



July 18, 2023

Kevin Morin, PE  
Green Development, LLC  
2000 Chapel View Boulevard  
Cranston, Rhode Island 02920

Subject: Wildlife Habitat Assessment  
Johnston Solar Site – Winsor III, Johnston, Rhode Island

Dear Mr. Morin:

I reviewed the current plans and documents submitted to the Town of Johnston as part of the Special Use Permit submission for the property located on Winsor Avenue in Johnston, Rhode Island (Figures 1 & 2). The purpose of my review is to assess the proposed project's impacts on wildlife and to provide information and mitigation strategies relative to the proposed project. The site plans reviewed are titled 'Planning Concept Review & Zoning Special Use Permit Submission' GD Johnston Winsor III, 112 Winsor Avenue, Johnston, Rhode Island 02919, Assessor's Plat 59, Lot 15 (last revised date 6/7/2023).

I had prepared a report for this, and other proposed solar projects submitted to the Town dated April 20, 2022; for that report, and this current assessment, for the GD Johnston Winsor III, property, online data resources (RIDEM Environmental Resource Map) and aerial imagery were also reviewed as part of this effort. This report will address the current proposal for the Winsor III solar arrays and will provide an assessment as to the project's potential impacts to wildlife, as well as mitigation measures proposed.

#### GD Johnston Winsor III Existing Conditions

The subject property contains mixed-deciduous forested upland including dominant red oak, white oak, black oak and white pine. Lowbush blueberry and black huckleberry dominate the understory in the upland forests. This site also contains active agricultural fields and orchards. Based on review of historical imagery from 1939 through 2023, the current conditions of the property have remained largely consistent during this time period, however there are western field that were active in the first half of the century that have reverted to forest.

Wetland habitat is located on this property in varying locations and classifications. All jurisdictional wetlands on this property will be avoided.

#### Wildlife Habitat Assessment

The upland forests are mixed deciduous oak and white pine forests. Forests can offer features that are beneficial to wildlife includes the presence of stone walls (small mammal and reptile habitat), nesting cavities and nests (birds and small mammals), tall, mature white pine trees (owl habitat), steep boulder slopes with potential mammal dens (coyote, fox, bobcat) and food supplies (lowbush blueberry, black huckleberry). On this property, there are limited stone walls and steep slopes.

Wildlife that likely use the habitats onsite include white-tail deer, eastern gray squirrel, chipmunk, raccoon, red-tail hawk, black-capped chickadee, American robin, blue jay, gray catbird, northern

cardinal, tufted titmouse, white breasted nuthatch, American crow, pileated woodpecker, downy woodpecker, hairy woodpecker, other small birds such as tanagers and warblers, ground forest birds (eastern towhee, turkey, ovenbird, etc.), other birds of prey and owls, and other small & large mammals including Virginia opossum, mice, voles and shrews, bats, eastern cottontail, fishers, mink and weasels.

Overall, the wetlands on the property might offer better opportunities for wildlife, including water, dense shrub understory for cover, travel corridors and potential amphibian breeding in interior portions. However, upland forested habitats are certainly preferred habitats by some species over wetland habitats. All on-site habitats provide wildlife habitat for numerous species for feeding and watering, nesting sites, resting sites and cover.

The open fields provide excellent habitats to be used by small mammals, which in turn provide hunting opportunities for birds of prey. Edge habitat is present along these existing fields and around the residential dwellings and associated lawns/open field areas.

The stone walls on this property are excellent habitat features that provide habitat for small mammals and reptiles such as mice, voles, chipmunks, and snakes.

#### **PROJECT IMPACTS TO WILDLIFE & MITIGATION MEASURES:**

The proposed scope has been reduced from earlier versions. Figure 1 shows the original extent of the Limits of Work (LOW) and the current proposed LOW. An approximate 7.9 acres of land have been preserved from earlier concepts, which include areas immediately adjacent to wetlands.

The cutting of any large area of forest will affect any species that occur there and they will need to relocate to adjacent nearby habitats. Figure 1 also shows that contiguous forest and natural habitats are available adjacent to and within a ½ mile of this site. There appears to be ample opportunities for displaced wildlife to relocate.

