

Information requests directed to the proponent

IR Number	Dept Number	Effects Link to CEEA 2012	Link to EIS guidelines	EIS Reference	Context and Rationale	Specific Question/ Request for Information
Birds						
CEAA 21	CEAA	5(1)(a)(iii) Migratory Birds	6.3.2	7.4.8.2, 7-246, 250	<p>The EIS refers to waterfowl surveys conducted by helicopter in spring and fall 2011.</p> <p>The EIS also states that concerns were expressed by Indigenous communities on effects of helicopters on wildlife.</p>	<ul style="list-style-type: none"> Describe potential limitations, if any, of using helicopters to carryout bird studies for birds that are noise sensitive and how this may have affected survey results and effects predictions.
<p>HML Answer:</p> <p>The Canadian Wildlife Service itself publishes annual reports on the populations status of birds across Canada, and their data is largely based on helicopter surveys. The proponent therefore concludes that Waterfowl surveys by helicopter is an approved method by Environment Canada. In Eastern Canada, breeding waterfowl populations are monitored annually through the Eastern Waterfowl Breeding Ground Survey (hereafter referred to as the Eastern Waterfowl Survey). The Canadian Wildlife Service carries out systematic helicopter surveys over the Boreal Shield region from northeastern Ontario to Newfoundland and Labrador, and the Atlantic Highlands region from the Gaspé Peninsula in Quebec to Nova Scotia (CWS, 2013). This accepted method disturbs waterfowl for a very short period of time and does not prevent ducks for raising brood and attempt successful breeding.</p> <p>Source: Canadian Wildlife Service Waterfowl Committee. 2013. Population Status of Migratory Game Birds in Canada: November 2013. CWS Migratory Birds Regulatory Report Number 40.</p>						
CEAA 22	CEAA	5(1)(a)(iii) Migratory birds	6.3.2	Appendix XVI, Volume 1, Section 7.4.8.2, Page 7-250	<p>The EIS states “removal of overburden and stockpiling of waste rock and other wastes will result in some loss of habitat, including some loss of wetlands that are important for certain at-risk migratory birds.</p> <p>Wetlands will be inspected in this area at least annually to ensure that the loss of wetland habitat does not exceed what was committed.”</p> <p>Wetlands are particularly important for staging and breeding waterfowl. It is not clear how wetland inspections would be undertaken.</p>	<ul style="list-style-type: none"> Clarify whether traffic and heavy equipment would be permitted to enter wetlands or other areas not designated for traffic outside of the breeding season (i.e. September to April). Provide information on when and how wetlands would be inspected, and on proposed mechanisms for adaptive management in the event that wetland habitat loss exceeds what was predicted.

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					The EIS mitigation measures state that during breeding season, from mid-May to mid-August, traffic including heavy equipment shall not be permitted to enter wetlands or any area that is not designated for traffic.	
<p>HML Answer:</p> <p>The proponent will not allow any personal traffic, equipment traffic or machinery to travel on any natural zone nor in any non-active area.</p> <p>The Proponent is currently preparing a wetland management plan (final version to be ready in the Fall 2016), which includes a submetric delineation of the wetlands that are in the vicinity of the proposed Howse Project infrastructures. The plan will include specific mitigation measures to minimize the effects of the project on wetlands, such as limit their encroachment. In addition, Section 9.2.1 of the Howse EIS states: Although it is not expected that wetlands be affected by pit dewatering, (Section 7.4.2), the Proponent is committed to monitoring of wetlands during the routine site inspections and a wetland disturbance survey will also be conducted every five years.</p> <p>Section 9.2.1 of the Howse EIS provides detail on the Proponent’s commitment to wetland monitoring: Water table monitoring wells, consisting of perforated pipe should be installed before the beginning of the construction phase in order to obtain some measures before pit dewatering begins. Measurement should be taken once a month, but once every two weeks from the beginning of operation phase until dewatering ends. Transects of wells should be positioned in CMH-04, CMH-05 and CMH-06 (see Figure 7 30 for the location of these wetlands). The wells should be spaced 50 m apart.</p> <p>The Proponent is committed to restoring the Howse Project site to the pre-project condition during its decommissioning and reclamations phase. As such, wetland areas will be restored to their original state following operations.</p>						
CEAA 23	ECCC-IR-01	5(1)(a)(iii) Migratory Birds	6.3.2	Volume 1, Section 7.4.8.2, Page 7-250	The EIS states "loss of habitat and disturbance associated with the project activities will mostly affect the LSA, and effects in the Regional Study Area (RSA) will be negligible or nonexistent. Disturbance in the LSA might result in bird avoidance of the LSA."	<ul style="list-style-type: none"> Identify mitigation measures to address potential effects on ground-nesting migratory birds. Explain whether an avifauna management plan would be prepared in accordance with the following document: <i>"Planning ahead to reduce the risk of detrimental effects to migratory birds and their nests and eggs"</i> https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=1B16EAFB-1#_001 . If so,

