EXECUTIVE SUMMARY

Bremner Trio Hydropower Corporation (BTHC), a British Columbia based company, is pursuing the development of the Bremner Creek Hydropower Project (the "Project"). The Project is to be located on Bremner Creek, a tributary to Harrison Lake, in southwestern British Columbia, approximately 57 km north of Chilliwack. The Project will provide sustainable, renewable, low environmental impact energy to BC Hydro under an Energy Purchase Agreement (EPA) obtained through the Clean Power Call of 2008. The project is linked by the EPA to the adjacent Trio Creek Hydropower Project which has received provincial and federal approvals and is set to begin construction in 2015. The purpose of this Development Plan (DP) is to provide project specific information and an effects assessment in accordance with provincial guidelines to support provincial decision making. The DP will also serve to inform other levels of government and interested parties on the nature of the project and its potential effects. The 148 GWh/yr of firm renewable energy generated is equivalent to a reduction of 53,000 tonnes of CO_2/yr compared with new combined cycle gas turbine generation, or 127,000 tonnes CO_2/yr compared with coal fired turbine generation.

The Project design is a hybrid of run-of-the-river and a traditional storage reservoir. A 26 m tall earthen dam will be constructed on Bremner Creek to store approximately 1,100,000 m^3 of water at the normal operating level. This stored volume will be used to produce power preferentially during times of peak daily demand, a strategy known as hydropeaking. Two secondary intakes on un-named tributaries will augment flow to the reservoir from the Bremner Creek mainstem. A typical run-of-the-river style intake will also be constructed upstream of the reservoir to maximize head during reservoir re-filling and facilitate dam and reservoir maintenance. Ecologically derived instream flow requirements (IFRs) will be provided downstream of all intakes to support aquatic ecosystems. Diverted flow will pass through the 5.2 km penstock pipe located largely under or adjacent to an existing resource road. The powerhouse will sit on the shore of Harrison Lake and be equipped with a Pelton turbine and 25 MW generator to produce electricity. Outflows from the powerhouse will be conveyed by a short buried tailrace directly to Harrison Lake, adjacent to the mouth of Bremner Creek. A 50 – 300 m long 138 kV powerline will deliver electricity to the Trio Creek transmission line, set for construction in 2016. The maximum proposed quantity of water to be diverted will be 7.5 m^3/s at the main intake and 0.5 m^3/s and 0.75 m^3/s at the Tributary 1 and Tributary 2 intakes, respectively. The total final footprint of the Project is estimated to be 26 ha. The target for completion of Project construction is late 2017.

The Project is located within the Coastal Western Hemlock (CWH) biogeoclimatic zone and includes the CWHds1 (Southern Dry Submaritime) and CWHms1 (Southern Moist Submaritime) variants, characterized by mild winters, dry summers and intense fall storms. The Bremner Creek watershed has been extensively logged over the last 50 years and there is a well-developed network of forest roads throughout the area. Developments in the area include a forest service road (FSR), BC Hydro transmission line right-of-way, ongoing forest harvesting activities and development of other run-of-the-river hydropower facilities. Bremner Creek is fish-bearing with anadromous fish species including cutthroat trout and coho and chum salmon in the lower 707 m downstream of an impassable barrier and resident rainbow trout upstream of this point. The assessment identified 21 focal wildlife species, including three amphibian species, 12 birds, and

six mammals. These include coastal tailed frog, American dipper, northern goshawk, harlequin duck, spotted owl, pacific water shrew, grizzly bear, and mountain goat, among others.

Assessment of the Project considered potential effects of construction and operation of the Project. The assessment considered potential accidents and malfunctions including fire, release of deleterious materials, material or structural failure, landslide and ramping rate or IFR violation. Valued components (VCs) were selected was based on the baseline setting, provincial and federal guidelines, professional judgment, and issues identified during consultations under the general headings: aquatic environment, atmospheric environment, geophysical environment, terrestrial environment and socio-economic / cultural environment. Each interaction between a VC and a project activity with the potential for an adverse effect was assessed in terms of baseline conditions, potential effect, mitigation measures and offsetting, and determination of the nature and significance of the potential residual effect. Significance is judged based on the direction, magnitude, geographic extent, duration, frequency, reversibility, context, and probability of the potential effect under consideration. Where possible, threshold criteria or management standards have been identified beyond which a residual effect is considered significant.

