that structure these conflicts. Section II examines the ecological, social, and economic benefits and costs of removing dams. *197 Section III presents the first case study, the proposal to remove the **Condit Dam** on the White Salmon River. Section IV examines the proposal to remove Elwha and Glines Canyon Dams on the Elwha River. Section V analyzes the proposal to remove the Savage Rapids Dam on the Rogue River. Section VI concludes that river advocates must develop more effective strategies for navigating the administrative and political processes controlling dam removal proposals, such as building local support for removal proposals. Ultimately, the removal of at least some of the dams blocking rivers in the Pacific Northwest is vital to the survival and recovery of the salmon and the ecosystems in which they live.

II. Proposals For Enhancing Fish Passage By Removing Dam Obstructions

Until the late 1980's, dam removal proposals were the sole province of the cutting edge (or radical fringe) of the environmental community. [FN27] With Congress' authorization of the purchase and eventual removal of two large dams on the Elwha River in 1992, [FN28] dam removal proposals were baptized into the political mainstream. [FN29] These proposals are the result of a new understanding of the value of free-flowing river systems, especially for anadromous fish species, and the *198 detrimental impact of dams on those river systems and the species that depend upon them.

A. The Dam Legacy

The central goal of the three dam removal proposals examined in this Article is the restoration of rivers to their natural, free-flowing state in order to provide safe passage for anadromous fish. The legacy of the Condit, Elwha and Glines Canyon, and Savage Rapids Dams has been the total loss of salmon runs on the White Salmon River above **Condit Dam**, [FN30] the Elwha River above Elwha Dam, [FN31] and the continuing decline of runs on the Rogue River above Savage Rapids Dam. [FN32] The removal of these dams would resuscitate drowned sections of the White Salmon, Elwha, and Rogue, and remove the primary obstacles to salmon reaching their historic ranges in those rivers.

B. Ecological Effects

The removal of a dam will inevitably have ecological consequences, both at the dam site itself and within the watershed, because dams and the reservoirs behind them often develop their own dynamic but artificially simplified ecosystems. [FN33] The beneficial effects will range from improved fish passage at the site to increased riparian habitat and improved spawning habitat. [FN34] Dam removal may have short-term adverse consequences as well, including increases in *199 turbidity and in the sediment load downstream of the former dam site. [FN35] The following sections examine the potential ecological benefits and detriments of removing dams.

1. Fish Passage

The primary goal of the dam removal proposals examined in this Article is to enable anadromous fish to travel down the river safely as smolts and to return to their spawning beds unimpeded as adults. Dams are the primary impediment to fish passage in most rivers, and their removal would return rivers to their historic beds where salmon are accustomed to living. [FN36] During the early twentieth century, many dams were built without considering or understanding the harmful effects that those dams would have on native fish populations. [FN37] Some dams, such as the Savage Rapids Dam, were constructed without effective fish passage facilities. Others, including Elwha, Glines Canyon, and **Condit Dams**, were built without any passage facilities at all. [FN38] Dams without fish passage facilities effectively destroy all of the upriver habitat because salmon can no longer reach those spawning grounds. [FN39] *200 Removing these dams will allow the restoration of historic runs of salmon to those portions of rivers closed off, often for more than half a century.

2. Habitat Destruction

The construction of dams and filling of reservoirs destroys salmon habitat by inundating spawning beds, altering river flows and water temperatures, flooding riparian vegetation and habitat, and turning free-flowing rivers into lakes. [FN40] Removing dams creates the potential for habitat restoration.

The greatest challenge in dam removal is the sediment that has collected behind the dam. [FN41] Engineers have suggested three alternatives for dealing with sediment: natural flushing, where the flow of the river reestablishes the river channel; [FN42] complete sediment removal, which involves collecting all of the sediment and disposing of it off-site; [FN43] and, sediment management, which involves dredging a river channel and stabilizing the remaining sediment as riverbanks. [FN44] Each proposal must be carefully examined in order to determine which method best fits the site. Once the dam is removed and a sediment management scheme is chosen, restoration can begin.

3. Rivers To Lakes To Rivers: Restoration

Dam removal offers a unique opportunity to explore the potential ecological and societal benefits of watershed restoration firsthand. [FN45] In order to build momentum for dam removal proposals, *201 river advocates in the Pacific Northwest have focused their efforts on those dams that harm salmon. [FN46] Because salmon are the signature natural resource of the region and the focus of the greatest biological restoration effort ever attempted, [FN47] citizens of the region have shown a willingness to sacrifice in order to protect the salmon from extinction. [FN48] Dam removal represents one important element in this regional restoration effort. [FN49] In addition to salmon-focused restoration efforts, dam removal offers the opportunity to restore riparian ecosystems flooded by reservoirs. [FN50]

C. Social and Political Effects

There are those, such as Floyd Dominy, the head of the Bureau of Reclamation during the great dam building era of the 1950's, who believed that reservoirs bring "man a little closer to God." [FN51] This statement illustrates the driving philosophy in the development of water in the American West, the almost God-given mandate to tame the wildness of the land--control it and quick. [FN52] Wallace Stegner labeled the *202 results of this belief--the transformation of the rivers of the West into reservoirs--"original sin." [FN53] Dam removal represents a direct challenge to the philosophy that transformed the West. By removing dams, rivers would be restored to the uncontrolled, free-flowing state that men such as Dominy sought to overpower, in effect untaming the West, absolving the sin.

1. Changes in Values: the Growth of Environmental Consciousness

A slow but important philosophical shift in the American consciousness towards a more "biocentric" [FN54] environmental awareness has taken place in the fifty years since many of the dams in the United States were constructed. [FN55] As a FERC spokesman put it, "(w)hen these dams were put in people were thinking about power generation and not fish and wildlife." [FN56] This shift in environmental awareness helped to spawn the modern American environmental movement in the 1960s. [FN57] It also fueled the passage of many of the federal environmental statutes in place today in the late 1960s and early 1970s. [FN58]

Dams have typically been seen by environmentalists as particularly reprehensible symbols of the destructiveness of the belief that land and rivers must be controlled and developed solely for human *203 benefits. [FN59] Indeed, anger over the construction of the Glen Canyon Dam on the Colorado fortified the resolve of two prominent environmental advocates, David Brower [FN60] and Edward Abbey. [FN61] At the same time, a substantial segment of the general public began to speak out against dam construction proposals, notably two dams proposed in the Grand Canyon. [FN62] It was only a matter of time before such anger and public resolve translated into proposals to remove harmful dams. Unfortunately, it was three decades before dam removal proposals began to be taken seriously.

2. Dam Safety

Many of the dams now holding back rivers in the United States are showing the cracks of time. As these dams age, the dangers presented by them, including the potential for catastrophic failures, increase. [FN63] Government concerns about these dangers resulted in a Federal Emergency Management Agency report on dam safety which concluded that "an effective program to protect the public from unsafe *204 dams is necessary." [FN64] In addition to safety issues, concerns about potential liability as a result of catastrophic dam failures provide dam owners with a strong incentive to fix problems. [FN65] According the National Research Council, "(r)emoving a dam may be cheaper than repairing an unsafe dam or one that has failed." [FN66] Thus, dam removal can provide economic benefits to dam owners while protecting the public.

3. Advocates and Opponents

The debate over dam removal proposals in the Pacific Northwest is largely a product of the "salmon crisis." [FN67] This

crisis spawned a variety of proposed solutions, [\[FN68\]](#) one of which is dam removal. Like other issues involving salmon, fierce, sometimes rabid, debates quickly developed between advocates and opponents of dam removal proposals.

The advocates of dam removal generally fall into three categories: environmental advocates, scientists, and federal and tribal governments. Environmentalists have historically made arguments for dam removal that rely on charismatic species such as salmon, [\[FN69\]](#) but they have also raised other issues, such as general ecological concerns, the safety issue, the effect of dams on tribal fishing and cultural rights, and *205 the economic benefits that could result from river restoration. [\[FN70\]](#) Scientists, especially fisheries biologists, have traditionally been strong advocates of dam removal. [\[FN71\]](#) Tribal governments, notably the Yakama Nation, have also advocated dam removal. [\[FN72\]](#) Finally, the federal government has played a central role in several dam removal proposals, with federal agencies calling for removal of the Elwha and Savage Rapids Dams. [\[FN73\]](#)

The opponents of dam removal proposals tend to be more localized, and are often motivated by self-interest. Vested interests, including utilities and irrigation districts, generally oppose dam removal, unless they are guaranteed replacement power or water and compensated for value of the dam. [\[FN74\]](#) In addition to utilities and irrigation districts, local opposition groups have fought dam removal proposals almost as soon as they are floated. In Grants Pass, Oregon, for example, local landowners and business interests formed the Association to Save Savage Rapids Dam and Lake, Inc. [\[FN75\]](#) A similar opposition group formed in Port Angeles, Washington in response to proposals to remove the Elwha dams. [\[FN76\]](#) These local opposition groups have proven especially effective at halting or stalling dam removal proposals. As a result, they represent one of the greatest obstacles that dam removal proposals must surmount.

*206 D. Economic Effects

While dam removal opponents often emphasize the short-term costs of removing a dam and replacing the electricity or irrigation water that it supplied, dam removal has the potential to yield significant economic benefits to the local community and the region.

1. Costs and Benefits

The most immediate cost associated with dam removal proposals is the actual cost of removing the structure and possibly the accumulated sediment. [\[FN77\]](#) In addition, there is the cost associated with replacing the benefit that the dam provided. Many of the dams in the Pacific Northwest are hydropower dams, providing electricity to local utilities or industries. [\[FN78\]](#) However, the contribution of the small projects proposed for removal, such as the Condit and Elwha projects, to the overall generating capacity of the region is negligible, [\[FN79\]](#) especially given a projected surplus of electrical generating capacity between fifteen and twenty percent over the next twenty years. [\[FN80\]](#)

On the other hand, the following are significant benefits of restoring former salmon-producing rivers: the rehabilitation of the commercial salmon fishing industry in California, Oregon, and Washington; an increase in salmon-related tourism, such as sport fishing; the renewal of tribal fishing economies, which would benefit those tribes that formerly relied on salmon as a source of income; [\[FN81\]](#) and, secondary benefits for locales in which fishing is an important part of *207 the economic base. [\[FN82\]](#) In addition, there are the less quantifiable benefits of restoring the river, such as the return of other native species and the enhanced recreational opportunities provided by a free-flowing river. The removal of **Condit Dam**, for example, would more than double the length of the currently popular whitewater raft and kayak run on the White Salmon River. [\[FN83\]](#) These "nonmarket" benefits can be estimated through contingent valuation, and can be quite high; one economist valued the restoration of the Elwha River at \$6.3 billion per year. [\[FN84\]](#) However, these benefits will not become fully clear until restoration is well underway. [\[FN85\]](#)

2. Funding

The question of how to fund dam removal is one of the central questions in the debate over dam removal proposals. The high costs of removing a dam and the sediment that has collected over the years in the reservoir has turned removal proposals into political footballs. For example, in the case of the Elwha Dams, funding issues appear to be the central obstacle to removal. [\[FN86\]](#) One suggestion for solving the funding question is to assess a small annual charge on all hydroelectric producers which would finance a decommissioning fund. [\[FN87\]](#) American Rivers and other environmental groups are attempting to get FERC to establish such a fund to pay for the decommissioning of outdated, dangerous, or abandoned dams. [\[FN88\]](#) Another method already in place is a condition in FERC licenses requiring the licensee to pay into a *208 decommissioning fund for the licensed project itself. [\[FN89\]](#) FERC itself has stated that the licensee should be responsible for paying the costs of decommissioning, "since the licensee created the project and benefited from its operations." [\[FN90\]](#) Finally, federal funding for dam removal may be available in some cases. [\[FN91\]](#) The variety of potential funding sources, individually or in combination, lessens the importance of funding questions in the debate surrounding dam removal proposals. [\[FN92\]](#) Indeed, funding questions are often used as a smokescreen, hiding the ideological heart of the disagreement between dam removal advocates and their opponents--exploitation versus restoration.

III. The **Condit Dam** on the White Salmon River

The White Salmon River flows south off of the glaciers of Mount Adams, the sacred mountain of the Yakama Indians, ultimately pouring into the mighty Columbia in the heart of the Columbia River Gorge National Scenic Area. [\[FN93\]](#) Studies estimate that prior to the time Lewis and Clark passed the mouth of the river, more than four thousand *209 Chinook returned each year to spawn in the White Salmon. [\[FN94\]](#) In addition, the river supported coho, chum, steelhead, and sea-run cutthroat trout. [\[FN95\]](#)

Since 1913, when the 125-foot **Condit Dam** was finished, just three miles from the mouth of the river, anadromous fish have been unable to reach the upper river, and their historic spawning beds. [\[FN96\]](#) As a result, salmon are gone from the river above the dam, the spring chinook run below the dam is extinct, and "winter and summer steelhead and fall chinook are close to it." [\[FN97\]](#) Less than 400 salmon return to the White Salmon each year, and almost all of these are hatchery stock. [\[FN98\]](#)

Condit Dam is the first of thirteen small hydropower projects owned by PacifiCorp to have its FERC license expire. [\[FN99\]](#) In February of 1963, Pacific Power & Light, the forerunner of PacifiCorp, applied for a FERC license, which was granted in 1968. [\[FN100\]](#) The original license did not mention fish passage facilities, instead requiring only minimum flows out of the dam in order to preserve some fish habitat between the dam and the powerhouse, a distance of one mile. [\[FN101\]](#) Since that time the regulatory environment has changed considerably; no longer can the needs of native fish be ignored.

FERC must now take fish and wildlife values into account during the licensing process. [\[FN102\]](#) This requirement is significant because, in the *210 next decade, hundreds of dams throughout the West will come up for relicensing before FERC. [\[FN103\]](#) The environmental and legal climate has changed drastically since these dams were licensed with both attitudes and statutes reflecting a new environmental consciousness. [\[FN104\]](#) The most important change for dam owners was the 1986 amendment of the Federal Power Act. [\[FN105\]](#)

A. Private Hydropower Dams and FERC Licensing

The Federal Power Act now requires FERC to "protect, mitigate . . . and enhance" fish and wildlife in license decisions. [\[FN106\]](#) In addition, environmental statutes passed in the 1960's and 1970's imposed new substantive and procedural requirements on FERC's relicensing process that did not exist when many of the dams whose licenses are now expiring were built. [\[FN107\]](#) As a result, FERC now must consider the environmental consequences of each project. This gives FERC the opportunity to correct the mistakes of the past-- hundreds of miles of salmon rivers blocked by dams, degraded by water

diversions, made *211 fatal to salmon by hydropower turbines and reservoirs, and ecologically altered by hatcheries and the introduction of non-native species.

1. Environmental Conditions and Relicensing

FERC has the authority to place environmental conditions in the licenses that it issues. [FN108] In addition, the fish and wildlife agencies can prescribe mandatory conditions that must be placed in the license. [FN109] License conditions can require the construction of fish passage facilities [FN110] and mitigation for the destruction of habitat, and that licensees pay into a decommissioning fund. [FN111] FERC also recently asserted its authority to order dam removal, based on its authority to deny licenses. [FN112] Despite this assertion of authority, FERC has never refused to relicense a dam and has yet to order one removed. [FN113] Still, FERC's authority to condition or deny licenses creates an incentive for applicants to craft their applications as carefully as possible in order to avoid a lengthy battle with FERC.

However, in seeking a renewal of its Condit Project license from FERC, PacifiCorp failed to propose the construction of fish passage facilities. [FN114] This failure flew in the face of overwhelming support for restoring salmon to the upper section of the White Salmon River. Almost ten years before PacifiCorp filed its license renewal application, the Northwest Power Planning Council (Council) called for the construction of fish passage facilities at **Condit Dam** and the restoration of the salmon and steelhead fishery in the White Salmon River. [FN115] Neither PacifiCorp nor FERC responded. Again, the Council and a *212 coalition of environmental groups demanded that FERC require PacifiCorp to enhance fish passage at the site, either through the installation of fish ladders or by removing the dam altogether. [FN116] The National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service, and the Washington Department of Fisheries and Wildlife all added their voices to those supporting restoration of anadromous fish to the White Salmon. [FN117] Finally, with the license renewal application filed, FERC was forced to act. FERC examined PacifiCorp's proposal, as well as other alternatives, in a Draft Environmental Impact Statement (DEIS). [FN118]

2. Failing to Choose Dam Removal: Flaws in the DEIS

In the fall of 1995, FERC released the Condit Hydroelectric Project relicensing DEIS. [FN119] The DEIS examined five alternatives: PacifiCorp's proposal (no fish passage); a FERC enhancement of PacifiCorp's proposal (with fish passage); partial removal with new upstream diversions; project retirement with dam removal; [FN120] and a "no action" alternative "consisting of continued operations, flows, and facilities." [FN121] The preferred alternative chosen by FERC essentially *213 consisted of PacifiCorp's proposal plus fish ladders. [FN122] FERC dismissed dam removal as too costly. [FN123] However, federal agencies, tribes, and environmental organizations all pointed out serious flaws in FERC's reasoning and NEPA analysis, calling its choice of the fish ladder alternative into question.

a. The Alternatives Analysis

Many of the agencies, tribes, and environmental groups that commented on the DEIS noted that the NEPA alternatives analysis was flawed. [FN124] NEPA regulations require discussion of the "no action" alternative in all EISs, [FN125] which examines the environmental consequences of not undertaking the action or project at all. [FN126] However, the no action alternative FERC presented in the DEIS was in fact a relicensing alternative, allowing the current power generating operations to continue. [FN127] Notwithstanding FERC's misinterpretation of NEPA regulations, [FN128] it also fatally flaws the DEIS because FERC relied on it "to establish baseline environmental conditions for comparison with other alternatives." [FN129] Thus, FERC compared all of the other proposed alternatives to a flawed no action alternative in its determination of the preferred alternative. [FN130] FERC never considered not licensing the project, or, in NEPA terms, not taking action.

*214 b. Dam Removal Costs

Commenters pointed out flaws in the analysis of the dam removal alternative. For example, NMFS, relying on projections for removing the Elwha dams, noted in its comments that the cost estimate for dam removal "may be overstated." [FN131] FERC estimated that dam removal would cost \$52.39 million, while NMFS estimated a cost of \$8.7 to \$10 million. [FN132] A study commissioned by the Yakama Indian Nation and American Rivers also found that the cost estimates of removal were overstated, perhaps by a factor of five times or more. [FN133] The Yakama study concluded that removing the dam would cost PacifiCorp \$1.8 million less annually than the DEIS's preferred dam retention with mitigation alternative. [FN134] The Columbia Basin Fish and Wildlife Authority (the Authority) also faulted FERC for an inadequate analysis of the dam removal option, and suggested that FERC contract with the Bureau of Reclamation to further evaluate the removal proposal. [FN135] FERC's overestimation of dam removal costs led it to reject dam removal as too expensive. [FN136] In addition to flaws in the cost estimates, commenters pointed out FERC's failure to consider the benefits of dam removal for local tribes.

