

“NONSENSICAL AND A CONTRADICTION IN TERMS”:

Multiple-Use Forestry, Clearcutting, and the Politics of Fish Habitat in British Columbia, 1945-70

RICHARD RAJALA

IN WELCOMING DELEGATES to the fourth British Columbia Natural Resources Conference at Victoria's Empress Hotel in February 1951, provincial minister of trade and commerce L.H. Eyres described the province as “our home and our workshop.” It was the workshop analogy that preoccupied the assembled executives, administrators, scientists, and educators, the idea that British Columbia's array of natural resources constituted “our stock in trade,” as Eyres put it. But those resources were “practically ... worthless,” the minister declared, until put to use. Thankfully, British Columbia was a busy workshop indeed. Almost fifty thousand men were engaged in the forest industry, producing nearly \$400 million in wealth in 1950. Mining ranked second, agriculture third, and then came the fisheries, employing twenty-one thousand and generating \$63 million worth of products. The convention's theme, “Co-ordination or Conflict,” hinted at the problems a booming resource-based economy had begun to confront, and Eyres wished his audience well in achieving conservation and wise use while turning resources into “payrolls, the life blood of this economy.”¹

Eyres's address conveyed the prevailing conception of conservation as “rational planning to promote efficient development and use of all natural resources.” Professionals and business elites held fast to this credo during the postwar years. Speaking to the 1945 United Fishermen and Allied Workers Union Convention (UFAWU), federal fisheries official R.E. Foerster defined conservation as “the wisest utilization of resources so that they could be maintained and exploited in perpetuity.” Readers of the timber industry's *Forest and Mill* periodical received the same dose

¹ L.H. Eyres, “Address of Welcome,” in *Proceedings of the Fourth British Columbia Natural Resources Conference* (Victoria: BC Natural Resources Conference, 1951), 1-2.

of wisdom in a 1960 piece devoted to clearing up any confusion about the meaning of conservation: “real conservation is use – wise use of a growing and renewable resource.” Withholding forests from exploitation amounted to “wasteful extravagance.”²

In both forest and fisheries policy, conservation as wise use informed and legitimated the notion of sustained yield as an approach offering the regulation of harvests in accordance with cycles of renewal. In reality, the biological basis of sustained yield has always been challenged by economic, political, and technological forces. During the immediate postwar decades, government preoccupation with maximizing investment, employment, profit, and revenue had, it seems, more influence in determining harvest levels than did biological capacity. Technological advances in artificial renewal, in the form of plantations for forests and hatcheries and spawning channels for salmon, only helped to foster what Paul Hirt terms a “conspiracy of optimism” that drove cutting levels on American national forests beyond sustainable levels. That process is also evident in BC forests and in the waters off its coast, where the provincial state, responsible for forests, and Ottawa, with jurisdiction over salmon, defined sustained yield in economic rather than in ecological terms. The forests and the waters would yield their maximum returns, calculated in “cold cash,” as Geoff Meggs puts it in his analysis of salmon policy.³

This article has much less to say about fisheries policy than it does about forest policy. Indeed, its specific focus is on multiple use, an approach to forest management that developed in tandem with sustained yield’s emphasis on production. The latter became official policy in 1947, after mounting concerns about timber depletion on the lower coast led to the Royal Commission of Inquiry headed by Chief Justice Gordon Sloan. Sloan, drawing upon Chief Forester C.D. Orchard’s idea for a system of working circles involving the pooling of private land, earlier temporary tenures, and Crown forest, recommended that the province adopt new tenure arrangements to put an end to “cut-and-get-out” logging. *Maximum* sustained yield should be the objective, Sloan maintained, the land being managed “to the fullest extent of its productive capacity.” The tenure instrument to achieve that vision, introduced in 1947, was the tree farm licence (TFL). Private land, pre-1912 Forest Act

² Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1880-1920* (Cambridge: Harvard University Press, 1959), 21; “Speakers Discuss Conservation,” *Fisherman*, 20 March 1945; “Conservation Means Wise Use of Resources,” *Forest and Mill* 14 (1960): 5; “Wildlife Notebook,” *Forest and Mill* 15 (1961): 6.

³ Paul W. Hirt, *A Conspiracy of Optimism: Management of the National Forests since World War Two* (Lincoln: University of Nebraska Press, 1984); Geoff Meggs, *Salmon: The Decline of the British Columbia Fishery* (Vancouver: Douglas & McIntyre, 1991), 176-99.

leases and licences, and uncut adjacent Crown forest would be consolidated in such tenures for large firms operating under management plans approved by the BC Forest Service (BCFS). Public sustained yield units (PSYU) would also be organized around the province, these to be managed by the BCFS and logged on a timber-sale basis by smaller companies.⁴

From the start, Orchard and other BCFS officials emphasized notions of teamwork, cooperation, and partnership in characterizing the relationship between state and industry on the TFLs. In accepting control over vast stretches of public forest at low holding rates corporations would develop a proprietary attitude, managing wisely for future yields. The Crown, through the BCFS, would take up a role as “firm but understanding landlord,” exercising the right of approval over long-term working plans and annual cutting permits. Sustained yield would be achieved on a cooperative basis, with corporate self-interest making rigid regulation unnecessary. Actual management “lay largely in the hands of the licensee,” the forester in charge of working plan administration reported in the mid-1950s, a duty they fulfilled with “considerable freedom of action.”⁵

The resulting accord in the postwar “timber management regime” saw executives from the large BC firms working closely with government officials through the Council of Forest Industries (COFI) in what Michael Dalzell describes as “an exclusive and mutually beneficial” arrangement that included a place for smaller operators to make their views known through the Truck Loggers Association (TLA). Concentration of control over the resource under the TFL system topped their list of concerns, which deepened as the majors began taking up cutting rights in the PSYUs. Small operators did find a place on the TFLs after the 1953 introduction of the contractor clause in those contracts, but throughout they maintained that the rules of sustained yield had been rigged against

⁴ Gordon Sloan, *Report of the Commissioner Relating to the Forest Resources of British Columbia* (Victoria: King’s Printer, 1945), 127; Richard A. Rajala, *Clearcutting the Pacific Rain Forest: Production, Science, and Regulation* (Vancouver: UBC Press, 1998), 189–98; Gordon Hak, *Capital and Labour in the British Columbia Forest Industry, 1934–74* (Vancouver: UBC Press, 2007), 45–51.

⁵ C.D. Orchard, “Forestry,” in *Transactions of the First Resources Conference* (Victoria: BC Natural Resources Conference, 1948), 89–90; C.D. Orchard, “British Columbia’s Forest Management Licenses,” in *Western Forestry and Conservation Association, Proceedings of the 39th Annual Meeting* (Victoria: Portland: Western Forestry and Conservation Association, 1948), 21 (hereafter *WFCA*); R.C. Telford, “A Report on the Progress of the Program for Sustained Production in British Columbia,” in *WFCA, Proceedings of the 38th Annual Meeting* (Portland: Western Forestry and Conservation Association, 1947), 9; Walter G. Hughes, “Management Plan Considerations in Initiating Sustained Yield Forestry,” in *Proceedings of the Society of American Foresters* (Portland: Society of American Foresters, 1955), 140.

their interests. By 1974, the ten largest firms controlled 54.5 percent of the provincial harvest, up from 37 percent in 1954.⁶

Bickering over allocation and timber pricing aside, the annual harvest rose from 22 million cubic metres in 1950 to almost 55 million in 1970. A reforestation crisis loomed, but for the time being sustained yield produced the goods – jobs, profits, revenues, and the welcome, if temporary, appearance of community stability. The BCFS was “among the world leaders in sustained yield forestry,” Herbert McDonald informed British Columbians in 1966, a reassuring message industry and government elites promoted relentlessly. No jurisdiction in the world “controls its basic raw materials in any more positive a fashion than we do in British Columbia,” Minister of Lands Ray Williston enthused a few years later, citing the “high performance requirements” imposed on the province’s thirty-eight TFL holders.⁷

Some critics did challenge aspects of the consensus narrative of regulatory and managerial efficiency. The Co-operative Commonwealth Federation, renamed the New Democratic Party (NDP) in 1961, had by the late 1950s dropped Colin Cameron’s proposal for gradual nationalization of the forest industry in favour of a more relaxed program of regulation consistent with moderate socialism in a Cold War context. The party continued to denounce monopoly control by the big corporations and demand higher stumpage charges, doing so as an increasingly sophisticated clearcutting regime accelerated the pace and reach of coastal logging. Completing the transition from steam power to the internal combustion engine, power saws displaced the crosscut saw in falling timber and new, mobile high-lead yarding equipment swept logs to landings for loading onto trucks that surpassed railways in gaining access to hillside and higher-elevation timber. Framing clearcutting as the essential first step in achieving real forest management, industry described the mature coastal forest as “sluggish” and vulnerable to insect attack and disease. “Sound forestry practice,” declared a *Forest and Mill*

⁶ Michael Howlett and Jeremy Rayner, “The Business–Government Nexus: Principal Elements and Dynamics of the Canadian Forest Policy Regime,” in *Canadian Forest Policy: Adapting to Change*, ed. Michael Howlett (Toronto: University of Toronto Press, 2001), 34; Michael James Dezeil, “Grapple Yarding with the Future: A New Mandate for COFI” (MA thesis, University of Victoria, 1993), 2; Hak, *Capital and Labour*, 51–66; Patricia Marchak, *Green Gold: The Forest Industry in British Columbia* (Vancouver: UBC Press, 1983), 51–52.

⁷ Jeremy Wilson, *Talk and Log: Wilderness Politics in British Columbia* (Vancouver: UBC Press, 1998), 80; Herbert L. McDonald, *British Columbia: Challenge in Abundance* (Canadian Confederation Centennial Committee of British Columbia, 1966), 43; Ray Williston, “Foreign Capital Investment Defined,” *Truck Logger* (hereafter *TL*) 25 (1969): 50.

article, “calls for the removal of the trees as they mature so they can be quickly replaced by vigorous young stands.”⁸

But if most British Columbians accepted the logic of the conservation paradigm during the postwar boom, by the 1950s outdoor enthusiasts expressed reservations about putting *all* of British Columbia’s forests to the saw, adding their voices to a long-standing critique of stream abuses by commercial fishing interests. “Many people today are not satisfied with trees to turn into lumber and newsprint, or even to spin into rayon,” C.D. Orchard observed in 1953: “Today they want trees and forests to look at, to sit under, to hike through, to camp in, and to photograph. They want trees and forests to foster fishing and to sustain and shelter wildlife.” Orchard’s comments came just as W.A.C. Bennett’s Social Credit government began a two-decade run in power, pushing a development agenda that promised British Columbians “the Good Life.” That meant jobs in traditional resource sectors, rising living standards, and modernization in transportation and hydroelectric power projects, but the good life, as Orchard recognized, also meant access to unspoiled nature.⁹

Much of this pressure originated in the hinterlands, from those who bore witness to the ravages of the clearcutting regime. Look closely at the people who use natural resources at the local level, Richard Judd challenges environmental historians, and you will “see the sources of rising conservation consciousness in bold relief.” Judd’s observation holds true for British Columbia, where those who lived, worked, and played in coastal forests mounted a strong, if disjointed, critique of clearcutting to the edges of fish-bearing streams. It fell short of a movement, but British Columbians had become increasingly worried about their rivers, lakes, and streams, and the fish that occupied them, contributing to the pollution critique of the 1960s.¹⁰

⁸ Scott Prudham, “Sustaining Sustained Yield: Class, Politics, and Post-War Forest Regulation in British Columbia,” *Environment and Planning D: Society and Space* 25 (2007): 258–83; Wilson, *Talk and Log*, 116; Rajala, *Clearcutting*, 39–46; “Foresters Work with Nature,” *Forest and Mill* 15 (1961): 8.

⁹ C.D. Orchard, “The British Columbia Forest Service in the Field of Recreation in Provincial Parks,” *Forestry Chronicle* 29 (1953): 174–75; Jean Barman, *The West beyond the West: A History of British Columbia*, 3rd ed. (Toronto: University of Toronto Press, 2004), 286–302; Richard A. Rajala, “Streams Being Ruined from a Salmon Producing Standpoint’: Clearcutting, Fish Habitat and Forest Regulation in British Columbia, 1900–1945,” *BC Studies* 176 (2012–13): 93–132.

