



# Breeding Landbird Monitoring in the Northeast Temperate Network

## *2012 Summary Report*

Natural Resource Data Series NPS/NETN/NRDS—2013/468



**ON THE COVER**

Scarlet Tanager

Photograph by: Steven Kersting

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|                   |                   |
|-------------------|-------------------|
| Peg Ackerson*     | Andy Lamy*        |
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| Paul Corcoran     | Liz Martens*      |
| Sherrie Downing   | Kent McFarland*   |
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| Lora Haller       | Jose Ramirez*     |
| Julie Hart        | James Restivo*    |
| Dave Hayes*       | Jody Schubert*    |
| Zachary Holderby* | Tom Sharp*        |
| Patrick Johnson   | Tim Spahr         |
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| Jonathan Klizas*  | Bob Stymeist*     |
| Scott Kruitbosch  | Linda White*      |

\* Indicates volunteers who conducted surveys in 2012



# Introduction

The National Park Service (NPS) Northeast Temperate Network (NETN) is tasked with monitoring a suite of representative natural resource indicators, called vital signs, for 12 parks in seven northeastern states plus the Appalachian National Scenic Trail (APPA). Breeding birds were chosen as one of the NETN vital signs because they are a reliable indicator of ecological integrity and they are a high profile taxonomic group. Many bird species are easily detected and identified, and well-established survey methods are available. This report covers breeding landbird monitoring in 11 of the NETN parks (Figure 1). Difficult logistics prevent this protocol from being feasible for the Boston Harbor Islands and APPA (Faccio et al. 2010).

The Northeast Temperate Network and the Vermont Center for Ecostudies (VCE) began monitoring breeding landbirds in most NETN parks in 2006, using volunteer birders to conduct point count surveys. On a broad scale, the 11 monitored parks are located within the temperate deciduous forest biome. At a finer scale, the parks range across four Bird Conservation Regions (BCRs) (Figure 1). Bird Conservation Regions, developed by the North American Bird Conservation Initiative (NABCI 2000), are ecologically defined units that provide a consistent spatial framework for bird conservation across North American landscapes. By employing broad scale units that are ecologically meaningful to bird populations, conservation efforts can be tailored to support groups of species throughout the heart of their ranges. Bird Conservation Regions are being used to help assign “conservation priority” scores for bird species. Each BCR has its own unique list of “priority” species ranked by conservation importance according to a standardized set of criteria.

This report summarizes data collected from 2006 through 2012. As we accumulate more years of data, we anticipate that the annual report will expand to incorporate more data interpretation. Readers are cautioned to treat the ecological integrity assessment results as provisional for two reasons: 1) the assessment assumes that the bird community is completely characterized, and if a subset of species are rare and hard to detect, the results could be biased; and 2) many NETN parks have a primary mandate to manage for the historical landscape rather than biological integrity or ecosystem structure and function; thus, management action may not always be warranted when guilds are rated “significant concern.” In an attempt to better characterize the bird community at each park and reduce bias, the assessment results presented for each park were produced by combining data from all survey years at a given park (up to 7 years of data). In the future, we plan to work with park managers to produce a parallel assessment based on park management goals.

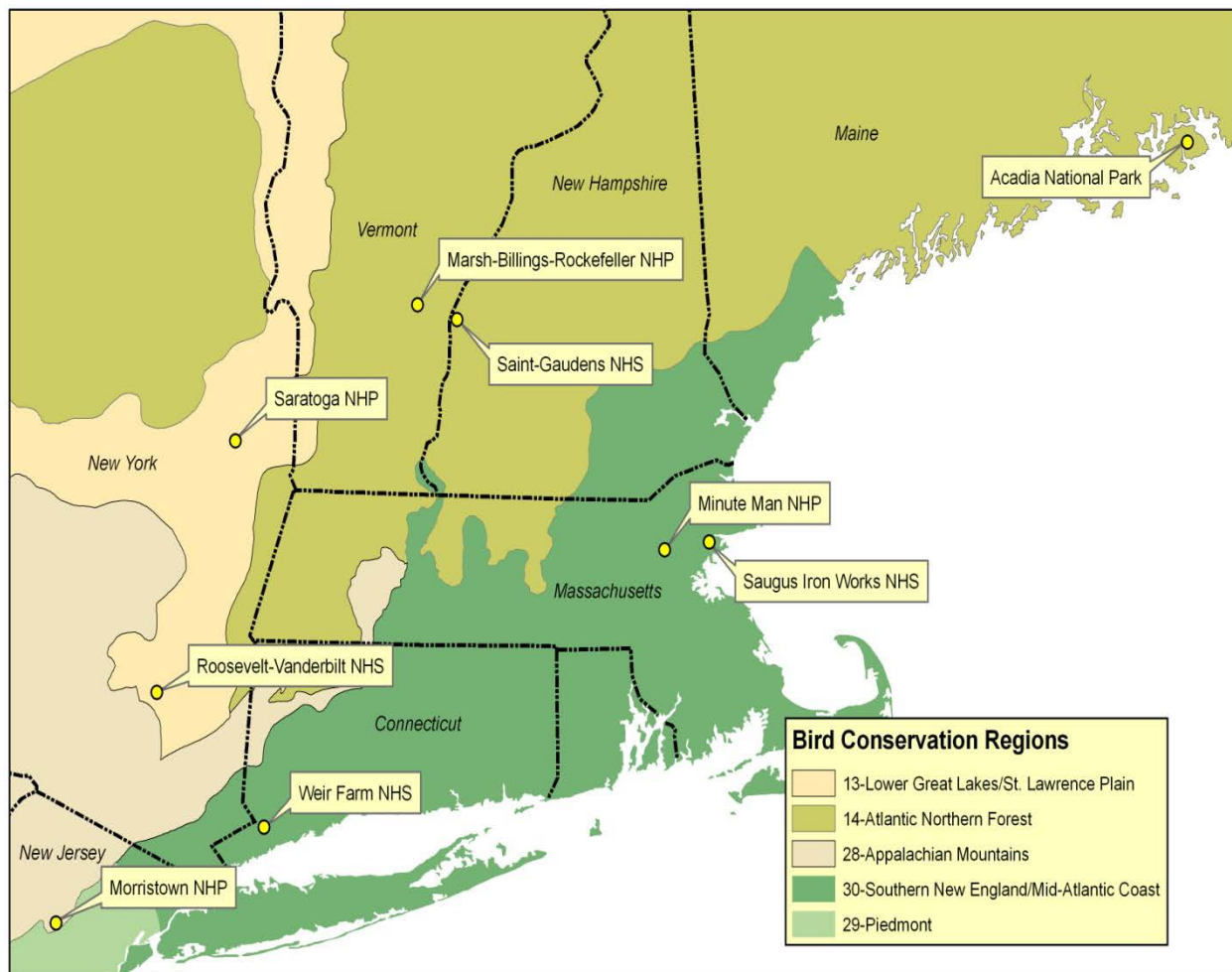


**Figure 1.** Northeast Temperate Network parks where the breeding bird monitoring protocol is being implemented and their associated Bird Conservation Regions. Roosevelt-Vanderbilt NHS includes Eleanor Roosevelt, Home of Franklin D. Roosevelt, and Vanderbilt Mansion national historic sites.

## Methods

Depending on size and habitat, each park contains one or more study sites and each study site contains between three and 12 point count stations, each separated by approximately 250 m. Most sites (26) are forested, but four sites (three at Saratoga NHP and one at Minute Man NHP) are primarily grassland. Volunteer birders visit each station at least once per year between late May and June, except that parks with fewer than 10 point count stations (Saint-Gaudens NHS, Saugus Iron Works NHS, and Weir Farm NHS) are visited at least twice. Repeat visits are particularly helpful for estimating detection probabilities of different species, and are encouraged at all sites. Volunteers record the species of each individual they detect during 10-minute point counts, the time during the count when each individual is first detected, and the distance band within which each individual was first detected (0-10 m, 10-25 m, 25-50 m, and > 50 m). The data are recorded on field cards and input into the United States Geological Survey (USGS) Point Count Database.

Birders are recruited through local birding groups, listservs, word of mouth, and park staff. Each volunteer takes a bird identification quiz on the Vermont Center for Ecostudies website, and receives a Volunteer Training Manual with detailed instructions and procedures. Volunteers are expected to spend time practicing distance estimation skills and familiarizing themselves with their route prior to conducting their survey. For quality control and training purposes, the project manager travels to one park each year and conducts side-by-side observations with a volunteer birder. The data from both observers are compared to ensure that similar species were detected, with particular attention paid to similar-sounding species and high-pitched species that may be harder for some volunteers to hear. NETN is also working with partners to develop a birder certification website that provides training tools and testing in visual and auditory bird identification. Volunteer birder skill is evaluated by the project leader and data from poor observers are excluded from analyses and reporting. At this point, only data from a single site from 2006 at Saratoga National Historical Park have been excluded.

Volunteer recruitment and retention has varied widely by park. To date, an average of 79% of the 29 active study sites have been surveyed (at least partially) each year network-wide, with five parks (Roosevelt-Vanderbilt NHS [ROVA], Marsh-Billings-Rockefeller NHP [MABI], Minute Man NHP [MIMA], Saint-Gaudens NHS [SAGA] and Saugus Iron Works [SAIR]) achieving 86% coverage or better, and two parks (Morristown NHP [MORR] and Saratoga NHP [SARA]) achieving 71% and 75% coverage, respectively (Table 1). Acadia NP (ACAD) and Weir Farm NHS (WEFA) have had volunteer recruitment and/or retention problems, resulting in just 60% and 57% coverage, respectively. At ACAD in 2012, one volunteer was unable to conduct his survey due to a family illness, but indicated an interest in continuing with the survey in 2013, while a new participant did not follow through with his commitment to survey two sites. Volunteer recruitment for vacant sites during the 2013 season is ongoing, and we are hopeful that all parks will have 100% coverage.

**Table 1.** Number of surveys conducted at each study site annually, 2006-2012. “NA” indicates sites that were not established during a given year. Total coverage is the proportion of years each site (or park) was at least partially surveyed.

| Park/Study Site (no. of stations)          | 2006           | 2007           | 2008           | 2009 | 2010 | 2011           | 2012            | Total Coverage (%) |
|--------------------------------------------|----------------|----------------|----------------|------|------|----------------|-----------------|--------------------|
| Acadia NP (ACAD)                           |                |                |                |      |      |                |                 | 60                 |
| Schoodic (n=6)                             | NA             | 1              | 0              | 0    | 2    | 2              | 0               | 50                 |
| Giant Slide Trail (n=10)                   | NA             | 1 <sup>2</sup> | 1              | 1    | 0    | 1 <sup>2</sup> | 0               | 67                 |
| Seal Cove Center (n=6)                     | NA             | 1              | 2              | 2    | 2    | 2              | 2               | 100                |
| Seal Cove East (n=7)                       | NA             | 1              | 2              | 2    | 2    | 2              | 2               | 100                |
| Seal Cove West (n=6)                       | NA             | 0              | 0              | 0    | 0    | 1 <sup>5</sup> | 2               | 33                 |
| Witch Hole Pond (n=9)                      | NA             | 0              | 0              | 1    | 0    | 1              | 1               | 50                 |
| Youngs Mtn (n=7)                           | NA             | 0              | 0              | 1    | 0    | 0              | 0               | 17                 |
| Roosevelt-Vanderbilt NHS (ROVA)            |                |                |                |      |      |                |                 | 95                 |
| ELRO (n=11)                                | 1 <sup>2</sup> | 1              | 1              | 1    | 1    | 1              | 1               | 100                |
| HOFR (n=12)                                | 1              | 1              | 1              | 0    | 1    | 1              | 1               | 86                 |
| VAMA (n=7)                                 | 1              | 1              | 1              | 1    | 1    | 1              | 1               | 100                |
| Marsh-Billings-Rockefeller NHP (MABI)      |                |                |                |      |      |                |                 | 100                |
| East (n=10)                                | 1              | 1              | 1              | 1    | 1    | 1              | 1               | 100                |
| Northwest (n=10)                           | 1              | 1              | 2 <sup>2</sup> | 1    | 1    | 1              | 1               | 100                |
| South (n=5)                                | 1              | 2              | 1              | 1    | 1    | 2              | 2               | 100                |
| Minute Man NHP (MIMA)                      |                |                |                |      |      |                |                 | 95                 |
| Hartwell Tavern (n=7)                      | 1              | 1              | 1              | 1    | 1    | 1              | 1               | 100                |
| Miriam's Corner (n=8)                      | 1              | 1              | 1              | 1    | 0    | 1              | 1               | 86                 |
| The Bluffs (n=8)                           | 1              | 2              | 2              | 2    | 1    | 3 <sup>3</sup> | 2               | 100                |
| Battle Road (n=6) <sup>1</sup>             | NA             | NA             | NA             | NA   | NA   | NA             | 2               | 100                |
| Morristown NHP (MORR)                      |                |                |                |      |      |                |                 | 71                 |
| Mt. Kemble (n=10)                          | 0              | 0              | 2              | 2    | 1    | 1              | 0               | 57                 |
| Primrose Brook (n=10)                      | 1              | 1              | 2              | 2    | 1    | 0              | 2               | 86                 |
| Soldiers Huts (n=9)                        | 1              | 1              | 0              | 0    | 1    | 2              | 1               | 71                 |
| Saint-Gaudens NHS (SAGA) (n=8)             | 0              | 1              | 2              | 2    | 2    | 2              | 2               | 86                 |
| Saugus Iron Works NHS (SAIR) (n=3)         | NA             | NA             | 1              | 3    | 2    | 2              | 2               | 100                |
| Saratoga NHP (SARA)                        |                |                |                |      |      |                |                 | 75                 |
| Bemis Heights (n=6)                        | NA             | 0              | 1              | 1    | 1    | 1 <sup>2</sup> | NA <sup>4</sup> | 80                 |
| Burgoyne's Headquarters (n=5) <sup>1</sup> | 1              | 0              | 1              | 1    | 1    | 1              | 1               | 86                 |
| Freeman Farm (n=10) <sup>1</sup>           | 1              | 1              | 1              | 1    | 1    | 1              | 1               | 100                |
| Middle Ravine (n=10)                       | NA             | 1              | 1              | 0    | 0    | 0              | 0               | 33                 |
| Neilson Farm (n=10) <sup>1</sup>           | 1              | 0              | 1              | 1    | 1    | 1              | 1               | 86                 |
| Wilkinson Trail (n=10)                     | 0              | 0              | 1              | 1    | 1    | 0              | 1 <sup>6</sup>  | 57                 |
| Northwest (n=8)                            | NA             | NA             | NA             | NA   | NA   | NA             | 1               | 100                |
| Weir Farm NHS (WEFA) (n=5)                 | 2              | 0              | 0              | 2    | 2    | 0              | 2               | 57                 |
| Total Surveys                              | 16             | 20             | 29             | 32   | 28   | 32             | 34              | 79                 |

<sup>1</sup> Grassland sites

<sup>2</sup> Partial survey. 9 points at ACAD Giant Slide Trail (2007 and 2011), 6 at ELRO (2006), 5 at MABI NW (2008), and 2 at SARA Bemis Heights (2011).

<sup>3</sup> Includes simultaneous quality control survey by project manager.

<sup>4</sup> Site discontinued in 2012 due to hazardous conditions, and a new site (Northwest) established.

<sup>5</sup> Data submitted late and were not included in the 2011 Summary Report.

<sup>6</sup> Survey conducted but data not received in time to include in 2012 Summary Report.

Data summaries were produced for each park (and each site when a park has more than one) using a database developed by the Northeast Temperate Network. The summaries include species detected and abundance for each year, as well as species richness and the Shannon diversity index. To facilitate comparisons across years and among parks and sites, if a site is surveyed multiple times in a year then only the data from the first survey are used for the data summaries (relative abundance figures, Appendix A, and Appendix B, including species richness and the Shannon diversity index). The use of the first survey is arbitrary, but is not biased towards maximizing detections of any particular species or group. Detections of additional species from later surveys are noted in the text, as is the total number of species and individuals detected through the full survey effort. The ecological integrity assessments use all species detected, regardless of whether the detection is in the first or a later survey.

