Building a Green Dam: Environmental Modernism and the Canadian-American Libby Dam Project

Author(s): Philip Van Huizen

Source: *Pacific Historical Review*, Vol. 79, No. 3 (August 2010), pp. 418-453
Published by: University of California Press
Stable URL: http://www.jstor.org/stable/10.1525/phr.2010.79.3.418
Accessed: 19-12-2017 20:59 UTC

Building a Green Dam: Environmental Modernism and the Canadian-American Libby Dam Project

PHILIP VAN HUIZEN

The author is a doctoral candidate in history at the University of British Columbia.

This article examines a fundamental shift in ideas about development, from high modernism in the early twentieth century to environmental modernism after 1960, illustrated by the promotion and construction of the Libby Dam Project in the Canadian-American Kootenay River Basin. In the 1940s Canadian and U.S. planners originally promoted the dam by stressing the rational conquest of nature through science and technology. When construction began in 1966, however, pressure from a growing environmental movement changed how planners designed and constructed the Libby Dam and its reservoir, Lake Koocanusa. The later planners implemented mitigation measures, "blended" the dam and reservoir into the landscape, and appropriated First Nations' symbols to make the project seem like a natural part of the Canadian-American Kootenay Basin. Thus, in both countries, planners reflected the shift from high modernism to environmental modernism.

In 1972 the U.S. Army Corps of Engineers (Corps) held an international competition for a 27-by-30-foot bas-relief sculpture to commemorate the nearly completed Canadian-American Libby Dam Project. The winning design, by noted New York sculptor Albert Wein, was installed in 1975 on the upstream wall of the Libby Dam Treaty Tower, a 57-foot structure constructed halfway along the dam's crest. In the sculpture, a muscular, loincloth-clad "Indian" man blocks the path of two wild horses, representing,

I would like to thank Helena Van Huizen, Steven Lee, Tina Loo, Joy Dixon, Eagle Glassheim, Bob McDonald, Eric Nelles, Matthew Evenden, Meg Stanley, and the *Pacific Historical Review*'s anonymous referees for their comments and suggestions. Archivists and librarians in Victoria and Vancouver, British Columbia, in Seattle, Washington, and in Helena, Montana, were also wonderfully helpful, particularly Rich Aarstad, Shelley Trulson, and Ken House. Research for this article was partially funded by the Social Sciences and Humanities Research Council of Canada.

Pacific Historical Review, Vol. 79, No. 3, pages 418–453. ISSN 0030-8684
 DOI: phr.2010.79.3.418.

Figure 1. Albert Wein, Libby Dam Treaty Tower Sculpture, 1975, granite bas-relief, 27 × 30 feet; 620-D-5 file 1, Add. Mss. 1371, Elek Imredy fonds, City of Vancouver [B.C.] Archives. Used with permission of the U.S. Army Corps of Engineers.

respectively, the Libby Dam and the raging Kootenay River.[1] Light streams down from a partially cloudy sky, as if from heaven, while Canada geese fly in the air above and two fish swim in calm water at the man's feet.

The sculpture is striking not only as a piece of artwork but also because a literal depiction of the dam is not included in the scene, nor are other images traditionally associated with technology, such as Greco-Roman figures, power lines, gears, or levers.[2] Instead, Wein naturalized the Libby Dam by appropriating an image of a

1. The river is spelled "Kootenai" in the United States. Although rivers often cross international boundaries, how they are spelled sometimes does not. In the interest of consistency, I use the Canadian spelling (Kootenay), except when quoting from U.S. sources.

2. For examples of such images, see David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge, Mass., 1990), 10–38, and David E. Nye, *American Technological Sublime* (Cambridge, Mass., 1994).

stereotypical "prehistoric Indian" and including images of fish and geese, thereby separating his design from previous artwork that had depicted dams as machines that conquer nature.[3] It thus reflected how planners in the 1970s wanted the Libby Dam Project to be seen: as an example of international cooperation and technological achievement that maintained a link with both the natural environment and the history of the Kootenay River Basin.[4]

Planners on the Libby Dam Project did not always promote the dam with this message. Constructed to produce power and provide flood control for both the United States and Canada, the Libby Dam converted a 150-kilometer-long stretch of the Kootenay River (a major tributary of the Columbia River) into a reservoir, Lake Koocanusa, which straddles the forty-ninth parallel almost exactly between southeastern British Columbia and northwestern Montana. In the 1940s, when planners in both the U.S. Pacific Northwest and British Columbia began a serious investigation of damming the Kootenay River, they were proud that they would be transforming the river, often bragging that the dam would not only symbolize "man's" domination of nature, but also that it would be done in the spirit of international cooperation. Initial rhetoric about the project fit with how other dams in the United States and Canada were promoted at the time. Government agencies in both countries approved and promoted mega-dam projects, such as the Hoover and Grand Coulee dams in the United States and the Kenney and Bennett dams in British Columbia, in ways that stressed the rational conquest of nature using tools provided by science and technology.[5]

---

3. Sculptor Oscar J. W. Hansen explained that his Greco-Roman styled artwork for the Hoover Dam was meant to symbolize that "man's control over natural forces has grown in proportion to his increasing knowledge of the true nature of this universe of which we are a part." See Oscar J. W. Hansen, *With the Look of Eagles: Sculptures at Hoover Dam* (Washington, D.C., 1967), 10.

4. For a complete description of the sculpture's design and function as part of the Libby Dam Project, see Army Corps of Engineers, "News Release: Libby Sculpture Completed for Dedication," *Dedication of Libby Dam by President Gerald Ford and Minister Donald S. MacDonald, 24 August 1975: After Action Report* (Seattle, 1975), annex K.

5. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, Conn., 1998); Tina Loo, "People in the Way: Modernity, Environment, and Society on the Arrow Lakes," *BC Studies*, 142/143 (2004), 161–196; Arn Keeling and Robert McDonald, "The Profligate Province: Roderick Haig-Brown and the Modernizing of British Columbia," *Journal of Canadian Studies*, 36 (2001), 7–23.

By the time construction began in the mid-1960s, controversies surrounding the effects of dams on fish and wilderness, in concert with a wider environmental movement that questioned the benefits of large public works projects in general, changed how planners designed and promoted their projects. The effect of this transitional period on political actors, from environmental activists and conservationists (both in and out of government) to fishing and hunting industry representatives, has been well explored by environmental historians.[6] How this transition affected such "unlikely environmentalists" as the experts who planned, designed, and constructed large development projects has been far less studied.[7] Instead, scholars have generally assumed that planners and engineers retained a high modernist development ethos, opposed to environmentalists and government conservationists who fought on the side of nature. Concessions toward environmental mitigation made by the construction industry, the argument goes, were either forced by government regulation or were adopted grudgingly and superficially.[8]

An examination of the promotion, design, and construction of the Libby Dam Project reveals this assumption as too simplistic.

---

6. Tina Loo, *States of Nature: Conserving Canada's Wildlife in the Twentieth Century* (Vancouver, B.C., 2006); Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, D.C., 2005); Frank Zelko, "Making Greenpeace: The Development of Direct Action Environmentalism in British Columbia," *BC Studies*, 142/143 (2004), 197–239; Hal K. Rothman, *Saving the Planet: The American Response to the Environment in the Twentieth Century* (Chicago, 2000); Mark Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque, 1994); Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955–1985* (Cambridge, U.K., 1987).

7. Paul Charles Milazzo, *Unlikely Environmentalists: Congress and Clean Water, 1945–1972* (Lawrence, Kans., 2006), is an exception, especially chapter 7, which explores the U.S. Army Corps of Engineers (Corps) and pollution clean-up. Non-historians have also explored the Corps's transition to environmentalism. See Daniel A. Mazmanian and Jeanne Nienaber, *Can Organizations Change? Environmental Protection, Citizen Participation, and the Corps of Engineers* (Washington, D.C., 1979).

8. Examples of such works are legion, as the theme of environmentalists versus engineers has long dominated the field of environmental history and the environmental movement. For examples, see Roderick Nash, *Wilderness and the American Mind* (New Haven, Conn., 1967); Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (Oxford, U.K., 1985); Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York, 1986); Patrick McCully, *Silenced Rivers: The Ecology and Politics of Large Dams* (London, 1996); and Paul R. Josephson, *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World* (Washington, D.C., 2002). One very significant exception to this is Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York, 1995).

In response to growing environmental awareness and often before restrictive legislation was passed, Libby Dam Project planners, including Canadian and U.S. politicians, the Army Corps of Engineers, and planners in the British Columbia government, changed their designs and promotions from ones that stressed the project's size and its transformation of nature to others that focused on its compatibility with the surrounding landscape. As they saw it, the Libby Dam Project no longer dominated nature but complemented and intertwined with it, creating a relationship between the Kootenay River and the Libby Dam that was environmentally modern and responsible. In this way, experts for the Libby Dam Project were a part of, rather than implicitly opposed to, the "greening" of society that occurred the world over after World War II.[9]

The fact that the Kootenay River Basin straddles the Canadian-U.S. border complicates this argument. As some scholars have pointed out, the political boundaries of nation-states encapsulate more than just the limits of a nation's geography; they are also powerful social constructions that often cause academics to define and examine their studies only within the geographic limits of their respective nation-states.[10] Similar to other borderlands, "bioregions" such as the Kootenay River Basin and the rivers, people, flora, and fauna that inhabit them do not strictly adhere to politically created borders.[11] More importantly for this article, the ideas that informed the development of the Kootenay River did not adhere to political borders either. From the beginning, experts approached developing the Kootenay River in a bi-national fashion. This fact complicates arguments that approaches to development and the environment have been different on either side of the

9. This follows a similar argument made by Michael Bess in *The Light-Green Society: Ecology and Technological Modernity in France, 1960–2000* (Chicago, 2003).

10. Benedict Anderson, *Imagined Communities: Reflections on the Origins and Spread of Nationalism* (London, 1991); Ian Tyrell, "Making Nations/Making States: American Historians in the Context of Empire," *Journal of American History*, 86 (1999), 1015–1044; Richard White, "The Nationalization of Nature," in *ibid*., 976–986.

