

"When Dams Weren't Damned: The Public Power Crusade and Visions of the Good Life in the Pacific Northwest in the 1930s"*

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Your power is turning our darkness to dawn,
roll on, Columbia, roll on!

—Woody Guthrie, "Roll On Columbia." (1941)

In *Encounters With the Archdruid*, a 1971 biographical account of environmentalist David Brower, writer John McPhee comments that for conservationists, there is something special about dams, "something—as conversation problems go—that is disproportionately and metaphysically sinister." McPhee continues:

The outermost circle of the Devil's world seems to be a moat filled mainly with DDT. Next to it is a moat of burning gasoline. Within that is a ring of pinheads covered with a million people—and so on past phalanxed bulldozers and bicuspid chain saws into the absolute epicenter of Hell on earth, where stands a dam.

McPhee maintains that conservationists who remain rational in the face of oil spills "mysteriously go insane at even the thought of a dam." How can this violent reaction to dams be explained? Possibly, suggests McPhee, it is "because rivers are the ultimate metaphors of existence, and dams destroy rivers. Humiliating nature, a dam is evil—placed and solid."¹

Historical accounts of early 20th century conservation have emphasized the controversial decision to dam the Tuolumne River

in the Hetch Hetchy Valley of Yosemite National Park, breaking John Muir's heart. In 1987, Hetch Hetchy was once again news when Secretary of Interior Donald Hodel proposed tearing down O'Shaughnessy Dam, restoring Hetch Hetchy Valley to its natural state, a proposal warmly welcomed by David Brower. Muir, representing the esthetic side of American conservation, was exceptional in opposing a dam. Typically, American pioneers constructed dams and altered streams. Rivers were a resource to be used as Tim Palmer points out in *Endangered Rivers and the Conservation Movement*. This practical view was illustrated by a 19th century writer whose praise for the Hudson was confined to its commerce: "It would outrage one's sense of justice if that broad stream were to roll down to the ocean in mere idle majesty and beauty." The "dam-it-up" approach has dominated river policy throughout most of United States history.²

In recent decades, the spirit of John Muir has been resurrected as anti-dam and pro-river sentiments have grown. The fights to keep dams out of Dinosaur National Monument, the Grand Canyon, and Hell's Canyon from the 1950s into the 1970s culminated in victories for anti-dam environmentalists. The passage of the Wild and Scenic Rivers Act of 1968 affirmed the value of preserving free flowing rivers. Many water projects that included dams, however, were approved during these same decades, including Glen Canyon Dam on the Colorado River, which was seen by some as the modern equivalent of Hetch Hetchy as an environmental sin.³

Edward Abbey, popular writer about the American West and inspiration for the militant environmental cause known as Earth First!, rafted the Colorado just before a section of the river was transformed into Lake Powell, drowning the spectacular Glen Canyon. He hoped that a miracle—they would run out of cement, slide rules, or engineers—would prevent Glen Canyon Dam from being completed, and he daydreamed of seeing the dam dynamited to a heap of rubble at its dedication: "the loveliest explosion ever seen by man." The dam was a symbol of perfidy in Abbey's fictional *The Monkey Wrench Gang*. Bent on sabotaging the over-development of the West, the eco-guerillas or "monkey wrenchers" drive the custodians of civilization to distraction trying to guess what symbol of progress will become their next target. At a ceremonial moment, the monkey wrench gang succeeds in blowing up the bridge adjacent to Glen Canyon Dam. The novel continues:

On the Utah side of the canyon, a governor, a highway commissioner and two high-ranking officers of the Department of Public Safety strode through the crowd toward their remaining limousines. Stern-faced and furious, they conferred as they walked.

"This is their last stunt, Governor, I promise you."

"Seems to me I heard that promise before, Crumbo."

"I wasn't on the case before, sir."

"So what. What're you doing now?"

"We're on their trail, sir. We have a good idea who they are, how they operate and what they're planning next."

"But not where they are."

"No sir, not at the moment. But we're closing in."

"And just what the hell are they planning next?"

"You won't believe me."

"Try me."

Colonel Crumbo points a finger to the immediate east.

Indicating *that thing*.

"The dam?"

"Yes sir."

"Not the dam."

"Yes sir, we have reason to think so."

"*Not Glen Canyon Dam!*"

"I know it sounds crazy. But that's what they're after."

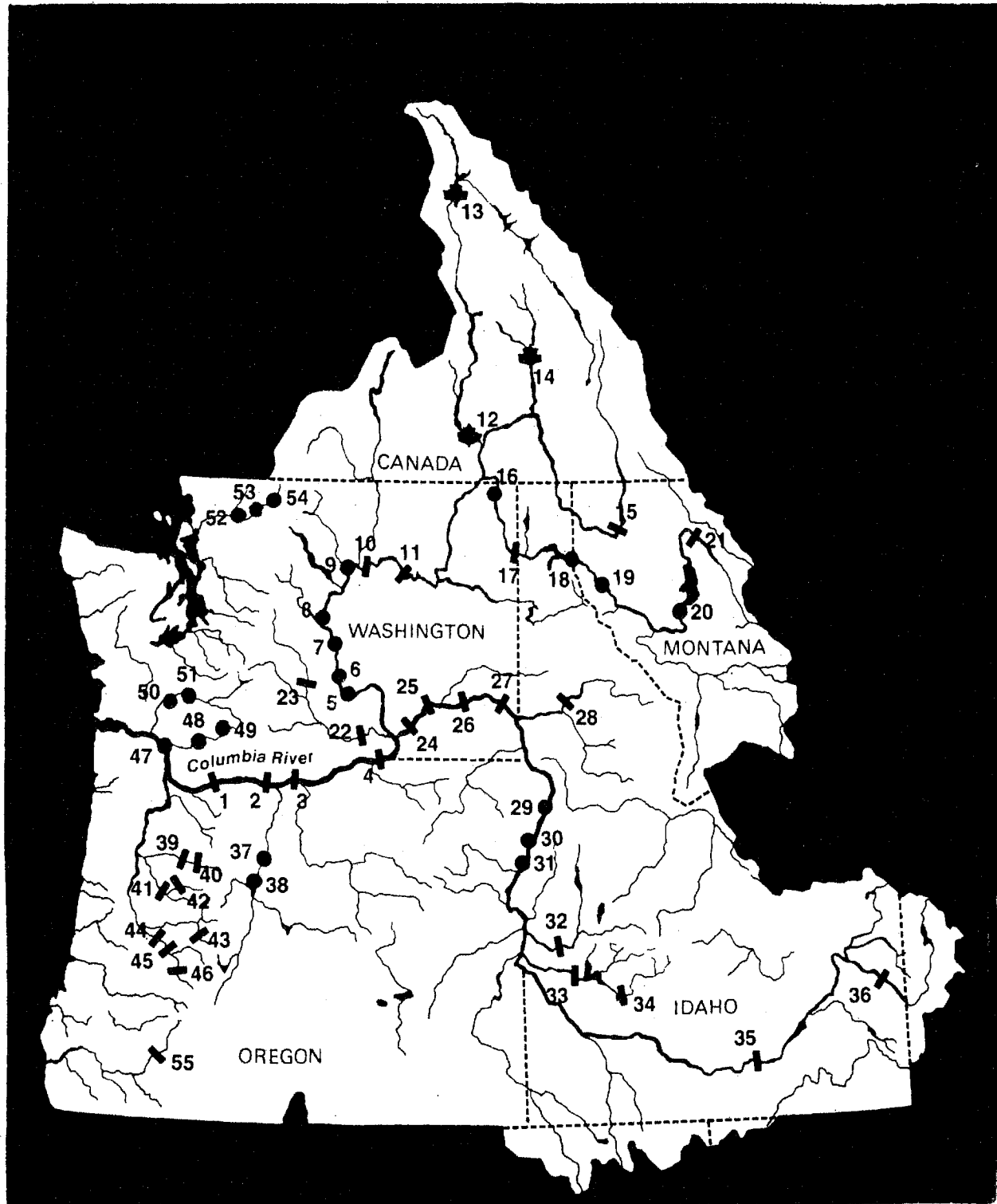
When Edward Abbey died recently, the newspaper *Earth First!* ran a sketch from the cover of his 1977 *The Journey Home, Some Words in Defense of the American West* picturing Glen Canyon Dam destroyed.⁴

Another work of popular literature that reflected the growing chorus of anti-dam sentiment was Ernest Callenbach's *Ecotopia*, a futuristic novel about Oregon, Washington, and California set in 1999 which projects a society based on ecological principles. A visitor to Ecotopia records that the "new government even went so far as to dynamite some of the dams which had been built on the rivers—on the dubious grounds that they prevented 'white-water' recreational boating or interfered with the salmon runs—which have been reestablished with great effort and enjoy much public support."⁵

Donald Worster's *Rivers of Empire* and Marc Reisner's *Cadillac Desert* offer indictments of the cumulative results of the

