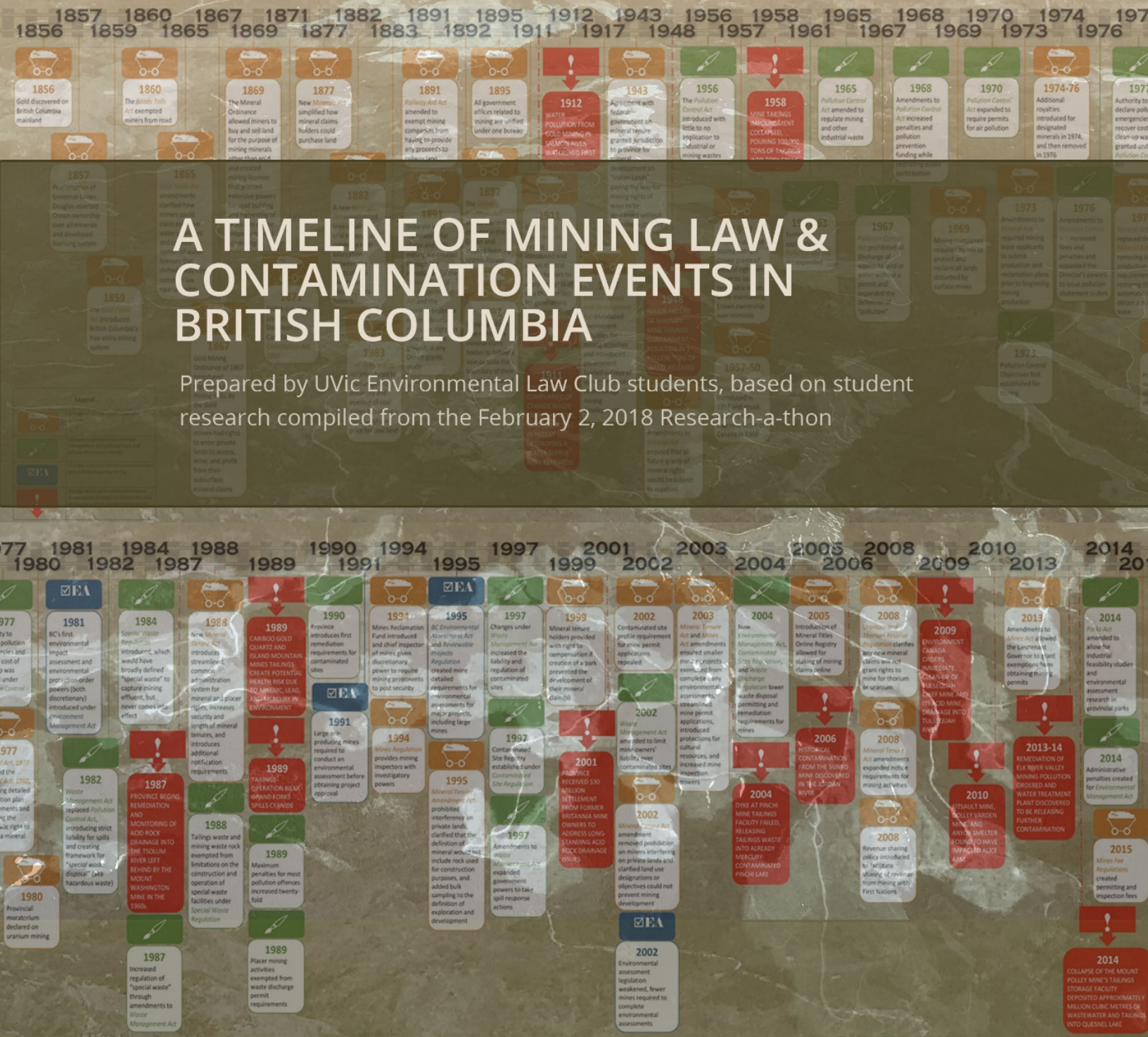
Digging Up a Legislative History

ONE DAY OF STUDENT RESEARCH:

160 YEARS OF HISTORY



A TIMELINE OF MINING LAW & CONTAMINATION EVENTS IN BRITISH COLUMBIA

Prepared by UVic Environmental Law Club students, based on student research compiled from the February 2, 2018 Research-a-thon

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INTRODUCTION: ONE DAY OF STUDENT RESEARCH – 160 YEARS OF HISTORY

For over 160 years, mining activity has impacted British Columbia's environment. This timeline was developed to show how colonial laws related to mining in BC have evolved - or stayed the same - across this time horizon. Law students from the University of Victoria, University of British Columbia, and Thompson Rivers University provided a large portion of the information contained in this timeline through their participation in a "Research-a-thon" event on Feb 2, 2018. The "Research-a-thon" event was organized by the Environmental Law Club and Environmental Law Centre at the University of Victoria. The student research produced by this event was then compiled and edited into this timeline by members of the Environmental Law Club.

Ultimately, this timeline, and accompanying executive summary, is intended to provide an overview of the major changes in mining legislation. This timeline should not be relied on to capture every legislative change or every major mining contamination event in BC, and is not intended to provide any legal advice. The timeline was structured to tell a factual and readable story for anyone interested in the changing nature of regulatory oversight of

the mining sector in British Columbia. As an introductory tool for understanding the many twists and turns in BC's legislative history related to mining, this timeline may also reveal opportunities to improve how the province's mining industry is regulated in order to ensure the air, water, and land that we share can remain healthy for future generations.

EXECUTIVE SUMMARY PART I: OBSERVED THEMES

Mining is recognized as a founding industry of the colony of British Columbia – it provided one of the earliest sources of revenue for the colony, drove settlement, and was a significant driving force behind the British Crown's decision to assert control over mainland British Columbia in the mid 19th century. In fact, in 1857, in response to a considerable influx in the number of mineral prospectors entering mainland British Columbia, a colonial legal regime was established over minerals across the mainland - even before the British Crown *asserted* official control over the territory in 1858. Thus, mining laws are some of the oldest laws that we have in the province. However, behind and beyond this founding story lies many other important impacts of, and changes to, the mining sector that this timeline aims to explore.

This overview identifies and summarizes some of the main policy areas that emerge in mining law and policy in British Columbia from 1856-2018 and discusses how they have developed and changed over time. These themes include the province's free entry mining system; government regulation of the relationship between free miners, private landowners and First Nations; the changing nature of mineral tenures; and attempts to grapple with responsibility and remediation for the environmental impacts of mining and mining contamination events.

This overview also contains a summary of policy trends that have developed across different time periods in the province's history.

1. Mineral Claim Rights and the Mineral Tenure system:

1 (A). THE FREE ENTRY SYSTEM

In 1859 the colony of British Columbia established a "free entry" mining system, which allowed any person 16 years of age or over obtain a Free Miner Certificate ("FMC") upon payment of a nominal fee. A FMC gave its holder (the "free miner") the right to freely enter onto, and stake a claim, on any un-staked area of Crown land – including private property and First Nations' territories. Further, once a claim was staked, the claim holder obtained the exclusive right to conduct mineral exploration and development activities over their claim and collect the proceeds. Since 1859, a wider scope of regulation and oversight has been applied to the mining sector - additional government approvals are generally required before mining activities can begin (i.e. obtaining a mine activity permit

and submitting to environmental assessment processes). However, the "free entry system," comprising of the right of free miners to enter onto private lands and First Nations' territories to explore for minerals, and the ability of free miners to stake and obtain exclusive mineral production rights over these area, without consent, still remains in place today.

Ultimately, while the nature and impacts of mining have grown in scale since 1859, persons may still obtain exclusive mineral rights by acquiring an FMC, paying a nominal fee and staking their claim.[1] Further, the steps required for acquiring a registered mineral claim over land in the province are less onerous for a free miner today, than they were in the 19th century.[2] For much of BC's history, free miners acquired mineral claims by visiting the proposed claim site and erecting physical claim posts, however, as of 2005, free miners may acquire mineral claims through the click of a mouse on an online map. Since this online registration system was introduced, there has been an exponential increase in the number and area of claims staked across the province – including over private lands and First Nations' territories.

Although the current system still prioritizes a free miner's right of entry over the consent of private landowners and First Nations, as will be explored, legislative changes since the mid-late 19th century have added notice, compensation and arbitration requirements. However, several of these requirements do not apply to rights of free entry and mineral claims on traditional territories outside of reserve land as these areas are not recognized under colonial law as privately owned land.

In 1867, the laws of the province provided for a compensation scheme that preserved free miner's rights of free entry but required the free miner to compensate the landowner for any damages caused by their use of the land. While rights to compensation existed, the law did not provide any legal avenue for landowners to prevent a miner from using their land to access their mineral claim. This is the same legal relationship that exists between landowners and mining proponents today. In 1891, provincial legislation formally recognized locations in which free miners could not enter onto and prospect for mineral claims. This included towns, private homes and Indian reserve lands. Today, areas that do not carry the automatic right of entry include land occupied by a building, the 75m of land directly surrounding a private residence (if that area is lawns, gardens etc.) and crop lands.[3] However, despite these access restrictions, mineral claims – which provide exclusive development rights - can still be staked under these areas and across all private lands through the province's online registry.

In 1911, the *Mineral Easements Act, 1911* introduced the right of a mineral title holder to obtain rights of way over private land.[4] These rights of way included the right to construct the infrastructure required for mining and the right to use existing roads in aid of their mining activities – subject to an application process. The Act established a 30 day notice

requirement of an applicant's intention to apply for a right of way over other mineral claims and private lands and continued the province's compensation scheme. The Act provided that there was no requirement that the land owner consent to a miner's right-of-way - as long as proper notice was given. If parties could not agree on compensation for the right-of-way, the Act provided for a mandatory arbitration process to take place under the province's *Arbitration Act*. Beginning in 1943, the mineral title holder's ability to acquire rights of way, without consent, under the *Mining Right of Way Act* (a successor of the *Mineral Easements Act, 1911)*, applied to Indian reserves in the province.[5] While a mineral title holder can no longer obtain a right of way over Indian reserves, the *Mining Right of Way Act* and compensation scheme remains largely unchanged as applied to private land.[6]

In 1988, new notification obligations were introduced that required miners to give notice to private land owners prior to commencing any exploration, development or production activities involving mechanical equipment which would disrupt the surface of the land. Previously, notice was only required for mining activities in the development and production stage. In 2008, notification requirements were expanded further to require mining proponents to provide 8 days' notice when they were going to begin any mining activity on private land , including non-mechanical prospecting, mapping and surveying – in addition to mechanized activities that would disturb the surface.

While the types of activities that trigger notification requirements has gradually expanded over time, the prioritization of a miner's right of entry over the consent of private landowners, subject to specific notice, compensation and arbitration requirements, still continues to this day. Notably, a brief break from this prioritization regime entered in 1995 when the province outright prohibited free miners and recorded holders from interfering with any operation, activity or work on private land – whether compensation was made available or not. However, this limitation on the right of free entry and the compensation scheme was removed in 2002 and the right of interference with private lands, as long as compensation was provided, was reinstated.

It is also important to recognize that while notification requirements have expanded, and a compensation scheme has been established, there is a significant exclusion from this regime in the province. Under current provincial legislation, notification and compensation requirements are only owed to land "owners" or lessees of Crown land.[7] Thus, mining activities conducted on First Nations' traditional territories are not entitled to the notification or compensation requirements extended to private landowners under the *Mineral Tenure Act.*[8] First Nations in the province do not benefit from the minimum 8 days' notice requirement for works beginning on their traditional territories, and neither a free miner nor a recorded holder is liable under the *Mineral Tenure Act* to compensate a First Nation for damage caused by the entry, occupation or use of their traditional territory for exploration, development or production of minerals.[9]

1 (B). THE INTRODUCTION OF MINERAL LEASES

Prior to 1957, the provincial government could issue outright mineral rights to a free miner who had staked a mineral claim through the use of a Crown Grant. This provided the free miner with property rights to the minerals, subject to the specific terms of the Crown Grant. Since 1957, the province has maintained legal ownership over minerals in the province and instead grants 21-year renewable leases over minerals in a claim area. Since the concept of mineral leases was first introduced in 1957, the granting of mineral leases has been "virtually automatic" upon application. In fact, under current provincial legislation, if the application's information requirements are met, there is no discretion to refuse granting a mineral lease – and these leases may now be granted for up to 30 years. This opportunity to automatically obtain upon application, without discretion, larger and longer term mineral production leases was briefly suspended from 1973 -1977 when the government required the submission and approval of production and ecological reclamation plans *before* a lease could be acquired and production could begin.[10] Today, if a registered claim owner wishes to produce higher volumes of minerals in their claim area, the owner must obtain a mineral lease – which carries with it higher production rights.

2. Regulating the environmental impacts of mining

The environmental impacts of mining were not addressed specifically in law until more than 100 years after mining licences were introduced — despite mining pollution being recognized as early as 1911 and 1912.[11]

Three related areas of environmental mining regulation developed in the 1960s as the environmental impacts of mining were better understood: assessment of mining plans prior to construction, effluent/run off permitting and enforcement during operation, and requirements for reclamation and remediation. Operational pollution permitting requirements came first in 1965, then the requirements for mine reclamation in 1969, then the need to submit pre-construction production and reclamation plans in 1973. Over time penalties have increased and government powers to respond to spills and environmental emergencies have expanded. There is a trend for introducing general environmental laws and then exempting certain aspects of the mining industry from these laws. For example: exempting placer mining from requiring waste discharge permits; exempting mining waste from hazardous waste storage requirements, and; introducing a separate section of the *Waste Management Act* to address mining-related contaminated sites. Environmental regulation seems to swing pendulously from expanding liability and application requirements for mines to reducing these same requirements.

Discovery of and response to mining disasters and contamination

The timeline documents a long history of contamination from mines as a result of acid rock drainage and leaching, as well as from catastrophic tailings pond breaches. The timeline

also documents how regulation of mining activities has changed and adapted to our increased understanding of the potential environmental impacts of mining.

The need to balance the risks and rewards of mining is an ongoing tension faced by the province– a balance that has often left hefty remediation bills to provincial tax payers. For example, the Mount Washington Mine, which operated for 2 years between 1964 and 1966, left behind a pyrite waste rock that caused copper-bearing acid rock draining that continues to seep into the Tsolum River today. The provincial government spent $1.5 million in remediation and monitoring costs for the Mount Washington Mine between 1987 and 1992. Additionally, there is the case of the Britannia Mine. While the provincial government negotiated a $30 million settlement with former owners of the Britannia Mine (in exchange for indemnification), it is estimated that the province has spent almost $46 million on site remediation. Further, the province continues to be saddled with ongoing water treatment costs of $3 million per year.