11. Sterling Evans, ed., *The Borderlands of the American and Canadian Wests: Essays on Regional History of the Forty-Ninth Parallel* (Lincoln, Nebr., 2006); Elizabeth Jameson, "Dancing on the Rim, Tiptoeing through Minefields: Challenges and Promises of Borderlands," *Pacific Historical Review*, 75 (2006), 1–25; Paul W. Hirt, ed., *Terra Pacifica: People and Place in the Northwest States and Western Canada* (Pullman, Wash., 1998); John M. Findley and Ken S. Coates, eds., *Parallel Destinies: Canadian-American Relations West of the Rockies* (Seattle, 2002). For a discussion of the term "bioregion," see Dan Flores, "Place: An Argument for Bioregional History," *Environmental History Review*, 18 (1994), 1–18.

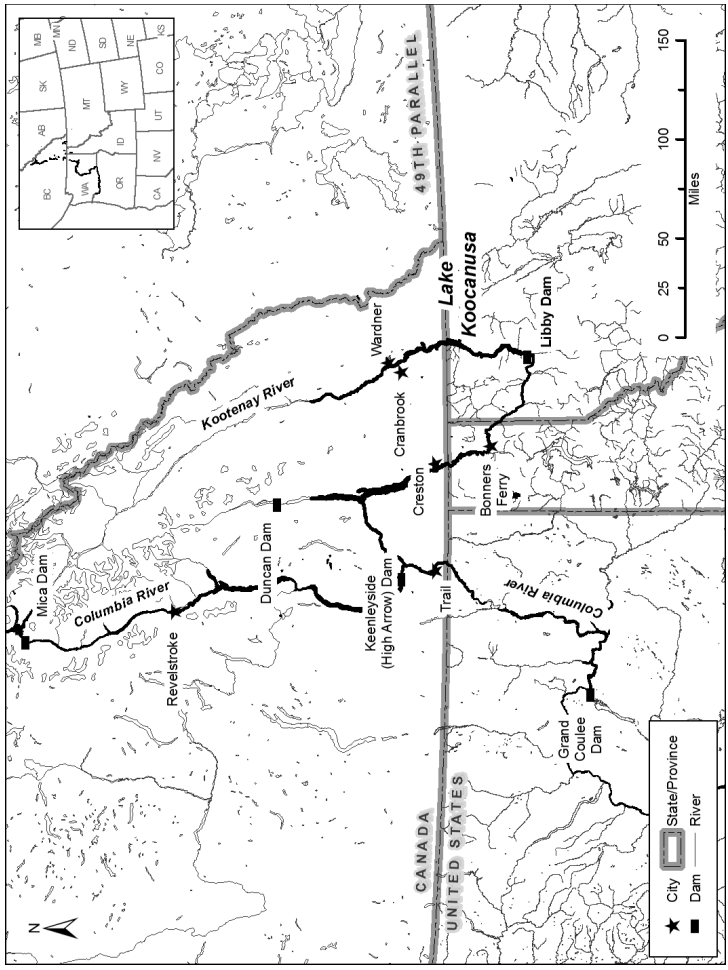

Figure 2. Map of the Canadian-American Kootenay River and part of the Columbia River. The faint dots indicate other bodies of water. Map by Jacquelyn C. Ferry; used with permission.

Canadian-U.S. border.[12] Whether the similarities were due to the influence of new trends or ideas in the United States or Canada or whether they reflected the increasingly transnational nature of the dam construction industry over the twentieth century remains to be studied. It is enough to argue that the forty-ninth parallel offered little impediment to changing ideas about the Kootenay River's development or the construction of the Libby Dam and its reservoir.

Flooding "the most useless land": High modernism and the Libby Dam Project

From the 1930s to the 1970s the dominant, but not the sole, dam-building trend in North America was to "conquer" entire river basins by building enormous, publicly funded projects, one after the other, along each river in a watershed, transforming rivers into hydrologic systems of dams and reservoirs so that no water would be "wasted" before emptying into an ocean. Academics who study dams have labeled this period variously as "the big dam era" and "the go-go years," a time in which the "massive tradition" of gravity dam design predominated.[13] The trend is best captured, however, by James Scott's larger term "high modernism." As in other endeavors, dams built in this period were predicated on a faith in the power of science and technology, directed by a centralized state, to overcome the problems of both human and non-human nature.[14] Both Canadian and U.S. proponents for and opponents of the Libby Dam Project and its initial design never questioned whether such massive dams were needed in the Columbia River Basin, or whether state agencies should coordinate the planning process. This situation proves just how pervasive the high modernist

12. Donald Worster, "Two Faces West: The Development Myth in Canada and the United States," in Hirt, ed., *Terra Pacifica*, 71–92; Nye, *American Technological Sublime*.

13. McCully, *Silenced Rivers*; Reisner, *Cadillac Desert*; D. C. Jackson, *Building the Ultimate Dam: John S. Eastwood and the Control of Water in the West* (Lawrence, Kans., 1995).

14. Scott, *Seeing Like a State*. Although James C. Scott fleshed it out more extensively, he actually borrowed the term high modernism from David Harvey. See Harvey, *The Condition of Postmodernity*. For other discussions of the complexities of the term "modern," see Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass., 1993); Stuart Hall, David Held, Don Hubert, and Kenneth Thompson, eds., *Modernity: An Introduction to Modern Societies* (Oxford, U.K., 1996), 3–18; and S. N. Eisenstadt, "Multiple Modernities," *Daedalus*, 129 (2000), 1–30.

ideology had become among dam engineers and planners in the postwar period.

As Donald Jackson and others have argued, social factors have had a profound effect on dam design. In the engineering community, certain design elements and building techniques won approval over others, often as the result of contingent factors such as personality differences, professional jealousies, and social and market trends rather than for more objective technical reasons.[15] When the number of large dams constructed in North America increased around the turn of the twentieth century, largely as a result of new technologies in the construction industry and in the production of hydroelectricity, there was initially greater variety in how they were designed and built. Competition between projects was fierce, with proponents of both public and private dams providing room for innovation, as engineers promoted their designs over those of their competitors as the safest and most cost-effective.[16]

Starting in the New Deal 1930s and accelerating after World War II, this decentralized, public-private competition over dam construction was largely replaced by a "comprehensive planning" approach to river development coordinated by the state, first in the United States and then in Canada. Promoted throughout the 1910s and 1920s by Progressive Era engineers John Freeman and Frederick Newell of the Reclamation Service (later the Bureau of Reclamation), such an approach stressed the use of traditional gravity-type dams, although on a larger scale than previously attempted. Since such dams relied on their own weight to hold water back to create a reservoir, they required massive amounts of construction material and hence a large amount of initial capital,

15. Jackson, *Building the Ultimate Dam*; Todd Shallat, *Structures in the Stream: Water, Science, and the Rise of the U.S. Army Corps of Engineers* (Austin, Tex., 1994). Joel Tarr and Martin Melosi have made similar arguments for public works structures in general. Joel A. Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron, Ohio, 1996); Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America From Colonial Times to the Present* (Baltimore, 2000).

16. Karl Boyd Brooks, *Public Power, Private Dams: The Hells Canyon High Dam Controversy* (Seattle, 2006), especially chapter 1; Robert W. Righter, *The Battle Over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (New York, 2005); Jackson, *Building the Ultimate Dam*; Jeremy Mouat, *The Business of Power: Hydro-Electricity in Southeastern British Columbia, 1897–1997* (Victoria, B.C., 1997); H. V. Nelles, *The Politics of Development: Forests, Mines, and Hydro-Electric Power in Ontario, 1849–1941* (Toronto, 1974), especially chapters 6 and 7.

something that private investors sought to avoid. Freeman and Newell promoted these expenditures by the government, however, stressing the multiple benefits that such massive dams would realize in the form of hydroelectricity, flood control, irrigation, navigation, and recreation.[17] Not to be outdone by the Bureau of Reclamation, the congressional River and Harbor Act (1927) authorized the Corps to go beyond its mandate of managing waterways only for navigational purposes. Instead, Congress directed the Corps to investigate river basins in their entirety to ensure that all existing dams and future projects were constructed and managed in the most efficient and multipurpose manner possible.[18]

This approach by the two premier dam-building agencies of the U.S. government, which gained fame from the massive New Deal-era dams on the Colorado and Columbia rivers, traveled north of the border during and after World War II. Canadian provinces, especially British Columbia, Manitoba, Ontario, and Quebec, generally with the blessing if not the help of the Canadian national government, began to promote and build similarly huge multipurpose dams.[19] With few exceptions, smaller projects meant to service local needs and alternative dam designs that could have made smaller social and environmental impacts were left by the wayside in both the United States and Canada.[20]

Most studies that have investigated this high modern era of river basin planning in North America have done so solely within the confines of a single nation-state. Indeed, Scott's argument for the rise of this type of planning hinges on the fact that it was part of the state-building project in the twentieth century.[21] For the

17. Jackson, *Building the Ultimate Dam*, 187–192, 245–253; Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers* (Boston, 1971), 185–239.

18. Maj. Gen. Lewis A. Pick, Chief Engineer, to Dean Acheson, Secretary of State, Dec. 1, 1950, Libby Dam file, box 25, Civil Works Project Construction Files, Records of the U.S. Army Corps of Engineers, Record Group 77, National Archives and Records Administration, Seattle Division (hereafter RG 77).

19. Matthew Evenden, "Mobilizing Rivers: Hydro-electricity, the State, and the Second World War," *Annals of the Association of American Geographers*, 99 (2009), 845–855; Karl Froschauer, *White Gold: Hydroelectric Power in Canada* (Vancouver, B.C., 1999).

20. As Karl Brooks has shown, Idaho was one of these exceptions. Private interests and state government managed to thwart a federal plan for the world's largest dam to be built at Hell's Canyon on the Snake River, opting instead for a series of smaller dams built in the 1950s and 1960s. Brooks, *Private Power, Public Dams*.

