Elk Valley Water Quality Plan

Annex N
Teck's Approach to Biodiversity Management

Teck

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June 27, 2014

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1 Summary – Biodiversity Management Plans

1.1 Teck's Sustainability Strategy - Overview

Teck's corporate strategy is focused on building a broadly diversified resource company, growing its production at existing operations and developing new projects in stable jurisdictions. The pursuit of sustainability guides Teck's approach to business and we recognize that success depends on our ability to establish safe workplaces for our people and collaborative relationships with communities.

Sustainability requires a long-term perspective and decision-making that considers future opportunities and the interests of various communities of interest, all while ensuring that Teck remains competitive and achieves healthy financial performance.

In 2011, Teck developed a comprehensive sustainability strategy that set long-term goals that extend to 2030 and short-term 2015 goals in six focus areas: Community, Our People, Water, Biodiversity, Energy, and Materials Stewardship (Figure 1). These focus areas represent the most significant challenges and opportunities facing the company.

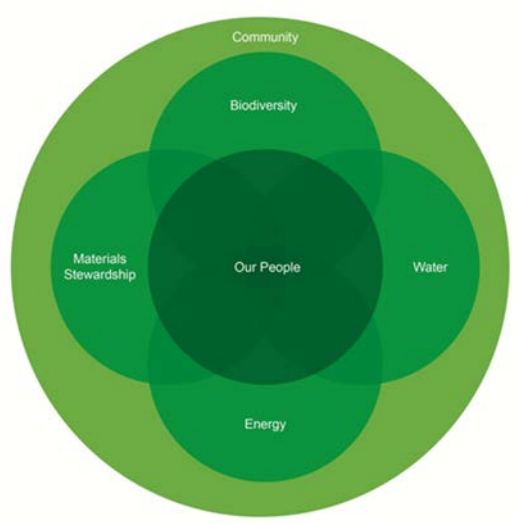

Figure 1 Our Focus Areas

The six focus areas are interconnected: therefore managing sustainability may require the balancing of competing interests. For example, replacing fresh water used for mineral processing with desalinated seawater is likely to increase energy use. The interconnectedness of the focus areas can also create synergies. For instance, reducing overall water use typically results in less water being pumped or treated, which reduces energy use. Teck focuses on developing strategies that maximize benefits across our focus areas.

Water is the focus of the Elk Valley Water Quality Plan; however, the interrelationships between water and the other focus areas within Teck's sustainability strategy could translate into additional benefits in other focus areas. Efforts to conserve or restore biodiversity, for example, can have significantly positive impacts on water quality and quantity. For this reason, there is potential for Teck's voluntary biodiversity actions to positively contribute to the objectives of the Elk Valley Water Quality Plan. Therefore, Teck's approach to biodiversity planning is the focus of this summary.

1.2 Teck's Biodiversity Vision, Goals and Tools

Protecting and enhancing biodiversity, which is the abundance and variety of living organisms and ecosystems on the planet, is integral to sustainability. Teck's long-term vision for biodiversity is that:

> *We achieve a net positive impact on biodiversity by maintaining or re-establishing self- sustaining landscapes and ecosystems that lead to viable long-term and diverse land uses in the areas in which we operate.*

This vision establishes a clear over-arching biodiversity goal: that biodiversity will be improved as a result of our activities and presence in a region. We believe this goal is achievable through a combination of mitigation actions, with on-site restoration playing a primarily role and off-site conservation and restoration contributing additional benefits. Teck has developed and is aggressively pursuing both short- and long-term goals in support of our biodiversity vision. Teck intends to achieve four short-term biodiversity goals by 2015:

- Develop comprehensive biodiversity management plans, including targets and actions, to minimize impact at all operations and advanced projects, in accordance with our Biodiversity Guidance Manual and management standards. These plans are designed to implement the biodiversity mitigation hierarchy: (1) avoid impacts where possible; (2) minimize impacts that are unavoidable; (3) rehabilitate affected areas; and (4) offset any residual impacts
- Develop plans at our operations to offset ecosystem impacts that cannot be fully mitigated or rehabilitated, by enhancing or protecting similar habitat areas of equal or greater ecological value, in the affected regions
- Enhance our contribution to biodiversity conservation knowledge
- Identify and implement biodiversity improvement and conservation opportunities that would seek to create a net positive impact in our areas of influence

We have developed a series of biodiversity resources and tools, including a corporate Biodiversity Guidance Manual, a corporate management standard for biodiversity, a biodiversity workbook, and a framework for biodiversity management planning across our five Elk Valley operations. Together, these tools provide employees and contractors with a means of consistently assessing operations, quantifying impacts on biodiversity and developing site specific biodiversity management plans.