Catastrophic failures of mining infrastructure have resulted in significant ecological damage to the province. For example, on May 24, 1958, a small tailings impoundment at the Mineral King mine collapsed, dumping nearly 100,000 tons of tailings into Toby Creek, a medium sized tributary of the Columbia River. Additionally, the recent Mount Polley tailings storage facility failure released an estimated 25 million cubic metres of waste water and tailings into Hazeltine Creek and Quesnel Lake. However, some of the contamination events featured on the timeline are not the result of mine infrastructure *failures*, but are instead a result of standard industry practice —practice that has failed to adequately consider mining's potential for environmental harm.

Early mining practices have caused contamination of soil and groundwater that continues to impact our land and waters today. In 1912, mining operations in the Kootenay region were reported to have killed all of the fish in the Salmo River. At the time, the Department of Fisheries and Oceans investigator was reluctant to take any action that would hamper the important industry. The Salmo River watershed continued to have contamination issues from mining into the 1940s and 1950s. In the early 2000s, studies revealed the presence of metal leaching and acid rock draining. Mercury, heavy metals and arsenic contamination is considered typical of old mines in the region.

A noticeable trend in these mining contamination events is the time it takes for contamination to be discovered, and for reclamation and remediation to occur. However, the legislative events on this timeline also demonstrate how large-scale mining contamination events have functioned as an impetus for legislative changes, and how improved remediation standards and liability provisions have found some success in cleaning up contaminated mine sites.

EXECUTIVE SUMMARY PART II: A HISTORICAL OVERVIEW OF MINING LAW IN BRITISH COLUMBIA

Pieced together, the historical snapshots included in this timeline reveal some interesting trends in mining and policy in British Columbia.

From **1859 to 1943**, government interest in obtaining revenue from mineral development and encouraging settlement in the colony resulted in a system of mineral licenses and claim registration. Regulations generally made conditions more favourable to miners by providing exemptions from certain tolls, prioritizing free access rights to develop claims over private landowners, and introduced exclusive water privileges for miners that changed the face of the common law. At the turn of the century, the Crown began to take more control over mineral and water resources by having all ownership vest in the Crown. However, the focus appeared to be on reducing conflict between mineral resource developers, rather than in protecting other rights holders.

From **1948 to 1963**, we begin to see the regulation of the industry through royalties, taxation and the introduction of a new mineral tenure system whereby the province began leasing mineral rights, while retaining subsurface ownership as opposed to granting proprietary rights to mineral claims. It is at the end of this era that pollution control and effluent regulation began developing - which would not begin to directly apply to the mining industry for another decade.

From **1965 to 1974**, the province began introducing new permitting and reclamation requirements for mines. At one point during this period, mines had to both apply for waste discharge permits when contemplating any release of a contaminant into air, land or water, as well as have a full ecological reclamation, production and feasibility plan approved by the province before any mining leases would be granted and production could proceed. It was during this time period that a specific concern for the preservation of the natural environment and a targeted resource management policy emerged, as well as an incremental royalties regime to create more government revenue from the mining industry. Interestingly, from 1976-1977, while fines were increased for pollution incidents and government powers were expanded to take faster action to issue pollution abatement orders, the new mineral royalties scheme and the requirement for government approved production and ecological plans prior to mineral lease grants and production were removed.

From **1980 to 1987** a renewed appetite for environmental regulation and oversight emerged with a ban on uranium mining, the first introduction of discretionary Environmental Impact Assessment requirements and the establishment of hazardous waste regulations. It was also during this time that the Minister for Environment first gained the power to declare an environmental emergency and associated emergency

powers and the early establishment of the province's first strict liability offences for waste disposal and spills. However, this appeared to come to a head in 1988 when a new *Mineral Tenure Act* was legislated. The new Act introduced a common administration system for mineral and placer rights in British Columbia, opening up areas that were previously off limits for placer mining in the province. It also reduced application requirements for obtaining mineral and placer claims and leases and increased the length and security of mineral tenures. It was also in 1988 that the authority of the government to regulate hazardous wastes was limited by the removal of a long list of specific compounds from the definition of "special waste" (now known as hazardous waste) under the *Special Waste Regulation*. While new regulations were introduced to increase spill protections, restrict construction of certain hazardous facilities in sensitive ecological areas, and increase reporting requirements – facilities that managed mine tailings or mine waste rock only were specifically exempted from these requirements.

From **1989 to 2001**, the province was alerted to series of contamination events that had occurred as a result of historical mining. The government began expending resources to undertake remediation of these sites. It was also during this time frame that penalties for most pollution offences were increased – including a twenty fold increase in fines for discharging waste in contravention of a waste permit. However, in 1989 placer mining activities were exempted from waste discharge permit requirements under the *Waste Management Act* – an exemption that remains in effect today under the *Environmental Management Act*. During this period, the province introduced new remediation requirements and powers to oversee industry led clean-up of contaminated sites and to obtain limited security amounts from mining companies for mine reclamation. In 1997, the direct liability for mining companies for site remediation increased and a public site registry of contaminated sites was created. As a direct result of these increased liability and remediation obligations, the province was able to seek compensation from former owners of Britannia Mine to address long-standing acid rock drainage contamination in 2001. The province received a $30 million settlement in exchange for the former owners' indemnification. Unfortunately, despite these settlement funds, taxpayers are estimated to have paid $46 million for the Britannia Mine site to be remediated to date.

It is also not until this time period, in 1991, that non-discretionary environmental assessment requirements for high production mines was legislated – these requirements were then built upon and expanded in 1995. It was during this mining regulation ramp-up that new consideration was given to the rights of private landowners and, unlike the surface access rights in place today, miners and mining companies were subject to an outright prohibition from interfering with any operation, activity or work on private land.

The years between **2002 to 2007** saw a general trend towards deregulation of the mining sector and an effort to streamline and simplify requirements placed upon the mining industry. For example, in 2002, the requirement to submit site profiles prior to obtaining a

mine permit was removed, and in certain circumstances, past mine owners and current owner (who had posted security) were exempted from the remediation requirements required for other contaminated sites under the existing *Waste Management Act*. Further, it was during this time frame that the prohibition against miners interfering with activities on private lands was removed; legislation clarified that community based land use plans would *not* prevent mining from proceeding in an area; smaller and mid-sized projects (including mines) were exempted from environmental assessment requirements; government powers to require further clean-up of mines were limited; and mines were exempted from specific waste discharge permitting requirements. It is also within this time frame that changes introduced in 2004 increased the reliance placed on "approved professionals" that remains in place today. This system of professional reliance created a regulatory model where industry proponents hired professionals to determine how government objectives would be achieved, with the government role switching to one of compliance and enforcement rather than government taking a more active role in project design and planning.[12] Finally, of particular significance during this era is the introduction of the Mineral Titles Online Registry system that allowed proponents to stake their claim using an online map and the click of a mouse, rather than having to visit the area and physically drive claim stakes into the ground.

Interestingly, the year **2008** saw the introduction of some new regulations, followed by a mixed bag of deregulation, new allowances for the mining sector, and increased environmental penalties by the year **2013 and 2014**. In 2008, the province clarified that thorium and uranium should stay in the ground; introduced new notice requirements before any mining activity could proceed on private land, and; announced a new mining revenue sharing policy with First Nations. In 2013, new powers were introduced that provided the Lieutenant Governor with the authority to exempt any person from obtaining a mine permit before beginning mining activities in an area. In 2014, changes were introduced that newly allowed for the granting of park use permits for development research. Previously, park use permits were only granted to those able to demonstrate the proposed activity was necessary for the preservation or maintenance of the recreational values of the park. The changes specifically allowed for the potential use of any development research gathered to impact established park boundaries. Finally, administrative monetary penalties were introduced for contraventions of the *Environmental Management Act* by persons and industry caught by the *Act*'s requirements– which included mines.

After the Mount Polley disaster on August 4, 2014, which saw a release of an estimated 25 million cubic metres of waste water and tailings into Hazeltine Creek and Quesnel Lake from Mount Polley mine, there has been an increase in new mining regulations. Between late **2014 and 2018**, the provincial government revised the Health, Safety and Reclamation Code for Mines for tailings storage design requirements and increased environmental

assessment information requirements for new tailings facilities including detailed assessment of alternatives for tailings management. Further, a new requirement was introduced that all mines with tailings storage facilities must establish their own an independent review panel of experts to review and advise tailings storage operations.

In 2015, mining proponents were required to pay new permitting and inspection fees to help pay for the geotechnical staff and inspections required to oversee and enforce mine permits.

2017 saw the introduction of new spill clean-up and reporting requirements, that capture mine owners and operators in the event of a spill, as well as new administrative monetary penalties for contraventions of the *Mines Act*.

It is clear that recent changes to mining regulations have been reactive to the Mount Polley mining disaster and the implications this event has had on the natural environment – where some metals still exceed allowable standards in the soil and sediment in the Polley Lake, Hazeltine Creek to Quesnel Lake area. Interestingly, while the government has seen a need to increase oversight, compliance and enforcement in this area through regulations, this has not been matched with a desire to hold Mount Polley Mining Corporation civilly, statutorily or criminally responsible for the breach of the tailings dam and its ensuing environmental damage. In August 2017, the province confirmed that it would not press provincial charges against the mining company, and in January 2018, the province further directed a stay of proceedings of a private prosecution.

Ultimately, mining law and policy has been driven by different objectives during different times depending on the issue carrying the day – from settlement and economic wealth to environmental protection and oversight – as well as attempts to balance these objectives. The ebb and flows of mining laws over BC's history demonstrates, if nothing else, that the mining sector is far from depoliticized, and is under a state of constant change - from a growing number of permitting and reclamation requirements in the late 1960s-early 1970s, and in the post-Mount Polley era, to the deregulation and streamlining of permitting and reclamation requirements in the early 2000s. However, beneath these changes, the foundation of the free entry mining system has remained relatively consistent over the province's history - a system that has significantly expanded since being taken online through the Mineral Tenure Online staking system.

Whether the current, increased appetite for government oversight will continue to shape mining policy in a post-Mount Polley political climate, and for how long - and whether this will translate into increased civil and criminal liability laws in the future remains to be seen. Further, as increased commitments are made to Indigenous governments, and more information is revealed about the long-term environmental impacts of mining on its surrounding land and water base, one may wonder whether changes to BC's long standing free entry system may be on the horizon.

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TIMELINE OF MINING LEGISLATION AND CONTAMINATION EVENTS IN BRITISH COLUMBIA

Legend	
	Changes to mining-specific laws and policies
	Changes to general environmental management and pollution laws and policies that impact mining
	Changes to environmental assessment laws and policies impacting mining
	Mining catastrophes and contamination events (years on timeline indicate the date of discovery of the contamination event)

1856-1900

1856: Gold discovered on the mainland of British Columbia

On March 1, 1856, Governor James Douglas sent a dispatch to the Right Hon. Henry Labouchere, Member of British Parliament, communicating that gold had been found in considerable quantities within British Territory. In this communication, Governor Douglas recommended that all persons engaged in gold digging be subject to a tax, which could act as a source of revenue for the colony. Governor Douglas advised Henry Labouchere that in order to effectively levy this tax a military presence would be required in the area. This is the first recognition that considerable government revenue could be generated through the extraction of mineral resources in the province.[13]

1857: Proclamation of Governor James Douglas asserted Crown ownership over all minerals and developed a licensing system.

On December 29, 1857, Governor James Douglas issued a proclamation that asserted Crown ownership of all minerals across the mainland of British Columbia.[14] The proclamation also established a licensing system for mineral prospectors. This licensing system did not take effect until February 1, 1858.

This proclamation introduced the first colonial legal framework for minerals in the province. It is emblematic of the perceived urgency to assert ownership over a profitable area of land during the Fraser Valley gold-rush. At the time of this proclamation, James Douglas did not have the legal authority from the British Crown to pass laws or issue proclamations in the name of the British Crown over the mainland of British Columbia. British Parliament did not officially assert control over mainland British Columbia until August 2, 1858. It was not until this assertion that James Douglas became the official governor of British Columbia.[15]

However, as First Nations never surrendered their rights in the colony of British Columbia, many Indigenous and non-Indigenous scholars contest the British Crown's right to assert authority over all minerals in the province.[16]

1859: The Gold Fields Act introduced British Columbia's free entry mining system

On September 7, 1859 the *Gold Fields Act* was proclaimed into force in the colony of British Columbia.[17] The Act established a free entry mining system through the creation of Free Miner Certificates (FMCs). Only persons who obtained a FMC, which were freely available upon payment of a 1-pound fee, could conduct mining activities in the colony. The Act also created the position of a Gold Commissioner to oversee the FMC system. Once a miner had obtained an FMC they were free to enter and stake a claim on any area of Crown land, subject to a senior claim by another free miner. Regulations under the Act created restrictions on the size of claims and established water rights for prospectors. Free miners were allowed to claim defined amounts of water for carrying out mining activities.[18] The Act also provided miners with the authority to establish local Mining Boards with powers to create mining by-laws. Decisions of the Mining Boards were subject to Governor approval, and the Governor could easily disband them.[19]

The colony of British Columbia was the first jurisdiction in Canada to adopt a free entry mining system.[20] The mining framework in British Columbia still operates upon the free entry system today to provide mineral access rights to persons who obtain FMCs.[21]

1860: The Roads Tolls Act exempted miners from road tolls

On October 15, 1860, the *Roads Tolls Act* was issued in accordance with the *Gold Fields Act*, *1859*.[22] The proclamation imposed a general toll on goods that were transported past

certain points in the colony. The *Roads Tolls Act* arose in the context of rapid expansion of roads and transportation in British Columbia and the proclamation was issued in order to obtain funds for the maintenance of these roads. The Proclamation provided an exemption for miners who were carrying their own packs not exceeding 30 lbs. The *Roads Tolls Act* and the miners' exemption is an early example of how government policy was used to encourage mining in the province and highlights the weight the colonial administration placed in the industry. The general toll was removed from the roads in 1871-72.[23]

1865: Gold Fields Act amendments clarified how miners could claim exclusive water privileges and created a system of water licenses that shifted away from common law riparian rights

On April 11, 1865, the *Gold Fields Act* was amended. The amendment established a system for granting exclusive water privileges that required the construction of ditches and flumes to indicate exclusive water ownership (i.e. similar to how fences are used in land enclosures). The amendment clarified how miners could assert exclusive water privileges over an area. The *Gold Fields Act* created administration of water licenses through magistrates. It also provided privileges in aid of land development activities, while moving away from common law riparian rights of free use of waterways.[24] This move away from common law riparian rights, and the use of licenses to secure exclusive access to water in certain areas, may have impacted the traditional use of waterways by Indigenous groups.