Dam removal would have substantial cultural and spiritual benefits for local tribes. The Condit project lies within the land ceded by the Yakama Nation to the United States in the Yakama Nation Treaty of June 9, 1855, and, as a result, the Yakamas have a "tremendous interest in ensuring that FERC's review process fully considers the impacts to trust and cultural resources affected by the Condit Project." [FN137] The Yakamas strongly supported decommissioning and *215 removal, [FN138] and noted in their comments that the White Salmon River present a rare opportunity to reclaim excellent salmon habitat and foster basin wide restoration efforts. [FN139]

c. Decommissioning Funds

The costs associated with dam removal are one of the central stumbling blocks in the way of removal. One solution is to require the licensee to pay into a decommissioning fund over the life of the project. [FN140] The current Condit license contains just such a condition. [FN141] However, in all of the debate surrounding the current relicensing application and dam removal proposal there has been no mention of this permit condition, despite a careful analysis by FERC of the potential costs of dam removal to PacifiCorp. The preferred alternative proposed by FERC in the DEIS includes a retirement fund. [FN142] This suggests that FERC overlooked the decommissioning fund in the original license. If PacifiCorp has been abiding by the conditions of its license over the years, then the fund should be substantial. However, given the energy it has put into fighting the dam removal proposal, and indeed any proposal other than its own, it appears unlikely that PacifiCorp met the retirement fund condition in its original license. [FN143] Thus, PacifiCorp appears to be operating the Condit project in violation of its FERC license.

*216 B. The Owner's Goals and Tactics

PacifiCorp's stated goal with the Condit project is "to relicense the project and continue to operate it in a way that is both economically sound and environmentally responsible." [FN144] PacifiCorp considers the project's fifteen megawatt capacity--enough to power 13,000 homes--an important part of its energy base. [FN145] As a result, PacifiCorp has put substantial energy into fighting any proposals that would either increase its costs in running the Condit project or result in its decommissioning. [FN146]

1. PacifiCorp's Response to the DEIS

In response to those who have argued that the White Salmon could provide excellent salmon habitat, [FN147] PacifiCorp has consistently contended that the section of the river above the dam is not good fish habitat. [FN148] PacifiCorp also contends that the DEIS's preferred alternative is too costly, effectively forcing PacifiCorp to consider selling the project or to decommission it. [FN149] In their comments on the DEIS, PacifiCorp made a counter-proposal that would lower its costs and delay *217 or alter implementation of many of the prescriptions in the DEIS. [FN150] This counter-proposal did not include fish passage at the dam.

2. Challenging Fish and Wildlife Prescriptions

PacifiCorp challenged the fish and wildlife prescriptions that the DEIS would impose, including the fish and wildlife agencies' requirement of fishways as a condition of relicensing. [\[FN151\]](#) The utility instead proposed undertaking a "trap and haul" system, where adult salmon would be collected at the powerhouse and transported upriver to a point above the dam. [\[FN152\]](#) Smolts would later be collected at the dam and transported downriver. [\[FN153\]](#) It remains to be seen whether the fish and wildlife agencies will use their section 18 authority to prescribe conditions that force FERC into a negotiating position with PacifiCorp that the utility cannot accept because it is not economically feasible. [\[FN154\]](#)

C. Lessons

The path that the proposal to remove **Condit Dam** has followed illustrates the basic tension between those who value rivers merely for the economic gain from the kilowatts that can be generated and those who value rivers for deeper reasons. In this case, PacifiCorp gained a source of cheap power in damming the river and using its flow to produce electricity, which it then sold to consumers. The Yakama people lost a source of cultural, spiritual and economic subsistence. The salmon of the White Salmon River lost their home and their heritage. Thus, FERC is caught between its historic mission as the federal licenser of hydropower development rights to politically powerful utilities and its legal obligation to protect and enhance fish and wildlife.

The relatively formal FERC licensing process, in which the fate of the **Condit Dam** will be decided, involves well-defined roles for the *218 various entities involved. Given the posture of the case under the Federal Power Act, NMFS has substantial authority under section 18 to demand specific fish and wildlife conditions. [\[FN155\]](#) This authority makes it difficult for FERC and the utility to make a deal that does not include fish passage. However, dam removal is another question. If FERC employs its asserted authority to order decommissioning, [\[FN156\]](#) which would theoretically result in removal, then PacifiCorp will likely challenge that authority. Although FERC's decommissioning policy promises not to impose "unreasonable" costs on utilities, [\[FN157\]](#) FERC did not offer any subsidies to PacifiCorp to help fund dam removal. This is in contrast to the federal monies offered to fund dam removal in other cases. [\[FN158\]](#)

The FERC licensing process also insures that river advocates have an open public forum in which to push for dam removal. [\[FN159\]](#) Ultimately, NMFS's formal role in the relicensing process, which is strengthened by environmental groups' support for dam removal, guarantees that fish passage concerns will be addressed. [\[FN160\]](#) However, whether removal will occur remains an open question. If FERC relicenses the project, the big winner will be PacifiCorp, but it will be largely a symbolic victory given that the project only provides one to two percent of the utility's electric generating portfolio.

*219 IV. The Elwha and Glines Canyon Dams on the Elwha River

The native people of the Olympic peninsula called the chinook salmon of the Elwha River *tyee*, which "mean(s) 'chief' in Chinook jargon, the crude pan-Indian trade language of the Northwest Coast." [\[FN161\]](#) The *tyee* could reach a hundred pounds and were the largest salmon on the Olympic peninsula. [\[FN162\]](#) In addition to the *tyee* chinook, the Elwha supported sizable runs of every species of salmon found in the Northwest. [\[FN163\]](#) In 1911, the construction of the Elwha Dam cut these great fish off from their spawning grounds, effectively destroying all but one of the runs in the river. [\[FN164\]](#)

Elwha Dam, in contrast to **Condit Dam**, was never licensed by FERC because it was built in 1913 before the imposition of licensing requirements by the Federal Power Act. [\[FN165\]](#) However, Glines Canyon Dam, built a few miles upriver in 1926, was licensed by FERC. [\[FN166\]](#) It was the expiration of this license in 1976, [\[FN167\]](#) in combination with a federal *220 study finding that salmon could not be restored to the Elwha without removing the dams, [\[FN168\]](#) that ultimately spawned proposals to remove both dams. As with the Condit Project, the FERC licensing process offered dam removal advocates an official forum to push for salmon restoration on the Elwha River. Unlike other rivers in the Pacific Northwest, however, the

Elwha offers a unique opportunity for restoration because nearly its entire length lies within Olympic National Park. As a result, the Elwha has become a cause celebre among environmentalists and federal agencies. [\[FN169\]](#)

A. The Illegal Construction of Elwha Dam

While the proposal to remove the Elwha Dams and the surrounding debate illuminates the tensions between private hydropower development and the public interest of saving salmon, the history of the Elwha offers a broader lesson as to how the salmon crisis began. Events on the Elwha set an unfortunate precedent for fishery policy in the State of Washington and beyond by allowing unscrupulous developers to pay for the construction of hatcheries instead of requiring fish passage facilities at new dams.

The construction of the Elwha Dam began in 1911. [\[FN170\]](#) Despite a state law requiring the construction of fish passage facilities at new dams, Elwha Dam, completed in October 1912, had no fish ladders. [\[FN171\]](#) At the time, the enforcement of Washington's fishery laws was widely considered nonexistent. [\[FN172\]](#) The fishery commissioner simply did not have *221 the political weight to force the powerful interests behind projects like that on the Elwha to follow the law. [\[FN173\]](#)

In 1912, Ernest Lister was elected governor of Washington. Lister went to Olympia with few political debts, a vision of growth and development as the path to a better world, and a desire to use his time in office to implement that vision to conscientiously serve the common good. [\[FN174\]](#) He appointed a conservation-minded, muckraking editor named Leslie Darwin as his fishery commissioner. [\[FN175\]](#) Darwin quickly reformed the commissioner's office, penalized the salmon canneries, one of the most powerful political interests in the state, for wasteful and illegal practices, [\[FN176\]](#) and enforced other environmental protections, necessary for the salmon's survival. [\[FN177\]](#) However, Darwin's resolve fluttered when presented with the Elwha project and the political power of its backers. He considered the situation "perplexing," [\[FN178\]](#) and, as a result, could not bring himself to apply the law with the vigorousness that he once had against other illegal dams. [\[FN179\]](#) The novel solution that he came up with ultimately set the pattern for state and national fishery policy for the next fifty years.

1. Hatcheries In Lieu of Fish Passage

In a letter to Olympic Power, the owner of the Elwha project, Darwin proposed that Olympic build a hatchery at the foot of the dam in lieu of fish passage facilities. [\[FN180\]](#) Although seemingly uninterested at first, Olympic Power soon signed an agreement to donate land for a hatchery and contributed \$2,500 toward its construction. [\[FN181\]](#) Darwin's *222 novel solution to the conflict between salmon and the dam was blatantly illegal, since state law required construction of fish passage facilities at any dams built on a river containing salmon. [\[FN182\]](#) That law did not authorize the fishery commissioner to waive the fish passage requirement. Nevertheless, Darwin's solution soon became the norm, [\[FN183\]](#) and hatcheries were constructed on many of the rivers of the West in order to mitigate the damage to salmon populations caused by new dams. [\[FN184\]](#)

Since their construction, the Elwha Dams have gone through a succession of owners, all of whom have profited handsomely. This profit has come at the expense of the salmon and the people who rely on the salmon's yearly return to the Elwha river. Since 1919, when Olympic Power sold the Elwha dam and its hydropower facilities to Crown Zellerbach, electricity from the dam has been used to power lumber and paper mills in Port Angeles, Washington. [\[FN185\]](#) Nine years later, in 1926, *223 Crown Zellerbach built Glines Canyon Dam upriver from the Elwha Dam, [\[FN186\]](#) adding its generating capacity to that of Elwha Dam. Crown Zellerbach reported a profit for every year of its operations in Port Angeles. [\[FN187\]](#) The salmon and the people of Washington, on the other hand, lost. A 1971 report by the Washington Department of Fisheries estimated that the loss of the Elwha salmon runs had cost the people of the state \$500,000 annually. [\[FN188\]](#)

2. The S'Klallam Tribe, Dam Safety, and Treaty Fishing Rights

In addition to its destructive effect on the Elwha's salmon, the Elwha Dam continues to pose a "high downstream hazard potential," according to a report by the U.S. Army Corps of Engineers on the dam's safety. [\[FN189\]](#) The Elwha S'Klallam's reservation is located immediately downstream of the dam. [\[FN190\]](#) As Frank Bennett, chairman of the Elwha Tribal Council said, "I guess they don't care if a few Indians drown." [\[FN191\]](#)

The safety hazard is not the only effect on the tribe. The Elwha dams have also interfered with the S'Klallam's treaty which guarantees fishing rights on the Elwha River. Under the aptly named Treaty of Point No Point, the tribe reserved the right to take fish from the river to sustain themselves "in perpetuity." [\[FN192\]](#) Like the Yakama, the *224 S'Klallam have consistently supported dam removal as a way of restoring their treaty rights and their cultural heritage. [\[FN193\]](#) Without the fish, these treaty rights are meaningless, and the S'Klallam have lost a crucial element of their culture.

B. FERC Relicensing and National Parks

A complicating factor in the Elwha removal proposal is the question of whether FERC has jurisdiction over Glines Canyon Dam due to its location within the Olympic National Park. [\[FN194\]](#) The Park Service, the General Accounting Office (GAO), and environmentalists all contend that the Federal Power Act does not give FERC authority to issue hydroelectric licenses for projects located in national parks. [\[FN195\]](#) These parties all argued that the dam is not compatible with the area's goals. [\[FN196\]](#) Without jurisdiction, FERC cannot relicense the dam, and without a license, the dam cannot operate. FERC claims continuing jurisdiction because the dam rests on private land, although that land is an inholding within the boundaries of the Park. [\[FN197\]](#) This jurisdictional argument highlights the competing federal purposes of the Park Service *225 and FERC, environmental protection versus hydropower regulation and development.

1. Enhancing Olympic National Park

The primary goal of restoring the Elwha is to enhance Olympic National Park. [\[FN198\]](#) While the park itself remains pristine and wild, the land around it has been decimated by logging. [\[FN199\]](#) As a result, the park provides the last protected habitat for species that once called the vast forest of the Olympic Peninsula home. Due to the Elwha and Glines Canyon Dams, the salmon are gone from the lengthy section of the Elwha within the park. However, if the dams were removed, the salmon could return, refilling their crucial niche in the Park's ecosystem. [\[FN200\]](#) The Park could provide a "salmon refuge," protected habitat managed with the goal of protecting and enhancing salmon habitat and populations. [\[FN201\]](#) To date, every federal agency involved supports dam removal. The National Park Service Director, James Ridenour, opposes the issuance of a new FERC license and has asked FERC to order the removal of the Elwha Dam. [\[FN202\]](#) Additionally, the U.S. Department of the Interior, the Bureau of Indian Affairs, and the Fish and Wildlife Service have all expressed support for removal as the only way to fully restore salmon to the Elwha. [\[FN203\]](#) The state's congressional delegation has also supported *226 dam removal and restoration, [\[FN204\]](#) with one important exception, Senator Slade Gorton (R-Wa.). [\[FN205\]](#)

2. Satisfying the Owner: Cheap Power

The cost of electricity from the Elwha Project is significantly less than what the dam's owner, James River Corp., would have to pay for electric power on the open market. [\[FN206\]](#) The primary concern of the James River Corp. is continued access to cheap electricity to power the mill, now owned by Daishowa America Corp. [\[FN207\]](#) James River Corp. is also concerned about being saddled with potential liability for dam removal. [\[FN208\]](#) While neither the federal agencies pushing for dam removal, nor FERC, allayed James River Corp.'s fears of liability and the loss of cheap electricity, Senator Gorton and Congress did.

*227 C. Congress Steps In

By 1992, the proposal to remove the Elwha dams had gained widespread support. [\[FN209\]](#) One of the few opponents was Senator Gorton. Gorton helped draft a bill that took the debate out of the hands of dam removal advocates and FERC and, put it into the hands of Congress.

1. Authorization of Removal: The Elwha River Ecosystem and Fisheries Restoration Act

When Congress passed the Elwha River Ecosystem and Fisheries Restoration Act (Elwha Act) [\[FN210\]](#) of 1992, many thought the dispute over removal was over. [\[FN211\]](#) The Elwha Act set the purchase price for the dams at \$29.5 million, [\[FN212\]](#) allowed Daishowa to purchase replacement power from BPA, [\[FN213\]](#) and required a study on the feasibility of removing the dams. [\[FN214\]](#) The Elwha Act appeared to set the stage for a federal purchase of the dams followed by their removal. However, the 1994 congressional elections, in which the Republicans took control of Congress, changed the course of the removal proposal. [\[FN215\]](#)

*228 2. The Political Dam: Sen. Gorton's Opposition to Removal

The 1994 congressional elections changed the balance of power in Washington, D.C., with a new Republican ideology of fiscal austerity taking control over many areas of spending. In Washington state, Senator Gorton, senior senator in the Northwest delegation, concluded that the potential costs of dam removal were too high. [\[FN216\]](#) Representative Norm Dicks (D-Wa.) later claimed Senator Gorton was largely responsible for extinguishing the proponent's hopes for dam removal. [\[FN217\]](#)

Originally, Senator Gorton cosponsored the Elwha Act "as an attempt to resolve what had become an impossible situation, and because the Elwha report ('mandated by the Act') would provide much needed information." [\[FN218\]](#) Once the relicensing EIS recommended dam removal, however, he reversed his opinion, rejecting that option as too costly. [\[FN219\]](#) As an alternative, he proposed relicensing the dams but requiring fish passage facilities, [\[FN220\]](#) despite the fact that fish ladders cannot be constructed at Glines Canyon Dam given its height. When the Clinton administration proposed financing dam removal in its 1997 budget, Senator Gorton continued to oppose it. [\[FN221\]](#) When the final dam removal EIS was released in November of 1996, with dam removal as the preferred alternative, Senator Gorton remained opposed. [\[FN222\]](#)

*229 D. Lessons

In the final analysis, Senator Gorton's opposition to dam removal has, more than any other factor, stalled the proposal to restore the Elwha. At the center of the debate is the question of who must pay for the river's restoration. Senator Gorton has driven the proposal into the ground on precisely this point. In contrast, the debate surrounding the Condit proposal did not turn on the issue of funding, which insulated it from the risks of the congressional appropriations process. Although couched in the language of financial austerity and budget cutting, Senator Gorton's opposition appears to be based more on ideology than economics. [\[FN223\]](#)

The congressionally-driven Elwha proposal highlights the arbitrariness of a process based on political needs and ideology. Political forces want to keep the Daishowa mill running, yet the economic benefits of the mill could easily be obtained by subsidizing the mill's electricity. More importantly, the ecological benefits of restoring the salmon far outweigh the localized economic benefit of keeping the mill operating. Indeed, the economic value of restoring the Elwha salmon could climb into the hundreds of millions of dollars each year. [\[FN224\]](#) By taking the proposal out of the FERC relicensing process, Congress undermined that process' validity. Still, in substituting the NEPA-oriented Interior process, Congress took the dam proposal out of the hands of the federal dam licensing experts, FERC, and gave it to the federal land management experts, the Department of the Interior (Interior). [\[FN225\]](#) This is perhaps the better result because Interior will most likely take a broader approach to the issues than FERC, thus resulting in a clearer statement of the benefits of removal to federal lands and

resources. However, Congress then side-stepped the dam removal recommendation of Interior by not funding purchase and removal. While Congress does not have to follow Interior's recommendations, its *230 disregard of these recommendations highlights the capriciousness of a politically driven approach to solving important ecological issues. As a result, a questionable project that has survived for more than twenty years on annual FERC licenses [FN226] apparently will continue to rely on this interim measure into the foreseeable future.

V. The Savage Rapids Dam On the Rogue River

Southern Oregon's Rogue River is one of the most storied salmon, steelhead, and white-water rivers in the West. [FN227] The river presently supports the largest population of anadromous fish in Oregon. [FN228] Despite this relative abundance, the Bureau of Reclamation (BOR) has concluded that its fish populations are "severely depressed from historic levels," with many stocks being proposed for listing under the ESA. [FN229] Further, BOR has severely restricted the allowable catch compared to historic levels. [FN230] The Savage Rapids Dam near Grants Pass has played a significant role in the decline of these species.