¹⁰ Richard W. Judd, *Common Lands, Common People: The Origins of Conservation in Northern New England* (Cambridge: Harvard University Press, 1997), 4–5; Arn Keeling, “Sink or Swim’: Water Pollution and Environmental Politics in Vancouver, 1889–1975,” *BC Studies* 142/143 (2004): 93; Richard A. Rajala “The Vernon Laboratory and Federal Entomology in British Columbia,” *Journal of Entomological Society of British Columbia* 98 (2001): 177–88.

As the battle lines formed up, commercial and recreational fishers linked arms with fisheries managers and biologists in a campaign that sought greater protection for streams from a host of industry practices, culminating in a demand for the preservation of streamside timber. Science is only just beginning to unravel the complex relationships of forests, water, fish, and wildlife, and some of the assumptions that drove stream management prescriptions have proven unwise. Efforts to clear streams of large, woody debris, for example, were pursued with too much enthusiasm. But if the defenders of fish lacked precise data concerning logging's impact on fresh-water habitat, abundant anecdotal evidence existed that the clearcutting of valley bottoms and hillsides had negative consequences. The positioning of yarding equipment near streams destroyed their banks, depositing sediment and leaving enormous debris accumulations behind. Logging roads crossed streams frequently, and, as road networks penetrated steeper, mountainous terrain, runoff and mass soil movements worsened sediment loads. Clearcutting to the edge of streams and lakes altered seasonal flows. Low water levels during dry summers made it difficult for salmon to reach their spawning grounds, and higher water temperatures increased stress on fry. Heavy runoff after fall rains produced freshets that scoured gravel beds, destroying eggs and fry. Removing streamside trees reduced both the food supply and the shade that moderated water temperatures. Stream beds also made convenient yarding routes. That practice, and the removal of gravel for logging roads, deprived salmon of the clean, well-aerated stream beds needed for the laying and fertilization of eggs.¹¹

Although the hard data would only begin to be accumulated in the 1950s, that did not prevent those with an interest in healthy fish populations from deploring what they could see with their own eyes, calling either for a lighter touch from loggers operating in riparian areas or rules

¹¹ D.W. Chapman, "Effects of Logging upon Fish Resources of the West Coast," *Journal of Forestry* 60 (1962): 536; Howard A. Tanner, "Place of Game and Fish in Multiple Use of Watersheds," *Transactions of the American Fisheries Society* 87 (1954): 386-91; Fred W. Johnson, "Forests and Trout," *Journal of Forestry* 51 (1953): 551-54; Donald L. McKernan, Donald R. Johnson, and John I. Hodges, "Some Factors Influencing the Trends of Salmon Populations in Oregon," in *Transactions of the Fifteenth North American Wildlife Conference* (Washington, D.C.: Wildlife Management Institute, 1950), 427-49; P.W. Schneider, "The Effects of Logging Old-Growth Timber on Fish Management," in *Proceedings of the Society of American Foresters* (Portland: Society of American Foresters, 1955), 121-23; Jim Lichtatowich, *Salmon without Rivers: A History of the Pacific Salmon Crisis* (Washington, DC: Island Press, 1999), 60-66; Joseph E. Taylor III, *Making Salmon: An Environmental History of the Northwest Fisheries Crisis* (Seattle: University of Washington Press, 1999), 55-57; Ray J. White, "Growth and Development of North American Stream Habitat Management for Fish," *Canadian Journal of Fisheries and Aquatic Sciences* 53 (1996): 356-57.

banning them from streamsides entirely. To these demands, and the equally threatening proposals for park reserves, foresters articulated their version of multiple-use forestry. The term seems to have originated in the United States during the 1930s as a management philosophy capable of accommodating pressure from forest users for greater attention to non-industrial values, although both the meaning and application of the concept has always been a matter of contention. State and industry forest managers defined multiple use in hierarchical terms, with timber interests ranking over all other users. Hunters, fishers, and campers imagined greater equality among uses, a balance offering protection to scenic beauty and the habitats that sustained wildlife, salmon, and trout. In the American context, Hirt maintains, the US Forest Service strove to occupy the “middle ground” as debates between industry and recreationalists over National Forest policy heated up after the Second World War. According to Hirt, passage of the Multiple Use-Sustained Yield Act, 1960, enabled the agency to maintain both its hegemony and the commitment to maximum timber production, while, in British Columbia, the Ministry of Lands, Forests and Water Resources and its BCFS ensured the industry freedom from regulation that might constrain profitable forest exploitation.¹²

The resulting tug-of-war raised a host of questions that challenged policy-makers and resource administrators in British Columbia. How much say should fisheries experts – both federal and provincial – have in the conduct of logging? Should the undeniable market efficiencies of clearcutting as a mode of production be subject to constraints or should it be excluded from streamsides entirely? To what extent, in the end, should the dominant industry be forced to accommodate the recreational and commercial values of unfouled waters? In resolving these questions, a building momentum for reform met powerful traditions and institutions resistant to change. As might be expected, progress came slowly in a province so devoted to getting the wood out.

The structure of Canadian federalism, coupled with the realities of power in a province where the economic returns from forests far outweighed those from fish, left the defenders of Pacific salmon and trout with weaker political allies than the timber interests. By 1930 a series of court rulings had awarded the federal government jurisdiction over both coastal and inland fisheries under the British North America Act (BNA), 1867. In the case of salmon and other anadromous fish, the

¹² Donald W. Floyd, “Whither Multiple Use?” *Journal of Forestry* 104 (2006): 102; Hirt, *Conspiracy of Optimism*, 171–92.

authority of the federal Department of Fisheries extended into the non-tidal portions of rivers. Provincial authority intersected with federal jurisdiction in two ways. British Columbia took possession of both the beds of watercourses and forest land upon entering Confederation in 1871, the latter provision affording the province absolute control over forest management. British Columbia also played a part in the commercial salmon fishery, having named John P. Babcock fisheries commissioner in 1902 to meet the canners' demands for expertise in hatchery production, and the province licensed canneries under the BNA Act's property and civil rights clauses. British Columbia's Game Department took over responsibility for enforcement of regulations for the conservation of non-tidal sport fisheries in 1937, becoming part of a new Department of Recreation and Conservation as the Fish and Wildlife Branch (BCFWB) in 1957 and taking part in enforcing the federal Fisheries Act.¹³

Despite an abundance of forestry and fisheries law, this jurisdictional tangle offered no easy path to balanced resource use. Ottawa's authority over fisheries conservation stopped at the edge of salmon-bearing streams, and the provincial state saw little benefit in impairing the performance of its key industry to protect a resource of lesser economic importance that fell under federal jurisdiction. Elsewhere I document the emergence of a mutual relationship between timber capital and the provincial state, a partnership of sorts rooted in the principle of profit-sharing under British Columbia's stumpage system. That arrangement had subordinated the BCFS's regulatory function to its promotional role since the early twentieth century, and the sustained-yield mandate did nothing to disrupt the agency's devotion to upholding the industry's capital accumulation potential. The federal Department of Fisheries, mindful of this reality, exercised its regulatory powers cautiously, wary of conflict with the province. Provincial fisheries agencies were constrained by the same dynamic, especially at the ministerial level, and both federal and provincial fisheries managers tended to emphasize education and post-logging cleanup rather than prosecutions under the Fisheries Act.¹⁴

¹³ Frank Millerd, "The Evolution of Management of the Canadian Pacific Salmon Fishery," *Digital Library of the Commons*, available at <http://dlc.dlib.indiana.edu/archive/00000999>; W.A. Clemons, "Some Historical Aspects of the Fisheries Resources of British Columbia," *Transactions of the Ninth British Columbia Natural Resources Conference* (Victoria: BC Natural Resources Conference, 1956), 129; Thomas L. Burton, *Natural Resource Policy in Canada: Issues and Perspectives* (Toronto: McClelland and Stewart, 1972), 97-110.

¹⁴ Rajala, "Streams Being Ruined," 93-110; P. Scott and W. Schouwenburg, "Environmental Foresight and Salmon: New Canadian Developments," in *Pacific Salmon Management for People* (Victoria: University of Victoria, 1977), 126.

That approach did nothing to quiet the demands of fisheries unions, anglers, and rural boards of trade for stricter regulation. Closure of the federal salmon hatcheries in the mid-1930s likely only heightened such concerns, coinciding as it did with general acceptance of the home-stream theory, clarifying the link between specific salmon populations and their spawning beds. Expressing a reasonably strong distaste for streamside clearcutting, during the late 1930s the Victoria and District Fish and Game Association, the Duncan Chamber of Commerce, the Port Alberni Board of Trade, the Associated Boards of Trade of Vancouver Island, and the BC Trollers' Association and others called for controls on logging adjacent to streams. Ernest Manning's appointment as chief forester in 1935 even seemed to place a man receptive to such arguments in a position of authority. Until his death in 1941 Manning campaigned for government regulation of logging to speed the natural regeneration of cutover lands, his interventionist leanings accommodating a rhetorical embrace of multiple-use planning to develop forests as "attractions for the tourist and other recreationists who delight in the great outdoors." But both Manning and Lands Minister A. Wells Gray pointed out that the bulk of streamside timber, alienated under early twentieth-century licences, embodied property rights that, if reserved, would require financial compensation.¹⁵

Manning's 1941 death eliminated a strong reformist voice from the coalition administration that governed British Columbia until 1952 as wartime demand for both wood and salmon exploded from Depression-era levels. With the disappointing salmon catches of 1943 and 1944 provoking further worries about the impact of increasing forest harvests on stream productivity, new chief forester C.D. Orchard brought to the post a more laissez-faire philosophy of business-government relations than had his predecessor. Orchard would also share his profession's reluctance to yield planning influence to fisheries managers, a stance that stiffened as the streamside clearcutting critique gained momentum. When Chief Inspector of Western Fisheries J.A. Motherwell made a 1942 request to proscribe the felling of forests on the shores of Babine

¹⁵ Rajala, "Streams Being Ruined," 122-30; Joseph P. Taylor, "Making Salmon: The Political Economy of Fishery Science and the Road Not Taken," *Journal of the History of Biology* 31 (1998): 33-59; British Columbia, *Report of the Commissioner of Fisheries for the Year Ended Dec. 31, 1934* (Victoria: King's Printer, 1935), 103-4; "BC Hatcheries to be Closed," *Western Fisheries* (hereafter *WF*) 11 (1936): 6; Bob Stewart, "Conservation," *Fisherman*, 4 November 1937, BC, *Report of the Forest Branch for the Year Ended Dec. 31, 1936* (Victoria: King's Printer, 1937), 7; "Better Spirit on Island," *Comox Argus*, 29 June 1939; C. Dolsen to A. Wells Gray, 15 September 1939, British Columbia Ministry of Forests and Range Records (hereafter BCMFR), f. 0669; Wells Gray to Dolsen, 27 September 1939, BCMFR, f. 0669.

Lake, a major Skeena River sockeye habitat, a seemingly receptive Orchard authorized his district forester to insert special clauses in timber sale contracts “along any streams which in [his] judgement warrant[ed] this action.” Significantly, Orchard did not offer Motherwell’s staff an opportunity to take part in setting leave strip boundaries, and a later check of the files revealed that no such reserves were established.¹⁶

This potentially positive accommodation came to naught along Babine Lake and other fresh-water habitats during the postwar decades because the economic and political structures that legitimated the forest industry’s conception of multiple use prevailed over that advocated by those who favoured vigorous regulatory mechanisms. This spelled frustration for conservationists such as Roderick Haig-Brown, whose multiple-use aspirations for protective leave strips ran up against the determination of timber capital and the provincial state to maintain unfettered clearcutting. This is also a story of incremental administrative reform, however, as forest managers grudgingly yielded a degree of their planning authority to fisheries professionals. By 1970 the latter had gained input, but not equality, in the design of cutting plans, and logging operators were under constraints that sought to curb the most flagrant abuses of aquatic ecosystems. Yet regulation failed to protect mature streamside timber, and it neglected the impact of clearcutting on watershed dynamics. For all of sustained-yield forestry’s claims to managerial sophistication in forest renewal – a modernist conception of human control over nature that failed to deliver even on its own promises in British Columbia – the accord between timber capital and the state proved even less accommodating to the multiple-use demands of the fisheries interests. Regulation, then, would come in too compromised a form to satisfy conservationists such as Haig-Brown, and it fell well short of containing the emerging environmental movement.