1867: The Gold Mining Ordinance of 1867 introduced regulation of mining in BC by the Gold Commissioner and stated that free miners had rights to enter private lands to access, mine, and profit from their subsurface mineral claims

The *Gold Mining Ordinance* of 1867 introduced general regulations that governed mining in the colony of British Columbia until 1880.[25] The Ordinance gave the Gold Commissioner the power to determine all mining disputes outside of the courts, and make decisions regarding damages and costs. The Gold Commissioner would deliver FMCs to any person who was over the age of sixteen who paid the fee. The Ordinance also provided for a claim registration system where Free Miners were required to record their claim at the Office of the Commissioner within a set time of its staking. The Ordinance clarified that a Free Miner had the exclusive right to enter private lands to access and mine their subsurface mineral claims, and were entitled to all the proceeds of the mining activity.[26] While the Ordinance required Free Miners to compensate surface right holders/private landowners for any damages caused by their entry, the surface right holders had no legal avenue for preventing a miner from using their land to access their mineral claim. Further, the Ordinance gave the Gold Commissioner the power to grant water diversion rights to miners directly. However, the Ordinance put limited these rights by prohibiting the willful waste of water, and giving water rights-holders responsibility for disposing of any wastewater and maintaining ditches and flumes.[27]

1869: The Mineral Ordinance allowed miners to buy and sell land for the purpose of mining minerals other than gold and created mining licenses that granted extensive powers for road building and harvesting of resources on the property needed for mining

On March 10, 1869, the government issued the Mineral Ordinance, 1869, which was the colony of British Columbia's first mining statute specifically introducing regulations for minerals other than gold.[28] The Ordinance established a process by which persons could sell and purchase land for the purpose of mining. Prior to the Ordinance, miners could only acquire a 2-year lease to land. The Ordinance waived any fees for purchasing the land if the miner could demonstrate that they had invested $10,000 or more into their mining activity. The Ordinance also provided for mineral licenses that miners could apply for that would grant extensive powers to prospect and mine minerals and to build any roads necessary for the duration of the license. A mineral licensee was granted free use of a reasonable quantity of any timber, stone, sand and lime on the premises "necessary for the profitable conduct of his or their mining operations."[29] As a result, once a miner obtained a mineral license, they would not need to obtain separate approvals for road construction, or the use of nearby natural resources in aid of developing their mineral claim.[30]

1871: British Columbia joins the Dominion of Canada - the Constitution Act, 1867

In 1867, British Parliament passed the *Constitution Act, 1867*[31] and established the Dominion of Canada. British Columbia joined the Dominion in 1871. The *Constitution Act, 1867* (the "*Constitution*") distributed heads of powers between the federal government and the provinces and vested mineral rights in the provinces. Under sections 109 and 117 respectively, the province retained ownership over "All Lands, Mines, Minerals …belonging to the several provinces" and ownership over their respective public property not otherwise disposed of in the *Constitution*. Subsection 92(5) also gives the provinces legislative powers over the management and sale of public lands. The government of British Columbia retained the majority of its jurisdiction over mining activities in the province.[32]

Because mineral rights were vested in the province, the *Constitution* preserved the practice of individuals having to apply for mineral licenses and register mineral claims with the provincial government. In addition, because each province was granted regulatory power in this area (mineral rights in the territories remained vested in the federal government), British Columbia has maintained a separate regulatory regime for mineral tenure and mining activities from other provinces in Canada. This has allowed the Province of British Columbia to establish a less stringent regulatory regime for mining, as compared to other provinces. For example, while the Province of British Columbia allows mining activities to proceed in areas that have been designated under land use plans as

inconsistent with mining activities, in Ontario, land-use plans are binding on mining proponents.[33]

1877: The new Minerals Act simplified how mineral claims holders could purchase land

In 1877, the government passed the Minerals Act, 1877, SBC 1877, c 14, with the purpose of further developing the mineral resources of the province beyond previous mineral ordinances.[34] This legislation simplified how holders of minerals claims could purchase land by setting out a framework for applicants to submit a mineral claim and obtain a Crown grant. Successful applicants obtained exclusive right and possession of all the land surface and subsurface rights to minerals within their mineral claim area and the absolute right to convey the land and minerals (except gold not in veins or lodes).[35]

1882: A new Minerals Act consolidated laws on all non-coal minerals and created a clear bifurcation between the rights of free miners and mineral rights holders

Enacted on April 21, 1882, the *Minerals Act, 1882* repealed the *Gold Mining Ordinance*, 1867, the *Mineral Ordinance*, 1869, and their amendments, and consolidated the province's non-coal mineral laws under a single statute.[36] The *Minerals Act 1882* described: the appointment of provincial mining administrators; obtainment of free miners certificates; claim registrations; the nature of mineral claims; drainage of mines; mining partnerships; granting of mineral leases; establishing of water ditches; and penal sanctions. The *Minerals Act 1882* confirmed a bifurcated regime where free miners had to first obtain an FMC, and then register a mineral claim to have the exclusive right to the subsurface minerals and to keep the proceeds from the minerals.[37] The *Minerals Act 1882* reiterated the rights of free miners to enter onto occupied land to access and develop their mineral claim, but confirmed they did not have surface rights.[38]

The *Minerals Act 1882* also highlighted the importance of obtaining FMCs – any person who was not registered as a free miner had no claim over wages for labour performed in any mineral claim. Further, the *Minerals Act 1882* maintained free miners' privileged access to water by providing that registered free miners were entitled to as much water flowing through or past their claim as was deemed necessary. If water did not naturally flow through a claim a free miner could obtain the right to divert water for a period of up to 10 years.[39] Those with mineral claims maintained their ability to obtain Crown grants of land over their mineral claim.[40]

1883: Coal Prospecting Act introduced to encourage the discovery and opening of coal mines by setting a fixed purchase price for coal land

On May 12, 1883, the *Coal Prospecting Act* was introduced, which set a fixed purchase price for coal land and repealed s.8 of the *Land Amendment Act, 1882* which had specified a minimum price for the purchase of coal lands.[41] The *Coal Prospecting Act* also set out a

license application process for acquiring possession of "unoccupied or unreserved" land for coal extraction. The *Coal Prospecting Act* introduced some of the earliest notice requirements for mining in the province: license applicants were required to post notice on the land of their intention to apply for a coal prospecting license. The purpose of the *Coal Prospecting Act* was to encourage the discovery and opening of coal mines in the province.[42]

1891: The Railway Aid Act was amended to exempt mining companies from having to provide any proceeds to railway land owners

In 1891, *An Act to Amend the "Railway Aid Act, 1890"* was introduced, which removed the right of railway companies to collect a percentage of the proceeds of mineral development that was undertaken on the lands that they owned. [43] This change is an example of government amending mining laws to protect the proceeds of mining companies from interference by third parties.

1891: Separate legal frameworks for placer and lode mining are created through the introduction of the Mineral Act and the Placer Mining Act and the province begins to retain subsurface rights (i.e. rights to minerals in the ground) in any Crown grants made

On April 20, 1891, the province enacted the *Placer Mining Act, 1891* and the *Mineral Act*, *1891* which was the first time the province introduced legislation that distinguished between placer mining (the *Placer Mining Act*) and lode mining (the *Mineral Act 1891)* and created separate schemes for these activities.[44] Placer mining involves prospectors panning and dredging for loose, separate pieces of gold, whereas lode mining involves extracting gold from within hard rock. These separate regimes were not unified under a common legislative scheme again until 1988.[45]

The two pieces of legislation were introduced by the newly established Mining Commission.[46] The Mining Commission was the first resource commission to be established in British Columbia and the first investment made by the province to establish a government agency tasked with finding ways to make an industry grow.[47]

The *Placer Mining Act, 1891* consolidated and clarified the free mining certification process for miners. Any miner who failed to produce a valid certificate would lose all claim and right to minerals and the use of water for their mining activities.[48] It also clarified the right of free entry by formally identifying locations miners could not enter to prospect for subsurface claims.[49] This included towns, dwellings and Indian reserve lands.

The *Mineral Act*, *1891* clarified the mineral claims process, including: how to mark the claim, the duration of the claim, and the penalty for mining without a certificate.[50] The *Mineral Act 1891* specified that the Crown could grant subsurface mineral claims to individuals beneath land where rights to surface resources also existed (i.e. under a timber

lease) and also stated that the province would retain all rights to subsurface minerals in any Crown land grants made from that point onwards.[51] Further, the *Mineral Act*, *1891* gave jurisdiction over mining matters to county courts, including over disputes concerning a miner's water rights.[52] Previously, the Gold Commissioner or other mining officials would resolve mining disputes.

1892: The Water Privileges Act vested ownership of water in the Crown and created a licensing system for use

In 1892, the *Water Privileges Act* officially vested jurisdiction in the government of British Columbia over all water in the province that did not already come under the exclusive powers of Parliament. The statute introduced a centralized water rights system that replaced common law riparian rights. Common law riparian rights gave stream-side landowners the right to a flow of water that was "undiminished in quality or quantity". This common law right was seen as an obstacle to development.[53] To address this, the *Water Privileges Act* curtailed riparian rights of landowners, preventing them from diverting or appropriating water except in exercise of a general right of all persons to use water for domestic and stock supply.[54] Further, the *Water Privileges Act* expanded the rights of companies (empowered under an act of the province) to use water and conduct work on riparian lands "as the judge may deem expedient," and acquire any other rights not specifically mentioned which "may, in the opinion of the judge, be reasonable and proper."[55] The *Water Privileges Act* paved the way for miners to gain access to water in aid of mining activities that would previously have been prohibited by common law riparian rights.[56]

1892: Extralateral rights (the rights of a mineral claim holder to follow a vein outside the boundary of their claim) are eliminated in BC

On April 23, 1892, the *Mineral Act, 1891* was amended to extinguish extralateral rights in BC.[57] Prior to 1892, the holder of a mineral claim was entitled to follow a vein (a sheet-like area of crystallized minerals) which extended outside the boundary of their claim, even if it went under the boundary of an adjacent claim and interfered with their operation. Following the 1892 amendment, boundary lines of claims continued vertically downward and did not allow for mineral claim holders to pursue veins that continued outside of their boundary. [58] However, existing extralateral rights granted under former Acts were not affected by the change.[59]

The change was in response to costly litigation of extralateral rights claims. The case that set precedent for extralateral rights conflicts in BC was *Iron Mask Mining Co v Centre Start Mining Co*.[60] In this case, Centre Start Mining corporation claimed they had a right to follow a vein from their land which extended under Iron Mask's land. This was the "most expensive and protracted mining litigation in [BC] prior to 1900."[61]

This coincided with a time in the 1890s where the mining industry was shifting from small-scale mining projects working on small veins of silver and gold to large-scale projects with large low-grade deposits of base metals. This amendment allowed for large mining companies to emerge and develop without delays or costs from legal battles around extralateral rights.[62]

1895: All government offices related to mining are unified under one bureau

In 1895, all existing government officials and agencies relating the regulation of the mining industry in the Province were brought together to create the Bureau of Mines.[63] Under the *Bureau of Mines Act*, a position was created for a provincial mineralogist who would make recommendations to the provincial government on the development of technical mining laws and regulations.[64] This bureau and position indicated the provincial government's recognition of the increased complexity of mining activities in the province that were no longer just restricted to small scale prospectors and panning for placer gold.

1900-1950

1911: The Mineral Easements Act, 1911 is introduced and allows mineral claims holders to apply for rights of way that can last for generations

On March 1, 1911, the *Mineral Easements Act, 1911* was introduced.[65] This Act established requirements for miners seeking a right-of-way over land for the purposes of mining activities, including application, notice, measurement and compensation requirements. The Act applied to owners or holders of mineral claims under the *Mineral Act* or the *Placer Mining Act*, whether land was granted by the Crown or held on record. The *Mineral Easements Act, 1911* did not require that an owner of land consent to a miner's right-of-way, as long as proper notice was given. The Act required that a mining right of way applicant provide 30 days' notice to the land owner and/or any mineral, coal or timber claim holders registered in the area across which works were to be constructed. It also required that compensation be paid by the miner/mining company prior to access. If parties could not agree on compensation for the right-of-way, the Act provided for a mandatory arbitration process to take place under the province's *Arbitration Act*.

While the title granted to a successful applicant would be an easement only, all benefits and burdens of the right-of-way would enure to heirs, executors, administrators, successors and assignees of the persons affected. Only thirty days' notice (including an advertisement published in the British Columbia Gazette and in a local newspaper for one month) was required for the establishment of a right of way that could last over an area of land for generations and permit the construction of a pipeline, tramway and movement of heavy machinery. However, rights of way requiring construction would not be granted on any lands where buildings had been erected or which were being used for agricultural

purposes. Today, the ability for mining proponents to secure a right of way over private land, without the consent of the landowner, is preserved under section 2 of the *Mining Right of Way Act* – a legislative successor of the *Mineral Easements Act, 1911*.[66]

1911: Local farmers complained of cyanide waste from the Nickel Plate Mine mill in Hedley destroying a water supply near Keremeos

The Nickel Plate Mine operated intermittently between 1898 and 1996.[67] At the turn of the century the mill was depositing cyanide laced tailings into a nearby creek. Farmers complained about this pollution in the Similkameen River in 1911, but little was done as the river was not seen as a salmon stream. Even with the installation of some settling tanks, further complaints were made about water quality downstream in 1916 and 1918. Pollution from this operation and the Copper Mountain mine continued, with complaints also coming from across the border in Washington State.[68] Some waste rock dump reclamation occurred at the Nickel Plate Mine between 1992 and 1993.[69]

1912: Water pollution from gold mining in Salmo River Watershed first reported

In 1912, gold operations in Sheep Creek were reported to the provincial game warden to have killed all the fish in the Salmo River.[70] The responding federal fisheries investigator was reported to have said that "It would be a very grave mistake on the part of the Department [of Fisheries] to do anything that would in any way hamper this very important industry."[71] The Salmo River watershed continued to have contamination issues from mining in the 1940s and 50s. In 1994 mercury, heavy metal and arsenic contamination was discovered at the Second Relief Mine in the Salmo River watershed. A report issued indicated that this type of contamination was likely typical of old mines in the region.[72] In 2000, studies revealed parameters within the Salmo River and in the Yankee Girl tailings pond exceeded provincial water quality guidelines.[73] In 2002, metal leaching and acid rock drainage from the Yankee Girl Mine was discovered. Despite the discovery of contamination issues from as early as 1912, remediation of the Yankee Girl Mine was not initiated until 2007.[74]

1917: Mineral Survey and Development Act introduced government subsidies for mining activities and introduced government funded surveys of mineral deposits to encourage mining development

On May 19, 1917, the *Mineral Survey and Development Act* was introduced, which expanded the work of the existing Bureau of Mines and doubled the number of research staff working in the Department of Mines.[75] The Department of Mines had been created in 1899 by the *Department of Mines Act*. Upon its creation in 1899, the Bureau of Mines continued as the technical arm of the Department of Mines.