Since the Grants Pass Irrigation District (GPID) constructed the dam as an irrigation diversion in 1921, the dam has been killing fish, especially smolts migrating downstream. [FN231] The dam creates a summer reservoir, part of which is diverted into an irrigation canal. [FN232] During *231 the rest of the year, the reservoir is drawn down to run-of-the-river level. Although the dam has two fish ladders, one built at the time of construction and another added in 1934, these fish passage facilities do not allow fish to pass safely around the dam. [FN233] BOR estimates that approximately 27,000 more salmon would spawn above the dam every year if the dam were removed. [FN234]

A. Irrigation Projects, State Law, and the Bureau of Reclamation

The history of the Savage Rapids Dam is a microcosm of the history of water in the West. GPID built Savage Rapids Dam in an era when developers and federal agencies were building thousands of irrigation diversions to make the arid West bloom. [FN235] Many of the farms and orchards that relied on the reservoir are now gone, replaced by the lawns of residential subdivisions. [FN236] Along with these changes in water use patterns, a growing awareness of the dam's effect on salmonids led *232 fishery agencies, [FN237] environmentalists, [FN238] and the Oregonian news-paper [FN239] to call for dam's removal. While a fundamental change in western water use patterns and environmental values has occurred since the dam was constructed, a concurrent change in river management has not occurred. While attitudes and uses may have changed, the dam remains. [FN240]

1. GPID's Goal: Enhancing Fish Passage While Maintaining the Irrigation Diversion

Fishery agencies have pointed out the fish passage problems at the dam since it was built. However, GPID did not take the issue seriously until the state Water Resources Commission decided in 1986 to revoke half of GPID's historic water right based on GPID's failure to *233 fix the fish passage problems at the dam. [FN241] After a GPID appeal of the Commission's decision, the state issued a temporary permit in 1987 [FN242] which stipulated that an oversight committee be formed to advise GPID of a solution. [FN243] Ultimately, GPID and Josephine County asked BOR to initiate a water management study in the form of an EIS. [FN244] The resulting EIS recommended dam removal as the preferred alternative. [FN245]

Dam removal offered several benefits for GPID. Not only would it solve the fish passage problems at the dam, but it would also result in the federal government forgiving a lingering debt GPID owes BOR for renovation work at the dam in the late-1950's. [FN246] In addition, the federal government would provide 100% funding for removal and construction of new diversion pumping stations. [FN247] These subsidies are similar to *234 those proposed for removal of the Elwha dams, with the federal government paying the full cost of work intended to benefit endangered species. Interestingly, although the same

benefit would be served by the removal of **Condit Dam**, no such subsidies have yet been proposed in that case. Further, benefits from removing the dam include meeting the Commission's goal of dam removal and guaranteeing GPID's water rights. Thus, GPID had everything to gain and nothing to lose by removing the dam; fish passage problems would be solved, irrigation water would be guaranteed, and its federal debt would be forgiven. [\[FN248\]](#)

2. The State and Federal Agencies' Goal: Dam Removal

The anadromous fish of the Rogue River are a designated "national resource" under the Water Resources Development Act. [\[FN249\]](#) As such, they "are worthy of every consideration to preserve and enhance their viability and to prevent them from becoming threatened or endangered." [\[FN250\]](#) As a result, federal and state agencies unanimously supported dam removal as the best way to meet the goals and spirit of the ESA and the Water Resources Development Act. [\[FN251\]](#)

*235 3. Recreation: Reservoir or River?

The most prominent side-effect of dam removal would be the loss of summer recreation on the reservoir, primarily the use of motor boats and jet skis. [\[FN252\]](#) Removal would also make some private recreation facilities, such as existing boat docks, unusable. [\[FN253\]](#) A county survey determined that most reservoir users are local residents. [\[FN254\]](#) Although there is access at Savage Rapids Park, most of the area near the dam is in private ownership, and public access to the river and reservoir is quite limited. [\[FN255\]](#) In essence, dam removal would result in the loss of summer lakefront recreation for adjacent property owners and a small number of local citizens. [\[FN256\]](#) Not surprisingly, these people are the driving force opposing dam removal.

B. Dam Removal Proposals and Local Politics

The debate surrounding the proposal to remove the Savage Rapids Dam illuminates the tensions that lie at the confluence of federal environmental law, state water law, and local politics. Just as on the Elwha, federal and state agencies, and environmental groups support dam removal while local political interests oppose it. As a result, fish on the Elwha and Rogue continue to decline, while dam removal is studied and debated yet again.

*236 1. Local Opposition to Dam Removal

Local opposition to the Savage Rapids Dam removal proposal developed late in the process. [\[FN257\]](#) Dam removal opponents, primarily local property, and business owners, formed two organizations to further their position. [\[FN258\]](#) Opponents' arguments center around the loss of recreation on the reservoir and the power costs of running a new pumping diversion. [\[FN259\]](#) They have also argued that the current irrigation diversion is economical, [\[FN260\]](#) a moot argument given that GPID has a legal obligation to fix the problems at the dam. [\[FN261\]](#) Though opponents tried to make good use of these arguments in the first two forums, the GPID elections (and subsequent recall process), and federal court, they were more effective in the state legislature.

a. The GPID Recall Drive

The galvanizing moment for the dam removal opposition was the GPID board's passage of a resolution to remove the dam. [\[FN262\]](#) In response, *237 local opponents mounted a recall drive against those board members who had voted for removal. [\[FN263\]](#) While this recall effort failed, [\[FN264\]](#) ultimately new members who opposed removal were elected to the Board in the next election. [\[FN265\]](#) However, by this time GPID had already agreed to remove the dam in exchange for an extension of its water right. [\[FN266\]](#) Thus, opponents were forced to look for another forum in which to stop the removal proposal.

b. The SLAPP Suit

Dam removal opponents next sought to halt the removal proposal by filing a Strategic Lawsuit Against Public Participation, or SLAPP, [\[FN267\]](#) in federal court. The Association to Save Savage Rapids Dam and Lake, Inc. (ASS) and local

landowners filed suit, seeking injunctive and declaratory relief and damages against a long list of defendants, including the Secretary of the Interior, various state agencies, environmental groups, and citizens who had publicly supported dam removal. [FN268] As with other "environmental" SLAPPs, this suit had the *238 ulterior motive of silencing dam removal proponents. [FN269] In the words of one commentator, ASS's SLAPP "may represent the high water mark of SLAPP litigation, being based, apparently, upon the theory that anyone who even speaks, however abstractly, about removing a dam . . . for whatever reason is subject to suit for alleged conspiracy." [FN270] This effort to silence dam removal proponents failed when the suit was thrown out of court.

c. Enlisting Local Politicians

While neither the recall drive, nor the SLAPP suit slowed the progress towards removal, the opposition was much more effective in the local political arena. They gained the support of two local politicians, state Senator Brady Adams (R-Grants Pass) and state Representative Bob Repine (R-Grants Pass), both of whom played crucial roles in taking the removal proposal out of the hands of its proponents. [FN271]

Both Senator Adams and Representative Repine testified against dam removal at a Water Resources Commission hearing during which the commission ultimately approved the deal with GPID to remove the dam and extend GPID's water right. [FN272] Despite threats from Senator Adams, [FN273] the Commission approved a plan calling for the *239 removal of the dam by 2001. [FN274] In response, both legislators crafted bills to protect the dam. [FN275]

2. State Legislative Involvement

Just as with the Elwha removal proposal, the opposition of powerful local politicians halted the dam removal proposal. [FN276] With the introduction of two bills to protect Savage Rapids Dam, proponents of dam removal suddenly found themselves in the unfriendly confines of the Oregon legislature, where their opponents gained the upper hand.

a. Senate Bill No. 1006

Senator Adams introduced Senate Bill No. 1006 in the Oregon Senate. [FN277] The bill originally called for legislative approval before any dam in the state could be removed, [FN278] but was later altered as a result of a compromise negotiated with Governor John Kitzhaber. [FN279] The sole requirement of this compromise bill was the creation of the Savage Rapids Dam Strategic Task Force (Task Force) to study the issue further. [FN280] The Task Force [FN281] was charged with developing "a finite set *240 of alternatives to provide for fish passage and water resources management," [FN282] despite the fact that the Bureau of Reclamation had already done such an alternatives analysis in the EIS. [FN283] After a year of study, the Task Force released its recommendation. [FN284]

b. The State Task Force Recommendation: Dam Retention

The Task Force recommended a slightly modified version of the dam retention alternative not chosen as the preferred alternative by the Bureau in the EIS. [FN285] The Task Force's decision to support dam *241 retention essentially gave removal opponents what they wanted: "this dam retention plan will benefit recreational users of the impoundment, will economically benefit upriver business interests and will avoid potential costs and potential environmental impacts which could result from the discharge of accumulated sediments." [FN286] As a result, it appears that removal opponents have gained the political upper hand. [FN287]

C. Lessons

The Task Force's recommendation is a major step backward for dam removal proposals. It represents the political manipulation of a scientifically-grounded, ecologically-sound recommendation to remove the dam in order to satisfy the narrow, short-term desires of vested local businesses and property owners. While similar manipulation occurred on the

Elwha, Savage Rapids must be distinguished from both the Elwha and Condit cases because the administrative and political processes at work on the Rogue are primarily state-level processes. Although a federal agency developed the Savage Rapids EIS, it was the Oregon Water Resources Board, spurred by an environmental group, WaterWatch, that first made Savage Rapids Dam an issue. Thus, state law and state processes, subject to state-level political pressure, controlled the fate of the dam removal proposal. Still, the federal agencies, especially the U.S. Fish & Wildlife Service, continue to play an important role in keeping the fish passage issue alive. [\[FN288\]](#)

The Savage Rapids imbroglio is a prime example of public choice theory in action. [\[FN289\]](#) It illustrates how a tiny but vocal local opposition *242 group, coupled with powerful local politicians, can halt carefully crafted, administratively-approved decisions which have been developed in a lengthy public process. In Grants Pass, just as in the case of the Elwha dams, a vocal minority blocked an ecologically beneficial dam removal by enlisting powerful local politicians, who then blocked the proposal in the state legislature. In the case of the Savage Rapids Dam, the plight of the salmon appears to have been overwhelmed by the selfishness of a vocal minority of local landowners, business interests, and politicians. Ultimately, the winners if the dam stays are those few local landowners and citizens who recreate on the reservoir in the summer. The salmon continue to lose.

VI. Conclusion

With the serious and well-documented proposals to remove the Condit, Elwha, and Savage Rapids Dams, the restoration of the White Salmon, Elwha, and Rogue Rivers to their free-flowing state is closer than ever before to becoming a reality. Widespread support for these proposals both in government and among the general public represents a considerable shift in attitudes concerning water development. [\[FN290\]](#) The salmon have played a crucial, though tragic role in crystallizing support for dam removal. [\[FN291\]](#) Yet, despite the seriousness with which these dam removal proposals have been developed and debated, the dams remain. And the salmon continue to decline.

The federal and state agencies responsible for developing dam removal proposals generally support dam removal, [\[FN292\]](#) with the possible exception of FERC. [\[FN293\]](#) The processes for developing these proposals are *243 in place and functional, [\[FN294\]](#) yet for various reasons none of the administrative processes examined above has led to a successful dam removal. There are a number of reasons for the current lack of success of dam removal proposals: NEPA analyses inconsistently value the ecological benefits of dam removal; funding issues stall otherwise workable proposals; and, local opposition groups enlist legislators, who are interested only in promoting their own re-election or ideology.

The NEPA process is the primary forum in which the ecological benefits of dam removal have been analyzed. However, different agencies take different approaches to analyzing and valuing the ecological, social, and economic impacts of each alternative, and these differing analytical approaches can lead to inconsistent results; the EISs for Elwha and Savage Rapids both recommended removal, while the EIS for Condit did not. The simplest explanation for this appears to be the flaws in FERC's NEPA analysis in the Condit DEIS. [\[FN295\]](#) However, FERC was also responsible for developing the Elwha relicensing EIS, which recommended dam removal. The distinction between Condit and Elwha may lie in the involvement of the Department of the Interior, and especially of the Park Service, in developing the Elwha proposal. There is considerably more scientific weight and institutional momentum behind the Elwha proposal than in the case of Condit. [\[FN296\]](#)

While funding issues have, at least on the surface, played a crucial role in halting the Elwha proposal, funding mechanisms are in place. It remains to be seen whether those mechanisms will be used. FERC, for example, can require dam owners to remove dams and restore the river. [\[FN297\]](#) In addition, federal funding may be available, especially if endangered species are involved. [\[FN298\]](#) However, despite the ecological benefits of removal for salmon and riverine ecosystems and despite the governmental processes in place for developing and funding workable proposals, local opposition to dam removal has

been both frequent and effective.

*244 Local opposition to dam removal proposals has taken three forms: vested economic interests, citizen opposition groups, and politicians. While the lines between them can blur, as in the case of the Savage Rapids proposal, [\[FN299\]](#) each generally has different motives for opposing dam removal. Vested economic interests, such as the utilities and irrigation districts that own dams, are motivated by the economic realities of their business; a utility with capital invested in a hydropower project wants compensation for the dam and the benefits obtained from it. [\[FN300\]](#) While compensating dam owners for their projects may be the most politically expedient path to dam removal, it may be too expensive for federal or state governments. [\[FN301\]](#)

Local citizens groups and politicians appear to have more ephemeral motives for opposing dam removal proposals. Self-interest and anti-government, anti-environmental ideologies appear to be the driving forces behind opposition groups like Rescue Elwha Area Lakes (REAL), the Association to Save Savage Rapids Dam (ASS), and the Three Rivers Watershed Council. [\[FN302\]](#) The most effective tactic of these local opposition groups is their enlistment of sympathetic politicians to *245 carry their cause to the state legislature or Congress. [\[FN303\]](#) While election-year politics may have played a role in some politicians' involvement, [\[FN304\]](#) the political opposition is generally made up of conservative Republicans who also appear to be motivated by a pro-development, anti-environmental ideology. [\[FN305\]](#) This combination of ideology and self-interest fits perfectly into the branch of public choice theory called the "interest group theory:" [\[FN306\]](#) legislatures are the playground of special interests, like ASS or REAL, or passive mirrors of self-interested constituents. [\[FN307\]](#) Legislators are also driven by their desire for reelection and ideology. [\[FN308\]](#) The Elwha and Savage Rapids cases, sadly, illustrate this only too well.

River advocates must develop effective tactics for countering opposition to dam removal proposals when it develops. One approach is to precede dam removal opponents into the political arena, enlisting the support of politicians early on, playing the public choice game. Another is to anticipate opponents' arguments and make sure that those arguments are addressed in the administrative process, whether in an EIS or in hearings. [\[FN309\]](#) For example, in the case of Savage Rapids, environmental groups' comments on the Draft EIS failed to address the loss of recreation on the reservoir or the gain for river users such as rafters. [\[FN310\]](#) By highlighting the weaknesses of dam removal opponents' arguments during the early stages of development of removal proposals, *246 river advocates can defuse some of the rhetorical power of those arguments.

Despite the apparent recent success of removal opponents, river advocates' overall strategy of using the salmon crisis to spur dam removal proposals towards fruition has had striking results. The three removal proposals examined above all have come closer to restoring free-flowing rivers in the Pacific Northwest than any before them. Hopefully, it is only a matter of time before a crack will appear in the dams holding back these proposals and they, like the rivers they seek to restore, will burst through.

[\[FNd1\]](#). Winner of the 1997 Student Writing Competition--Wallace Stegner Center for Land, Resources and the Environment.

[\[FNa1\]](#). Executive Director, Northwest Environmental Defense Center (NEDC); J.D. and Certificate in Environmental and Natural Resources Law 1997, Northwestern School of Law of Lewis & Clark College; B.A. 1991, Reed College. This Article was originally produced as a paper for Professor Michael C. Blumm and remains indebted to him for both inspiration and his insightful comments throughout its development. In addition, I would like to thank Stephen Bloch and the Journal staff for their superb editorial assistance.

[\[FN1\]](#). John McPhee, Encounters With The Archdruid 159 (1971).

[FN2]. Christopher Manes, *Green Rage: Radical Environmentalism and the Unmaking of Civilization* 5 (1990) (quoting Floyd Dominy, former head of the Bureau of Reclamation).

[FN3]. There are between 68,000 and 75,000 large dams on American rivers, damming 17% of the total mileage of those rivers, and if dams that create farm ponds are included, the number rises to over two million. See W. Kent Olson, Introduction to John D. Echeverria et al., *River At Risk: The Concerned Citizen's Guide to Hydropower* 1, 1 (1989). Less than 0.25% of those rivers are protected. See *id.* at 1-2.

[FN4]. Human communities rely on dams for power, drinking water supplies, flood control, recreation, and irrigation. See [Michael T. Pyle, Note, Beyond Fish Ladders: Dam Removal as a Strategy for Restoring America's Rivers, 14 Stan. Env'tl. L.J. 97, 99 \(1995\)](#); Patrick McCully, *Silenced Rivers: The Ecology and Politics of Large Dams* 24 (1996).

[FN5]. An "indicator species" is a species whose health reflects that of the ecosystem in which it lives. If the species' population declines, that decline reflects a concurrent decline in the overall health and function of the ecosystem. See Theodore C. Foin, Jr., *Ecological Systems and The Environment* 267 (1976) (discussing indicator species).

[FN6]. In the Columbia Basin, the operation of the Federal Columbia River Hydropower System accounts for 80% of the decline of salmon, from a historic level of 10-16 million fish annually to 1.5 million today. See [Northwest Resource Info. Ctr. v. N.W. Power Planning Council, 35 F.3d 1371, 1376 \(9th Cir. 1994\)](#). See also Sarah F. Bates et al., *Searching Out the Headwaters: Change and Rediscovery in Western Water Policy* 43 (1993) (noting that declines in salmon populations in Northwest and in squawfish populations in Colorado River are directly attributable to dams); McCully, *supra* note 4, at 41 (citing a National Marine Fisheries Service Study which found that the economic losses for the period between 1960 and 1980 due to the destruction of the salmon fishery totaled \$6.5 billion). One recent study noted that the aggregate mortality of juveniles migrating down the 471 miles of the Snake River-Columbia River corridor is estimated at 43% to 95% from all causes. See HARZA Northwest, Inc. et al., *Salmon Decision Analysis Lower Snake River Feasibility Study Final Report* 3-5 (1996) (prepared for U.S. Army Corps of Engineers Walla Walla District) (hereinafter HARZA Report).

[FN7]. When smolts reach a dam, they must pass over, around, or through it, a process that can result in high mortality. In addition, smolts must swim down through the reservoir behind the dam instead of being flushed to the sea by spring floods. Water flows much more slowly through the reservoir than in the river, increasing the time smolts spend getting to the sea. During this slowed migration, they are more susceptible to predation, heat stress, and other causes of mortality. See [Northwest Resource Info., 35 F.3d at 1375-77](#) (discussing detrimental impact of hydropower development on salmon populations); see also [Public Util. Dist. 1 of Chelan County, Wash., 34 FERC < 63,044 \(1986\)](#) (finding 11% mortality at one dam).

After growing to maturity in the Pacific, adult salmon climb upstream to the river of their birth, passing over as many as eight dams on the mainstem Columbia River alone, as well as smaller projects on tributaries. The cumulative effect of this series of dams is highly destructive to salmon populations because the passage problems at each dam are multiplied, leading to a cumulative deterioration of the downstream migration. See [H.R. Rep. No. 96-976, pt. I, at 46 \(1980\)](#), reprinted in 1980 U.S.C.A.N. 5989, 6044. See also William G. Robbins, *The World of Columbia River Salmon: Nature, Culture, and the Great River of the West*, in *The Northwest Salmon Crisis: a Documentary History* 18, map (Joseph Cone & Sandy Ridlington eds., 1996) (hereinafter *Salmon Crisis*) (picturing all major dams in Columbia Basin).