THE SLOAN COMMISSIONS, SUSTAINED YIELD, AND THE FATE OF THE FISH

Between the end of the Second World War and the late 1950s shifts in forest policy, forest practice, and the technology of fish culture brought both hope and despair to those with a stake in productive fish habitats. On the one hand, sustained yield promised a speedier renewal of forest

¹⁶ Cicely Lyons, *Salmon: Our Heritage* (Vancouver: British Columbia Packers Ltd., 1969), 437–70; E.B. Proud to District Forester, Prince Rupert, 4 September 1942, BCMFR, f. 0669; C.D. Orchard to J.A. Motherwell, 5 September 1942, BCMFR, f. 0669; Davis M. Carey to E. Knight, 13 February 1968, BCMFR, f. 0669.

cover. A brief postwar turn to less expansive clearcuts provided another basis for cautious optimism. Finally, new techniques of breeding salmon, in artificial spawning channels, promised compensation for the loss of some spawning beds. On the other hand, the forest industry drew public criticism for disregarding the waters that supported both commercial and recreational pursuits as it penetrated more deeply into coastal watersheds. As the clearcutting regime expanded aggressively in the early 1960s, and undermined the credibility of the industry's multiple-use promises, advocates for a more balanced relationship between fisheries and forest managers sharpened their arguments.

Early in 1943, with postwar planning in high gear, a Rehabilitation Council report to the provincial legislature recommended a series of measures to ensure veterans employment in a healthy fishery, one of these being for reservation of forest cover along salmon-spawning streams. Fishers approved, but the Coalition government's plans for a booming postwar forest industry conducted along the lines of Orchard's sustained yield proposal incorporated no multiple-use provisions. The public would have to be prepared for the introduction of new tenure arrangements, however, and this gave rise to Gordon Sloan's first royal commission. Fisheries interests seized the opportunity to document the destruction of habitat and to propose reforms, only to spawn a united front of opposition from C.D. Orchard and the industry he promoted. Clearcutting down to the edge of Lake Cowichan, argued BC Game Commissioner Frank Butler, had caused many of the streams to dry up during the summer. He maintained that reserving timber along water courses would help to regulate runoff, and recommended that the BCFS enforce stream obstruction and pollution regulations.¹⁷

In response, Orchard claimed that buffer strip provisions were included "in many of our timber sales." Questioned further on this point, he replied that the practice had been followed "in outstanding cases" for the past six to eight years. In Orchard's view, most important salmon streams were situated on privately held land, so a "very limited" number of post-1912 Forest Act timber sales had involved protective restrictions. Asked to provide examples, Orchard could recall none but reasserted that such reserves had "been a measure to be actively considered in the making of timber sales." When the commission counsel repeated his request for specifics, Orchard, now presumably squirming in his seat,

¹⁷ "Rehabilitation Council Offers Conservation Plan," *Fisherman*, 16 February 1943; Hak, *Capital and Labour*, 49-50; J.A. Motherwell to R.E. Foerster, 20 March 1944, Pacific Biological Station Archives, f. 8278-C6; British Columbia, Royal Commission on Forestry, 1944-45, Transcripts, 552-77.

retreated further, "I doubt if we have several," he said. "It does not often arise. There is no note of them ... I will enquire."¹⁸

Moving on to consider the insertion of protective clauses in timber sale contracts, Orchard warned that such restrictions would render many areas impossible to log economically and create "a constant source of friction and misunderstanding and disagreement." The average operator "does not see the value of the fish," the chief forester elaborated, "and it is extremely difficult to get a man to do what he does not see the value of." The counsel inquired whether this reluctance justified leaving operators free of regulation. Orchard replied that blanket rules should not be contemplated. In a minority of cases "extreme measures" might be justified, but in most "the cost and difficulty would not be warranted."¹⁹

Several federal fisheries officials followed Orchard, presenting extensive testimony on the loss of valuable salmon habitat. James Tait, dominion supervisor of fisheries for Vancouver Island and the adjacent mainland, discussed the degradation of the Vancouver River. When logging began in the Jervis Inlet watershed in 1929 the stream featured an adequate water supply, excellent spawning beds, and heavy annual runs. Soon, however, personnel noticed diminished flows during late summer and early fall. Pink salmon experienced difficulty in reaching the spawning grounds; later, heavy rains produced runoff and scouring of gravel beds where eggs had been deposited. Similar conditions prevailed on the Theodosia River, near Powell River. Over two decades some 4,047 hectares had been logged off, with runs of pink salmon falling from up to 100,000 to "a mere trickle." Rock Bay Creek, a fine Thurlow Island coho stream prior to twelve years of logging, suffered an 80 to 90 percent reduction in its commercial value. "Where the forest growth still stands, we still have the normal run, and don't have to give those streams so much attention," Tait concluded. Alexander MacDonald, responsible for the east coast of Vancouver Island, had observed the Comox Logging and Railway Company's operations on the Tsolum River for sixteen years. Prior to logging, most of the Tsolum's 32.2 km length provided ideal gravel for salmon reproduction. But a recent inspection found that about 80 percent of these gravel beds had been washed out of the riverbed by severe freshets, creating a "huge loss" in productivity.²⁰

¹⁸ British Columbia, Royal Commission on Forestry, 1944-45, Transcripts, 577-81.

¹⁹ *Ibid.*, 581-84.

²⁰ *Ibid.*, 809-30; 891-99.

Chief Inspector of Fisheries James Motherwell summarized the damage inflicted by logging. Although not all streams had suffered negative impacts, “it is a fact,” he declared, “that many of the smaller ones have been ruined and numbers of the large ones greatly affected.” Motherwell went on to submit a number of recommendations, the most confrontational for retention of a strip of timber at least half a mile (0.8 kilometre) in width along the banks of each salmon stream, the lakes at the head of these streams, and their tributaries. “The difficulties and objections to such a suggestion are, of course, well appreciated,” he acknowledged, before moving on to urge, as his second point, prompt reforestation to restore satisfactory stream conditions. Third, Motherwell insisted, all cutting rights should include a condition, subject to heavy penalties and strict enforcement, compelling operators to keep streams free of debris and to refrain from using them as yarding roads. Fourth, Motherwell advocated selective logging that would preserve young growth and eliminate much of the slash burning that destroyed organic material and topsoil. Patch logging represented another superior alternative to continuous clearcutting, provided that timber blocks were reserved from logging until cutover areas had taken on new growth. Under questioning, Motherwell acknowledged that his first proposal would limit industry access to a tremendous amount of timber.²¹

Confronted with a substantial critique of industry practices and Motherwell’s alarming leave strip proposal, the BC Loggers Association expressed outrage at the “grossly misleading and unfair attack launched upon the loggers” by the federal agency. Too much emphasis had been placed on a few small streams; too little on larger rivers subject to logging that continued to support healthy salmon runs. Motherwell’s leave strips would “naturally either prevent cutting entirely or make the cost of logging the fringe outside the half-mile strip prohibitive.” Chief Forester Orchard joined in, describing the proposal as “neither practical nor intelligent.” He agreed, however, that no justification existed for operators using stream beds as logging roads, placing landings on their banks, or piling logs across streams, calling these practices “simply unpardonable.”²²

Sloan’s 1945 report offered a comprehensive blueprint for postwar forest policy, one that included a call for stronger regulation of logging to protect salmon habitat. Intelligent watershed management could

²¹ Ibid., 860-61.

²² “The Forestry Commission,” *British Columbia Lumberman* (hereafter *BCL*) 28 (1944): 26; “Raps Fisheries Proposal,” *West Coast Lumberman* 71 (1944): 124.

preserve streamflows, Sloan concluded, but the streams themselves, as “highways from and to the sea,” required protection. Thus, the BCFS should have the power to cancel the contract or tenure of any operator found guilty of destructive practices. Orchard considered this recommendation “a little drastic,” and policy-makers ignored the proposal.²³

Fisheries interests still hoped that sustained-yield forestry would have beneficial effects for stream protection as capital flowed into the province to secure TFLs for pulp and paper developments. To this point British Columbia’s only serious, albeit preliminary and unpublished, research into the impacts of logging, conducted by the Pacific Biological Station’s Ferris Neave, had found that clearcutting increased seasonal fluctuations in the flow of the Cowichan River. Winter floods tore up spawning beds, producing the “lethal effects” of siltation, and the reduction of runoff during dry periods resulted in the destruction of eggs and young fish. In addition, removal of forest cover contributed to higher than ideal water temperatures during the late summer. Unable to conduct experimental studies of the sort being initiated by the US Forest Service in Alaska and Washington, and by the State of Oregon in the Alsea watershed, testing cutting practices to identify methods of streamside protection, late in 1945 Pacific Biological Station director R.E. Foerster turned to experience to conclude: “We can find plenty of areas ... where full-scale removal of timber has taken place and conditions in the streams rendered very bad indeed.” As for professional foresters, Foerster noted that they “seem to have a very definite idea on how streams should be protected and water flow maintained and actually thus far they haven’t shown a great deal of interest.”²⁴

Late in the 1940s, Neave and W.P. Wickett identified the specific factors affecting the fresh-water development of Pacific salmon. Pink

²³ Gordon Sloan, *Report of the Commissioner Relating to the Forest Resources of British Columbia* (Victoria: King’s Printer, 1945), 171; “Mr. H.J. Welch on the Sloan Commission,” *Comox-Courtenay Argus*, 11 April 1946.

²⁴ Richard A. Rajala, *Up-Coast: Forests and Industry on British Columbia’s North Coast, 1870–2005* (Victoria: Royal British Columbia Museum, 2006), 146–47; Ferris Neave, “Cowichan River Investigation,” unpublished manuscript, 1945, Pacific Biological Station Archives; Ferris Neave, “Game Fish Populations of the Cowichan River,” *Bulletin of the Fisheries Research Board of Canada* 84 (1949): 1–32; Ferris Neave, “Fecundity and Mortality in Pacific Salmon,” *Transactions of the Royal Society of Canada* 42 (1948): 97–105; Robert W. Cowlin, “Federal Forest Research in the Pacific Northwest: The Pacific Northwest Research Station,” unpublished manuscript, 1968, 115–16, 126; James D. Hall, George W. Brown, and Richard L. Lantz, “The Alsea Watershed Study: A Retrospective,” in *Streamside Management: Forestry and Fishery Interactions*, ed. Ernest O. Salo and Terrence W. Cundy (Seattle: University of Washington College of Forest Resources, 1987), 399–400; R.E. Foerster to R.G.H. Cormack, 27 October 1945, Pacific Biological Station Archives, f. 8278–67; Foerster to Cormack, 19 November 1945, Pacific Biological Station Archives, f. 8278–67.

and chum salmon adults commonly entered their home streams in autumn and spawned almost immediately. Their offspring made their way to sea the following spring. Spring salmon might spend weeks or even months in rivers before spawning. Young coho and sockeye had prolonged exposure to fresh water as they remained in streams or lakes until their second spring (or longer in the case of some sockeyes). Although dependence on fresh-water habitat varied according to species, the mortality rate associated with that period of the life cycle approached 95 percent. Thus, even the slightest deterioration of the fresh-water environment represented “a potent cause of fluctuations in the abundance of mature salmon.” A few years later, Foerster and Neave warned that only a higher rate of natural reproduction could offset the degradation of fresh-water habitats caused by postwar industrialization, hydroelectric projects, and pollution.²⁵