The 1917 *Mineral Survey and Development Act* divided the Province into six separate districts and established six Resident Engineers that would oversee any survey work done within each district. Together, the Resident Engineers would ensure that a survey of the entire Province would be undertaken to determine areas where there was mineral potential. The Resident Engineers were directed to publish the survey results for use by the mining industry. The survey was to be funded by the Province and demonstrates a clear extension of the Department of Mines powers beyond just a research and regulatory body.[76] Further, in addition to conducting preliminary survey work to aid mining companies in choosing profitable areas to stake their claims, the Act also authorized the Minister of Mines to pay for exploratory drilling and preliminary work on leased mine sites. Finally, the Act required persons to take out security to protect the wages of any miners under their employ and established a vetting system for inaccuracies reported by mining speculators of their claims to investors. Ultimately, the Act established several important subsidies for the mining industry and introduced several protective policies aimed at avoiding individual mine failures and protecting the industry and its employees.

1943: Agreement with federal government on mineral tenure granted jurisdiction to the province for mineral development on "Indian Lands" and paved the way for mining rights of ways to be developed without Indigenous consent

On January 26, 1943, the provincial government reached an agreement with the federal government that granted jurisdiction to the province for the development of all minerals and mineral claims, located on Indian reserves in the Province.[77]

While the *Constitution Act, 1867* established that the provinces hold all lands located in their province and minerals under those lands, in 1912, the Province of British Columbia agreed to transfer jurisdiction over all Indian reserves within the province to the federal government.[78] This conveyance to the federal government included the right to base minerals beneath Indian reserves. However, the 1912 agreement did not convey any rights to *precious* minerals under Indian Reserves (i.e. gold and silver). Instead, the right to precious metals was retained by the Province. The purpose of the 1943 Agreement was to address the impracticality of the Province only having beneficial ownership over precious minerals, which could not be mined without disturbing and impacting upon base minerals.[79] The effect of the 1943 Agreement was to ensure that all development of minerals in Indian reserves would be subject to the Province's laws.[80]

However, the Agreement provided that both provincial and federal officials would have to approve any mineral activity on a reserve. This also had the effect of bringing Indian reserves under the province's *Mining Right of Way Act,* and allowed miners and mining companies to establish rights of way across Indian Reserves via the application process laid out under the act, with the added step of requiring the permission of the reserve's Indian Agent (notably, not the Indigenous government).

Further, the Province's Department of Mines could collect all revenue from mining activities on Indian reserves (i.e. any purchase money, rent, claim recording fees, royalties). The Department of Mines was required to remit half of this collected revenue to the federal government.[81]

The 1943 Agreement demonstrates the type of negotiations and decisions that were undertaken between the province and federal government concerning First Nations' land with no consultation or involvement of First Nations peoples. The 1943 Agreement sets out how different rights to reserve land have been divided between the federal and provincial governments with no discussion of the jurisdiction of First Nations' governments or their rights to the land.

1948: Major failure of Sullivan Mine tailings containment, resulting in 1 million tons of waste released

On March 2, 1948, a major failure of the Sullivan Mine's tailings containment facilities resulted in the release of 1 million tons of waste.[82] These facilities were non-engineered filling of valleys and depressions meant to contain the tailings from the mine. Another failure of the Iron Dyke dam in 1991 at the mine was contained on the property.[83] The Sullivan mine had operated since 1909 and was closed in 2001.[84] In addition to the breaches of the dykes in 1948 and 1991, acid mine drainage was detected at the mine sometime prior to 1950. The surface water and groundwater around the site were impacted by the acid rock drainage, and pre-reclamation studies detected elevated levels of cadmium, zinc, arsenic, iron and lead.[85] Soil and vegetation also had elevated levels of metals.[86] Reclamation activities began at the mine from as early as the 1960s.[87] While post-closure remediation of the mine was considered complete in 2010, the site requires ongoing monitoring and maintenance that continues under Teck to the present day.[88]

1948: Amendments to the Mineral Act ensured that all future grants of mineral rights would be subject to royalties

On April 28, 1948, *the Mineral Act Amendment Act, 1948* amended the *Mineral Act* to ensure that all grants of mineral rights after May 1948 would be subject to royalties.[89] The amendments provided that any failure to pay royalties by a grant holder could result in forfeiture of the grant. The Act also laid down conditions under which mineral claim holders may be able to obtain specific surface rights to work their claims.[90] Prior to 1948, the province was not collecting any royalties through the grant of mineral rights to miners.

1950-2000

1956: The Pollution Control Act was introduced with little to no application to industrial or mining wastes

On March 2, 1956, the first *Pollution-control Act*, SBC 1956, c 36 was assented to, but with limited scope. The Act only applied to municipal lands with a main focus on municipal sewage and drainage systems, rather than mines. Therefore, this first pollution control legislation had limited application to mines in BC, as it applied only to municipal land.[91] Industrial or mining wastes were not explicitly included in the definition of "works" which were subject to Pollution Control Board regulation.

1957: The province stopped issuing outright Crown grants of mineral rights and began to issue renewable leases while maintaining Crown ownership over minerals

On March 28, 1957, the province's system of granting outright mineral rights was replaced with a system whereby the Crown would grant applicant miners and mining companies a twenty-one year renewable lease over minerals in a claim area.[92] Because the province was no longer providing out-right grants, and were maintaining legal ownership over minerals that were instead being leased, the Act ensured the province could more easily continue to regulate and tax minerals in the province.[93] However, upon lobbying of the mining industry, the granting of these twenty-one year leases became "virtually automatic" upon application.[94]

1957 -1960: The Mineral Property Taxation Act was introduced in 1957 and struck down by the Supreme Court of Canada in 1960

On March 28, 1957 the *Mineral Property Taxation Act* gave the provincial government the authority to levy a maximum 10% property tax on the value of any privately owned mineral deposits in the province.[95] Upon introduction, the tax was only applied to iron ore.[96] The new legislation provided for a provincial assessor who estimated the fair market value of the iron ore for taxation purposes.[97] The iron ore industry was upset with the *Mineral Property Taxation Act* and the tax they were being charged. The iron ore industry proved very effective in appealing their tax assessments under the new legislation.[98]

In addition, the iron ore industry, led by two American iron-ore mining companies (Utah and Texada Mines), challenged the validity of the *Mineral Property Taxation Act* in court. [99] In 1960, the Supreme Court of Canada concluded that the *Mineral Property Taxation Act* was *ultra vires* the provincial government and struck down the Act.[100] In reaching its decision, the court, by way of Mr. Justice Locke, opined that the iron ore industry had been "singled out from other mining activities and subjected to a tax at an extraordinary rate."[101] Ultimately, the Supreme Court of Canada found that the primary purpose of the *Mineral Property Taxation Act* was to prevent foreign exports of unprocessed iron ore and

to encourage the processing business in British Columbia.[102] The failure of the provincial government's attempt to apply a higher tax rate to the iron-ore industry, in part demonstrated the clout and resources of the mining industry in the province at the time.

1958: Mine tailings impoundment collapsed, pouring 100,000 tons of tailings into Toby Creek

On May 24, 1958, a small tailings impoundment at the Mineral King mine collapsed, dumping nearly 100,000 tons of tailings into Toby Creek - a medium sized tributary of the Columbia River.[103] This followed a number of complaints in 1956 to 1957 regarding the inadequacy of the tailings impoundment.[104] The provincial Game Commission laid charges under the *Fisheries Act* and the company was forced to pay a $20 fine plus $9 court costs – even this minor penalty resulted in backlash from the mining industry.[105]

In 1963, the company was again charged with deliberately diverting tailings into the creek, but the action was dismissed because the prosecution failed to prove that the accused intentionally dumped a deleterious substance into the water – this ruling hindered further prosecutions of mining companies under the *Fisheries Act*.[106]

Despite the effluent from the mine continuing to exceed the permitted levels for some metals into the 1980s, the water quality downstream continued to meet drinking water standards – although with elevated levels of barium from mine effluent.[107]

1961-1963: the territorial application of the Pollution-control Act was expanded

Regulations under the *Pollution-control Act,* SBC 1956, c 36 that came into force between April 1, 1961 and January 1, 1963 expanded the territorial application of the *Pollution-control Act* to all land draining into the Columbia River and its tributaries in 1961,[108] and into the Fraser River and its tributaries with some exceptions and most areas between Esquimalt and Nanaimo on Vancouver Island in 1963.[109] Although these regulations expanded the territorial application of the *Pollution-Control Act* beyond municipal lands, these amendments did not change their limited application to mining and other industrial waste. The Act continued to be focused on municipal waste discharges.[110]

1965: The Pollution Control Act was amended to regulate mining and other industrial waste

On March 26, 1965, the *Pollution-control Act Amendment Act, 1965,* SBC 1965, c 37 expanded the definition of "works" under section 2 of the *Pollution-control Act,* RSBC 1960, c 289 to include any outlet for industrial waste, meaning that mining and other industrial waste flowing out of a drainage outlet was now regulated under the pollution control regime.[111] Jurisdiction over pollution control was also moved from the Minister of Municipal Affairs to the Minister of Lands, Forests and Water Resources.

This increased the Pollution Control Board's jurisdiction from being municipally focused to regulating industrial discharges provincially through a permitting process.[112]

1967: New Pollution Control Act prohibited all discharge of wastes to land or water without a permit and expanded the definition of "pollution"

On March 23, 1967, most of the *Pollution Control Act, 1967,* SBC 1967, c 34 came into force, replacing the previous 1956 legislation and creating a Director of Pollution Control to investigate pollution, issue permits, and punish violations. On January 1, 1970, section 5 of the Act came into effect, which prohibited the discharge of any waste materials to land or water unless a permit was obtained from the Director.[113] The Director was given the discretion under s. 5(2)(d) and (e) to require an applicant to submit additional plans or give security.[114] The Director under s. 10 could also order any person to increase treatment or cease discharges to the environment. The definition of "pollution" was changed from a substance that in the opinion of the Pollution Control Board was detrimental to health, sanitation or public interest, to the introduction of a substance to land or water that could substantially impair or alter the usefulness of land or water. This change expanded regulated "pollution" to include substances with a range of effects that extended beyond a public health and sanitation focus.[115] Outcry from the Pollution Control Board's approval of an application from a mine to discharge tailings into Buttle Lake in Strathcona Provincial Park was attributed to the development of this new legislation.[116]

As an example of the Pollution Control Board's new role, in 1971, the Pollution Control Board included unprecedented, stringent conditions in the waste discharge permit for the Island Copper Mine, which planned to dispose of mine tailings into the ocean. These conditions included independent environmental monitoring and the construction of an emergency tailings facility. Although acid rock drainage and damage to the benthic invertebrates did occur as a result of this project, the long-term effects were limited.[117] The monitoring of the project likely allowed for acid rock drainage to be collected and treated, relatively soon after its detection in the 1980s.[118]

1968: Amendments to the Pollution Control Act increased penalties and pollution prevention funding while restricting public participation

On April 6, 1968, the *Pollution Control Act (Amendment)* 1968, SBC 1968, c 38 increased penalties for non-compliance with the legislated permitting process. The *Pollution Control Act (Amendment)* also increased federal funding for pollution prevention and mitigation projects. The amendment allowed for a permit to be suspended or cancelled and introduced a summary conviction offence for discharging waste without a permit.[119] In addition, the amendment gave British Columbia the ability to enter into agreements with Canada for pollution prevention and containment projects drawing from the federal Consolidated Revenue Fund.[120]

However, the number of people able to file objections against permit applications was narrowed by limiting the class of persons who could make such an objection to those with a land or water interest that could potentially be affected by the permit.[121] This change was possibly in response to the wide public outcry and large community opposition to the approval of a tailings pond in Strathcona Provincial Park (see discussion at 1967: New Pollution Control Act above).[122]

1969: Mining companies required by law to protect and reclaim all lands disturbed by surface mines

On April 2, 1969, *An Act to Amend the Mines Regulation Act,* SBC 1969, c 18 and the *Coal Mines Regulation Act,* SBC 1969, c 3 came into effect.[123] Section 11 of the *Mines Regulation Act,* SBC 1967, c 25 and section 8 of the *Coal Mines Regulation Act* required that all owners, agents or managers of a surface mine carry out a program to protect and reclaim disturbed land and water and complete this program when the mine was abandoned or discontinued. These sections also required that prior to the start of production at a surface mine, mine owners, agents or managers had to file a report to the ministry for approval that included details of a reclamation and conservation plan for affected lands and watercourses. The province could decide to either approve or reject the plan.

Further, these amended sections provided that the company could either continually reclaim the surface of the land during production or deposit a security with the Minister of Natural Resource Operations that would cover the cost of the reclamation plan. If the plan was carried out in a condition satisfactory to the province, the mining company or owner was entitled to have their security returned. This new system was intended to ensure that reclamation would be carried out by the mine owners so that the impact of mine operations on the environment would be minimized.

1970: The Pollution Control Act was expanded to require permits for air pollution

On April 3, 1970, *An Act to Amend the Pollution Control Act, 1967,* SBC 1970, c 36 expanded the definition of "pollution" and "contaminant" in the *Pollution Control Act, 1967* to require that permits would also be needed for works causing air pollution.[124] This meant that mines discharging wastes to air would need an air pollution permit.

