

Identifier	Topic	Reference to EIS/EA Report	Summary of Previous Comment	Proponent's Response to Previous Comment	Follow-up comment/ Request for Information	New Proponent Response	Subsequent Comment
			<i>Date: March 2014</i> MNR-Terrestrial 2	<i>Date: June 2015</i>	<i>Date: August 2015</i>	<i>Date: October 2016</i>	
MNRF-11B	Terrestrial Habitat		<p>MNR feels that there is a still a lack of connection between indicators and measures in table 1-1; Valued Ecosystem Components Selected for Terrestrial Ecology. We question that the only birds measured as a VEC are upland birds. Measures do not appear to consider the actual presence of the identified VEC (identified as the indicator). This is troublesome for the reason that just because a habitat exists, it does not mean that it would be used by the VEC (in the case of individual species) for a number of reasons. For example, for furbearers and upland breeding birds the presence of the specifically identified species is not considered in the measures, rather only habitat suitability. The measure of a VEC should be of the VEC as identified. The rationale also doesn't line up with the indicators or measures. For example, where a habitat type is identified such as wetlands, wildlife use is not identified an indicator even though rationale for selecting the VEC is because it is important as wildlife habitat. Wildlife groups that use the wetland VEC are also not listed such as fish, amphibians, reptiles, non-migratory birds. It is felt that measures should include composition and diversity of wildlife species and communities, not just wetland plant communities. Suitability of habitat is only measured, not the actual use of the habitat, which is felt to be inappropriate. (MNR-146, MNR-147) The EA or the TSD should provide a rationalization of how the species were selected, and how the effects were considered (MNR-214)</p>	<p>Valued Ecosystem Components for the Project were selected based on:</p> <ul style="list-style-type: none"> ■ Results of baseline studies ■ Feedback from regulators and Project stakeholders ■ Ability to act as a surrogate for other valued species ■ Ecological function and socio-economic importance <p>A preliminary list of VECs was provided in January 2012 in newspaper publications, public open house events, presentations to government, Chiefs and Consultation Committees and visits to Aboriginal communities.</p> <p>The measures selected for the VECs reflect parameters that can reliably be collected during baseline inventory and follow-up monitoring programs (e.g., breeding bird point counts are a reliable measure of upland breeding bird abundance and thus a measurement endpoint for this VEC was selected as "relative abundance of breeding birds". In contrast, the population of furbearers, for example, was not determined within the scope of the baseline studies and therefore the effects assessment measurement endpoints did not use a population measurement but instead used a conservative measure based on habitat availability and suitability, and assumed that all suitable habitat would be used by furbearers and therefore they would expect to be present). As the collection of baseline information is largely a 'point in time'</p>	<p>MNRF feels that only measuring habitat presence and suitability in some cases, rather than actual habitat use by species and habitat presence/suitability in combination, is inappropriate and inconsistent with how other VECs are being measured. Specifically, the baseline studies as outlined in table 2.2 of the Terrestrial Ecology TSD, while valued, do not clearly link the VEC selected to the indicator.</p> <p>MNRF also continues to feel that some of the representative species selected as a VECs are inappropriate and a pathway of effect is not being adequately considered. For example, snapping turtles are not a good species to represent reptiles and amphibians for the reason that they are fairly generalist in habitat use.</p> <p>MNRF requests the proponent provide documentation on how the VEC's were selected (i.e. through baseline studies, feedback from regulators as they state). As well as provide a description/explanation</p>	<p>Valued Ecosystem Components (VECs) are considered to be receptors for project effects. Given the large number of species that could potentially interact with the Project, it is neither possible, nor necessary to attempt to measure effects on all possible receptors. Most VECs represent a broader group of species or a particular habitat type important for a variety of wildlife (i.e., provide ecological and assessment redundancy). Consequently, understanding the potential effects of the Project on the selected criteria provides inferences about effects on other wildlife species or guilds with similar life history traits and habitat requirements.</p> <p>Each VEC is represented in the assessment by measurement indicators. Measurement indicators are features that may be changed by the Project (i.e., survival and reproduction, habitat availability, and habitat distribution) and may affect the maintenance of self-sustaining and ecologically effective populations for the VEC. Effects on VECs are considered through a two-step screening process, first for potential interactions and secondly for measurable change, allowing the assessment to focus on where effects are likely to occur. Each measurement indicator requires specific measures that can be quantified and assessed. Additional information on how VECs were selected and how they can be used as surrogate species is provided below.</p> <p>Bald eagle was observed in the RSA during baseline surveys (Section 2.2.3.2.1 in the Terrestrial Ecology TSD). Bald eagle is listed as a species of special concern under the ESA (2007). Breeding habitat for this species is limited in Ontario and eagles can be sensitive to noise disturbance and human activity during nesting. Bald eagle may also be affected by changes to water quantity and quality, as this species is piscivorous. As a top avian predator this species can be a keystone species and will accumulate contaminants. Bald eagle can act as a surrogate for other top-predator piscivorous birds (e.g., osprey).</p> <p>Common nighthawk was observed in the RSA during baseline surveys (Section 2.2.3.2.1 in Terrestrial Ecology TSD). Nighthawk is listed as a species of special concern</p>	MNRF 11B-2