Potential effects on aquatic ecosystems include changes to aquatic habitat quantity or quality, reduction of stream connectivity and impedance of species migration, species mortality and changes in water quality. Key mitigation measures include the use of best management practices (BMPs) during design, construction and operation, construction environmental monitoring, provision of ecologically derived IFRs, tributary inflow downstream of the intakes, screening of intakes to avoid entrainment, provision of fish passage at intakes, return of flows directly to Harrison Lake and reservoir contouring to avoid ramping effects, and compliance and effectiveness monitoring of key variables. A fish habitat compensation plan will be developed to offset residual effects from reduced instream flows and direct disturbance due to instream construction.

Potential effects on atmospheric and geophysical VCs include reduced air quality due to emissions and dust production, changes to flushing and channel forming flows, reduced slope stability, alteration of stream sediment transport and distribution as well as acid rock drainage and metal leaching. Mitigation measures to counter these potential effects include the use of BMPs during design, construction and operation, construction environmental monitoring, upholding high standards for construction equipment maintenance, employing dust suppression methods, setting maximum diversion rates well below regular flood levels, tributary inflow downstream of intakes, detailed geotechnical assessment and design in risk-prone areas, and compliance and effectiveness monitoring of key variables.

Potential effects on the terrestrial environment include changes in wildlife habitat quantity or quality, increased wildlife mortality risk, alteration of movement or behaviour patterns of wildlife species as well as the loss of rare plant species, listed ecosystems, old forest or wetlands. Decline in forest health and introduction of invasive species are also potential effects. Key mitigation measures include the use of BMPs during design, construction and operation, pre-construction surveys, construction environmental monitoring, reduced risk work timing, avoiding human-wildlife interactions, re-use of existing disturbed areas, use of areas with lower habitat value, minimizing construction clearing area and final footprint, re-vegetating temporarily disturbed areas, screening water intakes to avoid entrainment of frogs and shrews, and compliance and effectiveness monitoring of key variables.

Assessment of the socioeconomic implications of the Project included consideration of the regional economy, resource objectives, land use plans, overlapping land tenures, navigation, transportation, access, water rights, human health and safety. Potential effects considered were impacts on forestry operations, employment during construction and operation, tax revenue generated by the Project, effects on designated areas, recreation, and visual quality, potential conflicts with other land tenure holders in the area, effects on transportation infrastructure, public access to Crown Land, and risks to public or worker safety. Capital construction costs are estimated to be up to $80M, depending on the final Project configuration. The Project will provide direct employment and contribute to the local economy during all phases including construction, operations, and decommissioning. Mitigating factors for potential adverse effects include the use of BMPs during design, construction and operation, the small size of the project footprint relative to the timber harvestable land base, maximizing use of existing roads, upgrading and repair of Bremner mainline and Sts'ailes Forest Service Road, use of barges to minimize road traffic, priority use of local skilled labour and services, avoiding human-wildlife interactions, working cooperatively with local forestry operations, most isolated timber is not harvestable, development of an access management plan, emergency response plans for spills, fire, and other environmental emergencies and compliance and effectiveness monitoring of key variables.

After initial consultations with all First Nations with overlapping consultative areas, BTHC has focused consultation efforts on the First Nations in closest proximity to the Project and with the clearest strength of claim for the area around Bremner Creek: Sts-ailes Nation and Xa'xtsa Nation (Douglas First Nation). Sts'ailes and Xa'xtsa Nation have executed an agreement that places an economic boundary at Tretheway Creek, north of Bremner Creek. Bremner Creek is located solely in the Sts'ailes economic area. A comprehensive Impacts and Benefits Agreement (IBA) has been signed with Sts'ailes First Nation, securing their support for the Project. Agreements have also been made with Douglas First Nation regarding the section of the Project's Transmission line that extends past Tretheway Creek to the Upper Harrison Terminal (UHT) substation. Sts'ailes and Douglas First Nations will benefit from the economic opportunities that the Project will provide. To date, no cultural or archaeological resources have been identified that will be impacted by the Project.

Given the implementation of the proposed mitigation and offsetting measures, no significant residual effects were identified in the assessment that would preclude the development of the Project. BTHC will oversee the construction and operation of the Project and will be responsible for fulfilling all commitments made in this Development Plan. Adherence to commitments will be ensured through the implementation of the Construction Environmental Management Plan, the Long-Term Environmental Monitoring Program and the Operational Environmental Management Plan.