

# BC MINING LAW REFORM



Dirty Dozen 2023:

## B.C.'s top polluting and risky mines

SECOND EDITION



ELK VALLEY COAL MINE. PHOTO: ALEC UNDERWOOD

"If these solutions are pursued, B.C. could come closer to realizing its claims of being a responsible jurisdiction for mining."

## Introduction

British Columbia is facing a big push for more mining by governments and industry, given both current geopolitical tensions and the on-going climate crisis. Canadian and B.C. governments are further subsidizing mining<sup>1</sup> and developing strategies to domestically source energy transition minerals,<sup>2</sup> and mining companies are lobbying to streamline mining permits.<sup>3</sup> Amidst these initiatives to fast-track and expand mining development, risks and shortcomings in British Columbia's mining regulatory regime remain.

### Key regulatory issues

One key issue is the management of mine waste, which is the largest source of solid waste in Canada,<sup>4</sup> much of it toxic. Mine waste must be stored, monitored, and, in many cases, cared for in perpetuity, presenting a public liability to current and future generations. Massive failures can occur in which large volumes of toxic mine tailings are released to the surrounding environment, as happened at the Mount Polley mine in 2014. Last year, we released

an interactive tailings map and expert analysis<sup>5</sup> evaluating the risks of tailings dam failures in B.C. The total volume of tailings currently stored at B.C. mine tailings storage facilities (TSFs) is conservatively estimated to be 2.5 billion cubic metres<sup>6</sup>—a volume that would fill B.C. Place stadium 943 times. According to the expert analysis, the height and volume of TSFs in B.C. have been increasing exponentially over time, increasing both the risk and potential consequences of tailings dam failures.<sup>7</sup> Instead of moving toward less risky approaches, such as waste backfilling, and de-watered and/or dry stack tailings, British Columbia has a number of proposed and approved mines that could result in some of the highest and largest tailings facilities in the world.

Mining is also a major source of water pollution and other damage to river systems. A recent article in *Science Advances*<sup>8</sup> highlights how mines harm salmon watersheds by discharging into rivers, leaching toxic contaminants, altering flow regimes and water temperatures, and directly modifying or destroying habitat. In the past year, Gibraltar and Mount Polley mines have renewed permits for discharge pipes into the Fraser watershed,<sup>9</sup> Teck Resources was fined \$16 million for polluting the Elk and Fording Rivers<sup>10</sup> (on top of a \$60 million fine issued in 2021<sup>11</sup>), and the Tulsequah Chief mine continued to leach acid mine drainage into the Taku watershed, as it has done for over 65 years.<sup>12</sup>

While British Columbia has reformed, and arguably strengthened, its *Environmental Assessment Act*, a recent study<sup>13</sup> found a loophole whereby over 60% of mining projects issued Environmental Assessment (EA) certificates between 2002 and 2020 subsequently received an amendment to their certificate after the EA process had concluded. Of these mines, 71% received amendments expected to directly or indirectly harm water resources, including changes to effluent discharge and degradation of fish habitat. Additionally, some new mines and mine expansions posing social and environmental risks—including some profiled in this report—continue to proceed without undergoing any EA at all.

Importantly, mining in British Columbia is intricately linked to colonization. As they have since the 1859 *Gold Fields Act*, prospectors today need only obtain a "free miner's certificate"<sup>14</sup> for a \$25 fee as an individual and \$500 as a corporation. With this certificate, a miner can go online to stake an area of interest for \$1.75 per hectare,<sup>15</sup> granting them the right of free entry to explore for minerals in more than 76% of the province<sup>16</sup> without permission

or consent from Indigenous nations, private landowners or municipalities. In 2022, 10.9 million hectares of B.C. had been staked for mining.<sup>17</sup> Gitxaala Nation has taken the Province to court over mineral claims in the Nation's territory, arguing the Crown failed to consult with Gitxaala leadership as required by B.C.'s *Declaration on the Rights of Indigenous Peoples Act* (DRIPA).<sup>18</sup> Despite commitments to modernize the *Mineral Tenure Act* in the DRIPA Action Plan<sup>19</sup> and the Minister's mandate letter,<sup>20</sup> the B.C. government continues to argue in court that its mining regime poses no harm to Indigenous peoples.<sup>21</sup>

## Recent successes

Since our last Dirty Dozen report was released in [2021](#), there have been some positive news stories. Last year, Imperial Metals and the Skagit Environmental Endowment Commission signed an agreement to protect the Donut Hole in Manning Park from mining.<sup>22</sup> This conservation effort was applauded on both sides of the border, although it required paying out Imperial Metals \$24 million in compensation for its mineral claims.