1973: Amendments to the Mineral Act required mining lease applicants to submit production and reclamation plans prior to beginning mining production

On August 1, 1973, a series of legislative changes to the *Mineral Act* came into effect. The Legislature added section 64 to the Act which required every mining lease application in the province to be accompanied by a "production plan" detailing the economic feasibility of the mining project, the applicant's plans for ecological reclamation, and the applicable

safety standards relevant to the mining project.[125] Section 64 also required the applicant to detail how their production plan would utilize the "best possible method of producing the minerals."[126] Section 65 of the Act allowed for the province to revoke a mineral lease and order production to cease if a lessee failed to comply with the terms of their lease – which included compliance with the production plan.[127] Previously, the claim holder had the right to obtain a lease upon meeting application requirements - including meeting certain work requirements on one's claim. The 1973 amendments provided the government with some discretionary power to decide whether to issue a mineral leases, based upon the plans and information submitted by the applicant.[128]

1973: Pollution Control Objectives were first established for Mining

In November 1973, the Pollution Control Board first set Pollution Control Objectives for Mining, Smelting and Related Industries under the authority of subsections 4(a) and (b) of the *Pollution Control Act*.[129] These objectives were non-binding guidelines that were subsequently reviewed in 1979 through a public inquiry process. The purpose of this objective setting process was to set both ambient guidelines for environmental monitoring and to guide the setting of effluent permit requirements.[130]

1974 - 1976: Additional royalties were introduced for designated minerals in 1974 and then subsequently removed in 1976

On June 20, 1974, the *Mineral Royalties Act* was introduced.[131] This Act imposed a 5% royalty on the "net value" of all designated minerals. The Act also imposed an incremental royalty, which increased the royalty owed by the producer by 50% when the gross value of the mineral exceeded the basic value of the mineral (the average mineral price over the preceding 5 years) by over 20%.[132] These royalties were strongly opposed by the mining industry.[133]

After the 1975 provincial election and a change in government, the *Mineral Royalties Act,* SBC 1974, c 54 was repealed by the *Mineral Resource Tax Act,* SBC 1976, c 31. Introduced on April 1 1976, the *Mineral Resource Tax Act* abolished the previous incremental mineral royalty regime.[134] The *Mineral Resource Tax Act* effectively lowered taxes paid by mining producers to levels paid prior to 1974.[135]

1976: Amendments to the Pollution Control Act increased fines and penalties and expanded the Director's powers to issue pollution abatement orders

The *Pollution Control (1967) Amendment Act, 1976*, SBC 1976, c 40, which came into force on June 30, 1976, expanded the Director's discretion to issue pollution abatement orders by allowing for a Director to issue a pollution abatement order before an order of non-compliance.[136] The maximum fines under the Act for polluting were increased from $1000 to $10,000 and the maximum jail sentence from three months to one year.[137]

The amendment gave the Director greater flexibility and discretion to respond to emergencies and issue pollution abatement orders. The amendment also increased maximum fines in order to try to make penalties a sufficient deterrent for larger polluter corporations.[138]

1977: Authority to declare pollution emergencies and recover cost of clean-up was granted under the Pollution Control Act

On April 6, 1977, the Minister was granted the authority to declare a pollution emergency in the event of a pollution requiring immediate action under section 26 of the *Pollution Control Act, 1967.*[139] Under the added section 26, the Minister could file a certificate of costs and expenses incurred in dealing with the spill in the BC Supreme Court to be deemed as a judgment against the named person who caused or permitted the pollution and who was liable for the costs and expenses incurred.[140]

This amendment gave the Minister the discretion to deal with spills and other pollution emergencies in BC. It signaled a shift towards a more "polluter pays" system. Although the Legislature debated adding the need for a bond system for oil tankers and other large polluters, this was not included as part of the amendment at this time.[141]

1977: Mineral Act, 1977 replaced the Mineral Act, 1960, removing detailed production plan requirements and restoring the automatic right to obtain a mineral lease

On September 1, 1977, the *Mineral Act 1977* replaced the *Mineral Act* of 1960.[142] This legislation repealed the requirements, introduced by the previous government, for mining companies to obtain ministerial approval of a detailed production and ecological reclamation plan before obtaining a mineral lease and starting operations. This production plan requirement had been heavily criticized by the mining industry.[143]

The *Mineral Act 1977* replaced the previous production plan regime with a much more lenient requirement for the submission of certain technical data.[144] The right to obtain a mineral lease when basic information requirements were submitted was restored. The Act removed the Minister's discretion to refuse a mineral lease grant when production and reclamation plans did not satisfy the Minister that it was in the public interest to approve the grant. This non-discretionary mineral lease application system remains in place today. The legislation also restored the "right to mine" to free miners and holders of mineral claims. These changes were at least partially in response to public pressure and lobbying mounted by the mining industry.[145]

1980: Provincial moratorium declared on uranium mining

On February 27, 1980, the provincial government introduced a moratorium on uranium exploration in the province.[146] The ban made BC a no-go zone for uranium in response to the anti-nuclear sentiment in the province.

Premier Bill Bennett had established a royal commission to look at uranium mining in the province in 1978 (and stopped all exploration in the meantime). Leading up to the moratorium in 1980 there were several protests against uranium mining.[147] In 1980, Bennett cancelled the royal commission before it was completed and declared a seven-year moratorium on uranium mining in BC citing health risks. However, the moratorium lapsed in 1987 and subsequent governments did not move to update it. Companies generally focused their exploration campaigns on other metals because there was still a widespread view that uranium production would be unpopular in the province. In 2008, the provincial government reinstituted the ban as companies began exploring for uranium in the province again as a response to a rise in uranium prices and increased interests in uranium-fed nuclear power plants.[148]

1981: British Columbia's first environmental impact assessment and environmental protection order powers (both discretionary) are introduced under the Environment Management Act

On August 7, 1981, sections of the *Environment Management Act*, SBC 1981, c 14 came into force, giving the Minister discretionary power to order environmental impact assessments. Sections establishing the Environmental Appeal Board came into force on January 1, 1982.

The legislation gave the Minister of Environment broad powers over environmental management planning, projects, policies, research, and education (s. 2), requiring environmental impact assessments (s. 3) and issuing environmental protection orders (s. 4). The Minister was also given the power to declare an environmental emergency, and associated emergency powers (s.5). "This legislation allowed the Minister of Environment to require 'any person who proposes to do anything that would have a detrimental environmental impact' to prepare an environmental impact assessment."[149] This expanded the Minister's powers to assess mining plans prior to construction and to respond to environmental emergencies including through greater cost recovery measures for environmental emergencies.[150] This was the first broad requirement for environmental impact assessment in BC.[151]

1982: The Waste Management Act replaced the Pollution Control Act, introducing strict liability for spills and creating a framework for "special waste disposal", now known as hazardous waste

On September 16, 1982, the *Waste Management Act,* SBC 1982, c 41 came into effect, replacing the *Pollution Control Act* and creating a framework for "special waste" (the term used for "hazardous waste").[152] The definition of "waste" included air contaminants, effluents and special waste. Section 3 of the Act prohibited the introduction of waste produced by industry without a permit, approval or order. Section 4 of the *Act* prohibited the storage of "special waste" above prescribed amounts, but relied on later introduced regulation to define "special waste".

The *Waste Management Act* was one of the first statutes to impose strict liability for waste disposal and spills.[153] Section 10 of the *Act* gave the Minister power to order anyone with possession, charge or control of a polluting substance to investigate, prepare a contingency plan, and construct or alter their works at that person's expense to abate a spill. Section 10(6) created strict liability for any person in possession, charge or control of a polluting substance should they be prosecuted.

1984: The Special Waste Regulation was introduced, which would have broadly defined "special waste" to capture mining effluent, but never comes into effect

On March 6, 1984, the *Special Waste Regulation,* BC Reg 42/84 was introduced. After existing in legislative limbo for four years, and never coming into effect, the regulation was repealed on April 1, 1988.[154] This proposed regulation created a broad definition of "special waste" under the *Waste Management Act*.[155] Section 7(1) exempted tailings storage facilities from special waste transport requirements where waste stayed on the property where the waste was produced. Otherwise, the regulations applied to effluent runoff and other mining wastes that moved or were transported off of the mine property. Therefore, had this Regulation come into force, mining wastes could have been regulated according to the *Waste Management Act* similarly to other hazardous wastes.

1987: Province begins remediation and monitoring of the acid rock drainage into the Tsolum River left behind by the Mount Washington Mine in the 1960s

The Mount Washington Mine started open-pit mining in 1964.[156] The mine operated for only 2 years, closing in 1966. The mine left behind rock with pyrite waste causing copper-bearing acid rock drainage that continues to leak into the Tsolum River until the present day.[157] By the 1980s, almost all fish had disappeared due to acid rock drainage. Previously, the river supported large populations of salmon, steelhead and cutthroat trout.[158]

In 1987, the province began researching and monitoring the acid rock drainage. [159] From 1987-1992, $1.5-million in remediation funding was issued from the Ministry of Energy,

Mines and Petroleum Resources. [160] Further remediation projects occurred between 2003 and 2010. Copper levels in the river decreased by 50% between 1998 and 2010 and fish populations have been slowly increasing; these changes are likely attributable to the remediation of the site.[161] Remediation projects continue in the area.[162]

1987: Increased regulation of "special waste" through amendments to the Waste Management Act

On July 16, 1987, the *Waste Management Amendment Act, 1987,* RSBC 1987, c 51 added more requirements for the storage of "special wastes." Section 3.1 of the *Waste Management Act* was added to require that persons may only release a "special waste" from confinement with a permit, approval, order, management plan, or according to the regulations. Section 33.1 was also added to allow for the Minister to create a Waste Management Trust Fund.[163] These amendments limited the storage and transport of special wastes, including certain mine tailings and waste rock.

1988: The new Mineral Tenure Act introduces a streamlined, common administration system for mineral and placer rights, increases the security and length of mineral tenures, and introduces additional notification requirements

On August 15, 1988, key sections of the *Mineral Tenure Act*[164] came into force, combining the *Mineral Act*[165] and the *Mining (Placer) Act*[166] into a single piece of legislation. These changes introduced a "common administration system for mineral and placer rights in British Columbia."[167] The *Mineral Tenure Ac*t aimed to increase security of tenure, extended the length of time a mineral lease could be granted for from 21 to 30 years (approximately 40% longer), and reduced application requirements for obtaining both mineral and placer claims and leases.[168] Further, the definition of a mineral was expanded to include industrial minerals, such as diatomaceous earth and bentonite.[169]

While reducing application requirements, the *Mineral Tenure Act* did introduce important notification obligations that required a free miner to give notice to surface owners prior to commencing any exploration, development or production activities which would disrupt the surface of the land.[170] Previously, the provision of notice to private landowners was only required when a miner was going to commence work for the development or production of a mineral.[171] Finally, while under the previous *Mineral Act* the Minister could restrict the use of surface rights in a claim and a lease, the new *Mineral Tenure Act* strengthened the rights provided by a mineral lease by limiting this power to claims only.[172]

1988: Tailings waste and mining waste rock exempted from limitations on the construction and operation of special waste facilities under the Special Waste Regulation

On April 1, 1988, the *Special Waste Regulation,* BC Reg 63/88[173] came into effect, limiting the definition of "special waste" in the 1984 *Special Waste Regulation* (not in force) to only include dangerous goods, waste oil, waste asbestos, waste pest control substances and leachable waste. In the 1984 Regulation, the definition of "special waste" could have included mining wastes.

The regulation increased restrictions on special waste including prohibiting the construction of special waste facilities on precarious sites, such as those susceptible to floods or tsunamis, as well as park and wildlife areas (section 3). The regulation also set out operational requirements including spill protection and reporting as well. **However, facilities that managed mine tailings or mine waste rock were specifically exempted from these construction and operational requirements under s. 2(9).[174]**

1989: Caribou Gold Quartz and Island Mountain Mines tailings create a potential health risk due to arsenic, lead, and mercury in the environment

The Caribou gold quartz mine established the town of Wells, BC.[175] Solid tailings waste deposited within the townsite of Wells, BC were identified as a health risk to individuals who came into contact with the sediment between 1987-1989. [176] In 1989, acid mine drainage from the mine site and tailings waste sites were evaluated as a risk to aquatic life. [177] Further, waste tailings were discharged into Jack of Clubs Lake during operation of the mines throughout the 1930s – 1960s. [178]

1989: Tailings operation near Grand Forks spills cyanide

On June 12, 1989, the BC Ministry of Environment declared an environmental emergency after cyanide used in a heap leaching operation by Sumac Resources Ltd. was discovered leaching into surrounding groundwater.[179] The government completed a $1 million environmental cleanup, paid by taxpayers, to prevent contamination reaching a nearby river.[180] A total of $200,000 in fines were laid against the two companies involved and a director of both companies.[181] Analysis by the Ministry of Environment concluded that the cyanide contamination stayed local. [182]

1989: Maximum penalties for most pollution offences are increased twenty-fold

On July 17, 1989, the *Waste Management Act 1989*, RSBC 1989, c. 62 increased the maximum fines for many offences by twenty fold (e.g., introducing waste while not complying with waste permit increased from $50,000 to $1,000,000 maximum fine).[183] New sections with additional fines were also added to recuperate any monetary benefits

gained in commission of an offence and to target those found to have intentionally caused harm to the environment or human health.[184]

1989: Placer mining activities are exempted from waste discharge permit requirements

On April 17, 1989, the *Placer Mining Waste Control Regulation*, BC Reg 107/89 exempted placer mining activities[185] from needing a permit or approval under the *Waste Management Act.*[186] This regulation meant that waste discharges during placer mining was, and continues to be, relatively unregulated in BC. This regulation was amended in 2004 along with the new *Environmental Management Act;* however, the effect of the regulation still meant that placer mining activities were exempt from the controls in the Act meant to prevent waste discharges to water.[187] This exemption contributes to the overall concern that placer mining is an activity with relatively little oversight by the Ministry of Energy and Mines and the Ministry of Environment.[188]

1990: Province introduces first remediation requirements for contaminated sites

On August 31, 1990, the *Waste Management Act* was amended to include provisions regarding the remediation of contaminated sites.[189] The amendment provided for certificates of compliance for the remediation of contaminated sites, and also enabled the Minister to order remediation without a prior declaration of an environmental emergency under the *Environmental Management Act*.

This was the provincial government's first step in increasing the regulation of contaminated sites.[190] There were few guidelines provided for establishing when parties would be liable under this new legislation.[191] The government still lacked the ability to undertake clean-ups themselves at the expense of the property owner.[192]

1991: Large ore-producing mines were required to conduct an environmental assessment before obtaining a project approval

On August 30, 1991, the *Mine Development Assessment Act,* SBC 1990, c 55, s 2 came into effect.[193] This legislation established a clear non-discretionary requirement for the environmental assessment of mines. The legislation required new mines capable of producing 10,000 tonnes of ore per year, or those designated by the chief inspector, to submit an application containing "information, analyses and an environmental protection plan" to the Minister of Energy and Mines and the Minister of Environment for approval.[194] The ministers could approve or reject an application or refer it to an independent assessment panel to conduct an inquiry.[195]

1994: The Mines Reclamation Fund is introduced and the chief inspector of mines is given the discretionary power to require mining proponents to post security

On August 26, 1994, the *Mines Reclamation Fund Regulation,* BC Reg 287/94 came into effect, establishing the mine reclamation fund described in sections 10(4) and 12 of the *Mines Act*, RSBC 1996, c 293.[196] The legislative change provided the chief inspector with the discretionary power to require mining proponents to provide security amounts for reclamation as a condition of obtaining a mine permit. The purpose of the fund was "to provide for protection of, and mitigation of damage to, watercourses and cultural heritage resources affected by the mine."[197] The amount of security required was, and continues to be, decided on a case by case basis by the Chief Inspector of Mines.[198] There is no legislated minimum for the amount of security that must be posted. This discretionary security scheme remains the law today.