Beginning with this report, we have included the Partner's in Flight (PIF) Priority Species codes in the tables in Appendices A and B. If these tables are compared with those from previous years, you will note an increase in the number of PIF Priority species designated for each park/site. This is due to the fact that we are now including "stewardship" species, those of regional or continental concern, and relatively common species that are exhibiting significant population declines. For more information about the PIF Species Assessment, go to <http://pif.rmbo.org/>.



## Avian Ecological Integrity Assessment

This report includes an assessment of the ecological integrity of the forest breeding bird community at each park. There is a separate assessment of the grassland bird community at Saratoga National Historical Park (NHP) and at a newly established site at Minute Man NHP, first surveyed in 2012. The assessments are based on an assemblage of behavioral and physiological response guilds (i.e., groups of species that require similar habitat, food, or other elements for survival). Over time, they will help elucidate changes in a broader, landscape context and indicate the direction that breeding bird habitat at the park may be moving along a disturbance gradient from “highly disturbed” or “urban,” to “pristine” or “natural.”

The forest breeding bird guild-based avian ecological integrity assessment consists of 13 guilds in three ecological integrity categories (Table 2), and for grasslands at Saratoga and Minute Man NHPs, we have also developed a grassland avian ecological integrity assessment, based on a small number of relevant guilds (Table 3). Each guild is broadly categorized as “specialist” or “generalist.” A specialist is a species with a narrow range of habitat tolerances, or one that exhibits a low intrinsic rate of population growth. The presence of a variety of specialist guilds indicates a high-integrity habitat condition, while a preponderance of generalist guilds indicates a low-integrity condition. The integrity categories are compositional (indicating species diversity), functional (highlighting ecological processes), and structural (related to the presence of important physical elements, like snags and shrub layer).

To calculate the avian ecological integrity assessment, species detected at a site or park are first assigned to guilds. Some species may be assigned to more than one guild, depending on their life history traits. The proportional species richness of each guild is then calculated by dividing the number of guild members detected by the total number of species detected. This value is then used to determine a rank of Good, Caution, or Significant Concern based on the proportional species richness thresholds listed in Tables 2 and 3. “Good” represents acceptable or desired conditions, “Caution” indicates a problem may exist, and “Significant Concern” indicates undesired conditions that may be in need of management action.

The thresholds and ranks for forest breeding birds are largely based on those derived by O’Connell et al. (2000) for birds in forested habitats in the central Appalachians, and from those derived by Glennon and Porter (2005) for New York’s Adirondack State Park. The thresholds and ranks for grassland birds were derived from Browder et al. (2002) and Coppedge et al. (2006). This is a first attempt at applying this assessment; threshold values may need to be adjusted by bioregion, forest type, or BCR, and may also be refined over time. In addition, within any given year some guild members are likely missed during surveys, so assessment results based on only one year of data may not be accurate. For that reason, assessments are based on all available data (up to seven years) for each park. Where more than three years of data were used, it is likely that the assessment results provide an accurate picture of the ecological health of the forest bird community. We recognize that the assessment is based on ecological criteria, and that park management goals may not seek to attain “ecological integrity.” A

management assessment could be developed by park staff and NETN scientists that would reflect progress towards avian and ecological management goals for individual parks.

Beginning with the 2011 annual report, the avian ecological integrity assessments were modified to more closely match the methods of O’Connell et al. (2000). Specifically, we limited both the forest breeding and grassland bird assessments to five groups of birds (perching birds or passerines, woodpeckers, cuckoos, swifts and hummingbirds, and doves). The only exceptions are American Kestrel and Northern Harrier, two grassland-obligate raptors that are now included in the “Grassland Obligate” guild for the grassland assessment. This helps ensure that the species included in the assessments are readily detected by point count surveys and are potential breeders in forested or grassland habitat. In addition, we limited the assessments to species that are assigned to guilds for the specific assessment type; interior forest birds detected on grassland point counts will not count in the species total (used to estimate proportional species richness) for that site.

**Table 2.** Forest Avian Ecological Integrity thresholds for 13 response guilds (based on O’Connell et al. 2000, and Glennon and Porter 2005). Percentages are proportional species richness.

| Biotic Integrity Element | Response Guild Metric        | Ratings (% Species Richness) |          |                     |
|--------------------------|------------------------------|------------------------------|----------|---------------------|
|                          |                              | Good                         | Caution  | Significant Concern |
| Compositional:           | Exotic Species               | 0%                           | 0.5 - 7% | > 7%                |
|                          | Nest Predator/Brood Parasite | < 10%                        | 10 - 15% | > 15%               |
|                          | Resident                     | < 28%                        | 28 - 41% | > 41%               |
|                          | Single-Brooded               | > 68%                        | 50 - 68% | < 50%               |
| Functional:              | Bark Prober                  | > 11%                        | 4 - 11%  | < 4%                |
|                          | Ground Gleaner               | > 9%                         | 4 - 9%   | < 4%                |
|                          | High Canopy Forager          | > 12%                        | 7 - 12%  | < 7%                |
|                          | Low Canopy Forager           | > 22%                        | 14 - 22% | < 14%               |
|                          | Omnivore                     | < 30%                        | 30 - 50% | > 50%               |
| Structural:              | Canopy Nester                | > 35%                        | 29 - 35% | < 29%               |
|                          | Forest-ground Nester         | > 18%                        | 5 - 18%  | < 5%                |
|                          | Interior Forest Obligate     | > 35%                        | 10 - 35% | < 10%               |
|                          | Shrub Nester                 | < 18%                        | 18 - 24% | > 24%               |

**Table 3.** Grassland Avian Ecological Integrity thresholds for six response guilds (based on Browder et al. 2002, and Coppedge et al. 2006). Percentages are proportional species richness and “Edge generalist” threshold values have been revised (see text).

| Response Guild Metric                                                   | Ratings (% Species Richness) |          |                     |
|-------------------------------------------------------------------------|------------------------------|----------|---------------------|
|                                                                         | Good                         | Caution  | Significant Concern |
| Edge generalist species                                                 | < 35%                        | 35 - 70% | > 70%               |
| Shrub-dependent species                                                 | < 10%                        | 10 - 25% | > 25%               |
| Grassland obligate species                                              | > 10%                        | 5 - 10%  | < 5%                |
| Exotic species                                                          | < 0.1%                       | 0.1 - 3% | > 3%                |
| Proportion of PIF Priority Grassland Obligate Species <sup>1</sup> for: |                              |          |                     |
| BCR 13 (# detected/8)                                                   | > 70%                        | 50 - 70% | < 50%               |
| BCR 30 (# detected/5)                                                   |                              |          |                     |
| Proportion of PIF Priority Shrub-dependent Species <sup>1</sup> for:    |                              |          |                     |
| BCR 13 and 30 (# detected/7)                                            | > 75%                        | 50 - 75% | < 50%               |

<sup>1</sup> New metric beginning with 2012 annual report (see text).

Additionally, as part of our review of the grassland assessment, 16 species were added to the “Edge Generalist” grassland guild beginning with the 2011 annual report: American Woodcock, Black-billed Cuckoo, Black-capped Chickadee, Glue-gray Gnatcatcher, Blue Jay, Common Grackle, Great Crested Flycatcher, Gray Catbird, Northern Bobwhite, Northern Cardinal, Red-winged Blackbird, Ruby-Throated Hummingbird, Tufted Titmouse, Yellow-billed Cuckoo, Yellow-shafted Flicker, and Yellow-throated Vireo; while Alder Flycatcher and Willow Flycatcher were added to the “Shrub-dependent” grassland guild. After reviewing the thresholds for both assessments in 2012, we revised the threshold values of the “Edge Generalist” grassland guild due to the number of species that were added to that guild. The revised threshold values are reflected in Table 3, and revised values were used for this year’s assessments. Because the assessments reported this year combine all data collected to date, revised assessments for previous years were not calculated. When changes in the assessment from the previous annual report may have been due to the altered threshold values, this is noted in the report.

Beginning with the 2012 survey year, the grassland assessment includes two additional guilds: “Partners in Flight (PIF) Priority Grassland Obligate Species” and “PIF Priority Shrub-dependent Species.” These metrics evaluate the proportion of grassland and shrub-dependent species detected on grassland surveys that are listed as conservation priorities for BCRs 13 and 30 (see Figure 1). Detecting a high proportion of shrub-dependent species on grassland surveys is not generally desirable (hence the threshold ratings for the “Shrub-dependent” guild in Table 3). However, because seven of the 13 species (54%) included in the shrub-dependent guild are of high conservation concern in the region, there is value in providing habitat for these rare and/or declining species.

For more information about the Avian Ecological Integrity Assessment, as well as project methodologies, sampling scheme, and more, see the Breeding Landbird Monitoring Protocol (Faccio et al. 2013), available at the NPS Northeast Temperate Network website at <http://science.nature.nps.gov/im/units/netn/monitor/programs/breedingLandbird/breedingLandbird.cfm>. The Google Earth Park Maps webpage (accessible through the leftmost suite of menu choices on NETN's homepage) also contains bird point count stations for all participating NETN park units.

## Results by Park

### Acadia National Park (Maine)

A total of 51 point count stations in seven study sites were established in 2007 at Acadia National Park (ACAD) in Maine (Figure 2). Of these, five of the six sites on Mt. Desert Island (MDI) have been surveyed in at least 2 years (Youngs Mountain has only been surveyed once), and the one site on the Schoodic Peninsula has been surveyed during 3 years, for a park-wide coverage rate of 60% (see Table 1 for a summary of survey coverage by year). Although we recruited enough volunteers to achieve 100% coverage in 2012, surveys were completed at only four of the seven study sites. One volunteer was unable to complete the survey of the Giant Slide Trail site due to a family illness, and a newly recruited volunteer did not follow through in conducting surveys at two study sites (Schoodic and Youngs Mountain).

During 2012, observers conducted a total of 47 point counts, detecting a total of 392 birds representing 44 species, including four species detected for the first time during monitoring at the park (Broad-winged Hawk, Scarlet Tanager, Song Sparrow, and Rose-breasted Grosbeak). A total of 69 species have been recorded over the 6 years of monitoring, including a Yellow-bellied Sapsucker which was detected only on a repeat site visit to Seal Cove East in 2008.

Average abundance during the first site visit increased from 7.3 birds per point in 2011 to 7.5 birds per point in 2012, the second lowest since point counts began at ACAD in 2007 (Appendix A). Despite the slight increase in number of individuals in 2012, species richness dropped slightly from 47 to 43 species detected during the first round of surveys. Only one species of regional or USA/Canada conservation concern (Scarlet Tanager) was detected during the 2012 surveys, while two species exhibiting significant declines across the region were detected: Ruffed Grouse and Pine Siskin. Appendices A and B detail the species and relative abundances found throughout the park and at each site during the first survey of each year, plus additional summary statistics.

Of the 10 most abundant species detected at all ACAD sites combined across all years, the relative abundances of four (Red-breasted Nuthatch, Hermit Thrush, Black-throated Green Warbler, and Dark-eyed Junco) increased from 2011, and the relative abundances of eight of the 10 species were below the 6-year average (Figure 3, Appendix A).

The park-wide forest avian ecological integrity assessment for all years combined at Acadia National Park resulted in seven categories ranked as “Good,” six ranked as “Caution,” and none ranked as “Significant Concern,” continuing to indicate that the forest bird community appears to be doing well (Table 4). The assessment has also been calculated for each study site, and these results are in Appendix C.



Figure 2. Point count stations at Acadia National Park, Mt. Desert Island and Schoodic Peninsula. Google Earth image.

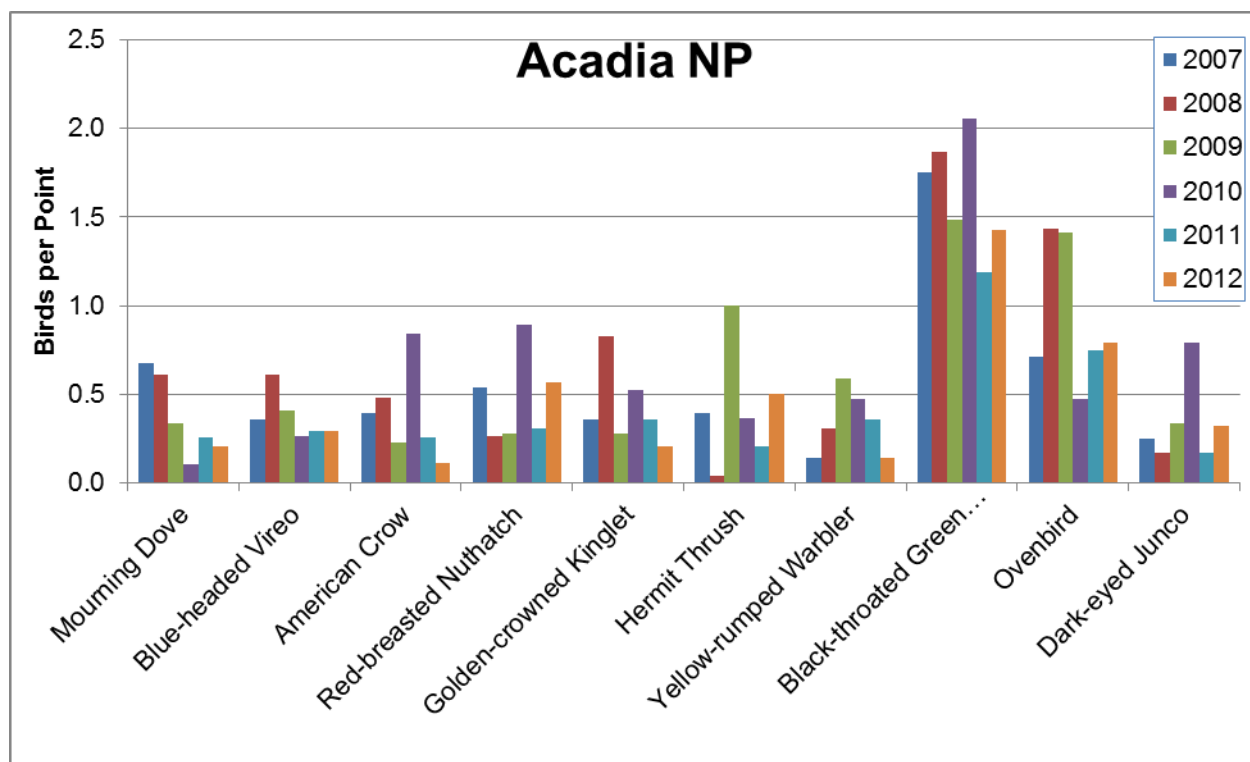


**Figure 3.** Relative abundance of the 10 most common species detected at Acadia National Park, 2007-2012; Mt. Desert Island and Schoodic Peninsula sites combined.

**Table 4.** Park-wide Forest Avian Ecological Integrity Assessment for Acadia National Park, 2007-2012.

**Acadia NP**

**2007 to 2012**

***Integrity Element:** Compositional*

| <i><b>Response Guild</b></i>   | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 5%                       | Good                 |
| Resident                       | 27%                      | Good                 |
| Single Brooded                 | 57%                      | Caution              |

***Integrity Element:** Functional*

| <i><b>Response Guild</b></i> | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 11%                      | Good                 |
| Ground Gleaner               | 6%                       | Caution              |
| High Canopy Forager          | 11%                      | Caution              |
| Low Canopy Forager           | 24%                      | Good                 |
| Omnivore                     | 35%                      | Caution              |

***Integrity Element:** Structural*

| <i><b>Response Guild</b></i> | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 37%                      | Good                 |
| Forest-ground Nester         | 14%                      | Caution              |
| Interior Forest Obligate     | 38%                      | Good                 |
| Shrub Nester                 | 22%                      | Caution              |

## **Eleanor Roosevelt National Historic Site (New York)**

A study site was established at Eleanor Roosevelt National Historic Site (ELRO; one of the Roosevelt-Vanderbilt National Historic Sites) in 2006 and surveyed annually (Table 1). The study site at ELRO originally consisted of six point count stations, but five additional sampling points were added for the 2007 field season, increasing the total to 11 point count stations (Figure 4).

