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## Wilderness and waterpower: how Banff National Park became a hydroelectric storage reservoir

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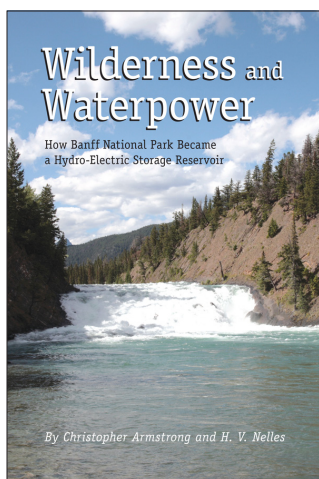
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**WILDERNESS AND WATERPOWER:  
HOW BANFF NATIONAL PARK BECAME  
A HYDROELECTRIC STORAGE RESERVOIR**  
Christopher Armstrong and H. V. Nelles

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## Reversing Rivers

With the debate over public versus private enterprise settled in favour of the Calgary Power Company by the late 1940s and with a postwar economic boom fuelled by new oil discoveries under way, the federal and provincial governments once more found themselves under intense pressure to approve new power projects. The topography of southern Alberta made the Bow River the prime site for water storage for hydroelectric development. With the minister of mines and resources being from Edmonton, the demand for more power was bound to receive a sympathetic hearing. The federal government had already made an important concession to the Calgary Power Company in 1930 by carving the Spray Lakes out of the national park to permit their use as a reservoir. The company's power surplus during the 1930s and its focus on the more readily available Minnewanka option during the war effectively sidelined consideration of the Spray Lakes development. However, once looming shortages had aroused power users and provincial politicians, it was only a matter of time before Spray Lakes development proposals would resurface.

With the public power question settled once and for all, Calgary Power's enthusiasm for expanding its capacity to meet the demand revived. The company, with strong municipal and provincial backing, readily asked permission to proceed with the long-deferred Spray Lakes project. The territory had been cut out of the national park by the Parks Act of 1930. This meant that prime responsibility for approving development lay with the provincial government. But in the Canadian federal system, nothing is simple. The federal government remained a key player

because the river whose waters would be rerouted and diverted for power production drained into Banff National Park. Moreover, revised plans for the development indicated that ever more land would have to be removed from the park to accommodate a larger reservoir.

After receiving permission to raise the dam at Lake Minnewanka in 1941, Calgary Power's energy requirements seemed to be met for the time being. However, no sooner had construction begun on the Cascade power plant in the summer of 1942 than the company revived its plans to use the Spray Lakes as a power reservoir. The revision of the National Parks Act in 1930 had, of course, removed the Spray basin itself from Banff National Park, but as we have seen, in the wartime emergency, Calgary Power opted instead for the less costly project at Lake Minnewanka. Now, with wartime demand straining generating capacity, the Spray development again began to look economically attractive.

Having conceded the removal of the Spray Lakes from the National Park system, the Lands, Parks, and Forests Branch (hereafter, the Parks Branch) of the Department of Mines and Resources was now simply concerned to ensure that the flow of the Spray River, which drained into the Bow at Banff, remained sufficient to preserve its scenic appearance. Calgary Power had lost its initial enthusiasm for the project in 1928 when Interior Minister Charles Stewart had insisted that the Spray River near its mouth must carry 500 cubic feet of water per second (cfs) since it entered the Bow right in the midst of the golf course at the CPR's Banff Springs Hotel. Because the Spray itself had no tributaries to swell its size for about fifteen miles below its headwaters, the flow demanded by Stewart would have required the release of a great deal of water over a dam at the Spray Lakes every summer. Every cubic foot flowing over the spillway would entail the loss of thirty-five hundred kilowatt hours of generating capacity to Calgary Power's Bow River plants during the ensuing winter. Company officials claimed that the whole storage project would be rendered uneconomical if more than 200 cfs had to be running at the mouth of the Spray in the tourist season.<sup>1</sup>