While biologists hoped to design spawning channels as an alternative to “wringing [their] hands at the encroachments of industry,” fishers fumed and proposed a variety of remedies. “One of the worst and most ruthless destroyers of the spawning streams and rivers is the BC boss logger,” declared T.B. O’Connor of Port Hardy: “These exploiters apparently have no consideration whatever of another man’s livelihood and rights.” Charley Valley of Skidegate Inlet criticized Haida Gwaii operators for using creeks as “cat” roads, a common practice on Vancouver Island as well. When the Lake Cowichan Fish and Game Club urged regulations compelling loggers to conduct post-logging cleanup of streams in 1949, Orchard explained that, while the Forest Act contained no such provisions, timber sale contracts did feature clauses mandating removal of obstructions. The following year the BC Natural Resources Conference urged operators and the BCFS to consult with the federal Department of Fisheries in improving stream conditions. Ignoring the request, Orchard replied that his agency had been aware of the “fisheries problem in relation to logging operations” for many years and that the matter would continue to receive attention. The province’s 1953 Game Convention endorsed a Vancouver Island Affiliated Fish and Game Association resolution requesting that a leave strip of one-hundred yards (about 90 metres) in width be left standing

²⁵ Ferris Neave and W.P. Wickett, “Factors Affecting the Freshwater Development of Pacific Salmon in British Columbia,” *Proceedings, Seventh Pacific Science Congress* 4 (1949): 548–55; R.E. Foerster, “Resource-Use Problems in British Columbia Fisheries,” *Transactions of the Third British Columbia Natural Resources Conference* (Victoria: BC Natural Resources Conference, 1950): 118; Ferris Neave and R.E. Foerster, “Problems of Pacific Salmon Management,” *Transactions of the Twentieth North American Wildlife Conference* (Washington, DC: Wildlife Management Institute, 1955), 426–40.

along all lakes and streams. Without a barrier of trees to hold back runoff and shade the surface, streams lost both their beauty and their capacity to support fish.²⁶

In the face of such criticism, and a loud outcry from small operators over the TFL system's concentration of timber rights, industry and its BCFS allies pointed to sustained yield's accomplishments. By 1955, twenty-three TFLs existed, all – according to their holders – operated under a stiff set of obligations that upheld the public's interest in advanced forest management. The acreage in plantations was increasing, if slowly, 36,422 hectares having been planted between 1946 and 1955. Yet there was an alarming increase in not-satisfactorily restocked Crown land on the coast; its extent had doubled to 7250 square kilometres as the annual cut averaged 1.3 million cubic metres in the Vancouver Forest District during the first half of the 1950s. On the bright side, the “young, vigorous new growth” that followed logging provided excellent habitat for deer and grouse, MacMillan Bloedel forester Ian Mahood informed delegates to the 1954 Game Convention, and logging roads opened up forests to outdoor recreationalists.²⁷

Only the boldest forester would claim that clearcutting benefited fish, but a transition from rail to truck logging, in conjunction with protection and reforestation considerations, prompted the most progressive coastal firms to reduce the scale of clearcuts during the 1950s. Although industry's embrace of patch logging barely lasted the decade, smaller clearcuts and the rhetoric of sustained yield heartened fisheries interests for a time. Gordon Sloan himself praised the patch logging initiative in his 1957 Royal Commission report, an inquiry called in response to concerns about the provincial state's handling of the TFL system. Sloan had received a surprisingly positive brief from A.J. Whitmore, the Pacific area director of the Department of Fisheries, who expressed great pleasure that “many of the logging practices which were formerly harmful to the salmon-fishery ha[d] now been almost completely eliminated.” Rarely did operators use streams as yarding

²⁶ T.B. O'Connor, “Timber Barons Destroy Salmon Spawning Grounds,” *Fisherman*, 4 March 1949; Charley Valley, “Queen Charlotte Briefs,” *Fisherman*, 19 February 1952; Chief Earl Maquinna George, *Living on the Edge: Nuu-Chah-Nulth History from an Aousabt Chief's Perspective* (Winlaw: Sono Nis Press, 2003), 116; W. Palliser to Minister of Lands, 16 March 1949, BCMFR, f. 0669; C.D. Orchard to Lake Cowichan Fish and Game Club, 22 March 1949, BCMFR, f. 0669; D.B. Turner to E.G. Oldham, 3 April 1950, BCMFR, f. 0154987; C.D. Orchard to Turner, 24 April 1950, BCMFR, f. 0154987; *Proceedings, Seventh Annual Game Convention* (Chilliwack, 1953), 87, 168.

²⁷ Gordon Sloan, *The Forest Resources of British Columbia* (Victoria: Queen's Printer, 1957), 1:232, 292-93; Ian Mahood, “Forest Management in Relation to Game Management,” in *Proceedings, Eighth Annual Game Convention* (Nanaimo, 1954), 71-83.

roads, and less slash found its way into their waters. Patch logging left more forest cover in place, and the trend towards sustained yield forestry contributed to a “general improvement.”²⁸

Assuming a much less aggressive posture than had Motherwell at the first Sloan inquiry, Whitmore acknowledged the impracticality of his predecessor’s half-mile leave strip proposal. He hoped, nevertheless, that the province would consider such measures wherever “economically feasible,” introduce stream protection clauses in cutting rights, and compel operators to cooperate in protecting the salmon runs. Recent Skeena River log drives by Columbia Cellulose demonstrated the need for multiple-use accommodation. According to a provincial fisheries official the deputy minister of forests had responded to an inquiry into Columbia Cellulose practices by declaring that the government did not “interfere with nor dictate to the holders of various management licences ... how they should conduct their affairs.”²⁹

Whitmore also expressed concern about the spraying of DDT to control defoliating insects, a practice that threatened “serious damage of one resource to benefit another.” Federal entomologists had cooperated with the BCFS and industry in the first west coast aerial application of DDT in 1946, spraying 4,856 hectares to control a hemlock looper infestation in the Nitinat Valley. No effort to study the impact on aquatic life accompanied this project, and, just prior to the appearance of Sloan’s second report, the BC Loggers Association, Victoria, and Ottawa shared the \$260,000 cost of spraying 63,940 hectares of northern Vancouver Island forestland threatened by the black-headed budworm. Participating fisheries biologists pressed unsuccessfully to have some spawning grounds excluded from the spray area and to have the DDT dosage cut by half. The project, effective from an entomological standpoint, produced significant mortality to salmon. “On the banks of the Nimpkish, Cluxewe and Quatse rivers, dead and dying fish lay in piles and blinded fish struggled in the water,” asserts historian Pat Wastell Norris. In his 1957 report Sloan called for closer cooperation between resource agencies in spraying projects and recommended serious study of the use of rivers as log transportation routes. The commissioner also repeated, to no effect, his 1945 proposal for inclusion of a clause in

²⁸ Sloan, *Forest Resources*, 1:225; A.J. Whitmore, “Brief on Behalf of the Department of Fisheries of Canada, Presented to the Chief Supervisor of Fisheries, Pacific Area, Regarding Certain Aspects of the Fisheries of British Columbia in Relation to the Forest Resources,” British Columbia Archives (hereafter BCA), box 12, BC Commission on Forest Resources, 1955.

²⁹ Whitmore, “Brief,” 2-3; Sloan, *Forest Resources*, 725-26; G. Alexander to A.J. Whitmore, 25 March 1955, BCA, GR 118, box 12, BC Marine Resources Branch Records; Harry Seaman, “First BC Coast Log Drive Under Way on Skeena,” *BCL* 34 (1950): 43.

cutting rights obligating licensees to “cooperate in the fullest possible measure” in protecting salmon streams, with flagrant abusers being subject to tenure suspension.³⁰

Overall, however, Whitmore’s opinion that ground had been gained in resolving fish-forestry conflict drew appreciative comment from the timber industry. Fisheries officials may have been somewhat distracted from logging-related issues during the mid-1950s as they confronted new challenges associated with hydroelectric development accompanying the new Kitimat aluminum smelter and effluent from the increasing number of pulp and paper mills. The International Pacific Salmon Fisheries Commission (IPSF), monitoring the Fraser River system, was upbeat about trends during the 1950s, proclaiming in its 1956 report that “timber can be harvested and land can be fully utilized without harm to the reproductive environment of the sockeye.” The dams, reservoirs, and river diversions associated with hydroelectricity represented the more pressing threat. But industrial modernization only increased the gap separating forestry from fishing in economic importance. By the late 1950s, forestry dominated the economy of all regions with the exception of the West Kootenays and perhaps the northwest, where Kitimat smelter employment rivalled that of Columbia Cellulose. What the UFAWU described as the “onslaught of civilization” contributed to pollution, the loss of forest cover to logging, the industry’s use of spawning gravel in road construction, and dams. Spreading the blame, the union also attributed declining total annual catch weights during the latter 1950s to the sport fishery, along with mid-ocean fishing by the Japanese.³¹

³⁰ Sloan, *Forest Resources*, 728-31; Rajala, “Vernon Laboratory,” 185-86; British Columbia, *Report of the Forest Service for 1956* (Victoria: Queen’s Printer, 1957), 79; British Columbia, *Report of the Forest Service for 1957* (Victoria: Queen’s Printer, 1958), 70; G.S. Brown, A.P. Randall, R.R. Le Jeune, and G.T. Silver, “Black-Headed Budworm Spraying Experiments on Vancouver Island, British Columbia,” *Forestry Chronicle* 34 (1958): 299-306; E.G. Marples, “Significance of Fish Mortality in Forest Spraying Operations,” *Proceedings of the Western Forestry and Conservation Association* (Portland: Western Forestry and Conservation Association, 1957), 44-55; R.A. Coulter and E.H. Vernon, “Effects of Black-Headed Budworm Control on Salmon and Trout in British Columbia,” *Canadian Fish Culturalist* 24 (1959), 23-40; Pat Wastell Norris, *High Boats: A Century of Salmon Remembered* (Madeira Park: Harbour Publishing, 2003), 125-27.

³¹ “Salmon and Co-operation,” *TL* (1956): 15; IPSF, *Annual Report of the International Pacific Salmon Fisheries Commission 1956* (Vancouver: Campbell and Smith, 1957), 5; Alex Gordon, “Salmon and Power – Not Salmon or Power,” *Fisherman*, 27 September 1955; M.H.A. Glover, “A General Introduction to the Utilization of the Primary Resources in British Columbia,” *Transactions of the Tenth British Columbia Natural Resources Conference* (Victoria: BC Natural Resources Conference, 1957), 140-43; “Restore Dwindling Salmon Runs,” *Fisherman*, 17 March 1961.

The commercial fishery's pleas for help did not go entirely unanswered thanks to two developments, one technological and one administrative. Unwilling as yet to restrict the number of licences in an increasingly efficient and capital-intensive industry, the Department of Fisheries and the IPSFC opted for new initiatives in fish culture. Selected streams threatened by dams and industrialization would have their productivity restored, even enhanced, through the introduction of artificial spawning channels. Jones Creek, a Fraser River tributary threatened by hydro development, became the site of the first spawning channel, engineered to achieve precise control of water depth and flow over carefully constructed gravel beds next to the stream. Pink salmon were diverted from the stream into the artificial beds in 1955; 38 percent of the eggs from the first spawning survived to enter the Fraser River as fry. That "four-fold increase over natural stream survival," and the return of fifteen hundred adults in 1957, prompted Fisheries Research Board biologists to transplant 3 million Skeena River pink salmon eggs into the channel. Promising initial returns were recorded before ice caused the channel banks to collapse, but the facility had demonstrated the technology's potential to compensate for lost spawning grounds.³²

The IPSFC went on to establish several larger spawning channels on Fraser River tributaries, while the Department of Fisheries initiated projects on a few Vancouver Island streams. Construction costs ran high, however, reaching almost a million dollars for the five Fraser River facilities. Stream clearance and the construction of fishways represented other approaches to boosting stream productivity, but capital costs alone for the twenty such projects undertaken by the Department of Fisheries between 1949 and 1965 amounted to over \$5 million. Reintroduction of hatcheries, and even salmon farming, came up for discussion as fisheries interests contemplated the industry's long-term viability.³³

Administrative progress of a sort also came during the mid-1950s on the north coast, where logging and commercial fishing came into increasingly direct conflict. Log production in the Prince Rupert Forest District reached a new high of 152,400,000 metres in 1953 as a wave of mergers placed Crown Zellerbach Canada, MacMillan Bloedel, and Rayonier at the head of an increasingly consolidated industry along with

³² Dixon MacKinnon, "Man-Made Spawning Channels for Pacific Salmon," *Canadian Geographical Journal* 63 (1961): 28-39; Meggs, *Salmon*, 165; "Jones Creek Pinks Almost Completely Rehabilitated," *WF* 63 (1961): 33.