1994: The Mines Regulation provides mining inspectors with investigatory powers

On April 22, 1994, the *Mines Regulation,* BC Reg 126/94 gave mine inspectors the ability to investigate mine related health and safety concerns.[199]

1995: BC Environmental Assessment Act and Reviewable Projects Regulation created more detailed requirements for environmental assessments for major projects, including large mines

On June 30, 1995, the *Environmental Assessment Act,* SBC 1994, c 35 came into effect,[200] creating a general non-discretionary requirement for detailed environmental assessments for major projects.

According to the *Environmental Assessment Reviewable Projects Regulation,* BC Reg 276/95, a mine required an environmental assessment where the completed mine would have a production capacity of 25000 tonnes of ore or greater annually. A modification to a mine would require an EA where production capacity would increase to 25,000 tonnes per year or more or where there would be a disturbance of 250 ha not previously disturbed by mining activity or where the new disturbance would be 35% or more of the area previously disturbed by mining activity. Placer mines would only require an environmental assessment where a completed mine would have 500,000 tonnes or more of pay-dirt per year.[201]

By replacing the *Mine Development Assessment Act,*[202] the *Environmental Assessment Reviewable Projects Regulation,* BC Reg 276/95 increased the threshold capacity for mines requiring environmental assessment, and would have therefore reduced the number of mines requiring environmental assessments.[203] This legislation added greater procedural detail to previous environmental assessment legislation and policies including mandatory public notice provisions, giving the Environmental Assessment Board powers of inquiry,

and establishing project committees that would include federal, provincial, municipal and Indigenous government representatives to make recommendations to ministers.[204] The legislation had clear purpose statements including the promotion of sustainability and prevention and mitigation of adverse effects.

1995: Mineral Tenure Amendment Act prohibited interference on private lands, clarified that the definition of mineral would not include rock used for construction purposes, and added bulk sampling to the definition of exploration and development

On December 1, 1995, sections of the *Mineral Tenure Amendment Act, 1995,* SBC 1995, c 50 came into effect, which changed mineral rights and activities on private lands and altered the definition of mineral.[205] Importantly, the amendment prohibited free miners and recorded holders from interfering with *any* operation, activity or work on private land and thus placed important limitations on the historical right of free entry for mining activities. [206] In addition, it redefined the term "mineral" to clearly include rock used for non-construction purposes and exclude rock used for construction purposes.[207] For claims over private land prior to 1988, the legislation clarified that claim holders would likely not be able to assert claims over these industrial minerals that prior to 1988 were not within the definition of mineral.[208]

The amendment also allowed for claim holders to take bulk samples as part of exploration and development. This allowed for a recorded holder to take minerals from the claim for testing prior to having a mineral licence – an amendment made at the request of the mining industry.[209]

1997: Changes under the Waste Management Act increased the liability and regulation of contaminated sites

On April 21, 1997, Part 4 of the *Waste Management Act*, "Contaminated Site Remediation" came into force, along with the *Contaminated Site Regulation*, BC Reg 375/96.[210] The *Waste Management Act* amendment and *Contaminated Site Regulation* expressly stated who would be responsible for remediation and increased potential liability for mining companies.[211] The new changes under the *Waste Management Act* required that owners under the *Mines Act* provide site profiles to a district inspector when applying for a *Mines Act* permit, when applying for a permit amendment, or if they intended to abandon a mine.[212] The government could then order a site investigation at the expense of the mine owner or operator if they had a reasonable suspicion of site contamination.

The government was required to create a public site registry. Liability for remediation at contaminated sites extended to current owners/operators of the site, previous owners/operators, persons who produced or transported a substance and caused the substance to be treated in a way that caused the contamination, and other persons designated as responsible for remediation in the regulations.[213]

Liability could also extend to secured creditors who took on a role of becoming a registered owner in fee simple of the site or who exercised control over or imposed requirements on how the contaminants causing the contamination were handled, treated or disposed of. Owners and operators who could show that they were unaware, despite all appropriate inquiries, that the site was already a contaminated site would not be held liable. Those responsible for a contaminated site were absolutely, retroactively, jointly and severally liable to any person or government for reasonably incurred costs of remediation.[214]

Further, the amendments attempted to prevent orphan mine sites and gave the Minister the power to declare sites as orphan sites or high-risk orphan sites.[215] The government also retained the right to take further actions even if there was a remediation agreement in place if information or standards changed, or the responsible person did something to contribute to contamination after the previous remediation.[216]

The legislation created a much clearer framework for contaminated site assessment, remediation, liability and cost recovery than existed previously.[217] It significantly expanded liability for those defined as "responsible persons". In response to pressure from some stakeholders, the provincial government reviewed whether these provisions should apply to mines in 2001 and found that the contaminated sites provisions added more detailed, environment-focused ways to remediate mine sites than previous regimes under the *Mines Act* or *Waste Management Act* even if those other provisions could be adapted to create an equivalent framework.[218] By broadening the scope of the definition of contaminated site and defining remediation, these amendments strengthened contaminated sites remediation requirements.

1997: The Contaminated Site Registry is established under the Contaminated Site Regulation

On April 1, 1997, the *Contaminated Site Regulation,* BC Reg 375/96 came into force with the *Waste Management Act* amendments (above). The province created a public registry - called the Contaminated Site Registry - to document mining site cleanup milestones and general information acquired during their investigations. The site profiles, investigations, and remediation actions of government and corporations were now easily accessible to the public.[219]

1997: Amendments to the Waste Management Act expanded government powers to take spill response actions

On July 26, 1997, the *Environment, Lands, and Parks Statutes Amendment, 1997,* SBC 1997, c 18 amended the *Waste Management Act,* RSBC 1996, c 482. These amendments expanded government powers to respond to spills. Section 12.1 of the *Waste Management Act* was added to address spill response actions.[220] Section 12.1(4) allowed

for a regional waste manager to issue certificates to persons with possession, charge or control of the spilled substance to pay for the reasonable costs of government spill response actions.[221] "Spill" was defined broadly as the "introduction of a substance into the environment, whether intentional or unintentional, otherwise than as authorized" by the Act.[222] This included any spills from tailings storage or mine waste facilities. Further, new compliance and enforcement powers were introduced — such as the power to cancel a permit or approval by notice.[223] Overall, the amendment provided the province with additional tools to respond to spills at the expense of the person in possession, charge or control of the pollutant.

1999: Mineral tenure holders were provided with the right to compensation if the creation of a park prevented the development of their mineral claim(s)

On January 25, 1999, the *Mining Rights Amendment Act, 1998,* SBC 1998, c 10 and the *Mining Rights Compensation Regulation*, BC Reg 19/99 came into force. This amending legislation and regulation introduced the right of mineral tenure holders to be compensated when mineral tenures are expropriated for parks (i.e. when park creation meant that mining could not be done).[224] This new right to compensation was controversial. Members of the public were concerned that it could lead to the government paying significant compensation to a development company, where the development company may have only paid a tiny amount to locate and record the claim.[225] The Regulation provided that compensation would be based on the value of the claim, rather than the amount that the claims holder had invested in developing the claim.[226]

2000-2018

2001: Province received $30 million settlement from former Britannia Mine owners to address long-standing acid rock drainage issues

The Britannia copper mine operated from 1905 to 1974.[227] Acid rock drainage from the mine was first identified in the 1920s. However, little remediation action was taken until the mine owners were ordered to collect and treat the acid rock drainage in 1974.[228]

It was not until the 1990s, when changes to the *Waste Management Act* and the *Contaminated Sites Regulation* came into force, that the Province began pursuing the former owners of Britannia Mine for compensation for remediation.[229] The new changes specifically dealt with the liability of "former owners" and allowed the province to more easily seek compensation for remediation activities. In 2001, the province received a $30 million settlement in exchange for the former owners' indemnification.[230] In 2002, Britannia Creek was identified as one of the largest sources of metal pollution in North America, as a result of copper and zinc contamination – and the Creek remained largely empty of aquatic life.[231]

In 2005, a water treatment plant was installed and in 2011, salmon returned to the river.[232] Despite these settlement funds, taxpayers are estimated to have paid $46 million for the site to be remediated, including a water treatment plant expected to operate in perpetuity at a cost of $3 million per year.[233]

2002: Contaminated site profile requirement for mine permit applications repealed

On May 9, 2002, the Legislature repealed section 10(10) of the *Mines Act,* RSBC 1996, c 293, and removed the requirement for mine developers to submit a site profile prior to approval of a mine permit.[234] While a mine permit applicant could voluntarily submit a site profile, it was no longer a mandatory step in the application process. The site profile requirement provided a basic tool for identifying contaminated sites. Therefore, these changes reduced the chances that mine sites would be recognized and treated as contaminated sites.[235]

2002: Waste Management Act amended to limit mine owners' liability for contaminated sites

On May 9, 2002, the *Waste Management Amendment Act,* SBC 2002, c 34 added Part 4.1 of the *Waste Management Act,* creating a separate remediation regime for mineral exploration sites and mines from other contaminated sites. [236] Part 4.1 exempts exploration, mine development and placer mining activities from the remediation requirements under the *Waste Management Act*.[237] The *Act* exempts past owners/operators, and those current owners/operators who have posted security with the Chief Inspector of Mines, from needing to complete remediation of exploration sites; it also limits situations where owners and operators need to remediate "core areas" of mines.[238]

This amendment limited the Province's ability to issue remediation orders at active mine sites. Further, this amendment increased reliance on the *Mines Act,* RSBC 1996, c 293 bond requirements because the mining industry was now exempted from the financial security provisions under the *Waste Management Act*. [239] This change increased the risk that BC taxpayers would bear the responsibility for paying for environmental damage from mining activities.[240]

2002: Mineral Tenure Act amendment removed prohibition on miners interfering on private lands and clarified that land use designations or objectives would not prevent mining development

On November 29, 2002, amendments to the *Mineral Tenure Act*, RSBC 1996, c 292, removed the prohibition against free miners and recorded holders from interfering with any operation, activity or work on private land. [241] This prohibition had originally been introduced in 1995 by the *Mineral Tenure Amendment Act*.[242] Instead of an outright

prohibition, the amendments provided that interfering with privately held land was permissible, so long as it was minimal and the private owner was compensated.[243] These amendments removed the provisions designed to prohibit entry and use and replaced them with provisions designed to establish conditions and compensation for such use.

Throughout the 1990s, the provincial government lead significant community based land planning processes, which were aimed at promoting sustainable development of the Province's natural resources, and balancing economic and environmental health (i.e. by limiting development activities in areas identified as having high ecological value).[244] The amendments also clarified that these existing community based land use plans, land use designations and objectives, would not prevent or limit mining activity. Specifically, only certain legislated protections, such as park designations, could limit mining activities.[245] These amendments created a "two-zone system," which clearly identifies for industry proponents which land is "open or closed" to exploration and mining in the province.[246] These amendments were intended to "streamline processes and encourage mineral exploration by clarifying rights and cutting red tape."[247]

2002: Environmental assessment legislation weakened, fewer mines required to complete environmental assessments

On December 30, 2002, the *Environmental Assessment Act*, SBC 2002, c. 43 came into effect and lowered the requirements for environmental assessments in BC. The legislation no longer required the inclusion of municipal or Indigenous governments on project committees.[248] Additionally, proponents no longer had to consider alternative sites and methods for a proposed project in their environmental assessment application.

At the same time as the *Environmental Assessment Act* came into effect, a new *Reviewable Projects Regulation* was introduced. [249] The *Reviewable Projects Regulation* increased the thresholds for many projects, including mines and mine modifications.[250] The effect of the increased thresholds in the *Reviewable Projects Regulation* was to exempt smaller to mid-sized developments, including mines, from environmental assessment requirements. It was also suggested at the time that greater discretion included in the EA process meant that the EA process could be more easily "politicized".[251]

2003: Mineral Tenure Act and Mines Act amendments ensured that smaller mining projects were exempted from completing any environmental assessments, streamlined mine permit applications, introduced protections for cultural resources, and increased mine inspection powers

In 2003, the province introduced the *Energy and Mines Statute Amendment Act, 2003,* SBC 2003, c 1 to "improve client service by cutting red tape and streamlining regulation" and "encourage greater investment in the mining, oil and gas industries and energy sector, and reduce the cost of government."[252] This Act repealed section 43 of the *Mineral Tenure Act,* RSBC 1996, c 292 and removed the requirement for a mine development certificate under

the *Mine Development Assessment Act* or the *Environmental Assessment Act* for a mining lease.[253]

The purpose of these changes was to ensure that smaller mining projects exempted by the *Environmental Assessment Act* regulations would not be required to complete environmental assessments under the *Mineral Tenure Act.* The amendments also gave the Gold Commissioner the authority to establish and repeal mineral reserves, rather than the Minister.[254]

On June 20, 2003, amendments to the *Mines Act*, RSBC 1996, c 293 came into force. These amendments provided inspectors with additional powers to inspect mines and order remedial actions and changed the application requirements for permits.[255] Some of these changes increased application requirements. For example, section 10 now required a program for the conservation of cultural resources. However, many other changes were intended to "streamline" and deregulate the industry, such as giving the chief inspector the ability to exempt a mine from the Act if satisfied it was not being used for mining as defined by the Act, or if the primary purpose of the site was not a mining activity.[256] In addition, by removing the position of "district inspectors," the amendments removed the practice of having specific inspectors be responsible for a designated area of the province (i.e. area-designated inspectors were replaced with general inspectors).[257]

2004: New Environmental Management Act, Contaminated Sites Regulation, and Waste Discharge Regulation lower the waste disposal permitting and remediation requirements for mines

On July 8, 2004, the new *Environmental Management Act*, *Contaminated Sites Regulation, and Waste Discharge Regulation* came into force, significantly changing how waste discharges and contaminated sites were regulated.[258]