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					<p>Direct mortality of ground-nesting birds may occur if construction proceeds during the migratory bird breeding season in absence of appropriate mitigation.</p> <p>Environment and Climate Change Canada has advised that all migratory bird mitigation measure should be codified in an avifauna management plan. Prior to preparing a plan, the following document should be consulted: <i>“Planning ahead to reduce the risk of detrimental effects to migratory birds and their nests and eggs”</i> https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=1B16EAFB-1#_001</p>	<p>describe the proposed review and approval process for an avifauna management plan.</p>
<p>HML Answer:</p> <p>The Proponent has committed to removing vegetation only outside the breeding season. This commitment will lower the number of species that could potentially breed on altered soil considerably. The Semipalmated Plover and the Spotted Sandpiper have been identified as the only potential species likely to nest directly on the ground or on altered soil. The Proponent is also committed to removing all vegetation debris (in September or October) to ensure that no other species will attempt to breed on ground where construction activities will be planned.</p> <p>As proposed by Environment Canada, nest surveys will be carried out by an environmental technician in previously cleared area where there is a lag between clearing and construction activities (and where ground nesters may have been attracted to nest in cleared areas or in stockpiles of soil, for instance). As stated in the EIS, if a nest is located, a small fence with wooden stakes and galvanized metal T-posts with colored nylon rope along the posts will be installed to identify it and prevent the machinery destroying the eggs.</p> <p>The Proponent is preparing an avifauna management plan, which will be ready in the fall of 2016.</p>						
CEAA 24	ECCC-IR-09	5(1)(a)(iii) Migratory Birds	6.3.2, 8.1.	Volume 1, Section 9.2.3, Page 9-40	<p>The EIS states “the proponent is committed to surveying the Howse Pit vertical walls in early and mid-summer every year that the mine is in the operations phase. Should the Bank Swallow be detected, deterrence measures will be taken to render the site inhospitable (noise, plastic covering of pit walls, etc.) for nesting.”</p>	<p>Explain whether the proponent would to commit to the following mitigation measures:</p> <ul style="list-style-type: none"> Physical deterrence measures to render the site inhospitable to Bank Swallows would only be used outside of the Bank Swallow breeding period.

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					<p>If Bank Swallows are detected through surveys, it is very likely that they have already begun nesting and thus too late to initiate deterrence. The deployment of physical deterrence methods after the arrival of birds would have a high probability of destroying nests.</p> <p>The scaring of migratory birds through the use of noise is only authorized for situations where the “birds are causing or likely to cause damage to crops or other property”. As this is not the case in this situation, targeted use of noise to scare birds attempting to nest would be considered disturbance and thus prohibited by regulations.</p> <p>Environment and Climate Change Canada has advised that:</p> <ul style="list-style-type: none"> • Physical deterrence measures to render the site inhospitable to Bank Swallows should only be used outside of the Bank Swallow breeding period. • The use of noise to render the site inhospitable to Bank Swallow during the nesting season should be prohibited. 	<ul style="list-style-type: none"> • The use of noise to render the site inhospitable to Bank Swallow during the nesting season would be prohibited.

