

**Supplemental Information for Migratory Birds and Bald and Golden Eagles that May Occur in
a Project Action Area in IPaC**

MIGRATORY BIRDS

BALD & GOLDEN EAGLES

MIGRATORY BIRDS

Certain birds are protected under the [Migratory Bird Treaty Act \(MBTA\)](#). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities, also known as incidental take. Any person or organization who plans or conducts activities that may result in impacts to migratory birds and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

The birds on your IPaC Migratory Bird list are birds of particular concern either because they occur on the USFWS [Birds of Conservation Concern](#) (BCC) list (and are declining either regionally or range-wide) or the species warrants special attention in your project location (“Non-BCC Vulnerable”). It is not a list of every bird you may find in the project location, nor a guarantee that every bird on the list will be found in the project area.

Please look carefully at the vertical survey effort line on your PROBABILITY OF PRESENCE graphs to see whether or not your project is in a well surveyed area. If the survey effort lines are small or indicated no survey effort; or your report says there are no BCC species in your project area, your list may not be complete. In these cases, you may need to rely on other resources to determine the species that are likely to occur, when and in what abundance they occur, and what they are doing (breeding, wintering, year-round) in your project area.

When the survey effort is good, the probability of presence graphs provide information regarding timeframes for when birds of concern are most likely to be present in the project area. Additionally, BCC species that are known to breed in that area will have a breeding timeframe indicated with yellow bars on graph. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

To do the minimum to protect all birds in your project area, please review and implement any measures that are appropriate for your project type in the [Nationwide Standard Conservation Measures](#) document. To view activity-specific measures that may be implemented for your project to provide additional protection for BCC species and other birds, see the Beneficial Practice resources suggested for reducing/avoiding stressors on the [Avoiding and Minimizing Incidental Take of Migratory Birds](#) webpage.

If you are involved in a communication tower project, please review [Avoiding and Minimizing Communication Tower Impacts on Migratory Birds](#) for measures that can save both birds and money!

Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below in the FAQs.

PROBABILITY OF PRESENCE SUMMARY

Please read the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret the probability of presence report.

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\)](#) tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

"BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

"BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

"Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species of range-wide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds."

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line means a lack of data and, therefore, a lack of certainty about presence of the species. If the survey effort lines are small or indicated no survey effort; or your report says there are no BCC species in your project area, your list may not be complete. In these cases, you may need to rely on other resources to determine the species that are likely to occur, when and in what abundance they occur, and what they are doing (breeding, wintering, year-round) in your project area.

This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds".

Understanding the Probability of Presence Graphs:

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability

of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the [Bald and Golden Eagle Protection Act \(BGEPA\)](#) and the [Migratory Bird Treaty Act \(MBTA\)](#). Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

This report includes a list of any eagle species that might be present in your project area. Please look carefully at the vertical survey effort line on your PROBABILITY OF PRESENCE graphs to see whether or not your project is in a well surveyed area. If the bars are small or indicate no survey effort; or your report says there are no eagle species in your project area, your list may not be complete, and you may need to rely on other resources (e.g. federal and state eagle survey and eagle nest survey data) to determine the eagle species that are likely to occur, when and in what abundance they occur, and what they are doing (breeding, wintering, year-round) in your project area. If your project has the potential to disturb or kill eagles, you may need to obtain an [eagle permit](#) to avoid violating the Eagle Act should such impacts occur. Please contact your local [Ecological Services Field Office](#) if you have questions.

To do the minimum to protect all birds in your project area, please review and implement any measures that are appropriate for your project type in the [Nationwide Standard Conservation Measures](#) document. To view activity-specific measures that may be implemented for your project to provide additional protection for eagles and other birds, see the Beneficial Practice resources suggested for reducing/avoiding stressors on the [Avoiding and Minimizing Incidental Take of Migratory Birds](#) webpage.

PROBABILITY OF PRESENCE SUMMARY

Please read the FAQ "Proper Interpretation and Use of Your Eagle Report" listed below before using or attempting to interpret this report.

BALD & GOLDEN EAGLES FAQ

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply).

Proper Interpretation and Use of Your Eagle Report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. If the bars are small or indicate no survey effort; or your report says there are no eagle species in your project area, your list may not be complete, and you may need to rely on other resources (e.g. federal and state eagle survey and eagle nest survey data) to determine the eagle species that are likely to occur, when and in what abundance they occur, and what they are doing (breeding, wintering, year-round) in your project area. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information helps you know what to look for to confirm presence and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities or get the appropriate [permits](#) should presence be confirmed.

Understanding the Probability of Presence Graphs:

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

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Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.