The *Environmental Management Act* prevented the ministry from re-opening certificates of compliance when environmental standards increased. This meant that the government was limited in its ability to require further clean-up of a mine site if it determined the site to be contaminated based on current scientific information.[259] In addition, the *Environmental Management Act* Part 5 maintained the 2002 amendments to the *Waste Management Act*, which limited the remediation orders that can be given to mining owners and operators.[260] The *Contaminated Sites Regulation* also increased reliance on "approved professionals."[261]

The *Waste Discharge Regulation* now only required a permit when there was a prescribed industry listed in the regulation. Although the Regulation listed "Mining and Coal Mining Industry" as a prescribed industry, the definition did not include exploration sites or gravel or sand quarries. The regulation also exempted any discharge of coarse coal refuse, waste

rock and overburden from the prohibition on introducing waste into the environment if the activity was permitted by the *Mines Act.*[262]

Industries, including aggregate mines, that were not included as prescribed industries became harder to regulate because they no longer required waste discharge permits under the new legislation.[263] Additionally, the changes increased reliance on approved professionals hired by mine proponents, which could increase conflict of interest issues in report writing and site assessment, and reduce direct government participation in planning and design.[264]

2004: Dyke at Pinchi Mine tailings facility failed, releasing tailings waste into the already mercury-contaminated Pinchi Lake

On November 30, 2004, a dyke that formed part of the tailings containment facility failed at the Pinchi Mercury Mine, spilling 6000 to 8000 cubic metres of waste water tailings, rock and dirt into Pinchi Lake.265 The Pinchi mine had operated from 1940 to 1975 and had been in a care and maintenance phase from 1975 to 2010.266 Even prior to the 2004 dam breach, mercury levels in fish were elevated and mercury in the lake sediments were "extremely high" because of the waste ore deposited in the lake in the 1940s.267 The owner, Teck Metals Ltd., undertook reclamation and decommissioning activities between 2010 and 2012 in cooperation with the Tl'azt'en Nation and the Nak'azdli Band to reduce the potential risk of mercury to wildlife for $22 million.[268]

2005: Introduction of Mineral Titles Online Registry allowed for staking of mining claims online

On January 12, 2005, the *Mineral Tenure Amendment Act, 2004,* SBC 2004, c 22 created the Mineral Titles Online Registry, which allowed for the staking of a mining claim online. This made the process significantly easier, faster, and cheaper, as proponents could now stake their claim using an online map and the click of a mouse, rather than having to visit the area and physically drive claim stakes into the ground.[269]

Since the online registry began in 2005, there has been an exponential increase in the number and area of claims staked across the province.[270] BC's online free entry staking system allows mineral claims to be staked and exploration activities to commence on First Nations' traditional territories without consultation or obtaining First Nations' free, prior and informed consent.[271]

2006: Historical contamination from the Sunro Mine is discovered in the Jordan River

The Sunro Mine operated between 1950 and 1974.[272] During its operation, large amounts of mine waste had been dumped into the Jordan River, and in 1957 coho and chum salmon disappeared from the Jordan River. The last pink salmon spawning in the river were recorded in the 1970s, and during this time period copper contaminated water continued

to seep into the river from the abandoned mine. In 1993 a mine inspector issued a letter stating that final reclamation had been found satisfactory. After a site is deemed clean, no further inspections are typically conducted. As a result, the province did not inspect the closed mine for over 20 years – during which the mine continued to actively contaminate the Jordan River and eliminated anadromous fish production.[273]

In 2006, the government was alerted to the extent of the ecological problems being caused by the decommissioned Sunro Mine when a BC Hydro study regarding salmon spawning implicated the historic mine in the "limits to spawning success in the Lower Jordan River" and its significant impact on water quality and spawning habitat.[274]

Reclamation of the decommissioned Sunro Mine is now in progress. In summer 2016, the Ministry of Environment designated the waste dump as a "High Risk" site and on August 25, 2016, the Ministry ordered Teck Resources to file a remediation plan to address the mining pollution by June 1, 2017.[275] A multi-stakeholder committee including Teck is now working on clean-up plans.[276] With an end to copper pollution, and adequate water flows aided by BC Hydro, there is hope that salmon stocks will be able to thrive again in the Jordan River in the future.[277]

2008: Uranium and Thorium Reserve Regulation clarifies that any new mineral claims will not grant rights to mine for thorium or uranium

On April 24, 2008, the Uranium and Thorium Reserve Regulation, BC Reg 82/2008 was introduced pursuant to the *Mineral Tenure Act.*[278] This regulation stated that any mining claims registered after the creation of the regulation do *not* grant the right to mine thorium or uranium in the claim area.[279]

2008: Mineral Tenure Act amendments expanded notice requirements for mining activities

On June 2, 2008, the *Mineral Tenure Act,* RSBC 1996, c 292 and *Mineral Tenure Act Regulation,* BC Reg 529/2004 were amended to require that any person beginning mining activities on private land had to give notice at least eight days prior to beginning *any* mining activity.[280] Thus, any free miner or recorded mineral tenure holder must now provide notice to a private landowner before entering onto their land and carrying out mining activities such as "prospecting, mapping, sampling and geophysical surveying activities" - in addition to activities that disturb the surface.[281] Previously, the provision of notice to private landowners was only required before carrying out a mining activity that used mechanical equipment to disturb the surface of the land. However, because First Nations' traditional territories are not recognized as privately owned land, this minimum eight days' notice requirement does not extend to these areas.[282]

2008: Revenue sharing policy introduced to facilitate sharing of revenue from mining with First Nations

On October 23, 2008, the province announced a revenue sharing policy with First Nations. Under this policy, the province would negotiate individual agreements with First Nations in the province to allocate profits from resource use in their traditional territories.[283] The agreements would be negotiated on a project-by-project basis, primarily through Economic and Community Development Agreements (ECDAs).[284] Developers were strongly in favour of the policy, as it granted them much more certainty and less protest to their operations at no cost — the revenue received by First Nations under the policy is allocated from royalties that were already being collected by the provincial government.[285] In August 2010, British Columbia became the first province in Canada to share mineral tax revenues directly with First Nations when two separate agreements were signed.[286]

2009: Environment Canada orders an immediate clean-up of the Tulsequah Chief Mine and its acid mine drainage into Tulsequah River

Copper, lead, zinc, silver and gold were mined at the Tulsequah Chief Mine on and off from the 1950s until 2008.[287] From at least 1957, acid mine drainage from the Tulsequah Chief Mine operations had been discharging into the Tulsequah River.[288] Mine tailings may have also contaminated the Taku River - home to five species of salmon and a "prime fishing spot."[289] In 2004, the Supreme Court of Canada upheld the 1998 environmental assessment for the re-permitting of the the Tulsequah Chief Mine and paved the way for mining operations to continue in the area until 2008.[290]

In 2009, Environment Canada ordered an immediate cleanup of the mine following lab studies that found the collected contaminated water from the Tulsequah Chief Mine caused 100% fish mortality.[291] In 2009, the mine owner set up an interim water treatment plant. This plant closed in 2012 when costs became too high for the operating company.[292] As metal concentrations in the waters near the mine continued to increase, the Ministry of Environment required the mine operator to commission its own Ecological Risk Assessment of the previous mine site.[293] Despite these initiatives, acid mine drainage continues to contaminate the Tulsequah River today.[294] In 2017, the Alaskan government sent a letter to the US State Department asking that actions be taken to address the "potential catastrophic effects on Alaska's communities" from Britich Columbia's mining activities. The letter specifically highlighted the Tulsequah Chief mine as an example of the province's "inadequate response" to mining contamination.[295]

2010: Kitsault Mine, Dolley Varden Mine, and Anyox Smelter found to have impacted Alice Arm, British Columbia

The Kitsault molybdenum mine operated from 1968 - 1972, and, after a decade of in-operation, resumed production in 1981-1982.[296] Over its production life, the Kitsault mine

was specifically exempted from regulations which would have controlled its mine effluent.[297] In 2009-2010, sediment samples were taken from Lime Creek in Alice Arm that found levels of metal in the sediment. The sampling indicated that the historic mining activities in the area were responsible for the presence of these metals.[298] The sampling also identified potential impacts to the sediment in Alice Arm from the Dolly Varden mine and the Anyox smelter.[299] The Anyox smelter operated from 1910 -1935, during which time it deposited slag waste into the marine environment, and continues to contribute metal loadings from acid rock drainage and exposed tailings.[300] Despite this history of contamination, a new mining project on the old Kitsault mine site was approved in 2014.[301]

2013: Amendments to Mines Act allowed the Lieutenant Governor to grant exemptions from obtaining mining permits

On September 1, 2013, the *Miscellaneous Statutes Amendment Act* introduced sections 10(0.1) and (1.1) to the *Mines Act.* These new provisions provided the Lieutenant Governor with the authority to exempt any person from obtaining a permit to start work in, on, or about a mine.[302] When the bill was enacted, Minister Rich Coleman stated that the change would allow mining companies to conduct low-risk explorations without going through a lengthy permitting process.[303] Coleman said the amendments were focused on small drill programs that would not require road-building. When this amendment came into force, the government also introduced *Permit Regulation,* BC Reg 99/2013. This Regulation exempted mines operated exclusively for or by the Ministry of transportation from mine permit requirements — so long as the mine is not a reviewable project under the *Environmental Assessment Act*.[304]

2014: Parks Act amended to allow for industrial feasibility studies and environmental assessment research in provincial parks

On March 25, 2014, the *Park Act* was amended to allow the province to grant park use permits for activities that are not related to the mandate and purpose of BC parks. Specifically, the amendments allow park use permits for development research and film production.[305] The amendments allows industry and others to carry out feasibility studies in provincial parks related to pipelines, transmissions lines, roads and other industrial activities that might require park land. The amendment allows industry to use the results of these feasibility studies to inform park boundary change decisions by the province.[306] Previously, park use permits were only granted to those able to demonstrate the proposed activity was necessary for the preservation or maintenance of the recreational values of the park.[307]

2014: Administrative penalties created for the Environmental Management Act

On June 23, 2014, the *Administrative Penalties (Environmental Management Act) Regulation* came into effect, creating administrative penalties for contraventions of the *Environmental Management Act* and regulations.[308] These new administrative penalties provide a less onerous and costly means of penalizing contraventions of the Act — as compared to court prosecution. Prior to this regulation, Ministry of Environment officials could only issue tickets with a maximum financial penalty of $575. The new regulation allows for administrative penalties of $2000 to $75,000 a day for contravention of the Act.[309]

2014: A collapse of the Mount Polley Mine's tailings storage facility deposited approximately 25 million cubic metres of wastewater and tailings into Quesnel Lake

On August 4, 2014, the Mount Polley mine's tailings pond dam breached, releasing an estimated 25 million cubic metres of waste water and tailings into Hazeltine Creek and Quesnel Lake.[310] The facility was owned by Mount Polley Mining Corporation, a subsidiary of Imperial Metals. The primary cause of the breach was a failure to take into account a weaker layer in the soil in the foundation of the dam.[311] An independent review of the breach concluded that it could have been prevented had there been a new proposed buttress in place along the embankment.[312] The review panel also found that increased inspections could not have prevented the failure.[313] In contrast, the Auditor General's Report in 2016 concluded that this design failure occurred because the Ministry of Energy and Mines had overly relied on qualified professionals; had failed to ensure that design standards were clear and enforced; had failed to perform recent geotechnical inspections to detect that the dam was not operating according to prescribed design, and had not used appropriate enforcement mechanisms to ensure the dam was built and operated as designed.[314]

In response to the dam breach, the provincial government revised tailings storage design requirements under the Health, Safety and Reclamation Code for Mines and increased environmental assessment information requirements for new tailings facilities (including detailed assessment of alternatives for tailings management). Further, the province undertook remediation and monitoring of Hazeltine Creek and Quesnel Lake with participation from local First Nations and communities.[315] However, the government did not include in the Code how it would move to achieve a reduced number of active tailings dams in the province —as was recommended by the Independent Review Panel.[316]

As of June 2016, some metals still exceeded allowable standards in the soil and sediment in the Polley Lake, Hazeltine Creek to Quesnel Lake area. Although water was not found to be toxic to most aquatic test species, benthic invertebrate populations were lower and had higher concentrations of some metals, like copper and vanadium, than prior to the breach.

In August 2017, the provincial government confirmed that it would not press provincial charges against the mining company.[317] In January 2018, the government further directed a stay of proceedings of a private prosecution seeking to charge the company with offences under the *Environmental Management Act* and *Mines Act.*[318]

2013-2014: Remediation of the Elk River Valley mining pollution ordered and water treatment plant discovered to be releasing further contamination

Coal mining began in the Elk River Valley in 1897. Since then, there has been a gradual increase in the groundwater concentration of selenium and other metals. This increase in metal concentrations has caused deformities in local fish populations and other deleterious effects.[319] In April 2013, the Ministry of Environment ordered Teck Coal Limited (the owner of the coal mines in the region) to prepare an Area-Based Management Plan and remediate the water quality effects from the coal mining activities.[320] A water treatment facility was built to treat the water being discharged from Teck's Line Creek mine; however, on October 16, 2014, Environment Canada investigators found dead fish in the Elk River area and the water treatment plant was shut down.[321] The plant was releasing wastewater contaminated with high levels of nitrite, ammonia, hydrogen sulfide, and phosphorous into Line Creek.[322] The Auditor General of British Columbia noted that if the Ministry of Energy is unable to enforce the Area-Based Management Permit, and the mine exceeds its permit limit for selenium at Lake Koocanusa, the mine may be in violation of the Boundary Waters Treaty of 1909.[323] This Treaty, reached between Canada and the United States, "forbids the pollution of water bodies on either side of" the Canadian and American border."[324]

2015: Mines Fee regulations created permitting and inspection fees

On April 1, 2015, the *Mines Fee Regulation,* BC Reg 54/2015, came into effect and established permitting and inspection fees under the *Mines Act.*[325] According to the provincial government, these fees were required to maintain the level of geotechnical staff and inspections and reduce permitting turnaround times. Before the permitting fees, the government was relying upon a contingency fund. These new permit fees were designed to reflect government costs of reviewing application while also being proportional to industry costs. Fees range from no permit fee, to a $10,000 fee, to upwards of $60,000. [326]

2016: New Water Sustainability Act and Regulations were introduced with subsequent amendments to exempt mine operators from certain water permit requirements

On February 29, 2016, the new *Water Sustainability Act,* SBC 2014, c 15 and the *Water Sustainability Regulation,* BC Reg 36/2016 came into force. The Act introduced significant changes to water regulation in the province — including new regulations for groundwater, new considerations of environmental flows to protect aquatic ecosystems, and broad water sustainability plans.[327] However, the Act maintained the first in time, first in right

(FITFIR) approach, meaning that old mining licenses could continue to have priority over environmental flows and more recent licenses.[328] Further, in April 14, 2016, the regulation was amended to clarify that those with permits under section 10 of the *Mines Act* would not need a water permit until the end of 2016.[329] This amendment continued a policy where small operators with a *Mines Act* permit could use water without the need for a water authorization, subject to specified terms and conditions. A further amendment on December 13, 2017 exempted mines from the requirement to obtain a groundwater diversion authorization for mine drainage works — so long as the water was not used for a water use purpose during the diversion and was discharged without significant risk of harm to public safety and the environment.[330] These amendments were intended to prevent duplication of regulation, as mine permits and waste discharge permits should include an assessment of any groundwater diversion. However, one concern raised by West Coast Environmental Law, was that this exemption would prevent the government from being able to regulate aquifer use by mines during times of scarcity if mining companies no longer had to apply for and obtain approval before diverting groundwater.[331]

2016: Deputy Minister's Mining Compliance and Enforcement Board established

In May 2016, the government established the Deputy Minister's Mining Compliance and Enforcement Board (C&E).[332] The Board was established to oversee compliance and enforcement planning across BC in all aspects of mineral exploration and development, with a key focus on environmental protection. The Board's five objectives are to: "1) integrate a risk-based approach and coordinate resources across the sector; 2) Increase public confidence in how government manages mining across the province; 3) Strengthen linkages between mining compliance and enforcement and Aboriginal groups; 4) Promote compliance with regulatory requirements; and 5) Enhance policy, tools and training to support a comprehensive compliance and enforcement program."[333] The Board also ensures greater integration between the Ministry of Energy and Mines, the Ministry of Environment, the Environmental Assessment Office and other agencies.