During 2012, a total of 145 individuals representing 35 species were detected, including four species detected for the first time during monitoring at the park (Eastern Phoebe, Common Yellowthroat, Chipping Sparrow, and Brown-headed Cowbird). In total, 52 species have been recorded during the 7 years, with an average abundance of 10.01 birds per point (Appendix A). In 2012, relative abundance (13.18 birds per point) was the highest in the survey's 7-year history, while species richness (35) declined from 2011. Among the ten most commonly detected species across all years, the relative abundances of four (Blue Jay, American Crow, Tufted Titmouse, and White-breasted Nuthatch) declined from 2011 (Figure 5, Appendix A). A total of three species of regional or USA/Canada conservation concern were detected during 2012 surveys at ELRO: Eastern Wood-Pewee, Wood Thrush, and Prairie Warbler. A list of species, their relative abundances, and other summary statistics are provided in Appendix A. Red-eyed Vireo, Wood Thrush, Tufted Titmouse, and Northern Cardinal continue to be the most commonly detected species across all years.

The park-wide forest avian ecological integrity assessment for all years combined at ELRO resulted in three categories ranked as "Good," six ranked as "Caution," and four ranked as "Significant Concern" (Table 5). Both the "canopy nester" and "shrub nester" guilds continue to be ranked as "Significant Concern." A low proportion of canopy nesting species, which includes birds that require a well-developed canopy layer, may be indicative of the park's location within a fragmented landscape, while a lack of shrub nesters may reflect poor structural diversity within the forest, possibly due to a deer over-browse problem. On the other hand, the "low canopy foragers" guild, which includes birds that specialize in feeding within the forest sub-canopy, showed improvement, moving up to "Caution."

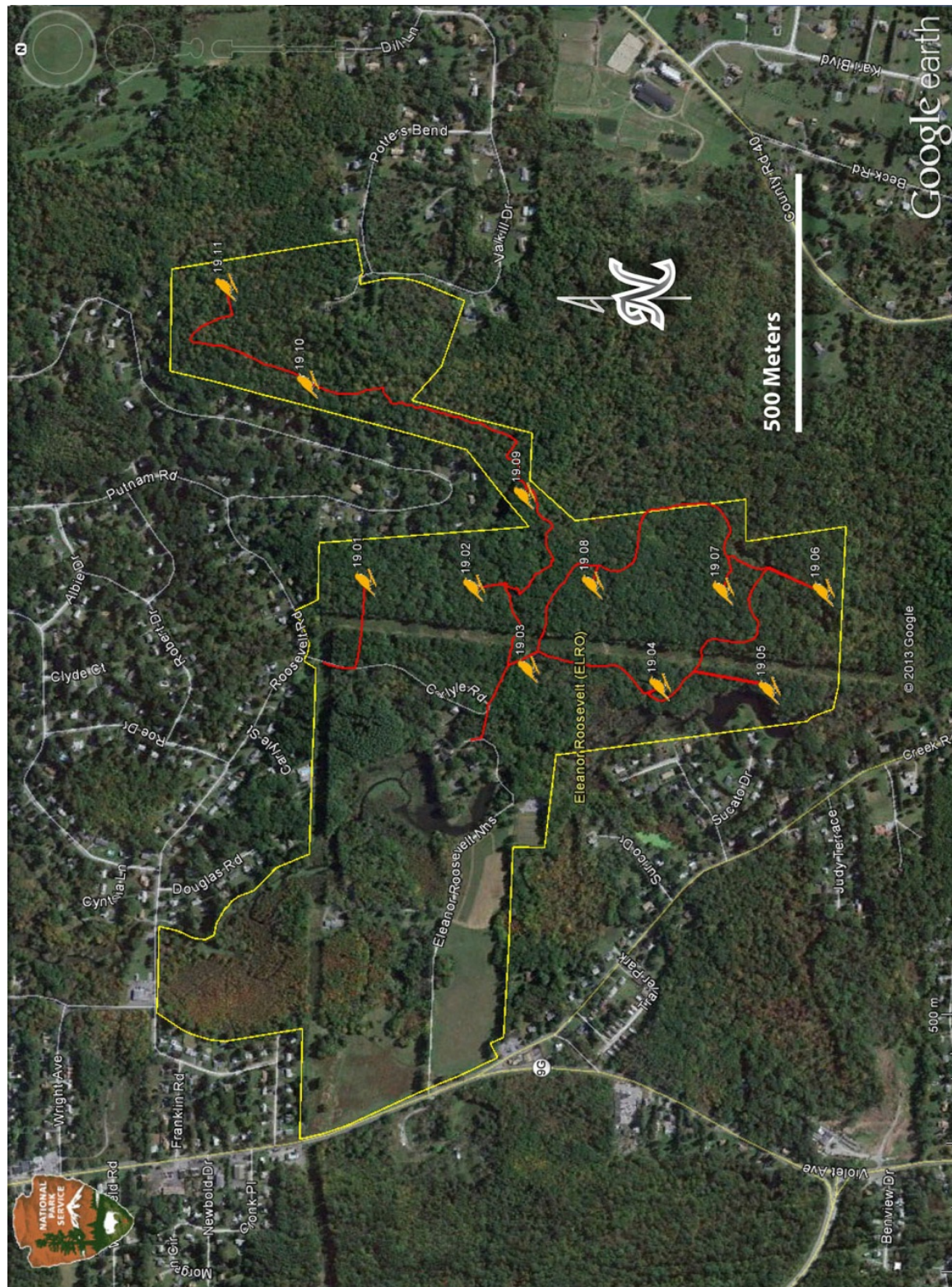


**Figure 4.** Point count stations at Eleanor Roosevelt National Historic Site. Red line indicates monitoring route. Google Earth image.

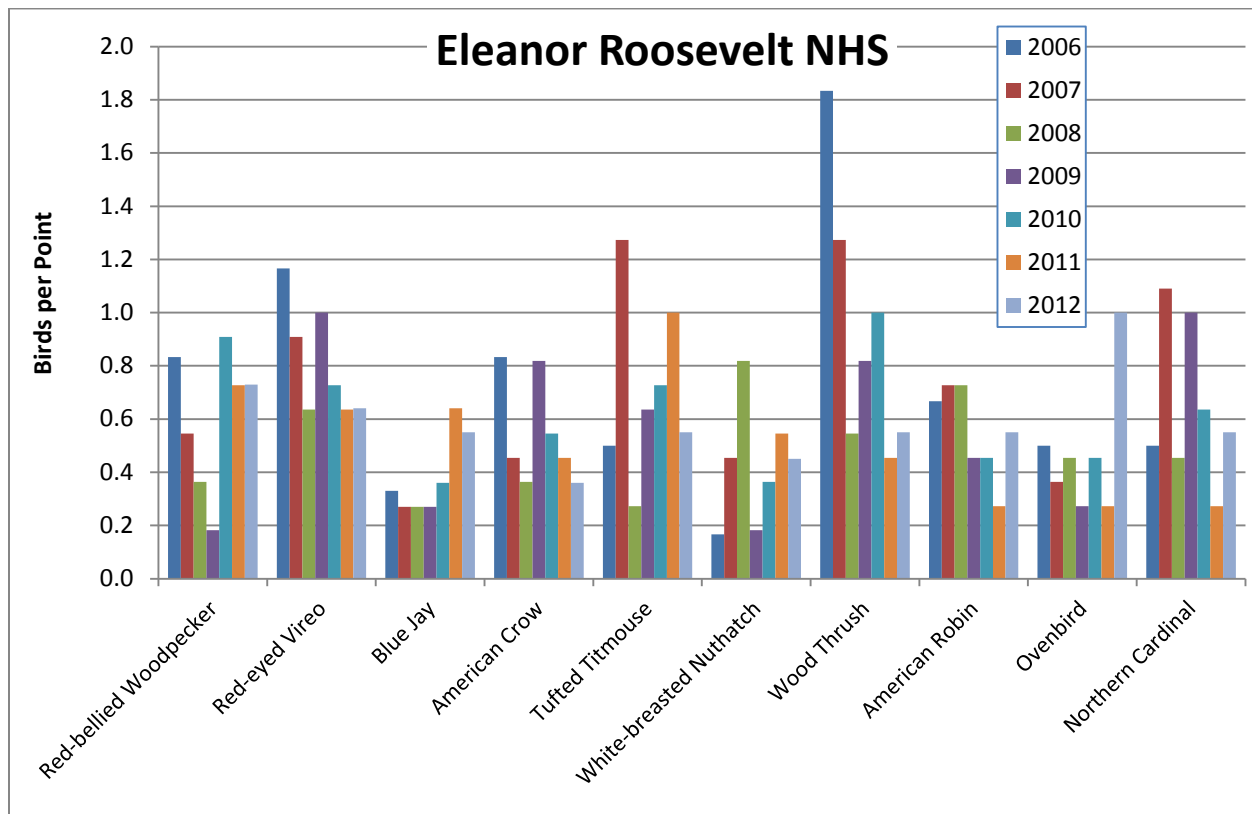


**Figure 5.** Relative abundance of the 10 most common species at Eleanor Roosevelt National Historic Site, 2006-2012.

**Table 5.** Park-wide Forest Avian Ecological Integrity Assessment for Eleanor Roosevelt National Historic Site, 2006-2012.

**Eleanor Roosevelt NHS**

**2006 to 2012**

***Integrity Element: Compositional***

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 7%                | Good          |
| Resident                       | 36%               | Caution       |
| Single Brooded                 | 47%               | Sig Concern   |

***Integrity Element: Functional***

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 16%               | Good          |
| Ground Gleaner        | 7%                | Caution       |
| High Canopy Forager   | 7%                | Sig Concern   |
| Low Canopy Forager    | 16%               | Caution       |
| Omnivore              | 42%               | Caution       |

***Integrity Element: Structural***

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 22%               | Sig Concern   |
| Forest-ground Nester     | 11%               | Caution       |
| Interior Forest Obligate | 22%               | Caution       |
| Shrub Nester             | 29%               | Sig Concern   |

## **Home of Franklin D. Roosevelt National Historic Site (New York)**

One study site with 12 point count stations was established at the Home of Franklin D. Roosevelt National Historic Site (HOFR; one of the Roosevelt-Vanderbilt National Historic Sites) (Figure 6) and surveyed in all years except 2009 (Table 1).

A total of 62 individual birds representing 20 species were detected in 2012, including two species detected for the first time during monitoring at the park (Ruby-crowned Kinglet and Chipping Sparrow). In total, 46 species have been recorded, with an average abundance of 6.92 birds per point. Both relative abundance and species richness declined in 2012 to the lowest in the survey's 6-year history (Appendix A). However, of the 10 most commonly detected species across all years, the relative abundances of only three (Blue Jay, Tufted Titmouse, and American Robin) declined from 2011 (Figure 7), while the relative abundances for half were above the 6-year average. There was a big drop in Tufted Titmouse detections in 2012 (only 1 individual), along with an increase of White-breasted Nuthatches (7 individuals). Only one species of regional or USA/Canada conservation concern (Wood Thrush) was detected in 2012. A list of species, their relative abundances, and other summary statistics are provided in Appendix A.

The park-wide forest avian ecological integrity assessment for all years combined at HOFR resulted in three categories ranked as "Good," nine ranked as "Caution," and one ranked as "Significant Concern" (Table 5). This represents a modest improvement over 2011 results, with two response guilds within the "Compositional" category ("Nest Predator/Brood Parasite" and "Resident") each bumping up a notch. However, the "Shrub Nester" category dropped from "Caution" to Significant Concern."

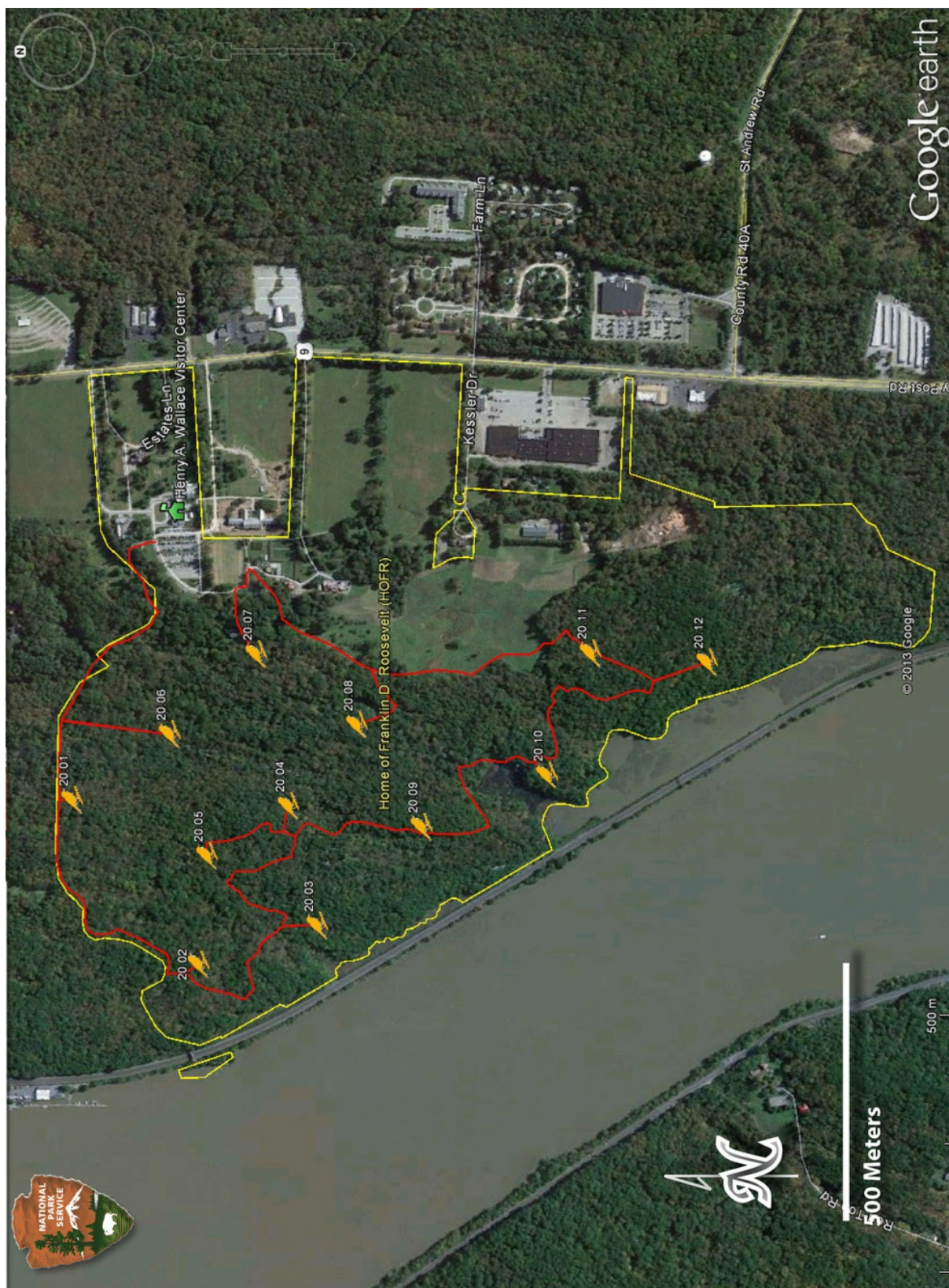


**Figure 6.** Point count stations at the Home of Franklin D. Roosevelt National Historic Site. Red line indicates monitoring route. Google Earth image.

