



Partner Organizations

Comox Valley Land Trust
Project Watershed Society
Tsolum River Restoration Society
Comox Valley Naturalists Society
C.V. Water Watch Coalition
Morrison Creek Stream Keepers
C.V. Environmental Council
Brooklyn Creek Watershed Society

Supporter Organizations

Mountaineer Avian Rescue Society
Perseverance Ck Watershed Stewards
Portuguese Creek Stream Keepers
Oyster River Management Committee
Black Creek Stream Keepers
Saratoga and Miracle Beach
Residents Association
Comox Town Residents Association
Millard-Piercy Stewards
Plateau Road Resident's Association
Cape-Lazo Forest Reserve Society

Government Partners

Comox Valley Regional District
City of Courtenay
Town of Comox
Village of Cumberland

Funding Partners

Real Estate Foundation of B.C.
Ducks Unlimited B.C.
C.V. Community Foundation
RBC Blue Water Fund
Comox Valley Regional District
Vancouver Foundation

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Submission To the Canadian Environmental Assessment Agency and the BC Environment Assessment Office regarding the draft AIR/ EIS Guidelines document for the proposed Raven Underground Coal Mine Project

June 2, 2011

The Comox Valley Conservation Strategy is made up of a community partnership of 18 local environmental and resident's groups committed to maintaining the viability of the natural ecosystems that underlie and support the economic and social wellbeing of our communities.

The Comox Valley Conservation Strategy steering committee has reviewed the Draft AIR/EIS document and identified a number of very serious concerns about the project and the process by which the project will be reviewed and potentially approved.

This proposal comes with a long list of potential risks that can have long term and catastrophic impacts on drinking water quality and aquifers, air quality, tourism, marine environment, fishery and shellfish industries, wildlife, viewsapes, property values and traffic patterns, in both the Comox Valley and Port Alberni. The review process is inadequate, given that the risks are high while the economic benefits of the project are short term, unsustainable and benefit a small number of stakeholders. A full joint federal/provincial independent expert review panel with public hearings is required to completely assess the full scope of the environmental, social and economic impacts of this proposal, both in the present and future, and to give the local public a real opportunity to be engaged in this process.

The Comox Valley Conservation Strategy (CVCS) is a plan that envisions a sustainable future for the Comox Valley. This plan is based on the *Nature Without Borders Report*¹, published in 2007, and endorsed by all Comox Valley local governments in 2008. The CVCS aims to identify and map, protect and restore the critical ecological areas that are essential for ecosystem function, human and non-human health and survival, economic sustainability and quality of life.

The proposed area for the Raven Underground Coal Project is centered throughout the Tsable River watershed, identified in the *Nature Without Borders* report as a Critical Watershed² in a

¹ Nature Without Borders report can be viewed at:

http://www.cvconservationstrategy.org/wp-content/themes/CVCS-Child-Theme/docs/land_trust_ph1report.pdf

² Nature Without Borders report, page 14.

network of biodiversity corridors. The Nature Conservancy of Canada, based on their own studies identifies the Tsable River watershed: "...as having some of the highest conservation priorities on a national and international scale." (See copy of letter in appendix on page 10.) Any environmental impact assessment of the proposed mine site will have to identify the conservation priorities for the watershed from previous studies and carefully evaluate the impact of proposed mining operations on them.

The effects of this mine will impact a far wider swath of territory than just the 200ha of land-based structures outlined on the proposal maps. The freshwater study area identified in the draft document is far too small to adequately encompass the threats to the Tsable River watershed and nearby creeks, streams and wetlands, including Wilfred Creek.

Water, whether it is clean or contaminated, has an inherent tendency to seek lower ground, and will not remain in the small 200ha field of buildings during a storm or flood event. It is imperative that the study includes hydrology, fisheries, aquifers, and aquatic life of the entire region that will be impacted by this proposal. This includes the Tsable River and Wilfred Creek watersheds and all shoreline drainage systems in the Region, with specific detailed studies outlining the nature of subsurface flows, porosity of substrates, aquifer locations and recharge, and history of storm events, taking into consideration the greatly increased levels of flooding in recent years.

Previous experience in the Tsolum River watershed has demonstrated how years of acid mine leachate from a copper mine can destroy salmon stocks and the entire ecosystem of a river, leaving the local community largely to foot the bill for restoration and rehabilitation.

In addition to the inadequate size of the freshwater study areas, the marine study areas are also inadequate and must include all of Baynes Sound, the Courtenay and Comox estuaries and Port Alberni estuary and foreshore. Baseline studies of heavy metal concentrations as well as fisheries, shellfish, wildlife and ecological function inventories should be conducted.