Despite the Spray Lakes having been removed from the park system in 1930, the agreement transferring natural resources to Alberta still

empowered the federal government to fix the levels in watercourses like the Spray River that flowed into the parks so as to preserve their scenic beauty. When G. A. Gaherty once more raised the question of damming the Spray Lakes in the autumn of 1942, the superintendent of Banff National Park warned “that any move by his company to divert the flow of the Spray River would most assuredly be bitterly opposed by the Canadian Pacific Railway Company and by this Bureau.”<sup>2</sup>

For its part, Calgary Power was considering altering its plans for the Spray Lakes development so as to mute such criticisms. Instead of channelling the stored water through a tunnel directly to a high-head plant on the Bow near Canmore, it was considering releasing it down the Spray River itself to be used at the existing Ghost, Horseshoe, and Kananaskis plants. Not only would this be much less costly, but it would avoid many of the problems created by low levels in the Spray in summer.<sup>3</sup> In the end, however, the company decided not to proceed with the development during the war and no formal application was presented, presumably because of the difficulty in raising capital and securing generating and other equipment under the circumstances.

It was obvious, however, that future growth in power demand would probably increase the need for more water storage in the Rocky Mountains. Near the end of 1944, Calgary Power suggested increasing the capacity of Lake Minnewanka by diverting Forty Mile Creek.<sup>4</sup> But company officials were aware of the problems likely to be created by more development inside Banff National Park, so in 1945 they began investigating a possible dam site lower down on the Bow near Cochrane, as well as on the upper Kananaskis River, both outside the park system and fully under provincial control. In addition, studies were made of an entirely new development in another watershed – across the Continental Divide in British Columbia near Canal Flats on the Kootenay River – that could be linked to the rest of the system by a transmission line running south of Banff National Park.<sup>5</sup> None of these schemes was undertaken, and the only addition to the system’s capacity was Barrier, a small plant on the Kananaskis River, producing 16,000 hp with a head of 155 feet.<sup>6</sup>

While Albertans debated the possibility of establishing a provincial electrical utility, Calgary Power put on hold the undertaking of any new major projects. By mid-1947, however, it became clear that E. C. Manning did not favour public power when the premier asked the private utilities to submit plans for rural electrification. The plebiscite of 1948 demonstrated the lack of a strong consensus in favour of public ownership, and little more was heard of the matter thereafter. As a result, the company began to explore developing the Spray Lakes once again, starting in 1947. That brought a protest from the remnants of the wilderness preservation movement that had originally sprung into existence during the 1920s to defend the Spray Lakes against the depredations of the power developers.<sup>7</sup>

More significant were rumblings from the CPR reminding the federal government that the junction of the Spray and Bow Rivers was the scenic centre of the Banff townsite and that the Spray was heavily fished. Any move to reduce the flow in the Spray that would impair its scenic beauty or fish spawn would meet strong resistance from the railway and other tourist operators with heavy investments in the region. In response, the new deputy minister of mines and resources, H. L. Keenleyside, inquired confidentially how much money the railway actually had invested in the Banff region. The reply was \$12.5 million, although the replacement value would obviously be much larger. Parks Branch bureaucrats were well aware of the value of such an ally:

We should see that the Canadian Pacific Railway Company officials are kept advised of developments. No final decision on this proposition should be made without the Railway Company's approval, as their development at Banff involving many millions of dollars would be seriously affected if anything was allowed that would in any way spoil the beautiful Spray valley.<sup>8</sup>

But as in the past, the federal policy-makers quickly discovered that there were powerful interests who favoured going ahead with the proposed plan at top speed. The Calgary Electric Commissioner pointed out to the prime minister that power load in the city was rising almost 10 per cent annually

and that additional capacity was needed to ensure continued industrial growth. Premier Manning also wrote to the acting minister of mines and resources, J. A. Mackinnon, to demand speedy action to deal with an increasingly serious power shortage in the province.<sup>9</sup>

When Calgary Power submitted its formal application to develop the Spray Lakes in the spring of 1948, it made a number of significant amendments to previous plans. Over the next five years, the company was prepared to invest up to \$18 million in order to add about 100,000 hp annually to its generating capacity. Instead of a tunnel to carry the water from the Spray Lakes reservoir to a headpond above Canmore, it was now proposed to divert the water through a canal along the valley of Goat Creek. Flooding this valley would require a formal act of Parliament to alter the boundaries of Banff National Park in order to remove another twenty square miles of land for commercial purposes.