Both the B.C. and federal governments rejected Glencore's proposed Sukunka open-pit coal mine project in northeast B.C., based on predicted cumulative effects and impacts to caribou and grizzly bear populations.<sup>23</sup> The mine would likely have extirpated caribou and added significant selenium and mercury pollution to a watershed already polluted by the Willow Creek/Brule/Wolverine coal mines we profiled in 2021.

The Province also denied (again) a permit for the proposed Morrison Mine, given potential impacts to sockeye salmon at one of the headwaters of the Skeena River.<sup>24</sup> We took the nearby Bell and Granisle mines on Babine Lake off our list as well this year in anticipation of increased monitoring and clean-up as part of implementation of the Foundation Agreement<sup>25</sup> between B.C. and Lake Babine First Nation.

Lastly, the Province released an Interim Mine Reclamation Security policy<sup>26</sup> in 2022 that moves B.C. toward full bonding for mine clean-up, though some gaps do remain, such as a need to put the policy into regulation. We will continue monitoring the Province's reclamation liability gap for a hopeful decrease over time as the Chief Inspector reports<sup>27</sup> out annually.

As advocates for more responsible mining that minimizes environmental harms, aligns with Indigenous rights, and reduces risks to watersheds and communities, we must address the shortcomings in British Columbia's mining regulatory regime and practices, and ensure better enforcement and monitoring.

The following list highlights the top 11 polluting or otherwise risky mines in B.C. in 2023; the twelfth case focuses on the adverse impacts to First Nations and environmental stewardship of exploration under the free-entry system. Some of the mines on the previous list were replaced either because solutions were enacted (e.g., the buy-out of Imperial Metals' mineral rights in Manning Park), or other mines seemed more urgent to highlight. This year's list was selected based on the mines' proven or probable impacts to sensitive environments and species, violation of Indigenous rights, unsafe management of tailings waste and/or water contamination, inadequate reclamation funding, poor governance, and/or non-compliance with environmental permits. In all cases, solutions exist that could improve the safety of the mines and/or industry to prevent these problems from recurring. If these solutions are pursued, B.C. could come closer to realizing its claims of being a responsible jurisdiction for mining.

*This report was researched and written by Adrienne Berchtold, MSc (SkeenaWild Conservation Trust), and written and edited by Nikki Skuce (Northern Confluence Initiative) and Jessica Spanton (BC Mining Law Reform).*

ON THE COVER: TAILINGS DAM AT COPPER MOUNTAIN MINE. PHOTO: BENJAMIN DRUMMOND AND LIGHTHAWK




ELK VALLEY COAL MINE. PHOTO: ALEC UNDERWOOD


## OPERATING MINES

# Elk Valley Coal

 **Mine type:** Coal; Open-pit

 **Owner:** Teck Resources Ltd.

 **Location:** A few km east of Elkford, Sparwood, and Fernie

 **Receiving watershed:** Elk River & Kootenay River (part of Columbia River watershed)

Teck Resources' Elk Valley coal mines have created one of the most serious pollution problems in North America<sup>28</sup> by releasing selenium hundreds of times over the healthy limit for fish into the Fording and Elk Rivers for decades.<sup>29</sup> Locally, the selenium contamination causes physical deformities and contributes to population declines of at-risk westslope cutthroat trout,<sup>30</sup> and the mines degrade human drinking water<sup>31</sup> and air quality.<sup>32</sup> Possible mine pollution has also been detected further downstream in Montana and Idaho.<sup>33</sup> A recently released [water quality hub](#)—a positive step for transparency—shows that Teck is non-compliant with its water quality and water treatment commitments,<sup>34</sup> has received multiple large non-compliance penalties (with more coming),<sup>35</sup> and is still only removing a very small proportion of the total selenium in the Elk River.<sup>36</sup> The Province has even allowed Teck to delay meeting its water quality obligations by up to five years.<sup>37</sup> Meanwhile, Teck has fought against Montana's selenium limit,<sup>38</sup> and lobbied<sup>39</sup> B.C. and Canada against a referral to the International Joint Commission (IJC)—an independent body designed to address cross-border water contamination—that has long-been requested by the B.C.-U.S. transboundary Ktunaxa Nation,<sup>40</sup> and is supported by the U.S. government and the IJC commissioners themselves.<sup>41</sup> Making matters worse, expanded coal operations are proposed in the Elk Valley<sup>42</sup> that would produce a lot more waste rock<sup>43</sup>—the primary source of selenium pollution. Teck now wants to spin off its coal mines,<sup>44</sup> leaving many worried about who exactly will pay for its massive environmental liabilities.<sup>45</sup> Teck and B.C. need to support an IJC reference, ensure full bonding for environmental liabilities, and implement effective selenium removal before new mines or mine expansions are permitted in the Elk Valley.