The proposed baseline studies for rare and endangered species should also be expanded to include the entire region at risk by this proposal. A large number of species at risk exist in the Comox Valley area (see appendix pages 5-7). The environmental assessment needs to identify which of these species are potentially impacted from mining operations, and the potential risks to watershed and marine habitats. This should include food sources and habitats. There are many endangered bird species that rely on *important bird areas* (land and water habitats) including Baynes Sound, Comox Harbour and Lambert Channel/ Hornby Island. Some of the specific concerns that need to be considered are listed on pages 8-9 in the appendix.

In addition, studies of the effects of dredging of the Port Alberni foreshore to make way for the supertankers that will be required to transport the coal to Asia must be undertaken.

Recent events on the south island in which a truck carrying diesel overturned on the highway spilling its contents into Goldstream River, points to the precarious business of transporting toxic substances by road through narrow, winding mountain passes. Given the proposed number of these large coal trucks that would be passing on the now-scenic and tourism-based route between Courtenay and Port Alberni, an accident is pretty much assured to occur. The question is not if, but when. Potential impacts of a trucking accident and potential toxic spill must be considered within the Raven operations and along the trucking route to Pt. Alberni.

Another area of concern to the CVCS includes the impacts of this proposal on air quality. Coal dust is a known and proven carcinogenic agent, causing serious impacts on both human and animal health, including cancers, pneumonias, bronchitis and emphysema. Information is lacking in the draft document on the proponent's liability for serious impacts and effects caused by the proposed project through every-day activities, accidents, malfunctions and unforeseen events such as earthquakes and tsunamis, including after decommissioning of the mine. Moreover, the increase of truck traffic to transport the hundreds of thousands of tons of coal to Port Alberni will result in large releases of greenhouse gases and sulphur and nitrogen oxides into the Vancouver Island environment.

Another aspect that is lacking in the draft document is consideration of the fact that coal is an extremely dirty fuel source and it will not remain in the Comox Valley. Consideration of the effects of global climate change and the contributions to that problem that this proposal will make are not adequately identified or considered. It is not just the greenhouse gas emissions produced during the mining, extraction, cleaning of ores, and transportation of the product that needs to be considered. The coal from this mine, once shipped overseas to Asia, Mexico, South America or other foreign destinations, will be ultimately burned, releasing enormous amounts of greenhouse gases into the environment, also causing particulate pollution and smog. The costs of this are not being factored into the mine proposal.

In 2010, local governments completed a Comox Valley Sustainability Strategy, which included a section on local economic development.³ The proposed Raven Coal Mine does not fit within the strategy's local economic development objectives which include:

Objective 8.2.1: Encourage potential opportunities in new green business sectors, particularly those focused on reducing climate emissions.

Objective 8.2.2: Develop the economic "brand" and reputation of the Comox Valley as a leader in green industry and progressive economic development.

The Comox Valley prides itself on its pristine beauty, bountiful and historic estuary, delicious oysters, organic farms, stunning wildlife, wild salmon, tourism and unparalleled outdoor recreation opportunities. Sustainable industries such as shell fish aquaculture, eco-tourism, sports fishing and outdoor recreation employ more people than the proposed mine. These industries and businesses rely on the conservation of natural land and marine areas and systems that are threatened by this project.

The Comox Valley Conservation Strategy operates under the precautionary principle: "*if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action.*"

³ Comox Valley Sustainability Strategy, Local Economic Development Section 8, pages 126-131. The document can be viewed on the Comox Valley Regional District website:
http://www.comoxvalleyrd.ca/uploadedFiles/Regional_Strategies/Sustainability/CVSustainabilityStrategy_Feb%2018_Final%20Draft2.pdf

Applying this principle ensures that in situations where there is the possibility of harm from a particular activity when complete scientific knowledge on the matter is lacking, there is a social responsibility to protect the public from exposure to this harm. For this reason, we are not supportive at this time of the Raven Underground Coal Mine Proposal. We believe that there is no better time than now to pursue more environmentally sustainable forms of energy production both locally, regionally, nationally, and internationally. BC should be at the cutting edge of sustainability, not supporting dinosaur forms of energy that put our natural areas and local economy at risk. Establishing a mine for coal production is not what the Comox Valley wants, needs or should be pursuing.