As for the flow of the Spray River, the company was now prepared to spill enough water from its reservoir to keep 180 cfs flowing out of the mouth of the river at Banff during the tourist season. G. A. Gaherty argued that releasing any more water would

seriously detract from the economic value of the whole Bow River development including the Spray.... If there is an imaginative difference of opinion about this, the company claims that any possible adverse effect upon the scenery in a spot in this tremendous park is infinitesimal compared to the importance ... of the power which can be developed.<sup>10</sup>

The staff of the Parks Branch prepared to fight the good fight once more. At a meeting with Gaherty, the minister of mines and resources, and the deputy minister, Roy Gibson, director of the Parks Branch, insisted that both power development in the park and removal of more land from the park “would be resented by a great many people who have the interests of the park at heart.” Furthermore, this would surely whet the company’s appetite for more storage sites in the park. Gibson reiterated the familiar argument of his predecessor, J. B. Harkin, that Canadian parks must

remain unspoiled if they were to compete successfully for the tourist trade with American parks, where development was banned. H. L. Keenleyside, the deputy minister, also urged the company to consider thermal power as an alternative.<sup>11</sup>

Unfortunately for those interested in wilderness preservation, the acting minister of mines and resources was not sympathetic to their case. J. A. Mackinnon (who assumed the portfolio on a permanent basis in June 1948), as the sole federal minister from Alberta, was naturally particularly sensitive to pressure from his home province.<sup>12</sup> Edmonton lawyer A. Fraser Duncan, who acted for Calgary Power, was on a “Dear Jim” basis in correspondence with Mackinnon. After meeting with company officials and staff, Mackinnon reported to Gaherty that he was giving the matter his “most sympathetic and earnest attention” to see if the necessary legislation could be rushed through Parliament before the end of the session with the concurrence of the opposition parties.<sup>13</sup>

Concern for Calgary Power’s needs was fully shared by the powerful minister of trade and commerce, C. D. Howe.<sup>14</sup> Four days after Mackinnon took over as full-time minister of mines and resources, Howe advised him: “I have been looking into the power situation in Alberta, as it affects the development of that province, and find that you [i.e., Albertans] must have additional hydroelectric power if the industrial growth of the province is to be maintained.”

The ammonia plant near Calgary, for which Howe had been so influential in obtaining power in 1940, was “a splendid producer of [US] dollar exchange, and there is a heavy demand for the output. It would, in my opinion, be a tragedy if its operation had to be curtailed.” The only readily available source of energy was the Spray Lakes development, noted Howe. Parks Branch bureaucrats might object to the plans, fearing the impact on the scenery of the Spray valley, but surely, Howe argued, some scheme could be devised to release just enough water to maintain the flow of the river at an attractive level. “It seems to me,” wrote Howe, “that the industrial growth of the province must be a first consideration. The province of Alberta is having a spectacular industrial expansion, and I would be sorry to see anything happen that would interfere with this very desirable



development.” He concluded, “I am giving you my views on account of my interest in industrial development throughout Canada,” which was a polite way of saying, “My friends in the business community asked me to write to you.”<sup>15</sup>

Certainly, the new minister’s advisors on park policy remained hostile to the plans. In an elaborate memorandum entitled “A Further Projected Encroachment by Calgary Power Limited on the Natural Resources and Scenic Attractions of ... Banff National Park ...,” T. E. Dunn set forth a full history of the company’s activities in the area. The company was now proposing to build a dam at the head of the Spray River 740 feet long and 192 feet high. At the height of land between the Spray Lakes and Goat Creek would stand a control dam 2,100 feet long and 48 feet high to feed water into a canal flowing to a headpond of several hundred acres, contained in turn by an earth dike running diagonally across the Goat Valley. In an extensive section headed “Arguments Contra,” Dunn noted that the company’s annual earnings had almost doubled between 1941 and 1946. Under the heading “Gradual Encroachment,” he pointed out:

In the last thirty-six years the Calgary Power Limited has continually brought pressure to bear to establish storage reservoirs, power plants, canals and transmission lines within the park area.