The Dams

- | | |
|---------------------|--------------------|
| 1 BONNEVILLE | 29 HELLS CANYON |
| 2 THE DALLES | 30 OXBOW |
| 3 JOHN DAY | 31 BROWNLEE |
| 4 McNARY | 32 BLACK CANYON |
| 5 PRIEST RAPIDS | 33 BOISE DIVERSION |
| 6 WANAPUM | 34 ANDERSON RANCH |
| 7 ROCK ISLAND | 35 MINIDOKA |
| 8 ROCKY REACH | 36 PALISADES |
| 9 WELLS | 37 PELTON |
| 10 CHIEF JOSEPH | 38 ROUND BUTTE |
| 11 GRAND COULEE | 39 BIG CLIFF |
| 12 KEENLEYSIDE | 40 DETROIT |
| 13 MICA | 41 FOSTER |
| 14 DUNCAN | 42 GREEN PETER |
| 15 LIBBY | 43 COUGAR |
| 16 BOUNDARY | 44 DEXTER |
| 17 ALBENI FALLS | 45 LOOKOUT POINT |
| 18 CABINET GORGE | 46 HILLS CREEK |
| 19 NOXON RAPIDS | 47 MERWIN |
| 20 KERR | 48 YALE |
| 21 HUNGRY HORSE | 49 SWIFT |
| 22 CHANDLER | 50 MAYFIELD |
| 23 ROZA | 51 MOSSYROCK |
| 24 ICE HARBOR | 52 GORGE |
| 25 LOWER MONUMENTAL | 53 DIABLO |
| 26 LITTLE GOOSE | 54 ROSS |
| 27 LOWER GRANITE | 55 LOST CREEK |
| 28 DWORSHAK | |



- ▮ Federal dams
- Non-Federal dams

damming of the West. Using these important studies and others, Wallace Stegner has recently provided an illuminating summary of the passing of an era. He notes: "The great days of dam building are clearly over, for the best dam sites are used up, most of the rivers are 'tamed,' costs have risen exponentially, and public support of reclamation has given way to widespread and searching criticism." Taming the rivers of the West has come at a high environmental price. Dams "do literally kill rivers," asserts Stegner, "which means they kill not only living water and natural scenery but a whole congeries of values associated with them." The damming of the West is one of the factors contributing to Stegner's depression concerning its present and future.⁶

With 50,000 large dams in the United States in 1980 and few free flowing rivers remaining, it is perhaps not surprising that the pessimism and skepticism associated with the environmental critique of dams have become commonplace. However, as the negative reputation of dams takes hold of the public imagination, it becomes increasingly difficult for contemporary audiences to comprehend that much of 20th century dam building was conceived within American conservation tradition—the tradition of utilitarianism which stressed efficient control of nature in the public interest. Development and a democratic ethos were trademarks of the conservation movement exemplified by Gifford Pinchot who justified the dam in the Hetch Hetchy Valley on utilitarian conservation grounds. The 1930s were a time of remarkable public works projects featuring multi-purpose river basin planning and construction of huge dams. Both efficiency and equity were central to New Deal conservation. Over time, the interests and values of the American people shifted from an emphasis on developmental conservation to environmental quality. Samuel Hays has described this evolution: "Conservation gave way to environment after World War II amid a rising interest in the quality of life beyond efficient production." Consequently, there were conflicts between the older conservationists and the newer environmentalists as resources previously prized as material commodities came to be valued for their esthetic and amenity uses. In the emergent Environmental Era, wild and scenic rivers became an expectation of the American standard of living. A river was not necessarily a resource to be developed. "This preposterous notion," said Hays, "was difficult if not impossible to accept to those whose preferences were rooted in an older time." A new appreciation of

ecological realities as well as esthetics and concern for health informed the new environmentalism.⁷

Regarding this modern-day shift from conservation to environmentalism, Clayton Koppes has provided some helpful advice: "To understand the great hopes invested in dam building from the 1930s through the 1960s requires us to step out of present-day environmental mindsets that tend to view big dams not as hydroelectric liberators but as ecological disasters." The following is an invitation thus to "step out" and into an exploration of the symbolism and meanings of Bonneville and Grand Coulee Dams and into an examination of the values, hopes, fears, and dreams of the promoters, publicists, and advocates (with some attention paid to doubters or critics) of the dams in their historical context in the Pacific Northwest during the Great Depression and New Deal.⁸

In the 1920s and 1930s, intellectuals, planners, politicians, reclamation proponents, and public power advocates were captivated by the potential of electricity for reshaping American civilization. A more abundant life was identified with the widespread distribution of low-cost electricity. An Electric Age beckoned, but whether its promised public benefits would be realized remained open to question. Private ownership of the electrical industry appeared to subordinate widespread public use to the profit motive. In the 1920s, many private power leaders and financiers became preoccupied with "frenzied finance" and dubious propaganda campaigns. Those who desired public ownership were impelled both by their positive visions of an Electric Age and their negative reaction to the "power trust." A dedicated band of public power crusaders was in the vanguard of the political fight. This was particularly true in the Pacific Northwest, where Seattle and Tacoma had early established municipal lighting systems that revealed by example that public ownership meant low rates and widespread use of electricity. These urban models inspired demands for rural electrification, culminating in the passage of public utility district laws in Washington and Oregon in 1930. Bisected by the mighty Columbia River, the Pacific Northwest possessed about 40 percent of the nation's potential hydroelectric power. The public power crusaders were determined to put the falling water to work and to save this last great resource for the people rather than for Wall Street. In 1933, under the New Deal, Bonneville and Grand Coulee Dams were initiated as public works projects to help combat the Great Depression. Although there were skeptics concerning the utility of such dams in an area containing

less than three percent of the nation's population, their construction inspired visions of a "promised Land" on America's "last frontier."⁹

Before turning to the symbolism of the Columbia River dams, it is important to characterize the negative imagery of the private utilities, many of which collapsed following the stock market crash and ensuing Depression. Once mighty, utility magnate Samuel Insull symbolized the bankruptcy of the past. In *The Lords of Creation*, Frederick Lewis Allen entitled the chapter on Insull, "Building the Pyramids." Allen wrote: "To look at a chart of the Insull pyramid as it appeared during those lush days is almost to be persuaded that one is dreaming. Certainly, one thinks, here is corporate capitalism gone mad." Allen noted that it was delusory to think that excessive profits came out of thin air. He concluded: "Pyramiding...took inordinate profits out of the consumer, the investor, and the future—often including, of course, the insiders' own future, as Samuel Insull subsequently discovered." Insull, thus, was identified with the "pyramids" of the old order, built on paper stocks and bonds. As the dreams of that age were shattered, Insull was stigmatized as representative of the folly of the past. Franklin Roosevelt used Insull's name in vain during the 1932 campaign, referring to the "unethical competitor, the reckless promoter, the Ishmael or Insull" and to the "Insull monstrosity." The future that Insull borrowed from was found wanting, but the need for a future of hope and promise remained. Although Insull's "pyramid" proved ephemeral, there was still a need for "pyramids." Expressions of that hope were projected onto the great dams.¹⁰

In his campaign speech on the power issue in Portland, Oregon, in 1932, Roosevelt discussed the merits of four government power developments—the St. Lawrence River, Muscle Shoals, Boulder Dam, and the Columbia River. Robert L. Duffus of the *New York Times* was impressed with the magnitude and implications of the four projects for the nation's economic future. The investment in the dams would be on the order of \$2,000,000,000. They would produce six to seven million horsepower or one-half of the existing capacity of all the waterpower plants in America. Duffus attempted to put the dams in perspective:

Great Wars have been fought and hundreds of thousands of men have died for smaller stakes than these. The actual physical force at the disposal of even the mightiest potentates at any stage of the world's history prior to the

invention of the electric dynamo was a mere trifle compared with it.

The projects had the capacity to influence the lives of millions of people living and yet to be born. "By comparison they make even gold mining a pathetic scramble for small change. They are pioneering on a scale undreamed of before the 20th century." The marvel of it all was accentuated by the fact that in the cases of the Colorado and Columbia Rivers, the projects were in regions in which the day of the old-fashioned pioneer was still within memory of living citizens. The dams would be pioneering carried out with the aid of 20th century technology. This would be in the grand manner, "yet in a spirit not different from the pioneering of the 19th century." Duffus concluded that since these were to be government enterprises, they might be a source of pride for millions who would not benefit directly, "for they will represent victories in a war, not with flesh and blood enemies,...but with nature in its most majestic and recalcitrant mood."¹¹

Knute Hill, Democratic congressman from eastern Washington from 1933 until 1943, was among those who articulated the significance of the New Deal water power program. During the House debate on a Tennessee Valley Authority bill early in 1933, Hill reflected: "...they say that Muscle Shoals is a dream. What a magnificent dream it is. Thank God for dreamers!" Identifying the progress of civilization with practical dreamers, Hill recalled that Thomas Jefferson had fit that description. Jefferson dreamed of the possibilities of the Oregon country, and sent Lewis and Clark to explore the region, resulting in American ownership of the Pacific Northwest. Now there was another dreamer and practical statesman in the White House. Of Roosevelt, Hill remarked:

He has a dream contemplating the development of the stupendous waterpower resources of our country for the benefit of all of its citizens. We are living in the electrical age and its blessings should be distributed equitably among all of the people, as they are all common inheritors of this great resource provided us by a bountiful nature.