HML Answer:

Section 9.2.3 of the Howse Project EIS reads as such: *The proponent is committed to surveying the Howse Pit vertical walls in early and mid-summer every year that the mine is in the operations phase. Should the Bank Swallow be detected, deterrence measures will be taken to render the site inhospitable (noise, plastic covering of pit walls, etc.) for nesting.*

The text should be modified to: *The proponent is committed to surveying the Howse Pit vertical walls in early and mid-summer every year that the mine is in the operations phase. Should the Bank Swallow be detected, deterrence measures will be taken to render the site inhospitable (noise, plastic covering of pit walls, etc.) outside of the breeding season, which, in northern latitudes, could go from mid-June to mid-August.*

TSMC is already committed to developing a management plan for this specific issue and is investigating the feasibility of maintain the Timmins 4 as swallow habitat. This plan will be submitted as soon as possible.

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CEAA 25	ECCC-IR-10	5(1)(a)(iii) Migratory Birds	6.3.2, 8.1.	Volume 1, Section 9.2.3, Page 9-40	<p>Bank Swallows can re-use their burrows/nests from year-to-year, although they can re-nest when nests and burrows are destroyed. The destruction of nests outside of the breeding season could have negative impacts on future breeding success.</p> <p>Environment and Climate Change Canada has advised that Bank Swallow colonies not have physical deterrents installed in years during which work is not expected to be undertaken on the rock stockpile/bank in question.</p>	<ul style="list-style-type: none"> Explain whether the proponent commits to not installing physical deterrents for Bank Swallow colonies in years during which work is not expected to be undertaken on the rock stockpile/bank in question.
<p>HML Answer:</p> <p>The proponent is committed not to install physical deterrents for Bank Swallow colonies in years during which work is not expected. It's already the case in one of the DSO4 pit and the proponent has installed a set-back fence to prevent any human disturbance to the colony.</p>						
CEAA 26	ECCC-IR-05	5(1)(a)(iii) Migratory Birds	6.3.2	Volume 1, Section 7.4.8.2, Page 7-254	<p>The EIS states “the Proponent is committed to surveying the Howse Pit area in early and mid-summer every year that the mine is in the operations phase (where vertical walls exist). Should the bank swallow be detected, then deterrence methods or measures should be taken to render the site inhospitable for nesting. Any nest found will be protected with a buffer zone determined by a setback distance appropriate to the species, the level of the disturbance and the landscape context, until the young have permanently left the vicinity of the nest.”</p> <p>If Bank Swallows are detected through surveys, it is very likely that they have already begun nesting and thus too late to initiate deterrence. The</p>	<ul style="list-style-type: none"> Explain whether the proponent commits to using deterrence methods in the form of plastic sheeting and fine meshed nets <u>prior to</u> (i.e. not during) the Bank Swallow breeding season. Explain whether surveys for Bank Swallows would be undertaken prior to utilization of deterrence measures, to ensure that no early nesting is occurring and, if yes what surveys would entail.