GIBRALTAR TAILINGS RESERVOIR.  
PHOTO: JEREMY SEAN WILLIAMS / WILDERNESS COMMITTEE

## OPERATING MINES

# Gibraltar

 **Mine type:** Copper/Molybdenum;  
Open-pit

 **Owner:** Taseko Mines Ltd.

 **Location:** 60 km north of Williams Lake

 **Receiving watershed:** Fraser River

Taseko's Gibraltar mine, on the banks of the Fraser River, is the fourth largest open-pit mine in North America. It never received an Environmental Assessment (EA), despite undergoing multiple significant expansions since EA legislation came into force.<sup>46</sup> While Gibraltar's previously underfunded reclamation bonding has recently improved,<sup>47</sup> the mine still has major risks associated with both tailings and water. The mine's tailings dams are built using "upstream" construction<sup>48</sup>—a construction design type that has high rates of instability;<sup>49</sup> concerningly, the dams are also expected to have 'Extreme' consequences if they fail,<sup>50</sup> including potential for high loss of life and irreparable environmental damage.<sup>51</sup> Gibraltar's persistent water surplus results in billions of litres of water<sup>52</sup> taking up space in the tailings facility, which puts the dams at greater risk of failure<sup>53</sup>—especially in the face of increasingly frequent and severe precipitation events<sup>54</sup>—and has required additional dam raises,<sup>55</sup> which likely increase the consequences of dam failure.<sup>56</sup> Gibraltar is permitted to reduce its water surplus by releasing untreated mine water directly to the Fraser River,<sup>57</sup> potentially placing already declining salmon runs and endangered white sturgeon<sup>58</sup> at even greater risk from nitrite, sulphate, and molybdenum pollution.<sup>59</sup> This discharge was fiercely opposed by local First Nations, and is still the subject of an unresolved appeal by the T̓silhqot'in Nation.<sup>60</sup> Temporarily paused due to high levels of nitrate,<sup>61</sup> Taseko plans to reinstate the Fraser discharge long-term.<sup>62</sup> Water management solutions that have the consent of affected Indigenous groups are needed at Gibraltar; B.C. needs to ban upstream tailings dams and pursue strategies to reduce both tailings storage volumes and dam failure consequences; and improved data and predictions regarding site water balances and water quality are needed at new mines to avoid the issues faced at Gibraltar.



AERIAL OF COPPER MOUNTAIN MINE. PHOTO: BENJAMIN DRUMMOND AND LIGHTHAWK

## OPERATING MINES

# Copper Mountain

 **Mine type:** Copper/Gold/Silver; Open-pit

 **Owner:** Copper Mountain Mining Corp.

 **Location:** 20 km south of Princeton

 **Receiving watershed:** Similkameen River  
(part of Columbia River watershed)

Straddling the Similkameen River, Copper Mountain mine, which never received an Environmental Assessment (EA), has a bad track record for causing damage to fish-bearing waters—including unauthorized wastewater discharges directly to the Similkameen<sup>63</sup> (where local Indigenous communities now feel unsafe accessing traditional foods<sup>64</sup>), and repeated copper and nitrate contamination of local creeks.<sup>65</sup> Though currently paused, Copper Mountain plans to reinstate the Similkameen discharge long-term, untreated, and even hopes to increase its discharge limits to allow worsened wastewater quality.<sup>66</sup> The mine's tailings facility—which contains 309 million metric tonnes of tailings and has risky upstream-constructed dams<sup>67</sup>—is a major source of concern for those downstream in Canada and the U.S.<sup>68</sup> Recent expert reports suggest Copper Mountain is underestimating its likelihood of tailings dam failure,<sup>69</sup> and that even a moderate dam failure would have sudden, life-threatening consequences in B.C. and significant physical effects to the Similkameen and Okanagan Rivers all the way to the Columbia River in Washington.<sup>70</sup> These risks will be compounded by the mine's massive proposed expansion, which would add an additional 450 million tonnes of tailings,<sup>71</sup> raise the pre-existing tailings dams to 260 m<sup>72</sup>—making them the second tallest in the world<sup>73</sup>—and add another 200 m dam for additional waste storage,<sup>74</sup> all without receiving an EA.<sup>75</sup> To reduce costs, Copper Mountain has opted *not* to reduce the water content, therefore the risk, of its tailings.<sup>76</sup> Copper Mountain's proposed expansion should, at minimum, receive an EA; B.C. should require reduced water content of mine tailings and improved mine discharge quality; and regulators should consider pausing and/or denying authorizations given poor compliance track records.