Appendix

List of species at risk potentially impacted by activities of the Raven Coal Project

SARA/COSEWIC listed species

a) Species Name	b) Population	c) COSEWIC Status	d) SARA Status (Schedule 1)
Barn Owl <i>Tyto alba</i>	Western population	Special Concern	Yes
Common Nighthawk <i>Chordeiles minor</i>		Threatened	Yes
Great Blue Heron fannini subspecies <i>Ardea herodias fannini</i>		Special Concern	Yes
Marbled Murrelet <i>Brachyramphus marmoratus</i>		Threatened	Yes
Northern Goshawk laingi subspecies <i>Accipiter gentilis laingi</i>		Threatened	Yes
Olive-sided Flycatcher <i>Contopus cooperi</i>		Threatened	Yes
Peregrine Falcon pealei subspecies <i>Falco peregrinus pealei</i>		Special Concern	Yes
Red-legged Frog <i>Rana aurora</i>		Special Concern	Yes
Sand-verbena Moth <i>Copablepharon fuscum</i>		Endangered	Yes
Short-eared Owl <i>Asio flammeus</i>		Special Concern	No
Western Brook Lamprey <i>Lampetra richardsoni</i>	Morrison Creek population	Endangered	Yes
Western Painted Turtle <i>Chrysemys picta bellii</i>	Pacific Coast population	Endangered	Yes
Western Screech-Owl kennicottii subspecies <i>Megascops kennicottii kennicottii</i>		Special Concern	Yes
Western Toad <i>Anaxyrus boreas</i>		Special Concern	Yes

Provincially listed species

a) Species Name	c) Provincial/territorial Status
Autumn Meadowhawk <i>Sympetrum vicinum</i>	Blue
Band-tailed Pigeon <i>Patagioenas fasciata</i>	Blue
Barn Swallow <i>Hirundo rustica</i>	Blue

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Black Gloss <i>Zonitoides nitidus</i>	Blue
Blue Dasher <i>Pachydiplax longipennis</i>	Blue
Broadwhorl Tightcoil <i>Pristiloma johnsoni</i>	Blue
Carolina meadow-foxtail <i>Alopecurus carolinianus</i>	Red
Caspian Tern <i>Hydroprogne caspia</i>	Blue
chaffweed <i>Anagallis minima</i>	Blue
creeping wildrye <i>Leymus triticoides</i>	Red
Cutthroat Trout, Clarki Subspecies <i>Oncorhynchus clarki clarki</i>	BLUE
Dolly Varden <i>Salvelinus malma</i>	Blue
Double-crested Cormorant <i>Phalacrocorax auritus</i>	Blue
Ermine, anguinae subspecies <i>Mustela erminea anguinae</i>	Blue
flowering quillwort <i>Lilaea scilloides</i>	Blue
Green Heron <i>Butorides virescens</i>	Blue
Henderson's checker-mallow <i>Sidalcea hendersonii</i>	Blue
least moonwort <i>Botrychium simplex</i>	Blue
Menzies' burnet <i>Sanguisorba menziesii</i>	Blue
Northern Pygmy-Owl, swarthi subspecies <i>Glaucidium gnoma swarthi</i>	Blue
Nuttall's quillwort <i>Isoetes nuttallii</i>	Blue
Olney's bulrush <i>Schoenoplectus americanus</i>	Red
Oregon ash <i>Fraxinus latifolia</i>	Red
Pacific Sideband <i>Monadenia fidelis</i>	Blue
pointed rush <i>Juncus oxymeris</i>	Blue
poverty clover <i>Trifolium depauperatum var. depauperatum</i>	Blue
Purple Martin	Blue

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<i>Progne subis</i>	
Roosevelt Elk <i>Cervus canadensis roosevelti</i>	Blue
Surf Scoter <i>Melanitta perspicillata</i>	Blue
Threaded Vertigo <i>Nearctula sp. 1</i>	Red
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	Blue
Western Thorn <i>Carychium occidentale</i>	Blue
western wahoo <i>Euonymus occidentalis var. occidentalis</i>	Red

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Important Bird Areas (IBA Candada)

Lambert Channel –

Birds concentrate in the Lambert Channel to take advantage of spawning herring, which are usually present during the first few weeks of March. Significant numbers of waterfowl, especially Surf Scoter, White-winged Scoter, and Long-tailed Duck, and significant numbers of waterbirds, especially Glaucous-winged Gull, Mew Gull and Thayer's Gull, are found at this time. As well, continentally important numbers of Black Brant occur during spring migration. Lambert Channel and the waters off of Hornby Island support significant concentrations of Harlequin Duck in more than one season. Aggregations of Harlequin Duck gather at a few locations on the northeast side of Hornby Island for 2-3 weeks during herring spawning. These aggregations can include 49-81% of the midwinter population of Harlequin Duck in the northern Strait of Georgia. An estimated 3400-5500 birds were present in 1996-2001. Aggregations occur in only a small fraction of the habitat area where spawn is available, indicating the importance of the site. During summer and early fall, the shores of Hornby Island are also a major roost site for moulting Harlequin Duck.