21. Tina Loo, ""Disturbing the Peace: Environmental Change and the Scales of Justice on a Northern River," *Environmental History*, 12 (2007), 895–919; Keeling and

Kootenay Basin, however, state approaches to development were international almost from the beginning. In fact, this was so for all Canadian-U.S. river basins after 1909 when the Boundary Waters Treaty was signed. Meant to put an end to tensions between the two nations over control of the Great Lakes, the treaty permanently created the International Joint Commission (IJC), composed of three Canadian and three U.S. commissioners, to deal with issues over shared waterways outside the regular diplomatic process. A tremendous success in terms of easing tensions, for its first sixty years the IJC helped ensure that water development in one country encouraged rather than hindered development in the other. For the Kootenay River, the IJC initially dealt with development proposals from the private sector, such as from Cominco (a major British Columbia mining company), which proposed to construct small dams on the Lower Kootenay in the 1920s and 1930s.[22] This changed to state-generated development plans in the 1940s with the beginning stages of what would eventually become the Columbia River Treaty.

Directly as a result of World War II fears about energy security and the Corps's new mandate to take entire river basins and multipurpose planning into account, Congress authorized the Corps in 1943 to investigate the Columbia River Basin in its entirety. The Columbia Basin already had a number of dams built on its various tributaries and its main stem, including the Grand Coulee and the Bonneville dams, but intense flooding each spring required that much of the water stored behind these dams be released over their spillways instead of through their penstocks to produce electricity.[23] Corps engineers quickly concluded that, in order to prevent this

McDonald, "The Profligate Province"; McCully, *Silenced Rivers*, 1–28; Reisner, *Cadillac Desert*, 151–175; Worster, *Rivers of Empire*; Scott, *Seeing Like a State*.

22. C. P. Stacey, *Canada and the Age of Conflict: A History of Canadian External Policies* (2 vols., Toronto, 1977), 1: 108–113; Ralph Pentland and Adele Hurley, "Thirsty Neighbours: A Century of Canada-US Transboundary Water Governance," in Karen Bakker, ed., *Eau Canada: The Future of Canada's Water* (Vancouver, B.C., 2007), 163–182; Mouat, *The Business of Power*.

23. Penstocks are openings that divert water from a dam's reservoir into its powerhouse turbines via intake tubes in order to produce hydroelectricity. Spillways release water from a dam (generally over the top) without generating electricity, an inefficient use of reservoir water if one of the dam's functions is to produce electricity. In the past, a hydroelectric dam's spillways would be used if its reservoir filled too quickly due to large spring freshets or heavy rains; however, they are increasingly being used, ironically, to simulate former river conditions downstream for fish populations.

wastage, dams and storage reservoirs needed to be constructed throughout the basin, which included the upper reaches of the Columbia and Kootenay rivers that originated in British Columbia. In 1944, at the Corps's behest, the U.S. State Department requested that the IJC develop a comprehensive plan for the entire Columbia River Basin on both sides of the border. The IJC agreed and, with Canadian consent, put together the International Columbia River Engineering Board (ICREB), which included representatives from the Corps, the U.S. Geological Survey, the Canadian Department of Mines and Resources, and the Canadian Department of Public Works.[24]

In early 1950 the ICREB released its interim report. Among many other proposed dams in the Columbia Basin, it recommended that a massive one be constructed on the Upper Kootenay River at Libby, Montana, the reservoir of which would stretch 70 kilometers into British Columbia to the town of Wardner. Such a recommendation resonated with most residents along the Kootenay and Columbia rivers, as the spring of 1948 had been one of the worst flood years on record for the Columbia Basin, killing nearly fifty people and causing over $100 million worth of damage to property and crops in Montana, Idaho, Oregon, Washington, and British Columbia. As a result of the 1950 ICREB recommendation, the U.S. Congress passed the Flood Control Act later in the year, which authorized the Corps to submit an application to the IJC for a major dam at Libby.[25]

U.S. engineers and politicians in the Pacific Northwest overwhelmingly supported damming the Upper Kootenay River.[26]

---

24. Acheson to International Joint Commission (IJC) as application for Libby Dam, Jan. 12, 1951, Libby Dam file, box 25, Civil Works Project Construction Files, RG 77; International Columbia River Engineering Board, *Water Resources of the Columbia River Basin: Final Report to the International Joint Commission* (Washington, D.C., and Ottawa, 1959), especially appendix 2: Kootenay Basin.

25. "Canada, U.S. Plan Curbs for Kootenay," *Vancouver Sun*, July 27, 1948, p. 9; "Flood Control in Northwest Recognized as International," *Christian Science Monitor*, Aug. 5, 1948, p. 13; Neil A. Swainson, *Conflict over the Columbia* (Montreal, 1979), 41–45; Donald E. Spritzer, *Waters of Wealth: The Story of the Kootenai River and the Libby Dam* (Boulder, Colo., 1979), 136–137. All dollar amounts are expressed in U.S. currency.

26. This is not to say that there was no resistance to the dam in the United States; as with any large public works project, there of course was opposition. Upstream residents who would be flooded out were the most resistant, although they still advocated for the development that the dam would bring. As Tina Loo has argued about those flooded out by a different dam in British Columbia, upstream residents in both

Support ranged from the practical to the symbolic and was framed within the context of high modern planning. The more practically inclined reasoned that the Libby Dam would help reorganize the Kootenay River system, overcoming the restrictions that the border had formerly placed on its development, in order to make it more productive. As the Corps's Seattle District Engineer, Lt. Col. John P. Buehler, argued, "I would like to emphasize the great amount of international study and coordination accomplished on the Libby project. . . . It will go far towards completely regulating the waters of the Kootenai, thus conserving our natural resources instead of wasting them."[27] Ultimately, the argument went, such a reorganization of the Kootenay River system by two nation-states would mean greater wealth and prosperity for everyone. As Congressman Wesley D'Ewart of Montana explained, "all will admit" that the land to be flooded was low in agricultural value and would allow for the reclamation of "extremely fertile lands."[28] Flooding that generally occurred in the fertile lower portion of the basin would be moved to the upper region, where agricultural potential was greatly inferior. The storage of these floodwaters would then work to regulate the flow of water downstream throughout the year, on both the Kootenay and Columbia rivers, producing additional electricity in both the United States and Canada and improving navigation and irrigation downstream.

Apart from these practical benefits, the dam possessed symbolic value as a testament to modern scientific planning that overcame both nature and politics. Enthusiasts bragged that the dam would be nearly 450 feet high and 3,000 feet wide. They

---

Montana and British Columbia instead favored an alternative route to modernity; they wanted the electricity and flood control, but they also wanted the dam to be built elsewhere. Nevertheless, most were resigned to its inevitability. See Loo, "People in the Way," and Hugo Tureck, *Social Impact of the Libby Dam, Lincoln County: The Case of Absentee or Extra-Local Influence* (Bozeman, Mont., 1972). Others, like the Great Northern Railway, the J. Neils Lumber Company, and Zonolite Mining, were conditionally against the dam unless satisfactory reimbursement for damages and relocations of roadways and rail lines could be arranged. Once they received these assurances, they unanimously supported the dam. See Army Corps of Engineers, *Libby Project Kootenai River, Montana Supplement to Design Memo No. 1: Determination of Axis and Type of Dam* (Seattle, 1953).

27. Lt. Col. John P. Buehler before IJC Libby Dam Hearings, Spokane, Wash., March 1951, Libby Hearing, Spokane file, box 24, Civil Works Project Construction Files, RG 77.

28. "Advantages of Dam Extolled," *Victoria Daily Colonist*, April 9, 1953, p. 3.

proudly described it as a "whopper" that would, as Idaho Senator Frank Church explained, "demonstrate again that man is not powerless to control his environment."[29] Others pointed out the great amount of objective scientific planning that was behind the development of the Kootenay and Columbia rivers, which overcame international boundaries just as it did nature. Montana's Attorney General, Arnold Olsen, was particularly enamored with the dam's symbolic value. As he stated in 1951 to the IJC in Helena, Montana:

> Streams do not recognize the boundaries of man in their unquestioning obedience to the natural forces which control their flow. The Kootenai is an excellent example of this. Men of science have long urged the development of our river basins upon a systematic plan which contemplates the entire river as an economic and social unit as it is a physical unit. Thus is achieved the maximum economy of development, the greatest degree of utilization of the forces of the river system. . . . This entire situation is symbolic of the history of cooperation in peaceful pursuit and mutual defense that has ever characterized our two nations.[30]

In contrast to such a relatively unified position about developing the Kootenay River in the United States, the Libby Dam was much more controversial in Canadian planning circles. This was not because of the potential destruction and dislocation that flooding would cause to British Columbia's ecology and population, nor because Canadians were less enthralled by the "technological sublime" than Americans.[31] Rather, planners and politicians disagreed over whether Canada should cooperate with the United States in developing the Kootenay River or focus on an "all-Canadian" dam further upstream. Those in favor of the Libby Dam in Canada justified its construction using arguments similar to those made in the United States. As part of its statement before the 1948 IJC Libby Dam hearings in Spokane, the Canadian Department of Mines and Resources representative to the ICREB explained why the project was so important:

29. "New Dam is a Whopper," *Vancouver Province*, Nov. 14, 1950, p. 11; Frank Church is quoted in Spritzer, *Waters of Wealth*, 143.

30. Arnold Olsen, Attorney General of Montana, before the IJC Helena Hearing, March 1951, p. 2, Libby Hearing, Helena file, box 24, Civil Works Project Construction Files, RG 77.

31. Nye, *American Technological Sublime*.

The Libby Dam will, in combination with dikes, provide a higher degree of flood protection on the Lower Kootenay River in Canada and the United States; will contribute materially to control of floods on the main stem of the Columbia River; will facilitate development of additional agricultural lands; will benefit existing and future downstream power installations in both countries; and will fit in with other projects which may be developed on the Kootenay as a result of the continuing studies of possible additional sites in Canada and the United States.[32]

British Columbia Premier W. A. C. Bennett and his Social Credit Party's pro-development government also favored the Libby Dam. Over the course of its tenure from 1952 to 1972, Bennett's government engaged in numerous projects to modernize and connect the outlying regions of British Columbia. In the 1950s, for example, the Social Credit government constructed more highways, bridges, and roads than all previous British Columbia governments combined.[33] Bennett approached the construction of multipurpose dams in a similarly aggressive fashion, for he saw dam-building as a catalyst for other forms of development. In a 1964 speech to commemorate the formal ratification of the Columbia River Treaty, which authorized the Libby Dam along with three other projects in British Columbia, Bennett stated: "We have all witnessed the benefits to every sector of a developing economy which follow the development of massive blocks of hydro-electric power. It is infinitely . . . rewarding to see them extended to millions of people in both our countries."[34] For Bennett, river development was an essential first step in the industrial development of any area. In 1961 he introduced his "Two River Policy," which created B.C. Hydro by nationalizing most of the province's private utility companies in order to build dams on the Peace and Columbia rivers in the province's hinterland. He had no problem backing dam projects that would flood lands in his province to produce power in the United States if it meant that the money gained would help pay for his Two River Policy.[35]

32. Pick to Acheson as part of an application to the IJC for Libby Dam, Dec. 1, 1950, p. 4, Libby Dam file, box 25, Civil Works Project Construction Files, RG 77.