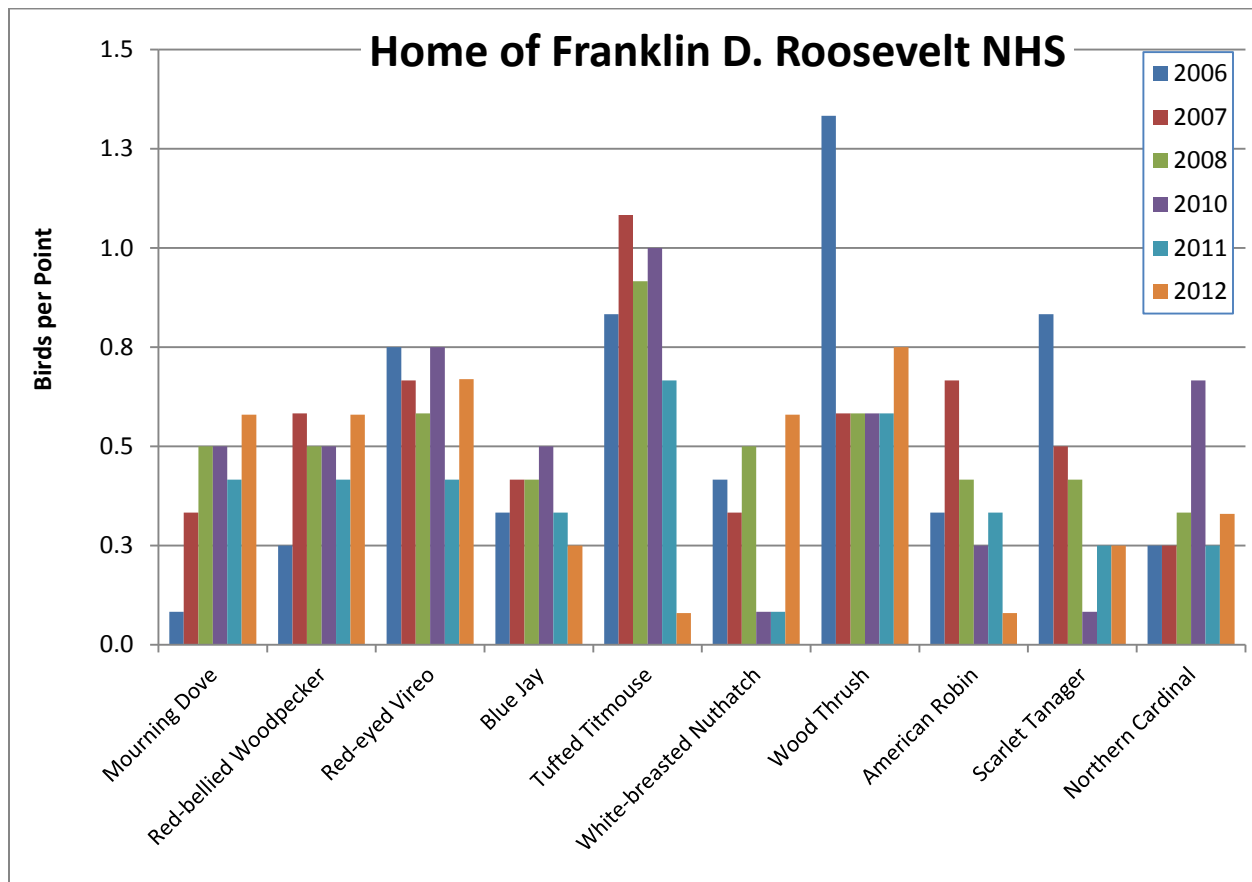


**Figure 7.** Relative abundance of the 10 most common species detected at the Home of Franklin D. Roosevelt National Historic Site, 2006-2012.

**Table 6.** Park-wide Forest Avian Ecological Integrity Assessment for the Home of Franklin D. Roosevelt National Historic Site, 2006-2012.

**Home of Franklin D. Roosevelt NHS**

**2006 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 10%                      | Good                 |
| Resident                       | 39%                      | Caution              |
| Single Brooded                 | 51%                      | Caution              |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 15%                      | Good                 |
| Ground Gleaner               | 7%                       | Caution              |
| High Canopy Forager          | 10%                      | Caution              |
| Low Canopy Forager           | 17%                      | Caution              |
| Omnivore                     | 39%                      | Caution              |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 32%                      | Caution              |
| Forest-ground Nester         | 10%                      | Caution              |
| Interior Forest Obligate     | 27%                      | Caution              |
| Shrub Nester                 | 24%                      | Sig Concern          |

## **Marsh-Billings-Rockefeller National Historical Park (Vermont)**

Three forested study sites were established at Marsh-Billings-Rockefeller National Historical Park (MABI) and surveyed annually since 2006 (Table 1). Two of these sites (MABI Northwest and MABI East) consist of 10 point count stations each, and one site (MABI South) consists of five point count stations (Figure 8).

During 2012 surveys, observers detected a total of 368 birds representing 34 species, including three that were only detected on repeat surveys (Belted Kingfisher [which was detected for the first time], Yellow-rumped Warbler, and American Redstart). A total of 58 species have been recorded over the 7 years of monitoring. Average abundance during the first site survey across all 7 years was 13.67 birds per point (Appendix A). In 2012, relative abundance (12.12 birds per point) and species richness declined from 2011. Of the ten most commonly detected species across all years, the relative abundances of only three species (Blue Jay, Hermit Thrush, and American Robin) increased over 2011 values (Figure 9), while the relative abundance of just three species (Blue Jay, American Robin, and Scarlet Tanager) were above the 7-year average. Ovenbird and Red-eyed Vireo continue to be the most abundant species detected. Three species of regional or USA/Canada conservation concern were detected during point count surveys in 2012: Eastern Wood-Pewee, Wood Thrush, and Scarlet Tanager (all of which have been detected every year). A list of species, their relative abundances, and other summary statistics are provided in Appendices A and B.

The park-wide forest avian ecological integrity assessment for all years combined at MABI resulted in seven categories ranked as “Good,” six ranked as “Caution,” and none ranked as “Significant Concern” (Table 7). This represents no change from the 2011 results. It should be noted that four of the guilds that were ranked as “Caution” (“Low Canopy Forager,” “Omnivore,” “Forest-ground Nester,” and “Shrub Nester”) were again less than 3 percentage points away from a “Good” rating, suggesting that the forest bird community is doing well at MABI. The assessment has also been calculated for each site, individually, and these results are provided in Appendix C.

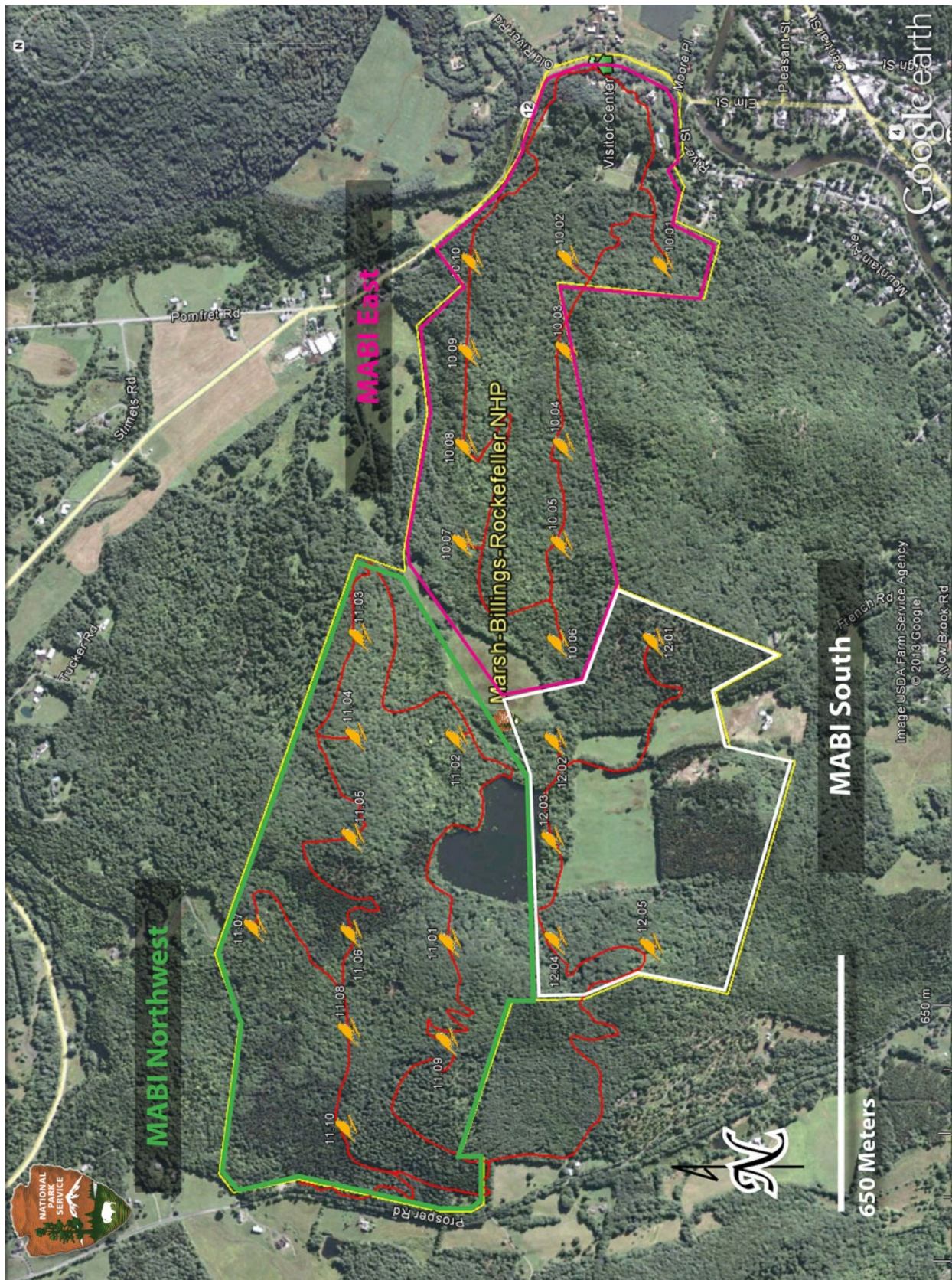


Figure 8. Point count stations at Marsh-Billings-Rockefeller National Historical Park. Red lines indicate monitoring routes. Google Earth image.

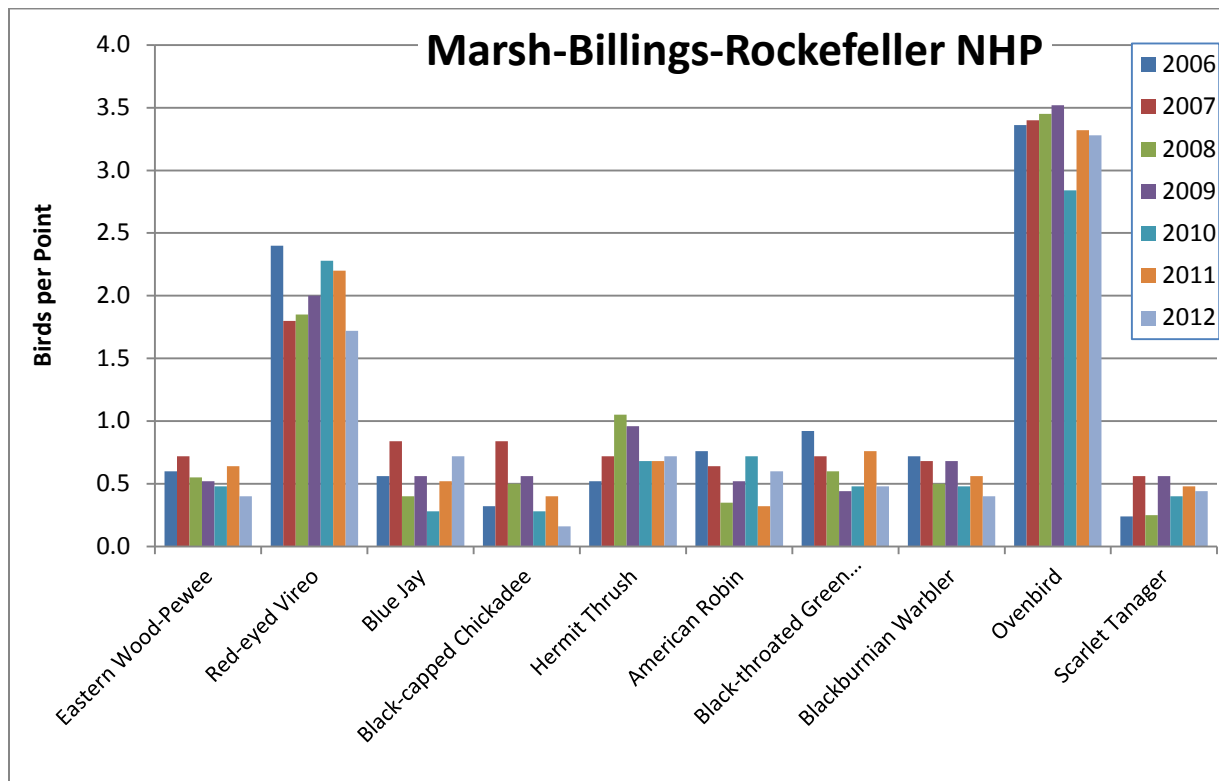


**Figure 9.** Relative abundance of the 10 most common species detected at Marsh-Billings-Rockefeller National Historical Park, 2006-2012, for all sites combined.

**Table 7.** Park-wide Forest Avian Ecological Integrity Assessment for Marsh-Billings-Rockefeller National Historical Park, 2006-2012.

**Marsh-Billings-Rockefeller NHP**

**2006 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 7%                       | Good                 |
| Resident                       | 28%                      | Good                 |
| Single Brooded                 | 61%                      | Caution              |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 15%                      | Good                 |
| Ground Gleaner               | 9%                       | Good                 |
| High Canopy Forager          | 7%                       | Caution              |
| Low Canopy Forager           | 19%                      | Caution              |
| Omnivore                     | 33%                      | Caution              |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 35%                      | Good                 |
| Forest-ground Nester         | 15%                      | Caution              |
| Interior Forest Obligate     | 35%                      | Good                 |
| Shrub Nester                 | 19%                      | Caution              |

## Minute Man National Historical Park (Massachusetts)

Three study sites were established at Minute Man National Historical Park (MIMA), located in Lexington and Concord, MA. Two of these sites (The Bluff and Miriam's Corner) consist of eight point count stations each, and one site (Hartwell Tavern) consists of seven point count stations (Figure 10). The three study sites were established in 2006 and surveyed annually, with the exception of Miriam's Corner which was not surveyed in 2010 (Table 1). The Bluff was surveyed twice in 2007, 2008, 2009, 2011, and 2012, and the project manager accompanied the volunteer observer in 2011, conducting a simultaneous quality control survey. At the request of park staff, a new "grassland" survey site (Battle Road), consisting of 6 point counts, was established and surveyed in 2012 (Table 1). Although this site does not appear to support habitat for grassland obligate species, it does provide open, park-like habitat dominated by grasses with a few scattered, mature trees (Figure 10).

During 2012 surveys, observers detected a total of 471 birds representing 45 species, including three European Starlings, a species not previously encountered during surveys at MIMA, detected at the newly established Battle Road site. A total of 62 species have been recorded over the 7 years of monitoring.