MOUNT POLLEY DAM BREACH. PHOTO: PHILIP N. OWENS

## OPERATING MINES

# Mount Polley

 **Mine type:** Copper/Gold; Open-pit

 **Owner:** Imperial Metals Corp.

 **Location:** 56 km northeast of Williams Lake

 **Receiving watershed:** Quesnel Lake (part of Fraser River watershed)


Mount Polley is the site of the most significant environmental mining disaster in Canadian history, in which a [tailings dam collapse](#) released 25 billion litres of tailings and contaminated water into salmon habitat in Quesnel Lake and surrounding creeks.<sup>77</sup> The mine's owner, Imperial Metals, was never held accountable for the damages,<sup>78</sup> although three engineers involved were eventually reprimanded.<sup>79</sup> An expert economist estimated that taxpayers covered \$40 million of clean-up costs—more than half the total expenses.<sup>80</sup> Urgent expert recommendations to prevent future tailings dam failures—such as to "*eliminate surface water from [tailings] impoundment[s]*"<sup>81</sup>—also have not been fully adopted by the B.C. government<sup>82</sup> and continue to be ignored at mines across the province. Scientists are now finding evidence of numerous long-lasting negative impacts of the spilled tailings, including elevated turbidity and seasonal remobilization of the tailings in Quesnel Lake's water column;<sup>83</sup> elevated metals concentrations in invertebrates that are food for fish in the lake;<sup>84</sup> and increased transport of copper downstream into Quesnel River.<sup>85</sup> To top it off, Mount Polley now discharges approximately 6.7 billion litres of mine effluent, elevated in dissolved metals like copper, directly to Quesnel Lake every year.<sup>86</sup> Community members fought against the extension of Mount Polley's discharge permit, but their science-backed inputs fell on deaf ears.<sup>87</sup> The company and government need to work with communities affected by mining and establish water management solutions other than relying on dilution in natural water bodies. B.C. must reduce the risks posed by tailings facilities by implementing expert recommendations and putting tailings safety first.<sup>88</sup>




QUINETTE COAL MINE. PHOTO: JASON WOODHEAD / FLICKR (CC BY 2.0)

## MINES IN CARE + MAINTENANCE


# Quintette

-  **Mine type:** Coal; Open-pit


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-  **Owner:** Conuma Resources Ltd.

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-  **Location:** 20 km south of Tumbler Ridge

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-  **Receiving watershed:** Wolverine and Murray Rivers (part of Peace River watershed)


The Quintette coal mine is located in the Peace region, home to critically endangered Central Mountain caribou.<sup>89</sup> Quintette was never an economically viable mine—it was forced into bankruptcy only a few years after opening, then sold to Teck Resources and operated for less than a decade with reduced production costs until 2000.<sup>90</sup> Since then, Quintette has been in temporary closure, a.k.a. Care and Maintenance (C&M)—a status that has no official definition or upper time limit in B.C.<sup>91</sup>—for over 23 years.<sup>92</sup> Prolonged C&M at Quintette has put fulsome clean-up and reclamation on pause, contributing to cumulative harms to sensitive caribou and Indigenous rights.<sup>93</sup> Even though coal prices have been high enough to make Quintette competitive enough to restart again,<sup>94</sup> shareholder call transcripts show that Teck (owner of Quintette until December 2022 when it sold to Conuma Resources)<sup>95</sup> kept Quintette closed in order to reduce B.C.'s overall coal supply and keep prices higher for Teck's Elk Valley coal.<sup>96</sup> This behaviour is contrary to principles of good governance, including transparency, integrity, and accountability.<sup>97</sup> While companies can use C&M to lower their costs and increase profits, long-term temporary closures may skew liability estimates because the further away mine closure is, the more likely reclamation costs are to be underestimated.<sup>98</sup> There should be an upper limit to how long mines can stay in C&M, tests of financial viability for companies who repeatedly enter into extended C&M, and full bonding of reclamation securities based on *accurate* estimates (as recommended by the Auditor General).<sup>99</sup>