33. Loo, "People in the Way," 162–163.

34. W. A. C. Bennett speech, Columbia River Treaty ratification ceremony, Peace Arch, B.C., Sept. 16, 1964, file F-55-39-0-20, box 62, W. A. C. Bennett Fonds, Simon Fraser University Archives (hereafter Bennett Fonds).

35. David J. Mitchell, *W. A. C. Bennett and the Rise of British Columbia* (Vancouver, B.C., 1995); Paddy Sherman, *Bennett* (Toronto, 1966), 231–252.

Such arguments were also commonly used downstream from the potential Libby Dam site in the southwestern Kootenay floodplain region near Trail and Creston, British Columbia. Farms in this area were situated on over 15,000 acres of reclaimed land that could be greatly expanded, farmers argued, if adequate flood protection were assured. Furthermore, industries in the region, such as the massive Cominco lead and zinc smelter complex in Trail, desperately needed more power in order to expand operations. Provincial government representative Leon J. Ladner thought the downstream area was so important to farming and industry that he even went so far as to argue that "the economic destiny of Western Canada and British Columbia in particular, affecting the welfare and happiness of generations unborn, is at stake."[36] In the eyes of British Columbia supporters of the Libby Dam, the development of these fertile lands and the expansion of industry justified the sacrifice of less productive areas and people. Dennis Williams, editor of the *Trail Daily Times*, argued that the land to be flooded by the Libby Dam represented "some of the most useless land in the province . . . land which consists in the main of rocky, over-grazed range, scrub-cattle owned by sub-marginal farmers (many of whom rely on Christmas tree cutting and social welfare payments for subsistence) [*sic*] and acres of jackpines [*sic*] not worth the cost of harvesting."[37]

Those in Canada who opposed the dam, such as the former Canadian commissioner of the IJC, Gen. A. G. L. McNaughton, also argued for high modern planning but wanted a plan that would remain in Canada, rather than one that worked in concert with the United States. McNaughton believed that the control of "Canadian" water should remain within Canadian hands. A more beneficial, and ambitious, alternative to the Libby Dam, he argued, would be to divert most of the Kootenay River into the Columbia before it reached the forty-ninth parallel. The water could then be dammed for hydroelectricity before entering the United States, thereby rendering the Libby Dam unnecessary.[38] McNaughton's

36. Leon J. Ladner, "The Columbia River and our Destiny," speech delivered at the Banquet of the Associated Boards of Trade and Chambers of Commerce of Southeastern B.C., April 5, 1957, file 155, 570-F-5, Leon J. Ladner Fonds, City of Vancouver Archives.

37. Dennis A. Williams, *Columbia River Treaty Project of Most Value To Us* (Trail, B.C., 1966), 3–4.

38. John Swettenham, *McNaughton* (3 vols., Toronto, 1969), 3: 210–350.

plan caused a stir in Ottawa, delaying negotiations for the Columbia River Treaty, but was eventually rejected since his alternative involved flooding greater portions of the Columbia and Kootenay river valleys and constructing dams without any U.S. compensation.[39] As in the United States, those within official planning circles in Canada all agreed that some form of a high modern plan was needed; however, they disagreed over whether this plan should be international in scope or be contained solely within Canada.

Beyond promotional rhetoric in the two countries, the assumptions behind high modern planning were also inherent in early engineering designs of the Libby Dam Project. The Corps's Seattle District released two types of drawings in the early 1950s: schematic ones intended for other experts, and an artist's rendering intended for the general public and non-experts. In the schematic drawings, junior-level Corps employees made the surrounding landscape, and how the dam would fit into it, "legible" to upper-level Corps engineers and ICREB experts who never needed to visit the site. Engineers used primarily aerial topographical photograph analysis and bedrock drill samples produced by subcontractors to determine where the dam should be located and what type it should be. Such analyses were then passed up the chain of command, from civil engineers in the Seattle District's design department to the district engineer, Lt. Col. John Buehler, who forwarded them to the division engineer in Portland, Brig. Gen. Don G. Shingler, who eventually used them to recommend to the Corps's chief engineer, Lt. Gen. Lewis A. Pick, in Washington, D.C., that a standard "straight gravity type structure . . . containing 3,700,000 cubic yards of concrete" be built. The chief engineer approved the decision, allowing the engineering schematics to be drawn and released to the public as part of the Corps's *Design Memo Number 1* in 1952.[40] Common to all high modernist projects, the engineers universalized the local characteristics of the Kootenay River valley. As depicted in the schematics, the type of dam chosen for it and the reservoir that it created would be instantly

39. Swainson, *Conflict over the Columbia*; Loo, "People in the Way," 163–164, 181–188; Mitchell, *W. A. C. Bennett and the Rise of British Columbia*, 298.

40. Army Corps of Engineers, *Libby Project Kootenai River, Montana Design Memo No. 1: Determination of Axis and Type of Dam Revised* (Seattle, 1952); Army Corps of Engineers, *Libby Project Kootenai River, Montana Supplement to Design Memo No. 1*, p. 3.

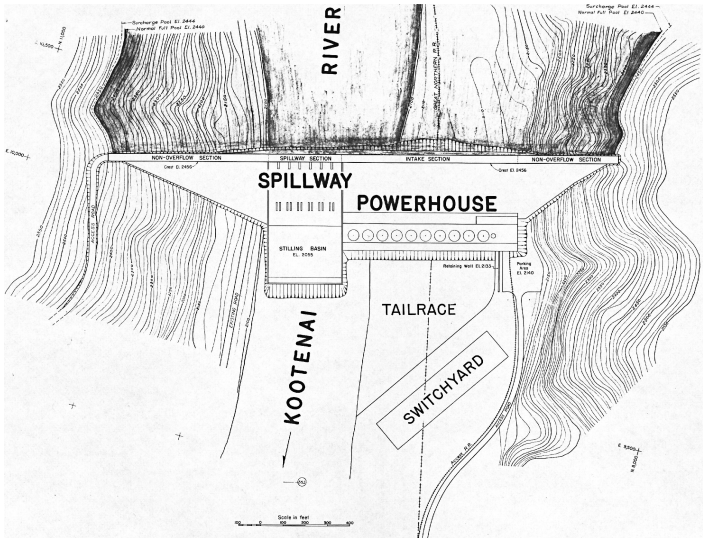

Figure 3. Schematic drawing of the Libby Dam, 1951, in International Columbia River Engineering Board Tech Studies folder, box 135, SEA-38 Survey Report Files, Records of the U.S. Army Corps of Engineers, RG 77. Used with permission of the National Archives and Records Administration, Seattle.

recognizable to other dam experts and could indeed be found in similar permutations all over the world.[41]

An artist's rendering of the dam, released around the same time, accomplished similar universalizing goals for general consumption. In the picture, the dam and reservoir are shown in the foreground, their size obvious when compared to the mountains depicted along with them. The dam clearly dominates the scene, taking for granted that the river will be transformed and tamed. Most significantly, however, the dam is depicted simply, unadorned by sculptures or other signifiers that would celebrate the uniqueness of the area or the dam. Such a design scheme utilized ideas that had been applied to large dam projects from the beginning of the high modern era, which capitalized on American affection for what David Nye has termed the "technological sublime."[42] As Gordon B. Kaufmann, the Hoover Dam's main architect, explained, the use of simplicity and clean lines enabled dams to speak

41. Michael Adas, *Dominance by Design: Technological Imperatives and America's Civilizing Mission* (Cambridge, Mass., 2006); Nick Cullather, "Damming Afghanistan: Modernization in a Buffer State," *Journal of American History*, 89 (2002), 512–537.

42. Nye, *American Technological Sublime.*

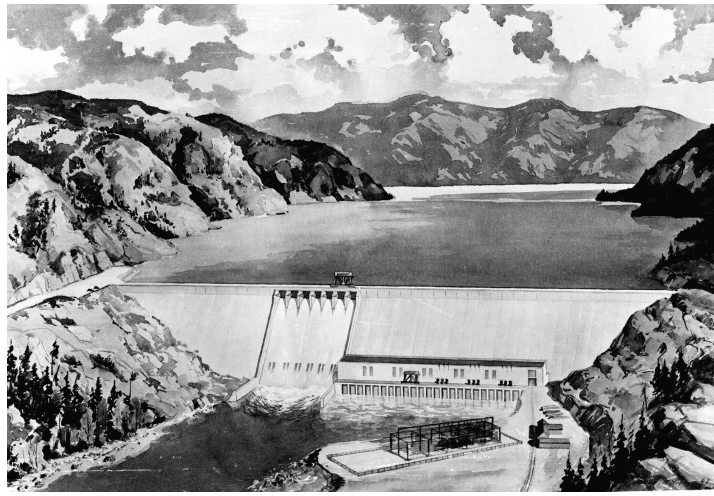

Figure 4. Artist's rendering of the Libby Dam, 1952. Artist unknown. Libby Project, Special Information folder, box 178, SEA-38 Survey Report Files, Records of the U.S. Army Corps of Engineers, RG 77. Used with permission of the National Archives and Records Administration, Seattle.

for themselves as symbols of "greatness, power, and domination."[43] Thus, although the scene is picturesque, it could be any dam anywhere in the world; the picture served to symbolize the grandeur of large engineering works more than the uniqueness of the location.