And under “*Future Demands*,” he predicted:

The demands by this corporation have never ceased. Three, five or ten years from now what further storage or power rights will they seek ... and what assurance is there that the next will be the last?

Looking even further into the future, he saw a gradual demise of the very idea of national parks:

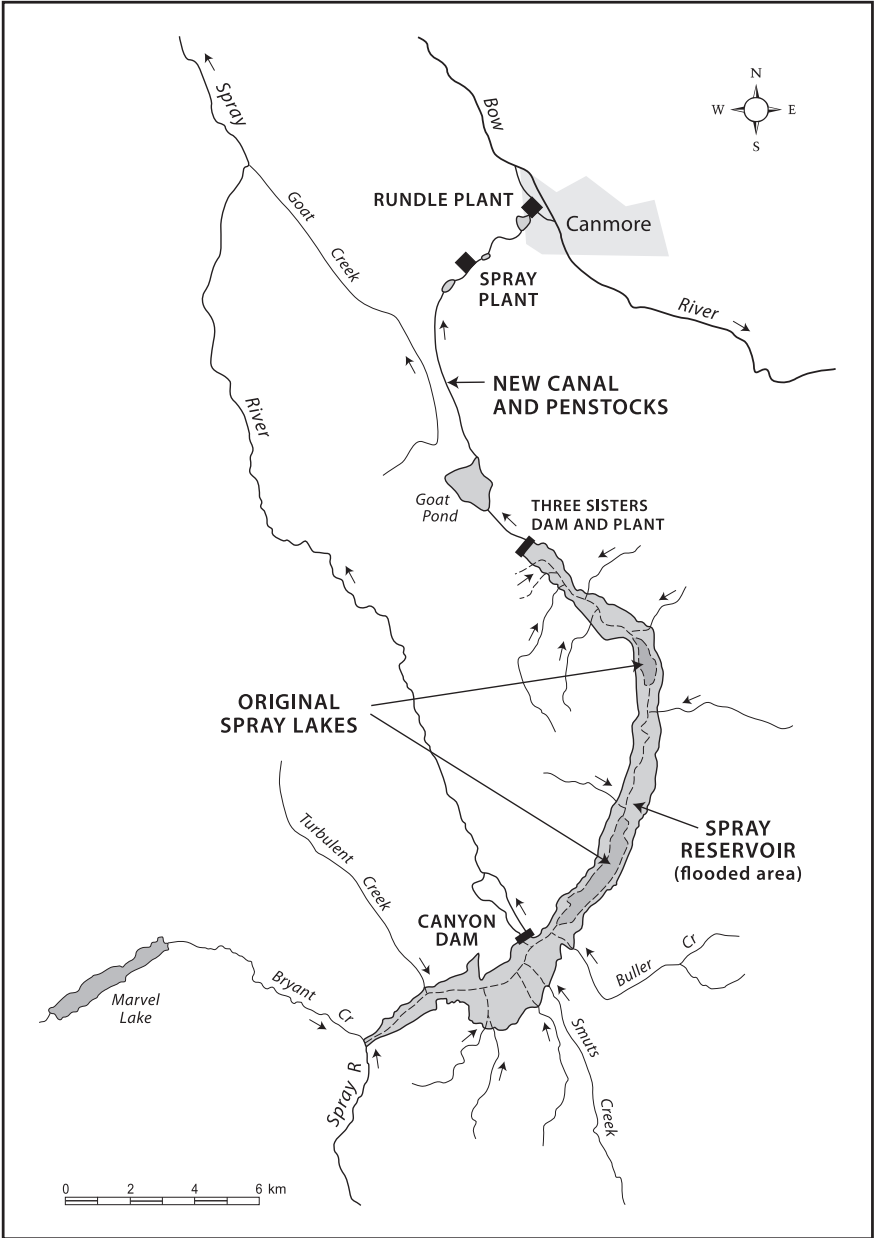
There are many other industrial corporations that would like to gain a foothold in our national parks and ... could ... argue with equal weight that it is as much in the national interest that