2016: Mining Code updated to increase regulation of tailings storage facilities (TSFs)

On July 20, 2016, the Health, Safety and Reclamation Code for Mines in British Columbia was updated to increase design standards for tailing storage facilities (TSFs). These updates included the introduction of new criteria for steepness of dam slopes, earthquake and flood design; additional responsibilities for the engineer of record, and; the establishment of an Independent Tailings Review Boards.[334] As a result of these updates, Independent Tailings Review Boards must be established by all mines with TSFs. Further, the chief inspector of mines must approve all board members. The changes also require new mine permit applicants to submit an assessment of best available technology for establishing and maintaining TSFs.[335]

These changes were the result of the Code Review Committee created in July 2015 to determine how best to implement the recommendations from the Independent Expert Engineering Panel's investigation of the Mount Polley Mine disaster.[336]

2017: Administrative monetary penalties added to enforcement provisions of the Mines Act

On February 27, 2017, the *Administrative Penalties (Mines) Regulation,* BC Reg 47/2017 was introduced. [337] The new Regulation established administrative monetary penalties as an additional compliance and enforcement tool under the *Mines Act,* RSBC 1996, c 293. Before this change, compliance and enforcement tools under the *Mines Act* were limited to shutting down a mine through the cancellation of a permit, the issuance of a stop-work order, or through the pursuit of prosecutions. With this change, administrative monetary penalties can be imposed for contraventions of the *Mines Act*, the Regulations, the Code, and for failing to comply with an order — all without involving the courts.[338] Existing penalties also increased from $100,000 and/or up to one-year imprisonment, to $1 million and/or up to three-year imprisonment. These changes were made in partial response to the recommendations put out by an independent expert panel and the chief inspector of mines.[339] While administrative monetary penalties under the *Mines Act* were introduced at the beginning of 2017, as of August 2018, no administrative monetary penalties under the *Mines Act* have been imposed.[340]

2017: A new Spill Reporting Regulation was introduced under the Environmental Management Act, requiring greater reporting and response to spills by responsible persons

On October 30, 2017, amendments to the *Environmental Management Act,* SBC 2003, c 53 and a new *Spill Reporting Regulation* came into effect.[341] The new *Spills Reporting Regulation* expanded spill response requirements for "responsible persons."[342] The *Spills Reporting Regulation* requires all "responsible persons" to report and ensure clean-up of a spill of a prescribed quantity of a substance, or of *any quantity* of a listed substance that enters or is likely to enter a body of water.[343] Any "substance…that can cause pollution" is included in the list of substances.[344] This means that a person who has possession, charge or control of a substance that spills and has a risk of causing pollution in a body of water, must report the spill and ensure a proper response to the spill.[345]

Unlike the previous regulation, the new *Spill Reporting Regulation* sets no minimum quantity of substance that must be spilled before reporting is required.[346] Ultimately, the amendments expand the obligations of "responsible persons'" (including mine owners and operators) to include more robust spills reporting and spill response measures.

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[1] However, a person must now be 18 years of age to be eligible for an FMC, not 16.
[2] While registering a mineral claim is less onerous today through the Mineral Title Office's online staking system, than the physical staking required in the 19th century, contemporary mining laws in the province require more permitting processes before a registered claim holder can begin any mining activities on their claim area. For example, under the *Mineral Tenure Act*, RSBC 1996, c 292, a registered claim holder obtains the right to "use, enter and occupy" their claim for mining activities, a mining proponent cannot act upon these rights, and "mechanical[ly] disturb…the ground" of their claim without *first* obtaining a *Mines Act* permit (additional permits and approvals may also be required under the *Environmental Assessment Act* S.B.C. 2002, c. 43 and *Environmental Management Act* S.B.C. 2003, c 53 depending on the size and nature of the mining activity); British Columbia, Ministry of Energy and Mines, *Mineral Titles Information Update No. 7 - A Guide to Surface and Subsurface Rights and Responsibilities in British Columbia*. (March 1, 2016) at p. 6 (available online);
[3] While mineral claims can currently be registered on Indian Reserves online, no mineral rights are acquired. This is different than areas in the province that have been set aside as "No Registration Areas," in which mineral claims cannot even be registered; British Columbia, *Mineral Titles Branch – Title Overlap Report (TOR)*(n.d.) at p. 3 (available online); See also: "where a mineral title is registered and a portion overlies [Indian Reserve land], no rights are acquired;" British Columbia, "Mineral & Placer Rights in British Columbia," (n.d.) (available online);
British Columbia, "Getting Stated with Reserves," (n.d.) (available online).
[4] *Mineral Easements Act, 1911*, SBC 1911, c 35 (available online).
[5] *Mining Right of Way Act,* RSBC 1996, c 294.
[6] Under section 4 of the *Mineral Tenure Act Regulation*, B.C. Reg. 529/2004, no mineral or placer rights can be obtained in respect of Indian Reserves [*Mineral Tenure Act Regulation*].
[7] *Mineral Tenure Act*, RSBC 1996, ch. 292, ss. 1, 19 [*Mineral Tenure Act*].
[8] However, a mining proponent must obtain a *Mines Act* permit before they can engage in any "mechanical disturbance of the ground or any excavation." The decision of whether or not to issue a Mines Act permit "is a statutory decision which requires consultation with potentially impacted First Nations." Thus, through the consultation process, impacted First Nations will receive notice when a person *applies* to conduct mechanized work on traditional territories. However, they are not entitled to the automatic, minimum 8 days' notice requirement before this work begins – such as private landowners are entitled to under section 2.1 of the *Mineral Tenure Act Regulation*, *supra* note 6.
Ultimately, under current provincial laws, there are no consultation requirements for staking a mineral claim or entering onto traditional territories as a free miner;
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[9] *Mineral Tenure Act*, *supra* note 7.
[10] *An Act to Amend the Mineral Act*, SBC 1973, c 52, s. 64 (available online).
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[15] Michael Begg, *Legislating British Columbia : a History of B.C. Land Law, 1858-1978* (Master of Laws Thesis, University of British Columbia, 2007) at pp 25-26 (available online).
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[17] *Gold Fields Act 1859*, proclaimed in force 7 September 1859, reprinted in Martin, *supra* note 14 at Appendix A, p. 538.
[18] Arn M. Keeling, *The Effluent Society: Water Pollution and Environmental Politics in British Columbia, 1889-1980,* (Doctor of Philosophy Thesis, University of British Columbia, 2004) at p. 127 (available online).

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[24] Begg, *supra* note 15 at footnote 160, p. 42; Keeling, *supra* note 18 at p. 127-8.
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[26] Allan S. Truman, *Placer Gold Mining in Northern British Columbia, 1860 to 1880,* (Master of Arts Thesis, University of British Columbia, 1935) at pp. 4-5 (available online); *Christmann v. New Nadina Explorations Ltd*, 2015 BCCA 243 at para. 16.
[27] *Gold Mining Ordinance 1867, supra* note 25.
[28] *An Ordinance to Facilitate the Working of Mineral Lands*, S Prov BC 1867 (32 Vict), No 22, reprinted in SBC [Ordinances] 1858-1870, LLMC Digital (available online).
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[32] Brian W Semkow, "Energy and the New Constitution," (1985) 23 Alta L Rev 101 at pp 104-114.
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[35] *Ibid*, ss 4-10; Begg, supra note at pp. 65 – 66.
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[37] *Ibid,* ss 26, 30, 48. 72;
[38] *Ibid,* s 48.
[39] *Ibid,* s 49.
[40] *Ibid,* s. 76.
[41] *Coal Prospecting Act*, SBC 1883 (46 Vict.), ch.3 (available online) (aka "An Act to encourage Coal Mining")[*Coal Prospecting Act, 1883*]; *Land Amendment Act*, SBC 1882 (45 Vict.), ch. 6, s. 8 (available online).
[42] "Whereas it is expedient to offer inducements for the discovery and opening of coal mines;" *Coal Prospecting Act, 1883, supra* note 41 at preamble.
[43] *Railway Aid Act Amendment Act, 1891,* SBC 1891, ch 34, s 2 (available online); this repealed section 13 of the existing *Railway Aid Act, 1890,* SBC 1890, ch. 40.
[44] *Placer Mining Act, 1891*, SBC 1891, c 26 (available online) [*Placer Mining Act, 1891*]; *Mineral Act, 1891*, SBC 1891, c 25 (available online) [*Mineral Act, 1891*].
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[47] Begg, *supra* note 15 at p. 73.
[48] *Placer Mining Act, 1891, supra* note 44, s. 9.
[49] *Ibid*, s. 10.
[50] *Mineral Act, 1891, supra* note 44, ss 14-19.
[51] *Ibid*, ss 10-11, 44 *Mineral Act, 1891*
[52] *Ibid*, s. 149.
[53] Keeling, *supra* note 18 at p. 128.
[54] *Water Privileges Act, 1892,* SBC 1892, c 47, s. 2 (available online).
[55] *Ibid*, s. 4.

[56] H. W. Grunsky, "Water Legislation and Administration in British Columbia," *British Columbia Sessional Papers, 1913*, Victoria, pp 15-23, at p. 17 (available online);
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[60] *Centre Star Mining Co v Iron Mask Mining Co*, 1898 CarswellBC 11 (WL Can), 1 MMC 267 (SC).
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[73] *Ibid,* at p. 9.
[74] *Ibid*; M. Tinholt et al, "Site Investigations and Remediation Yankee Girl Tailings Site, Ymir, BC." *British Columbia Mine Reclamation Symposium* (Morrow Environmental Consultants Inc. and Iridium Consulting Inc., 2007) (prepared on behalf of the Ministry of Agriculture and Lands, Crown Contaminated Sites Branch) at p. 2 (available online).
[75] *Mineral Survey and Development Act,* SBC 1917, c 41 (available online); Begg, *supra* note 15 at p. 8.
[76] Begg, *supra* note 15 at pp. 86-87.
[77] The Agreement was confirmed by the federal government with passage of *The British Columbia Indian Reserves Mineral Resources Act*, SC 1943-44, c 19, on July 24, 1943 [*British Columbia Indian Reserves Mineral Resources Act*]. The province of British Columbia confirmed the agreement with passage of the *Indian Reserve Mineral Resources Act*, SBC 1943, c 40 on March 18, 1943.
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[79]*Ibid,* at preamble.
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[81] *British Columbia Indian Reserves Mineral Resources Act*, *supra* note 77 at preamble.
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[91] *Pollution-control Act*, SBC 1956, c 36, s 12 (available online).
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[93] Payne, *supra* note 89 at p. 10.
[94] Raymond W. Payne, *Corporate power and economic policy making in BC, 1972-1975: The Case of the Mining Industry* (Masters of Arts Thesis, Simon Fraser University, 1979) at p. 96 (available online) [Payne, Thesis].
[95] *Ibid*, at p. 91; Payne, *supra* note 89 at p. 10; *Mineral Property Taxation Act,* SBC 1957, c 60 (available online);
[96] Payne, Thesis, supra note 94 at p. 91.
[97] *Ibid.*
[98] For example, an American mining company, Texada Mines was originally assessed under the new legislation as owing $1,543,663 in property taxes on iron ore. This amount was reduced to $79,250 by the B.C. Supreme Court; *Ibid*, p. 94.
[99] *Ibid*, pp. 94-95.
[100] Payne, *supra* note 89 at p. 10; *Texada Mines Limited v. Att. Gen. B.C.*, (1960) S.C.R. 713 [*Texada Mines*].
[101] *Texada Mines, supra* note 100, at p. 726.
[102] *Ibid*.
[103] Keeling, *supra* note 18 at p. 157.
[104] *Ibid*, pp. 157-8.
[105] *Ibid*, pp. 158-9.
[106] *Ibid*, p. 159.
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[109] BC Reg 79/64; *Pollution-control Act, 1960,* RSBC 1960, c 289, Order 2995/1962 (available online)
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[118] Mike J. Wilton, "The Evolution of the Island Copper Mine Pit Lake," *Proceedings of the 22nd Annual British Columbia Mine Reclamation Symposium* (Penticton, BC: 1998) at p. 173 (available online).
[119] *Pollution Control (Amendment) Act, 1968*, SBC 1968, c 38, s 4, 9 (available online).
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[123] *An Act to Amend the Mines Regulation Act,* SBC 1969, c 18 (available online); *Coal Mines Regulation Act,* SBC 1969, c 3 (available online).
[124] *An Act to Amend the Pollution Control Act, 1967,* SBC 1970, c 36, ss 1-2 (available online); *Pollution Control Act, 1967, supra* note 113.
[125]*An Act to Amend the Mineral Act,* 1973, *supra* note **Error! Bookmark not defined.**, s. 28.
[126] *Ibid*; Campbell, *supra* note **Error! Bookmark not defined.** at pp. 10-11.

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[131] *Mineral Royalties Act, 1974*, SBC 1974, c 54 (available online).
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[144] *Ibid*, pp 29-30.
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