After describing the President's four-cornered "yardstick" and multi-purpose river development plans, Hill asserted that the voters of his state had voted for Roosevelt because of his stand on the power question. He concluded: "We rejoice that we have a

dreamer and practical statesman again at the other end of Pennsylvania Avenue who not only knows what the people want but has the courage to make his dreams come true."¹²

With the persistent urging of Senator Clarence Dill of Washington, Senator Charles McNary and Congressman Charles Martin of Oregon, and others, Roosevelt made the dreams of Northwesterners come true by approving Bonneville and Grand Coulee Dams as public works projects. There was rejoicing in the Far Corner. The *Spokane Press* reported that the whole Inland Empire was afire with enthusiasm. Spokane citizens gathered on street corners to engage in spirited discussion about the glowing future of their city. "Everyone was talking Coulee Dam...." The paper indicated that the lack of cheap electricity had hampered the progress of Spokane as an industrial center and the greatest benefit to that area would derive from the production of cheap power for industrial and domestic uses. In Portland, one contemporary recalled that when the money for Bonneville was assured, some of the most distinguished businessmen marched through the streets at high noon to stir the home folks to a realization that something that had seemed years away was, in fact, happening now. Senator Dill summed up the regional response: "With cheap electricity on the farms, in the homes, in the stores, in the factories, and on the highways and the railroads, we shall build the greatest electrical empire here in the Northwest the world has ever known."¹³

Amidst this backdrop, President Roosevelt returned to the Northwest in the summer of 1934 to bestow his blessings on the two dams. In the process, he spelled out their meaning in human terms. The President spoke from a platform on the banks of the Columbia River near the site of the construction of Bonneville Dam. An audience of about 5,000 braved rain and muddy roads to hear FDR tell them that he believed in the old saying of "more power to you." He added that he did not believe that the Northwest would have enough power for a long time to come. The President described the Northwest as a region capable of absorbing a vastly increased population in contrast to sections of the country where there was overcrowding or the land had given out. Many Americans dreamed of a place where they would have a better chance for themselves and their children. Roosevelt concluded that the Pacific Northwest was a "land of opportunity—a land already peopled by Americans who know whither America is bound."¹⁴

The next day, the presidential party journeyed on to Grand Coulee. Senator Dill introduced the President to an estimated 20,000 people, remarking that Roosevelt was building "a new America in which all will have a more abundant life." Roosevelt explained his philosophy of cheap power—it would become so inexpensive that it would be a standard article of use in homes as well as for farms and factories. He was optimistic about the market for the electrical production of the dams, as experience with low-cost power proved that the cheaper it was, the more it was consumed.¹⁵

Roosevelt reminded the crowd that the administration had allotted more PWA money to the region than population *per se* justified. It was done because in the coast states "you have unlimited natural resources; you have vast acreage, capable of supporting a much larger population than you now have." The benefits from the projects would accrue not only to the Northwest, but would provide opportunity for many in the older parts of the nation "to come out here and distribute the burdens which fall on them more heavily than they fall now on the West." Roosevelt recalled Horace Greeley's 19th century slogan: "Go West, young man." He added: "You here show them the opportunity of still going west." The following day in a radio address from Glacier National Park, the President expressed confidence that in the days to come, as the parched lands of the Columbia Basin were watered from the Grand Coulee project, many families would thank his generation "for providing small farms on which they will at least be able to make an honest and honorable livelihood."¹⁶

Roosevelt's remarks made clear his sensitivity to the psychological, as well as the material, importance of the dams. Public power crusaders, reclamation enthusiasts, and boosters seeking to overcome the colonial character of the regional economy could all find grist for their mills in the President's speeches. An editorial in the *Seattle Star* reflected sentiment in the Northwest in response to FDR's visit. Entitled "The Great Dream of the West," it indicated that the President's reassurance that government development and control of power would never be abandoned meant more than appeared on the surface. "The great American dream—a dream of a happier, cleaner, more fruitful country—is close to the heart of the president." The *Star* related its version of what was in Roosevelt's mind for the Northwest beyond the declaration of an electrified industrial and agricultural

empire. "He sees homes and happy people and an advancing civilization of liberty-loving people."¹⁷

The paternalism of the New Deal in bestowing the dams was not out of character with the American Dream. The *Star* editorial defined the situation:

It is not part of the great American dream that the people shall be led by the hand, and literally nursed into prosperity. Nothing of the kind. The dream calls for a self-confident people to take advantage of opportunities furnished by government or agencies assisted by government. And that is the only sort of a dream that can come true.

The *Star* concluded that no other part of the nation possessed as many natural advantages as the Pacific Northwest, which made it, indeed, an attractive region for those in the crowded East and drought-stricken Middle West. It prophesied a great surge of immigration which would see "this part of America grow richer, greater, happier than even our wildest boosters predict."¹⁸

Later in 1934, Fred Lockley and Marshall Dana, editors of the [Portland] *Oregon Journal*, published a book which attempted to place Bonneville Dam in historical perspective. They wrote that Roosevelt, in ordering Bonneville, had caught the "vision of the West," and had begun to plant "the seeds of those regenerative activities and influences that help to keep governments virile and civilizations strong." Lockley and Dana evoked the imagery of the Old Oregon Trail and the pioneering period. The old trail led to America's last frontier. "The hegira of the Covered Wagon poured over the continental divide and down into the western valleys with human power to match that of the Columbia's own." The pioneers had dreamed dreams of empire, and they had always "fronted the future." The authors continued:

The dreams of the pioneers are the realizations of today and the realizations of today belong to the dreams of tomorrow. The new Oregon Trail leads to frontiers of developed resources and explored capacity. It is a great and a thrilling invitation to move on, and on.¹⁹

Bonneville Dam was, thus, a chapter, "brilliant with light and vivid with power," in the epic story of the Oregon country. The building of the dam came at a turn in the cycle from settlement

and agrarian improvement to that of power conversion and development of an immeasurably vast industrial civilization with its corresponding increase in population. Lockley and Dana believed that Roosevelt sensed this when he proclaimed "more power to you" to Oregonians. For their part, they sensed a clear line of destiny running through Oregon's history connecting with its future. They envisioned that the rim of the Pacific Ocean was about to become the theatre of the newest act in the drama of "humanity's struggle with the...forces of the earth." Building Bonneville Dam was one of the clear signs announcing that the curtain was rising upon this new act.²⁰

Oregon Congressman Walter Pierce was among those who believed a new day was beckoning. In a CBS radio address in 1938, he forecast that Grand Coulee and Bonneville would revolutionize the industrial and economic conditions of the Northwest. The dams would "usher in a new westward movement, such as we had before our national frontiers vanished at the water's edge of the Pacific Ocean." Drought-plagued farmers and land-hungry urban dwellers would find new opportunity upon the completion of the huge projects. In fact, the new westward movement had already begun. With it had come a revival of the pioneer spirit. The dams provided an opportunity to "place the landless man on the manless land." In short, when Roosevelt allotted the millions to build the Columbia River dams, "he initiated a new era for the Pacific Northwest."²¹

Not everyone was enamored of the prodigious potential of the great dams. Some Easterners were disenchanted with the flow of tax dollars to an area with so few people. An engineer, who visited the Northwest in 1936, expressed eastern disdain: "'The Columbia is certainly a wonderful river. It waters four states and drains forty-eight.'" A series of articles appeared during the 1930s which countered the optimism of the "dreamers." Some were inspired by private power opponents of the New Deal program; others were simply a recognition of a dramatic story, whether one viewed it favorably or negatively.²²

The question of the wisdom of the Northwest dams also received an airing in Congress during the 1930s. Some Easterners probed the apparent contradiction between the twin policies, both of which required public expenditures, of reclaiming the arid West and taking land out of production. Francis Culkin, Republican congressman from New York, was the most vocal opponent of further reclamation. In 1937, he described Grand Coulee Dam as a

colossal folly. It was uneconomic, hopelessly indefensible, a pipe dream, and represented a raid on the federal treasury. Grand Coulee reflected the efforts of "mad reclamationists," who were bent on shifting the center of production in America. These empire builders were motivated by soulless, selfish localism. Culkin indicated that some of his colleagues would draw the "red herring of power" across the trail. Sometimes, he said, the proposition was power, sometimes it was reclamation. Reaching into his rhetorical menagerie to offset the "red herring," Culkin proclaimed: "Up in the Grand Coulee area there is no one to sell the power to except the jack rabbits and the rattlesnakes, and they are not amenable, as you know, to the ordinary processes of an electric meter." The New Yorker urged the Congress to cease living in a "fool's paradise," because the Grand Coulee situation carried in itself the "seeds of death to popular government in America."²³

Culkin's oratory was rebutted by members of the Northwest congressional delegations. Charles Leavy from eastern Washington alleged that attacks on Grand Coulee were, in general, "power trust" inspired. The private utilities hoped to preclude the project's full development so that it would appear to be the colossal blunder of the New Deal. The game was then to suggest that it would be preferable to let the private companies have a go at converting the dam into something useful. Leavy believed that the low-cost power from Grand Coulee would "help free us and free the rest of the Nation from the curse of the domination of the Power Trust."²⁴

Leavy and Walter Pierce emphasized that the Northwest was a place where the displaced could find homes. As a Westerner, Leavy wanted to say to the crowded East: "There is a new home for you in the glorious West." Pierce hoped that Culkin would make a trip through the Grand Coulee country in 25 years, when he would see "a picture altogether different from the picture he dreams of now." Knute Hill pointed out that the Northwest projects were not a drain on the taxpayers; they would be self-liquidating. In any case, Hill believed that nothing could stop the onward march of irrigation. He noted that the last great frontier for homesteading was the arid West. A half century ago the Middle West was called the "bread basket of the United States" and the arid West was anthematized as the "great American desert." The juxtaposition of the Dust Bowl in parts of the Midwest and reclamation in the arid west was leading to a partial role reversal for the two areas. In Hill's view, "...the American

desert is becoming in a small measure the bread basket." The Northwest did not glory in the existence of the Dust Bowl, according to the congressman, but it did intend to provide food and shelter for those driven from their homes who came west seeking new ones.²⁵