In 2012, we engaged biodiversity leads at each of our operating sites to develop our draft Net Positive Impact (NPI) Strategy. The purpose of the strategy was to define: the scope of Teck's NPI Vision; how sites should use the mitigation hierarchy to pursue NPI; and site-level biodiversity targets. Key components of the NPI Strategy include:

- The use of quantitative metrics to demonstrate NPI on beneficial, valued, and sustaining ecosystem and biodiversity elements relevant to mining operations. These elements are referred to as Ecosystems and Biodiversity Elements (EBE) and include:
    - Natural habitats and ecosystems
    - Priority landscape functions
    - Highly threatened and/or vulnerable populations and species of plants and animals
    - Ecosystem services (both sustaining and valued by communities of interest
- The "pre-mine" condition, which is the baseline against which a site's impacts should be measured, even if the mine is currently in operation
- The timeline for achieving NPI for EBE: NPI should be achieved as soon as practicable for those EBE for which temporal loss is an important consideration. In general, Teck sites should achieve NPI for EBE by life of mine

The Teck guidelines reflect the most recent policies on mitigation (January 9, 2014) from the B.C. Ministry of the Environment, including the draft Policy for Mitigating Impacts on Environmental Values and the draft Procedures For Mitigating Impacts on Environmental Values. Teck's NPI Strategy is aligned with emerging best practices in corporate biodiversity management, regulatory frameworks in some provinces and countries where Teck operates, as well as the International Finance Corporation's Performance Standard 6.

The Elk Valley Water Quality Plan presents a package of mitigation actions to directly address water quality issues in and around our operating mine sites in the Elk Valley in order to protect the watershed and aquatic health. Our commitment to biodiversity presents an opportunity to consider additional off-site mitigation measures (offsets) to build on those efforts. Teck's geographic area of focus in the context of our biodiversity actions extends beyond the area defined under the Order to include both the Elk Valley and the Flathead River Valley.

Our current biodiversity activities in the Elk/Flathead Valley region can be grouped into three categories:

1. Biodiversity management plans which will determine the operational approach to managing and identifying biodiversity impacts
2. Conservation lands assessment and management
3. Other biodiversity projects that will seek to offset potential biodiversity impacts

1.3 Biodiversity Management Plans at Teck Operations

Teck completed a pilot project for the development of Biodiversity Management Plans (BMPs), starting with its Line Creek operations in 2013 and initiated BMP development at each of the other Elk Valley operations including Fording River, Greenhills, Elkview and Coal Mountain. Our BMP development process starts with the collection, collation and analysis of information related to the operations. This information may be recent or it may extend back decades. A BMP integrates myriad biodiversity information that is available for the site, including baseline information on the EBEs that were present at the site before the development of the mine. Other information compiled and used includes environmental assessments, information on potential EBEs not captured in existing baselines, biological

monitoring reports, risk and impact assessments, target commitments, existing and planned biodiversity mitigation actions and the range of biodiversity elements that are priorities for the site's communities of interest.

Following extensive preparatory work and information analysis, BMPs will be drafted for the five Elk Valley operations. Teck operations follow a nine-step implementation plan (see figure below), including:

1. Area delineation
2. Elements identification and amalgamation
3. Identification of potential effects
4. Impact and risk assessment
5. Additional mitigation planning and updated impact and risk assessment
6. Opportunity identification
7. Offset calculations
8. Development of actions
9. Implementation and monitoring

BMPs will highlight and quantify any EBE values that may have residual risks or impacts from the operations after the first three steps in the mitigation hierarchy (i.e. up to and including rehabilitation/reclamation) and will develop action plans to offset those impacts. Based on the identified offsetting requirements, individual BMPs will identify biodiversity opportunities and will prioritize and develop actions to achieve NPI. The actions will then be implemented and monitored.