Despite the fact that the Libby Dam's engineering design was basically set by the early 1950s, construction did not begin until 1966. As has been detailed at length elsewhere, disagreements over the dam's location, the possibility of diverting the Kootenay into the Columbia River in British Columbia (the McNaughton plan), and the question of selling power entitlements to the United States delayed negotiations over the Libby Dam for over a decade. Finally, in 1964 the project was included as part of the controversial Columbia River Treaty between Canada and the United States, which allowed the United States to build the Libby Dam and provided British Columbia with nearly $340 million to construct three dams along the Canadian portion of the Columbia River to provide storage for U.S. dams downstream.[44] By this time, however, approaches

43. Theodore Steinberg, "'That World's Fair Feeling': Control of Water in 20th-Century America," *Technology and Culture*, 34 (1993), 402.

44. The Columbia River Treaty, signed in January 1961 and finally ratified in 1964, divided the payment to British Columbia between a one-time flood entitlement

to development and the environment had shifted in both the United States and Canada. This change had a significant effect on how the Libby Dam Project was ultimately constructed.

"Green and clean": Environmental modernism and the Libby Dam Project

According to environmental historians, the growth of the environmental movement after 1945 was due to a complex combination of increases in wages, standards of living, leisure time, consumption, and university enrollment, especially in urban centers, as well as studies that exposed the detrimental effects of industrialization, such as Rachel Carson's *Silent Spring* (1962), and the organization of environmental groups like the Scientific Pollution and Environmental Control Society (1968), Friends of the Earth (1969), and Greenpeace (1971). These changes led to both an increase in environmental awareness among the general public throughout the late 1950s to the 1970s and the enactment of new environmental legislation that restricted development projects.[45] Such larger social and legislative trends had a discernible impact on the Libby Dam Project, particularly as it forced development-focused government agencies to address the environmental effects of large-scale dam construction, ultimately changing the ideology behind such projects.

Pressure for mitigation measures grew soon after the Libby engineering designs were made public as a result of strengthened environmental legislation and conservationist lobbying. After 1935, when Congress passed the Fish and Wildlife Coordination Act, U.S. agencies were technically required to consider the

payment ($65 million) and power entitlements, which granted British Columbia half of the additional power that U.S. dams would produce as a result of extra storage in British Columbia. The province sold this power to the United States for a thirty-year lump sum of $275 million. For a detailed account of the Columbia River Treaty negotiations, see Swainson, *Conflict Over the Columbia*, and John V. Krutilla, *The Columbia River Treaty* (Baltimore, 1967).

45. Historical treatments of the environmental movement abound, especially in the United States. For a sample see Hays, *Beauty, Health, and Permanence*; Nash, *Wilderness and the American Mind*; Gottlieb, *Forcing the Spring*; Arn Keeling, "Sink or Swim: Water Pollution and Environmental Politics in Vancouver, 1889–1975," *BC Studies*, 142/143 (2004), 69–101; Zelko, "Making Greenpeace"; and Jennfier Read, "Addressing 'A Quiet Horror': The Evolution of Ontario Pollution Control Policy in the International Great Lakes, 1909–1972" (Ph.D. dissertation, Queen's University, 1999), 200–242.

interests of fish and wildlife whenever public works projects were built. In reality, the act had little impact until the 1950s when the Federal Wildlife Service and the Bureau of Sport Fisheries and Wildlife presented mounting evidence of the negative impact of dams on animals, especially salmon populations in the Columbia River. In 1956 Congress amended the Fish and Wildlife Coordination Act and required all federal projects that affected waterways to mitigate the effects on fish and wildlife. Although the amended law still did not contain any powers of enforcement (this changed when the act was amended again in 1964), it did require the Corps at least to keep the federal Bureau of Sport Fisheries and Wildlife and the Idaho and Montana Fish and Game departments informed of what was going on with the Libby Dam Project.[46]

In concert with such legislation, conservation groups in both Montana and British Columbia also lobbied for mitigation measures. In 1961 the president of the Montana Wildlife Federation, Bob Sykes, wrote to Montana Senators Mike Mansfield and Lee Metcalf, asking them to help "protect and maintain the fish recreational value of [the Libby Dam]." According to Sykes, previously completed dams in Montana, such as the 1953 Hungry Horse Dam on the Flathead River, had been built without environmental mitigation strategies; this process had caused tremendous problems for fish and wildlife in the surrounding river basin.[47] Montana's Fish and Game Department director, W. J. Everin, had also contacted Mansfield with similar concerns, which the influential senator took straight to the Corps's director for public works, Maj. Gen. William Cassidy, in February 1962. Cassidy responded to Mansfield that, "although the authorizing document for the Libby Project . . . did not include a cost estimate for fish and wildlife measures, we recognize the need for fish and wildlife measures and are appraising the effect of the project on this resource."[48]

46. Memo on Fish and Wildlife Mitigation, Libby Dam Project, Col. Andrew Inge, North Pacific Division Engineer, Portland, to Chief of Engineers Office, Jan. 4, 1965, file 17, box 165, SEA–38 Survey Report Files, RG 77. See also Joseph Taylor, *Making Salmon: An Environmental History of the Northwest Fisheries Crisis* (Seattle, 1999), and Thomas R. Dunlap, *Saving America's Wildlife: Ecology and the American Mind* (Princeton, N.J., 1988).

47. Bob Sykes, President Montana Wildlife Federation, to Senators [Lee] Metcalf and [Mike] Mansfield, Feb. 21, 1961, file 5, box 125, Lee Metcalf Papers, Montana Historical Society, Helena.

48. Maj. Gen. William F. Cassidy to Mansfield, March 22, 1962, file 17, box 165, SEA–38 Survey Report Files, RG 77.

Although nothing similar to the Fish and Wildlife Coordination Act existed in British Columbia, Kootenay rod and gun clubs raised similar concerns about the project's impact. The Kimberley Rod and Gun Club had been actively lobbying to protect the East Kootenay's fish and wildlife from the effects of the Libby Dam's reservoir since at least 1961.[49] It was joined in these efforts by the West Kootenay Rod and Gun Club, which worried about the downstream impact of the Libby Dam on fish and wildlife. According to representatives, the elimination of annual flooding in the Kootenay floodplain would allow for greater agricultural use, but it would also dry up wetlands. This change would prove disastrous for wildlife and waterfowl and hence for hunters as well. Both groups therefore lobbied the British Columbia government's Fish and Game Branch to coordinate with U.S. agencies and plan a mitigation strategy.[50]

Such pressure for a coordinated Canadian-U.S. response to fish and wildlife impacts soon bore fruit. In response to lobbying on both sides of the border and as a way to fulfill Corps requirements to the U.S. Fish and Wildlife Coordination Act, representatives from various levels of government in the United States and Canada formed the Libby Project Planning Committee in the spring of 1962 to assess the Libby Dam Project's impact on fish and wildlife. Composed of scientists and planners from the Canadian Wildlife Service, the British Columbia Fish and Game Branch, the Idaho and Montana departments of Fish and Game, the U.S. Forest Service, the U.S. Bureau of Sport Fisheries and Wildlife, and the Corps, the committee spent the following year assessing the project's impact on fish and wildlife in the entire Kootenay River Basin and released a report in 1963.

The report concluded that, in displacing about 500 people, the dam's social impact in the region would be relatively small, but its effect on wildlife and fish resources in Montana, Idaho, and British Columbia would be substantial.[51] The reservoir would destroy

49. Kimberley Rod and Gun Club, "Recreation in the Libby Project Area," Annual Convention of the B.C. Federation of Fish and Game Clubs in Vernon, B.C., 1963, box 14, British Columbia Energy Commission, GR 1390, British Columbia Archives, Victoria, B.C.

50. I. D. Smith, *Probable Effects of the Libby Dam upon Wildlife Resources of the East and West Kootenay* (Victoria, B.C., 1970), 1.

51. Libby Project Planning Committee on Fish and Wildlife Resources, *Libby Dam and Reservoir Project, Kootenai River, Canada and the United States* (no place given, 1963), 6.

over 40,000 acres of prime winter grazing lands, which would result in the permanent loss of thousands of big game ungulates, including elk, big-horned sheep, and white-tailed deer. The loss of winter range would cause these animals to starve, since the snow on the remaining higher portions of the valley would be too deep for them to find food. This mattered particularly for Ural Tweed mountain sheep, since they were already an endangered species. The reservoir required the relocation of the Burlington-Northern Railroad in Montana, the Canadian National Railroad in British Columbia, Montana State Highway 37, and British Columbia Highway 3, as well as the creation of new service roads, which would destroy another 2,000 acres of grazing territory. The dam would dry out wetlands downstream in the floodplains of Montana, Idaho, and British Columbia, wiping out waterfowl and other water-based wildlife, such as geese and muskrats. In addition, it would alter river conditions, both upstream and down, which would eradicate prized game fish, including dolly varden, whitefish, and even Montana's state fish, the cutthroat trout. Ultimately, according to the committee, non-game fish such as suckers and chub would flourish in the reservoir, upstream tributaries, and downstream as far as Kootenay Lake. In response to Canadian and U.S. conservation agency agendas, the Libby Project Planning Committee was concerned only with protecting fish and wildlife that it deemed important as resources for the Kootenay Basin's fishing and hunting industries.[52]

To prevent or at least reduce these potential impacts, the committee advised that both the Corps and Bennett's government adopt an unprecedented environmental mitigation strategy for the Libby Dam Project, with responsibility divided along the forty-ninth parallel.[53] The committee argued that the project area needed to be carefully managed in an environmentally modern fashion in order to maintain the populations of economically valuable animals. This included constructing barrier dams on the Kootenay River's upstream tributaries to separate game from non-game fish; eliminating non-game fish from the reservoir altogether; constructing a

52. *Ibid.*, 8–54.