To the charge that the dams were superfluous because there was already too much power, Knute Hill responded that it was true that there was too much power. There was too much, however, because rates were too high. With government development, despite the huge increase in electrical capacity, there would not be an excess. Lower rates would encourage consumption. Hill argued: "...the people are going to use 10 or 15 times as much power as they are using today. Those who have no power at all, those who have only a little power in their homes, will use it for every conceivable purpose." He was confident that the dynamics of this formula would assure the utilization of every kilowatt from Bonneville, Grand Coulee, and future Columbia River dams. Hill concluded that this was what President Roosevelt and Secretary of the Interior Ickes stood for, and they were going to finish the job in spite of opposition.²⁶

Numerous articles on the New Deal dams were published in the 1930s that were more awe inspired than anything else. Grand Coulee was so Brobdingnagian in scale that it seemed incredible. An artist from Cleveland described her reaction to the dam: "'It's positively eerie! This unbelievable monolith here in the wilderness, like a fortress in the desert.'" To build the dam, it was necessary to "roll" the Columbia River first to one side and then to the other. One writer was struck by the imagery of this Herculean task going forth in the dark of the night. He asserted that it was not necessary to know what the men were doing. The sense of the drama, music, and operatic quality might be stronger for not knowing more than that it was man acting upon his environment to alter it, "under some idea of economic necessity so very urgent that he cannot wait for daylight."²⁷

Boulder or Hoover Dam, begun in 1931, had suggested superlatives of wonderment. Will Rogers said of the Colorado River structure: "'It's the biggest thing that's ever been done with water since Noah made the Flood look foolish.'" Grand Coulee surpassed Boulder in material and concept. Inevitably, Grand Coulee was compared to the Great Pyramid of Egypt, which had been the largest man-made structure for six thousand years. Writers noted that Grand Coulee, the emergent new champion and

"the eighth world wonder," and the Great Pyramid were both products of a desert environment and both were built by the labor of those who otherwise would have been unemployed (a euphemistic characterization of the labor force that built the Great Pyramid). Some, such as the *Chicago Tribune*, stressed their similarity in uselessness. If one considered that Grand Coulee was not destined to be a white elephant, the comparisons diminished and the contrasts heightened. Robert Case wrote for the *Saturday Evening Post*: "The tomb of Cheops served no useful purpose, in the utilitarian sense of the word; when it was completed, the sand above which it towered remained as barren as before. The modern structure at least has the benefit of an economic dream behind it...." Case noted that the Great Pyramid required four million man-power years for its construction. When this reservoir of energy was gone, it was dissipated. The new colossus would produce four million man-power years in energy every twenty days. With Grand Coulee in mind, Stuart Chase summed up the contrast: "Pyramids were houses for the dead. Dams are centres of energy for the living. It is better, I think, to live in the age of the Great Dams than in the age of the Great Pyramids."²⁸

As many of the preceding voices have indicated, the modern "pyramids" rising amidst the wilderness of the Pacific Northwest beckoned to a troubled nation. Many of those who came to the Northwest during the 1930s were fleeing the Dust Bowl of the Great Plains. The push and pull factors for their migration have been engraved in time by Pare Lorentz in the documentary film, "The Plow That Broke the Plains:"

Baked out—blown out—and broke!
Year in, year out, uncomplaining they fought
the worst drought in history:
their stock choked to death on the barren land...
their homes were nightmares of swirling dust
night and day.
Many went ahead of it—but many stayed
until stock, machinery, homes, credit,
food, and even hope were gone.

On to the West!
Once again they headed into the setting sun...
Once again they headed West out of

the Great Plains and hit the highways
for the Pacific Coast, the last border.²⁹

The majority of the Dust Bowl refugees went to California, and their odyssey has been popularized through John Steinbeck's *The Grapes of Wrath* and John Ford's film that followed. Less familiar is the story of those who journeyed to the Northwest. They came, in part, in response to the great dams and President Roosevelt's depiction of the dams as harbingers of a "Promised Land." The hope was that the Northwest was a last frontier. Journalist and political activist (and later U.S. Senator from Oregon) Richard Neuberger encountered an uprooted farmer from South Dakota, a recruit in the "great army of the highways," along U.S. 97 in Washington state. The Dakotan showed him a frayed newspaper clipping of Roosevelt's 1934 Grand Coulee speech describing the Northwest as a land of opportunity. The farmer explained:

The piece was in the newspaper 'bout the time the first drought hit us. I cut it out and tacked it in the kitchen. We used to read it whenever the dust trickled in at the windows and the sun and the heat gave our wheat another scorching.

Neuberger summed up his impression: "Water and power! These are the magic words beckoning the thousands of Dust Bowl pilgrims to the new frontier...." The new "frontier" was essentially a human-made frontier, and while its promise in terms of water and power was apparent in the 1930s, fulfillment in large part would await the following decades. The dams offered future salvation to Americans hemmed in by tenements or devastated by drought, but except for those who were employed in the actual construction, it was possible to see the point of a Seattle citizen who spoke of them as "'a cruel fraud on the unfortunate wanderers enticed across the country by fantastic stories of Utopia.'" Lockley and Dana noted in their 1934 study that many citizens had leapt to the conclusion that the dams were already providing the projected opportunities. They stressed the importance of warning the impoverished that they could not expect to find a land of "milk and honey." In reality, the latter-day pioneers did not find a "Promised Land" in the Northwest during the Depression decade. Although some who trekked west settled successfully on lesser, but already completed, reclamation projects, like Oregon, Washington, and Idaho had

their "migrant problem." Many of the Dust Bowl refugees were forced to follow the crops, picking fruits and vegetables in the orchards and fields of the Willamette, Yakima, and Snake River Valleys. Historian Richard Lowitt concluded: "While the plight of migrants in the Northwest was in no way as severe or as publicized as those in California, nor were there racial or ethnic dimensions to their plight, their situation was similar." He added that "scandalous treatment, exploitation, and deprivation" of migrant workers and their families remained the norm in the Pacific Northwest until late in the decade.³⁰

The link between the Dust Bowl migrants and the Columbia River dams was forged in the music and lyrics of renowned folk artist Woody Guthrie. Oklahoma born and Dust Bowl bred, Guthrie had written a number of Dust Bowl ballads. In 1941, he was hired by the Bonneville Power Administration to compose songs about the Pacific Northwest, the Columbia River, and its dams for possible use in a documentary film, "The Columbia." Guthrie, described as a "Marxist Will Rogers," traveled around the region and encountered fellow Okies who had come to the Pacific Northwest via California and who were living in government camps. With them in mind, he wrote "Pastures of Plenty:"

It's a mighty hard row that my poor hands have hoed
My poor feet have traveled a hot dusty road.
Out of your Dust Bowl and westward we roll,
And your deserts was hot and your mountains was cold.

California and Arizona, I make all your crops,
And it's north up to Oregon to gather your hops,
Dig the beets from your ground, cut the grapes from your
vines
To set on your tables your light sparkling wine.

Green pastures of plenty from dry desert ground,
From the Grand Coulee Dam where the water runs down....

FDR kept Guthrie's dispossessed in mind as he planned for the day that water would run down from Grand Coulee Dam, creating green pastures of plenty. The President anticipated 80,000 families settling on the reclaimed land with 20,000 additional families providing support services. "...I want," Roosevelt told Interior

Secretary Ickes, "to give first chance to the 'Grapes of Wrath' families of the nation."³¹

In many ways the Pacific Northwest was a final frontier. The Pacific Northwest Regional Planning Commission, the regional unit of the National Resources Committee, concluded in 1935: "The Pacific Northwest is the one large region of great promise yet awaiting full development in the United States." The question for some was: "Will there be a repetition of the old patterns of exploitation, wastefulness, and greed?" The Commission found evidence of a conservation tradition, but it also cited deep-seated antagonisms to conservation. The Commission believed that the latter grew directly out of the pioneer period still remarkably close in time for the Northwest. The pioneer period had been an era of exploration. "The rewards of money and prestige went, in that era, to the man who could most successfully rob nature." Those whose attitudes toward natural resources were formed in the era of conquest and rugged individualism were still influential and slow to change their beliefs. The Commission found that many of their sons and daughters shared the "same optimistic individualistic faith." Writer Katherine Glover illustrated the ambiguity of direction for the region. She found two pictures in eastern Washington. There were ghost ranches amid desolation. There was also the Yakima Valley with its farms and orchards. Both sprang from the same soil. The abandoned farms represented the old era of exploitation. The Yakima Valley farms, beneficiaries of planning and reclamation, symbolized what could be with a more cooperative spirit. With reference to lands to be revitalized via water and power, Glover reflected:

...the people of this region stand today upon a dividing ridge, from which they may see the mistakes of the old and the possibilities of the new and choose the way for this new land that is to be opened up.³²

During the 1930s, there was an environmental awakening or reawakening in response to the devastation of the continent. The problems of the Depression were intensified because of the dissipation of natural resources. Floods, drought, dust storms, and erosion were jeopardizing the organic stability of the United States. The "double whammy" of economic Depression and environmental catastrophe was not merely bad luck; both were rooted in a culture of unrestrained capitalism. Some saw the New

Deal dams as healing instruments in establishing a rapprochement with nature. Stuart Chase expressed this view: "The chief purpose of the great dams is to restore equilibrium." Essentially, the dams were an affirmation of technological solutions to environmental problems. Planning was the key to restoration and to recreating the frontier. Geographer Carl Sauer, however, warned against substituting an expanding frontier of technology for the doctrine of a passing frontier of nature. He wrote in 1938:

This "frontier" attitude has the recklessness of an optimism that has become habitual, but which is residual from the brave days when north European freebooters overran the world and put it to tribute.