[FN8]. There are numerous examples of such impassable dams, including: **Condit Dam** on the White Salmon River in Washington state; Elwha Dam and Glines Canyon Dam on the Elwha River on the Olympic Peninsula of Washington; Grand Coolee Dam on the upper Columbia River; and, the Hells Canyon Complex on the upper Snake River in Idaho. See *infra*

sections III. and IV.

[FN9]. While other factors play a part in the salmon's decline, dams are widely considered one of the central culprits. See *supra* notes 6-7; [Northwest Resource Info., 35 F.3d at 1375-77](#) (noting that hydropower system on Columbia is responsible for 80% of this decline).

[FN10]. As the writer Wallace Stegner put it, "Dams do literally kill rivers, which means they kill not only living water and natural scenery but a whole congeries of values associated with them." Bates et al., *supra* note 6, at 43.

[FN11]. See *id.* at 42-43. Federal agencies, regional power companies, and environmentalists all agree that dams in the West have altered the natural habitat of the rivers they block, threatening endangered species and native vegetation. See Michelle Boorstein, Grand Canyon Flood Scientist Quits, says Agency Ignoring Study, *The Oregonian*, Nov. 26, 1996, at A10.

[FN12]. See Margaret Bowman, Restoring the Balance: Dam Relicensing Offers River Restoration Opportunities, *World Rivers Review* (International Rivers Network, Berkeley, Ca.), July 1996, at 6-7. See also David Foster, Pressure Is On For Removal Of Dam From Elwha River, *Seattle Times*, Oct. 6, 1991, at B1 (noting history of hydropower in Northwest and FERC's role in it).

[FN13]. See Bowman, *supra* note 12, at 6-7; see also McCully, *supra* note 4, at 126. As John Echeverria, Conservation Director for American Rivers stated, "When these projects were built, there was little understanding and virtually no protection of the ecology of river systems. Relicensing is an opportunity to restore a lot of important river values that have been lost." Foster, *supra* note 12.

[FN14]. Tribes and environmental organizations have played a major role in making dam removal a viable option to solving the problems associated with dams. See, e.g., Oregon Natural Resources Council, 15 Damnable Dams 3 (1994) (noting that "it is time to abandon the old questions of where and whether dams should be built and replace them with the question of whether or not existing dams should be allowed to remain") (hereinafter ONRC Report); *infra* notes 138-140 and accompanying text. Federal agencies have also gotten involved in the debate about dam removal. One recent report, commissioned by the U.S. Army Corps of Engineers (Corps), went so far as to suggest removing major federal dams on the lower Snake River in order to promote the recovery of Idaho's salmon populations. See, e.g., HARZA Report, *supra* note 6, at 1-6; Jonathan Brinckman, Army Corps Considers Removing Dams, *The Oregonian*, Nov. 9, 1996, at A1.

[FN15]. A study of the lower Snake and Columbia Rivers found that juvenile salmonid survival rates would increase by 60% if the two major dams on the lower Snake were removed and improvements for fish passage were made to the lower Columbia dams. See HARZA Report, *supra* note 6, at 1-6. See Office of Hydropower Relicensing, Federal Energy Regulatory Commission, Draft Environmental Impact Statement: Glines Canyon (FERC No. 588) and Elwha (FERC No. 2683) Hydroelectric Projects, Washington 4-99 to 4-100 (1991) (hereinafter Elwha DEIS).

[FN16]. See Pyle, *supra* note 4, at 112. For example, restoring the salmon population in the Elwha would increase the biodiversity of the entire ecosystem by providing food to many species formerly dependent on salmon carcasses. See Elwha DEIS, *supra* note 15, at 1-7.

[FN17]. The primary ecological risks of dam removal result from the potential for increased sediment flow in the lower river as the sediment collected behind the dam over the years is released. High sediment flows have deleterious effects on fish, invertebrates, and plants. See Elwha DEIS, *supra* note 15, at 4-92 to 4-94.

[FN18]. See Pyle, *supra* note 4, at 113-114.

[FN19]. In some cases, dams have collapsed, devastating downstream ecosystems and human communities. See Donald Worster, *Rivers of Empire: water, Aridity, and the Growth of the American West* 308 (1985) (discussing collapse of Teton Dam); see also Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* 407 (1986) (setting damage cost resulting from Teton Dam collapse at \$2 billion); McCully, *supra* note 4, at 115-17 (discussing dam disasters, such as the collapse of a dam in China in 1975 which killed 230,000 people).

[FN20]. See Pyle, *supra* note 4, at 101. Although exact figures vary depending on the type of dam and numerous other factors, concrete dams are generally believed to have a lifespan of between 50 and 100 years. See also National Research Council, *Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy* 219 (1992) (hereinafter *Restoration of Aquatic Ecosystems*).

[FN21]. Wallace Stegner wrote eloquently of the environmental catastrophe that resulted from the belief that we must conquer the wildness of the West:

God and Manifest Destiny spoke with one voice urging us to "conquer" or "win" the West; and there was no voice of comparable authority to remind us of Mary Austin's quiet but profound truth, that "the manner of the country makes the usage of life there, and the land will not be lived in except in its own fashion."

...

... (M)illions of Americans continue to think of the water engineering in the West as one of our proudest achievements, a technology that we should export to backward Third World nations to help them become as we are. We go on praising apples as if eating them were an injunction of the Ten Commandments.

Wallace Stegner, *Where the Bluebird Sings to the Lemonade Springs: Living and Writing in the West* 87 (1992).

[FN22]. See Kirkpatrick Sale, *The Green Revolution: The American Environmental Movement, 1962-1992*, 16-18 (1993) (discussing organized opposition to proposed Grand Canyon dams in mid-1960's and "significant turning point in American attitudes toward(s)" land that public outcry against proposal represented); see also Bill Devall & George Sessions, *Deep Ecology: Living as if Nature Mattered* 65-73, 145-159 (1985) (discussing intrinsic value of natural systems).

[FN23]. The Secretary of the Interior, Bruce Babbitt, has publicly stated that he would like to blow up a major dam while in office. See *Babbitt Backs Removal of Elwha River Dams*, *Morning News Trib.* (Tacoma, Wash.), Apr. 23, 1993, at B5; see also Julie Titone, *Will Dams Come Tumbling Down? Government Poised to Return Elwha River to its Wild State*, *Spokesman Rev.*, May 13, 1994, at A1. A recent study for the U.S. Army Corps of Engineers suggested removal of two major dams on the lower Snake River. See *HARZA Report*, *supra* note 6, at 1-6. This appears to be the first time the federal agencies responsible for the Columbia basin hydropower system have considered removing any of the mainstem dams. It represents a significant step forward in thinking about major system changes in order to restore and protect salmon populations in the Columbia basin.

[FN24]. See *infra* section III.

[FN25]. See United States Bureau of Reclamation, U.S. Dept. of the Interior, *Planning Report and Final Environmental Impact Statement, Fish Passage Improvements Savage Rapids Dam Summary-3 to Summary-6* (1995) (hereinafter *Savage Rapids EIS*).

[FN26]. As one commentator has written, "(t)he power of these local interest groups should not be surprising." Michael C. Blumm, [Public Choice Theory and the Public Lands: Why "Multiple Use" Failed](#), 18 *Harv. Env'tl. L. Rev.* 405, 407- 08

[\[1994\]](#). As Professor Blumm points out, "public choice theory predicts that such small, well-organized special interest groups will exert a disproportionate influence on policymaking." *Id.* See also Daniel A. Farber & Philip P. Frickey, *Law and Public Choice: A Critical Introduction* 12-38 (1991). This prediction is particularly appropriate for public policy decisions involving public lands and natural resources such as rivers, where the distinct and locally powerful economic interests regularly overshadow the diffuse and distant "owners" of those lands and resources, the general public. See *id.* at 407-08; see also *infra* section V. B. 2.

[\[FN27\]](#). Both David Brower and Edward Abbey advocated removal of the Glen Canyon Dam on the Colorado as early as the 1970's. See Pyle, *supra* note 4, at 98-99. The environmental group Earth First!'s first public "action" was the "cracking" of Glen Canyon Dam with a 300-foot sheet of black polyethylene in 1981. See Manes, *supra* note 2, at 3-7; see also Dave Foreman, *Confessions of An Eco-Warrior* 21-22 (1991).

While dam removal proposals have yet attained success, public opposition killed a number of proposals to build new dams, including a Bureau of Reclamation proposal to build two dams in the Grand Canyon. See Sale, *supra* note 22, at 16- 17. This success was a watershed for the environmental movement. In the words of one commentator:

(F)or the first time, a large segment of the American public was heard to say that it preferred rivers to dams--dams, which had historically been favored by all administrations, by both parties in Congress, by developers of every stripe, and by generations who applauded turning darkness to dawn. Those dams were now seen by many as illegitimate concrete intrusions into wilderness areas that had their own integrity, their own beauty, and their own rights.

Id. at 17-18.

[\[FN28\]](#). The Elwha River Ecosystem and Fisheries Restoration Act, [Pub. L. No. 102-495](#), 106 Stat. 3173 (1992) (codified in scattered sections of 16 U.S.C.). See *infra* section IV., C., 1.

[\[FN29\]](#). See Pyle, *supra* note 4, at 99 (noting that dam removal proposals are now debated in Congress).

[\[FN30\]](#). See Federal Energy Regulatory Commission, *Draft Environmental Impact Statement, Condit Hydroelectric Project* FERC no. 2342-005, Washington 1 (1995) (stating that all salmon runs above the dam are gone) (hereinafter *Condit DEIS*).

[\[FN31\]](#). See *Elwha DEIS*, *supra* note 15, at 1-4.

[\[FN32\]](#). See *Savage Rapids EIS*, *supra* note 25, at Summary-2 (noting that fish passage at dam has been an issue since its construction).

[\[FN33\]](#). Ecologists now believe that ecosystems are "thermodynamically open, far from equilibrium" systems. See Eugene P. Odum, *Great Ideas in Ecology for the 1990s*, 42 *Bioscience* 542 (1992); see also Symposium on Ecology and the Law, 69 *Chi.-Kent L. Rev.* 845 (1994). While naturally evolved systems tend towards great diversity and variation in species, human action, one of the principal forces operating on ecosystems, tends to lessen diversity. See, e.g., Daniel B. Botkin, *Discordant Harmonies: A New Ecology for the Twenty-First Century* (1990). Reservoir ecosystems, for example, tend towards simplicity instead of the diversity inherent in naturally evolved ecosystems. The causes of this simplification of the former riverine ecosystem include dam-induced changes in water temperatures and flows and the introduction of non-native species, especially predators. Still, some tend to confuse what exists (the reservoir) with what is "natural" (the river). Others may simply prefer reservoirs to rivers, motor boats to kayaks, and bass to salmon and trout.

[\[FN34\]](#). See *Condit DEIS*, *supra* note 30, at iv.

[\[FN35\]](#). See Pyle, *supra* note 4, at 113.

[FN36]. See [Northwest Resource Info., 35 F.3d at 1375-76](#) (noting that dams are a "major factor" in decline of salmon); see also [Endangered and Threatened Species: Proposed Endangered Status for Snake River Sockeye Salmon, 56 Fed. Reg. 14,055, 14,058 \(1991\)](#) (attributing 80% of decline of some salmon to hydropower development). Congress has recognized "the tremendous, detrimental impact of dams on the fish runs" and as a result passed the Northwest Power Act, [16 U.S.C. §§ 839-839h \(1994\)](#), to "ensure ('') 'equitable treatment' of fish and wildlife. [Northwest Resource Info., 35 F.3d at 1377](#).

[FN37]. See Michael C. Blumm & F. Lorraine Bodi, Commentary, in *Salmon Crisis*, supra note 7, at 103-05 (discussing construction of Columbia River dams despite report noting uncertainties surrounding impact of dams on salmon).

[FN38]. This is not precisely true. Condit was built with a wooden fish ladder which was destroyed by a flood the following year. This was replaced with a concrete fish ladder, but this was also soon destroyed and never rebuilt. See Condit DEIS, supra note 30, at iii-iv.

[FN39]. That habitat may still be able to support salmon, however. One proposed method of continuing to make such habitat available to salmon is the trap-and-haul method. Adults are captured at the dam, trapped, and hauled over or around the dam and released into the reservoir; smolts are trapped at the dam end of the reservoir as they make their way toward the ocean and trucked around it. See PacifiCorp, Comments Regarding Draft Environmental Impact Statement, at 1 (Mar. 5, 1996) (proposing this method to get fish over **Condit Dam**) (on file with FERC Portland Regional Office).

Trapping and hauling is essentially a smaller version of the Corps' current method for getting fish past the Columbia dams, the barging and trucking program. Despite 20 years of barging on the Columbia, the salmon continue to decline and many critics argue that barging has done little to alleviate the problem. See Michael C. Blumm & F. Lorraine Bodi, Commentary, in *Salmon Crisis*, supra note 7, at 320 (discussing ineffectiveness of the ESA in limiting barging); see also William L. Lang, *River of Change: Salmon, Time, and Crisis on the Columbia River*, in *Salmon Crisis*, supra note 7, at 359-60 (arguing that artificial solutions to salmon crisis, such as barging, only exacerbate problems).

[FN40]. See Ted Gup, *Dammed From Here to Eternity: Dams and Biological Integrity*, *Trout*, Winter 1994, at 14, 18.

[FN41]. See Pyle, supra note 4, at 108.

[FN42]. See Elwha DEIS, supra note 15, at A-70 (noting simplicity and low cost of method). Natural flushing is the cheapest method, but has the potential for the greatest adverse consequences downstream with the potential release of large amounts of sediment from behind the dam. While natural flushing has the potential to harm downstream habitat in the event of a massive release of sediment, in some cases it may be a safe and effective option. In Wisconsin, a city removed a small dam on the Milwaukee River for public safety reasons. See *Restoration of Aquatic*, supra note 20, at 220. All of the sediment was scoured out within six months and native fish quickly returned to the river. See Pat Durkin, *Ailing Rivers and Wetlands Get help*, *L.A. Times*, Oct. 31, 1993, at A2.

[FN43]. See Elwha Deis, supra note 15, at A-70. (noting expense of method). The cost of complete sediment removal may be prohibitively expensive in some cases.

[FN44]. See *id.* at A-71.

[FN45]. See *Restoration of Aquatic Ecosystems*, supra note 20, at 219.

[FN46]. See Telephone Interview with Katherine Ransel, American Rivers Northwest Regional Office (Oct. 20, 1996).

[FN47]. See [Kai N. Lee & Jody Lawrence, Adaptive Management: Learning From the Columbia River Basin Fish and Wildlife Program, 16 Env'tl. L. 431, 441 \(1986\)](#) (calling Program largest biological restoration effort ever attempted); see also [Michael C. Blumm et al., Beyond the Parity Promise: Struggling to Save Columbia Basin Salmon in the Mid-1990s, 27 Env'tl. L. 21, 23 \(1997\)](#) (hereinafter Blumm, Beyond the Parity Promise) (calling salmon signature natural resource of region).

[FN48]. Indeed, salmon are so important to the citizens of the region that they are willing to pay increased electricity rates to protect and restore salmon runs. See Blumm et al., Beyond the Parity Promise, supra note 47, at 124.

[FN49]. See Jim Klahn, 'Blow a Dam or Two' to Protect Salmon Runs, Says Scientist at Seattle Conference, Seattle Times, Jan. 13, 1994, at B5 (noting benefit of removal for salmon runs); see also Pyle, supra note 4, at 104-05 (noting that region is fertile ground for removal efforts because of salmon crisis). Much of the stream restoration in the past has been directed at salmonids, and there is a wealth of literature attesting to the potential effectiveness of such restoration efforts. See Restoration of Aquatic Ecosystems, supra note 20, at 222.

[FN50]. See, e.g., Elwha DEIS, supra note 15, at 4-107 (finding that revegetation of Elwha River would benefit many other species in Olympic National Park, including deer and elk).

[FN51]. Manes, supra note 2, at 5. To this Edward Abbey responded, referring to Glen Canyon Dam on the Colorado, "about 300 feet closer. Eh, Floyd?" Id.

[FN52]. Western water law is ruled by the doctrine of prior appropriation. The person who first appropriates water from a stream gains a right over all others to that water. In short, grab all you can lest someone else grab it first. See 2 Robert E. Beck, Waters and Water Rights §§ 11.01-17.04 (1995) (discussing prior appropriation doctrine generally); see also [Michael C. Blumm, Seven Myths of Northwest Water Law and Associated Stories, 26 Env'tl. L. 141, 145-46 \(1996\)](#) (western water law rewards first diverter with property rights). For a critical appraisal of prior appropriation doctrine, see generally Charles F. Wilkinson, Aldo Leopold and Western Water Law: Thinking Perpendicular to Prior Appropriation Doctrine, 24 Land & Water L. Rev. 1 (1989).

[FN53]. Stegner, supra note 21, at 87.

The Garden of the World has been a glittering dream, and many find its fulfillment exhilarating. I do not. I have already said that I think of the main-stem dams that made it possible as original sin, but there is neither a serpent nor a guilty first couple in the story. In Adam's fall we sinned all. Our very virtues as a pioneering people, the very genius of our industrial civilization, drove us to act as we did.

Id. at 86-7.

[FN54]. "Biocentric" literally means "earth-centered." In the formulation of its proponents, it means that "all things in the biosphere have an equal right to live and blossom and to reach their own individual forms. . . . The practical implications of this . . . suggest(s) that we should live on the earth with minimum rather than maximum impact on other species and the Earth in general." Devall & Sessions, supra note 22, at 67-68.

[FN55]. See supra note 22 and accompanying text.

[FN56]. Joan Laatz, Dam's Fate Lies on Salmon Issue, Oregonian, Aug. 9, 1993, at A1.

[FN57]. See Devall & Sessions, supra note 22, at 59-61 (1986) (noting change in environmental consciousness begun with

Rachel Carson's *Silent Spring* and resulting development of environmental movement in U.S.); see also Sale, *supra* note 22, at 3-5 (discussing origins of American environmental movement).

[FN58]. See Sale, *supra* note 22, at 26 (discussing passage of NEPA and watershed moment it represented for legal protection of environmental values).

[FN59]. John Muir's fight against the damming of Hetch Hetchy Valley to create a water supply for San Francisco in the 1900's has become a symbolic battle in the history of American environmentalism, pitting preservationists against developers and setting the pattern for later battles. See Bates et al., *supra* note 6, at 43-44 ("Dam Hetch Hetchy! Muir exclaimed in outrage, 'As well dam for water-tanks the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.'").

[FN60]. See David R. Brower, *Let the Mountains Talk, Let the Rivers Run: A Call to Those who Would Save the Earth* 26-27 (1995) (discussing Glen Canyon fiasco).

[FN61]. In Abbey's most famous novel, the main characters dream about bringing down Glen Canyon Dam. See generally Edward Abbey, *The Monkey Wrench Gang* (1975).

[FN62]. See Sale, *supra* note 22, at 17-18.