they be granted a license to explore and develop mineral timber and oil resources.... Carried far enough, the eventual outcome of granting concessions is plain. Park areas will then be found to differ inappreciably from areas beyond their boundaries and the renowned purposes for which they were created will have vanished.<sup>16</sup>

On the day after his appointment as minister, Mackinnon wrote to Premier Manning to consult him on what to do. The premier urged immediate action in order to avoid power shortages that could arrive as early as 1950. Alberta officials considered a flow of 200 cfs in the Spray River adequate, as it would require twenty-five hundred acre-feet of storage capacity to maintain this flow during the tourist season. Increasing the flow by just 50 additional cfs, however, would require four times as much stored water, which, from Manning's perspective, served "to show that extravagance of endeavouring to improve the scenery at the expense of the power development."<sup>17</sup>

Consultations with the CPR indicated that the railway would not object provided that 200 cfs flowed out of the Spray in the summer. Armed with this assurance, Mackinnon tried to persuade his colleagues to rush through the necessary law amending the National Parks Act before the end of the 1948 session of Parliament. Other ministers, however, took note of the opposition to the scheme expressed by Mackinnon's own staff and refused to amend the parliamentary timetable. Despite Mackinnon's best efforts and a direct appeal to the prime minister from Premier Manning, any legislative change would have to wait until the following year.<sup>18</sup>

By mid-1948, it was clear that action to authorize the Spray Lakes development was almost certain in the near future. A memorandum summing up the current situation quoted Mines and Resources Minister Mackinnon as saying, "A good case was made out by the company from the standpoint of industrial needs, and a rather strong lobby was carried on in the company's behalf." With a federal election in the offing in the near future, Mackinnon wanted to be able to defend himself against criticism from Albertans that he was holding back economic development by



MAP OF THE COMPLETED SPRAY LAKES DEVELOPMENT.

failing to approve the immediate expansion of Calgary Power's capacity.<sup>19</sup> The acting deputy minister pressed the minister to give the Parks Branch "every opportunity to state its case before committing yourself to any policy of hydro power or the storage of water in national parks." Yet even before Mackinnon left for his Edmonton home, he told the parliamentary press that he would be considering Calgary Power's right to develop the Spray Lakes over the coming weeks.<sup>20</sup>

The director of the Parks Branch, R. A. Gibson, followed his minister to the West to consult with departmental officials and soon reported that support for additional power development was far from universal:

There has been a disposition in the past to consider that the general interest was on the part of the Parks administration and the C.P.R. This is a short-sighted conception because many people in Banff and many people who are interested in Banff will immediately interest themselves in any proposition which they do not think is in the best interest of this park.

Other members of his staff attempted to convince James Mackinnon that using a single watershed like the Bow for a large hydroelectric system was unwise owing to the danger of sabotage or air attack. When the minister himself came to Banff, he was presented with a petition by the Town of Banff's advisory council opposing any development at the Spray Lakes as antithetical to the purposes for which the national park system had been established.<sup>21</sup>

Further discussion with Calgary Power officials about alternative schemes, however, proved fruitless. G. A. Gaherty, who had first devised the Spray Lakes storage scheme in the 1920s, remained firmly committed to the idea. Despite pressure to consider coal-fired thermal generating plants as an option, Gaherty continued "to press the Spray project by every means at his disposal," resisting any efforts to involve the wider public in the debate, according to Gibson:

Apparently it is the desire of the company that the argument on this question should be limited to the company and the departmental officials, and the company through every means at its disposal is endeavouring to have the matter dealt with as an emergency.<sup>22</sup>

