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Estuary Working Group

Permission is given to post my name and address.

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Re: The Raven Coal Mine proposal draft AIR

The Estuary Working Group, a sub committee of Project Watershed, is a coalition of individuals and representatives of environmental groups and agencies in the Comox Valley concerned with the protection and restoration of the Courtenay River Estuary. The Courtenay River Estuary is the headwater of Baynes Sound and a significant contributor of freshwater inflow and nutrient productivity in the Sound. We are concerned with any urban, commercial and industrial developments that may have a negative impact on the watersheds that flow into Baynes Sound. It must be understood that the Sound is an integrated ecosystem and the waters, marine organisms, fish, and terrestrial species - animals and birds – are part of the whole. Twenty-three creek and river systems drain into Baynes Sound including those emanating from the Raven tenure.

The Courtenay River Estuary (CRE) is rated as a Class 1 estuary, one of only eight estuaries in British Columbia given this designation. The classification is based on intertidal size, estuarine habitat, intertidal species, water bird density and herring spawn. The estuary provides habitat for 145 bird species (more than 70,000 birds), 218 plant species, and 29 fish species including all five species of salmon.

The Courtenay River Estuary is second only to the Fraser River estuary as bird habitat. Both the estuary and Baynes Sound have been designated as an "Important Bird Area". As noted above, thousands of migrating birds use the estuary and Baynes Sound as winter habitat and as a resting and feeding place

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during migration. International organizations and governments have collaborated to protect these birds and many volunteer hours have been invested in protecting and restoring habitat. We question whether a mining proposal should even be considered that would jeopardize these investments. It should be pointed out that International covenants have been entered into by Canada to provide habitat and protection for migrating birds, including those that frequent the estuary and the Sound. We are obligated to respect these covenants and the species these covenants were intended to protect.

The Raven Underground Coal Project Proposal

The proposed Raven Underground Coal Project is located in the Cowie (Cougar Smith) Creek, Hindoo Creek, Wilfred (Coal) Creek, and Tsable River watersheds. It poses a threat to the health and viability of these waterways, the freshwater and marine aquatic species found within them, their estuaries, and Baynes Sound. Acid rock drainage, subsidence of the ground as a result of mining operations, impacts from mining activity on ground and surface water, periods of seasonal drought and extreme weather events constitute potential threats to a wide area associated with the proposed coal mine. This same potential contamination also poses a threat to the thousands of birds that inhabit the area.

There has been an active program to restore fish stocks and habitat on many of the creeks in the area of the proposed Raven Underground Coal Project. The Fanny Bay Salmonid Enhancement Society for instance maintains a hatchery to stock these rivers and creeks and regularly works to improve the habitat in these watersheds. These efforts would be impacted by the proposed mine.

Cowie Creek has been identified by Compliance Corporation as the primary creek that will be impacted by the surface operations of the proposed mine. The estuary of this creek forms part of the Fanny Bay Conservation Area (FBCA) and is designated a protected habitat. (The FBCA was created under the North American Waterfowl Management Plan, the Pacific Coast Joint Venture Management Board, and the Pacific Estuary Conservation Program). The surface and underground operations of the proposed mine are a direct threat to this protected area.

The Fanny Bay Conservation Area Management Plan (1992) p.33 states the importance of protecting this area.

... in keeping with the Ministry's mandate to 'preserve, maintain, enhance and protect '[the FBCA], only compatible resource uses would be considered for future developments. This mandate is of the utmost importance, to ensure the integrity of this area is maintained for the enjoyment of future generations.

The Fanny Bay Conservation Management Plan (1992) p. 40 closes with the following statement.

In the last century, Fanny Bay has evolved from an agricultural and wood processing industrial centre, to a community which thrives on non polluting recreational enjoyment and the culturing of shell fish. Throughout the years, the natural resources of this region have remained in the forefront. These attributes have been the catalyst for government agencies and conservation groups to work towards the continued protection of this ecologically important estuary. By protecting the natural habitats of Fanny Bay, the wildlife and fish of this area will continue to

prosper and be enjoyed, by all of us now, and in the future. This protection will also be vital to the shellfish industry as their existence relies heavily on the sustainment of high water quality standards.

It is in the best interest of all interest groups to work together, so the Fanny Bay estuary continues to prosper in a relatively unaltered state. It is the commitment of the Ministry of Environment, Lands and Parks to ensure that this common goal is achieved. Hopefully, this management plan can be useful in carrying on the impressive ecological wealth and tradition of the Fanny Bay and Baynes Sound region.

Fanny Bay Management Plan, Ministry of Environment, Lands & Parks, Nature Trust of British Columbia, Ducks Unlimited Canada, 1992.

The potential for acid rock drainage from the proposed coal mine poses a serious threat to the area. The water supply of local residents who are dependent on wells is at risk. The aquaculture industry in Baynes Sound is at risk. We believe comprehensive aquifer mapping and modeling is essential to determine the impact the mine may have on surface water, ground water and the waters of Baynes Sound.

The impact of the proposed mine on the creeks and rivers, particularly the subsidence of the ground, needs to be studied in detail as this could have major negative consequences on the many fish bearing streams in the area.