Sauer concluded that Americans had not yet learned the difference between yield and loot. "We do not like to be economic realists."³³

Bonneville and Grand Coulee Dams symbolized a cluster of images during the 1930s. Most were positive, reflecting the universality of the appeal of heroic undertakings. Among these expressions were "power on the last frontier," "making the desert bloom," and "biggest structure on the planet." In more economical language, the dams suggested regional self-sufficiency, conservation, planning, and an electrical empire. These were the descriptions of the dreamers, visionaries, boosters, and reclamation and public power enthusiasts. Central to the promotion of the dams was the Bonneville Power Administration created in 1937 to market and coordinate transmission of electricity for the Columbia River system.³⁴

BPA's formative vision was encapsulated in "Hydro," a film it produced in 1939 to promote public power. "Hydro" was a quintessential expression of the utilitarian conservation perspective. The Columbia was portrayed as a river of hope with enormous potential for the region; untamed, however, it was a resource going to waste. "Ten million horses plunge relentlessly to the sea." The challenge of the Columbia was to control it—harness those wild horses; with Bonneville and Grand Coulee Dams, America's conquest of the mighty river had begun. And it was only the beginning as nine large dams were projected on the main stem of the Columbia, which would be developed for all its values: protection of fish life, flood control, navigation, reclamation, and electrical power.³⁵

The dams were the gateway to America's last frontier which would be a Promised Land with reclaimed desert lands to accommodate half a million migrants, rural electrification, electrical necessities and conveniences for homes, and new factories attracted to the region by the cornucopia of electrical power. The latter would include electro-metallurgical and electro-chemical industry. There would also be energy for developing the mineral resources of the Northwest such as phosphates for fertilizer and energy for national defense. All of this would help to break the dependency of the region on a boom-and-bust logging industry based on unsustainable practices and would help to change the colonial character of the Northwest economy. As other countries struggled for markets and land amid the chaos of a troubled world, America was building her own in creating an empire in the Pacific Northwest. Furthermore, the new order was sustainable: hydroelectricity was an oil well that would never run dry. The dams were underwriting an economy of abundance to make the American Dream come true for the citizens of the Pacific Northwest. Bonneville and Grand Coulee represented an historic chapter in man's triumph over untamed nature and wilderness.³⁶

There were also the doubters and the detractors, who spoke of economic monstrosities, political "crimes," and foolishness. In either case, the dams were more than just dams. Lockley and Dana saw Bonneville as part of "the splendor of a nation's audacious answer to the challenge of depression." In viewing Grand Coulee, Katherine Glover felt the final measure would not be in terms of money spent or in engineering achievement, "but in terms of the vision and stamina of the people, their courage in withstanding old pressures and their intelligence in evolving and using new ways of work and life."³⁷

The private utilities were among the doubters, and their outlook was accentuated by Kendall Hoyt in 1936. He argued that the dams were justified ostensibly because they were multi-purpose projects, which would improve navigation, aid in flood control, and assist in reclamation. This was really a guise to get the concrete poured. The larger New Deal strategy had one purpose in mind: the socialization of electrical utilities. Since there was virtually no market for the power from Bonneville and Grand Coulee, the private utilities would be caught in a "squeeze play." Hoyt asserted:

Each dam is a white elephant which tramples out legitimate business, eats the taxpayers' money, and cannot be sold or slaughtered because it is a sacred thing for which the public ownership group will fight fanatically.

He maintained that there was a new "Federal Power Trust," which was establishing a vested interest "far more subversive and anti-social than anything imputed to the private 'power trust' in its palmiest days."³⁸

Whether or not their interest was subversive, public power crusaders were determined to protect their last, best natural resource. Following the collapse of utility holding company empires during the Depression, the credibility of private utilities had suffered. The national example of the "Insull monstrosity" was engraved in the memories of public power advocates in the Pacific Northwest. Closer to home, thousands of Portlanders had lost their savings through the financial manipulations of the Central Public Service Company. When the President told his Oregon audience in 1934 that Bonneville power was to be government controlled for all time, a cheer reverberated through the Columbia Gorge. One spectator uttered: "'See, I told you he'd help the little fellow. No grafting holding company's going to get this dam.'" Walter Pierce referred to the Columbia River's millions upon millions of kilowatts as the people's heritage over which his generation must exercise custodial care. But this could not be done "if the racketeers of Wall Street are allowed to stand between the Government-erected power plant and those who desire to use the electric energy." The dams were the region's opportunity, and they had to be protected from "predatory interests." From a public power viewpoint, repetition of the paper "pyramids" of the holding company debacle with respect to the Northwest dams represented the "unpardonable crime."³⁹

Moved by the "spirit of Grand Coulee," Stuart Chase reflected on the relationship of the great dams to the Depression:

Concrete dams in granite cradles are solid. They are not like debentures and mortgages, which go up in smoke. Even companies owning skyscrapers go up in smoke, but the steel and concrete never quiver.

Chase suggested that in a time of disturbing transition, it was not a bad idea to build solid things, "which add to the long-range

wealth and energy of the people; that reduce flood and drought, water the desert, ...and release great blocks of light, heat, and power." He conceded that he might be wrong, but right or wrong, no American could stand below the spillways of the Grand Coulee Dam and not be proud "to belong to the nation which could rear this mighty thing."⁴⁰

Bonneville and Grand Coulee evoked images of a "Promised Land," opportunity, frontier, and dreams. The dams as symbols embodied a myth of the future which had repercussions for the present. Geographer J. Russell Smith believed that American civilization would reach its "maximum" in the Northwest, outstripping New York. Regional predictions of this kind were common during the 1930s. Richard Neuberger explained why: "We live in an electric age, and any area with the greatest power stream on earth is bound to have the open sesame to future industrial development." The myth was given poetic summation by Woody Guthrie when he traveled the Northwest in 1941, producing 26 folksongs. Guthrie was inspired by the natural beauty of the region, by the powerful Columbia River, and by the dams which represented democracy on the march. His songs inscribed the symbolic lure of the great dams for a people beset by Depression, but yearning for a better tomorrow. In "Grand Coulee Dam," he depicted a beautiful but wild river that had hitherto dominated humanity while sparking its imagination:

...she gave men dreams to dream.
Of the day the Coulee Dam would cross that wild and
wasted stream.

Uncle Sam took up the challenge in the year of thirty-three
For the farmer and the worker, and all of you and me,

He said roll along Columbia,
you can ramble to the sea.
But river while you're rambling,
you can do some work for me.⁴¹

In 1937, Bonneville Dam was completed and the Columbia River was ready to do some work for Uncle Sam. In his dedicatory speech, Roosevelt talked of the necessity for planning to restrain the individualism that had laid waste to so much of the Great Plains, forcing the migration of thousands of destitute families to

Oregon, Washington, and California. He stressed conservation and regionalism and told his audience that he understood the desire of some who lived close to great sources of power to seek the advantages that come from geographical proximity. He understood the dreams of creating another Pittsburgh with its whirling machinery. However, wisdom and experience dictated that "the policy of the widest use ought to prevail." This was cause for disappointment for Portland Chamber of Commerce, political, and private utility interests which had worked for policies that would have made Bonneville a local rather than a regional asset, but reason for exaltation for the public power movement with its strong rural component and regional orientation. "Today," Roosevelt noted, "many people are beginning to realize that there is inherent weakness in cities which become too large...and inherent strength in a wider geographical distribution of population." Following the Bonneville ceremony, the President returned to Grand Coulee Dam.⁴²

A column in the *Washington Post* proclaimed that the President's trip to Bonneville and Grand Coulee was symbolic of the restoration of the American frontier and the dream of the American pioneer. The new dream was the same, but its embodiment was different. The prospects of illimitable riches, Comstock Lodes, pyramiding real estate values, or dizzy profits, which had marked previous westward ventures, were not present. However, these developments revived the still "older American idea of security upon the land and its concomitant—independence—the idea that was the bedrock of Thomas Jefferson's political faith." The editors of the *New York Times* were generally sympathetic with the philosophy expressed by Roosevelt at Bonneville. They reviewed the transition from the age of steam to the age of electricity. The former had led to the concentration of population: "The slums, the overcrowding, the grime, vice and disease that have been so many blots on this civilization were consequences." America, however, had not made the most of the opportunity of electricity. Most of the 27,000,000 American farmers were "still reading by dim, obsolete oil lamps, still washing clothes by hand in old-fashioned tubs, still carrying water from wells, still cooking in kitchens differing not at all from those of U.S. Grant's time." The editors believed that FDR was justified in his optimism concerning the development of rural and small town America. Bonneville and the Northwest were an experiment—a social laboratory—that would put to the test the theory that

decentralization would follow the generation and distribution of electricity. *Life* magazine was also captivated by FDR's pronouncements and entitled its story: "Roosevelt Builds the Biggest Dam and Envisions a New Society." Power and water would assist many Americans, but these were means to a greater end:

Beyond these aims lies President Roosevelt's long-cherished vision of a whole new U.S. society based on Power. For when drudgery-relieving Power is almost as cheap and abundant as sunlight, he believes, free citizens will have leisure and dignity enough to make democracy really work.