Average relative abundance during the first site survey across all 7 years was 12.92 birds per point. In 2012, relative abundance (12.64 birds per point) increased slightly from 2011, while species richness also increased, likely due to the increased number of points surveyed and the addition of sampling in open habitat (Appendix A). Of the ten most commonly detected species across all years, the relative abundances of six increased compared to 2011 (Figure 11), while the relative abundances of half were equal to or above the 7-year average. A total of seven species of regional or USA/Canada conservation concern were detected during 2012, including four species that were detected in all years (Eastern Wood-Pewee, Wood Thrush, Scarlet Tanager, and Rose-breasted Grosbeak). A list of species, their relative abundances, and other summary statistics for the first survey of each point are provided in Appendices A and B.

The park-wide forest avian ecological integrity assessment for all years combined at MIMA resulted in one category ranked as "Good," nine ranked as "Caution," and three ranked as "Significant Concern" (Table 8). These results represent no change from the 2011 assessment. While the only "Good" score continued to be the "Nest Predator/Brood Parasite" guild, "Significant Concern" scores were found in two of the three integrity elements (and the score for "High Canopy Forager" is close to a "Significant Concern" rating in the third integrity element. These results are not unexpected, and are likely due to the urbanized and highly fragmented landscape of the park and surrounding area. The assessment has also been calculated for each site, and these results are in Appendix C.

The grassland avian ecological integrity assessment is provided in Table 9. Five of the six guilds were rated "Significant Concern." This assessment is not based on enough years of data to be reliable, and in addition the point counts for the Battle Road site were conducted later in the day than normal, resulting in a low number of bird detections. The ratings may improve as more data are collected, although the fragmented grassland habitat at MIMA is not expected to support grassland obligate species.



Figure 10. Point count stations at Minute Man National Historical Park. Red lines indicate monitoring routes. Google Earth image.

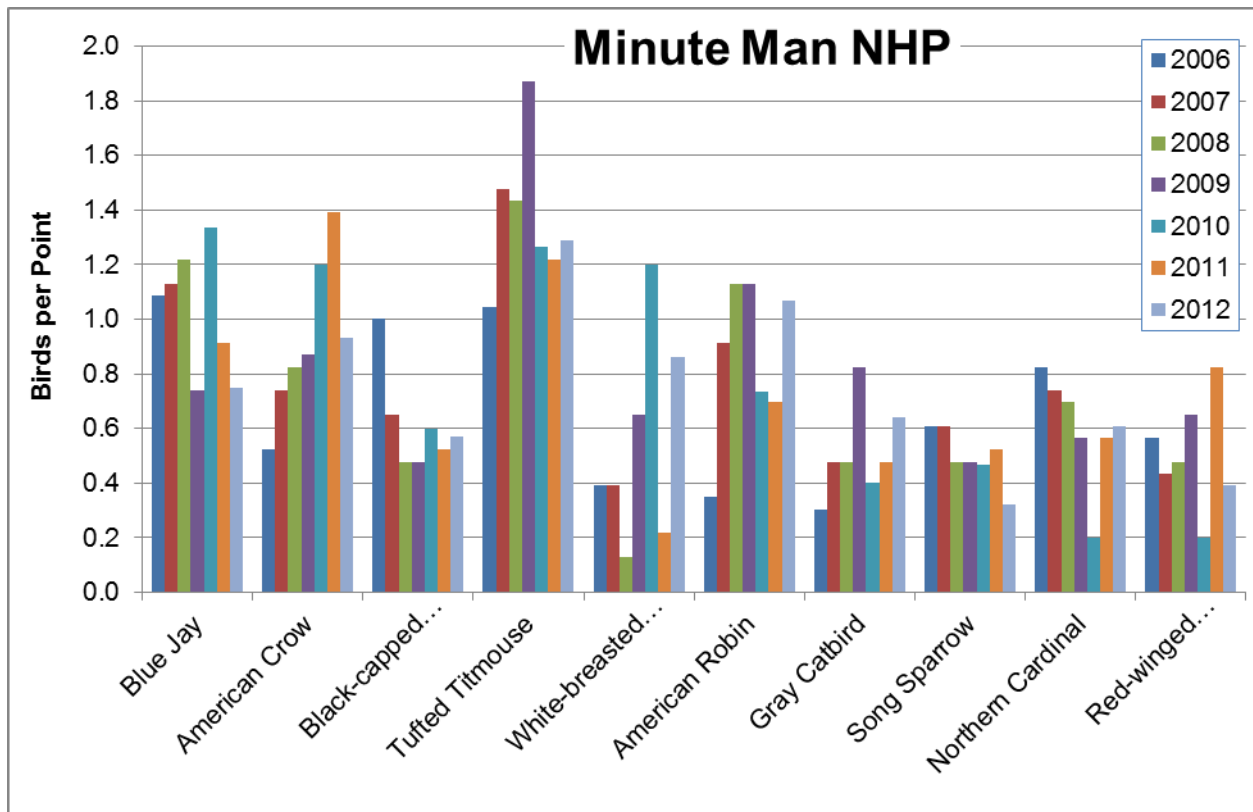


**Figure 11.** Relative abundance of the 10 most common species detected at Minute Man National Historical Park, 2006-2012, for all sites combined.

**Table 8.** Park-wide Forest Avian Ecological Integrity Assessment for Minute Man National Historical Park, 2006-2012.

| Minute Man NHP                          |                                | 2006 to 2012      |               |
|-----------------------------------------|--------------------------------|-------------------|---------------|
| <i>Integrity Element: Compositional</i> |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Exotic                         | 4%                | Caution       |
|                                         | Nest Predator / Brood Parasite | 7%                | Good          |
|                                         | Resident                       | 33%               | Caution       |
|                                         | Single Brooded                 | 49%               | Sig Concern   |
| <i>Integrity Element: Functional</i>    |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Bark Prober                    | 11%               | Caution       |
|                                         | Ground Gleaner                 | 5%                | Caution       |
|                                         | High Canopy Forager            | 7%                | Caution       |
|                                         | Low Canopy Forager             | 20%               | Caution       |
|                                         | Omnivore                       | 36%               | Caution       |
| <i>Integrity Element: Structural</i>    |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Canopy Nester                  | 25%               | Sig Concern   |
|                                         | Forest-ground Nester           | 5%                | Caution       |
|                                         | Interior Forest Obligate       | 16%               | Caution       |
|                                         | Shrub Nester                   | 27%               | Sig Concern   |

**Table 9.** Grassland Avian Ecological Integrity Assessment for grassland study site at Minute Man National Historical Park, 2012.

| Minute Man NHP |                        | 2012              |               |
|----------------|------------------------|-------------------|---------------|
|                | <i>Guild</i>           | <i>Percentage</i> | <i>Rating</i> |
|                | PIF Grassland Obligate | 0%                | Sig Concern   |
|                | PIF Shrub-dependent    | 0%                | Sig Concern   |
|                | Edge Generalist        | 94%               | Sig Concern   |
|                | Exotic                 | 13%               | Sig Concern   |
|                | Grassland Obligate     | 0%                | Sig Concern   |
|                | Shrub-dependent        | 6%                | Good          |

## **Morristown National Historical Park (New Jersey)**

A total of 29 point counts in three study sites were established in 2006 at Morristown National Historical Park (MORR), in Morristown, New Jersey (Figure 12). One of the sites has been surveyed during six of the seven years, one site during five years, and the third during four years, for a park-wide coverage rate of 71% (Table 1). In 2012, the newly-recruited volunteer for one study site (Mt. Kemble) did not follow through and the site was not surveyed for the first time since 2007.

During 2012 surveys, observers detected a total of 353 birds representing 34 species, including a Black-capped Chickadee that was only detected on a repeat survey in 2012. One new species (Common Grackle) was observed for the first time in 2012. A total of 58 species have been recorded during the 6 survey years.

Average abundance during the first site visit was 14.47 birds per point, up from 2011 and above the 7-year average of 12.76 (Appendix A). Of the ten most commonly detected species across all years, the relative abundances of four increased over 2011 (Figure 13), while the relative abundances of only three species (Blue Jay, Veery, and Ovenbird) in 2012 were above the 7-year average. A total of five species of regional or USA/Canada conservation concern were detected during 2012, including three species (Eastern Wood-Pewee, Wood Thrush, and Eastern Towhee) that were detected in all survey years. In addition, Eastern Wood-Pewee and Wood Thrush were among the 10 most abundant species detected (Figure 13). A list of species, their relative abundances, and other summary statistics from the first survey of each point are provided in Appendices A and B.

The park-wide forest avian ecological integrity assessment for all years combined at MORR resulted in four categories ranked as “Good,” seven ranked as “Caution,” and two ranked as “Significant Concern” (Table 9). This represents a slight change compared to 2011, as two categories in the Structural Integrity element dropped down a level; “Canopy Nester” declined to “Significant Concern,” while “Interior Forest Obligate” dropped to “Caution.” The other two guilds within the Structural Integrity element also consisted of “Caution” and “Significant Concern” ranks, possibly reflecting the low structural diversity throughout much of the park; the legacy of a high deer population which has resulted in very limited forest regeneration. Guilds within the “Compositional” and “Functional” metrics however, were dominated by “Caution” or “Good” ranks. The assessment has also been calculated for each site, and these results are provided in Appendix C.

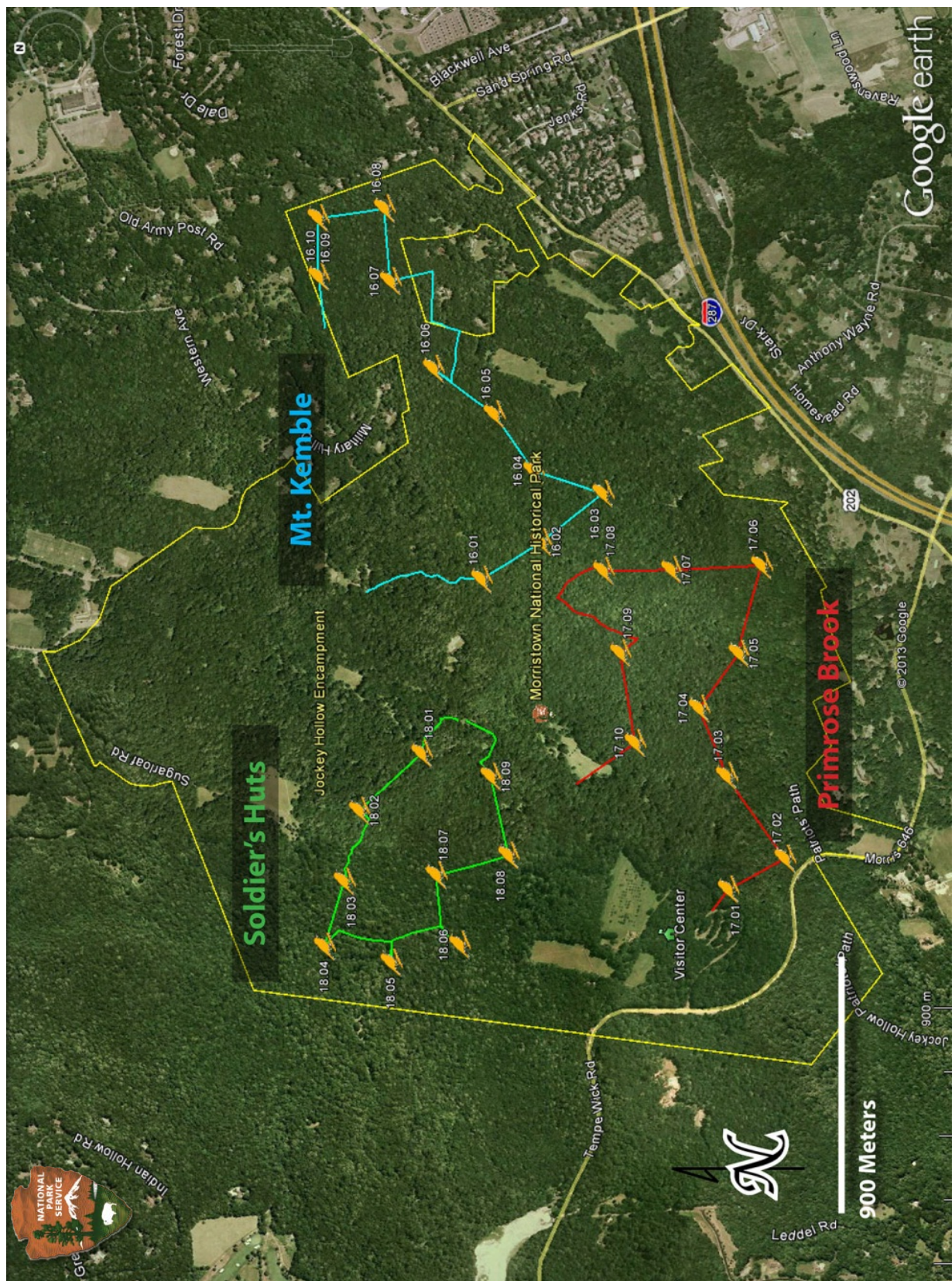


Figure 12. Point count stations at Morristown National Historical Park. Colored lines indicate monitoring routes. Google Earth image.

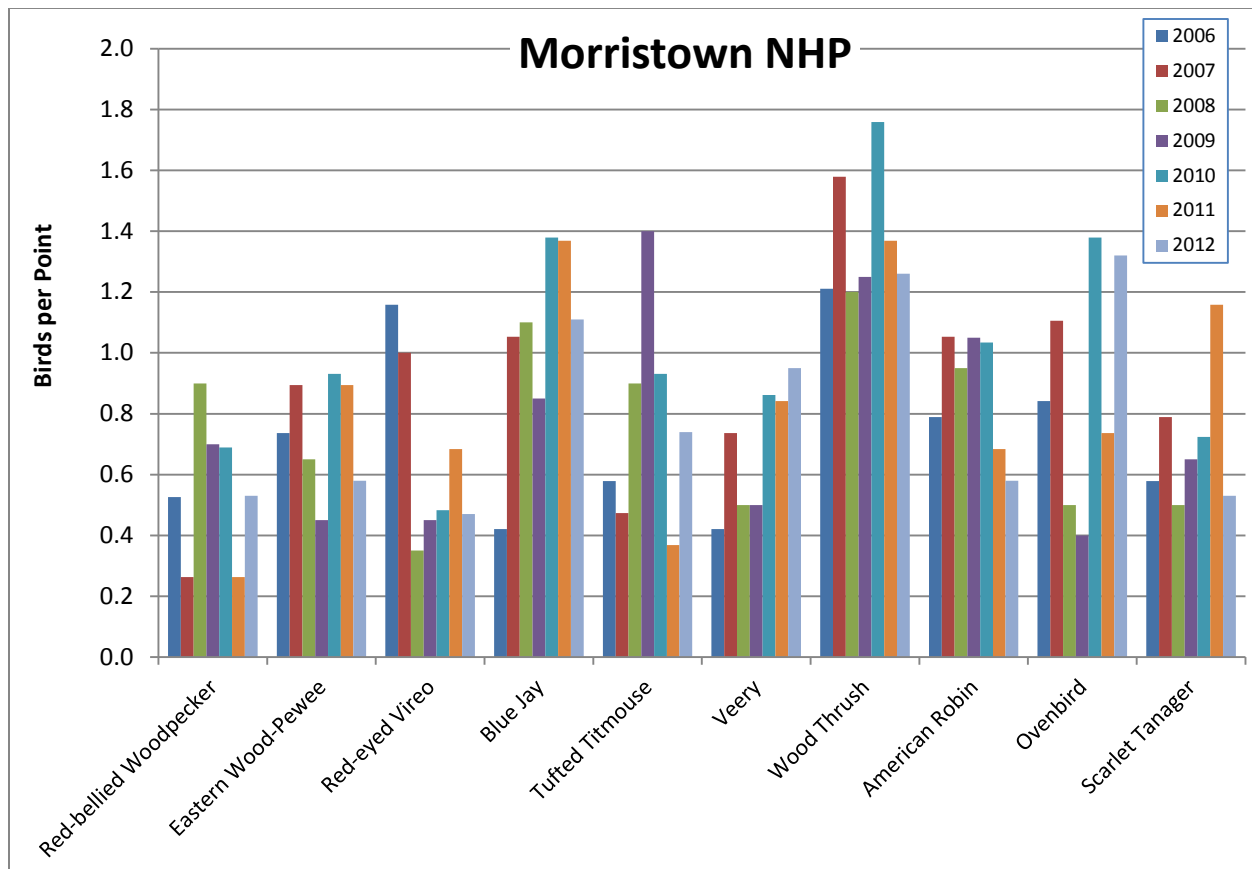


**Figure 13.** Relative abundance of the 10 most common species detected at Morristown National Historical Park, 2006-2012, for all sites combined.

