

## HUMAN HEALTH

### VOLUME 4, SECTION 33

The Environmental Impact Statement (EIS) details the environmental assessment undertaken for the Site C Clean Energy project. The EIS includes the project rationale, identifies potential effects and proposes measures to avoid or mitigate these effects. The EIS also describes the benefits Site C would provide for customers, Aboriginal groups, northern communities and the province as a whole.

#### ABOUT THE ASSESSMENT

The potential for human health effects as a result of the project may be associated with changes in air quality, water quality, noise and vibration, electric and magnetic fields, and methylmercury levels in fish.

#### ASSESSMENT AREA

The local assessment area for each human health aspect was based on the technical study area boundaries for air quality, noise, water quality, and EMF studies, the mercury human health risk assessment, and specific locations of human use.

#### SUMMARY OF POTENTIAL EFFECTS AND MITIGATION MEASURES

Potential Effects	Key Mitigation Measures
Change in ambient air quality (construction)	<ul style="list-style-type: none"> <li>• Implement Air Quality Management Plan</li> <li>• Utilize filters to contain particulate matter at concrete batch plants and crushers, and silos for fly ash cement and aggregate at concrete batch plants</li> <li>• Retain vegetation barriers where practical</li> <li>• Minimize burning of wood waste and follow B.C. Ministry of Environment Open Burning Smoke Control Regulation</li> <li>• Locate workforce camps outside the area of potential air quality objective exceedance</li> <li>• Conduct detailed modelling at dam site once the exact locations of emission sources are better defined. Modelling results will be used to determine where to place particulate matter monitors on the north and south bank</li> <li>• Monitor air quality associated with construction of Hudson's Hope Shoreline Protection; implement mitigation measures as required</li> <li>• Conduct further screening modelling at residences located 1.5 km from West Pine Quarry to identify potential exceedances at this site; and implement of air quality management plan at this site; as required</li> </ul>
Change in noise and vibration (construction)	<ul style="list-style-type: none"> <li>• Provide temporary noise barriers between work sites and receptors, use portable enclosures/barriers</li> <li>• Implement notification of work program for residents</li> <li>• Develop and implement Noise and Vibration Management Plans for work sites, monitor noise levels at work sites and implement adaptive management measures as required</li> </ul>

Potential Effects	Key Mitigation Measures
	<ul style="list-style-type: none"> <li>• Construct perimeter fencing</li> <li>• Retain or plant tree screens</li> <li>• Build berms and acoustic barriers</li> <li>• Enclose elements of conveyor belt system</li> <li>• Develop and implement noise monitoring and adaptive management as required</li> </ul>
Change in potable and recreational water quality (construction and operations)	Develop and implement the following Environmental Management Plans: <ul style="list-style-type: none"> <li>• Spill Prevention and Emergency Response Plan</li> <li>• Erosion Prevention and Sediment Control Plan</li> <li>• Groundwater Protection Plan</li> </ul>
Country foods: methylmercury in fish (operations)	<ul style="list-style-type: none"> <li>• Monitor methylmercury concentrations in fish to identify changes</li> <li>• Provide the public with information about safe fish consumption levels</li> </ul>

## KEY FINDINGS

- Development and implementation of environmental management plans and monitoring programs are expected to mitigate potential effects on human health. No residual effects are anticipated.

## ABOUT THE SITE C CLEAN ENERGY PROJECT

Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. Site C would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year – enough energy to power the equivalent of about 450,000 homes per year in B.C.

Site C is undergoing a cooperative environmental assessment by the Canadian Environmental Assessment Agency (CEA Agency) and the British Columbia Environmental Assessment Office (EAO). The environmental assessment process commenced in August 2011 and is anticipated to take approximately three years to complete.

**FOR MORE INFORMATION** visit [bchydro.com/sitec](http://bchydro.com/sitec)

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