In that, Calgary Power was successful. While at home in western Canada, the minister was persuaded to fix the flow at the mouth of the Spray River at 200 cfs during the tourist season, the order being drafted by the company solicitor. With the CPR being satisfied that the scenery around the Banff Springs Hotel would not be adversely affected, the decision was rushed through cabinet in early September 1948, as soon as the minister returned to Ottawa. Edmonton lawyer Fraser Duncan advised his friend Mackinnon privately that Gaherty was “particularly pleased” about the deal and had immediately set about ordering all the necessary generating equipment and planning construction, with the aim of commencing work before the autumn freeze-up.<sup>23</sup>

In the end, the officials of the Department of Mines and Resources were completely excluded from these final negotiations. The deputy minister and his assistant continued to oppose Calgary Power’s demands but reported “that the minister was determined to grant the request and that he had received authority from Council [i.e., the cabinet] to do so.” R. A. Gibson, the director of the Parks Branch, recognized defeat:

The minister is fully aware, and, I understand, has advised council that the officials concerned with the National Parks administration are unfavourable to the proposed action as they consider it a violation of section 4 of the National Parks Act. It is particularly unfortunate that a move of this kind should be made when there seems to be good ground for believing that the required power could be developed otherwise. However, we have failed in our argument on the general question of principle.

He asked plaintively to be allowed access to the minister's confidential files containing the correspondence between James Mackinnon and Fraser Duncan in order to find out what had been agreed to.<sup>24</sup>

Events had moved so rapidly that proponents of wilderness preservation had no opportunity to organize an effective protest against the Spray Lakes development, the threat to which had brought their movement into formally organized existence during the 1920s. One civil servant in the Parks Branch later confided to the executive secretary of the National Parks Association of the United States:

The negotiations in connection with this ... withdrawal [of lands from the park system] did not cover a very long period, and there was not much time to work up any public interest in the matter before it was an accomplished fact. There is little use dwelling on the matter any further from our standpoint.... We, of course, hope that we will never be placed in a situation again where we will have to stand up to any further inroads on our National Park areas by outside interests.<sup>25</sup>

When the decision had already been made, W. J. Selby Walker (once executive secretary of the Canadian National Parks Association) wrote the Parks Branch to complain that wartime secrecy no longer prevented a full public airing of the issues, as had been the case when the damming of Lake Minnewanka had been approved in 1940. Mackinnon merely turned Walker's complaints aside with the response that as an Albertan, he, too, was "deeply concerned regarding the maintenance of the attraction of our National Parks," but that there was an acute shortage of power in the province and the Spray Lakes development was the "most expeditious" way of coping with that. Leaving 200 cfs flowing out of the Spray in the summer months would, he insisted, be quite sufficient to preserve the beauty of the scenery.<sup>26</sup>

Company officials, meanwhile, descended upon Ottawa, demanding approval to move heavy construction equipment into Banff National Park to begin road construction and the clearing of the dam site, even before

the necessary legislation had been presented to Parliament. Mackinnon chafed at the reluctance of the Parks Branch to permit the company to commence work at once, but his officials seem to have continued a kind of low-level guerrilla warfare. When Mackinnon asked for a brief in favour of the concession to present to Parliament with the required bill in early 1949, R. A. Gibson replied that his staff had prepared plenty of material “but that our statements were hardly of the character to assist the minister with his bill.”<sup>27</sup>

In the end, however, the bureaucrats had to bow to the will of their minister. James Mackinnon reached agreement with the Alberta government to compel Calgary Power to provide enough additional storage capacity to permit the release of 100 cfs down the Spray River during construction so that it would not become simply a dry riverbed along much of its upper reaches. Reluctantly, the company accepted this requirement, although with the following proviso:

The company must be free to operate the power development and the reservoir as it may see fit, and in particular at all times to generate any such energy as it may require and to draw down the reservoir to the extent it may deem advisable.<sup>28</sup>