[FN63]. Although rare, dam failures can have catastrophic consequences. See Pyle, *supra* note 4, at 100-01. The collapse of the Bureau of Reclamation's Teton Dam in 1976 killed 11 people and 13,000 head of cattle, destroyed many ranchers' homes, and carried away "a billion tons of topsoil and no small part of the pride and esteem of the river controllers." Worster, *supra* note 19, at 308. In the more distant past, dam failures caused the infamous Johnstown Flood of 1889 in which more than 2000 people died and the St. Francis Dam disaster near Los Angeles in 1928 in which more than 400 people drowned. See *id.* at 309.

More insidious and widespread than catastrophic failure, the aging of dams causes inevitable problems. As one commentator eloquently noted:

(t)he best designs of the best engineers . . . could fail, not only all at once . . . but slowly too, wearing out, falling into disrepair, becoming impossible to salvage. Steel penstocks and headgates must someday rust and collapse. Concrete, so permanent-seeming in its youth, must turn soft and crumble. Heavy banks of earth . . . must eventually, under the most favorable circumstances, erode away.

Id.

[FN64]. Brad Knickerbocker, *Future of Aging Dams in U.S. Comes Under Federal Scrutiny*, *Christian Sci. Monitor*, Mar. 2, 1994, at 1 (quoting Federal Emergency Management Agency, *Report on Dam Safety*). Dam safety concerns prompted Congress to enact a national dam safety act in 1972, which set safety standards and required inspections. See [33 U.S.C. §§ 467-467n \(1994\)](#) (dam safety act); see also R. Thomas Lay, *Dam Failures: Common and Emerging Theories of Liability and Recovery*, 43 *Okla. L. Rev.* 103, 103-04 (1990) (discussing concerns that led to dam safety act); McCully, *supra* note 4, at 126 (discussing Move thou 10,000 'unsafe' dams discovered by the Corps during a survey in the early 1980s).

[FN65]. See *Restoration of Aquatic Ecosystems*, *supra* note 20, at 219.

[FN66]. *Id.* The Council, extrapolating from Corps and state figures, determined that it would cost \$2.24 billion to repair just those dams found by the Corps to have a high hazard of failure. See *id.*

[FN67]. See generally Salmon Crisis, *supra* note 7. In other regions of the country, safety concerns, fish passage concerns, and economic burdens seem to be driving removal proposals. See Restoration of Aquatic Ecosystems, *supra* note 20, at 219-20 (discussing safety concerns about dam in Wisconsin and fish passage concerns about dam in Maine).

[FN68]. For a discussion of the proposed solutions for the Columbia, see Blumm et al., Beyond the Parity Promise, *supra* note 47, at 29-36.

[FN69]. See Pyle, *supra* note 4, at 104.

[FN70]. See, e.g., Savage Rapids EIS, *supra* note 25, at Attachment I-Comments and Responses (printing comments of environmental organizations on Draft EIS which discussed ecological and other benefits of removing dam). In addition, much of the restoration of streams and rivers in the Pacific Northwest is a result of organized efforts by groups such as Oregon Trout, the Federation of Fly Fishers, Trout Unlimited, Northwest Steelheaders, and United Anglers, all made up primarily of sport fisher persons who prize healthy fish habitat. See Restoration of Aquatic Ecosystems, *supra* note 20, at 222.

[FN71]. See Klahn, *supra* note 49 (noting agreement among scientists at Seattle conference that dam removal will benefit salmon).

[FN72]. The Yakamas played the leading role in getting FERC to consider dam removal in the case of **Condit Dam**. See Condit DEIS, *supra* note 30, at 2-1; see also *infra* section III., A., 2.

[FN73]. See *infra* sections IV and V.

[FN74]. Utilities are also afraid that allowing a single dam to be removed would set a precedent that would result in further dam removals. See Rich Royston, Washington Dams Targeted: Two Private Hydroelectric Facilities may be Torn Down to Restore Native Salmon Runs, *Christian Sci. Monitor*, Aug. 12, 1992, at 8.

[FN75]. See Group Files Lawsuit to Stop Loss of Savage Rapids Dam, *The Oregonian*, Mar. 19, 1994, at D3.

[FN76]. This group is named Rescue Elwha Area Lakes, or REAL. See Eric Pryne, Elwha Dams Won't Be Coming Down Anytime Soon, *Seattle Times*, May 19, 1994, at A1. They too have adopted a charismatic species as their cause celebre, the trumpeter swan, which stops at the reservoir behind Glines Canyon Dam during its migration. See *id.* The trumpeter swan is not a listed species under the ESA.

[FN77]. These costs can be quite high in the case of large projects. For example, the current estimated cost of removing the Elwha dams is around \$111 million. See Slade Gorton, A More-Sensible Option for Elwha Dams, *Seattle Times*, July 31, 1996, at B5. These costs are far from clear, however, and have been the subject of much debate since the proposal was originally made. Earlier estimates had the cost of removal as high as \$300 million. See Slade Gorton, Can We Build Up Salmon By Tearing Down Dams?, *Seattle Post-Intelligencer*, July 22, 1994, at A13.

[FN78]. Hydropower dams generate what many people consider environment-friendly electricity, because it is renewable, reliable, non-polluting, and cheap. See Pyle, *supra* note 4, at 115-16. However, the true costs of hydropower can be seen in the decline of the salmon.

[FN79]. The Condit Project, for example, produces approximately 1.5% of PacifiCorp's power. See Condit DEIS, *supra* note 30, at 2-1.

[FN80]. See Blumm et al., *Beyond the Parity Promise*, supra note 47, at 100, n. 573.

[FN81]. See Bruce Brown, *Mountain in the Clouds* 34-37 (1982) (discussing effect from loss of Lake Quinault sockeye salmon runs on economy of Quinault Indians and potential for restoration).

[FN82]. See Pyle, supra note 4, at 114-17.

[FN83]. See Condit DEIS, supra note 30, at 3-15.

[FN84]. Contingent valuation translates public values into cash values. See Eric Pryne, *Figuring Price for Priceless Assets is no Idle Exercise: Economists Try to Calculate Value of Elwha River to see what the Public Would Pay to Restore it*, *Seattle Times*, Apr. 9, 1995, at B1.

[FN85]. For example, a return of upper-river, non-Indian commercial salmon harvesting of the Columbia runs is a long way off. Salmon populations will have to experience an exponential increase over many years in order to reach levels at which they can again be commercially exploited.

[FN86]. See infra section IV.

[FN87]. See Pyle, supra note 4, at 139-40.

[FN88]. See Laatz, *Dam's Fate Lies on Salmon Issue*, supra note 56. In the past, some unscrupulous dam owners have abandoned unsafe dams, leaving the public to foot the bill for removal. For example, in Michigan taxpayers paid for the removal of several abandoned hydroelectric projects. See [Consumers Power Co., 68 F.E.R.C. ae 61,077, 61,378-382 \(1994\)](#). A decommissioning fund, funded via a charge to licensees, could provide the money to necessary to remove abandoned projects.

[FN89]. Such a condition is included in the FERC license for the Condit Project. See Federal Power Commission, *Order Issuing License (Major) 1* (Dec. 20, 1968) (on file with FERC Portland Regional Office).

[FN90]. Federal Energy Regulatory Comm'n, *Project Decommissioning at Relicensing, Policy Statement* (Dec. 14, 1994) (Docket No. RM93-23-000) (hereinafter FERC [Decommissioning Policy](#)), [60 Fed. Reg. 339 \(1995\)](#) (codified at [18 C.F.R. § 2.24](#)). FERC Adopted this policy soon after, however it remains to be seen how the agency will implement the policy statement.

[FN91]. One such case is where dam removal would help protect or enhance the viability of a listed species such as the salmon. See infra sections IV., V.

[FN92]. This is not to say that funding issues are unimportant or that money is not a concern. Dam removal is expensive, especially when the benefits of river restoration in the Northwest are primarily theoretical. In other areas, dam removal has resulted in significant ecological and economic benefits. See supra note 42.

[FN93]. See Columbia River Gorge Commission, *An Overview: Columbia River Gorge National Scenic Area Management Plan 1* (1994) (discussing Gorge's unique features and values); see also [Bowen Blair, Jr., *The Columbia River Gorge National Scenic Area: The Act, Its Genesis And Legislative History*, 17 Env'tl. L. 863, 869-71 \(1987\)](#) (discussing natural resources and values at Gorge); Kristine Olson Rogers, [Native American Collaboration in Cultural Resource Protection in the Columbia River Gorge National Scenic Area](#), [17 Vt. L. Rev. 741, 742 \(1993\)](#) (discussing Columbia River Gorge National Scenic Area

Act).

[FN94]. The National Marine Fisheries Service (NMFS) conservatively estimated 3,856 Chinook returns annually. See National Oceanic and Atmospheric Administration, Comments on the Draft Environmental Impact Statement (DEIS dated Nov. 1995) For the Condit Hydroelectric Project (FERC No. 2342) 6 (Mar. 6, 1996) (hereinafter NMFS Comments) (on file with FERC Portland Regional Office). However, this estimate is probably conservatively low. See Laatz, *Dam's Fate Lies on Salmon Issue*, supra note 56.

[FN95]. See NMFS Comments, supra note 94, at 1.

[FN96]. See Laatz, *Dam's Fate Lies on Salmon Issue*, supra note 56. The dam was built with wooden fish ladders which were destroyed in a flood shortly after the project was completed; concrete replacement ladders were built but also destroyed and never rebuilt. See also *Battle Brewing Over Fish Protection in First of PacifiCorp Relicensings*, *Electric Util. Wk.*, Aug. 16, 1993, at 8 (hereinafter *Battle Brewing Over Fish Protection*). The project's owner at the time, Northwest Electric Co., paid Washington state \$5,000 in lieu of building another fish ladder; the money was used for a hatchery to mitigate the loss of fish habitat near the mouth of the Columbia River. See *id.*

[FN97]. See American Fisheries Society, *Crossroads Report*, in *Salmon Crisis*, supra note 7, at 290-295 (examining salmon crisis); see also Katherine Ransel & Shawn Cantrell, *Dam Issue Doesn't Need More Study*, *Oregonian*, Sept. 21, 1994, at B11.

[FN98]. See NMFS Comments, supra note 94, at 6.

[FN99]. See *Battle Brewing Over Fish Protection*, supra note 96.

[FN100]. See Federal Power Commission, *Order Issuing License (Major) 1* (Dec. 20, 1968) (on file with Portland Regional Office).

[FN101]. See *id.* at 7.

[FN102]. See [16 U.S.C. §§ 803\(j\), 823a\(c\) \(1994\)](#).

[FN103]. See Laatz, *Dam's Fate Lies on Salmon Issue*, supra note 56; see also supra note 12 and accompanying text.

[FN104]. As a FERC spokesman put it, "(w)hen these dams were put in people were thinking about power generation and not fish and wildlife." *Id.* Indeed, hydroelectric licensing under the FPA led to the first modern environmental appellate opinion, [Scenic Hudson Preservation Conf. v. Federal Power Comm'n.](#) 354 F.2d 608 (2d Cir. 1965), cert. denied, [384 U.S. 941 \(1966\)](#), which involved the FPC's refusal to examine environmental effects in a licensing decision.

[FN105]. See Electric Consumer Protection Act of [1986, Pub. L. No. 99-495](#), S161, 100 Stat. 1243 (1986) (codified at [16 U.S.C. §§ 791-828c \(1994\)](#)). Originally passed as the Federal Water Power Act in 1920, the FPA has gone through several amendment processes that have clarified Congress's intent to protect fish and wildlife while promoting hydropower development on the nation's rivers and streams. See also Michael C. Blumm, *Hydroelectric Regulation Under the Federal Power Act*, in *Waters and Water Rights* § 40.02 (Robert E. Beck ed., 1996) (hereinafter Blumm, *Hydroelectric Regulation*).

[FN106]. [16 U.S.C. §§ 803\(j\), 823a\(c\) \(1994\)](#). Congress increased the FPA's fish and wildlife protections with the passage of the Electric Consumer Protection Act of [1986, Pub. L. No. 100-495](#), S1 (a), 100 Stat. 1243 (codified in scattered sections of

[16 U.S.C. §§ 791-828c \(1994\)](#). The 1986 Act was passed in reaction to the energy crisis of the 1970s, incentives created by Congress to promote sustainable energy development, and the resulting "small hydro" boom of the 1980s, in order to clarify that it had not intended to elevate hydropower development over fish and wildlife protection. See Blumm, Hydroelectric Regulation, *supra* note 105, § 40.01.

[FN107]. Notably, the National Environmental Policy Act of 1969 (NEPA), [42 U.S.C. §§ 4321-4370d \(1994\)](#), the Endangered Species Act of 1973 (ESA), [16 U.S.C. §§ 1531-1544 \(1994\)](#), the Clean Water Act (CWA), [33 U.S.C. §§ 1251-1387 \(1994\)](#), and the National Wild and Scenic Rivers Act of 1968, [16 U.S.C. §§ 1271-1287 \(1994\)](#) all require analyses of proposed activities effect on the natural environment. See generally Blumm, Hydroelectric Regulation, *supra* note 105, §§ 40.08-40.08(e)(1).

[FN108]. See [16 U.S.C. §§ 662\(a\), 797\(e\), 803\(j\) \(1994\)](#). See also Blumm, Hydroelectric Regulation, *supra* note 105, § 40.10(c) (discussing environmental review during relicensing).

[FN109]. See [16 U.S.C. § 811 \(1994\)](#). Pursuant to § 18 of the FPA, NMFS and U.S. F&WS prescribed conditions to Condit licensing. The most important conditions involved fish passage facilities. The agencies required the construction of an Ice Harbor type fish ladder, a fish counting station, a fish screen, spillway modifications to provide safe downstream passage, and a tailrace barrier. See Condit DEIS, *supra* note 30, at 2-32 to 2-35.

[FN110]. See [16 U.S.C. § 811 \(1994\)](#).

[FN111]. See, e.g., Federal Power Commission, Order Issuing license (Major) 1 (Dec. 20, 1968) (on file with FERC Portland Field Office) (Condit Project license).

[FN112]. See FERC Decommissioning Policy, *supra* note 90, at 32-34.

[FN113]. See Laatz, Dam's Fate Lies on Salmon Issue, *supra* note 57 (restating Bob Cecil, FERC spokesman). See also Bowman, *supra* note 12, at 6-7.

[FN114]. See Condit DEIS, *supra* note 30, at viii. PacifiCorp did propose improvements to existing operations at Condit in its 1991 license renewal application. See *id.* at 1-1.

[FN115]. See Northwest Power Planning Council, Columbia River Basin Fish & Wildlife Program 7-11 (1982). The Council's program stated that "FERC shall require (PacifiCorp) to immediately design and construct facilities to allow upstream and downstream migration of anadromous fish at **Condit Dam**. Construction shall be completed by November 15, 1985." *Id.*

[FN116]. The NPPC's general counsel noted that **Condit Dam** offers a significant opportunity for restoration of riverine habitat because, historically, the White Salmon had a large run of wild fish, and there is only one other dam between the river and the ocean, Bonneville Dam on the lower Columbia. See Northwest Groups Asking FERC to Ensure Fish Are Aided at PacifiCorp **Condit Dam**, Util. Env't Rep., Aug. 20, 1993, at 11. See, e.g., Ransel & Cantrell, Dam Issue Doesn't Need More Study, *supra* note 97 (noting that PacifiCorp ignored NPPC's fish passage requirement for more than a decade); Laatz, Dam's Fate Lies on Salmon Issue, *supra* note 56; Battle Brewing Over Fish Protection, *supra* note 97 (quoting Katherine Ransel, co-director of Northwest regional office of American Rivers, as saying, "We want fullest restoration of the river, the best biological means of fish passage and the river unified and restored. If that involves dam removal, so be it.").

[FN117]. See Ransel & Cantrell, *supra* note 97.

[FN118]. The permitting of hydropower facilities such as the Condit Project generally triggers the EIS requirement of NEPA. See [42 U.S.C. § 4332\(2\)\(C\) \(1994\)](#). FERC's NEPA regulations "normally" require an EIS for new water power projects and an Environmental Assessment (EA) for relicensing. See [18 C.F.R. §§ 380.6\(a\)\(4\), 380.5\(b\)\(6\)-\(10\) \(1996\)](#). However, this position appears inconsistent with [Confederated Tribes & Bands of the Yakima Indian Nation v. FERC, 746 F.2d 466, \(9th Cir. 1984\)](#) (requiring an EIS prior to relicensing because the Federal Power Act requires the same consideration of environmental impacts at relicensing as at initial licensing); see also Blumm, *Hydroelectric Regulation*, *supra* note 106, § 40.08(a), n. 287. But cf. [Eugene Water & Elec. Bd., 49 F.E.R.C. ae 61,211](#), at 61,744 (1989) (failing to require EIS prior to granting new license for existing dam).

[FN119]. See Condit DEIS, *supra* note 30, at 1.

[FN120]. FERC considered dam removal at the request of the Yakima Indian Nation. See *id.* at 2-1.

[FN121]. Condit DEIS, *supra* note 30, at viii.

[FN122]. See *id.* at viii-ix.

[FN123]. See *id.* at 2-1.

[FN124]. See, e.g., NMFS Comments, *supra* note 94, at 6-8; Meyer Resources, Inc., *An Analysis of: "FERC/DEIS-0103 - Condit Hydroelectric Project-FERC 2342- 005 Washington,"* at 6 (Feb. 1995) (hereinafter MEYER) (on file with FERC Portland Regional Office).

[FN125]. See [40 C.F.R. § 1502.14\(d\) \(1996\)](#).

[FN126]. See Daniel R. Mandelker, *NEPA Law and Litigation* § 10.09(3) (1996). Recent cases have held that failure to adequately discuss the no action alternative is improper and that such incomplete EISs must be remanded back to the agency for repair. See, e.g., [City of Tenakee Springs v. Clough, 915 F.2d 1308 \(9th Cir. 1990\)](#); [Bob Marshall Alliance v. Hodel, 852 F.2d 1223 \(9th Cir. 1988\)](#).

[FN127]. See Condit DEIS, *supra* note 30, at 2-19.

[FN128]. "No action" under NEPA does not mean licensing the project. Instead, no action means not licensing the project. See Mandelker, *supra* note 126, § 10.09(3).

[FN129]. Condit DEIS, *supra* note 30, at 2-19.

[FN130]. In addition, FERC's exclusion of all economic impacts save those effecting energy and construction cost of alternatives results in an incomplete, imbalanced NEPA process. See Meyer, *supra* note 124, at i. BPA and the Council studies suggest that there is an energy surplus, not a deficit. The DEIS analysis, however, relied on an energy deficit, not the current energy surplus. See *id.*

[FN131]. See NMFS Comments, *supra* note 94, at 9.