Several mitigating measures are proposed to minimize impacts to wildlife and to protect wildlife habitat on the subject properties to the maximum extent practicable. First, the proposed development avoids all jurisdictional wetlands. Therefore, wetlands and their jurisdictional setbacks (buffers) will remain as important food and water sources, and will maintain the existing travel corridors established by wildlife utilizing the wetlands; the corridor from Kimball Reservoir northeast to Winsor Avenue will be preserved.

Second, it is important not to disrupt species' breeding during their breeding seasons. Therefore, a mitigating measure is to perform construction activities, especially tree cutting, to occur outside of the breeding season (May 1<sup>st</sup> through August 31) to the maximum extent practicable. The majority of sensitive wildlife species, including certain birds and bats, will not be directly or adversely impacted by construction activities if these activities can occur outside of their breeding times.

Third, although there are limited stone walls on this property, those walls outside of the project's LOW will continue to provide the benefits to wildlife that utilize these stone walls for habitat.

Fourth, at the completion of the project, fences are only proposed around the arrays. Therefore, there is unobstructed availability for wildlife to travel through the properties around the solar arrays

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through the unaltered areas outside of the LOW's. In addition, the proposed fence will provide a 6-inch gap above ground which will allow small mammals and wildlife to pass through. Free movement of all wildlife and migration routes for bird species should not be adversely impacted by these proposals. In addition, as noted, all jurisdictional wetlands will be maintained as they currently exist and will maintain their buffer habitats and travel corridors for wildlife.

Fifth, landscaping and plantings will help mitigate effects of the proposed development on wildlife. Landscaping tree and shrub plantings will provide additional buffers and habitat once the projects are completed, and a pollinator wildflower mixture will be planted within the solar array fenced areas. These plantings and pollinator habitats will mitigate some of the effects of vegetative clearing associated with the projects.

Sixth, features can be proposed to replace and/or augment habitat conditions onsite. For instance, coarse woody debris (large logs/stumps) and slash piles can be placed in areas to provide escape cover and denning sites for species such as eastern cottontail, small mammals, reptiles and amphibians. Nest boxes for bluebirds and purple martins can also be installed at the newly created developments' edge habitat and within the arrays themselves.

In addition, the project should incorporate 'turtle sweeps' prior to and during tree clearing activities in order to ensure that any turtles or other wildlife found within the anticipated work area can be collected and transported to a location outside of the LOW.

Finally, soil erosion and sedimentation controls (SESC) will be established at the project LOW's prior to the start of the construction activities. These measures will remain in place until the project is completed and the grounds are stabilized. The SESC's will be installed properly, inspected and repaired as necessary in accordance with the RI Soil Erosion and Sedimentation Control Handbook (2016). These are mitigating measures for wildlife because they will prevent any sedimentation into the jurisdictional wetlands (including buffers) and they will act as physical barriers to small wildlife to deter their movements into the active work areas. As noted, once the construction is complete, the erosion controls can be removed and movement through the site can be restored for wildlife.

Thank you for the opportunity to work with you on this project. Please contact me at (401) 595-4276) if you have any questions regarding this work, or if you require additional information.