## Bonanza Ledge (& Cariboo Gold)

 **Mine type:** Gold; Underground

 **Owner:** Barkerville Gold Mines Ltd. (subsidiary of Osisko Development Co.)

 **Location:** 3.5 km southeast of Wells

 **Receiving watershed:** Willow River (part of Fraser River watershed)



AERIAL VIEW OF BONANZA LEDGE MINE. PHOTO: GOOGLE EARTH. 2022

Osisko's Bonanza Ledge gold mine, recently placed in care and maintenance,<sup>100</sup> is a prime example of Environmental Assessment (EA) evasion. Initially permitted at a production rate of 74,000 tonnes of ore per year (tpy)—only 1,000 tpy under the threshold to trigger a provincial EA<sup>101</sup>—the mine later doubled production to 150,000 tpy,<sup>102</sup> and then increased again to 215,000 tpy,<sup>103</sup> without undergoing any public risk assessments. Similar to Osisko's performance at the Malartic mine in Quebec,<sup>104</sup> Bonanza Ledge has been a repeat environmental offender. In recent years, the mine exceeded discharge limits for metals and other contaminants to fish-bearing waters on many hundreds of occasions, and repeatedly released acutely toxic discharge.<sup>105</sup> The mine was convicted federally for unauthorized pollution to important fish habitat in 2018,<sup>106</sup> and received ten provincial penalties for non-compliance in 2021 and 2022 alone<sup>107</sup>—though it's questionable whether such penalties are effective deterrents.<sup>108</sup> Osisko now wants to develop the nearby Cariboo Gold project,<sup>109</sup> which would be significantly larger—therefore, likely riskier—than Bonanza Ledge. True to form, the proposed production rate at Cariboo Gold is only 250 tonnes of ore per day below the threshold to trigger a more rigorous federal review.<sup>110</sup> Concerns voiced by local communities and First Nations about the project have included the proximity of major infrastructure to residential and tourism areas, and the potential for negative impacts to fish, caribou, and traditional plant species.<sup>111</sup> More stringent EA legislation is needed that strengthens thresholds for review and prevents assessment evasion by projects undergoing phased expansion,<sup>112</sup> as are meaningful sanctions—such as not allowing new mine development—for repeat offenders.



ACID MINE DRAINAGE AT TULSEQUAH CHIEF.  
PHOTO: CHRISTOPHER MILLER – CSMPHOTOS.COM

## CLOSED + ABANDONED MINES

# Tulsequah Chief

 **Mine type:** Copper/Lead/Zinc;  
Underground

 **Owner:** Abandoned

 **Location:** 100 km south of Atlin

 **Receiving watershed:** Taku River

Tulsequah Chief mine is a poster-child for deficient financial responsibility and clean-up. The mine underwent multiple bankruptcies and otherwise failed ownerships from 1951 onwards,<sup>113</sup> and adequate reclamation bonds were never collected by the Province.<sup>114</sup> Now, for over 65 years, the mine has been leaking acid drainage, contaminated with heavy metals, into the Tulsequah River,<sup>115</sup> which provides important salmon habitat and is only 10 km away from the top salmon-producing transboundary Taku River.<sup>116</sup> Recent progress has been made with a draft remediation plan,<sup>117</sup> the end of key legal proceedings of Tulsequah's most recent owner,<sup>118</sup> and commitments by B.C. and Teck Resources (a previous site owner) to contribute to final site closure and reclamation.<sup>119</sup> However, long-term acid drainage clean-up has not yet begun,<sup>120</sup> and questions remain about how much of the estimated \$100 million reclamation cost<sup>121</sup> will fall to taxpayers, given that B.C. only held \$150,000 in bonding for the site as of March, 2022.<sup>122</sup> Problems with operating and cleaning up the Tulsequah Chief mine have included its remoteness, which presents financial and logistical challenges,<sup>123</sup> and the complexity and fluctuating conditions of the Tulsequah River—characteristics that are generally associated with greater salmon productivity,<sup>124</sup> and make the system more vulnerable to negative effects from mine discharges.<sup>125</sup> Tangible reclamation progress is still needed at Tulsequah Chief, as is a comprehensive strategy to address legacy site issues across B.C.—such as an industry-levied fund.<sup>126</sup> Tulsequah Chief also demonstrates why mining in productive and hard-to-reclaim salmon habitat may need to be avoided altogether.