Conservation Issues - Lambert Channel and the waters surrounding Hornby Island have long been recognized as an important area for waterbirds and herring. Any activity that negatively impacts the herring spawn (e.g. reductions in water quality, foreshore development) could have significant impacts on the ability of this site to support a concentration of birds.

Comox Valley

The Comox Valley is noteworthy for the numbers of Pacific Trumpeter Swans that over-winter there. Based on regular surveys, the numbers of swans seem to have stabilized at an over-wintering (February) population of about 2100 birds, although peak counts are over 2900 birds. Peak numbers represent over 12% of the world population of Trumpeter Swans, and over 16% of the Pacific population of this species. Waterfowl numbers reach continentally significant levels in winter. Congregations are composed of many species, most notably American Wigeon, Mallard, Northern Pintail, and Black, Surf and White-winged Scoter. Western Grebe occurred at globally significant levels most years from 1975 to 1997, but has decreased in numbers since then (numbers yet to be updated in table below). The valley and estuary are also important feeding areas for migrating Black Brant, Great Blue Heron (fannini subspecies), Glaucous-winged Gull, and Thayer's Gull.

Conservation Issues - The population of the Comox Valley has doubled over the past 20 years. Development comes with associated threats, including runoff from sewage and suburban storm sewers, wetlands filled in, new housing developments, and disturbance from increased recreational activities. From 1992 to 2002, at least 5% of the sensitive ecosystems were lost and over 29% of modified ecosystems such as older second growth forests and seasonally flooded agricultural fields disappeared.

Baynes Sound

The Baynes Sound area is important for winter populations of waterfowl and shorebirds, and for summer-moulting seaducks. The presence of spawning herring during early spring is an important food source for many bird species occurring in the area. Continentally important

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numbers of Black Brant occur during spring migration. Western Grebe occurred at globally significant levels most years from 1975 to 1988, but has decreased in numbers since then. The area is also an important feeding area for Surf Scoter, Glaucous-winged Gull, Mew Gull and Thayer's Gull.

Conservation Issues - Baynes Sound has long been recognized as an important area for waterbirds, salmon, herring and shellfish, but as of 2008 had not been designated any official protection status. The east coast of Vancouver Island has experienced rapid housing development in the past few years. The greatest threat to birds in Baynes Sound is the destruction or degradation of habitat (in particular coastal wetlands) by urban development. Runoff from sewage and suburban storm sewers threaten the water quality and disturbance from increased recreational activities also poses a threat to bird populations using the area.

Appendix

Letter from Nature Conservancy of Canada referencing the Tsable River Watershed



Pierre Iachetti
Director of Conservation Science and Planning
British Columbia Region

May 15, 2009

Re: Nature Conservancy of Canada endorsement of the Comox Valley Conservation Strategy

The Nature Conservancy of Canada (NCC) is Canada's leading national land conservation organization. We are a private, non-profit group that partners with corporate and individual landowners to achieve the direct protection of our most important natural treasures through property securement and long-term stewardship of our portfolio of properties.

When deciding what lands to protect, NCC bases its decisions on sound conservation science. Part of our approach is to draft "*Ecoregional Conservation Assessments*" for Canada's natural geographic regions. These help us identify priority landscapes where NCC and its partners can focus their conservation efforts. The conservation assessments also document the sites that if conserved would secure the long-term survival of viable natural species and community types of the ecoregion. Ecoregional conservation assessments answer the questions: What does conservation success look like on the landscape? What do we need to do to realize that vision? To answer these questions, we must engage the best available science and community consensus, and take action in an informed, deliberate and efficient manner.

NCC has completed two ecoregional conservation assessments that are relevant to the Comox Valley area: the Pacific Northwest Coast Ecoregional Assessment (completed in 2006) and the Puget Trough-Willamette Valley-Georgia Basin Ecoregional Assessment (completed in 2004). The goal of these assessments was to identify conservation sites that would contribute toward the long term survival of all viable native plant and animal species and natural communities within these ecoregions. The process undertaken by NCC involved detailed analysis of conservation targets (species, communities, and ecosystems), threats, and opportunities on an ecoregional scale that spanned British Columbia, Washington, and Oregon. The assessment had the involvement of teams of scientists and planners from these three jurisdictions and was extensively reviewed by a panel of experts throughout the process.

NCC endorses the Comox Valley Conservation Strategy, which has identified two specific areas for regional conservation (the Browns River watershed and the Tsable River watershed); sites which were also selected by NCC's ecoregional assessments as having some of the highest conservation priorities on a national and international scale.

Sincerely,

A handwritten signature in cursive script that reads "P. Iachetti".

Nature Conservancy of Canada - British Columbia Region
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