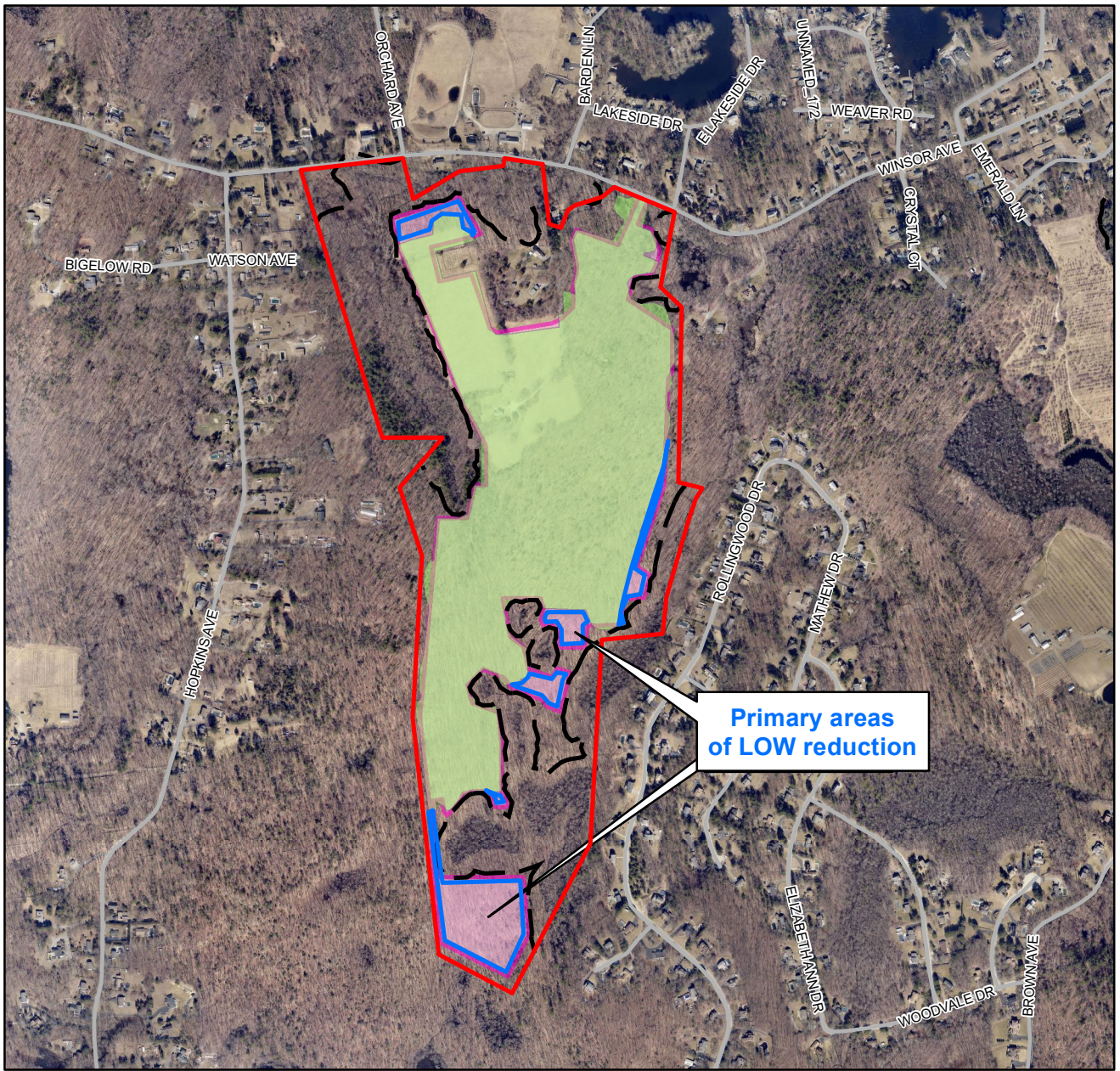
Sincerely yours,  
MCCUE ENVIRONMENTAL, LLC



Joseph P. McCue, PWS  
President  
Principal Environmental Scientist

Attachments:

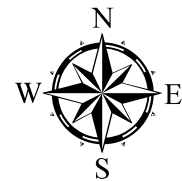
- Figure 1: Existing Conditions and Proposed LOW GD Winsor III
- Figure 2: Preserved Wildlife Travel Corridor and Available Contiguous Forests



Sources: 2023 RIDEM Digital Color Orthophotography

Approximate Location of:

- Property Boundaries
- Approximate Landward Limits of Wetland Jurisdictional Setbacks
- Approximate Prior Limits of Disturbance
- Approximate Current Limits of Disturbance