AERIAL VIEW OF YELLOW GIANT MINE. PHOTO: DANIEL MESEC / GITXAAŁA NATION


CLOSED + ABANDONED MINES

# Yellow Giant

 **Mine type:** Gold/Silver; Underground

 **Owner:** Abandoned

 **Location:** Banks Island (100 km south of Prince Rupert)

 **Receiving watershed:** Hecate Strait (Pacific Ocean)





Yellow Giant mine, previously owned by Banks Island Gold, Ltd. (BI Gold), illegally and intentionally spilled 240,000 L<sup>127</sup> of mine waste water and tailings elevated in harmful metals like copper and zinc into the waters of Banks Island.<sup>128</sup> Traditionally called "Lax k'naga dzol", Banks Island is an important harvesting site for Gitxaala Nation, who never supported the mine<sup>129</sup> and who are now dismayed to observe the spill's damage—including perceived loss of shellfish, halibut, cod, and salmon.<sup>130</sup> Inadequate regulatory oversight is partly responsible for this tragedy—Yellow Giant didn't receive an Environmental Assessment (its production was 2,000 tonnes of ore per year under the reviewable limit),<sup>131</sup> and the Province performed zero environmental inspections for the first 15 months of mine operations until a whistleblower finally alerted them to the mine's illegal activities.<sup>132</sup> Shortly after the spill, BI Gold declared bankruptcy,<sup>133</sup> and its CEO and Chief Geologist now face 29 criminal charges.<sup>134</sup> Though an environmental management action plan is in the works, the site remains largely unreclaimed.<sup>135</sup> Some key barriers to clean-up are: a lack of reclamation funding—nearly \$2 million outstanding (and possibly more, given clean-up estimates haven't been updated since 2016);<sup>136</sup> high costs of removing equipment due to the mine's location on a remote and unprotected coastal island;<sup>137</sup> and the legal rights afforded to BI Gold's creditors, who currently technically own the mine.<sup>138</sup> To prevent this from happening again, more EAs on smaller mines are needed—especially at important Indigenous sites and/or remote or hard-to-reclaim sites—as is Indigenous consent of mine approvals. Regulating ministries must also tighten up and increase their inspection and reclamation bonding regimes. Engagement and Indigenous consent should be required for reclamation plans to ensure concerns are adequately addressed.



STEAM SHOVEL AT HIDDEN CREEK MINE AT ANYOX. PHOTO: UNKNOWN CREDIT

## CLOSED + ABANDONED MINES

# Anyox

-  **Mine type:** Copper/Gold/Silver; Underground
-  **Owner:** Anyox Hydro Electric Corp.
-  **Location:** 60 km south of Stewart
-  **Receiving watershed:** Observatory Inlet (Pacific Ocean)

Anyox copper mine and on-site smelter operated from 1914–1936,<sup>139</sup> long before environmental regulation of mining in B.C. existed.<sup>140</sup> During this time, it was one of the top ore producers on the province's coast. It was also a top polluter. Records suggest the site's sulphur fumes were so strong they produced acid rain that killed off all vegetation for a 20–30 km radius.<sup>141</sup> Today, accounts by various observers indicate that Anyox mine—now owned by a hydro-electric company<sup>142</sup> after abandonment by its original owners (Granby Consolidated Mining Co.)—has never been properly closed or reclaimed. "Mountainous" piles of waste remain on the banks of the water,<sup>143</sup> and the mine is still leaking acid drainage into crab, salmon, and seal habitat in Observatory Inlet.<sup>144</sup> The site and surrounding area are also fully staked with mineral claims, and exploration activities have occurred over the past decade.<sup>145</sup> The scale of the acid drainage problem and any other on-going environmental impacts at Anyox is not in the public record; however, direct communication with the Province revealed the site was last assessed in earnest in 2005, and it has yet to be prioritized as a site for clean-up by the Crown Contaminated Sites Program.<sup>146</sup> This site—at its peak, one of the largest polluting mines in the country—needs monitoring, clear steps to closure and remediation, and transparent public accounting of that process. Additionally, there are over a thousand historic mines in the province,<sup>147</sup> many of them from a time when closure planning was essentially non-existent. The province needs a comprehensive, industry-wide strategy for closing and cleaning up these old mines, prioritizing those like Anyox that continue to pollute local waters.