53. The recommendations thus followed the Columbia River Treaty's stipulations for the Libby Dam Project's construction, which stated that each country would be responsible for all construction on its respective side of the border. See Article 12, Section 2, in Department of External Affairs, *The Columbia River Treaty; Protocol and Related Documents* (Ottawa, 1964), 66–67.

hatchery to stock the reservoir with cutthroat trout and whitefish; hiring biologists to work with project planners so that new roads and rail lines would not inhibit wildlife; clearing all trees and undergrowth in areas that would be flooded; and purchasing private land around the reservoir for big game winter grazing areas. By purchasing all remaining private lands and reserving them for wildlife preservation and public recreational use, natural resources not directly affected by the dam were to be preserved from private "abuses," such as ranching or logging. Such solutions to local resident "interference," both indigenous and non-indigenous, with wildlife and wilderness conservation, especially through the establishment of parks, were common in both Canada and the United States throughout the late nineteenth and early twentieth centuries.[54] The committee saw the Libby Dam Project as an opportunity to change land use in the Kootenay region in a similar fashion.[55]

In addition to its role as part of the Libby Project Planning Committee, the Corps also worked independently to address environmental criticism through the architectural treatment of the Libby Dam. Although the dam's fundamental engineering design—a concrete gravity type, 420 feet high and 2,900 feet wide, located 17 miles north of Libby—was decided in the early 1950s, a considerable amount of designing was left to be done regarding the dam's surface appearance, the project's powerhouse, and the landscaping around the dam and reservoir. To this end, the Corps's Seattle District, at the direction of its North Pacific Division in Portland, Oregon, took the unusual step in 1964 of appointing someone from outside the Corps as the supervising designer for the Libby Dam Project: prominent Seattle architect Paul Thiry. The division engineer, Col. Andrew Inge, justified the abnormal hire to the chief engineer, Lt. Gen. Walter Wilson, stating, "this was done because of the prominence of the project as a key element in the joint development of the Upper Columbia Basin."[56] The Corps

54. Mark David Spence, *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks* (New York, 1999); Alan MacEachern, *Natural Selections: National Parks in Atlantic Canada, 1953–1970* (Montreal, 2001); Theodore Binnema and Melanie Niemi, "'Let the Line Be Drawn Now': Wilderness, Conservation, and the Exclusion of Aboriginal People from Banff National Park in Canada," *Environmental History*, 11 (2006), 724–750.

55. Libby Project Planning Committee, *Libby Dam and Reservoir Project,* 8–54.

56. Inge to Lt. Gen. Walter Wilson, Chief of Engineers, Jan. 15, 1965, file 18, box 165, SEA–38 Survey Report Files, RG 77.

chose Thiry based on his previous work, most notably as the principal architect for Seattle's World Fair from 1957 to 1962. Practicing what he referred to as "organic architecture," Thiry purposefully fused modern technology with an area's surrounding natural beauty, which, he argued, tempered high modernist, "place-less" architecture made famous by the French architect Le Corbusier.[57] Such a design aesthetic appealed to Corps engineers, and Inge explicitly directed Thiry in his contract "to utilize the combined beauty of the site with the forcefulness and simplicity of the dam structure to present to the public a project which is appealing and functional, yet not extravagant and costly."[58]

Thiry spent about a year on the architectural treatment of the dam, powerhouse, and U.S. portion of the reservoir, working in consultation with engineers from the Seattle District, including Sydney Steinborn (Engineering Division), Sidney Knutson (Planning Section), and Peter Denny (Recreation, Fish, and Wildlife Section). In his 1965 final report, Thiry expanded the multipurpose justification of the Libby Dam that previous promoters had continually stressed to include more than just the high modern control of nature. He argued that dams could be environmentally modern as well, stressing that, "with consideration and imagination, dams can provide not only water control for reservoirs, flood control, irrigation, reclamation, hydroelectric power generation, water storage, and navigation but also wildlife protection, recreation, and the preservation of nature." To this end, Thiry designed the appearance of the dam so that its "grandeur" would still be recognizable, but so would its place within the Kootenay River valley, stating "in time this monumental construction will appear as though it grew here and 'belongs.'"[59]

Thiry stressed that all project structures should blend into the valley, particularly through the use of "rockscaping," a particular type of landscape design that used simple concrete slabs and rock

57. Paul Thiry, Richard M. Bennett, and Henry L. Kamphoefer, *Churches and Temples* (New York, 1953), chapter 4 "Organic Architecture versus Modernistic"; Meredith L. Clausen, "Paul Thiry," in Jeffrey Karl Ochsner, ed., *Shaping Seattle Architecture: A Historical Guide to the Architects* (Seattle, 1994), 246–251. For an analysis of Le Corbusier's high modernist designs, see Scott, *Seeing Like a State*, 103–146.

58. Contract between U.S. Army Corps of Engineers and Paul Thiry, June 3, 1964, file 19, box 165, SEA–38 Survey Report Files, RG 77.

59. Paul Thiry, *Libby Dam Kootenai River, Montana Proposed Architectural Treatment* (Seattle, 1965), 10, 27.

Figure 5. Paul Thiry's "rockscaping" design for the Libby Dam Project's viewpoints and rest areas, using concrete to simulate the mountainous terrain. This type of design was used for other project structures as well, including the dam's powerhouse and visitor center. The original document includes the handwritten annotation. Paul Thiry, *Libby Dam Kootenai River, Montana Proposed Architectural Treatment* (Seattle, 1965). Used with permission of the U.S. Army Corps of Engineers.

structures for buildings and visitor facilities in imitation of the mountainous terrain.[60] According to Thiry, such landscaping was a medium that would "provide a transition between the manmade features of the project and the natural surroundings."[61] Furthermore, any objects that blocked views of the dam and reservoir, such as large rocks, shrubs, and trees with low leaf bases, were removed. Thiry instructed that viewpoints be constructed that "framed" built structures with "intrinsic elements," such as vegetation, rocks, and fallen trees. These would then form a "landscape

60. *Ibid.*, 27–28.

61. Army Corps of Engineers, "Section 3–Visitors' Accommodations Concept" (date unknown), 1–2, Libby Dam, Libby MT, Recreation File, Montana Historical Society.

identity" that fulfilled what visitors expected to see.[62] To achieve such a landscape identity, Thiry directed that only "native plant material . . . [that would] enhance, suggest, or maintain the character of the natural landscape" be used, rather than "sheared shrubs and manicured lawns," in order to convince visitors that not much had changed in the area surrounding the dam.[63]

Thiry's architectural treatment for the dam, then, departed quite purposefully from how the structure had been presented by the Seattle District's Engineering Department in the early 1950s. Rather than a place-less structure meant to celebrate human domination of nature, Thiry altered the appearance of the dam so that it would complement the area and make reference to its unique landscape and culture. Nothing represented this goal more than the Treaty Tower and sculpture that he recommended for the top of the dam. This tower was meant to distinguish the dam from others and to be a testament to the unique, international circumstances that had created it. Thiry also recommended the type of sculpture that would eventually be chosen for the tower, instructing that it should "be designed to recall the early natives of the region who did not recognize national boundaries as known today."[64]

Thiry's designs came at an especially timely moment for the Corps, as the design of federal projects around the country was being heavily criticized in the mid-1960s. A 1965 editorial in the *New York Times* blasted government projects for being "drab and ugly," something that did not escape the notice of Sydney Steinborn, chief of the Engineering Division for the Seattle District. He sent a copy of the editorial to the chief of the Engineering Division in Portland, using it and similar criticisms in *Architectural Forum* as a form of vindication for their unprecedented use of Thiry for the Libby Dam.[65] Corps officials on the designing committee, as well as their commanding officers, were thus quite pleased with Thiry's work, and, as the sculpture discussed at the beginning of this article attests, they followed through with most of his recommendations.

---

62. Army Corps of Engineers, *Design Memorandum 44: Libby Dam–Lake Koocanusa Project Master Plan* (Seattle, 1983), Section 9, p. 1.

63. *Ibid.*, Section 9, pp. 1, 6.

64. Thiry, *Libby Dam*, 25.

65. "Drab and Ugly," *New York Times*, March 14, 1965, p. E10; Sydney Steinborn to Chief Engineering Division, North Pacific Division, Portland, Ore., March 23, 1965, file 18, box 165, SEA–38 Survey Report Files, RG 77.

Designing the look of the dam to seem more natural, however, still did not address the adverse impacts that the Libby Project Planning Committee, the U.S. Fish and Wildlife Service, and the British Columbia Fish and Game Branch argued the dam would have.[66] Furthermore, the 1964 amended Fish and Wildlife Coordination Act and the 1969 National Environmental Policy Act (NEPA) imposed even more rigorous guidelines for the Corps to follow. NEPA required U.S. federal agencies to publish environmental impact statements and mitigation plans for all ongoing and future development projects.[67] Although the Libby Dam was well under construction in 1969, it was still a number of years from completion, so an environmental impact statement was required, one of the first that would be conducted for a dam in the United States.[68]

Released in 1972, the Corps's environmental impact statement addressed many of the concerns raised by the Libby Project Planning Committee and by U.S. and Canadian fish and wildlife agencies. To compensate for fish losses, the Corps promised to build a hatchery to stock the reservoir periodically with 25,000 pounds of cutthroat trout; install a cutting-edge selective withdrawal system that would draw water from different levels of the reservoir to control downstream river temperatures; and construct barrier dams in Kootenay tributaries to impede the migration of non-game fish into the reservoir. To mitigate the effects on wildlife, the Corps promised to provide funds to the U.S. Forest Service to implement a "timber and wildlife habitat management program on about 7,000 acres of National Forest Lands." The Corps also promised to purchase an additional 12,000 acres of privately owned land to re-create winter

66. U.S. Fish and Wildlife Service, *A Detailed Report on Fish and Wildlife Resources Affected by Libby Dam and Reservoir Project Kootenai River Montana* (Portland, Ore., 1965); Smith, *Probable Effects of the Libby Dam upon Wildlife Resources* [by Wildlife Management Division, Fish and Wildlife Branch, Department of Recreation and Conservation]; M. R. Whatley, *Effects on Fish in Kootenay River of Construction of Libby Dam* [by Fish and Habitat Protection Section, Fish and Wildlife Branch, Department of Recreation and Conservation] (Victoria, B.C., 1972).