With this settled, the legislation to amend the National Parks Act by cutting more lands out of Banff National Park began to wend its way through Parliament. Having passed the Senate, the second reading debate in the House of Commons on March 23, 1949, lasted no more than about ten minutes. By the end of the month, the change had become law.<sup>29</sup>

The experience of the Parks Branch in overseeing the development of more energy from the Spray Lakes by Calgary Power proved as frustrating as previous dealings with the company. Faced with a steadily growing power demand even while the company waited for the new plants fed by the Spray Lakes to come into service, Calgary Power drew down the level of Lake Minnewanka to unprecedented levels during the summer of 1949, which was unfortunately a year when low precipitation made refilling the reservoir impossible. By the autumn, the lake contained only about

one-third of the usual amount of water. Power demand was rising by more than 10 per cent annually, yet the company was able to generate significantly less hydroelectricity than under normal conditions.<sup>30</sup>

After visiting Banff, Parks Branch director R. A. Gibson complained that the shoreline of Lake Minnewanka reminded him

... strongly of the back view of the head[s] of some of the boys who used to come down from the Gatineau after a winter in the woods; ... the barber used to shave their neck[s] half way up the back of their heads. Long [mud]flats are noticeable, and while these are reasonably tidy they are certainly not attractive, and it is altogether a most unnatural layout.... It would seem that the action which was taken by parliament with respect to the Spray River has convinced the company that they can do about as they like in the National Park.

Was there nothing, he asked his officials, that they could do to control the level of Lake Minnewanka under Calgary Power's licence?<sup>31</sup>

Not much, as it turned out. The 1947 licence specified only maximum and minimum levels, and Lake Minnewanka was currently eleven feet higher than the minimum. Although the understanding had been that water would not be drawn off during the tourist season, only a change in the regulations by cabinet could ensure control over this matter. Despite some suspicions that Calgary Power might be drawing more heavily on Lake Minnewanka than on its other reservoirs, the Parks Branch decided not to pursue the matter in the hope that nature would rectify the problem with heavy precipitation.<sup>32</sup>

But the autumn rains were not heavy enough, and Calgary Power was soon requesting emergency permission to draw down Lake Minnewanka four feet below the previous minimum in the spring of 1950. All of the company's steam plants were running at capacity, and if, as hoped, the Spray development would be ready by the fall of 1950, no water would be released from that watershed into the Bow River during the coming winter. If nothing was done, bulk power supplies to the Canada Cement



and Alberta Nitrogen would have to be curtailed, and there might even be general electricity rationing. Alberta Nitrogen was a particularly vital customer since it was a heavy earner of US dollar exchange: almost anything was justified to keep current flowing to its ammonia plant near Calgary.<sup>33</sup>

The superintendent of Banff National Park predicted that failure to accede to Calgary Power's demands was almost certain to spark a great public outcry once the news of a general power shortage leaked out. The provincial government would soon jump into the fray and attack Ottawa. He, therefore, recommended that the Parks Branch permit the emergency drawdown on the understanding that Calgary Power would run its thermal generating stations flat out during the summer of 1950 so as to permit Lake Minnewanka to refill. Company lawyer Fraser Duncan lobbied hard with the new minister of mines and resources, Colin Gibson (who had replaced James Mackinnon in the spring of 1949), and eventually, the company was granted permission to take the extra water if necessary.<sup>34</sup>

The unhappy relationship between the Parks Branch authorities and Calgary Power continued during the construction of the Spray project. The plan called for water from the Spray reservoir to be brought by canal to the head of Whiteman's Pass above Canmore and then released to generating equipment located in the Bow valley far below. Things rarely go according to plan, especially plans that involve moving mountains and reversing the flow of rivers. Errors of judgement and accidents happen. The canal dike was constructed along the steep side of Goat Creek valley in winter using frozen material. In November 1950, to meet rising power demands, the company raised the flow in the canal to feed its Bow River plants. Under this increased pressure, the dike melted and slid into the Goat Creek valley. In order to keep the water flowing into the Bow, the company then purposefully breached the dike in several places so that all the water running down Goat Creek would eventually reach the Bow River. That got the water to the Bow power plants, but it also moved a debris field into the valley, causing \$100,000 worth of flood damage.<sup>35</sup> Re-engineering nature had precipitated a major environmental disaster, though it was not called that at the time.