PRIMARY KSM WORKSITE AND CAMP VISIBLE NEAR SULPHURETS CREEK.  
PHOTO: CHRISTOPHER MILLER – CSMPHOTOS.COM

## PROPOSED MINES

### KSM

 **Mine type:** Gold/Copper/Silver;  
Underground and open-pit

 **Owner:** Seabridge Gold Inc.

 **Location:** 65 km northwest of Stewart

 **Receiving watershed:** Unuk River and  
Nass River

Seabridge Gold's KSM mine, the world's largest undeveloped copper/gold project,<sup>148</sup> is so big it threatens two major, salmon-producing watersheds. The mine's wastewater, containing elevated metals and selenium, will require treatment for hundreds of years before release to the Unuk watershed<sup>149</sup> — a watershed that supports salmon stocks of concern.<sup>150</sup> Perpetual water treatment is inherently risky, especially given that selenium treatment technologies are immature.<sup>151</sup> KSM's massive tailings storage facility (TSF), proposed to be 239 m tall and containing 2.3 billion tonnes of wet tailings,<sup>152</sup> is the largest permitted dam in B.C.<sup>153</sup> and among the largest in the world.<sup>154</sup> If built, it will sit atop the Nass River, one of B.C.'s top salmon-producing systems, with 'Extreme' consequences if it fails.<sup>155</sup> As KSM receives unprecedented extensions of its Environmental Assessment (EA) certificate,<sup>156</sup> Seabridge is pursuing habitat fragmenting construction activities before even acquiring the financial support it needs for full mine development.<sup>157</sup> Concerning changes to the mine plan also keep occurring, the latest being that more environmentally destructive open-pit mining will be prioritized over underground mining to save costs,<sup>158</sup> and that expanded ore extraction could require *even more* wet tailings storage.<sup>159</sup> Provincial regulators should be more cautious before approving mines needing perpetual water treatment and/or wet tailings storage, especially at such a large scale. Though KSM's EA is approved, regulators can still require that the mine—with consultation and consent of affected Indigenous governments, including downstream Alaskan tribes—be re-designed for reduced risks and impacts. This would include: primarily underground mining, non-degradation standards for discharge water quality, full reclamation bonding, and reduced tailings water content and/or dry closure of the TSF.




CONFLUENCE OF TELKWA AND BULKLEY RIVERS.  
PHOTO COURTESY OF WHAT MATTERS IN OUR VALLEY


## PROPOSED MINES

# Telkwa Coal (a.k.a. Tenas Project)

 **Mine type:** Coal; Open-pit

 **Owner:** Allegiance Coal Ltd.

 **Location:** 7 km southwest of Telkwa  
(25 km south of Smithers)

 **Receiving watershed:** Telkwa and Bulkley  
Rivers (part of Skeena watershed)

Telkwa Coal is a proposed open-pit coal mine just 7 km from the Village of Telkwa. On top of concerns of local citizens about coal dust and blasting noise effects on human health,<sup>160</sup> the mine poses several risks to wildlife and fish. If developed, it would overlap with a designated recovery area for the Telkwa caribou herd<sup>161</sup>—a herd that at last count had only 33 members,<sup>162</sup> and the federal government says is at imminent risk of extirpation.<sup>163</sup> Even the Province acknowledges the mine would "likely lead to further [caribou] population declines".<sup>164</sup> Additionally, Telkwa Coal is proposed in an historically very important area for steelhead production to the Telkwa River<sup>165</sup> (a major tributary to the Bulkley River), and the mine would directly eliminate steelhead spawning and rearing habitat.<sup>166</sup> Due to mine water contamination and potential acid rock drainage, Telkwa Coal also wants special permission to vastly exceed B.C. Water Quality Guidelines (WQGs) for selenium and heavy metals in multiple fish-bearing creeks,<sup>167</sup> which could negatively affect local steelhead, bull trout, and salmon populations. Though B.C. is requiring an assessment of alternate water management approaches,<sup>168</sup> mine requests to exceed WQGs are often ultimately approved.<sup>169</sup> Overall, the local area is already degraded by human activities and high mineralization, putting the system at greater risk for negative cumulative impacts.<sup>170</sup> Not to mention that even metallurgical coal—the type found at Telkwa—is a major contributor to climate change.<sup>171</sup> The Province needs to move away from new coal mining. Extra caution, such as non-degradation objectives for water quality or respecting "no-go" zones for mining, should also be taken in important wildlife and fish habitat and/or previously degraded systems with existing cumulative effects.