0 500 1,000  
 Feet  
 Approximate Scale

Johnston Proposed Winsor III Solar Site  
 Johnston, RI

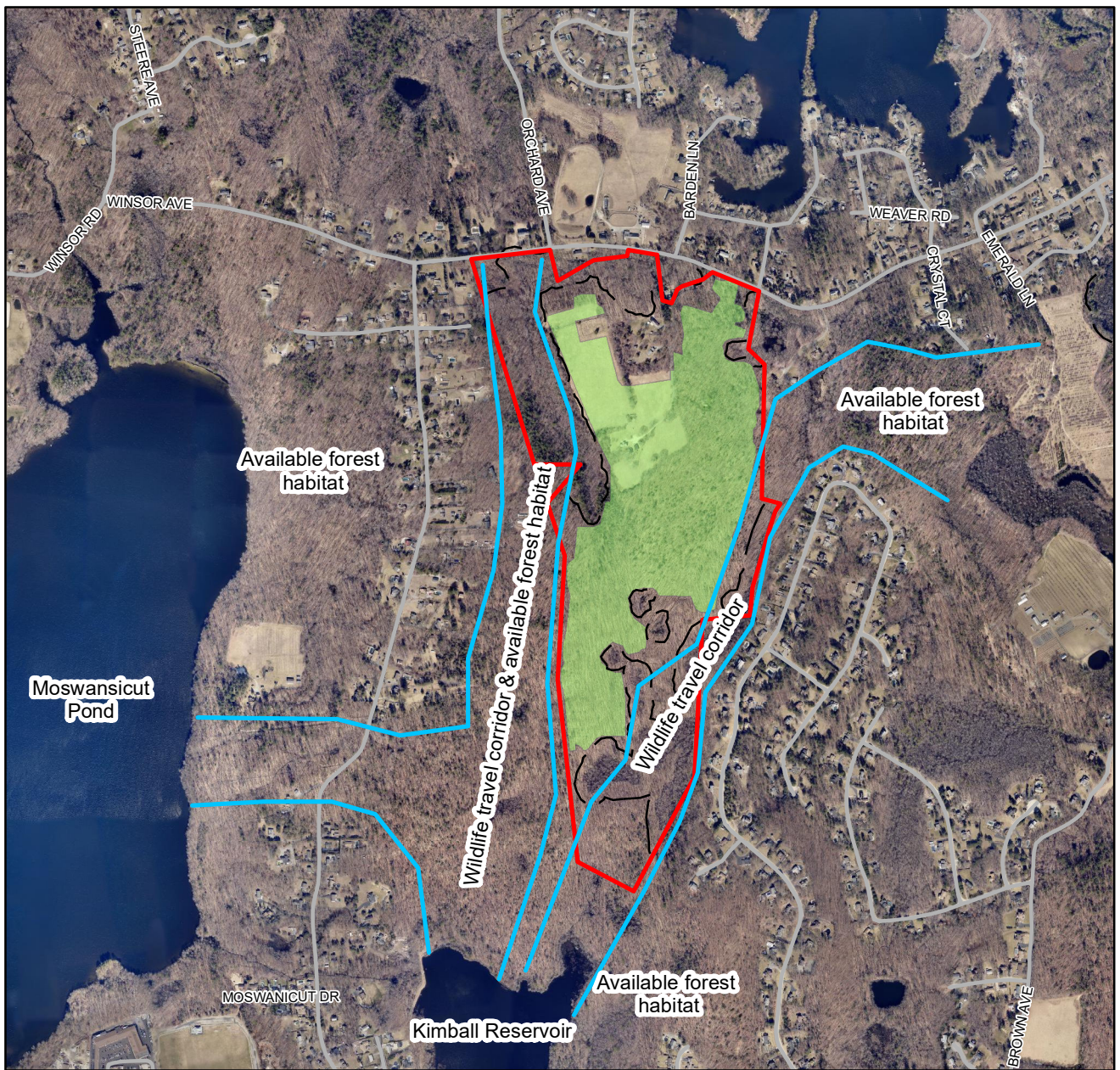


**MCCUE ENVIRONMENTAL, LLC**  
 CONSULTING & WETLAND PERMITTING SERVICES  
 (401) 595-4276

**EXISTING CONDITIONS  
 AND PROPOSED LOW  
 GD JOHNSTON WINSOR III**

Project No. 21111

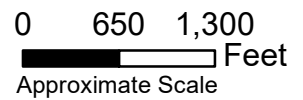
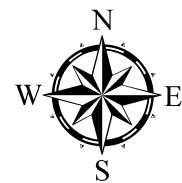
Figure 1



Sources: 2023 RIDEM Digital Color Orthophotography

Approximate Location of:

- Property Boundaries
- Approximate Landward Limits of Wetland Jurisdictional Setbacks
- Approximate Current Limits of Disturbance
- Wildlife Travel Corridors



Johnston Proposed Winsor III Solar Site  
Johnston, RI



**PRESERVED WILDLIFE TRAVEL  
CORRIDOR AND AVAILABLE  
CONTIGUOUS FORESTS**

Project No. 21111

Figure 2