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					deployment of physical deterrence methods after the arrival of birds would have a high probability of destroying nests.	
<p>HML Answer:</p> <p>Please see answer to CEAA 24 above.</p> <p>If the proponent has to install deterrence methods (in the form of plastic sheeting, fine meshed nets or Irri-tape ©), it will only be <u>prior to</u> the Bank Swallow breeding season.</p> <p>The proponent has a trained environmental technician who is committed to survey the pits in early June to detect Bank Swallow arrival before nesting begins.</p> <p>First birds to arrive spend first 2–3 weeks, mostly foraging, and probably do not begin pair formation immediately; later-arriving birds visit colonies and start forming pairs immediately upon arrival (Garrison and Barret, 1999). Thus, if swallows surveys are carried out during their early arrival, it allows the proponent to install deterrence measures before the birds starts to nest. The Proponent will not implement deterrence measures if the swallows have already started breeding.</p> <p>Source: Garrison, Barrett A. 1999. Bank Swallow (<i>Riparia riparia</i>), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online:http://bna.birds.cornell.edu/bna/species/414</p> <p>doi:10.2173/bna.414</p>						
CEAA 27	ECCC-IR-03	5(1)(a)(iii) Migratory Birds	6.3.2	Volume 1, Section 7.4.8.2, Page 7-251	<p>The EIS states “the summer 2015 study on Pinette Lake confirmed this hypothesis, as a simulation of the water regime for Pinette Lake predicted slight changes in water level of only 2mm should not, in any case, affect breeding success in waterfowl.”</p> <p>If larger than predicted water level changes occur during the waterfowl breeding season, destruction of nests and eggs could occur.</p>	<ul style="list-style-type: none"> Identify mitigation measures to address adverse effects on waterfowl if water levels fluctuate beyond predicted parameters.

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<p>HML Answer:</p> <p>Under no scenario is the Pinette Lake water level expected to increase. If the lake water level decreases by more than 2 mm, this will not affect breeding success of any waterfowl species. Indeed, although about 25% of the watershed of the lake is diverted to Howse infrastructures to eliminate the possibility of Pinette Lake contamination, most of Pinette Lake inflow is believed to come from groundwater. Therefore, lake hydrology will probably not change. In any case, prolonged stabilization of water levels usually leads to a reduction of emergent plants (Markham, 1982) which are needed for duck brood rearing. Consequently, a more important water decrease than expected could potentially induce an increase of emergents which could have beneficial effects on waterfowl breeding success.</p> <p>Source: Markham, B. J. (1982). Waterfowl production and water level fluctuation. Canadian water resources journal, 7(4), 22-36.</p>						
CEAA 28	ECCC-IR-04	5(1)(a)(iii) Migratory Birds	6.3.2	Volume 1, Section 7.4.8.2, Page 7-253	<p>The EIS states “if a nest is located, a small fence with wooden stakes and galvanized metal T-posts with colored nylon rope along the posts will be installed to identify it and prevent the machinery destroying the eggs.”</p> <p>Environment and Climate Change Canada has advised that additional measures may improve the effectiveness of the above mitigation.</p> <p>For example, a nest itself should never be marked using flagging tape or other similar material as this increases the risk of nest predation. If necessary, flagging tape can be placed at the limits of a buffer zone.</p> <p>The proponent should refer to: https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=8D910CAC-1 for setback ranges for different types of birds. Please note that these general examples should serve as a general starting point and be adjusted after assessing relevant factors, such as the risk of disturbance caused by industrial operations, for species at risk, ground nesting species, or the highly mobile chicks of species.</p>	<ul style="list-style-type: none"> Confirm that a nest itself would never be marked using flagging tape or other similar material. If necessary, flagging tape can be placed at the limits of a buffer zone. <p>Explain whether and how Environment and Climate Change Canada’s Avoidance Guidelines and associated technical information would be followed to help reduce the risk of incidental take of migratory birds, nests and eggs - https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=AB36A082-1.</p>