³³ John F. Roos, *Restoring Fraser River Salmon: A History of the International Pacific Salmon Fisheries Commission, 1937-1985* (Vancouver: Pacific Salmon Commission, n.d.), 214-26; "Salmon Development: What's Been Done? What's to Come?" *WF* 71 (1966): 18-22, 48-54.

Canadian Forest Products and BC Forest Products. District Forester Percy Young described the influx of companies from the overcut lower coast as “more or less a flood” in mid-decade, and in 1956 Prince Rupert district officials implemented a referral process that gave federal fisheries managers some input into logging plans. The BCFS remained adamantly opposed to the reservation of streamside timber, but Prince Rupert Forest District officers did notify the Department of Fisheries of operations, allowing federal officers to identify important salmon streams on reference maps. When timber sales were initiated in sensitive areas, federal staff recommended clauses requiring operators to keep streams free of debris, to avoid felling riparian area trees into streams, and to refrain from yarding logs within watercourses. To keep Department of Fisheries agents at arm’s-length from logging operators, infractions were reported to the BCFS, preserving its direct, contractual relationship with industry partners.³⁴

In 1957, as federal fisheries managers contemplated extension of the referral system to other regions, the Bennett government created the Department of Recreation. The Vancouver Island Affiliated Fish and Game Association quickly urged that the new department have a role in managing fish and wildlife on TFLs. Delegates to the Annual Game Convention ratified the resolution and expressed dissatisfaction with the absolute control firms exerted over the tenures. Commercial fishers were also unhappy with the relegation of the provincial Fisheries Department to branch status in the new Department of Recreation, and the timber industry regretted the shift in responsibility for parks from the BCFS to the new agency. Multiple-use had suffered a setback, Crown Zellerbach’s Hugh Hodgins observed. “Under no circumstances should minority interests be given an opportunity to disturb such a motive,” he advised.³⁵

Hodgins overestimated the threat posed by the new ministry and its Fish and Wildlife Branch (BCFWB), but the challenges posed by “various minority pressure groups,” as MacMillan Bloedel’s Angus MacBean put it, could not be ignored. Resource policy must recognize certain economic realities and the industry’s commitment to multiple-use planning. Forestry, MacBean pointed out in a “fifty-cents-of-every-

³⁴ Rajala, *Up-Coast*, 151-53; D.J. Morris to District Forester Prince Rupert, 30 July 1956, BCMFR f. 02003; P. Young to R.D. McDougall, 14 August 1956, BCMFR f. 02003; J.S. Stokes to District Forester, Prince Rupert, 21 September 1956, BCMFR f. 02003.

³⁵ *Proceedings of the Eleventh Annual Game Convention* (Penticton, 1957), 138, 169; Lyons, *Salmon*, 526; Hugh J. Hodgins, “Increasing Timber Production in Western Canada,” *Proceedings of the Forty-Ninth Western Forestry Conference* (Portland: Western Forestry and Conservation Association, 1958), 59-60.

dollar” mantra that every BC school child knew by heart during this period, generated half of the province’s total income. Moreover, multiple use was already a reality on MacMillan Bloedel lands thanks, in part, to fisheries regulations that prompted many loggers to simply leave streamside timber standing rather than “run afoul” of federal law. Timber reserved for fisheries, yielded to highway rights-of-way, and lost to hydro reservoirs and parks was beginning to add up as the plethora of uses mounted. Lest there be any confusion about how conflicts should be settled, MacBean concluded: “As long as the Province is supported chiefly by a forest products economy, the needs of the timber user must be the principal consideration in the integrated use of all forest lands.”³⁶

By 1960 foresters could no longer disregard disturbing trends. British Columbia’s population had nearly doubled in the previous two decades, the number of recreational fishers had more than quadrupled, and hunting showed a similar increase in popularity. “This whole outdoor recreation surge is only in the beginning stages,” Deputy Minister of Recreation and Conservation David Turner informed a 1960 forestry conference. Two years later Vancouver hosted the Canadian Institute of Forestry’s annual meeting on the theme of “conflicts in forest land use.” Foresters and executives hoped that their version of multiple use would legitimate their industry’s pre-eminence, but salmon were also a source of commodity value. So, too, were the trout that drew licensed sport fishers to the province’s streams and lakes, and the forested landscapes favoured by auto-tourists. But in industry’s conception of multiple use those who advocated the preservation of timber for parks or fish protection ranked among the “single-use advocates” whose selfishness contrasted to the forestry profession’s tradition of “providing the greatest benefit for the greatest number of people.”³⁷

Two trends undermined the power of this claim during the 1960s. First, the road-building programs of the BCFS and the forest companies increased public access to industrialized landscapes. Indeed, industry advertised such access as a fulfillment of its multiple-use responsibility. “Only the managed forest can offer this advantage through roads and

³⁶ Angus P. MacBean, “The Integrated Use of Public Forests,” *Proceedings of the Western Forestry and Conservation Association* (Portland: Western Forestry and Conservation Association, 1960), 94-97.

³⁷ David B. Turner, “Trends in Forest Recreation,” *Proceedings of the Western Forestry and Conservation Association* (Portland: Western Forestry and Conservation Association, 1960), 89-93; “Conflicts in Forest Land Use,” *Forest and Mill* 16 (1962): 5; “Tree Is More Than a Forest,” *Forest and Mill* 16 (1962): 3; J.R. Forrest, “Multiple Use Today: Oriented to Wood Production,” *Proceedings of the Western Forestry and Conservation Association* (Portland: Western Forestry and Conservation Association, 1967), 69-71.

trails built for logging and fire protection,” Canadian Forestry Association president F.A. Harrison said in a 1962 speech. Crown Zellerbach, which constructed a hundred miles (160 kilometres) of road in 1961 alone, had welcomed roughly eighty-five hundred hunters, fishers, and hikers to its lands the previous year. MacMillan Bloedel, with over three thousand miles (forty-eight hundred kilometres) of logging road, initiated a public access program in 1963, recording over fifty-seven thousand visitors in 1965.³⁸

New roadside plantations aside, residents and visitors witnessed more aggressive clearcutting as patch logging lost favour during the early 1960s. Government and industrial foresters throughout the coastal region concluded that natural reforestation was too uncertain and time-consuming a process to depend upon. Planting would do the job faster, with greater control over species composition. More important, patch logging added to the cost of logging and road construction. When the forest products market slumped in 1959, all the arguments were in place to permit a decisive return to more extensive clearcutting. Surveying industrial foresters that year as a consultant to Crown Zellerbach, C.D. Orchard found unanimous agreement that clearcuts could be expanded from 16 hectares to the 121 to 162 hectares range and beyond with considerable benefit to profit margins.³⁹

Whitmore’s and Sloan’s praise for the patch logging initiative in the mid-1950s turned to harsh condemnation of industrial forestry from commercial fishers and anglers during the early 1960s. Local knowledge was easy to come by in coastal communities, given the frequency with which people moved seasonally between fishing, handlogging, and work in larger camps. Sointula’s UFAWU local urged action against logging debris in creeks, a symbol of habitat mistreatment. Campbell River’s Fish and Game Club joined with the local Chamber of Commerce, unions, and the Native Brotherhood of British Columbia to press for watershed protection legislation. From the north, Frank Howard accused the Fisheries Department of allowing MacMillan Bloedel to extract spawning gravel from Haida Gwaii streams for road-building purposes. The Skidegate UFAWU local got an admission from the agency’s J.R. McLeod that field staff limitations precluded effective inspection of logging operations. At Kyuquot, *Western Fisheries* correspondent John Gibson waged a print campaign against contractors for degrading

³⁸ “Need for Sensible Policies,” *Forest and Mill* 16 (1962): 8; “New Logging Roads,” *Forest and Mill* 15 (1961): 1; “Company Plants Million Trees,” *Forest and Mill* 15 (1961): 1; “Logging Roads Boon to Sportsmen and Tourists,” *Forest and Mill* 19 (1966): 3.

³⁹ Rajala, *Clearcutting*, 209–14.

streams while criticizing the federal Fisheries Department's regulatory failings. George McDonald reported on how logging had turned a Craycroft Island creek into "one long slough filled with sword grass and bushes, a swamp in fact, filled up with logs of all sizes rotting." McDonald concluded: "We are destroying the seed beds, a small one here, a large one there, and less fish every year." The accelerated pace of interior logging caused second thoughts on the part of the IPSFC as well, as Fraser River watershed streams experienced more dramatic fluctuation in flows, higher water temperatures during the summer months, and heavier siltation of spawning beds. By the mid-1960s, salmon populations on some tributaries had suffered, and worried officials forecast the "total destruction" of others. Forestry's "timber production first" multiple-use hierarchy was losing legitimacy as the price of expanding clearcuts and degraded streams mounted.⁴⁰

"PROGRESS IN THIS LOGGING-FISHING BUSINESS":
EXPANSION OF THE REFERRAL PROCESS, THE "P" CLAUSES,
AND THE LIMITS OF REGULATION

As conservationist criticisms of logging mounted, fisheries managers pressed for a province-wide referral process. By the summer of 1959, the Prince Rupert Forest District's system, which originally applied only to timber sales, was in operation on TFL cutting permits as well. The BCFS continued to drag its administrative heels, however, only grudgingly accepting expansion of the referral process, coupled with a standardized set of stream protection clauses in all cutting rights. These shifts reflected less a commitment to a genuine planning partnership than a response to the need for administrative clarity in an increasingly difficult planning environment. Fishery values would be accommodated but only if they did not compromise BCFS-forest industry hegemony or the efficiencies of clearcutting.⁴¹

⁴⁰ Gary Cadorin, "Sointula," *WF* 69 (1964): 20; Mikko Saikku, "Utopians and Utilitarians: Environment and Economy in the Finnish-Canadian Settlement of Sointula," *BC Studies* 154 (2007): 3-38; "Northern Ripples," *Fisherman*, 12 March 1965; Gary Cadorin, "Sointula," *WF* 70 (1965): 40; "Peace in Industry Dampens Interest," *Fisherman*, 10 June 1960; "'Salmon Unlimited' Promotes Program of Conservation," *Fisherman*, 18 December 1961; "Howard Wants Committee to Restore QCI Salmon," *Fisherman*, 15 March 1963; "Fisheries, Union Speakers at Special Skidegate Meet," *Fisherman*, 20 March 1964, 12; J.S.T. Gibson, "News from Kyuquot," *WF* 62 (1961): 83; J.S.T. Gibson, "News from Kyuquot," *WF* 66 (1963): 33; J.S.T. Gibson, "News from Kyuquot," *WF* 67 (1964): 48-50; George McDonald, "Craycroft Island Streams Need Rehabilitating Now," *Fisherman*, 15 January 1963; IPSFC, *Annual Report of the International Pacific Salmon Fisheries Commission* (Vancouver: Campbell and Smith, 1966), 4.

⁴¹ D.R. Selkirk to F.S. McKinnon, 9 June 1959, BCMFR, f. 02003; J.T. Pennell, "Effects on Fresh Water Fisheries of Forestry Practices," *Canadian Fish Culturalist* 25 (1959): 29.