[FN132]. See *id.* at 8-9. Interestingly, the Washington Department of Fish & Wildlife contended that the cost estimates for

dam removal presented in the DEIS were too low. See Department of Fish and Wildlife, State of Washington, Condit Hydroelectric Project (FERC No. 2342), Draft Environmental Impact Statement Comments and Supplemental Terms and Conditions 1 (Mar. 6, 1996) (on file with FERC Portland Regional Office). At the same time, it asked for a more in-depth analysis of the dam removal alternatives. *Id.* The Department produced no evidence supporting its contention regarding cost, however, and other estimates were much lower than that presented in the DEIS.

[FN133]. See Meyer, *supra* note 124, at ii.

[FN134]. See *id.* at iii.

[FN135]. See Columbia Basin Fish & Wildlife Authority, CBFWA Comments: Draft Environmental Impact Statement (DEIS), Condit Hydroelectric Project, at 1-2 (Mar. 4, 1996) (on file with FERC Portland Regional Office).

[FN136]. See Condit DEIS, *supra* note 30, at 2-19.

[FN137]. Confederated Tribes and Bands of the Yakama Indian Nation, Yakama Indian Nation Comments on the Draft Environmental Impact Statement for the Condit Hydroelectric Project, at 1 (Mar. 4, 1996) (on file with FERC Portland Regional Office).

[FN138]. See *id.* At the time of the construction of **Condit Dam**, neither the developers nor any governmental agency consulted the Yakamas about the construction nor was compensation or mitigation for the loss of the fishery and associated traditional religious and cultural activities ever offered. See *id.*

[FN139]. See *id.* at 2. The Yakamas also argued that the DEIS substantially undervalued or ignored the cultural, recreational, and aesthetic benefits of "a river restored to its natural character from headwaters to mouth." *Id.* They also noted that the DEIS failed to take FERC's trust responsibility into account after stating that dam removal is the best alternative for achieving cultural resource benefits. See *id.* at 4. The Authority also pointed out that FERC failed to examine the benefits of dam removal to local tribes. See *id.*

[FN140]. See *supra* section II.D.2.

[FN141]. See Federal Power Commission, Order Issuing License (Major), at 1 (Dec. 20, 1968) (on file with FERC Portland Regional Office). However, it appears that no money has ever been paid, since no decommissioning fund for **Condit Dam** is mentioned anywhere in the DEIS.

[FN142]. See Condit DEIS, *supra* note 30, at 2-11.

[FN143]. If PacifiCorp did in fact fail to meet this condition, this failure should weigh against granting a new license.

[FN144]. PacifiCorp, Comments Regarding Draft Environmental Impact Statement, at 1 (Mar. 5, 1996) (hereinafter PacificCorp) (on file with FERC Portland Regional Office).

[FN145]. See Laatz, Dam's Fate Lies on Salmon Issue, *supra* note 56; see also Battle Brewing Over Fish Protection, *supra* note 96.

[FN146]. As of this writing, PacifiCorp has begun to broaden its products and services and expand the scope of its business nationwide in order to stay independent in the changing utility industry. PacifiCorp's approach to this situation, like its

approach to the Condit relicensing, is framed in the rhetoric of war; "PacifiCorp is in a fight for its existence and we intend to be a victorious warrior." Bill MacKenzie, *PacifiCorp Builds Utility Empire*, *Oregonian*, April 3, 1997, at D1 (statement of PacifiCorp president and CEO Fred Buckman).

[FN147]. The Yakama Nation, NMFS, U.S. F&WS, the Washington Department of Fisheries and Wildlife, NPPC, and a coalition of environmental groups all have pointed out the habitat potential of the White Salmon and the healthy runs that existed before the dam was built. See *supra* notes 115-117 and accompanying text.

[FN148]. See *Battle Brewing Over Fish Protection*, *supra* note 96, at 8. PacifiCorp bases this claim on the fact that waterfalls upriver of the dam block migrating fish from the upper watershed. PacifiCorp, *supra* note 144, at 1. However, during periods of high flow these waterfalls appear to be potentially passable by mature salmonids. The waterfalls actually present less of an obstacle than falls on the Elwha up which salmon are known to have passed during seasonal floods. See Telephone Interview with Katherine Ransel, *supra* note 46.

[FN149]. See PacifiCorp, *supra* note 144, at 1. Indeed, PacifiCorp argued that FERC should offset the \$3 million that it had already spent on the relicensing process in FERC's determination of the costs of fish and wildlife enhancement measures. See *id.* PacifiCorp may change its tune, however, given the fish and wildlife agencies power to require fish passage. As of this writing, it remains unclear what will happen to the Condit project, relicensing or dam removal.

[FN150]. See *id.* at 2-3.

[FN151]. See *id.* at 3. The fish and wildlife agencies set the environmental conditions, including the fishways requirement, pursuant to their authority under § 18 of the Federal Power Act. See [16 U.S.C. § 811 \(1994\)](#).

[FN152]. See PacifiCorp, *supra* note 144, at 3.

[FN153]. See *id.*

[FN154]. Ultimately, FERC has the discretion to make the licensing decision with the conditions that it chooses to include. However, the fish and wildlife agencies can exercise their § 18 authority to require FERC to include fishways, which PacifiCorp is not interested in providing. This could effectively force PacifiCorp into accepting decommissioning because fishways would make the Condit project uneconomical. See *supra* note 149.

[FN155]. See *supra* section 2.A.1. (discussing fish and wildlife agencies fish passage requirements for Condit). See *supra* notes 149 and 154, and accompanying text.

[FN156]. See *supra* note 112 and accompanying text (noting FERC's assertion of its authority to order dam removal).

[FN157]. See FERC Decommissioning Policy, *supra* note 90, at 340. In the Policy statement, FERC stated that "the licensee will ultimately be responsible for meeting a reasonable level of decommissioning costs . . ." *Id.*

[FN158]. Both the Elwha and Savage Rapids dam removal proposals provide significant federal funding for dam removal. See *infra* sections IV.C., V.A. Another interesting difference between the Condit relicensing process and other removal proposals in the lack of significant local opposition to removal. Both the Elwha and Savage Rapids proposals discussed *infra* encountered vocal and well-organized opposition. See *infra* sections IV.C., V.B.2.

[FN159]. The public participation guarantees of NEPA and the Federal Power Act protect the public's ability to argue for

dam removal.

[FN160]. NMFS authority to require fish passage could make the Condit project uneconomical and, therefore, to such an extent that PacifiCorp might decide not to proceed with relicensing. The question then is whether PacifiCorp would be required to remove the unlicensed dam. See *supra* notes 149 and 154.

[FN161]. Brown, *supra* note 81, at 61.

[FN162]. See *id.* The Spanish explorer Manuel Quimper bought a number of "salmon of 100 pounds" from natives in July of 1790, early settlers noted the remarkable size of the fish, and the U.S. Department of Fisheries even managed to catch several males weighing 100 pounds each as late as 1930. See *id.* More than 8,000 chinook spawned in the river annually. See Brown, *supra* note 81, at 63.

[FN163]. *Id.* The runs of pink salmon were estimated at 275,000 annually. "In 1909, the run of pink salmon in the Little River, a tributary of the lower Elwha, was so great that Harold Sisson's mother had to back her terrified horse across the ford." Brown, *supra* note 81, at 63.

[FN164]. See *id.* at 71. Today, only the fall run Chinook returns in significant numbers. The fall run Chinook survived because they spawn in the lower river, below the Elwha Dam. The spring Chinook and sockeye are extinct, and the coho, pink, and chum runs are but ghosts of their former strength. See *id.*

The dam has also had serious ecological consequences for the lower river and the spit where the river meets the Strait of Juan de Fuca. The flow of gravel which forms the spawning beds for Chinook in the lower river has been halted. This has forced the spawning Chinook together into smaller and smaller spawning beds. In addition, the lack of gravel flow is causing the erosion of Ediz Hook, a three mile spit that forms the natural harbor of Port Angeles. Between 1967 and 1972, the federal and city government and Crown Zellerbach spent \$1,000,000 to prevent a breach; since 1973, the U.S. Army Corps of Engineers has trucked gravel quarried on the Elwha to the spit, a project that is to last for 50 years at a cost of \$4,000,000. This project also has significant environmental consequences for the Hook's ecosystem, on which the Elwha Chinook rely for food during migrations. See *id.* at 73-74.

[FN165]. See Office of Electric Power Regulation, Federal Energy Regulatory Commission, Water Resources Appraisal for Hydroelectric Licensing: Elwha River Basin 26 (1981) (hereinafter Elwha Appraisal); see also Don Hamilton, Agency Feels Push, Pull of Dispute Over Elwha Dams, *Oregonian*, Apr. 7, 1991, at D6.

[FN166]. See Elwha Appraisal, *supra* note 165, at 26.

[FN167]. See Larry Lange, Battle of the Elwha Dams Heads to Federal Court 'Bring Back the Salmon' Groups File Suit, *Seattle Post-Intelligencer*, June 1, 1991, at B1. Glines Canyon Dam has operated on yearly extensions ever since. See Hamilton, *supra* note 165.

[FN168]. See Royston, *supra* note 74, at 8; see also Removal of Elwha Dams necessary to Restore Salmon Runs, Study Says, *Morning News Trib. (Tacoma, Wa.)*, July 29, 1993, at B2.

[FN169]. Bruce Brown's book also played a crucial role in publicizing the fate of Olympic peninsula salmon, and the Elwha salmon in particular. See Brown, *supra* note 81.

[FN170]. The Elwha project, one of the first hydroelectric projects in Washington state, was financed by a Chicago

investment bank and overseen by a board of directors that included prominent Seattle businessmen. See Brown, *supra* note 81, at 64. The dam was a radical design for the time. It consisted of an 80 foot high concrete retainer hung from the canyon walls without a footing in the bedrock underneath the river. See *id.* This lack of footing was to pose major problems as the dam aged. See *infra* note 189.

[FN171]. The dam was illegal because it violated a law passed by Washington's first legislature in 1890 requiring the construction of fish passage facilities on dams "wherever food fish are wont to ascend." See Brown, *supra* note 81, at 64.

[FN172]. The British Columbia commissioner of fisheries described the state's enforcement as a "dead letter." See *id.* at 66. Indeed, the Washington's fisheries commissioner managed to ignore the Elwha Dam even when it was under construction. See *id.*

[FN173]. Appointees to the post of fisheries commissioner were generally taken from the ranks of those who profited from poor enforcement, including cannery owners and hydropower developers. See *id.*

[FN174]. See *id.* In his inaugural address, he told the legislature, "you gentlemen are sent here by your constituents to get your share of the pie. I am sent here by all of the people to see that not too much of it is distributed." Brown, *supra* note 81, at 66.

[FN175]. See *id.* at 67.

[FN176]. At the time, the cannery owners had gained almost complete control over the local governments in which the canneries resided. The cannery owners also sent cannery-friendly representatives to the state legislature. See *id.* As a result, they paid only a small percentage of the income taxes due to the state, polluted the waters, and practiced illegal harvest methods including cutting fish off from their natal streams and harvesting entire runs. See *id.*

[FN177]. See *id.* at 67-69.

[FN178]. See Brown, *supra* note 81, at 69.

[FN179]. Prior to tackling the Elwha Project, Darwin had forced the owner of an illegal dam on a tributary of the Elwha to remove it. See *id.*

[FN180]. See *id.*

[FN181]. See *id.* at 69-71. A title search later revealed that neither Olympic Power nor Crown Zellerbach, which bought the dam in 1919, ever transferred the title to the land to the state as required in the agreement. The hatchery itself was a failure, never producing enough returns to supply itself with eggs. See *id.* at 72, 104.

[FN182]. See Brown, *supra* note 81, at 71. The illegality of accepting hatcheries in lieu of fish passage appears to have done little to slow acceptance of Darwin's solution. Instead, with the encouragement of Governor Lister, the legislature soon changed the law so that hatcheries could be built in lieu of fish passage facilities. See *id.* This amended law stated that "Every dam . . . shall be provided with a durable and efficient fishway, . . . which shall be kept open, unobstructed and supplied with a sufficient quantity of water to freely admit the passage of fish." 35 Wash. Rev. Stat. § 5730 (Remington 1932). Yet, it also provided that:

In the event that any person desires to construct a dam . . . to a height that will make a fish-ladder or fishway thereover impracticable, in the opinion of the director of fisheries and game, then such a person shall convey to the state of Washington

a site of the size and dimensions satisfactory to the director . . . and erect thereon a fish hatchery and hatchery residence . . . and enter into an agreement with the director . . . to furnish all water and lights . . . and necessary sums of money to operate and maintain said proposed hatchery. The provisions of this section shall not apply to cases . . . where dams have been heretofore constructed in streams to a height where construction of a fish-ladder is impracticable.

Id. § 5731. Thus, did the legislature solve both the problem of hatcheries in lieu of fish passage and the illegally constructed Elwha Dam.

[FN183]. Darwin accepted seven more hatcheries in lieu of fish passage facilities at dams before the law was changed to allow this practice, one of which was **Condit Dam** on the White Salmon River. See Brown, *supra* note 81, at 71, 74.

[FN184]. See, e.g., U.S. Commissioner of Fisheries, U.S. Commissioner of Fisheries Report, reprinted in Salmon Crisis, *supra* note 7, at 100 (stating that "millions of fry will be produced by artificial propagation and rearing to compensate for the runs obstructed by Grand Coulee Dam").

[FN185]. See Brown, *supra* note 81, at 72. Crown Zellerbach sold the dams to James River Corporation in 1986, which used them to power pulp mill. James River Corp. sold the mill to Daishowa America Corporation in 1987, with an agreement to sell electricity from the dams to Daishowa to power the mill. See Royston, *supra* note 74, at 8.

[FN186]. See Lange, *supra* note 167.

[FN187]. See Brown, *supra* note 81, at 72.

[FN188]. See *id.* A more recent study suggests that there would be substantial economic benefits for the local economy from dam removal. Restoring the Elwha would provide \$90.4 million in local jobs, \$21.1 million in project-related spending, and \$5.1 million annually in direct business revenues from restored salmon runs. See Shawn Cantrell, Friends of the Earth, Help the Economy, Blow Up a Dam! 6 (1994).

[FN189]. See Brown, *supra* note 81, at 107 (quoting a 1978 Corps report on the safety of Elwha Dam). The Corps concluded that the dam was "structurally unsafe" because it had never been anchored in the bedrock of the riverbed; despite repairs, rebuilding, and nearly filling the reservoir with earth, rocks, and even matted pine boughs to prevent leaks, hundreds of cubic feet per second of water continue to flow under the dam. See *id.* See also Titone, *supra* note 23; McCully, *supra* note 4, at 126.

[FN190]. The tribe has 1,000 members on a 600-acre reservation near the mouth of the Elwha. See Titone, *supra* note 23. It is they who would suffer if the dam breached, as it did once before shortly after it was completed. See Brown, *supra* note 81, at 107-8. The Elwha S'Klallam remember the original breach in 1913 as "the time when there were salmon in the trees," and blame the dam for yearly flooding of their homes. They were enraged when it was revealed that Crown Zellerbach had received a similar, but private, report in the late 1960's concerning the danger presented by the dam, but had done nothing to correct the problems. See *id.* at 107.

[FN191]. *Id.* at 108.

[FN192]. See Elwha DEIS, *supra* note 15, at 1-4 to 1-5; see also McCully, *supra* note 4, at 127. The tribe's treaty rights offer one potential avenue of restoration. One commentator has suggested that tribes may be able bring suit against the federal government to require the fulfillment of the federal government's treaty obligations. See Blumm, Beyond the Parity Promise, *supra* note 48 at 120. The presence of the tribe also appears to have blunted the impact of the local opponents to dam

removal, possibly to avoid raising issues of race and the past treatment of the tribe and its treaty rights.

[FN193]. Tribal members testified during the hearings on the Elwha Act that they wanted the dams removed. See, e.g., Elwha River Ecosystem and Fisheries Restoration Act: Hearing Before the Comm. on Energy and Natural Resources, 102d Cong., 2d Sess. 94 (1992) (statement of Bea Charles, Tribal Elder, Lower Elwha S'Klallam Tribe).

[FN194]. The dam itself actually rests on private land, an inholding within the Park, but the reservoir lies on federal land. See Elwa Appraisal, *supra* note 165, at 5-6.

[FN195]. See Foster, *supra* note 12; see also Lange, *supra* note 167. The Federal Power Act proscribes hydroelectric projects in national parks and national monuments. See [16 U.S.C. §§ 796\(2\), 797a, 797c \(1994\)](#); see also Blumm, Hydroelectric Regulation, *supra* note 105, at 426. [Section 797a](#) prohibits the issuance of licenses for dams within the limits of any national park or monument "without the specific authority of Congress." [16 U.S.C. § 797a \(1994\)](#). In 1992, Congress forbade the issuance of an "original license . . . for any new hydroelectric power project located within the boundaries of any unit of the National Park System that would have a direct adverse effect on Federal lands within any such unit." [16 U.S.C. § 797c \(1994\)](#). In 1991, four environmental groups filed suit challenging FERC's authority to relicense Glines Canyon Dam. See Lange, *supra* note 167.

[FN196]. See Royston, *supra* note 74, at 8.

[FN197]. See Elwha Appraisal, *supra* note 165, at 5-6. This argument raises the legal question of how to interpret those provisions of the Federal Power Act that prohibit the issuance of licenses within the boundaries of National Parks. See *supra* note 195 for the language of these provisions. FERC interprets the statutory language narrowly, thus allowing it to license Glines Canyon Dam because it rests on a small slice of private land entirely within the bounds of Olympic National Park.

[FN198]. See Elwha DEIS, *supra* note 15, at 1-2. The Olympic National Park was created in 1938. See [16 U.S.C. § 254 \(1994\)](#).

[FN199]. See Brown, *supra* note 81, at 42.

[FN200]. An estimated 22 species that relied on the salmon have declined as a result of its extinction from the upper Elwha. See Elwha DEIS, *supra* note 15, at 1-9. Fisheries experts estimate that salmon populations could grow to 50,000 to 400,000 fish once restoration of the Elwha is complete. See Royston, *supra* note 74, at 8.

[FN201]. See Forest Ecosystem Management Assessment Team, U.S. Dep't of Agriculture et al., Forest Ecosystem Management: An Ecological, Economic, and Social Assessment V-29 to V-31 (1993) (proposing "riparian reserves" that would conserve, protect, and enhance fish habitat, among other benefits); see also [Shauna Marie Whidden, The Hanford Reach: Protecting the Columbia's Last Safe Haven for Salmon, 26 Env'tl. L. 265, 283-84 \(1996\)](#) (arguing for federal protection of Hanford Reach to protect spawning salmon).

[FN202]. See Keith Ervin, Remove 2 Dams on Elwha, Park Service Recommends, Seattle Times, June 19, 1990, at B2. Ridenour reaffirmed the Park Service's long-standing position that FERC lacks the authority to license Glines Canyon Dam, because it is within the boundary of Olympic National Park. See *id.* The regional director of the Park Service, Charles Odegaard, echoed his boss, calling for dam removal because anadromous fish "are a crucial element of the natural ecosystem of the Olympic National Park . . . and full restoration is essential." Parks Service Wants James River to Dismantle Two Hydro Facilities, Indus. Energy Bull., July 6, 1990, at 1. The Park Superintendent, Maureen Finnerty, also weighed in for the

removal proposal: "It's an opportunity to take what once was a world-class watershed and restore it. Years of research convinced us we could get that restoration, but only if the dams come out." Foster, *supra* note 12.