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<p>HML Answer:</p> <p>The nest itself would never be marked using flagging tape to avoid attract any potential predators. Flagging tape will only mark the wooden stakes and/or the small fence that would be placed at a setback distance (different, depending of the species) to reduce to a maximum any potential harm to the birds and their breeding success.</p> <p>Environment and Climate Change Canada’s Avoidance Guidelines and associated technical information will be followed and have already inspired the Proponent to reduce the risk of incidental take of migratory birds, nests and eggs. The proponent is well aware of and understands the relevant provisions of laws and regulations pertaining to the protection of birds, nests and eggs. Notably: the <i>Migratory Birds Convention Act, 1994</i>, the <i>Migratory Birds Regulations</i> and, where applicable, the <i>Species at Risk Act</i> and has completed a thorough risk assessment in a timeframe suitable to balance project needs with risk of incidental take of migratory birds. By avoiding vegetation removal during the breeding season, establishing a policy if a nest is randomly found during construction or operation activities, the proponent has committed to be in accordance with the proposed Guidelines of Environment and Climate Change Canada.</p>						
CEAA 29	ECCC-IR-06	5(1)(a)(iii) Migratory Birds	6.3.2	Volume 1, Section 7.4.8.2, Page 7-254	<p>The EIS states “lighting of the mine will be reduced by half when weather forecasts are extreme (thick fog and snowstorms). This measure will be considered during the migration period (in May and from August to October) where migrating birds are more vulnerable to being entrapped by artificial lighting during harsh weather conditions.”</p> <p>Attraction to lights at night or in poor visibility conditions during the day may result in collision with lit structures or their support structures, or with other migratory birds. Disoriented migratory birds are prone to circling light sources and may deplete their energy reserves and either die of exhaustion or be forced to land where they are at risk of depredation.</p>	<p>Explain whether the following additional mitigation would be implemented:</p> <ol style="list-style-type: none"> The minimum amount of pilot warning and obstruction avoidance lighting would be used on tall structures. Warning lights would flash and completely turn off between flashes. Only strobe lights would be used at night, at the lowest intensity and smallest number of flashes per minute allowable by Transport Canada. The fewest number of site-illuminating lights possible would be used in the project area. Lighting for the safety of the employees would be shielded to shine down and only to where it is needed. <p>LED lights would be used where possible instead of other types of lights. LED light fixtures are less prone to light trespass (i.e. are better at directing light where it needs to be, and do not bleed</p>

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					Environment and Climate Change Canada has advised that it supports the measure of reducing lighting by half during the migration period.	light into the surrounding area), and this property reduces the incidence of migratory bird attraction.
<p>HML Answer:</p> <p>The Proponent provided answer to the same question to CEAA (CEAA 47) in April 2016:</p> <p>Upon review of applicability to the project. The following list of specific mitigation measures for light is included in the EIS. The selected mitigation measures combine recommendations by Environment Canada and by the International Dark-Sky Association in the document Light Pollution and Wildlife (IDA, 2008):</p> <ul style="list-style-type: none"> ▪ Shield your outdoor lighting; ▪ Only use the light when you need it; ▪ Shut off the lights when you can; ▪ Use only enough light to get the job done; ▪ Use long wavelength light with a red or yellow tint to minimize effects; ▪ Staff will be informed to turn off lights on top of trucks at night, when not necessary; ▪ The minimum amount of pilot warning and obstruction avoidance lighting should be used on tall structures; ▪ Lighting for the safety of employees should be shielded to shine down and only to where it is needed, without compromising safety; ▪ When possible, LED lights will be used. 						
CEAA 30	CEAA	5(1)(a)(iii) Migratory Birds 5(1)(c)	6.3.2 6.3.4	Table 4-7	The EIS states that elders have noted that Irony Mountain is an important nesting site	Provide information on species potentially occurring on Irony Mountain and the predicted effect of the Project on these species. Discuss proposed mitigation measures, if any.