At a meeting in mid-May 1959 with BCFS officials and allies from British Columbia's Department of Recreation and Conservation the Department of Fisheries' A.J. Whitmore sought extension of the referral system. Citing Sloan's recommendation, fisheries representatives argued for automatic insertion of stream protection clauses in cutting rights. D.B. Turner supported the principle of safeguarding all BC streams, not just those of value to the commercial fishery, but Chief Forester Finlay McKinnon balked at the proposal. His agency handled some three hundred timber sales per month, and the measure would have placed a "large administrative burden on his staff, producing inevitable delays in processing cutting right applications." McKinnon refused to accept blanket habitat protection, but the report of the meeting indicated his willingness to support a trial of the Prince Rupert method in the busy Vancouver Forest District. Then, after reading the minutes, McKinnon seemed to backtrack. He and his staff had agreed only to *consider* extension of the system to the lower coast. Final approval would be withheld until Vancouver district staff had assessed their position. Legal barriers had also surfaced. Insertion of fish protection clauses in pre-1912 tenure contracts was beyond the authority of the Forest Act, according to an opinion submitted by counsel.⁴²

Nevertheless, during the early 1960s, clauses "offering a measure of protection to spawning areas" became increasingly common in timber sale contracts along the entire coast. BCFS staff who appraised prospective sales from local ranger stations prior to auction were responsible for recommending their inclusion, based on their own inspection and Department of Fisheries maps identifying known spawning beds. Whenever possible federal officers were consulted, and, while BCFS staff permitted "no unnecessary delay" in making contact, a few Vancouver Forest District auctions had been delayed to provide an opportunity for field inspections. This is how W.F. Tuttle explained the situation in late 1963, when he described the process to his Prince George Forest District counterpart prior to the system's introduction there. Enforcement, however, remained under BCFS control. Fisheries officers were to notify the local ranger office in the event of a violation. The BCFS would tolerate no intrusion into its contractual relationship with the operator.⁴³

⁴² A.J. Whitmore to F.S. McKinnon, 14 May 1959, BCMFR, f. 02003; "Minutes of the Meeting Held in the Chief Forester's Office in Victoria on June 23, 1959 to Discuss Salmon Stream Protection on Logging Operations through Insertion of Certain Protective Clauses into Timber Sales and Contracts," F.S. McKinnon to A.J. Whitmore, 10 July 1959, BCMFR, f. 02003.

⁴³ I.T. Cameron to J.W. Stokes, 11 December 1959, BCMFR, f. 02003; W.F. Tuttle to District Forester, Prince George, 24 December 1963, BCMFR, f. 02003.

The referral process was a potential administrative advance towards multiple-use forestry, but it fell well short of equalizing the relationship between forest and fisheries managers. Foresters considered it a nuisance, slowing the processing of timber sale and TFL cutting permit applications. Conflicts over the meaning and enforcement of clauses, staff shortages, and a lack of basic data exacerbated inter-agency tensions. No clauses could be included in pre-1912 timber licences and leases, and many spawning areas had not been identified as such. Those within coastal TFLs could be made subject to the clauses as annual cutting permits were issued, but the BCFS wanted to avoid excessive meddling in the operational practices of major firms. By its own admission the Department of Fisheries lacked the field staff to enforce its own legislation, and to some the referral process seemed to do little more than impose an additional bureaucratic burden upon all agencies. A later report concluded that a literal interpretation would have meant that the contract provisos “were being violated by almost every operation near a stream.”⁴⁴

With the Bennett government pressing for a more prominent role in managing the industrial fishery, creation of the Federal-Provincial BC Fisheries Commission in 1964 provided the basis for a common front among managers pressing for administrative and forest practice reform. But an October 1965 meeting involving representatives of British Columbia’s Commercial Fisheries Branch and Fish and Wildlife Branch, the Department of Fisheries, and the BCFS to discuss “areas of conflict” provided only more evidence of foresters’ reluctance to yield. Although the previous spring’s Stellako River log drive had proven destructive, BCFS officials would not rule out a repeat. They were similarly unreceptive to appeals for the reservation of streamside timber. When R.G. McMynn of the Commercial Fisheries Branch asserted the value of leave strips in maintaining stream productivity, forester W.G. Hughes replied that blowdown of reserved timber ruled out that regulatory approach. Perhaps, federal biologist F.C. Boyd countered, but in that case wider, continuous leave strips would reduce the threat. Narrow borders of streamside timber were of doubtful value in controlling runoff and siltation of spawning grounds in watersheds subject to complete clearcutting. Even the introduction of patch logging requirements

⁴⁴ G.F. Hartman, J.C. Scrivener, M.J. Brownlee, and D.C. Morrison, *Fish Habitat Protection and Planning for Forest Harvesting in Coastal Streams of British Columbia: Some Research and Management Provisions* (Ottawa: Department of Fisheries and Oceans, 1983), 31.

on TFLs would benefit fish stocks. That option could be investigated, Hughes responded, but for the protection of “high priority areas” only.⁴⁵

Stymied on the leave strip issue, fisheries managers continued to negotiate for a referral system capable of bringing order to administrative relationships on less contentious matters. Both groups of professionals could agree on the need for a less cumbersome process, but Department of Fisheries Pacific area director W.R. Hourston’s early 1966 proposal for the blanket insertion of a simplified set of stream protection clauses in all BCFS contracts drew a mixed response from forestry officials. Prince Rupert District Forester H.M. Pogue approved, on the grounds that uniform contract language would ease administration. A.B. Robinson of the Vancouver office worried that the proposal would only place rangers in the middle of more disputes between fisheries officers and operators. Where timber sale areas included salmon streams, Robinson suggested simply including this information in the published auction notices along with a statement that the Canada Fisheries Act applied to the sale. That would not only constitute adequate assistance to the federal agency, “at the same time leaving it up to them to administer their own act and regulations,” but also leave rangers free from challenges. For the moment the BCFS declined automatic inclusion of the clauses in all cutting authorities, citing “the problem of communication which sometimes resulted in . . . Fisheries field staff reversing a decision made by our field staff.”⁴⁶

The referral process was a response, but not a solution, to fish-forestry conflict in British Columbia. Although administrative cooperation among agencies had begun, field relationships remained messy. A 1965 amendment to the Forest Act making the renewal of pre-1912 tenures subject to inclusion of the stream protection clauses, adopted in response to Crown Zellerbach’s logging of its old pulp leases in the Owikeno watershed, served only to convince many of the need for a stronger regulatory solution. Denying a 1966 UFAWU request for a halt

⁴⁵ “Notes on a Meeting Held in Victoria, British Columbia, Oct. 19, 1965, between Representatives of the Provincial Bureau of Commercial Fisheries, the Provincial Fish and Game Branch, the British Columbia Forest Service and the Department of Fisheries, to Informally Discuss Areas of Conflict between the Forest Industry and Fisheries,” 5 November 1965, Pacific Biological Station Archives, app. 5, minutes, Federal-Provincial BC Fisheries Committee, Nanaimo, British Columbia.

⁴⁶ W.R. Hourston to W.G. Hughes, 17 February 1966, BCMFR, f. 02003; H.M. Pogue to Management Division, 23 March 1966, BCMFR, f. 02003; A.B. Robinson, Elimination of the Referral Step When Including Fisheries Clauses in Timber Sales and Cutting Permits, 1 April 1966, BCMFR, f. 02003; W.G. Hughes, file note re. meeting on 27 April 1966 with members of the Federal Department of Fisheries, Fish and Game Branch, and the Salmon Commission, BCMFR, f. 02003.

to logging in the area, Minister of Lands Ray Williston asserted that the new authority over the pulp tenures would allow both resources to be developed “without serious conflict.” Williston took the same obstructionist approach to a mild request from cabinet colleague Ken Kiernan for a rule requiring TFL holders to cooperate with the BCFWB in preserving habitat. With a legal opinion indicating that the Forest Act provided no such authority, Chief Forester McKinnon advised his superior that it would be a mistake to “single out any particular Department or Government for special consideration.” Recreation and Conservation demands were “not always practical”; fortunately, the legal opinion provided the minister with “a way out.” Williston simply informed Kiernan that the recent decision to curtail TFL grants for the time being made action unnecessary. It was clear, observed the BC Wildlife Federation’s Howard Paish, that the BCFWB would “never be any stronger” than the senior agency allowed. Multiple use remained little more than a “popular catchword,” given the branch’s exclusion from the regulatory process.⁴⁷

The BCFWB’s 1966 *Field Manual of Sport Fish Habitat Protection* and a companion *Prevent Logging Damage to Streams* pamphlet distributed to industry reflected the agency’s subordinate relationship to the BCFS, and its necessary tolerance of industry practices that contributed to stream degradation. The *Manual* instructed conservation officers to authorize the cutting of “precipitous” streamside sites “if at all possible,” even if debris would inevitably be deposited in the water, then require post-logging cleanup. If in doubt, staff should seek the advice of a BCFS representative, who would have final authority.⁴⁸

And so it went, as forest industry expansion and practices generated increasing momentum for stricter controls. Commercial and recreational fishing interests even put aside their differences over catch allocation to pursue a united front against habitat destruction. Addressing the UFAWU’s 1966 convention, the BC Wildlife Federation’s Howard Paish stressed their shared interest in integrated resource management, and the UFAWU became the first union to join several forest companies as

⁴⁷ H. Stavenes to R. Williston, 21 April 1966, BCMFR, f. 02003; Williston to Stavenes, 6 May 1966, BCMFR, f. 02003; K. Kiernan to R. Williston, 26 August 1965, BCMFR, f. 0145987; C. Cooper to F. McKinnon, 21 September 1965, BCMFR, f. 0145987; Williston to Kiernan, 18 July 1966, BCMFR, f. 0145987; Howard Paish, “Secretary-Manager’s Report,” *Transactions of Proceedings, Ninth Annual Convention of the BC Wildlife Federation* (Prince George, BC, 4-7 May 1966), 1-5.

⁴⁸ British Columbia, *Field Manual of Sport Fish Habitat Protection* (Victoria: Fisheries Management Division, Fish and Wildlife Branch, Department of Recreation and Conservation, 1966): 3; BC Fish and Wildlife Branch, *Prevent Logging Damage to Streams: A Message to All Logging Operators* (Victoria: Queen’s Printer, 1966).

an honorary member of the federation. Department of Fisheries Pacific area director W.R. Hourston emphasized the theme of progress in addressing the same convention. Improved cooperation with the BCFS, inclusion of stream protection clauses in coastal TFL cutting rights, and tighter control on the removal of stream gravel for road construction all reflected improvement. When Ed Regnery of Skidegate asked if Hourston was aware of any stream, large or small, that continued to produce salmon after logging, the federal official responded that he knew of several. Logging need not destroy streams, Regnery conceded, but “the manner in which they have been doing it in the last few years” produced inevitable degradation. Removal of forest cover had an undeniable impact, Hourston replied, but stressed that “we are making progress in this logging–fishing business.” The BC Commercial Fisheries Branch’s R.G. McMynn adopted a similarly conciliatory tone in a 1966 *British Columbia Digest* article, praising BCFS cooperation in introducing special conditions for the logging of sensitive sites.⁴⁹

Yet commercial fishers’ alienation from both levels of government only deepened. Despite a federal order prohibiting a second Stellako River log drive in the spring of 1966, the province proceeded with the drive as fisheries authorities looked on. According to the pages of the *Fisherman*, a log-towing operation from Owikeno Lake down the Whonnock River to the head of Rivers Inlet, approved by Ottawa over a UFAWU protest, reflected Fisheries Minister H.J. Robichaud’s “incompetence and lack of concern for the interests of the BC fishing industry.” The BC Wildlife Federation joined the UFAWU in condemning the log transportation initiatives, but these were specific, identifiable events in particular places. Clearcutting, on the other hand, was an ongoing, relentless process that had “detrimental and disastrous” impacts on young salmon throughout the province, a 1965 BCFWB report concluded. And it was a general sense of losing ground that fuelled the growing conviction that logging operations should be excluded from riparian areas entirely.⁵⁰

⁴⁹ “Common Interests Outweigh Commercial, Sport Differences,” *Fisherman*, 1 April 1966; “BC Wildlife Federation Welcomes First Union,” *Fisherman*, 22 April 1966; “Area Director Addresses Session,” *Fisherman*, 1 April 1966; “Delegates Question Hourston,” *Fisherman*, 8 April 1966; R.G. McMynn, “Man, Water, and Fish,” *British Columbia Digest* 22 (1966): 36–42.