**Table 10.** Park-wide Forest Avian Ecological Integrity Assessment for Morristown National Historical Park, 2006-2012.

**Morristown NHP**

**2006 to 2012**

***Integrity Element: Compositional***

| <i><b>Response Guild</b></i>   | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 8%                       | Good                 |
| Resident                       | 29%                      | Caution              |
| Single Brooded                 | 56%                      | Caution              |

***Integrity Element: Functional***

| <i><b>Response Guild</b></i> | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 12%                      | Good                 |
| Ground Gleaner               | 8%                       | Caution              |
| High Canopy Forager          | 10%                      | Caution              |
| Low Canopy Forager           | 23%                      | Good                 |
| Omnivore                     | 37%                      | Caution              |

***Integrity Element: Structural***

| <i><b>Response Guild</b></i> | <i><b>Percentage</b></i> | <i><b>Rating</b></i> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 29%                      | Sig Concern          |
| Forest-ground Nester         | 15%                      | Caution              |
| Interior Forest Obligate     | 35%                      | Caution              |
| Shrub Nester                 | 25%                      | Sig Concern          |

## **Saint-Gaudens National Historic Site (New Hampshire)**

Eight point counts (Figure 14) were established at Saint-Gaudens National Historic Site (SAGA), and surveyed annually since 2007 (Table 1). The park has been surveyed twice in all years except 2007.

During 2012 surveys, observers detected a total of 200 birds representing 37 species, including 10 species that were detected only on the repeat survey. A total of 56 species have been recorded during the 6 survey years. This number includes a Yellow-rumped Warbler detected on the second survey in 2012, and Black-throated Blue Warbler, Cedar Waxwing, Downy Woodpecker, Red-bellied Woodpecker, Solitary Sandpiper, Swamp Sparrow, and Yellow-throated Vireo detected on the second survey in previous years.

Average abundance during the first site survey was 11.08 birds per point. In 2012, relative abundance during the first survey (Appendix A) decreased from the previous year, while species richness remained the same. Of the ten most commonly detected species across all years, the relative abundances of six equaled or increased from 2011 (Figure 15), while the relative abundances of half were above the 6-year average. Five species of regional or USA/Canada conservation concern have been detected at SAGA: Belted Kingfisher, Eastern Wood-Pewee, Veery, Wood Thrush, and Scarlet Tanager; all of these species were detected in 2012. A list of species, their relative abundances, and other summary statistics from the first survey of each point are provided in Appendix A.

The park-wide forest avian ecological integrity assessment for all years combined at SAGA resulted in six categories ranked as “Good,” six ranked as “Caution,” and one “Significant Concern” (Table 11). The 2012 data did not alter the 2011 results. Overall, composition metrics were generally “Good,” while function and structural guilds were largely “Caution.” The predominance of “Caution” ratings for structure and function might warrant further exploration. This pattern tends to occur at parks without much understory structure and diversity, and is often associated with ungulate (in this case most likely white-tailed deer) over-browsing.

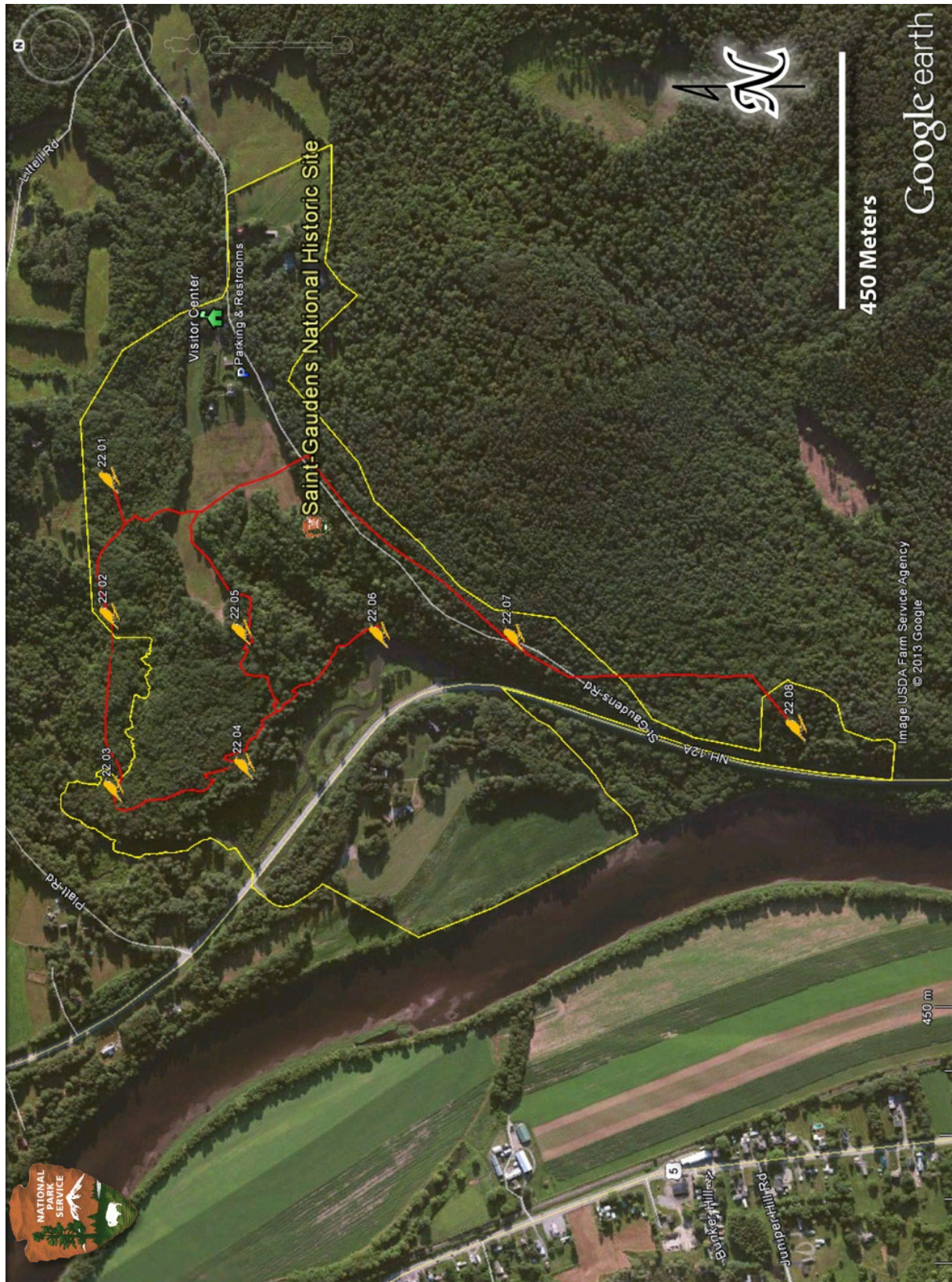


**Figure 14.** Point count stations at Saint-Gaudens National Historic Site. Red line indicates monitoring route. Google Earth image.

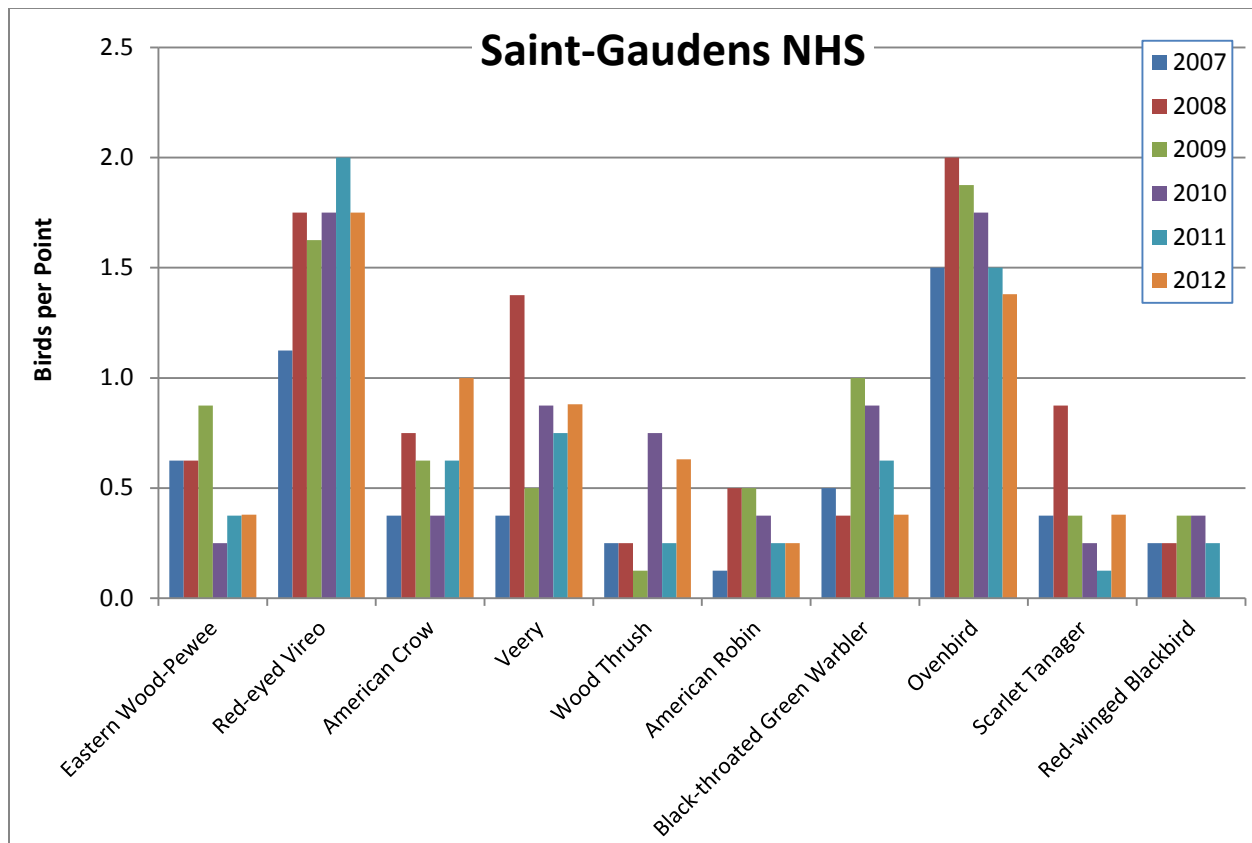


**Figure 15.** Relative abundance of the 10 most common species detected at Saint-Gaudens National Historic Site, 2007-2012.

**Table 11.** Park-wide Forest Avian Ecological Integrity Assessment for Saint-Gaudens National Historic Site, 2007-2012.

**Saint-Gaudens NHS**

**2007 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 4%                       | Good                 |
| Resident                       | 26%                      | Good                 |
| Single Brooded                 | 62%                      | Caution              |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 17%                      | Good                 |
| Ground Gleaner               | 8%                       | Caution              |
| High Canopy Forager          | 9%                       | Caution              |
| Low Canopy Forager           | 21%                      | Caution              |
| Omnivore                     | 28%                      | Good                 |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 30%                      | Caution              |
| Forest-ground Nester         | 15%                      | Caution              |
| Interior Forest Obligate     | 38%                      | Good                 |
| Shrub Nester                 | 25%                      | Sig Concern          |

## **Saugus Iron Works National Historic Site (Massachusetts)**

Three point counts were established in 2008 at Saugus Iron Works National Historic Site (SAIR) in Saugus, MA (Figure 16). A single survey of these three point counts was conducted during June 2008, while three surveys were conducted in 2009, and two in 2010, 2011, and 2012 (Table 1). Due to the limited number of point counts at SAIR, multiple visits are encouraged to increase sample size. Note that the removal of several dozen Norway maple trees from near the point count stations in spring 2011 may have been a sufficient disturbance to affect the 2011 counts.

During 2012 surveys, a total of 96 individual birds representing 30 species were detected during the two surveys (six point counts), which may include some double-counted individuals. Four species (American Crow, Black-Crowned Night Heron, Downy Woodpecker, and Northern Mockingbird) were detected only during the second survey in 2012. A total of 44 species have been detected at the park during the four years of surveys, including six that were observed only during the repeat site surveys in 2009 (Great Egret, Killdeer, and Carolina Wren), 2011 (Double-Crested Cormorant and White-Breasted Nuthatch), and 2012 (Northern Mockingbird).

Average abundance during the first site visit was 15.87 birds per point. In 2012, relative abundance for the first survey increased to 17.33 birds per point from the previous year, and species richness increased by 10 species. Of the 11 most commonly detected species across all years, the relative abundances of six equaled or increased from 2011 (Figure 17), while the relative abundances of seven species in 2012 were below the 5-year mean. Three species of regional or USA/Canada conservation concern (Chimney Swift, Eastern Kingbird, and Baltimore Oriole) and three non-native species (Rock Pigeon, European Starling, and House Sparrow) have been detected. Appendix A contains a list of the species detected, relative abundance, and other summary statistics from the first survey of each point. Mallard, Song Sparrow, and Red-winged Blackbird continue to be the most commonly detected species.

The park-wide forest avian ecological integrity assessment for all years combined at SAIR resulted in one category ranked as “Good”, three categories ranked as “Caution” and nine ranked as “Significant Concern” (Table 12). These results represent no change from the 2011 results. Overall, the scarcity of “Good” rankings is not surprising considering the heavily urbanized location of this small park, and the fact that the tool was developed to assess the breeding bird community of interior forests.