In a time of economic insecurity, Roosevelt held out the prospect of a more abundant life for Americans. Hydroelectric development was a key element in planning for a series of related issues including flood control, soil erosion, afforestation, reclamation, and decentralization of industry. In examining the President's perceptions of the power issue in 1936, the *New York Times* remarked that it was the first time that it has seen electricity "woven into a fabric which includes the proper function of every rill and tree as well as the welfare of every little farm and every little industry in the country." "To the President," said the *Times*, "the abundant life is evidently the electrical life." The New Deal dams were thus tied to conservation and regional planning which anticipated a higher standard of living; a higher standard of living was the underpinning for a healthier democracy—a new society.⁴³

As the 1930s came to a close, the Bonneville Power Administration was in its formative stage: Bonneville Dam was producing energy while Grand Coulee Dam was still under construction—its first generators went on line in September of 1941. Certain questions remained open. Were Northwesterners, in part, victims of the "cheap power legend" that industry would locate where there was abundant, low-cost power? Was this a Northwest version of the myth of the Great Plains that "rain follows the plow?" Walter Pierce spoke for many in the region when he proclaimed: "Fortunate indeed are the citizens who may use without stint an abundant supply of electric current." Was this an extension of the "myth of superabundance" that had characterized America's earlier frontier experience? Throughout the 1930s, debate waxed on the question of whether the Northwest was about

to enter an "electrified paradise" or a "fool's paradise." Was the Northwest truly to become a "land of opportunity" or did the dams reflect New Deal opportunism? Were the public power crusaders merely substituting their "new era" for the earlier, but discredited, "New Era" of the 1920s? To the extent that such questions could be answered at all, the answers would depend on the passage of time. In the 1930s, public power proponents believed that they were leading their people out of the "promissory land" of the past into the "Promised Land" of the future.⁴⁴

The story of the dams was that of a people determined to resurrect the pioneering spirit in a modern context. They sometimes looked backward to Jefferson's dreams and to the historical destiny of the Oregon country. Mostly, they looked to the future, believing that if they did not move forward, they would go backward. In a time of distress, the dams rekindled hope that the "sun of opportunity" had not set in the West; on the contrary, it was rising in the Pacific Northwest and their progressive destiny was yet to be realized. Although one could argue with the assertion that the Northwest's future was more malleable because it could build "a new civilization without having to rehabilitate a civilization already founded," many believed it to be true. For those, the future of the region remained to be shaped. The thread of destiny ran through much of the commentary of the 1930s. However, there were differences of opinion concerning the fulfillment of that destiny. Public power leaders, private power advocates, politicians, and chamber of commerce spokespersons held conflicting views as to what was "manifest" regarding the destiny of the region. From time to time, particular leaders fell back on their own theory of predestination, but the political struggle made clear that the destiny was not pre-determined. In large part, it was up for grabs.⁴⁵

Whether Bonneville and Grand Coulee would produce change to match the psychic energy invested in them would depend in some measure on the policies adopted for governing their use. Whatever the wisdom of those policies, it could be said that Franklin Roosevelt had achieved the goal he enunciated at Grand Coulee in 1934 of making the American people "dam minded."⁴⁶

The continuing significance of Bonneville and Grand Coulee Dams would also be interwoven with historical fate. When Franklin Roosevelt spoke at the dedication of Bonneville Dam in 1937, the shadow of war was looming over the world. He took pride in its peaceful purposes:

As I look upon Bonneville Dam today, I cannot help the thought that instead of spending, as some nations do, half their national income in piling up armaments and more armaments for purposes of war, we in America are wiser in using our wealth on projects like this which will give us more wealth, better living and greater happiness for our children.

Early in 1939, after viewing Grand Coulee Dam, a Dust Bowl refugee wrote:

"You know, for years I have been reading about the building of the biggest battleships, the biggest bombing planes and the biggest artillery on earth. It thrilled me immeasurably to stand above that great dam and see ingenuity put to useful rather than destructive purposes. Thank God that some of the biggest things on earth are to make life better rather than to make life end!"

By that time, the new Bonneville administrator was supporting his requests for congressional appropriations with arguments for preparedness. Bonneville and Grand Coulee power was early channeled into defense industries. Old-time public power champion Judson King assessed the public power contribution to the war program:

TVA and the Columbia River dams "saved our lives" in World War II. They made possible production of phosphorus, nitrates, light metals and other war materials, including materials for the atom bomb. TVA plus the Columbia Basin...became known as the Arsenals of Democracy because their government-owned facilities could meet skyrocketing power requirements quickly.

In a time of war, the Electric Age had given birth to the Atomic Age. The plutonium for the Alamogordo, New Mexico, Trinity Test explosion and for the bomb dropped on Nagasaki was produced at Hanford, Washington, in secrecy with the help of a "mystery load" of electricity from the Columbia River dams. That the tragedy of the human condition led so swiftly from the hopes expressed by FDR and the Dust Bowl expatriate to the

incomprehensible destruction of modern warfare was cause for sober reflection.⁴⁷

The Faustian nuclear bargain has resulted in radioactive wastes and environmental problems for the Pacific Northwest. Lord Ritchie-Calder, former Professor of International Relations at Edinburgh University and a member of several scientific commissions to the United Nations, has described the scene:

...high-level wastes, some with elements the radioactivity of which can persist for *hundreds of thousands* of years, present prodigious difficulties. There must be "burial grounds" (or euphemistically "farms"), the biggest of which is at Hanford, Washington. It encloses a stretch of the Columbia River in a tract covering 650 square miles, where no one is allowed to live or to trespass.

There, in the twentieth century Giza, it has cost more, much more, to bury live atoms than it cost to entomb the sun-god Kings of Egypt.

The radioactive atoms, with the potential to destroy most life on the continent if released, are kept in million-gallon steel tanks. One problem with these modern sepulchres is their vulnerability. "The tanks will not endure as long as the pyramids and certainly not for the hundreds of thousands of years of the long-lived atoms." At least 500,000 gallons of these wastes have already leaked, and some ponder what would happen to these atomic burial grounds if an earthquake should shake the state of Washington. Recently the region was shaken by revelations of chronic radioactive iodine contamination from Hanford. Some of the airborne releases were intentional experiments; others were due to failures. Furthermore, in the 1950s, "each operating reactor was releasing up to 1,600 curies of beta products per day to the [Columbia] river through its cooling water, with trace activity documented as far away as Portland, Oregon. The fission product zinc 65 was detected in oysters 300 miles downstream in Willapa Bay." Hanford was selected as the site for plutonium production because of the abundance of electricity from the dams, water from the Columbia River to cool the reactors, and the "isolated expanse of uninhabited land." The features that had made the Northwest a "Promised Land" in the dreams of many had also become links in the chain of this radioactive nightmare.⁴⁸

The original road to the "Promised Land" looked to technology and engineering to liberate humankind from poverty and toil. Many 1930s conservationists anticipated, along with George Norris, father of TVA, "the dawning of that day when every rippling stream that flows down the mountain side and winds its way through the meadows to the sea shall be harnessed and made to work for the welfare and comfort of man." W.J. McGee, advisor to Theodore Roosevelt on water issues, believed that the "'Conquest of Water' was the 'single step remaining to be taken before Man becomes master of nature.'" When Franklin Roosevelt campaigned in the Pacific Northwest as a vice presidential candidate in 1920, he took one look at the Columbia River and "could not help thinking, as everyone does, of all that water running down unchecked to the sea." The Depression provided the opportunity for the great public water projects such as Bonneville and Grand Coulee. A generation later, another American president, John Kennedy, talked about an abundance of electricity as a major contributor to a higher level of civilization. In 1962, as he dedicated a dam on the Missouri River, he asked his audience to recall a bit of history:

When we are inclined to take these wonders for granted, let us remember that only a generation or two ago all the great rivers of America, the Missouri, the Columbia, the Mississippi, the Tennessee, ran to the sea unharnessed and unchecked. Their power potential was wasted. Their economic benefits were sparse. And their flooding caused an appalling destruction of life and of property. Then the vision of Theodore Roosevelt was fulfilled by Franklin Roosevelt.... And as a result this Nation began to develop its rivers systematically, to conserve its soil and its water, and to channel the destructive force of these great rivers into light and peace.