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<p>HML Answer:</p> <p>Irony Mountain biotope consists mostly of tundra with dwarf birch, lichen and exposed rock surface. The following species use the site for breeding: American Pipit, Horned Lark, Willow Ptarmigan, American Tree Sparrow, White-crowned Sparrow, Savannah Sparrow and Common Redpoll. The proponent will not conduct any activities on Irony Mountain and the area will remain wild and undisturbed. As such, there are no anticipated adverse environmental effects of the project on avifauna at Irony Mountain.</p>						
CEAA 31	ECCC-IR-07	5(1)(a)(iii) Migratory Birds	6.3.2, 8.1.	Volume 1, Section 9.2.3, Page 9-40	<p>The EIS states “the Proponent will engage in breeding birds and species at risk monitoring surveys every five years. Surveys with point count methods will allow HML to stay informed on avifauna in the area. In order to keep track of possible changes in bird populations, these surveys will be conducted in every habitat present in the Howse area, after the end of the construction phase.”</p> <p>One of the main purposes of post-construction surveys is to verify the prediction of no significant adverse effects upon avifauna. The frequency of surveys stated in this section is too low to obtain adequate data for an effects assessment.</p> <p>If surveys at the current frequency show that the prediction of no significant adverse effects is incorrect, there may be insufficient time to undertake adaptive management to mitigate adverse effects.</p> <p>Following the initial three year post-construction period, monitoring as proposed by the proponent should be implemented to assess long-term effects.</p>	<ul style="list-style-type: none"> • Present a strategy for monitoring effects and explain how resulting information would be used to determine potential effects on migratory birds. Explain whether the following would be implemented/committed to: <ul style="list-style-type: none"> - Undertaking post-construction monitoring every year for the first three years of post-construction in order to assess initial effects. Monitoring of migratory birds would also include monitoring for landbirds (i.e. songbirds, etc.) Methods would be comparable to those used in pre-construction surveys. - Submitting all monitoring protocols for migratory birds in the form of an Avifauna Management Plan to Environment and Climate Change Canada for review prior to implementation. • Provide information on if- and how Indigenous Traditional Knowledge would be considered in follow-up surveys for avifauna and how local communities would be involved.
<p>HML Answer:</p>						

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<p>The Proponent's follow-up purposes will be to:</p> <ul style="list-style-type: none"> • Conduct a quantitative breeding bird survey; • Conduct a qualitative breeding bird survey; • Carry out an in depth species at risk survey. <p>The breeding bird survey will consist of point counts distributed randomly in the study zone and in order to cover all the different biotopes that are found in the LSA. These surveys will help monitoring changes in intensely used or altered sites, in moderately used or altered sites and in unaltered sites in order to evaluate the impacts of the mining project in the Howse area.</p> <p>Surveys of breeding birds target principally passerines and woodpeckers. They are conducted by means of point counts. The technique is derived from a combination of that of counting within a limited radius (Bibby et al 1992) and that of site-specific indices of abundance (Blondel et al 1981). The latter technique involves noting all birds detected during a 10-minute period regardless of their distance from the observer. It has the advantage of enabling the coverage of a larger area, thereby improving the chances of detecting rare species. The survey by counting within a limited radius started after a settling-down period of approximately five minutes allows the birds to recover from the disturbance caused by the movements of the observers. Birds within a 50-m radius are distinguished from those situated further away. Although the survey by point counts targeted predominantly passerines and woodpeckers, observations of other bird species are also noted. Point counts survey started at sunrise and lasted for approximately four hours.</p> <p>Many lakes, ponds and wetlands are present in the study area. These habitats will be visited after points counts in order to survey all the species present but also to detect aquatic birds, raptors and species at risk (Rusty Blackbird and Red-necked Phalarope).</p> <p>The richness of the study area (number of bird species) will be calculated on the basis of all the available data, including the data collected during movements.</p> <p>As stated in Section 9.3: HML has put in place various communication and socioeconomic monitoring mechanisms collaboratively with affected Aboriginal communities, which will be maintained for the Howse Project. Any species sightings can be reported to TSMC and records will be updated and preserved.</p>						
CEAA 32-	ECCC-IR-08	5(1)(a)(iii) Migratory Birds	6.3.2, 8.1.	Volume 1, Section 9.2.3, Page 9-40	<p>The EIS states "uses of playback in proper habitat will be part of an adapted protocol..."</p> <p>Playback is generally a tool to use to determine absence of a species. The use of playbacks has the potential to disrupt natural bird behaviour. If a species is</p>	<ul style="list-style-type: none"> • Explain under circumstances playback would be used. Confirm that playback would be used only if regular survey effort is resulting in no observations of a species, and it is necessary to confirm its absence from the area.