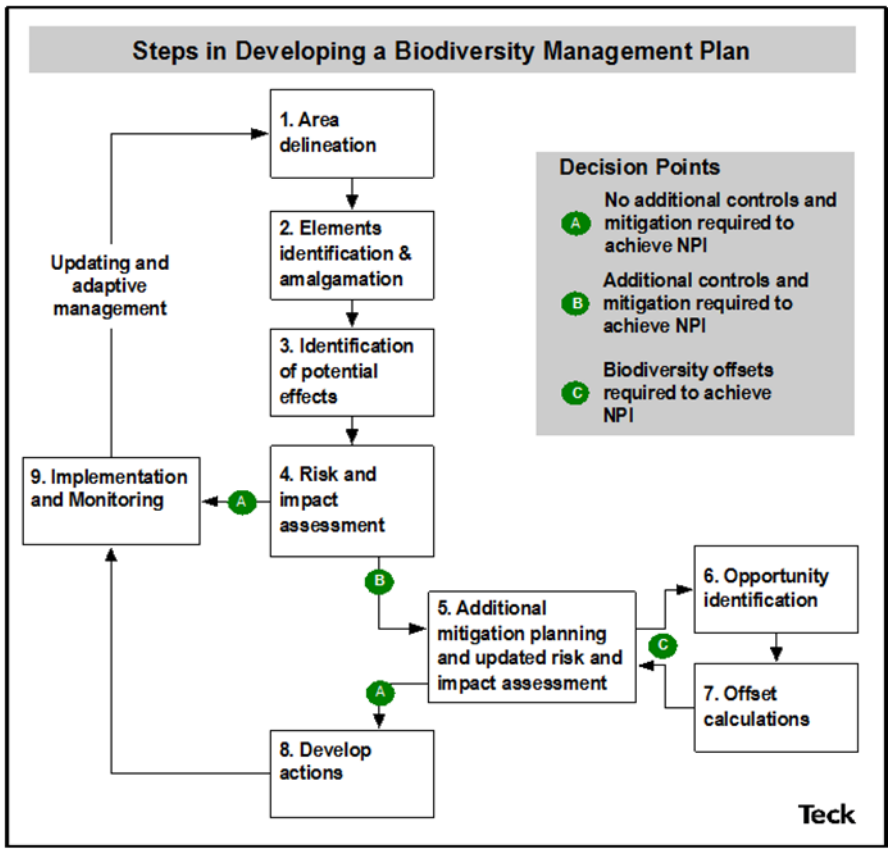

Figure 2 Nine-Step Implementation Plan

2 Teck Conservation Lands

Teck's ownership of significant tracts of land in the Elk Valley presents an opportunity to achieve biodiversity offsets for both aquatic and terrestrial ecosystems through well-planned land stewardship. These opportunities exist both on lands that have been owned by the company (or its predecessors) for decades, and on private lands that have been newly acquired.

Through our preliminary work in quantifying biodiversity values impacted by our Elk Valley operations, we recognized that there will be a need to mitigate impacts through protection or enhancement of some quantity of biodiversity offsets. It was also apparent that this additional mitigation through conservation would likely need to draw upon a larger land area than that which was already owned by Teck, and therefore new land acquisition would be required.

As a result of early engagement efforts with communities of interest including the Ktunaxa Nation, local NGOs and conservation organizations, Teck became aware of an opportunity to acquire several properties of high conservation value close to our areas of operation in southeast British Columbia. On October 17, 2013, Teck announced one of the biggest private sector investments in land conservation in British Columbia's history when it made a $19M acquisition of:

- Grave Prairie (3,059 hectares)
- Alexander Creek (3,098 hectares)
- Flathead Townsite (992 hectares)

These conservation lands are located within a larger ecosystem described by multiple provincial, national and international organizations as having global significance for biodiversity.

The conservation lands situated in Elk Valley and Flathead River Valley preserve key aquatic values such as free flowing rivers and intact riparian areas that will help preserve water quality and will influence water temperature. These lands also secure cold-water habitats for populations of native bull trout (a blue listed 'species of special concern' in British Columbia) and westslope cutthroat trout (a blue listed species in British Columbia and a federal 'species of special concern').

Preservation of these lands will help to conserve aquatic values over the long-term and are also important for the movement of wildlife which uses the river valleys and high elevations to migrate north, south, east and west over the Rocky Mountains.

