Avian Risk Assessment and Mitigation

Best Practice Considerations for Industrial Projects

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Status of Bird Populations

- Many bird populations are declining
- Some bird groups have decreased as much as 60%
- Some causes include:
  - Habitat loss
  - Climate change
  - Pollution
  - Incidental take

Incidental Take

- Harming, killing, disturbance or destruction of migratory birds, nests and eggs is known as **incidental take**
- Incidental take can be caused by:
  - Clearing vegetation
  - Draining or flooding of wetlands
  - Noise/activity from nearby construction
  - Exposure to toxic substances

Incidental Take

- Estimated that 269 million birds, and 2 million nests are destroyed by incidental take in Canada *each year*
  - Industrial activities
  - Agriculture
  - Building strikes
  - Cats

Legislation Protecting Birds

- Environment and Climate Change Canada (ECCC)
  - Develops and implements policies & regulations to ensure protection and conservation of migratory birds

- Most of Canada's 450 bird species are protected under the federal *Migratory Birds Convention Act* (MBCA)

Legislation Protecting Birds

- General prohibitions under the MBCA and its regulations protect migratory birds, their nests and eggs anywhere in Canada
- Some species may have additional protection under the *Species at Risk Act* (SARA)
- Some species may be protected provincially under *The Wildlife Act*

Legislation Protecting Birds

- Incidental take has the potential to result in investigation and possibly prosecution under the MBCA and its regulations

- Higher likelihood of prosecution if no reasonable attempt was made to avoid or reduce the risk of impacting migratory birds, nests, and/or eggs

Legislation Protecting Birds

- To minimize risk of contravening the law, proponents should implement Best Management Practices (BMPs)

Preventing Incidental Take

General ECCC recommendations:

1. Know your legal obligations;
2. Avoid engaging in potentially destructive or disruptive activities in key sensitive periods and locations, in order to reduce the risk of affecting birds, their nests or eggs;
3. Develop and implement appropriate preventive and mitigation measures to minimize the risk of incidental take and to help maintain sustainable populations of migratory birds.

Preventing Incidental Take

General ECCC recommendations:

1. Know your legal obligations;
2. Avoid or delay potentially destructive or disruptive activities in key sensitive periods and locations, in order to reduce the risk of affecting birds, their nests or eggs;
3. Develop and implement appropriate preventive and mitigation measures to minimize the risk of incidental take and to maintain sustainable populations of migratory birds.

Legal Obligations

- High potential for prosecution if no reasonable attempt was made to avoid or reduce the risk of impact to birds, nests, and/or eggs.

- Fines/penalties vary according to the nature of the offence and the type of offender.

Preventing Incidental Take

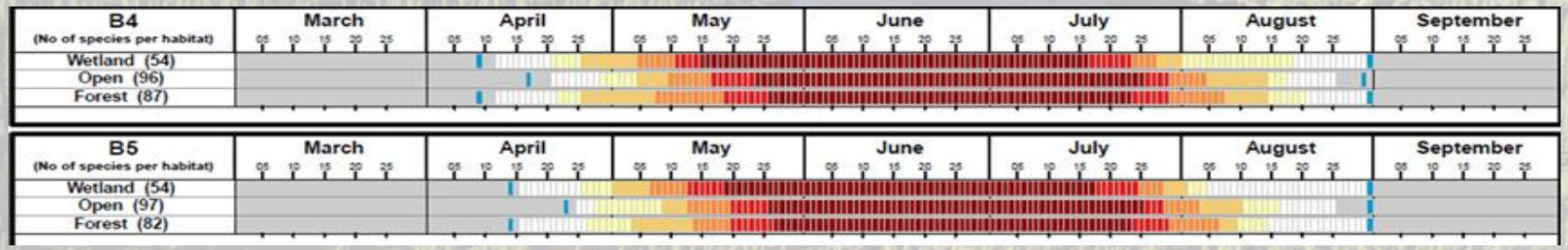
General ECCC recommendations:

1. Know your legal obligations;
2. Avoid engaging in potentially destructive or disruptive activities in key sensitive periods and locations, in order to reduce the risk of affecting birds, their nests or eggs;
3. Develop and implement appropriate preventive and mitigation measures to minimize the risk of incidental take and to maintain sustainable populations of migratory birds.

Risk Avoidance

- A large proportion of incidental take can be avoided by good project planning

- Try to avoid engaging in potentially disruptive activities in key sensitive periods and locations



Risk Avoidance

- In SK, breeding bird season is approximately beginning of April until end of August
  - Varies based on geographic location as well as by species
- If birds or bird habitat will be affected, it is best to complete work during the fall, winter or early spring

Preventing Incidental Take

General ECCC recommendations:

1. Know your legal obligations;
2. Avoid taking part in potentially destructive or disruptive activities in key sensitive periods and locations, in order to reduce the risk of affecting birds, their nests or eggs;
3. Develop and implement appropriate preventive and mitigation measures to minimize the risk of incidental take and to help maintain sustainable populations of migratory birds.

Risk Evaluation

- If work activities must occur during the breeding season, it is recommended that a qualified biologist complete an assessment in the project area to determine risk to breeding birds

Risk Evaluation

- To determine potential risk to breeding/nesting birds (including SAR), assessments should be completed that incorporate:
  - Detection surveys following MOE approved protocols
  - Behavioural observations (breeding vs. non-breeding behaviours)
  - Non-invasive nest searches where possible
  - Habitat evaluation (quality, etc.)

Minimizing Risk

- Proper design can help ensure that project sites are not dangerous to birds
- **Better to be proactive than reactive**
- Proactively employ BMPs before there is risk to birds

Minimizing Risk

- Implement appropriate BMPs to minimize potential impacts **<u>or</u>** reschedule work outside breeding season if possible
- Federal or provincial activity restriction buffers should be implemented if sensitive species are detected

Best Management Practices

- Plan project footprint in lower quality habitat rather than high quality habitat when possible
- Make habitat less desirable to birds to minimize nesting opportunities:
  - Dewater*
  - Clear/mow vegetation*
  - Level sand/soil stockpiles and banks to <45°*

**outside of the breeding season and regularly thereafter*

Best Management Practices

- Employ bird deterrents *before* birds move in
- Use hand clearing instead of heavy machinery when possible
- Clear minimum possible footprint to reduce loss of habitat
- Have a qualified biologist/monitor present during clearing and other potentially disruptive activities

Future Directions

- Developing and honing mitigation measures and BMPs for efficiency
- Research into effectiveness of mitigation strategies
  - Monitoring
- More focus on conserving existing habitat and appropriate reclamation of habitat after project completion

Questions?

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