⁵⁰ For an account of the 1966 Stellako drive, see Richard A. Rajala, “This Wasteful Use of a River: Log Driving, Conservation, and British Columbia’s Stellako River Controversy, 1965–72,” *BC Studies* 165 (2010): 31–74; “Stellako Log Drive Threat to Salmon,” *Fisherman*, 17 June 1966; “Industry Protests Whonnock Log Tow,” *Fisherman*, 1 July 1966; “Robichaud Criticized for Failing Industry,” *Fisherman*, 1 July 1966; “Logging and Fish,” unpublished report, BC Fish and Wildlife Branch, 1965, p. 3.

Such sentiments moved fisher, conservationist, and writer Roderick Haig-Brown to declare his hatred for “practically everything British Columbia stands for” in a much-publicized 1965 Victoria speech that blasted the Social Credit development agenda. While Arn Keeling and Robert McDonald are no doubt correct in asserting that most British Columbians embraced the “ideology of progress,” Haig-Brown was far from alone. Tofino’s Roland Arnet thought that the “I-hate-BC” speech expressed “a feeling common to many.” According to Arnet, so deep was the province’s infatuation with “pulp mills, with growing cities, with accumulation of ‘wealth’ through the exploitation of nature, that [it was] failing to see that the real ‘gold’ [was] slipping from [its] grasp.” Similar sentiments informed a 1966 *Fisherman* editorial calling for a new approach to industrial coexistence so that the salmon fishery could survive as “a vital economic, recreational, and aesthetic part of British Columbia’s heritage.”⁵¹

In a speech to the 1966 BC Wildlife Federation Convention, Haig-Brown, continuing his critique of the incremental accumulation of “silent erosions,” denounced the TFLs as “private little kingdoms” and called multiple use “nonsensical and a contradiction in terms.” More research, more imaginative planning, and much stronger provincial protection from destructive logging practices was required. It was precisely that agenda that brought Alberni region BCFWB conservation officer W.D. Haddleton to the forest industry’s attention in 1967. That June, Haddleton pressed for the reservation of smaller streambank timber. MacMillan Bloedel and BCFS representatives made the standard response: any timber left along stream edges would inevitably blow down. Moreover, BCFS utilization regulations mandated the cutting of all trees above a 22.86 cm diameter. It was not possible to log without some stream pollution, MacMillan Bloedel management claimed, but, afterwards, the firm would clean up to Haddleton’s satisfaction. A thoroughly *dissatisfied* Haddleton relayed the meeting’s content to BCFWB biologist J.C. Lyons, observing that post-logging debris remained in Cameron River for weeks, some being swept downstream by high water.⁵²

⁵¹ Arn Keeling and Robert McDonald, “The Profligate Province: Roderick Haig-Brown and the Modernizing of British Columbia,” *Journal of Canadian Studies* 36 (2001): 8–9; Arn Keeling, “‘A Dynamic, Not a Static Conception’: The Conservation Thought of Roderick Haig-Brown,” *Pacific Historical Review* 71 (2002): 239–68; Roland Arnet, “Tofino,” *WF* 71 (1965): 45–46; “Secure Salmon First,” *Fisherman*, 8 July 1966.

⁵² Roderick Haig-Brown, “Fish and Wildlife in the Development of British Columbia’s Future,” *British Columbia Digest* 22 (1966): 32–40; W.D. Haddleton, meeting held 6 June 1967, MB (Alberni) Ltd., Cameron Division, BCMFR, f. 0218081; W.D. Haddleton to J.C. Lyons, 7 June 1967, BCMFR, f. 02003.

Haddleton's regulatory enthusiasm ruffled feathers all the way to the top of the BC forest industry. "In simple terms" COFI president Bert Hoffmeister told Ray Williston, "the conflict arises over the leaving of timber adjacent to streams and lakes," and it "would save time and misunderstanding if the principle could be established once and for all." Williston suggested that it might be time to bring the BCFWB into the referral fold (presumably to curtail independent action by field staff), assured Hoffmeister that the BCFS would not impose blanket restrictions on industry rights to streamside timber, and forwarded copies of the exchange to Minister of Recreation and Conservation Ken Kiernan.⁵³

But that September Kiernan, subject to widespread ridicule for failing to defend the sport fishery on the Stellako River, asked for a meeting of BCFWB and BCFS officials. The agenda included discussion of the latter agency's streamside utilization standards, along with the reservation of timber on "steep, uneconomical sites" and those of high recreational value. The meeting does not appear to have taken place until June 1968 when J.C. Lyons hosted a Nanaimo gathering of agency representatives. MacMillan Bloedel drew praise that spring for initiating a general stream clean-up in its Alberni operations, the result of "several years of 'selling'" by Haddleton; however, in the interim Haddleton had become involved in another confrontation with the local ranger and the firm's Cameron River Division managers. According to Haddleton, fallers had dropped trees into the river. The ranger explained that BCFS policy mandated the cutting of all merchantable timber "whether a pollution was caused or not." Haddleton, wanting to "avoid the embarrassment of charging a company with a pollution, only to have the Forestry [Service] appear as a defence witness," emerged from a subsequent inter-agency meeting with an understanding that the BCFS did not endorse practices that produced major stream disturbance. After another meeting confirmed that impression Haddleton drafted a "logging directive" that gained both BCFWB and Department of Fisheries approval. Copies went out to MacMillan Bloedel's Alberni divisions, but, in late August, Haddleton hit a wall. Rather than accept individual responsibility for habitat protection, the firm wanted the directive applied on an industry-wide basis.⁵⁴

⁵³ B.M. Hoffmeister to R.G. Williston, July 1967, BCMFR, f. 0218081; Williston to Hoffmeister, 20 July 1967, BCMFR, f. 0218081.

⁵⁴ E.H. Vernon to W.G. Hughes, 19 September 1967, BCMFR, f. 02003; J.B. Bruce to Vernon, 27 September 1967, BCMFR, f. 02003; BC Department of Recreation and Conservation summary of Fish and Wildlife Branch Reports for May and June 1968, BCA, GR 1027, box 74; W.D. Haddleton to J.C. Lyons, 4 September 1968, BCMFR, f. 02003.

Although Haddleton seemed to be making some progress with Mac-Millan Bloedel, his activism soured relations with the BCFS. At the June 1968 Nanaimo inter-agency meeting, Vancouver district forester H.B. Forse accused Haddleton of depicting the recent events at Cameron River as “an illustration of malpractice on the part of the Forest Service.” BCFWB director J. Hatter replied that his agency enforced the Fisheries Act with “very considerable discretion” but that logging debris reduced the stability of stream banks, obstructed fish passage, and reduced oxygen levels through decomposition. A September 1968 BCFWB review characterized the Cameron River conflict as a “local manifestation of general problems throughout the forested areas of the Province.” Distribution of three thousand copies of the *Prevent Logging Damage to Streams* pamphlet had increased industry awareness, especially among larger companies more responsive to public and shareholder criticism, but habitat deterioration continued. Amidst discussions with Vancouver Forest District officials, the BCFWB’s E.H. Vernon and I.L. Wither declared that the time had arrived for the BCFS to accept responsibility for a province-wide program of stream protection backed by close field supervision and enforcement.⁵⁵

Some foresters agreed that their agency, and the profession itself, should embrace a mandate beyond timber production. Reviewing the file on stream obstruction in 1968, Management Division forester Davis Carey began by asserting that the BCFS might justifiably resist demands for uses “likely to make less contribution to the general welfare.” But that did not mean that the agency was entitled to ignore the value of other resources. In taking a share of industry profits under the stumpage system the government was “a moral participant” in any damage created by logging. Foresters, then, were “morally obliged to try and protect ... other resources and the rights of other resource users, in making and administering contracts for the disposal of timber.”⁵⁶

While Carey pondered his profession’s responsibilities, the administrative tug-of-war continued. In early December a more assertive Kiernan responded to the Hoffmeister-Williston correspondence, passing on a BCFWB request for formal BCFS and industry acceptance of a habitat policy consistent with the goals of the *Prevent Logging Damage to Streams* pamphlet. Recognition of the need for stream protection by BCFS was not in doubt, Williston replied, but conflicts at Cameron River

⁵⁵ H.B. Forse to J. Hatter, 5 September 1968, BCMFR, f. 02003; Hatter to Forse, 13 September 1968, BCMFR, f. 02003; E.H. Vernon and I.L. Wither, “A Review of the Problem of Logging Debris in Watercourses Inhabited by Sport Fish,” September 1968, BCMFR, f. 02003.

⁵⁶ D.M. Carey to E. Knight, 13 February 1968, BCMFR, f. 0669.

and elsewhere pointed to “a weakness in administrative procedures at the field level.” His proposed solution, precluding further direct meddling by provincial or federal fisheries staff, would see them report offences to the local ranger, representing the agency responsible for contract administration. The status quo, then, coupled with the inclusion of the proper clauses in harvest agreements, would suffice.⁵⁷

Williston’s desire to keep the fisheries agencies in their place may have been reinforced by H.B. Forse’s visit to Cameron River. After a tour of the area Forse reported that there had been no alternative to falling some “leaners” across the stream but that the operator had done “a remarkable job” in cleaning up. Haddleton’s unfounded charge was “a deliberate attempt to discredit the Ranger staff, to embarrass our Department as a whole, and to needle the writer personally.” Acknowledging the need for a stream protection policy, Forse anticipated problems dealing with the “administratively immature” BCFWB.⁵⁸

With all agencies sharing an interest in rationalizing their relations and avoiding public controversy that discredited their stewardship, BCFS, BCFWB, and Department of Fisheries representatives met in January 1969 to discuss ways of achieving “a satisfactory basis for liaison at the field level.” Prince Rupert district forester H.M. Pogue, his administrative headaches having worsened recently, welcomed the initiative. Department of Fisheries officers were “becoming very vocal and aggressive” as expansion of the Prince Rupert pulp complex and Eurocan’s new Kitimat newsprint facility drove up logging rates. His rangers, untrained in fisheries management, faced increasing demands to enforce federal legislation in a contentious planning environment. Federal officers routinely objected to industry logging plans, expecting his staff to pass on suggested revisions, creating “hard feelings on the part of the Licensee against the Forest Service.” Recently the fisheries protection officer at Kitimat had insisted on the reservation of five-chains (one hundred metres) of timber on both sides of all Kitimat Valley streams. The effects on Eurocan’s TFL working plan were “quite startling,” Pogue remarked, and the “badgering and cajoling” his staff endured was becoming intolerable. But Pogue’s remedy – having the fisheries agencies press for change through direct contact with operators – would undermine Williston’s insistence on BCFS supremacy in the government-industry relationship.⁵⁹

⁵⁷ K. Kiernan to R. Williston, 2 December 1968, BCMFR, f. 02003; Williston to Kiernan, 14 February 1969, BCA, GR 1935, box 1.

⁵⁸ H.B. Forse to J.S. Stokes, 18 December 1968, BCMFR, f. 02003.

⁵⁹ W.G. Hughes to H.M. Pogue, 26 February 1969, BCA, GR 1035, box 1; Pogue to Hughes, 7 March 1969, BCA, GR 1035, box 1.

Leading Vancouver Island companies came under more pressure to leave streamside timber untouched as well. When the Tofino-based Pacific Trollers Association asked MacMillan Bloedel to spare the Clayoquot River from logging in early 1969, Vice-President J.O. Hemmingsen assured the group that his firm operated under “rigorously enforced” federal standards and that logging conducted according to the multiple-use concept posed no threat to salmon. Conveying his unease to Ray Williston, Hemmingsen hoped for the minister’s ongoing support when discontent with industry practices escalated into preservationist demands. Once again, Williston was quick to promise a united front in resisting any suggestion that industry be excluded from drainages.⁶⁰

During the late 1960s, conservation through multiple use was losing credibility even among those who defined themselves as conservationists. And if the traditional defence that forestry’s economic importance made it first in “the obvious and natural order of priorities” no longer commanded respect, could the standard arguments be expected to hold up when confronted by a new social movement? In 1969, the appearance of the Society for Pollution and Environmental Control (SPEC) and a BC chapter of the Sierra Club alerted government and industry elites that environmentalism had arrived in the province. COF’s Norm Dusting cited the Sierra Club’s presence as a sign of increasing public disenchantment with industrial development. Executives called on foresters to become more active in bringing “the voice of reason and fact” to public debate. The Canadian Forestry Association of BC quickly announced a new public awareness program advocating integrated forest use, a rhetorical twist on the old term that reaffirmed industry’s place atop the allocation and planning hierarchy. The solution lay in working together in an “unemotional meeting place” declared the *British Columbia Lumberman*, dismissing the “so-called conservationists” whose “extreme insistence on single use” rejected the spirit of reasoned compromise.⁶¹

⁶⁰ Pacific Trollers Association to H.R. MacMillan, 7 April 1969, BCMFR, f. 02003; J.O. Hemmingsen to Pacific Trollers Association, 23 May 1969, BCMFR, f. 02003; Hemmingsen to R. Williston, 23 May 1969, BCMFR, f. 02003; Williston to Hemmingsen, 29 May 1969, BCMFR, f. 02003.