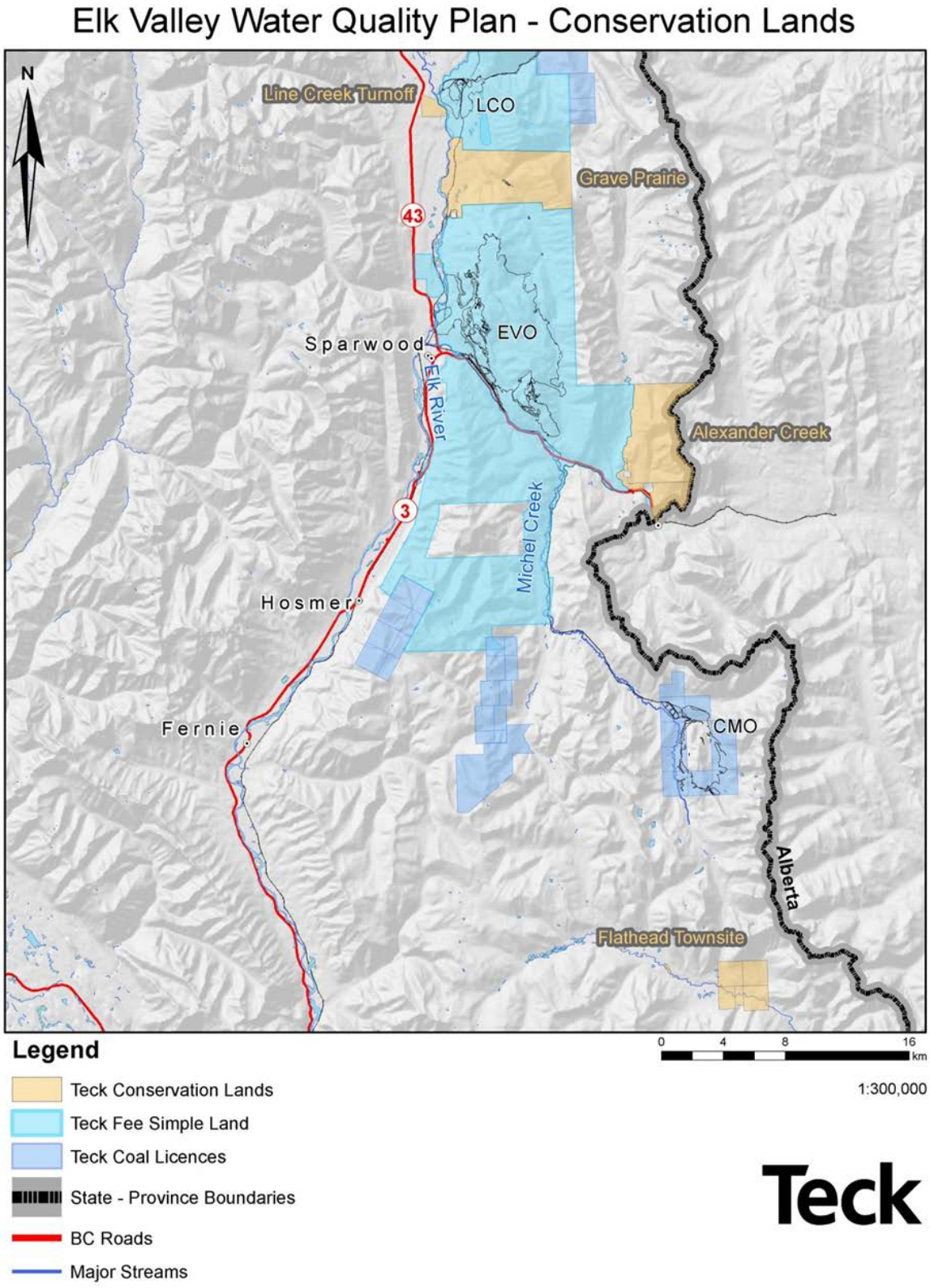

Figure 3 Conservation Lands

As a result, it is an area that has one of the most diverse communities of carnivores and ungulates anywhere in North America, including grizzly bears, wolverines, lynx, mountain goats, bighorn sheep, elk and deer. One particular conservation organization describes the Flathead as being as rich in plant species as the Okavango Delta (in Botswana) or the Serengeti (spanning Tanzania and Kenya) because it is a mixing zone for plant species from north, south, east and west.

The land parcels acquired by Teck in 2013 fall within the area identified by the Ktunaxa Nation as their traditional territory and have been identified as having cultural significance for the Ktunaxa. Teck has committed to work in co-operation with the Ktunaxa to preserve these values and to work with communities and other stakeholders to ensure these lands can be used to protect key wildlife and fish habitat in the Elk Valley and Flathead River Valley now and for the future.