[FN203]. See Interior Department Backs Removal of Dams, *Oregonian*, June 21, 1991, at C2. Interior sent a letter to FERC in 1991 advocating removal and arguing that FERC should terminate the license for Glines Canyon Dam because it does not have jurisdiction in the Park. In the letter, Interior stated that the Elwha's runs cannot be restored with the dams in place; "(e)ven state-of-the-art fish-passage facilities would not achieve restoration of affected fish, wildlife and other natural resources." *Id.* The letter also noted that dam operation is inconsistent with Indian treaties and impedes ecosystem restoration in Olympic National Park. See *id.* The U.S. Fish & Wildlife Service also weighed in, advocating the removal of the dams as the only way to fully restore the salmon to the Elwha. See Keith Ervin, *Calls For Dam Removal Annoy Interior Chief*, *Seattle Times*, July 26, 1990, at B5. The Bureau of Indian Affairs also supports removal and restoration. See Interior Department Backs Removal of Dams, *supra*.

[FN204]. Former republican congressman John Miller, in statement read at a FERC relicensing hearing, echoed the sentiments of other members of the Washington delegation, stating that "it is in the public interest to begin the long process to restore the once majestic salmon runs on the Elwha." Hamilton, *supra* note 165. U.S. Representatives Jim McDermott and Al Swift, Senator Brock Adams, and others have said that they could support removal of the dams. See *id.*

[FN205]. See *infra* Part IV.C.2.

[FN206]. See *Fish May Recapture a River*, *Engineering News-Record*, Nov. 22, 1993, at 8. It is this cheap electricity that makes the Port Angeles mill it powers profitable. See *id.*

[FN207]. See *id.* James River has a contractual obligation to Daishowa to supply the mill with cheap electricity, though it is unclear whether this obligation is directly tied to the Elwha project or instead requires a specific amount of electricity to be provided at a below-market rate. James River claimed that power purchased from BPA, the market source for much industrial power in the region, would cost significantly more than power from the Elwha project. See *id.* James River also stated that it would not oppose dam removal if a cheap source of electricity for its mill could be guaranteed. See *id.*

[FN208]. A GAO report had pointed out that FERC could order James River Corp. to pay for removal and restoration. See General Accounting Office, *Hydroelectric Dams: Interior Favors Removing Elwha Dams, But Who Should Pay is Undecided* 6 (1992).

[FN209]. Many agencies with the Department of Interior, including the National Park Service, the Fish and Wildlife Service, and NMFS all supported the proposal. See Kim Murphy, *Administration Backs Elwha Dams Removal*, *News Tribune* (Tacoma, Wa.), Mar. 20, 1996, at A3. A coalition of environmental groups and Indian tribes called for dam removal. See *id.*

[FN210]. See [Pub. L. No. 102-495](#), 106 Stat. 3173 (1992) (codified in scattered sections of 16 U.S.C.). Congress intervened partly to preclude litigation on FERC's licensing authority in National Parks. See Pyle, *supra* note 4, at 120.

[FN211]. See Pryne, *Elwha Dams Won't Be Coming Down Anytime Soon*, *supra* note 76 (quoting the hydropower manager for James River Corp. as saying that the Act brought order to the chaos of the dispute).

[FN212]. Interior is authorized to buy the dams if the study finds that full restoration of the Elwha River ecosystem depends on it. See *Elwha Act*, § 3(b).

[\[FN213\]](#). See id. § 5(b).

[\[FN214\]](#). See id. § 3(c). The Act also blocked the FERC relicensing process until Congress decided what to do with the dams.

[\[FN215\]](#). See Christopher Hanson, *Elwha Dams Plan is 'Dead' New Austerity Makes them too Costly to Remove*, Dicks Says, *Seattle Post-Intelligencer*, Nov. 17, 1994, at A1 (quoting Representative Norm Dicks (D-Wa.), whose district covers the Elwha, as saying, "I think the Elwha dam issue is over The cost is too big.").

[\[FN216\]](#). See id.

[\[FN217\]](#). See id.

[\[FN218\]](#). Gorton, *Can We Build Up Salmon By Tearing Down Dams?*, supra note 77. Senator Gorton stated that he would support dam removal if the mill could be assured an affordable power supply and the Port Angeles water supply could be protected. See id. Yet, this is precisely what the Elwha Act did.

[\[FN219\]](#). See id. He based his rejection of dam removal on cost estimates of \$200-\$300 million. See id.

[\[FN220\]](#). See id.

[\[FN221\]](#). See Murphy, supra note 209. Senator Gorton stated that removing the dams simply won't result in broad salmon recovery throughout the entire Northwest region. Joel Connelly, *Elwha Dam Removal the Key to Aid Salmon*, Babbitt says but it won't Help Region Recovery, *Gorton Counters*, *Seattle Post-Intelligencer*, Mar. 21, 1996, at A7. Washington's other senator, Patty Murray (D-Wa.), who supports the dam removal proposal, has said that "(t)his is a place where we can make a huge difference, and that's why we're doing what we should have done back in 1914 They put those dams in without any regard to the salmon, and we are fixing a wrong from a long time ago." Murphy, supra note 209. The budget process concluded with the President's proposal removed, and only \$4 million out of the \$29.5 million purchase price ultimately allocated towards purchasing the dams. See Joel Connelly, *No Money Earmarked to Remove Elwha Dams*, *Seattle Post-Intelligencer*, May 15, 1996, at B2.

[\[FN222\]](#). See *Final Elwha Dam EIS Released*, Associated Press, Nov. 14, 1996 (AP Report available on WESTLAW ALLNEWS database).

[\[FN223\]](#). See Telephone Interview with Shawn Cantrell, Friends of the Earth, Seattle Office (Nov. 20, 1996). The potential economic gain from spending the money necessary to restore the Elwha far outweighs the benefit to the local economy of keeping the dams in place. See id. Senator Gorton was also at the forefront of efforts to gut the Endangered Species Act. See Interview with Sybil Ackerman, Western Regional Endangered Species Organizer, National Wildlife Federation, in Portland, Or. (Dec. 1, 1996).

[\[FN224\]](#). See supra note 188, citing a recent study which concluded that restoring the Elwha would provide \$90.4 million in local jobs benefits alone.

[\[FN225\]](#). Interior's expertise in environmental matters offered a greater potential that the resulting EIS would fully analyze the benefits and detriments of dam removal.

[\[FN226\]](#). The James River Corp.'s original FERC license expired in 1976, and FERC has issued annual licenses to the

corporation ever since. FERC regulations authorize it to issue annual licenses to existing licensees upon expiration of the original license if they are in the process of obtaining a new license. See 16 C.F.R. § 16.18(b) (1996). These licenses, which simply continue the terms and conditions of the original license, actually only need to be issued once because, under FERC regulations, they are renewed automatically. See *id.* § 16.18 (b) & (c). As a result, annual licensing is actually a one-time occurrence and can result in a situation, like that on the Elwha, where an annual license is effectively a twenty-plus year license.

[FN227]. The river is nationally-renowned for its wild salmon and steelhead runs, drawing fishermen like Zane Grey and former President George Bush to its riffles and runs, as well as for its popular white-water runs. See Savage Rapids EIS, *supra* note 25, at VI-31 (noting that "(t)he Rogue River is nationally and internationally recognized for its diverse recreation opportunities"). The Rogue is one of the most popular white-water rivers in the West. See Jeff Barnard, Pressure Builds to Rip Out Rogue R. Dam, Save Fish, *The Seattle Times*, Dec. 5, 1993, at B2.

[FN228]. See Savage Rapids EIS, *supra* note 25, at Summary-1 to Summary-2.

[FN229]. Among the stocks proposed or under study for listing are the "Klamath Mountains Province Steelhead," the Coho salmon, sea-run cutthroat trout, and pink, chum, sockeye, and Chinook salmon. Depleted stocks of salmon prompted the Pacific Fishery Management Council to prohibit all ocean fishing for these species in 1994 along the Washington and northern Oregon coasts. See *id.* at Summary-2. NMFS is currently proposing the listing of steelhead and coho on the Rogue.

[FN230]. See *id.*

[FN231]. See *id.*

[FN232]. The summer, when the reservoir is full, is also the height of downstream migration for anadromous fish. See *id.* at II-6 to II-7.

[FN233]. Although a mortality study has never been done at the dam, fisheries agencies and experts agree that the dam's antiquated fish passage facilities do not allow smolts to pass the dam safely. Interview with Ron Garst, Project Biologist, U.S. Fish & Wildlife Service, in Portland, Or. (Nov. 14, 1996). See also Savage Rapids EIS, *supra* note 25, at II-5 to II-7 (discussing mortality at the dam during both upstream and downstream migrations). Despite improvements in the 1970's, fish passage problems continue, and current facilities still do not meet current NMFS criteria. See *id.* at Summary-2. The main problem appears to be the north side fish ladder, which passes virtually no adult fish. See ONRC Report, *supra* note 14, at 13. In addition to the inadequate fish ladders, the irrigation diversion was essentially unscreened until 1958. See Savage Rapids EIS, *supra* note 25, at Summary-2. As recently as 1991, thousands of smolts were diverted into the irrigation canal and the fields it waters in the Grants Pass Valley. See Thousands of Young Fish Caught in Irrigation Canals, *The Oregonian*, Oct. 3, 1991, at B8. The problem was discovered by local children, who found thousands of smolts trapped in irrigation canals and began returning them to the river. According to an Oregon Department of Fish & Wildlife biologist, "(t)here's always some fish in the ditch, but it certainly sounds like we have a lot more fish than we anticipated." *Id.* The problem turned out to be a seal on the diversion screen. See Fish-Screen Repairs Made for Wayward Salmon Smolts, *The Oregonian*, Oct. 4, 1991, at C8.

[FN234]. See ONRC Report, *supra* note 14, at 13. The Oregon Department of Fish and Wildlife estimated the direct value of Rogue River salmon and indirect value of fish-related tourism at \$200 to \$300 per salmon. See *id.* Thus, removing the dam would represent \$5 million in potential economic benefits from the increased salmon populations and associated fisheries.

[\[FN235\]](#). The Bureau of Reclamation, the primary federal dam builders, constructed more than 600 dams in the West, primarily for irrigation. See Barnard, *Pressure Builds*, supra note 227.

[\[FN236\]](#). See Editor, *Remove Savage Rapids Dam*, *The Oregonian*, Nov. 20, 1993, at D6 (noting the changed land use patterns in the Grants Pass valley and calling for the removal of the dam); see also Jeff Barnard, *Outfitting Firm Leads Campaign to Rip Out Rogue River Dam*, *The News Tribune* (Tacoma, Wash.), Nov. 29, 1993, at B11 (noting that "Savage Rapids Dam is a prime example of the history of water use in the West").

[\[FN237\]](#). The Oregon Department of Fish & Wildlife, the U.S. Fish & Wildlife Service and the National Marine Fisheries Service all favor removal of the dam. See *State Would Eliminate Fish Migration Barriers*, *Engineering News-Record*, Mar. 4, 1991, at 12 (noting ODFW pressure for removal); see also Letter from State Supervisor, Oregon State Office, U.S. Fish & Wildlife Serv., U.S. Dept. of Interior, to Regional Director, Pacific Northwest Region, U.S. Bureau of Reclamation 2 (Apr. 6, 1995) (stating U.S.F&WS support of removal alternative in Draft EIS), reprinted in *Savage Rapids EIS*, supra note 25, attachment I-15; Letter from Jacqueline V. Wyland, Division Chief, National Marine Fisheries Serv., National Oceanic and Atmospheric Admin., U.S. Dept. of Commerce, to John W. Keys, Regional Director, U.S. Bureau of Reclamation 1 (Apr. 11, 1995) (stating NMFS support of removal alternative in Draft EIS), reprinted in *Savage Rapids EIS*, supra note 25, attachment I-10.

[\[FN238\]](#). The Oregon Natural Resources Council, the Northwest Environmental Defense Center, the American Fisheries Society, American Rivers, and many other groups support removal of the dam. See *Savage Rapids EIS*, supra note 25, at attachment I-6 to I-7 and following (comment letters on Draft EIS supporting removal); see also ONRC Report, supra note 14, at 13 (advocating dam removal). In addition, the outfitting company, Patagonia, produced and ran ads both nationally and locally calling for the removal of the dam in 1993. See Barnard, *Outfitting Firm Leads Campaign*, supra note 236; see also Patagonia Service Center, *Public Works: Wild Salmon Campaign 1-2* (1993) (unpublished document, on file with author).

[\[FN239\]](#). The *Oregonian* has printed numerous editorials calling for the removal of the Savage Rapids Dam. See Editor, *Remove Savage Rapids Dam*, supra note 236 (noting the changed land use patterns in the Grants Pass valley and calling for the removal of the dam); see also Editor, *Remove Savage Rapids Dam*, *The Oregonian*, Sept. 14, 1994, at B6 (calling for dam removal); Editor, *Savage Rapids Dam Must Go*, *The Oregonian*, Dec. 29, 1994, at C8 (calling, again, for dam removal); Editor, *Let Savage Rapids Dam Go*, *The Oregonian*, Apr. 18, 1995, at B10 ("Savage Rapids Dam . . . is a notorious killer of salmon and steelhead. It should be torn down, as the *Oregonian* recommended in 1993 and 1994.").

[\[FN240\]](#). Indeed, it was the Bureau of Reclamation, the nation's foremost dam builder, that recommended removing the dam and offered its expertise. See *Savage Rapids EIS*, supra note 25, at Summary. This recommendation represents a significant shift in the institutional culture of the Bureau, away from dam construction and towards using its engineering expertise to help remove dams throughout the West. See Comment, *Freeing the Rogue*, *The Arizona Daily Star*, Dec. 31, 1993, at 20A (calling Bureau's support for removal reflection of new attitude within it).

[\[FN241\]](#). See Garst, supra note 233, Nov. 14, 1996; see also *Savage Rapids EIS*, supra note 25, at I-5.

[\[FN242\]](#). The State Water Resources Department permit allowed GPID to maintain its water right at the historic level despite the fact that its irrigable land base had shrunk by almost half. This permit was originally effective through 1994, but was reissued in 1990 effective through 1999. Water Resources Dept., State of Oregon, Grants Pass Irrigation Dist. Permit No. 50957 1-14 (1990), reprinted in *Savage Rapids EIS*, supra note 25, at Attachment-B. The permit's primary goal is the lowering of the water use by GPID. See id. at 1.

[FN243]. See Savage Rapids EIS, supra note 25, at I-5 to I-6. The committee, known as the Permit Oversight Committee (POC), was made up of members from GPID, the city of Grants Pass, Josephine County, ODFW, Oregon Water Resources Division, the Bureau of Reclamation, the Natural Resources Conservation Service, and WaterWatch of Oregon. The BLM, the U.S.F.&W.S., NMFS, and the Forest Service also provided information or participated in the study process. This committee played a central role in developing the information that led to the dam removal recommendation in the EIS. See Garst, supra note 233, Nov. 14, 1996; see also Savage Rapids EIS, supra note 25, at VII-1.

[FN244]. See Savage Rapids EIS, supra note 25, at VII-1 (discussing history of administrative process surrounding development of EIS).

[FN245]. See id. at Ch. III. The EIS identified two solutions to the problems at the dam: 1) remove the dam and construct new diversion pump facilities, or 2) retain the dam and construct new fish passage and protective facilities and improve or replace the current irrigation diversion facilities. See id. at Summary-3. According to a 1981 U.S. Fish & Wildlife Service report, removal of the dam could allow 26,000 more fish to return upriver each year. See Paul Koberstein, Council to Fight for Rogue Fish Runs in Filing for Protection for Five Salmon and Trout Stocks, the Oregon Natural Resources Council Aims to Restore Healthy Runs to the River, *The Oregonian*, July 6, 1991, at D1.

The Oregon Department of Fish & Wildlife has also proposed removing two other dams on the Rogue to enhance fish passage: the Elk Creek structure, a partially completed Corps' project whose storage capacity is not needed; and, the Powerhouse Rapids Dam, a five-foot high dam built to divert water to a powerhouse that is no longer operating. See State Would Eliminate Fish Migration Barriers, *ENR*, Mar. 4, 1991, at 12-13.

[FN246]. In 1949, GPID enlisted federal assistance in modifying the dam and existing fish screens and constructing a siphon under the river. This work was completed in 1955, but the debt owed to the federal government, currently \$290,525, has never been paid off. See id. at I-10, IV-17. This was the beginning of federal involvement with Savage Rapids Dam.

[FN247]. The only costs to GPID would be the annual electric power costs for operating the pumps. See id. at III-15. On the other hand, if the dam is retained and upgraded, GPID's debt to the federal government will increase significantly. Costs for upgrading the irrigation diversion would be reimbursable without interest under current federal requirements. GPID would ultimately be responsible for these costs, which were estimated at \$2,848,000. See id. at IV-17.

[FN248]. One explanation for this may be the different forums in which these proposals are moving forward; Condit is in the formal FERC relicensing process, perhaps constrained by the narrow analysis of that process, while both Elwha and Savage Rapids are moving forward within less formal but more public politically driven processes. Another explanation may simply be the amount of controversy generated by the proposals; Condit is by far the least controversial of the three proposals.

[FN249]. See The Water Resources Development Act of [1986, Pub. L. No. 99- 662](#), 100 Stat. 4235 (codified in scattered section of U.S.C.), requires the preservation and enhancement of national resources. In the EIS, BOR found that the Rogue's salmon fit two categories of national resources identified in the Act: 1) resources addressed by treaties of the United States; and 2) anadromous fish. See Savage Rapids EIS, supra note 25, at III-2; See also [33 U.S.C. § 2283\(e\)\(1\) \(1994\)](#). Salmon in the Rogue basin may soon also fit another category, listed species under the ESA. See [33 U.S.C. § 2283\(e\)\(2\)](#). Both the coho and steelhead in the Rogue are potential candidates for listing under the ESA, as well.

[FN250]. Savage Rapids EIS, supra note 25, at II-2. As a result, federal agencies must ensure that decisions involving the development of water resources do not have detrimental impacts on these species. While this is not as potent a proscription as the ESA, it does require federal agencies to recognize the ecological value of designated species before they decline to such a low level that the ESA comes into play.

[\[FN251\]](#). See id.

[\[FN252\]](#). See id. at VI-36. These activities include motor boating, jet skiing, swimming, and limited fishing. See id. at VI-33. However, this use is limited, comprising just 520 motorized boating-days in 1990, due to the narrowness of the reservoir, limited public access, and limited facilities. See id. Dam removal would disperse this use to other sites in the area, which are safer and offer better opportunities for boating. See id. at VI-36.

[\[FN253\]](#). See id. These docks could be moved down to the new waterline.

[\[FN254\]](#). See id. at VI-33.