⁶¹ Fred E. Moonen, “The Place of Fish, Wildlife and Outdoor Recreation in the Development of BC’s Natural Resources,” *Transcript of Proceedings, Ninth Annual BC Wildlife Federation Convention* (Prince George, BC, 4-7 May 1966), 2-4; Hak, *Capital and Labour*, 180; Yasmeen Qureshi, “Environmental Issues in British Columbia: An Historical-Geographical Perspective” (MA thesis, University of British Columbia, 1991), 110-11; N.R. Dusting, “World Wood Markets,” *Proceedings of the 60th Western Forestry Conference* (Portland: Western Forestry and Conservation Association, 1969), 25; A.B. Anderson, “Meeting the Needs through Policies and Politics,” *Proceedings of the 60th Western Forestry Conference* (Portland: Western Forestry and Conservation Association, 1969) 68; “Pressures Intensify on BC Timberlands,” *TL* 25

But it would take more than new catchwords to resolve deeply entrenched structural obstacles to true integrated planning, BCFWB biologist P.J. Bandy told the Canadian Institute of Forestry's Vancouver Section. Administrative development had given rise to separate agencies, both provincial and federal, with responsibility over individual resources governed by a tangle of laws. Only "a holistic ecological approach" would overcome the parochialism that left conflicts either ignored or resolved in favour of the "politically most astute" players. A new system was necessary, Bandy told the foresters, one "based on sound ecological principles, free of unnecessary competition between managers and specialists, and ... responsive to both economic and social needs."

Bandy's vision of inter-agency harmony would not be realized without industry consent, however, and COFI asserted timber capital's priorities when its new technical land-use committee met with BCFWB representatives on 30 May 1969. First clarifying the administrative pecking order, the assembled agreed on the status of the BCFS as "the main regulatory agency for the forest industry." All dealings between industry and fisheries regulators must have BCFS approval.⁶²

The meeting then turned to a proposed BCFWB policy statement on streamside logging, headed by a measure calling for quick removal of streambank trees fallen into waters. The Crown Zellerbach, Rayonier, MacMillan Bloedel, and Weldwood managers, preferring that to the alternative of submitting to pre-logging instructions, agreed. From that point on, unanimity proved more elusive. The second suggestion – that companies delay logging steep streamside terrain until a joint inspection by either BCFWB or Department of Fisheries and BCFS officials – caused some hesitancy. Leaving timber on such sites would require BCFS approval, although it might be workable if government representatives had "the correct attitude." The company representatives saw much more difficulty in implementing the third measure – the reservation of "immature" lakeshore and streamside timber – agreeing only that several approaches, including selective logging, patch cutting, and quick reforestation, merited investigation.⁶³

(1969): 12; "Integrated Use," *TL* 25 (1969): 16; "On Learning to Work Together," *BCL* 52 (1968): 35.

⁶² P.J. Bandy, "Forestry, Fish and Wildlife – Our Joint Responsibility," *Forestry Chronicle* 43 (1967): 242-46; Minutes of a meeting between the Technical Land-Use Committee of the Council of Forest Industries of British Columbia and the Fish and Wildlife Branch of the Department of Recreation and Conservation to discuss logging-fisheries problems, 30 May 1969, p. 2, BCMFR, f. 02003.

⁶³ Minutes of a meeting between the Technical Land-Use Committee of the Council of Forest Industries of British Columbia and the Fish and Wildlife Branch of the Department of

While industry balked at multiple-use compromise, the Bennett government put its policy-making house in order with the establishment of a cabinet-level Land Use Committee, dedicated to “economic growth consistent with ecological balance,” headed by Williston. Leaving no doubt about his stance on the meaning of balance, he urged foresters to “sell” multiple use to the public in countering “articulate, affluent, selfish preservationists.” Nevertheless, the momentum for a compromise capable of rationalizing inter-agency relations on the most obviously abusive practices continued to build. In April 1969, the creation of a BCFS, BCFWB, and Department of Fisheries committee to study relations between the agencies resulted in the adoption of a uniform set of stream protection measures for all cutting rights that August. The P-1, P-2, and P-3 clauses restated operators’ responsibility for keeping streams free of logs and debris; prohibited log skidding, equipment operation, and gravel displacement within their banks; required bridges and culverts at stream crossings; and barred landings from within two chains (40.2336 metres, or 132 feet) of stream channels. Operators were also to “protect from logging and burning all streambank and lakeshore shrubs.” The following year Bandy’s BCFWB finally gained entry into the referral system.⁶⁴

The new cutting rights provisions, confined as they were to curtailing only the most disruptive practices and limiting protection to streamside shrubbery, hardly represented a regulatory breakthrough. The BCFS’s authority remained intact, and the denial of leave strip regulation upheld the clearcutting mode of production. Not surprisingly, the mild reforms failed to quiet conservationist demands for the reservation of streamside timber in sufficient dimensions to protect fish habitat. In June 1969, the Port Alberni District Sportsman’s Association requested that logging of the Nahmint River watershed be subject to plans “ensuring that an abundance of standing trees be left along the river banks and around the lake.” Concerns about reports of the Tahsis Company cutting to the edge of the Burman River on its TFL prompted the Pacific Salmon Society to ask Williston about the legality of the practice. No legislation or regulation required protective strips, Williston replied. Experience had shown that

Recreation and Conservation to discuss logging–fisheries problems, 30 May 1969, pp. 2–4, BCMFR, f. 020034.

⁶⁴ “Will Set Land Use Priorities,” *BCL* 54 (1970): 53; Ray Williston, “The Forest Land Administrator,” *Proceedings of the Sixty-First Western Forestry Conference* (Portland: Western Forestry and Conservation Association, 1970), 88–90; W.G. Hughes to F. Boyd, 5 May 1969, BCMFR, f. 02003; Boyd to Hughes, 14 May 1969, BCMFR, f. 02003; H.M. Pogue to Supervisor of Fisheries, 8 August 1969, BCA, GR 1035, box 2; Anthony H.J. Dorsey, Michael W. McPhee and Sam Sydneysmith, *Salmon Protection and the BC Coastal Forest Industry: Environmental Regulation as a Bargaining Process* (Vancouver: Westwater Research Centre, UBC, 1980), 107–8.

blowdown of reserved timber created stream blockages, a fire hazard, and an “insect breeding ground that represented an almost impossible economic proposition to log.” Skirting any consideration of more substantial reserves to minimize blowdown, Williston assured the society that the recent rewording of timber-sale clauses would address the problem.⁶⁵

Williston did ask for a report on the Burman River operation, however, which revealed that the Department of Fisheries had prosecuted a Tahsis Company contractor under the Fisheries Act the previous spring, and the BCFWB was going ahead with a second prosecution. The BCFS would send a formal letter outlining the firm’s stream protection responsibilities, Deputy Minister J.S. Stokes assured the society on 22 December. That same day a steelhead fisher condemned the “utter devastation” caused by the Tahsis company’s “complete stripping of hillsides right down to the banks of the rivers” in the Gold River area. The Vancouver Forest District office reviewed the firm’s cutting permit application, which involved a “considerable mileage of ‘river side’ logging.” Recent concerns by fisheries agencies would necessitate revisions to the approved TFL working plan, the company was informed.⁶⁶

The BCFS would respond given a sufficient volume of criticism, and sport fishers on the east coast of Vancouver Island were equally upset about logging practices in that region. “Logging has had a sorry history of destruction of watershed values here on Vancouver Island,” the Nanaimo and District Fish and Game Protective Association informed Williston. Ignorance may have excused past abuses, but sufficient knowledge now existed to protect fisheries while allowing profitable logging. The BCFS, unfortunately, seemed to “equate maximum profit to maximum human benefit.” The organization went on to cite a logging company’s willingness to leave timber along one prized fishing stream, only to have the agency order its extraction. Blowdown of reserved timber was not inevitable, if planned properly, and deer and elk also needed winter cover. “We are calling on you to implement the technology that is available to integrate the fish and game resource as part of a Multiple Use Program on our watershed,” the Nanaimo group concluded.⁶⁷

⁶⁵ Port Alberni District Sportsman’s Association to Lands and Forests Department, 16 June 1969, BCMFR, f. 02003; Pacific Salmon Society to R. Williston, 8 October 1972, BCMFR, f. 02003; R. Williston to Pacific Salmon Society, 17 October 1972, BCMFR, f. 02003.

⁶⁶ J.S. Stokes to Pacific Salmon Society, 22 December 1969, BCMFR, f. 02003; B.Gillespie to R. Williston, 22 December 1969, BCMFR, f. 02003; H.B. Forse to S. Rasmussen, 30 December 1969, BCMFR, f. 02003.

⁶⁷ Nanaimo and District Fish and Game Protective Association to R. Williston, 17 November 1969, BCMFR, f. 02003.

CONCLUSION

Clearly, industry and the BCFS moved too slowly to satisfy the multiple-use demands of many British Columbians in the two and a half decades after the Second World War. And their critics during this period were not the youthful direct-action environmentalists who would generate headlines after 1970. This was a relatively mild discourse in comparison to that which followed, conducted in the main by those who yearned for a balanced approach to land use capable of sustaining diverse local economies and recreational pursuits. Unrestrained clearcutting, justified in the confident terms of sustained yield and multiple-use forestry, generated sacrifices many deemed disproportionate to the benefits. Locked into a timber production mandate, and bound by a profit-sharing relationship with industry under the stumpage system, state forest managers operated within a tradition that did not welcome compromise. Their counterparts on the other side of the fish-forestry divide, both federal and provincial, understood that reality and settled for reforms that did not challenge a mode of production geared to timber industry competitiveness on global markets. Neither Davis Carey's ethical perspective nor P.J. Bandy's ecological vision penetrated into policy-making circles.

And much is the pity for the storm had only just begun. So, too, had the effort to contain it. Hoping to preserve the efficiencies of clearcutting while responding to mounting pressure for stream protection, the BCFS opted to impose a patch-logging alternative during the early 1970s. Cutblocks would alternate with leave settings under the plan, the latter to be withheld from harvest until the former had "greened up." These restraints, adopted unilaterally and kept in place by Dave Barrett's New Democratic Party government, provoked outrage on the part of industry without gaining the approval of fisheries regulators or the emerging environmental movement. But for all their shortcomings, the Coast Logging Guidelines broke with the tradition of industrial freedom that had reduced multiple-use promises to empty rhetoric. Discarded quickly by Bill Bennett's Social Credit government after their 1975 election victory, the guidelines gave way to a restored regime of aggressive clearcutting that unleashed the land-use conflicts of the 1980s and 1990s. This article, in setting the stage for the "war in the woods" of those decades, ends at the beginning of what would come to be a full-out assault on the model of industrial forestry that was shaped by postwar clearcutting. It would include, but reach far beyond, the moderate regulatory agenda considered here.⁶⁸

⁶⁸ Richard A. Rajala, "Forests and Fish: The 1972 Coast Logging Guidelines and British Columbia's First NDP Government," *BC Studies* 159 (2008): 81-120; Roger Hayter, "The War in the Woods': Post-Fordist Restructuring, Globalization, and the Contested Remapping of British Columbia's Forest Economy," *Annals of the Association of American Geographers* 93 (2003): 706-29.