The company then set about building a wooden flume to carry 700 cfs, but in January 1951, another breach in the dike led to the decision to abandon the canal plan. Instead, Calgary Power's engineers reverted to the more expensive Plan A and started drilling a fourteen-hundred-foot tunnel through Chinaman's Peak (now Ha Ling Peak). Until that was completed, the flow from the Spray reservoir into the Bow was cut off altogether. Construction errors then provoked a second environmental catastrophe. As the snow melted in the spring of 1951, the water began to pour over the spillway in the control dam at the head of the Spray River at the rate of 1,630 cfs. The valve in the diversion tunnel at the dam could have been opened to help cope with the problem, but the engineers were afraid to do so as they might not be able to close it again owing to the water pressure. Since the company had never expected to release more than the required 100 cfs over its dam each summer, no proper channel had been cut from the spillway to the Spray riverbed capable of carrying such a volume of water. The debris flow destroyed fish spawning beds in the river and inflicted an estimated \$350,000 worth of damage upon the lands and buildings inside Banff National Park. Downstream, with the Spray in full spate because the Spray Lakes no longer acted as a natural reservoir, the CPR's golf course at the Banff Springs Hotel had to be closed for a time in the spring of 1951.<sup>36</sup>

Prolonged haggling ensued between the Parks Branch and Calgary Power over payment for the damages caused. A formal claim of \$244,000 was countered by an offer from the company of only \$103,000. A meeting in the office of the deputy minister of resources and development (as the portfolio was renamed in early 1950) finally produced an agreement from the company to pay \$131,000 in compensation. G. A. Gaherty paid over this sum in May 1952, although he continued to grumble that Calgary Power should really be liable for less than \$100,000 but would be magnanimous in light of its desire to continue a supposedly friendly relationship with the bureaucrats.<sup>37</sup>

These engineering problems forced Calgary Power to repeat its request to draw down Lake Minnewanka below the minimum fixed by licence early in 1951. The failure to complete the Spray project as planned

and the redesign of the reservoir had left the company seriously short of electricity. Even with its thermal stations running flat out, both Alberta Nitrogen and Canada Cement had had to be cut back, and a series of radio advertisements were broadcast urging the public to curtail power use. The water that would come flooding down the Spray to the Bow in the spring might help somewhat, but further cutbacks to industry seemed inevitable. Fearful of the outcry that might arise, the Parks Branch again approved drawing down Lake Minnewanka by a further four feet.<sup>38</sup>

The growing power shortage in southern Alberta was finally dealt with later in 1951 when the Spray project came online, adding nearly 100,000 hp per annum to the capacity of Calgary Power's system. Not surprisingly, the CPR was soon complaining that a summer flow of only 200 cfs in the Spray River had created a small stream trickling down a wide, rocky riverbed through the golf course at the Banff Springs Hotel. The Parks Branch, which had predicted this result since the 1920s, could point out that the railway had agreed to the reduction in 1948. Because of the spring runoff, narrowing the streambed with landscaping seemed unwise; the only solution was to construct a series of weirs that would distribute the flow more evenly. Nature would have to be landscaped to disguise the effects of the diversion. Eventually, Calgary Power agreed to bear the cost of this work.<sup>39</sup>

That brought the wrangles over the Spray Lakes to an end after thirty years of controversy; henceforth, the lakes would function as a power reservoir. During those three decades, Banff National Park had its boundaries redrawn, its river flows manipulated, and its focal point marked by a hydroelectric storage and generating system. The battle had been long and drawn out, but it had been decisive. When Calgary Power applied to double the capacity of both the Spray and Cascade developments by installing additional generators in 1955, the Parks Branch had no objections.<sup>40</sup>