Kennedy told the dramatic story of rural electrification. Less than 30 years ago, fewer than 10 percent of farmers and rural dwellers had electric power. Today, more than 95 percent of rural homes have electricity, enriching their lives. The face of the nation had been changed for the better through the development of common resources; progress and prosperity followed in the wake of the great dams.⁴⁹

A year later, President Kennedy traveled to the Northwest for a ground-breaking ceremony launching the world's largest nuclear power plant at the federal atomic reservation at Hanford. He also visited Grand Coulee Dam, which, in his estimate, was an extraordinary national asset; it had led to prosperity and progress in the region and led to the new breakthrough of nuclear energy. He talked about how America's need for electric power doubles every ten years. "We need," he emphasized, "the equivalent of a new Grand Coulee Dam every 60 days." The nation would have to invest \$125 billion in the electric industry over the next 20 years. When that was done, the country would be richer and the next generation would enjoy a higher standard of living. "We don't realize that what we regarded as affluence 30 years ago is now way down below. Air conditioning, television, electricity, and the rest have changed the life of this country, and we are going to find the same extraordinary changes in the next 20 or 30 years." Maintaining this pace of progress would require an aggressive hydro program. Kennedy added: "Every drop of water which goes to the ocean without being used for power or used to grow, or being made available on the widest possible basis is a waste, and I hope that we will do everything we can to make sure that nothing runs to the ocean unused and wasted." Hydroelectric power would not be sufficient: nuclear and coal-fired production of electricity would also have to be developed and increased.⁵⁰

Kennedy's speeches serve as a reminder that the old conservation values lived on into the next generation. By that time, much of the vision of FDR, public power and reclamation enthusiasts, and others had been fulfilled. Land was being irrigated from Grand Coulee, new electro industries located in the Northwest, Washington was a predominantly public power state (Oregon and Idaho remained largely private power domains), and rural electric cooperatives abounded. Northwest consumers and industries, encouraged by low rates, used more and more electricity. This justified more dams on the Columbia and its tributaries. Power prognosticators (as JFK reflected) predicted that the electrical American Dream would keep on expanding. In anticipation of this demand, the Bonneville Power Administration and the Northwest utilities looked to coal and nuclear generated electricity to supplement hydro. As the hydro era shifted to the hydrothermal era, complications arose as the region was also shifting from the older conservation ethos to the new environmentalism. Caught between the demands of the Energy

Crisis and environmentalists, BPA Administrator Donald Hodel reflected the growing gulf between the old and the new in a 1975 speech to business executives in Portland:

This new environmental movement is on a collision course with the growing demand for energy...it has fallen into the hands of a small, arrogant faction which has dedicated itself to bringing our society to a halt. They are the anti-producers, and anti-achievers. The doctrine they preach is that of scarcity and self-denial. I call this faction the Prophets of Shortage.

Hodel was not ready to acknowledge that the definition of the standard of living was changing with more emphasis on quality of life compared to a narrower focus on quantity. "The people of this country will not give up their standard of living because someone tells them that the Spartan life is the good life. They will not forego their own aspirations to pay for someone else's nostalgic quest for Walden Pond." Acting on that assumption, BPA and Northwest utilities went ahead with grandiose plans for five large nuclear power plants. Financing was arranged through a consortium known as the Washington Public Power Supply System (WPPSS)—118 public and rural cooperative power systems and three private utilities underwrote the first three plants; 88 public power and cooperatives pledged their utilities to two more. The problems of nuclear power, the Energy Crisis, shoddy construction, and growing environmental awareness conspired to delay completion and send the costs soaring. With billions of dollars already spent, it was still cheaper to consider mothballing or cancelling four of the five reactors. The idled plants stood as modern-day billion dollar pyramids—tombs, in the eyes of some, to "inappropriate" technology. As the bills came due and there was no end in sight to the increase in electric rates, a ratepayer rebellion grew. Litigation ensued, resulting in the largest municipal bond default in American history. With these troubles, it is apparent why the acronym WPPSS was popularized as "WHOOOPS." The debacle tarnished the image of public power giving pause for flashbacks to the collapse of the "Insull monstrosity." Was the "Promised Land" headed back to the "Promissory Land?" If one could assign blame for this sorry spectacle, according to Marc Reisner, it "has to fall on the region's forty-year love affair with dams."⁵¹

Changing times and values also led to the passage of the Pacific Northwest Electric Power Planning and Conservation Act of 1980, which mandated that BPA look to conservation as the first "new" energy source—rather than to dams or nuclear reactors. The law also gave new priority to the Columbia River fisheries: the protection and enhancement of fish were to be co-equal with power production in future policies. The wondrous Columbia River salmon had been a concern in the dam building days of the 1930s. Bonneville Dam included fish ladders to allow the salmon to return upstream to spawn in spite of the dam; Grand Coulee was considered too high for accommodation. Bruce Brown described the consequences in *Mountain of Clouds*:

Hailed as the greatest engineering feat ever undertaken by man, Grand Coulee Dam was also the single most destructive act toward salmon of all time. When this unladdered colossus was completed..., it closed more than 1,000 miles of spawning rivers and streams in the upper Columbia, killing the famous 'June Hog' Chinook that had previously been the mainstay of the great Columbia fishery.

The Columbia River salmon had already been decimated due to over exploitation by commercial companies and loss of habitat from logging and development before the era of the great dams. Overfishing, diminution of habitat, and pollution would continue to make life difficult for the salmon after the New Deal dams went in. And as the years went by, more and more dams meant a whole series of barriers and fish ladders for the returning salmon to negotiate on their way to their spawning grounds. Survival is, if anything, more perilous for the salmon as they attempt to find their way downstream to the ocean where they live for a few years before returning to their birthplace to begin the cycle over again. Untold millions of young salmon have been killed as a result of going through the hydroelectric turbines where they confront pressure changes or whirling blades. Going over the spillways can be hazardous as well; other young salmon have been lost to unscreened irrigation canals or because of inadequate water levels due to irrigation or power requirements.⁵²

With Bonneville and Grand Coulee becoming realities in the 1930s, Cayuse Chief Red Hawk, who had been spearing for salmon before the railroad had reached the Columbia, reflected on their presence as he fished at Celilo Falls. Red Hawk looked

grimly at the mighty river and proclaimed: "White man's dams mean no more Indians' salmon." The early assumption of the dam builders was that "we can have fish and power too." BPA's 1939 film "Hydro" gave the impression that the salmon were actually going to benefit from the dam: the graduated fish ladders were less demanding than the wild Cascade Rapids before they were flooded under. The film portrayed the best of all possible worlds—one in which we could have it all—the salmon had a new luxurious fish ladder and the Indians upstream at Celilo Falls could keep on spearing salmon as they had through the ages. (Of course, it was just a matter of time before an additional dam would inundate Celilo Falls.) By 1947, there were scientific warnings reminiscent of Red Hawk's: "You can't have high dams and salmon too." However, the warnings were largely ignored, the dam building juggernaut rolled on, and the salmon census declined: an abundance of hydroelectric power contributed to salmon scarcity. Anthony Netboy, longtime student of the salmon, has carefully weighed the costs and benefits of the dams. He noted that the aluminum factories came to the Pacific Northwest because of cheap power and have remained a major consumer of BPA power—purchasing 36 percent of total sales in 1977. "When one considers," concludes Netboy, "some of the end uses of aluminum, such as beer cans, wrapping foil, and the like, the sacrifice of incalculable quantities of salmonids for such nonessential purposes seems like a travesty of common sense."⁵³

Could a reverence for life be reconciled with the sustained destruction of the salmon due to the dams? The dams were anthropocentric and the fish suffered; they were ethnocentric and indigenous peoples dependent on the salmon suffered as well. It is clear that without the dams, the salmon and the cultures based on them were already greatly stressed. It is also clear that the dams have put further pressure on both people and fish. Belated recognition of fish in the Northwest Power Act of 1980 is a reminder of the ecological destruction of the dams. What was the cost of ecological disruption? Of endangered salmon? To indigenous cultures impacted by loss of customary fishing and abundance? In "The River," Pare Lorentz's 1937 film that celebrated the Tennessee Valley Authority, the dams were viewed as contributors to environmental healing:

We had the power to take the valley apart—
we have the power to put it together again.
...where there is water,
there is power....
Power enough to make the river work!

Alas, some things once rent asunder cannot be put back together even with electricity and technology. Great sums of money have been spent to rescue the Columbia River salmon, and the price tag for further mitigation of its plight will be very expensive. The natural cycle of the salmon has been so disrupted by the dams and other human threats that it exists today on the Columbia River not as a natural wonder, but as a species dependent on environmental management techniques.⁵⁴

The saga of the Columbia River salmon is a reminder that there is a lot of "water over the dam" since the original dreams of the dam building enthusiasts of the 1930s. The dams were a reassuring symbol in a dark time in American history and they contributed to uplifting the American spirit. Bonneville and Grand Coulee also reflected a desire for a more democratic sharing of the nation's natural resources. The commonwealth would be strengthened if Americans possessed an economic foundation for attaining comfort, security, and happiness necessary for civic consciousness and a sense of community. Efficiency and equity went hand-in-hand in underwriting national security and environmental stability. In this sense, the dams were part of the conservation of natural resources and part of the conservation of the human spirit. Conservation during the Depression favored the stomach over the soul—development over preservation, efficiency over esthetics (although not exclusively)—but it was a vision that saw development as progressive in contributing to non-material dimensions of life, e.g., the dignity of freedom from want. In a time of under-consumption, the emphasis was on using more energy, equating that with a better life. That ideal is captured in Senator Clarence Dill's plea to Franklin Roosevelt in 1934 not to abandon the power fight:

If you carry forward this fight on power it will stand in history to your credit as the greatest achievement of your administration. In fact, I think it is the greatest movement since the abolition of slavery...because cheap electricity

will free millions of people, both black and white, from the slavery of daily toil and bring...comfort, recreation and happiness to generations yet unborn.

The attractions of the Electric Age were apparent when Woody Guthrie wrote:

I don't like dictators much myself,
but this whole Pacific Northwest Country up in here
ought to be run,
the way I see it,
by E-Leka-Tris-I-Tee!