67. Samuel P. Hays, *A History of Environmental Politics since 1945* (Pittsburgh, 2000), 61–62, 126–127.

68. For a history of the construction of the Libby Dam, see the Corps-commissioned paper by Rich Aarstad, "The Libby Dam" (unpublished, 2001), and Spritzer, *Waters of Wealth*, 136–154.

grazing lands and provide recreational access around the U.S. portion of the reservoir.[69]

Since the Libby Dam itself was located in Montana, mitigation plans were not as extensive for the project in British Columbia. In fact, the budget for the project in Montana and British Columbia differed by a ratio of fifty-to-one.[70] Still, criticism of the environmental effects of other Columbia River Treaty dams and of the Social Credit government in general made British Columbia Premier Bennett anxious to deflect negative attention. By the end of the 1960s Bennett and his government began to refashion their image to one that was environmentally friendly, just as the Army Corps of Engineers had sought to do. As Bennett later argued in an interview:

> [T]here are no better conservationists than ourselves [the Social Credit Party]. In the election of 1963—or '66, one of those elections—I was opening the campaign up in the northern part of [Vancouver] Island. At the opening meeting I announced then, before there was any of this [environmental] chatter, that the Social Credit government of British Columbia's policy was pure water, clean air and fertile soil, and the papers played it all down. That's been our policy always.[71]

In a 1972 radio broadcast, just before the Social Credit Party lost the next election, minister of highways and Kootenay representative Wesley D. Black concurred with Bennett's revision of Social Credit policy. He declared, "B.C. will be kept green and clean. . . . Concern for the environment has become a watchword . . . in British Columbia, the preservation of a quality environment must become everyone's business."[72] Much of this was simply rhetorical on the part of the provincial government, but it did make some attempts to adhere to the Libby Project Planning Committee's

69. Army Corps of Engineers, *Environmental Statement: Libby Dam and Lake Koocanusa, Kootenai River, Montana Final Draft* (Seattle, 1972), 13–15.

70. Cost estimates for the dam in the 1950s pegged the U.S. side of the project at $260 million and the Canadian at $6 million. The dam ultimately cost over $470 million, of which $10 million was spent in British Columbia. Army Corps of Engineers, *Planning Report: Libby Dam and Reservoir Kootenai River, Columbia River Basin, Montana* (Seattle, 1952); "Controversy Flows at Dam Opening," *Vancouver Sun*, Aug. 8, 1975, p. 9.

71. W. A. C. Bennett Interview (transcript), by David Mitchell, Nov. 14, 1977, tape 31, side 2, p. 15, W. A. C. Bennett Oral History Collection, British Columbia Archives.

72. Wesley D. Black, CKKC radio broadcast, March 30, 1972, pp. 1, 4, 9, file 46, box 7, Wesley D. Black Fonds, British Columbia Archives.

mitigation recommendations for the reservoir portion of the project and also engaged in efforts to shape visitor experiences of the project's reservoir.

In the early 1970s, at Bennett's direction, the British Columbia Fish and Wildlife Branch published two separate studies to assess the impact of the Libby Dam in British Columbia: I. D. Smith's study on the effects of the Libby Dam on East Kootenay wildlife and M. R. Whatley's study of its effects on fish.[73] Both studies came to conclusions similar to those of the Libby Project Planning Committee: The project required extensive mitigation measures on the reservoir portion in British Columbia, which could best be accomplished by creating a wildlife preserve around the reservoir. Bennett's government was interested in creating such a preserve, both for Lake Koocanusa and in other areas around the province. To that end, it organized the Environment and Land-Use Subcommittee, composed of representatives from the Land, Forest, and Water Resources services, as well as the departments of Agriculture, Mines, Municipal Affairs, and Recreation and Conservation, to investigate the possibility. In a *Victoria Colonist* editorial, Alec Merriman described the formation of the subcommittee as "one of the most significant actions in the history of land-use in British Columbia."[74]

In 1971 the subcommittee released a report that agreed with the Libby Project Planning Committee and British Columbia Fish and Game Branch recommendations. It advised the government not to use crown land as compensation for ranchers whose lands would be inundated by the Libby reservoir. Instead, it recommended that the government change land use within the East Kootenay region from ranching to "preserving wilderness" for wildlife conservation.[75] The Social Credit government lost the next election at the end of 1972, however, and Dave Barrett's subsequent New Democratic Party (NDP) government did not adopt the subcommittee's recommendations. This was most likely because the NDP had criticized the Columbia River Treaty dams since the mid-1960s, especially concerning the amount of money involved. With

73. Smith, *Probable Effects of the Libby Dam*; Whatley, *Effects on Fish*.

74. *Victoria Colonist*, Jan. 14, 1970, p. 11.

75. "Dam May Mark End of Ranching," *Vancouver Province*, Jan. 14, 1970, p. 22; "Bar to Crown Land Advised for those Ousted by Flooding," *Vancouver Sun*, June 3, 1971, p. 17.

the NDP government unwilling to spend more, the subcommittee's recommendations mostly went ignored.[76]

Before it lost the election, however, the Social Credit government did successfully implement part of the subcommittee's recommendation for the Libby reservoir by creating Kikomun Creek Provincial Park. The Bennett government had recognized the power of parks as a panacea against environmental protest for a number of years. In 1967 E. M. Gunderson, the executive director of B.C. Hydro (the government entity responsible for building the Columbia River Treaty dams in British Columbia and for relocating those forced out by the Libby Dam), wrote to Bennett that "the setting up of another park would do much to offset the criticism being given the government by the public."[77] As part of a last-ditch effort to prove its environmental detractors wrong before the next election in 1972, the Social Credit government set aside 1,400 acres of newly purchased land for the creation of Kikomun Creek Provincial Park to preserve wildlife and provide a space for recreational activities on the Libby Reservoir.[78]

Design plans for Kikomun Creek Park were strikingly similar to altered Corps plans to make the Libby Dam appear more natural. Planners knew that naming the park after the Libby Dam's reservoir would not sell the park as a wilderness area and thus named it after a nearby creek. Don Burke, project supervisor for the provincial Parks Branch, described the new park as "different from other provincial facilities," since constructed structures were meant to be as "unobtrusive as possible." Swimming areas were designed to be "lagoon-type," and parking areas and other constructed facilities were separated with "grassed banks and trees" to ensure that, as Burke explained, "people won't see just one great sea of metal." In addition, "trees will be made to keep the park area as natural as possible and swimmers will be protected from boating areas by

76. See Swainson, *Conflict Over the Columbia*, 283, and Spritzer, *Waters of Wealth*, 152–153.

77. E. M. Gunderson, Executive Director of B.C. Hydro, to Bennett, June 16, 1967, F-55-42-0-1, box 65, Bennett Fonds.

78. The environmental effects of twenty years of intense Social Credit Party development policies were a major part of the 1972 election campaign and a large part of the reason the New Democratic Party (NDP) won. The Social Credit Party returned to power under the direction of Bennett's son, Bill, three years later, but only after the province slid into an economic decline with the NDP. See Jean Barman, *The West Beyond the West: A History of British Columbia* (Toronto, 1991), 297–322.

banks around the lagoon." The park also contained a large camping area and numerous nature trails to allow visitors to explore its preserved wilderness. Such choices were a deliberate way to manage the reservoir in an environmentally modern fashion. Planners hoped that the proper development and subsequent management of the park would attract visitors to both its constructed and natural beauty and that it would remain a "bright spot" along the Lake Koocanusa shoreline.[79]

In reality, the Canadian side of the Libby reservoir did not afford as many recreational opportunities as Kikomun planners had hoped. In its first years of operation, landslides constantly threatened the reservoir as water levels fluctuated to produce power downstream. As one sign in the park warned: "DANGER: Sudden landslides and resulting high waves will occur in the shoreline and reservoir. The public is warned to keep away from banks and shores except at established boat launching ramps."[80] In addition, upstream pollution from a Crestbrook Forest Industries Ltd. pulp and paper mill in Skookumchuck, coal operations in Sparwood and Fernie, and Cominco mines near Kimberley threatened to destroy any recreational value that Kikomun Creek Park possessed. As a result of such threats and the reservoir's constant problem with mudflats, Kikomun was the only legacy of British Columbia's attempt at environmental planning for Lake Koocanusa. The remainder of the area around the reservoir not occupied by towns like Wardner or Newgate or by small ranches and farms was left unmanaged.[81] Its distance from any major urban center, coupled with the fact that the dam was not constructed in British Columbia, meant that few visitors went to Kikomun Creek Provincial Park, which, along with Lake Koocanusa, fell into obscurity in the province.[82]

The Corps, by comparison, engaged in a similar, although more aggressive and ultimately more successful, tourism program

79. "Libby Dam provides new BC park," *Vancouver Sun*, June 28, 1972, p. 10.

80. *Ibid.*

81. "Kootenay Preserve Planned," *Victoria Daily Times*, March 31, 1971, p. 20; "Regional Planner Fears 'Cesspool of the Kootenays,'" *Vancouver Province*, April 7, 1971, p. 14. See also Constance Graf and Christopher Graf, *Reflections on the Kootenay: Wardner, B.C. 1897–1997* (Altona, B.C., 1997), 557–559.

82. Province of British Columbia, Ministry of Lands Parks and Housing, *Kikomun Creek Provincial Park Master Plan* (Victoria, B.C., 1980), 1, 9–10.

when the dam was finally finished in the mid-1970s. Thiry had been quite explicit in his designs that every opportunity to shape the tourist experience of the dam should be taken advantage of, including building a visitor center, camping sites, interpretive trails, and an informational room shaped like a grotto inside the dam.[83] The Corps followed through with these recommendations and organized guided tours to ensure that visitors understood the Corps's new message that the dam "belonged" in the Kootenay Valley.