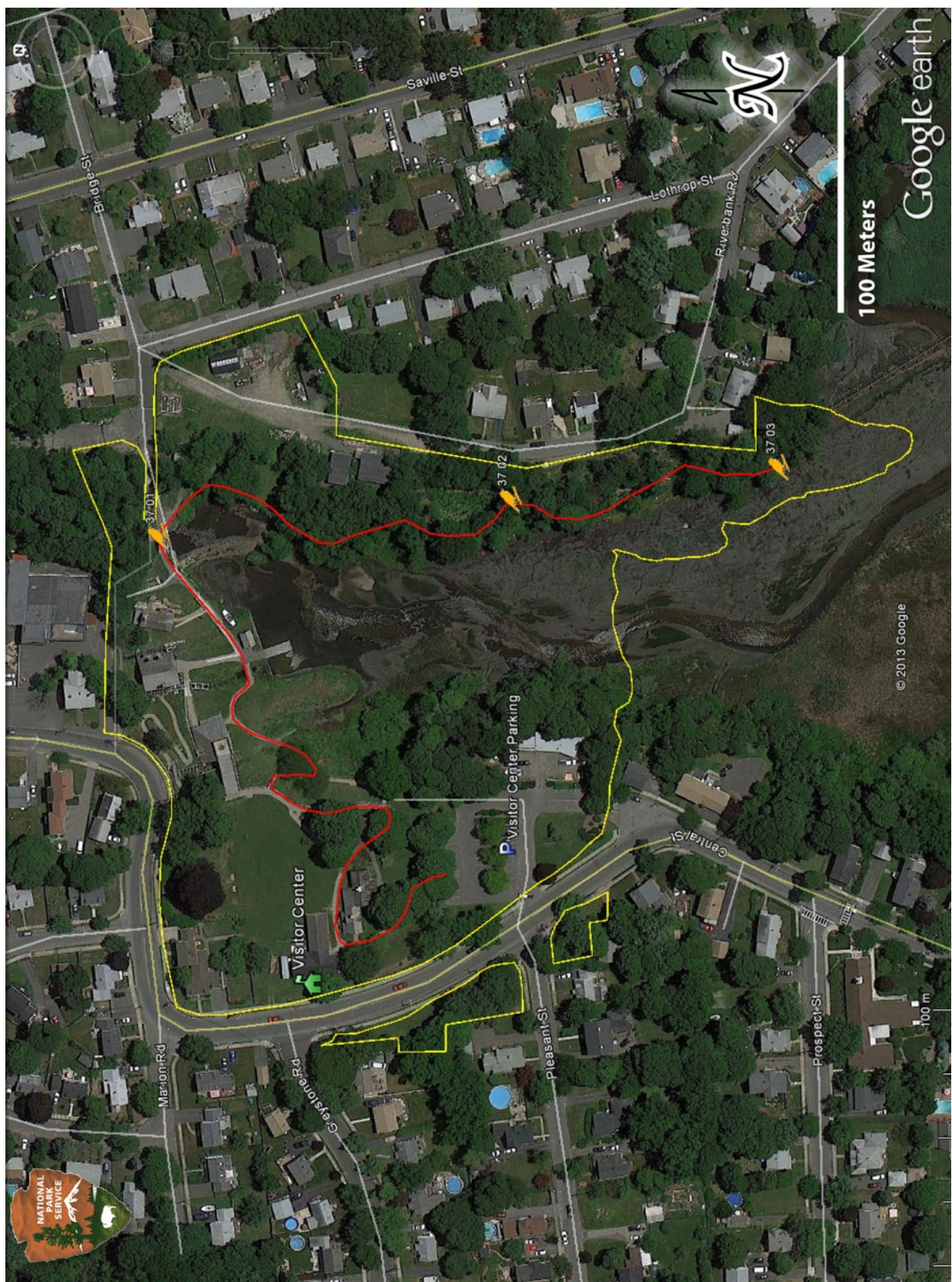


**Figure 16.** Point count stations at Saugus Iron Works National Historic Site. Red line indicates monitoring route. Google Earth image.

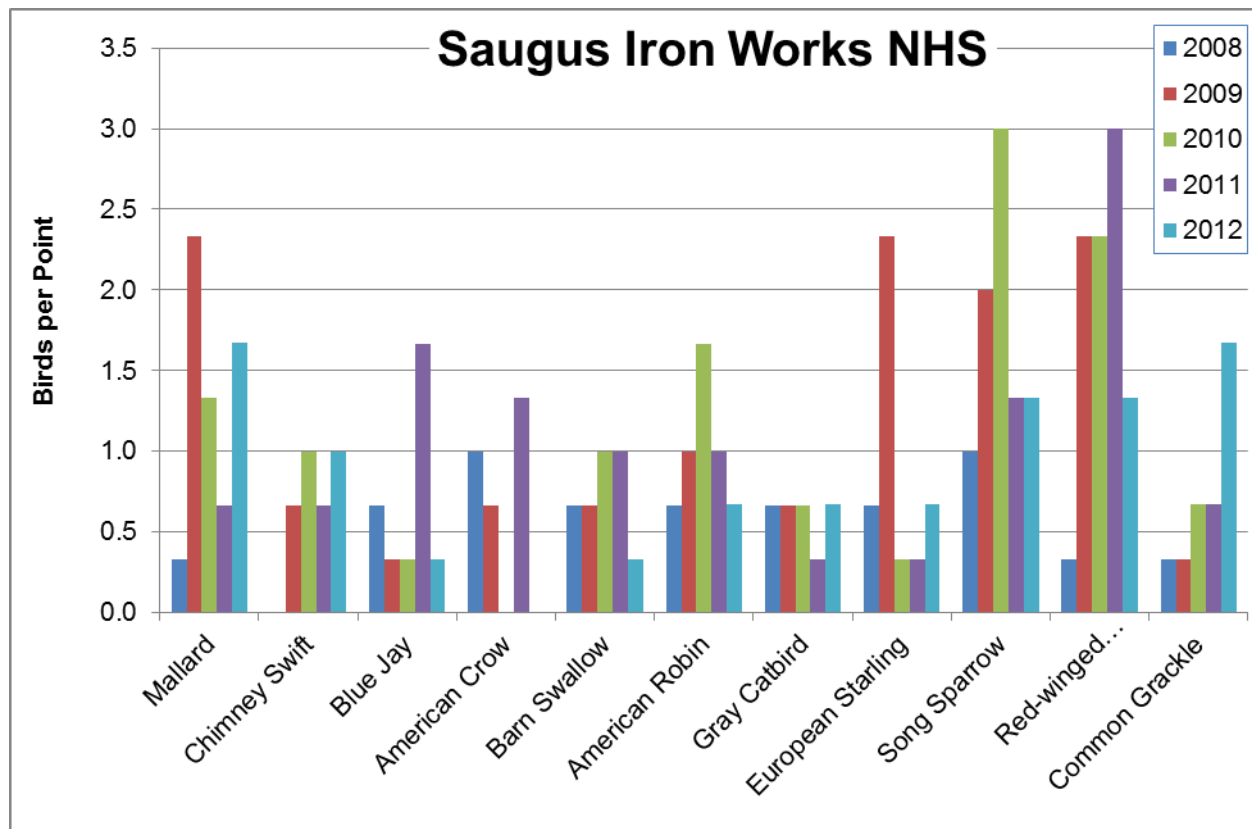


**Figure 17.** Relative abundance of the 11 most common species detected at Saugus Iron Works National Historic Site, 2008-2012.

**Table 12.** Park-wide Forest Avian Ecological Integrity Assessment for Saugus Iron Works National Historic Site, 2008-2012.

**Saugus Iron Works NHS**

**2008 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 10%                      | Sig Concern          |
| Nest Predator / Brood Parasite | 13%                      | Caution              |
| Resident                       | 45%                      | Sig Concern          |
| Single Brooded                 | 39%                      | Sig Concern          |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 6%                       | Caution              |
| Ground Gleaner               | 3%                       | Sig Concern          |
| High Canopy Forager          | 6%                       | Sig Concern          |
| Low Canopy Forager           | 23%                      | Good                 |
| Omnivore                     | 45%                      | Caution              |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 19%                      | Sig Concern          |
| Forest-ground Nester         | 0%                       | Sig Concern          |
| Interior Forest Obligate     | 3%                       | Sig Concern          |
| Shrub Nester                 | 29%                      | Sig Concern          |

## **Saratoga National Historical Park (New York)**

A total of six study sites (three grassland sites and three forest sites) consisting of 51 point count stations were established in 2006 and 2007 at Saratoga National Historical Park (SARA), and a new forest site (Northwest; eight point count stations) was established in 2011 to replace the Bemis Heights site, which was discontinued in 2011 after being deemed hazardous by park staff. Wilkinson Trail Forest (10 points), Burgoyne's Headquarters Grassland (five points), Freeman Farm Grassland (10 points), and Neilson Farm Grassland (10 points) were established in 2006, while Middle Ravine Forest (10 points) and Bemis Heights Forest (six points) were established in 2007 (Figure 18). Point count surveys were initiated in 2006 when Wilkinson Trail Forest and all three grassland sites were sampled. However, because the observer at Wilkinson Trail was unskilled at bird identification, the data from that site in 2006 were not used (previous reports had included these data). Since 2007, the first year that all six study sites were available to be surveyed, 100 percent coverage was only achieved in 2008 (Table 1). Overall, 75% of the sites have been surveyed each year at Saratoga. In 2012, five out of six sites were surveyed, although data for the Wilkinson Trail site were received too late to be included in this report.

During 2012, surveys were conducted at 33 point count stations, where observers detected a total of 849 individual birds representing 57 species, including four species that were detected for the first time during monitoring at the park (Wild Turkey, Green Heron, Blue-headed Vireo, and Northern Rough-winged Swallow). During the seven survey years a total of 4,664 individual birds representing 89 species have been detected at SARA, with a mean abundance of 21.33 birds per point (Appendix A). During 2012, relative abundance dropped slightly from 2011, while species richness increased to 57 species. Of the 10 most commonly detected species across all years, the relative abundances of half increased from 2011 (Figure 19), while the relative abundance of only two species during 2012 (American Robin and American Goldfinch) were below the 7-year mean. During 2012, six species of regional or USA/Canada conservation concern were recorded (Eastern Wood-Pewee, Veery, Wood Thrush, Blue-winged Warbler, Eastern Towhee, and Field Sparrow). A list of species, their relative abundances, and other summary statistics are provided in Appendices A and B.

The park-wide forest avian ecological integrity assessment for all years combined at SARA remained unchanged from 2011, with five categories ranked as "Good," five ranked as "Caution," and three ranked as "Significant Concern" (Table 13). With the exception of "Single Brooded" (which again earned a "Caution" rating), compositional metrics were rated "Good," while structural and functional metrics were dominated by "Caution" or "Significant Concern." These results continue to suggest that the forest bird community at SARA may be affected by the generally fragmented landscape consisting of small forest blocks broken up by fields and early successional habitats, plus effects of deer on understory vegetation structure. The forest avian ecological integrity assessment has also been calculated for each forest site, and these results are in Appendix C.

The grassland avian ecological integrity assessment resulted in three categories ranked as “Good” and three as “Caution” (Table 14). These results are not directly comparable to previous years because the threshold values of the “Edge Generalist” grassland guild were revised in 2012 due to the number of species that were added to that guild in 2011 (see Methods). In addition, this is the first year we have reported “Partner’s-in-Flight (PIF) Priority Grassland Obligate Species” and “PIF Priority Shrub-dependent Species” as “guilds” in the grassland assessment. These new metrics evaluate the proportion of grassland and shrub-dependent species detected that are listed as conservation priorities for BCR 13. Grassland communities are considered a high priority in the region, and it would be prudent for the park to continue its efforts to manage grassland habitat to support grassland species. However, because 54% of shrub-dependent birds are of high conservation concern in the region, there is also value in providing habitat for these rare and/or declining species.

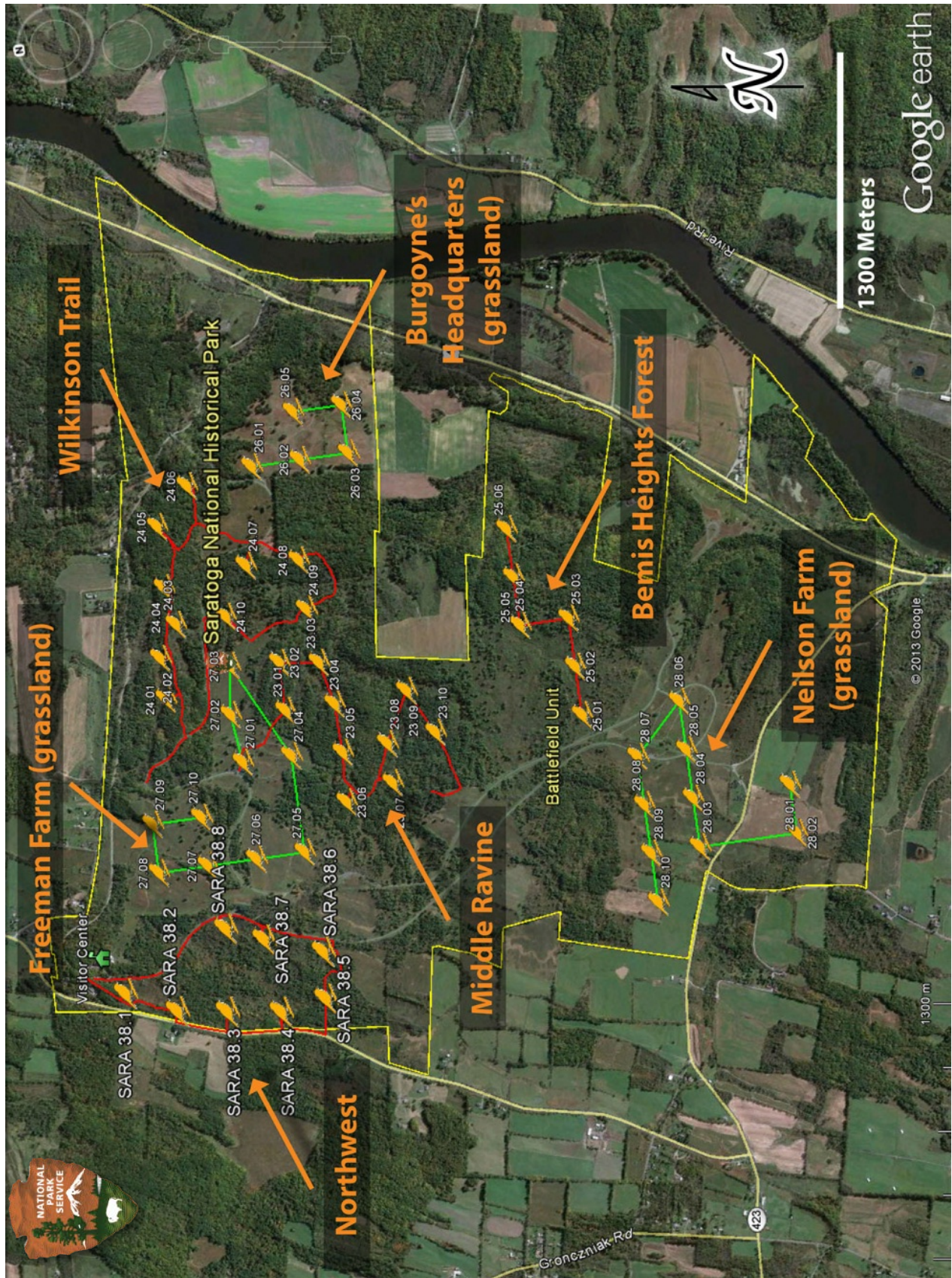


**Figure 18.** Point count stations at Saratoga National Historical Park. Red lines indicate forest monitoring routes, and green lines indicate grassland monitoring routes. Google Earth image.