[\[FN255\]](#). This situation which has caused considerable tension between private landowners and the public. See id. at VI-35. The limited public access is a result of the fact that the Rogue River in the vicinity of the dam has not been declared navigable by the state, although much of the rest of the river has been declared navigable. In Oregon, non-navigability means that private ownership of adjacent land extends to the middle of the river, while on navigable waters it extends only to the mean high waterline. See id. The "no trespassing" signs common in the vicinity of the dam are a result of this ownership situation.

[\[FN256\]](#). See Garst, *supra* note 233.

[\[FN257\]](#). See id.

[\[FN258\]](#). These two organizations are the Association to Save Savage Rapids Dam and Lake, Inc. and the Three Rivers Watershed Council. See Roy Scarbrough, High and Dry, *The Oregonian*, Nov. 2, 1994, at C2 (discussing Three Rivers Watershed Council). Despite the benefits that landowners with riverfront property would gain from dam removal--the size of their property would increase significantly, moving down to the new high waterline, or perhaps even the middle of the river--and despite the fact that the reservoir only exists for a few months each summer, support for dam removal in the local community has been sparse. Local environmentalists obviously support the proposal. In addition, local fishing guides and jet boat trip operators favor taking the dam out. See Garst, *supra* note 233.

[\[FN259\]](#). In letters to the editor, dam removal opponents claimed that loss of the reservoir would hurt recreation businesses that rely on the lake, though they did not provide any documentation supporting this claim. See Dick Hanbury, Letter to the Editor, Removing Savage Rapids Dam Would Hurt Recreation Business, *The Oregonian*, Dec. 8, 1993, at C8 (claiming that a "lot of recreational facilities have been developed, at considerable private and public expense, that depend on the dam," and therefore it should not be removed).

[\[FN260\]](#). See Charles A. Gordon, Letter to the Editor, Savage Rapids Dam Provides Economical Irrigation Service, *The Oregonian*, Dec. 4, 1993, at B7. Some have gone so far as to argue that removing the dam will mean the loss of "priceless" wetlands behind the dam. See Jon Robson, Letter to the Editor, Savage Rapids Dam Not Worst Culprit, *The Oregonian*, Jan. 13, 1995. However, despite the claims of removal opponents that keeping the dam would be cheaper than other approaches to solving the passage problems, GPID's manager pointed out that, "(g)iven the mood of the country, I think it's safe to say we won't get \$17 million to fix the dam." Structure is Attacked for Blocking Fish Runs, *ENR*, Jan. 10, 1994, at 11.

[\[FN261\]](#). See Water Resources Dept., State of Oregon, Grants Pass Irrigation Dist. Permit No. 50957 4 (1990), reprinted in Savage Rapids EIS, *supra* note 25, at Attachment-B (conditioning GPID's water appropriation on fixing fish passage problems at dam).

[FN262]. See Removal of Savage Rapids Dam OK'd, *The Oregonian*, Jan. 7, 1994, at C4 (discussing GPID's vote to remove dam). The GPID board conditioned its support for removal on the elimination of its financial liability and a guarantee of its access to irrigation water. *Id.* The EIS's preferred alternative met these conditions. See *Savage Rapids EIS*, supra note 25, at III-3, III-14. The GPID board also held out the possibility of keeping the dam if the \$17 million required to pay for fish ladders and other modifications could be raised from outside sources. See *Removal of Savage Rapids Dam OK'd*, supra. Local opponents of dam removal suggested putting a special levy before County voters. See *id.*

[FN263]. See Decision to Remove Dam Prompts a Recall Drive, *The Oregonian*, Jan. 14, 1994, at C3. The GPID Board voted 4-0 for removal, with one member absent. One of the board members who voted for removal said in response to the recall effort that the decision was made in the best interest of GPID patrons. See *id.*

[FN264]. See Editor, Remove Savage Rapids Dam, *The Oregonian*, Sept. 4, 1994, at B6.

[FN265]. See Roy Scarbrough, Dam Supporters Gain Majority, *The Oregonian*, Nov. 11, 1994, at C2. The three new members elected to the GPID Board all said that they wanted to explore ways of keeping the dam. See *id.*

[FN266]. See *id.* The Water Resources Commission approved a plan to remove the dam in October of 1994. See Draft Impact Statement Backs Dam's Removal, *The Oregonian*, Dec. 23, 1994, at D2 (discussing DEIS and process that led to it, including state Water Resources Commission's involvement); see also Water Resources Dept., State of Oregon, Grants Pass Irrigation Dist. Permit No. 50957 4 (1990), reprinted in *Savage Rapids EIS*, supra note 25, at Attachment-B (conditioning GPID's water appropriation on fixing fish passage problems at dam).

[FN267]. See Phillip S. Berry, The "Environmental" SLAPP, in ALI-ABA Course of Study, SLAPPs: Strategic Lawsuits Against Public Participation in Government 66-67, 72-82 (1994) (discussing Savage Rapids SLAPP and reprinting complaint).

[FN268]. See Association to Save Savage Rapids Dam and Lake, Inc., Complaint for Declaratory and Injunctive Relief and for Damages (Mar. 16, 1994), in ALI-ABA Course of Study, SLAPPs: Strategic Lawsuits Against Public Participation in Government 72-82 (1994) (hereinafter ASS Complaint); see also Group Files Lawsuit to Stop Loss of Savage Rapids Dam, *The Oregonian*, Mar. 19, 1994, at D3 (discussing "rambling" suit and quoting founder of Association to Save Savage Rapids Dam and Lake as saying "(t)he best defense is a well-directed salvo from your 16-inch guns."). In a poorly pleaded complaint, ASS made various state and federal constitutional claims and sought declaratory and injunctive relief and damages. See ASS Complaint, supra, at 72-82.

[FN269]. See Berry, supra note 267, at 67-68. See also ASS Complaint, supra note 270, at 73-82 (claiming violations of plaintiffs' rights under U.S. Constitution, Oregon Constitution, and State of Oregon's Admissions Act of 1859).

[FN270]. *Id.* at 66. According to Berry, the thrust of this suit "appears to be to shut up anyone wanting to address the issue (of dam removal) in any fashion." *Id.* The attorney who filed the suit and one of the plaintiffs were reported to be ultra-conservative candidates for Congress. See *id.*; see also Group Files Lawsuit to Stop Loss of Savage Rapids Dam, *The Oregonian*, Mar. 19, 1994, at D3.

[FN271]. An *Oregonian* editorial contended that both politicians' opposition to dam removal was the result of election year politics. See Editor, Remove Savage Rapids Dam, supra note 236.

[FN272]. See Roy Scarbrough, Lawmakers to Fight Removal of Rogue Dam, *The Oregonian*, Oct. 28, 1994, at B3.

[FN273]. Senator Adams went so far as to threaten the Commission that he would go over their heads by pushing a bill through the legislature to protect the dam, and that he might attempt to pass another bill to reduce the commissioners' authority. See *id.* Senator Adams stated that "(i)t is our intention to be strong advocates for retention of this dam," and he vowed "to use whatever legislative tools I can to see that the dam stays there." *Id.*

[FN274]. See Roy Scarbrough, *Time is Running Out for Savage Rapids Dam*, *The Oregonian*, Oct. 29, 1994, at C1.

[FN275]. See Joan Laatz, *Lawmakers Hear Comments on Rogue River Dam*, *The Oregonian*, Apr. 6, 1995, at C1 (discussing bills to protect dam and give GPID permanent water right via legislative enactment).

[FN276]. In the case of Savage Rapids Dam, it was state Senator Adams, while in the case of the Elwha dams, it was Senator Gorton.

[FN277]. Representative Lepine introduced a bill in the House, but it was dropped in favor of Senator Adams' proposal. In addition, S.B. 1005, introduced at the same time as S.B. 1006, would have increased GPID's water right as a matter of law and overturned the Water Resource Commission's condition that the dam be removed in exchange for the increased water right. See Joan Laatz, *Lawmakers Hear Comments on Rogue River Dam*, *supra* note 274.

[FN278]. See *id.* See also Ashbel S. Green, *Savage Rapids Dam Gets Reprieve For Now*, *The Oregonian*, Apr. 26, 1995, at E4 (discussing passage of S.B. 1006 and quoting Senator Adams as saying, "(y)ou do not use the system to blackmail the people of my community. . . . If we're going to remove a dam in Oregon, the Legislature ought to be involved."); Gail Kinsey Hill, *Hot Topics: House Oks Property Tax Break*, *The Oregonian*, May 26, 1995, at B11 (discussing passage of S.B. 1005 and S.B. 1006).

[FN279]. Governor Kitzhaber threatened to veto S.B. 1005 and S.B. 1006 as written, if they reached his desk, but also said that he was interested in finding a long-term solution to the problems at Savage Rapids. See Hill, *Hot Topics*, *supra* note 278. The Governor's office and supporters of the senate bills negotiated a compromise. The Governor refused to sign S.B. 1005 because it would make GPID's water right the subject of state law, unlike any other water right in the state. However, he did agree to amendments to S.B. 1006 that set up an entity to study alternatives to dam removal. See Joan Laatz, *Savage Rapids Dam Gets Reprieve*, *The Oregonian*, June 1, 1995, at D7 (discussing negotiations and compromise).

[FN280]. See 1995 Or. Laws 586 § 1(1) (S.B. 1006). Proponents of dam removal decried the waste of state resources on further study of the issue that this bill required. They argued that there was plenty of information on which the agencies had relied in making their decisions and that removal was the obvious and best solution. See Editor, *More Dam Studies, Ugh!*, *The Oregonian*, June 5, 1995, at B8 (stating that it is past time to study dam, "(j)ust get rid of it!"); see also Editor, *R.I.P.: Savage Rapids Dam*, *The Oregonian*, Aug. 9, 1995, at D6 (calling Task Force study waste of time and taxpayer money and noting that this issue has already been studied "to death"). But see Donald R. Greenwood, *Letter to the Editor, Fate of Savage Rapids Dam Shouldn't Depend on Weak Data*, *The Oregonian*, July 3, 1995, at B6 (arguing that there is local support for dam and that more study required).

[FN281]. The Task Force was made up of members appointed by the Governor and the legislature (read Senator Adams). While it included a few fish and wildlife members, it was largely made up of Grants Pass residents who opposed dam removal. See Garst, *supra* note 233.

[FN282]. 1995 Or. Laws 586 § 1(2) (S.B. 1006). In developing these alternatives, the Task Force was required to consider the following factors: fisheries, GPID's water use permit, economic considerations, water efficiency and distribution, impacts on

residents, costs of different alternatives, ecological considerations, legal rights and obligations, and community expectations. See *id.* § 1(2)(a)-(i). While some of these factors are easily decipherable, it is unclear what the legislature meant by factors such as "community expectations."

[FN283]. The motivation behind the new alternatives analysis should be obvious. Removal opponents were unhappy with the EIS's recommendation of dam removal. For example, state Representative Repine called the conclusions of the EIS likely flawed because they followed the lead of Interior Secretary Bruce Babbitt, who has said that he wants to blow up a big dam. See *Draft Impact Statement Backs Dam's Removal*, *The Oregonian*, Dec. 23, 1994, at D2.

[FN284]. See *Savage Rapids Dam Task Force, Proposed Form of Final Recommendation*, 1-2 (adopted as amended Oct. 9, 1996) (on file with author).

[FN285]. The dam retention alternative included two parts: (1) modification of the dam, improvements at the headworks of the irrigation canal, and replacement or rehabilitation of turbines, pumps, and associated facilities; and (2) removal of the existing fish ladders and screens and replacement with up-to-date facilities that meet the current NMFS criteria. See *Savage Rapids EIS*, *supra* note 25, at IV-1. The current pump system at the dam is powered by flow that passes through turbines. The dam retention alternative would keep this system. The only substantial change in the Task Force's proposed alternative, labeled "Modified Dam Retention Alternative 4B," from that rejected in the EIS is to replace the turbine and pump system with an electric pump system that relies on an outside power source. See *Design Team, Pacific Northwest Regional Office, Bureau of Reclamation, Design Summary for Modified Dam Retention Alternative 4B*, 1 (Sept. 1996) (hereinafter *4B Design Summary*). This difference is crucial because it weakens removal opponents' claims that GPID cannot afford the power costs of an electric pumping diversion. The yearly operating costs of the pumping diversions in the preferred alternative (dam removal) and the Task Force's proposal (4B alternative) are comparable. Pumping under the dam removal alternative would cost \$ 233,000 annually. See *Savage Rapids EIS*, *supra* note 25, at Summary-11. Pumping under the 4B alternative would cost \$ 167,000 annually. See *4B Design Summary*, *supra*, at 6. The dam retention alternative in the EIS would cost \$ 105,000 annually. See *Savage Rapids EIS*, *supra* note 25, at Summary-11. Thus, the Task Force's proposal falls almost precisely between the two EIS alternatives in terms of estimated costs. However, under both dam retention alternatives, GPID would take on significant new debt in the millions of dollars, while it would have zero debt under the dam removal alternative due to 100% federal funding plus debt forgiveness.

[FN286]. *Savage Rapids Dam Task Force, Proposed Form of Final Recommendation*, 1 (adopted as amended Oct. 9, 1996) (on file with author). The final consideration--the potential impact of sediments--is addressed in the EIS, with the conclusion that sediments do not present a significant problem. See *Savage Rapids EIS*, *supra* note 25, at III-5 to III-6.

[FN287]. Interestingly, the Bureau's Regional Director recently reaffirmed the Bureau's position that the dam should be removed. See John W. Keys, III, Regional Director, Pacific Northwest Region, Bureau of Reclamation, *Record of Decision: Fish Passage Improvements Savage Rapids Dam 4* (March 1997).

[FN288]. See *Garst*, *supra* note 233; see also *Keys*, *supra* note 287, at 4.

[FN289]. Public choice theory posits that small, well-organized special interest groups exert policymaking influence disproportional to their size. See *Blumm*, *supra* note 26, at 407. This influence is primarily directed at legislatures, and public choice theory suggests that it is the self-interest and, to some extent, the ideology of legislators that births this influence. See Daniel A. Farber, *Democracy and Disgust: Reflections on Public Choice*, 65 *Chi.-Kent L. Rev.* 161, 161-63 (1989).

[FN290]. This shift from an almost religious belief that dams will turn the arid West into a blooming Eden to an acceptance

of the ecological importance of free-flowing rivers can be seen in the seriousness with which the Bureau of Reclamation now offers its engineering expertise in developing dam removal proposals. See, e.g., Savage Rapids EIS, supra note 25, at Summary-1.

[FN291]. Unfortunately, it is their near extinction that has motivated these proposals.

[FN292]. See, e.g., supra notes 200-201 and accompanying text.

[FN293]. FERC's historic mission has been the regulation and promotion of hydropower development. Still, FERC has asserted its authority to order dam removal during the relicensing process. See supra section III.A.1. FERC has also examined dam removal during the NEPA process concurrent with relicensing, the Condit DEIS and the Elwha relicensing EIS. See Condit DEIS, supra note 30, at viii; see also Elwha DEIS, supra note 15, at 1-2 to 1-7. It must also be noted that the FERC process is either ongoing or unresolved for both Condit and Glines Canyon Dams.

[FN294]. Whether in the FERC relicensing process, the NEPA process, or state water resources management processes, forums for developing dam removal proposals exist. Each of these forums has resulted in ecologically sensitive, scientifically based, economically beneficial proposals outlined in EISs. On the Elwha and the Rogue, these EISs recommended dam removal as the preferred alternative.

[FN295]. See supra section III.A.2.

[FN296]. See supra section IV.B.2.

[FN297]. FERC has yet to exercise this authority, however. See supra note 114 and accompanying text.

[FN298]. See, e.g., Savage Rapids EIS, supra note 25, at Summary-5 to Summary-6 (indicating all costs of anadromous fish restoration via dam removal would be borne by federal government).

[FN299]. Those with vested economic interests in the continued existence of the reservoir, adjacent landowners and businesses, also were involved in the citizen opposition to dam removal. See supra section V.B.2.

[FN300]. Witness James River Corporation's desire to sell the Elwha dams to the federal government while guaranteeing cheap power for the Daishowa mill, thereby obtaining compensation for both the capital assets and the benefits lost to dam removal. See supra section IV.B.2.

[FN301]. This is Senator Gorton's primary argument of late, that the cost of removing the Elwha dams is too great in these times of financial austerity. See supra section IV.C.2. Still, the economic benefits of restored salmon runs are so significant that they call this argument into question. For example, the economic benefits of restored runs on the Rogue have been estimated at \$4,998,600 annually. See Savage Rapids EIS, supra note 25, at Summary-4.

In the case of FERC relicensings, FERC's authority to order removal offers the opportunity to achieve removal at the expense of those who have profited from dams, the owners themselves, not the taxpayers. See supra note 88 and accompanying text.

[FN302]. See Garst, supra note 233. For example, in the case of the Savage Rapids proposal, opponents focused on the loss of recreation, a benefit to relatively few members of the public other than local landowners. In addition, however, opponents expressed the general sentiment that the federal and state governments should stay out of what opponents saw as their business, GPID and the recreation on the reservoir. According to one person involved in the proposal from the beginning, anti-government and anti-environmentalists sentiments ran high at many of the public meetings on the proposal. See *id.* At

one public comment hearing, pro-removal speakers were booed and hissed throughout their presentations. Interview with Gloria Smith, Co-writer of NEDC comments on DEIS, in Portland, Or., (Nov. 26, 1996). See *supra* note 76 and accompanying text (REAL); see also *supra* notes 265-267 and accompanying text (ASS); *supra* note 256 and accompanying text (Three Rivers).

[FN303]. This occurred in both the Elwha, with U.S. Senator Gorton carrying the flag of dam removal opponents, and the Rogue, with state Senator Adams pushing through a bill to stall the dam removal proposal. See *supra* sections IV.C. and V.B.2.-3.

[FN304]. See *supra* note 272.

[FN305]. Senator Gorton, for example, who has been at the forefront of attempts to weaken federal environmental laws, notably the Endangered Species Act, has publicly stated his support for the agendas of the wise use and property rights movements. See Sybil Ackerman, *supra* note 224. Oregon state Senator Adams and Representative Lepine, both conservative Republicans, scored zero and four out of a possible 100 by the Oregon League of Conservation Voters for the state legislature. See *id.*

[FN306]. See Blumm, *supra* note 26, at 416 (citing Daniel A. Farber & Philip P. Frickey, *Law and Public Choice: A Critical Introduction* 22 (1991)).

[FN307]. See *id.*

[FN308]. See Farber, *supra* note 289, at 165 (noting that recent studies conclude personal ideology of legislators influences role call votes).

[FN309]. This would keep the debate in the relatively removal-friendly forums of state and federal administrative processes, such as the BOR or Interior EIS process, the FERC relicensing process (though how friendly FERC is to removal proposals is an open question), the Oregon State Water Resources Board water rights process. More importantly, keeping the debate in these forums would make it easier to deflate removal opponents' claims that their concerns were not addressed.

[FN310]. See, e.g., Phillip M. Bender & Gloria Smith, Northwest Environmental Defense Center, Comments on the Savage Rapids DEIS, in Savage Rapids EIS, *supra* note 25, at App. VI-21 to VI-23.

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