Terrestrial animals will be impacted as the proposed mine is located on wildlife corridors that are critical to the movement of animals through the area. The site and access roads will also impact the habitat of resident species.

The Bear Mine Deposit and the Trent River Watershed

The Bear Mine tenure, consisting of a proposed open pit and an underground mine poses a similar threat to the Trent River and its tributaries - these waters empty into the Courtenay River Estuary at Gartley Point. It should be pointed out that community groups are actively involved in restoration work on the Trent River. The Courtenay Game and Fish Protective Association for instance has an active program to obtain Coho brood stock from the Trent River and return the fry to the river each year. The Bear Mine tenure, when it is developed, will have a negative impact on the restoration of these stocks as well as on birds, terrestrial animals, and marine life in and about the Trent, its tributaries, the Courtenay River Estuary and Baynes Sound.

Anderson Lake Deposit, Dove Creek and the Tsolum River Watersheds

Should the Anderson Lake coal tenure be developed along with the Bear and/or Raven Project, Dove Creek and the Tsolum River will face potential contamination. The Tsolum River is only now recovering from the devastating effects of mine contamination from the Mt. Washington copper mine that operated in this area twenty years ago. The river is now showing signs of recovery after years of work by dedicated volunteers committed to its restoration. This recovery has only been made possible after the Provincial Government invested \$20 million of tax payers' money to cap and seal the mine itself

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and thus reduce the toxic leaching from the mine and waste rock left on the surface.

Baynes Sound and the Shell Fish Industry

Perhaps the greatest economic threat the proposed Raven Underground Coal Project poses for the Comox Valley is acid rock drainage which is known to release heavy metals from the rock once it has been disturbed as a result of the mining process. This disturbed rock lies on the surface in waste piles or tailing dumps and underground where the rock face is left exposed to the elements. Contaminants transported through runoff and the movement of underground water can be expected to enter into Baynes Sound. The shell fish industry requires clean sea water for the growing of shell fish. Any increase in pollution in the Sound, particularly increases in the level of heavy metals in the sediment, can be expected to have a cumulative effect. This industry currently employs more than 700 people and returns \$20 million a year to the Comox Valley and the provincial economy. A short term coal mine is an unacceptable risk to this vital sustainable industry.

Impacts on the Community

Any future mine in the Comox Valley will have significant impacts on the people who live in the Valley. Numerous local residents and visitors to the Valley use the many lakes, streams and rivers for recreational purposes - camping, hiking, photography, painting, hunting and fishing - and a large industrial operation will seriously curtail these activities, making the whole area less desirable as a place to live and visit. There will be impacts on local infrastructure as well, with a major increase in truck traffic hauling the product of the mines to a central location for washing and the shipment of the coal by truck (B-Trains every fifteen minutes twenty four hours a day) to Port Alberni. The proposed route, Highway #4, passes through Cathedral Grove and over the pass into Alberni. This is a hazardous route, subject to major disruptions during winter when snow and ice makes driving over the pass treacherous. There will be added costs for health care and education, while real estate values can be expected to decline as many moving to the Valley for recreational purposes and/or as a place to retire will be inclined to seek more favourable locations.

Coal and Climate Change

We believe it is time to take a serious look at policies or lack thereof in British Columbia which allow coal to be exported for both thermal power production and steel manufacturing purposes. There is global concern regarding the use of fossil fuels due to their release of carbon dioxide, a known green house gas. The carbon dioxide released impacts our climate and contributes to the acidification of oceans. We need to be conscious of the fact that each tonne of coal we export produces twice the tonnage of carbon dioxide when it is used, whether in thermal power plants or in the making of steel. This pollution needs to be calculated as part of the cost of any coal mining project. The mining of coal also releases methane gas trapped in coal beds. Methane produces twenty times more green house gas than does CO₂. The proposed Raven Project is known to have high concentrations of methane gas.

As a group committed to protecting and restoring a major estuary in Baynes Sound, we support the call for:

1. a joint federal/provincial independent expert Panel Review with full public hearings enabling the public to have experts present their views and also to hear the views of the governments' and the proponent's experts.
2. comprehensive aquifer mapping and modeling of the full Raven and Bear tenure including interaction between ground and surface waters and their relationship to Baynes Sound.

3. inclusion of the Bear Project and Anderson Lake Project within the list of future activities being considered by the proponent and for the environmental assessment of the cumulative effects these developments would have on transportation, water, and the accumulation of waste materials in the watersheds flowing into Baynes Sound.

Finally, we need to assess our coal exports in terms of the amount of CO₂ and methane gas that will be released into the atmosphere when this product is mined, transported and used. The addition of these greenhouse gases must be factored in to any calculation that determines the costs and benefits of any proposed coal mine.

Given the potential for significant negative impacts of the proposed Raven Underground Coal Project, we find the proposed Project incompatible with the community's vision of a sustainable Comox Valley. This vision is set forth in two recent documents, the Comox Valley Sustainability Strategy (2010) and the Comox Valley Conservation Strategy (2009).

Yours truly

Dr. Don Castleden, Chair
Estuary Working Group