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					<p>located during regular survey efforts, then there is no need to add stress to migratory birds by using playbacks.</p> <p>Confirm that playback would be used only if regular survey effort is resulting in no observations of a species, and it is necessary to confirm its absence from the area.</p>	
<p>HML Answer:</p> <p>Playback will not be used if the regular survey effort (point counts) has already allow to confirm the presence of any searched species. It will only be used to confirm the absence of a species from the area.</p>						
CEAA 33	CEAA	5(1)(a)(iii) Migratory Birds	6.1.6, 6.3.2	7.4.8.4, page 7-256	<p>The definition of the <i>frequency</i> criterion refers to timing considerations as opposed to frequency of effect: birds are more vulnerable during the breeding season or 25% of the year.</p> <p>As per the Agency's OPS <i>Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012</i>, <i>frequency</i> is intended to describe <u>how often an environmental effect occurs</u> within a given time period (e.g., alteration of aquatic habitat will occur twice per year).</p> <p><i>Geographic extent</i> is intended to describe the spatial area over which an environmental effect is predicted to occur. Prediction of the geographic extent should be quantitative whenever possible (e.g. hectares of habitat change).</p>	<ul style="list-style-type: none"> Review and revise the definition of <i>frequency</i> in accordance with the Agency's OPS <i>Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012</i>. Provide additional explanation for how geographic extent determinations were made, including the maximum spatial extent of effect (e.g. light, noise (including blasting), habitat loss). Also include any temporary or permanent habitat loss with respect to bird habitat.

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<p>HML Answer:</p> <p>The Proponent agrees that the frequency criteria, as the highlighted sentence suggests, seems to refer to timing. However, the intent was to assess frequency as it is defined in the Agency’s OPS Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012. As such, the sentence should read as follows: birds are more vulnerable during the breeding season or 25% of the year, which is occasional/intermittent. The rest of the assessment remains the same.</p> <p>LSA and RSA are defined as such in the EIS: The LSA is considered as being limited to the watersheds within which the Project takes place (e.g., Triangle Lake, Pinette Lake and Burnetta Lake watersheds). It includes areas that will be affected by habitat loss, as well as lakes and streams that are part of the watershed affected by the Project, as changes in water quality could affect food distribution for aquatics birds. The LSA is limited to the above-mentioned watersheds since habitat integrity and food distribution for birds rely heavily of the proximity of water bodies.</p> <p>In order to take into consideration the cumulative effects on bird populations such as habitat fragmentation and changes in behavior traits, both of which could lead to population-wide effects, the RSA has conservatively been designated as the area within a 30-km radius of the Howse Project. Notably, this area will include every any species that spend a part of their life cycle regionally and on which the Howse project could be effected. The 30-km radius is arbitrary but deemed sufficient to encompass all potential past, present and foreseeable future effects of the Howse Project on avifauna. Bird populations will continue to interact with the landscapes for the duration of the Project and beyond for some species, and so we set the avifauna temporal boundaries at the operations phase and decommissioning and abandonment phases. Bird avoidance due to disturbances will be mostly restricted to the operation phase while breeding birds will avoid nesting in unsuitable (altered) habitats and will not recolonize until previous habitats are restored. It is noted that given the sensitive nature of the breeding season, the period between June and mid-August is of particular importance.</p> <p>Avifauna habitat loss is limited to the Project Footprint, as the Proponent is committed to respecting buffer zones to preserve avifauna habitat around the project footprint. The Proponent expects to rehabilitate the site to pre-project conditions during the decommissioning phase.</p>						