GITXAAŁA DELEGATION WALKS TO THE VANCOUVER COURTHOUSE.  
PHOTO: BC MINING LAW REFORM

## EXPLORATION

# B.C.'s Free-Entry System

 **Mine types:** Multiple

 **Owners:** Multiple

 **Locations:** Multiple

 **Receiving watersheds:** Multiple

The free-entry system under the *Mineral Tenure Act* allows companies to start exploring for minerals—physically damaging the land and water, adversely impacting First Nations' culture and governance systems, and blocking environmental protection efforts—all without Nations' consent. Even once a Nation makes its opposition clear, such as with Nuxalk Nation's eviction of Juggernaut Exploration,<sup>172</sup> mining companies often continue their operations because the current legal framework allows them to do so. Removing tenures is also costly under the Province's current market-value approach; for example, in 2011, the B.C. government paid Cline Mining a \$9.8 million settlement for expropriation of its coal claims.<sup>173</sup> The high costs of buying out tenures are currently a barrier to provincial recognition of many Indigenous-led conservation efforts.<sup>174</sup> The free-entry system results in adversarial relationships, and even fosters conflicts, between First Nations and mineral exploration companies and the Province.<sup>175</sup> This is currently playing out in court with Gitxaała and Ehattesaht Nations' legal challenge of the *Mineral Tenure Act* and existing claims on their territories. Since the case was filed, 30 new claims were staked on Ehattesaht territory, including by two of the companies named in the case.<sup>176</sup> Rather than making progress on its commitments to reform the *Mineral Tenure Act*,<sup>177</sup> the Province is fighting Gitxaała and Ehattesaht Nations in court on precisely these issues. B.C. must get rid of its free-entry system and reform the *Mineral Tenure Act* to require consent of affected Indigenous peoples; conform to land use plans and respect no-go zones in special management areas; and update its mineral compensation regime to limit compensation when tenures conflict with other important land uses, such as conservation.

"There are mining reform solutions to ensure that our watersheds are protected, pollution is prevented and cleaned up, Indigenous rights are upheld, and other land uses are supported and respected."



CARIBOU. PHOTO: DINA HANSON

## Conclusion

The mining industry and government of British Columbia often make claims<sup>178</sup> about having the strongest environmental regulatory regime (without any third-party validation). However, as the dozen profiles in this report highlight, there are on-going pollution and other risks that are not being adequately addressed by B.C.'s mining laws and practices. Sadly, it seems to take dramatic events—a massive tailings failure, a court case, blockades, or international attention for transboundary pollution—to close loopholes and reform mining laws, regulations, policies or practices to reduce risks and mining pollution in this province.

There are mining reform solutions to ensure that our watersheds are protected, pollution is prevented and cleaned up, Indigenous rights are upheld, and other land uses are supported and respected. The BC Mining Law Reform network believes these reforms need to happen now.

**Below are recommendations to improve mine safety in B.C. (and globally):**

The BC Mining Law Reform network developed a comprehensive list of recommendations for shifting to more responsible mining in B.C., endorsed by nearly 30 local, provincial and national organizations from a wide range of sectors, including citizen and community groups, First Nations, academics, and social justice and environmental organizations. [Recommendations can be found on our website.](#)

The First Nations Energy and Mining Council released a report in 2022 on [consent for mining on Indigenous lands](#) that includes recommendations for all stages of the mining process, and potential pathways for operating within legal pluralism.

The First Nations Energy and Mining Council has three reports with recommendations for B.C. on reducing risks related to safety, mine disasters, and non-remediation. [These and other resources can be found on their website.](#)

The BC Mining Law Reform network and MiningWatch put out a report in 2022 to better understand the [gap between British Columbia laws and policy and best practices in other jurisdictions](#). It makes concrete recommendations for revisions to B.C.'s mining legislation in order to bring it into alignment with best practices and international standards on mine waste safety.



"[Safety First: Guidelines for Responsible Mine Tailings Management](#)" was endorsed by over 140 NGOs and technical experts. A second version was released in 2022 with 17 recommendations to improve tailings safety.

The BC Mining Law Reform network and SkeenaWild Conservation Trust produced an [interactive map of tailings storage in B.C.](#), along with an expert analysis evaluating the risks of tailings dam failures and a primer summarizing the analysis with concrete recommendations to reduce risks.

SkeenaWild Conservation Trust developed a report on [responsible mining in B.C.](#), including essential principles, recommended practices and technologies, and a checklist to assess mines and identify ways they can improve.

The B.C. Auditor General's "[Audit on Compliance and Enforcement in the Mining Sector](#)" includes several recommendations that have yet to be implemented, including financial securities for disasters.

The [Mount Polley Expert Panel Report](#) includes key recommendations that have yet to be implemented, including reducing B.C.'s active tailings storage facility inventory by dewatering tailings at closure and avoiding water storage at new facilities, according to best available technology.

The Initiative for Responsible Mining Assurance (IRMA) produced a voluntary responsible mining standard, developed by a multi-stakeholder committee. While a strong regulatory regime is needed, IRMA provides independent third-party verification to metal mine sites. It has also drafted a mineral exploration standard. [These standards can be found on IRMA's website.](#)

West Coast Environmental Law offers [publications on ensuring environmental protection from mining and other big industry](#), including topics like strengthening provincial and federal impact assessment, and revitalizing Indigenous law.



LINE CREEK COAL MINE. PHOTO: ALEC UNDERWOOD

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**BC  
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