Just as they were part of the Treaty Tower sculpture, the "cultural resources" and "prehistory" of the region were displayed throughout the project. A large part of this effort involved displaying "artifacts" and sites formerly used and inhabited by the Ktunaxa/Kootenai.[84] Before the Kootenay Valley was flooded, anthropologists from the University of Montana, under the direction of professor Dee Taylor, excavated numerous items formerly used by these Native American/First Nations groups, such as pottery, arrowheads, and pipes. Much of this material was then displayed in the grotto room inside the dam and in the Libby Dam Visitor Center, which together formed the Libby Dam Historical Museum, a unique joint venture between the Corps and the Montana Historical Society (a partnership that, due to funding restrictions, lasted only a few years).[85] Montana Historical Society employees, and later Corps tour guides, led tourists throughout the dam's museum exhibits, explaining how they displayed the "native" flora and fauna and the "prehistory" of the region. By intent, the exhibits illustrated "the geological development of the area, Indians and their ethnological and ethnographic development, the period of early fur traders in the area," and, finally, "the era of transportation

83. Thiry, *Libby Dam*.

84. The Ktunaxa was formerly known as the Kootenay First Nation in British Columbia. In 1990 they officially changed their name to the Ktunaxa Nation. In Montana and Idaho, they refer to themselves predominantly as the Kootenai but also as the Ksanka. See Randy Bouchard and Dorothy Kennedy, *First Nations' Ethnography and Ethnohistory in British Columbia's Lower Kootenay/Columbia Hydropower Region* [British Columbia Indian Language Project, Prepared for Columbia Power Cor]. (Victoria, B.C., 2000), 9–12. Throughout this article I refer to them together as the Ktunaxa/Kootenai.

85. "UM Anthropologists, Sociologists to Comb Site of Libby Reservoir," *Great Falls Tribune*, May 12, 1966, p. 8, file 30, box 2, Department of Health and Environmental Sciences, Environmental Science Division Records, Montana Historical Society; "Historical Society to Open Branch at Visitors' Center," *Western News*, Aug. 21, 1975 (no page), Libby Dam, Visitor's Center File, in *ibid*.

and industry."[86] Each period followed chronologically, so that a tour of the displays ended, teleologically, with the Libby Dam and presented a history that was seamless and appeared to progress peacefully.

The area outside of the dam's museum conveyed the same history. Around the perimeter of Lake Koocanusa, the Corps constructed trails that led to "historic Indian pictographs" and other "cultural sites" not inundated by the reservoir, which had been unearthed by Taylor's University of Montana archeological digs and were managed as outdoor displays by the Corps and the U.S. Forest Service.[87] The Corps also placed interpretive signs at these sites to inform tourists about an item's "function or historical significance and how it [fit] into the total project and environment."[88] Highlighting such Ktunaxa/Kootenai "cultural sites" naturalized Lake Koocanusa and its shoreline, since the sites were regarded as part of the prehistory of the area and thus as part of its natural landscape.

Left out of exhibits and displays in the dam and Lake Koocanusa's cultural sites, however, were any traces of friction or animosity that existed during or between these "stages of history." None of the displays mentioned that Ktunaxa/Kootenai bands did not simply disappear but had been marginalized, divided, and ultimately forced onto numerous reservations outside of the Libby Dam Project area in Montana and British Columbia by various government agencies, settlers, and diseases nearly a century before.[89] Indeed, nothing mentioned that Ktunaxa/Kutenai groups

86. Army Corps of Engineers, *Libby Dam and Lake Koocanusa, Kootenai River, Montana: Dedication Issue* (Seattle, 1975), Libby Dam, Libby MT File, in *ibid.*; Army Corps of Engineers, *Interpretive Plan: Libby Dam Project* (Seattle, 1973), 2, Libby Dam, Visitor's Center File, in *ibid.*; "Task Force Adopts Theme for Museum," *Western News*, July 10, 1969, in *ibid.*

87. Army Corps of Engineers, *A Proposed Public Use Plan for Libby Dam and Lake Koocanusa, Montana* (Seattle, date unknown), 5, Libby Dam, Libby MT, Recreation File, Montana Historical Society; Army Corps of Engineers, *A Preliminary Investigation of Recreation, Fisheries and Cultural Resources and Impacts on These Resources if the Reservoir is Drafted Deeper: Final Report Libby Dam-Lake Koocanusa Project, Kootenai River, Montana* (Seattle, 1985), 21.

88. Army Corps of Engineers, "Section 3—Visitors' Accommodation Concept" (Seattle, date unknown), 5, Libby Dam, Libby MT, Recreation File, Montana Historical Society.

89. *Not So Long Ago: Recollections of Ktunaxa/Kinbasket Elders*, coordinated by Troy Hunter (Cranbrook, B.C., 1999); Kootenai Cultural Committee of the Confederated Salish and Kootenai Tribes, *Ktunaxa Legends* (Pablo, Mont., 1997); Spritzer, *Waters of Wealth*, 6–54; Olga Weydemeyer Johnson, *Flathead and Kootenay: The Rivers, the Tribes and the Region's Traders* (Glendale, Calif., 1969).

still existed. Furthermore, planners did not acknowledge tensions between the Ktunaxa/Kootenai, the Corps, and the Montana and British Columbia governments over rights to such artifacts and cultural sites.[90] The Corps wanted visitors to experience firsthand only a pleasant version of the history of the area, either through the timeline-oriented "Indian" exhibits in the Libby Dam Historical Museum, or by "walking into the past" along nature trails that led to "prehistoric" sites, which would, planners hoped, harmonize it with the present reality of the dam.[91]

Conclusion

Libby Dam guides, both in person and in pamphlet form, inform visitors that "surprisingly, Koocanusa is not an Indian name," but was created by Alice Beers of Rexford, Montana, the winner of another 1972 Libby Dam Project contest to name the dam's reservoir, by combining the first three letters of the words Kootenay and Canada with USA—Koo-Can-USA.[92] That an "Indian"-sounding name was chosen for the Libby Dam's reservoir is not surprising.

90. Evidence for this point is scarce, presumably since the Ktunaxa/Kootenai were not consulted about the Libby Project by government agencies or by the media on either side of the border. Tensions are mentioned in a letter from Tribal Council Chairman Joseph J. Felsman of the Confederated Salish and Kootenai Tribes of the Flathead Reservation to Corps engineer Col. Roger Yankoupe, April 23, 1985, appended to the end of Corps, "A Preliminary Investigation," exhibit 5. Similar archaeological digs occurred in British Columbia. See Wayne Choquette, "1972 Preliminary Report, Libby Reservoir Archeological Salvage Project" (Calgary, 1972). I have been unable to locate evidence of tensions over artifacts and sites between the Ktunaxa Nation and the British Columbia government and/or archaeologists; however, that some Ktunaxa were involved in digs that did not go well is mentioned by British Columbia Ktunaxa Elder Theresa Pierre, who said in an interview: "I worked in archaeology before. That was out by Fort Steele and at the Reservoir. I got mad and walked out." See *Not So Long Ago*, 103. Neither British Columbia's main newspapers nor provincial records mention such digs. I also looked at every issue of British Columbia's Aboriginal publications, *Indian Voice* and *Native Voice*, from 1955 to 1975 but did not find any mention of the Libby Dam Project. Presumably the problem of evidence would be solved, at least partially, through the use of oral history, which might have enriched other areas of this article as well. Unfortunately, due to time and monetary constraints, I was unable to conduct any interviews for this article.

91. Karen Dubinsky, *The Second Greatest Disappointment: Honeymooning and Tourism at Niagara Falls* (Toronto, 1999); Philip J. Deloria, *Playing Indian* (New Haven, Conn., 1998); Daniel Francis, *The Imaginary Indian: The Image of the Indian in Canadian Culture* (Vancouver, B.C., 1992).

92. Army Corps of Engineers, "Libby Dam and Lake Koocanusa, Montana/British Columbia" (pamphlet) (Seattle, 1999); "Libby Dam: Beautiful to some; a dam site uglier to others," *Independent Record*, Aug. 15, 1973, Libby Dam, Libby MT File.

Just as the "Indian" man in the Treaty Tower sculpture was invented to make the Libby Dam seem "native" and thus natural, so the name of its reservoir was an invention meant to accomplish the same goal.

From the late 1940s until the mid-1970s, Libby Dam Project planners in both the United States and Canada paid careful attention to such details when designing and promoting the project. Initially, in typically high modernist fashion, planners wanted the project to represent "man's" dominance and control over the natural world, and they designed and promoted the dam accordingly. Following increasing public environmental awareness and pressure from conservation agencies, however, planners supplemented their engineering designs with a "green" architectural treatment so that the dam would be seen as a structure that was part of the natural progress of the region's past, present, and future, rather than something that dominated the Kootenay landscape.

The fact remains, however, that the basic size and technology of the dam and reservoir did not change. Despite the architectural treatment and mitigation measures that were built into the project, its basic engineering design (its size and location) and hence its basic environmental and social effects, including flooding nearly 40,000 acres of land and displacing anything and anyone that used it, remained the same.[93] Still, the tenor of the project had changed, anticipating the fact that such massive dam projects would be phased out of North American river planning over the course of the next two decades. The Libby Dam Project represents how dam planners and experts were trying to cope with this change in cultural values by applying a new environmental aesthetic to an old way of doing things.

It is important to note, too, that the politics of each region affected how these ideas about development were carried out. In Montana, following a period when planners and government officials unanimously agreed on the necessity for the high modern Libby Dam Project, environmental pressure resulted in numerous mitigation strategies and design changes. In British Columbia, on the other hand, the Libby Dam Project was controversial from the beginning, although initially not for any environmental reasons.

93. I am indebted to one of the *Pacific Historical Review*'s anonymous referees for this point.

Even when the project was later criticized for environmental problems, the fact that the dam was built in the United States meant that fewer resources were dedicated to mitigating its effects in British Columbia, since no single group there was responsible for the project as the Corps was in Montana. Thus, although a shift to an environmentally modern development ethic resulted in the creation of Kikomun Creek Provincial Park, its overall effect on the British Columbia portion of the project was far smaller.

Regardless of degree, something had nevertheless changed on both sides of the forty-ninth parallel. The Libby Dam spans more than just the width of the Kootenay River. The process leading up to and including its construction also stretches between the high modern, big dam era and the contemporary period of environmental modernism. The environmental movement did not just sway project engineers, politicians, and planners to make mere rhetorical nods to green planning. Rather, such actors were a key part of the movement, for environmentally friendly development planning, no matter how ecologically flawed it might be, has become common to construction projects in the decades since the Libby Dam's construction in a way that had not existed before. The greening of the Libby Dam marked the forefront of this transition, making it significant for the history of environmentalism and of development in both the United States and Canada.