Once all that energy was turned on, it was hard to stop. By one count, there are 192 dams on the Columbia and its tributaries. From headwaters to tidewater, the once roaring Columbia was now a series of slack-water pools with only one short stretch of free-running water near the Hanford atomic reservation. And there was still need for more energy from coal and nuclear power. In time, the liberating qualities of electricity appeared to be overshadowed by the dictatorial elements of economic and environmental costs.⁵⁵

Was the American Dream of liberation from toil and drudgery through abundant production and consumption of electrical energy fundamentally flawed? When energy shortages were on the public mind in the 1970s, Wendell Berry was critical of the pursuit of limitless energy sources: "This is fantastical because the basic cause of the energy crisis is not scarcity; it is moral ignorance and weakness of character. We don't know *how* to use energy, or what to use it for." He added that our time is characterized by the "abuse and waste of human energy." In the 1930s, the power planners had a pretty good idea of how people could use the energy and faith that they would put it to good use. They were also concerned with the abuse and waste of humanity. The dams were a solution to this problem, and intended to provide "the greatest good for the greatest number for the longest time." That utilitarian doctrine is hard to pin down, and the meaning of progress itself remains elusive and evolves over time. As suggested above, many benefited from the dams, but the multi-purpose projects were also mono-cultural and anti-ecological. They were anthropocentric and ethnocentric. The beauty of the dams was in the eye of the beholder and that judgement was standpoint dependent. The dams shined their light on farmers, public power

crusaders, and city builders, but cast shadows on Indians, salmon, and bio-diversity, not to mention the river itself. There are many ambiguities as one ponders the puzzle of the paradox of progress. Was the question of progress ultimately a matter of proportion? Were Bonneville and Grand Coulee defensible, but the multitude of future dams questionable? Aldo Leopold's foreword to *A Sand County Almanac* is helpful:

Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher 'standard of living' is worth its cost in things natural, wild, and free....

These wild things, I admit, had little human value until mechanization assured us of a good breakfast... The whole conflict thus boils down to a question of degree. We of the minority see a law of diminishing returns in progress; our opponents do not.⁵⁶

Depression era Americans were still mindful of assuring a good breakfast. Historically, the battle for that breakfast had been linked with taming and civilizing the wilderness, but individualistic exploitation of nature had proven wasteful and catastrophic. "We built a hundred cities and a thousand towns—but at what a cost!" laments the narrator in "The River." Dust storms were blowing in the West and rivers were flooding in the East. One answer to these problems in the 1930s was more development, but do it collectively and with planning. Controlling nature would still be the goal, but collective domination would supersede individual domination. Bonneville and Grand Coulee Dams were one result, illustrating that nature was still viewed as a commodity. Furthermore, while the public power movement advocated government ownership of the dams and the electrical industry, it did not question that part of the capitalist ethos that urged its participants toward infinite wants. Its overall impact was to encourage growth and ever-expanding dreams. With the rivers viewed as commodities going to waste and with dreams of a more abundant life, it was difficult to maintain a sense of proportion. Progress was still closely tied to human dominion, and the path to Leopold's "diminishing returns in progress" was further paved.⁵⁷

The legacy of the public power advocates and other dam boosters of the 1930s is thus mixed. They were preoccupied with

developing a "Promised Land" in the Pacific Northwest. Bonneville and Grand Coulee Dams helped fulfill many of their dreams, left some problems unresolved, and created some new ones. Henry Wallace's description of another "Promised Land" is apt:

The children of Israel's problems did not come to an end after they had crossed the borders, or even after they had taken possession of their promised land. Their real troubles as a people had then only begun. ... Their old frontier was gone. They had to work on new frontiers.⁵⁸

* This version of this study was inspired by Donald Worster's NEH SUMMER SEMINAR on the "Environment and the West" at Utah State University in 1988.

¹ John McPhee, *Encounters With the Archdruid* (New York: Ballantine Books, 1971), 158-9.

² See, e.g., Stephen Fox, *The American Conservation Movement, John Muir and His Legacy* (Madison: 1985, originally published 1981), ch. 4; Roderick Nash, "Hetch Hetchy," in *Wilderness and the American Mind* (New Haven, 1982, 3rd ed.), 161-81; "Hodel's Surprise: Granting John Muir's Last Wish; Secretary Would Remove Dam Conservationist Fought, Restore Valley at Yosemite Park," *Washington Post*, Aug. 7, 1987, A22; David Brower, "Restoring Hetch Hetchy," *Earth Island Journal* 2 (Fall 1987), 24-5; Tim Palmer, *Endangered Rivers and the Conservation Movement* (Berkeley, 1986), *passim*, quotation 16.

³ Even though the record of protecting rivers from development is impressive, Tim Palmer ends his book with a warning: "Yet the threats to rivers will increase again as resources become more scarce and as new pressures grow to squeeze the last wealth from the rivers that remain." *Endangered Rivers*, 234, *passim*; Nash, *Wilderness and the American Mind*; Elmo Richardson, *Dams, Parks & Politics: Resource Development & Preservation in the Truman-Eisenhower Era* (Lexington, 1973); Michael C. Robinson, "The Relationship Between the U.S. Army Corps of Engineers and the Environmental Community," *Environmental Review* 13 (Spring 1989), 1-42; Richard Berkman and W. Kip Viscusi, *Damming the West* (New York, 1973); Arthur Morgan, *Dams and Other Disasters* (Boston, 1971); Douglas Strong, "David Brower," in *Dreamers & Defenders: American Conservationists* (Lincoln, 1988), 196-219; "For Earth's Sake," film biography of David Brower, Bullfrog Films (Oley, Penn., 1989); "The Electric Valley," documentary film of the Tennessee Valley Authority, James Agee Film Institute (Johnson City, Tenn., 1986); Tim Palmer, *Stranislaus: The Struggle for a River* (Berkeley, 1982); Elizabeth Drew, "Dam Outrage: The Story of the Army Engineers," *Atlantic* 225 (April 1970), 51-62; Richard Davis (ed.), "Wild & Scenic Rivers," in *Encyclopedia of American Forest and Conservation History* (New York, 1983), v. 2, 690-1.

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⁵ Ernest Callenbach, *Ecotopia* (Berkeley: Banyan Tree Books, 1975), 36; see also Joel Garreau, "Ecotopia," in *The Nine Nations of North America* (New York, 1981), 245-86.

⁶ Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: 1987); Donald Worster, *Rivers of Empire: Water, Aridity & the Growth of the American West* (New York, 1985); Wallace Stegner, *The American West as Living Space* (Ann Arbor, 1987), 31-60.

⁷ Quotations from Samuel Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (New York, 1987), 3; see also ch. 1, "From Conservation to Environment," and *passim*; Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (New York, 1969); Clayton Koppes, "Efficiency/Equity/Esthetics: Towards a Reinterpretation of American Conservation," *Environmental Review* 11 (Summer 1987), 127-46; Russell B. Nye, "The American View of Nature," in *This Almost Chosen People* (East Lansing, 1966), 256-304; Gifford Pinchot, *The Fight*

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⁸Koppes, *ibid.*, 135; a useful tool for testing whether audiences can step out of present-day environmental mindsets when it comes to dams is "The Columbia," a 1949 documentary film produced by the Bonneville Power Administration (U.S. Dept. of Interior) that glorifies New Deal era dam building.

⁹Wesley Dick, "Visions of Abundance: the Public Power Crusade in the Pacific Northwest in the Era of J.D. Ross and the New Deal," (Ph.D. diss., University of Washington, 1973), see especially ch. 2, "Visions in Kilowatts"; Thomas Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore, 1983), 296-313; Martin Melosi, *Coping with Abundance: Energy and Environment in Industrial America* (New York, 1985), 117-37.

¹⁰Dick, *ibid.*, 132-9; Frederick Lewis Allen, *The Lords of Creation* (New York, 1935), 266-92; Samuel Rosenman (ed.), *The Public Papers and Addresses of Franklin D. Roosevelt* (New York, 1938-1950), v. 1, 727-56 (hereinafter referred to as PPA FDR); Richard Rudolph and Scott Ridley, *Power Struggle: The Hundred Year War Over Electricity* (New York, 1986), 22-86.

¹¹R.L. Duffus, "Four Vast Power Projects to Make Economic History," *New York Times*, Oct. 2, 1932.

¹²*Congressional Record*, April 24, 1933, 2280-1.

¹³The first dam to span the Columbia River was a private utility enterprise, the Rock Island Dam, completed in 1932. Bonneville Dam was located about 40 miles east of Portland and its original hydroelectric capacity was to be 518,000 kilowatts. Eventually, a second powerhouse doubled its capacity. Grand Coulee Dam was 300 miles upstream from Bonneville. Begun as a low dam, it was soon converted to a high dam with about 1,900,000 kilowatt capacity. This has been extended to over six million kilowatts, the most of any dam in the world. See, Gene Tollefson, *BPA and the Struggle for Power at Cost* (Portland, 1987), 83-4, 108-19, 342; George Sundborg, *Hail Columbia, the 30-Year Struggle for Grand Coulee Dam* (New York, 1954), 249; Walter W.R. May to the author, Oct. 10, 1967; Clarence Dill, "Cheap Electricity Will Bring Prosperity," n.d. (cir. 1933), in Clarence Martin MSS, Washington State Archives, Olympia; for further detail on the lobbying of Dill, McNary, Martin, and others, see, Dick, "Birch Rods' and 'Yardsticks'—A New Deal in Kilowatts," in "Visions of Abundance," 103-131.

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²⁴*Ibid.*, May 13, 1937, 5870.

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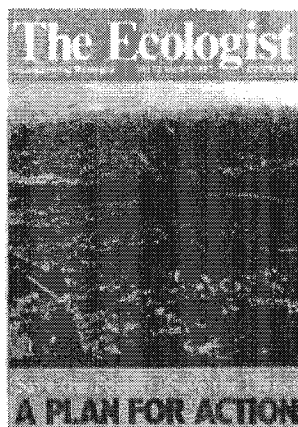
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