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				<p>survey, assumptions based on the availability and suitability of habitats must be made as it is unreasonable to determine habitat usage by each VEC. This effects assessment relied on scientific research into habitat preferences by VECs and then used a conservative approach in that all potential effects on suitable habitat for VECs was considered an effect on the actual VEC even though they may not utilize the habitat. This conservative assessment is considered to appropriately address the effects on wildlife communities.</p> <p>In addition to upland birds, 3 other bird species were considered as VECs, including, Bald Eagle, Common Nighthawk, and Canada Warbler.</p> <p>Upland Breeding Birds were chosen as a VEC based on their small territory size and high bird density, which means large numbers of upland birds may be affected by habitat loss. Upland birds are also considered an appropriate VEC as migratory birds are susceptible to population declines as a result of changing environmental conditions on breeding and overwintering habitats.</p> <p>The health and extent of wetland habitat is considered an appropriate measure for the Wetlands VEC. Wildlife health is directly related to the health and extent of their associated habitat and individual wildlife species are included as separate VECs.</p>	<p>on how the VEC's can act as a surrogate for other valued species, considering MNR's comments.</p>	<p>under the ESA (2007). Common nighthawk represents a guild of species that forage on insects while flying through the air and require edge habitat and forest openings. Common nighthawk can be used as a surrogate for other species that use similar habitats and are aerial insectivores, including eastern whip-poor-will.</p> <p>Canada warbler was observed in the RSA during baseline field surveys (Section 2.2.3.2.1 in Terrestrial Ecology TSD). Canada warbler is listed a threatened species under the SARA (2002) and a species of special concern under the ESA (2007). Canada warbler can be used as a surrogate for other species that use coniferous, deciduous, moist mixed forest, and regenerating habitats, such as magnolia warbler.</p> <p>American marten can be used as an indicator for species that require mature and old growth forests. Additionally, American marten can be used as a surrogate for black bear and lynx as these species are expected to be similarly affected by potential increases in harvest pressure on furbearer populations, for example. No American marten were observed in the RSA during field surveys.</p> <p>Muskrat uses wetland habitats and may be sensitive to the physical loss or alteration of wetland vegetation, loss or alterations of flows and drainage, and changes in water levels. Snapping turtle also uses wetland habitats and as a long lived, top predator species will accumulate contaminants. This species is therefore sensitive to the physical loss or alteration of wetland vegetation, loss or alterations of flows and drainage, changes in water levels, and changes to surface water and groundwater quality (including changes from air emissions and deposition and accidental spills). Other VECs that were assessed for effects from changes to wetland habitat loss, changes to flows and water levels, and changes to water quality are Wetlands (Section 3.3 in the Terrestrial Ecology TSD) and the Aquatic Environment (Section 3.0 in the Aquatic Environment TSD). Snapping turtle, muskrat, wetlands, and aquatic environment VECs are considered to be surrogates for all reptiles and amphibians.</p>	

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				<p>In addition to muskrats and snapping turtles, fish VECs were also considered as indicators of water quality. Additionally, water quality is also being monitored throughout all phases of the Project. The required Environmental Effects Monitoring, which will be undertaken in the operations phase, will also include bio indicators for water quality.</p> <p>Species that are habitat specialists were not selected as VECs as they are not the ideal species to represent other species (act as surrogates). If it is felt there is a pathway of effect that is not covered by the wildlife VECs selected and would be otherwise covered by a particular amphibian or reptile, then we need to consider this. However, if this is not the case then there is no reason to include another VEC.</p>		<p>Moose were observed in the RSA during field surveys.</p> <p>Moose were observed in the RSA during field surveys. Moose are an important subsistence and cultural species and an important prey species for large carnivores. Recent surveys suggest moose populations are decreasing in parts of Ontario. The moose VEC can act as a surrogate species for other ungulates such as white-tailed deer as both of these species are hunted and use similar habitats.</p> <p>The VEC of upland birds is considered to be a surrogate for all upland breeding birds (i.e., passerine species), including species at risk.</p>	