Through engagement with stakeholders and the Ktunaxa Nation, Teck has gained a preliminary understanding of the key values of the conservation lands:

Grave Prairie

- Wetland habitat
- Natural grasslands
- Mixed conifer & aspen forests
- Winter range for ungulates
- Habitat diversity including black bear (predominantly), cougar, wolves and badger
- Traditional cultural values and uses

Alexander Creek

- Habitat for bull trout
- Aquatic features including wetlands and riparian areas
- Connectivity for fish and wildlife
- Mature old growth forests
- Habitat diversity including grizzly, black bear, wolverine, cougar, wolves and elk
- Hunting, fishing and gather uses
- Traditional cultural values and uses

Flathead Townsite

- Habitat for bull trout
- Habitat for westslope cutthroat trout
- Connectivity for fish and wildlife
- Vegetation diversity
- Habitat diversity including grizzly, black bear, wolverine, cougar, wolves and elk
- Hunting, fishing and gather uses
- Traditional cultural values and uses

Teck is currently engaging with stakeholders to further identify the values of the land, in order to determine the overarching management goals for the three properties. We will also undertake detailed on-the-ground assessments of the values associated with the conservation lands including natural habitats, landscape function and elements prioritized by First Nations, regulators and communities of interest.

As a first step, we will focus on assessing vegetation types, including the condition and seral stage of vegetation. All assessments will be conducted in the same manner as the assessments conducted at our operating mine sites. This information is critical in assessing the equivalency between the impact site and the offset site, and in assessing the potential for active or passive gains in quality over time. Sampling intensity should provide a level of statistical power that supports the ability to:

- Estimate the abundance of biodiversity values with specific confidence limits, and
- Detect changes in the biodiversity values of a desired magnitude (for example, the statistical power to detect a 20% increase in or decrease in abundance)

Detailed assessments will also be completed for the other values identified, equivalency will be determined, management objectives will be assessed, counterfactuals will be developed (to answer the question: what would happen to the properties if they were not purchased by Teck?) and additionality of values (additional biodiversity benefits) resulting from Teck's land management of the property will be evaluated to quantify biodiversity offsets. All information will contribute to the creation of management plans for each of the three properties and will help quantify the value of the potential biodiversity offsets that the conservation lands represent.

Teck is also reviewing and evaluating ownership and management structure options for the conservation lands that will help achieve permanence. This is a necessary step in ensuring the longevity of biodiversity offsets while supporting the goals of stakeholders.

2.1 Lot 48

Teck has also acted to conserve other important habitats in the region. For example, Teck contributed $2 million to the Nature Conservancy of Canada to conserve Lot 48, a 127-hectare parcel of land located on the east shore of Columbia Lake in southeast British Columbia. Lot 48 was the last parcel of land not designated for conservation on the east side of the lake and securing it connected more than 7,600 hectares of protected land that together created critical north-south and east-west wildlife corridors.

The area represents important habitat for bighorn sheep, elk and a number of rare and endangered species. It also includes important wetlands near the headwaters of the Columbia River system which form part of the longest uninterrupted wetland in North America. These wetlands support hundreds of thousands of birds, reptiles, amphibians, mammals and fish, including Kokanee salmon, Rocky Mountain whitefish, ling cod and several varieties of trout.

This land has important cultural values for the Ktunaxa Nation which has used the area as a transportation route and as a site for villages and camps for thousands of years. Numerous archeological sites have been documented in this area including pictographs and burial sites.

3 Other Biodiversity Projects

In addition to conducting a review of conservation, enhancement and restoration opportunities, Teck is compiling information on other potential biodiversity projects, particularly those that would have positive impacts on aquatic ecosystems, such as road deactivation. This may include identifying opportunities for biodiversity projects on Crown land and/or other private lands. Potential biodiversity projects will be prioritized for implementation.

Teck is currently exploring opportunities to expedite its fish habitat banking in the Elk Valley. While habitat compensation is a legislated requirement under Section 35 of Fisheries Act, early efforts to construct and achieve functioning fish habitat in advance of mandated timelines can produce additional, verifiable benefits for fish and other aquatic organisms. Depending on the location and design of the habitat bank, elements could include the creation of spawning grounds for bull trout and westslope cutthroat trout, erosion control to stabilize river banks, and riparian vegetation enhancement to decrease erosion, protect or restore water quality, moderate stream temperature and provide added structure for fish and other aquatic organisms.

Teck has identified and compiled information on fish habitat enhancement and restoration opportunities throughout the Elk Valley in order to pursue and achieve early implementation of functioning fish habitat banks. We are working with the Elk Valley Fish and Fish Habitat Committee, which is made up of representatives of Fisheries and Oceans Canada, the Canadian Columbia River Intertribal Fisheries Commission (representing the Ktunaxa, Shuswap and Okanagan First Nations), and the Ministry of Forests, Lands and Natural Resources, to evaluate the projects best suited to habitat banking and to seek the necessary approvals before implementation begins. We are hopeful that we will achieve consensus and approvals in the coming months, which will enable the construction of the habitat bank(s).