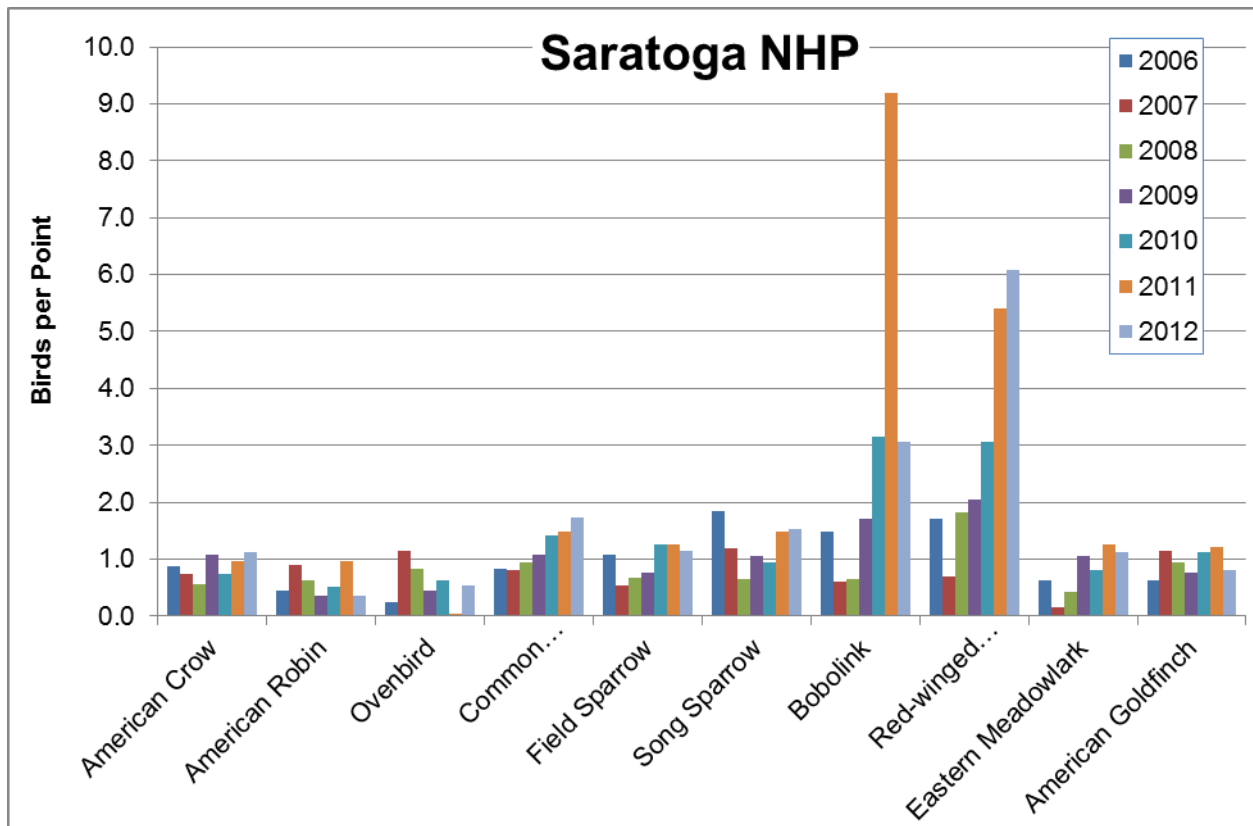


**Figure 19.** Relative abundance of the 10 most common species detected at Saratoga National Historical Park, 2006-2012, for all sites combined.

**Table 13.** Park-wide Forest Avian Ecological Integrity Assessment for forested study sites at Saratoga National Historical Park, 2006-2012.

| Saratoga NHP                            |                                | 2006 to 2012      |               |
|-----------------------------------------|--------------------------------|-------------------|---------------|
| <i>Integrity Element: Compositional</i> |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Exotic                         | 0%                | Good          |
|                                         | Nest Predator / Brood Parasite | 5%                | Good          |
|                                         | Resident                       | 25%               | Good          |
|                                         | Single Brooded                 | 53%               | Caution       |
| <i>Integrity Element: Functional</i>    |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Bark Prober                    | 13%               | Good          |
|                                         | Ground Gleaner                 | 7%                | Caution       |
|                                         | High Canopy Forager            | 7%                | Sig Concern   |
|                                         | Low Canopy Forager             | 23%               | Good          |
|                                         | Omnivore                       | 33%               | Caution       |
| <i>Integrity Element: Structural</i>    |                                |                   |               |
|                                         | <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|                                         | Canopy Nester                  | 27%               | Sig Concern   |
|                                         | Forest-ground Nester           | 12%               | Caution       |
|                                         | Interior Forest Obligate       | 27%               | Caution       |
|                                         | Shrub Nester                   | 27%               | Sig Concern   |

**Table 14.** Park-wide Grassland Avian Ecological Integrity Assessment for grassland study sites at Saratoga National Historical Park, 2006-2012.

| Saratoga NHP |                        | 2006 to 2012      |               |
|--------------|------------------------|-------------------|---------------|
|              | <i>Guild</i>           | <i>Percentage</i> | <i>Rating</i> |
|              | PIF Grassland Obligate | 75%               | Good          |
|              | PIF Shrub-dependent    | 100%              | Good          |
|              | Edge Generalist        | 68%               | Caution       |
|              | Exotic                 | 2%                | Caution       |
|              | Grassland Obligate     | 11%               | Good          |
|              | Shrub-dependent        | 21%               | Caution       |

## **Vanderbilt Mansion National Historic Site (New York)**

One study site with seven point count stations was established at Vanderbilt Mansion National Historic Site (VAMA; one of the Roosevelt-Vanderbilt National Historic Sites) and surveyed annually since 2006 (Table 1, Figure 20).

Forty-nine individual birds of 15 species were detected in 2012, including three species that were detected for the first time during monitoring at the park (Great Horned Owl, Red-winged Blackbird, and Common Grackle). In total, 37 species have been recorded, with an average abundance of 8.04 birds per point (Appendix A). In 2012, relative abundance decreased to 7.0 birds per point from 2011 (8.14 birds per point), while species richness increased. Among the 10 most commonly detected species across all years, the relative abundances of five declined from 2011 (Figure 21), and the relative abundances of four species in 2012 were at or above the 7-year average. Although three species of regional or USA/Canada conservation concern (Black-billed Cuckoo, Eastern Wood-Pewee, and Wood Thrush) have been detected during the 7-survey years, only Wood Thrush was detected in 2012. A list of species, their relative abundances, and other summary statistics are provided in Appendix A.

The park-wide forest avian ecological integrity assessment for all years combined at VAMA resulted in four categories ranked as “Good,” five ranked as “Caution,” and four ranked as “Significant Concern” (Table 15). This represents a slight decline from 2011, as “Low Canopy Foragers” dropped from “Good” to “Caution.” Once again, guilds within the structural category earned no “Good” rankings, while “Significant Concern” ratings for metrics measuring abundance of canopy and single brooded species are indicative of the park’s location within a fragmented landscape.



Figure 20. Point count stations at Vanderbilt Mansion National Historic Site. Red line indicates monitoring route. Google Earth image.

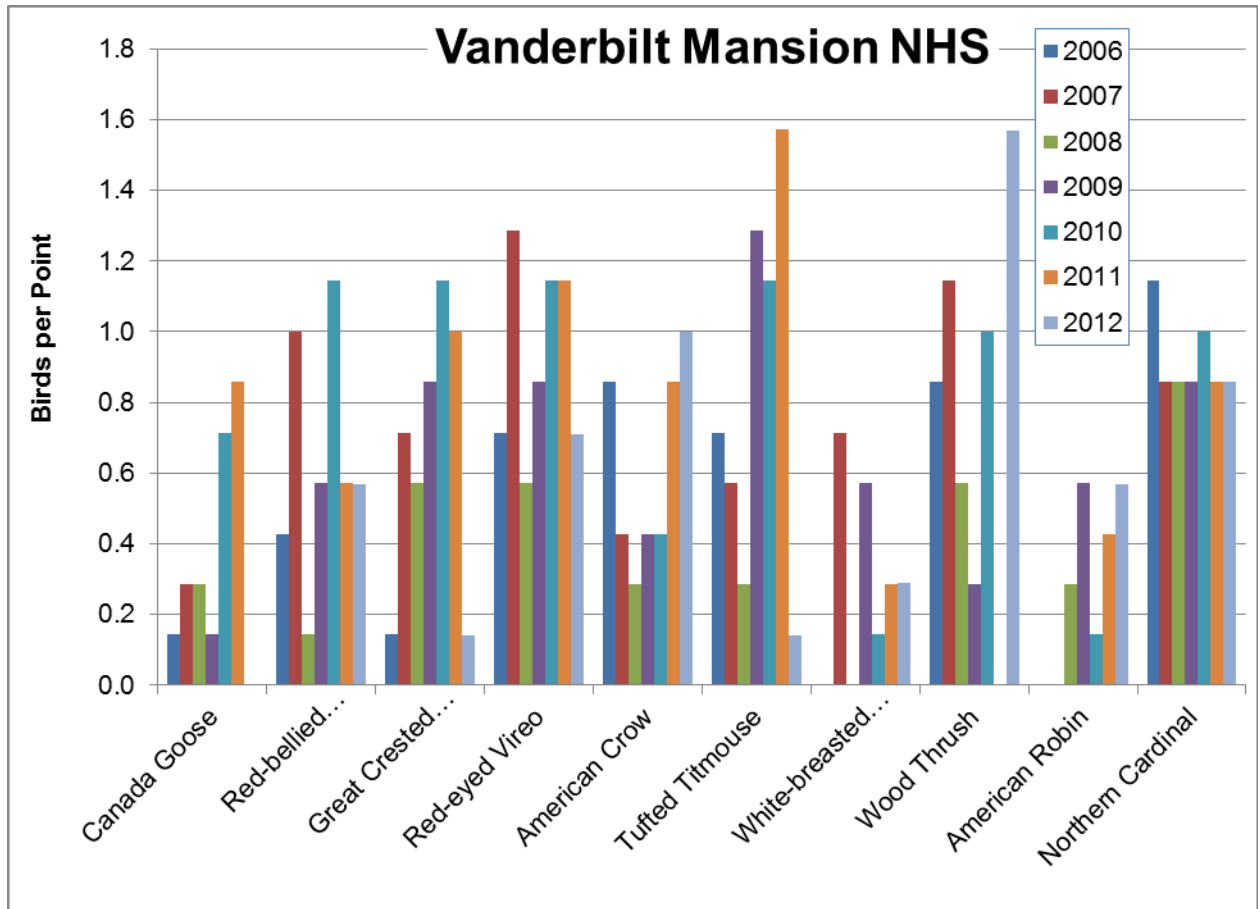


**Figure 21.** Relative abundance of the 10 most common species detected at Vanderbilt Mansion National Historic Site, 2006-2012.

**Table 15.** Park-wide Forest Avian Ecological Integrity Assessment for Vanderbilt Mansion National Historic Site, 2006-2012.

**Vanderbilt Mansion NHS**

**2006 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 9%                       | Good                 |
| Resident                       | 36%                      | Caution              |
| Single Brooded                 | 39%                      | Sig Concern          |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 15%                      | Good                 |
| Ground Gleaner               | 9%                       | Good                 |
| High Canopy Forager          | 6%                       | Sig Concern          |
| Low Canopy Forager           | 21%                      | Caution              |
| Omnivore                     | 36%                      | Caution              |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 24%                      | Sig Concern          |
| Forest-ground Nester         | 9%                       | Caution              |
| Interior Forest Obligate     | 24%                      | Caution              |
| Shrub Nester                 | 27%                      | Sig Concern          |

## **Weir Farm National Historic Site (Connecticut)**

Five point count stations were established at Weir Farm National Historic Site in 2006 (Figure 22). Two annual surveys have been conducted in 2006, 2009, 2010, and 2012 (Table 1). In 2012, a new volunteer assumed responsibilities to survey Weir Farm.

A total of 79 individual birds of 21 species were detected in 2012, including two species that were detected for the first time during monitoring at the park (Hairy Woodpecker and Yellow Warbler) and three species that were only detected on the second survey (Black-capped Chickadee, Common Grackle, and Mourning Dove). In total, 40 species have been recorded (including five that were only detected on repeat surveys: Black-throated Green Warbler, Common Yellowthroat, Eastern Bluebird, Louisiana Waterthrush, and Yellow-billed Cuckoo), with an average abundance of 7.70 birds per point (Appendix A). In 2012, relative abundance decreased to 7.60 birds per point from 2010 (10.6 birds per point), and species richness decreased by one. Among the 10 most commonly detected species across all years, the relative abundances of three increased from 2010 (Figure 23), and the relative abundances of half were above the 4-year average. Although five species of USA/Canada conservation concern (Eastern Wood-Pewee, Yellow-throated Vireo, Wood Thrush, Scarlet Tanager, and Baltimore Oriole) have been detected during the 4-survey years, only Eastern Wood-Pewee and Wood Thrush were detected in 2012. A list of species, their relative abundances, and other summary statistics are provided in Appendix A.

The park-wide forest avian ecological integrity assessment for all years combined at WEFA resulted in four categories ranked as “Good,” six ranked as “Caution,” and three ranked as “Significant Concern” (Table 16). This represents no change from the 2010 assessment. Once again, guilds within the structural category earned no “Good” rankings, while “Significant Concern” ratings reflected low abundance of canopy and single brooded species, and high abundance of shrub nesting species, indicative of the park’s location within a suburban, fragmented landscape.

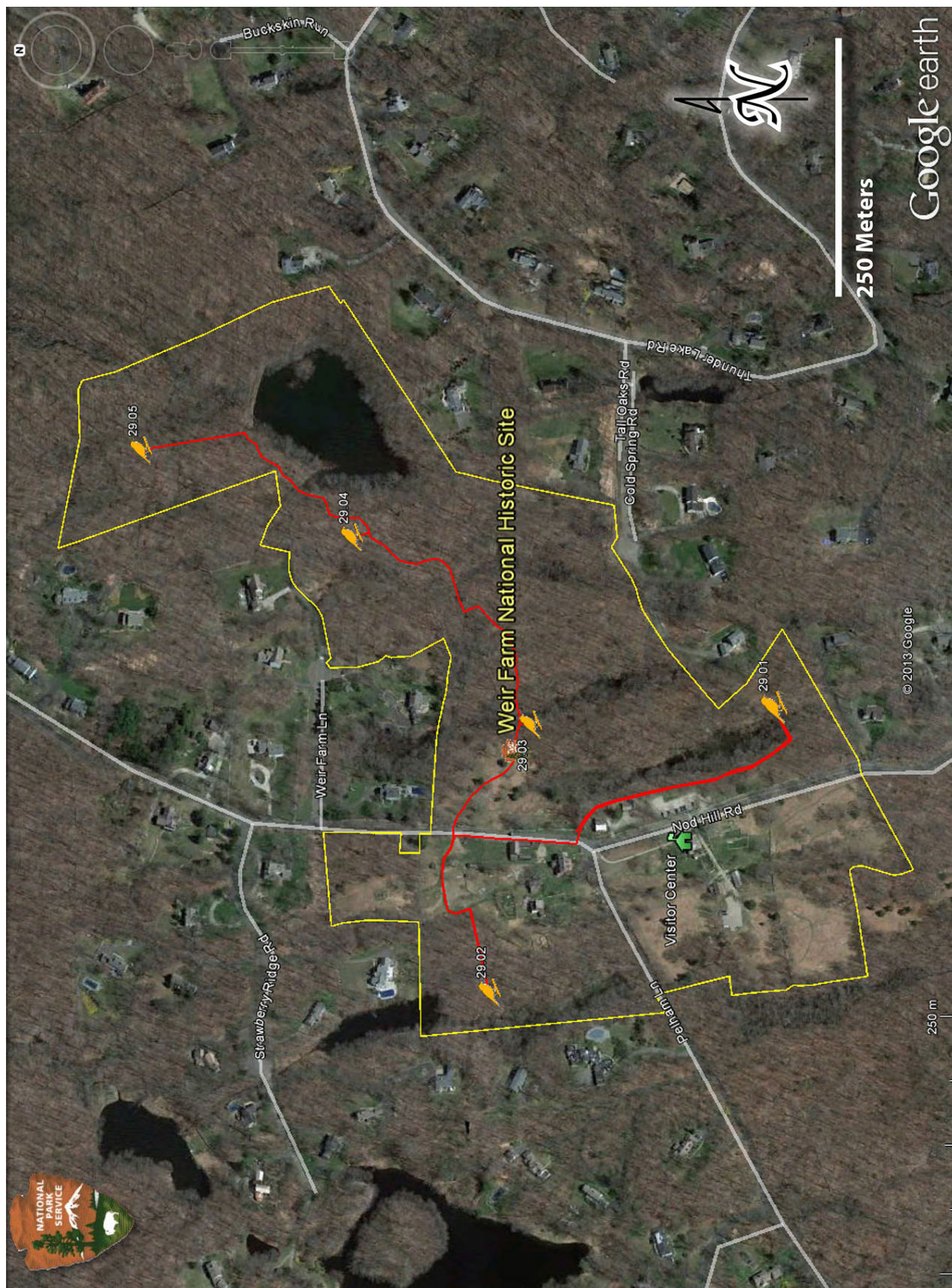


**Figure 22.** Point count stations at Weir Farm National Historic Site. Red line indicates monitoring route. Google Earth image.

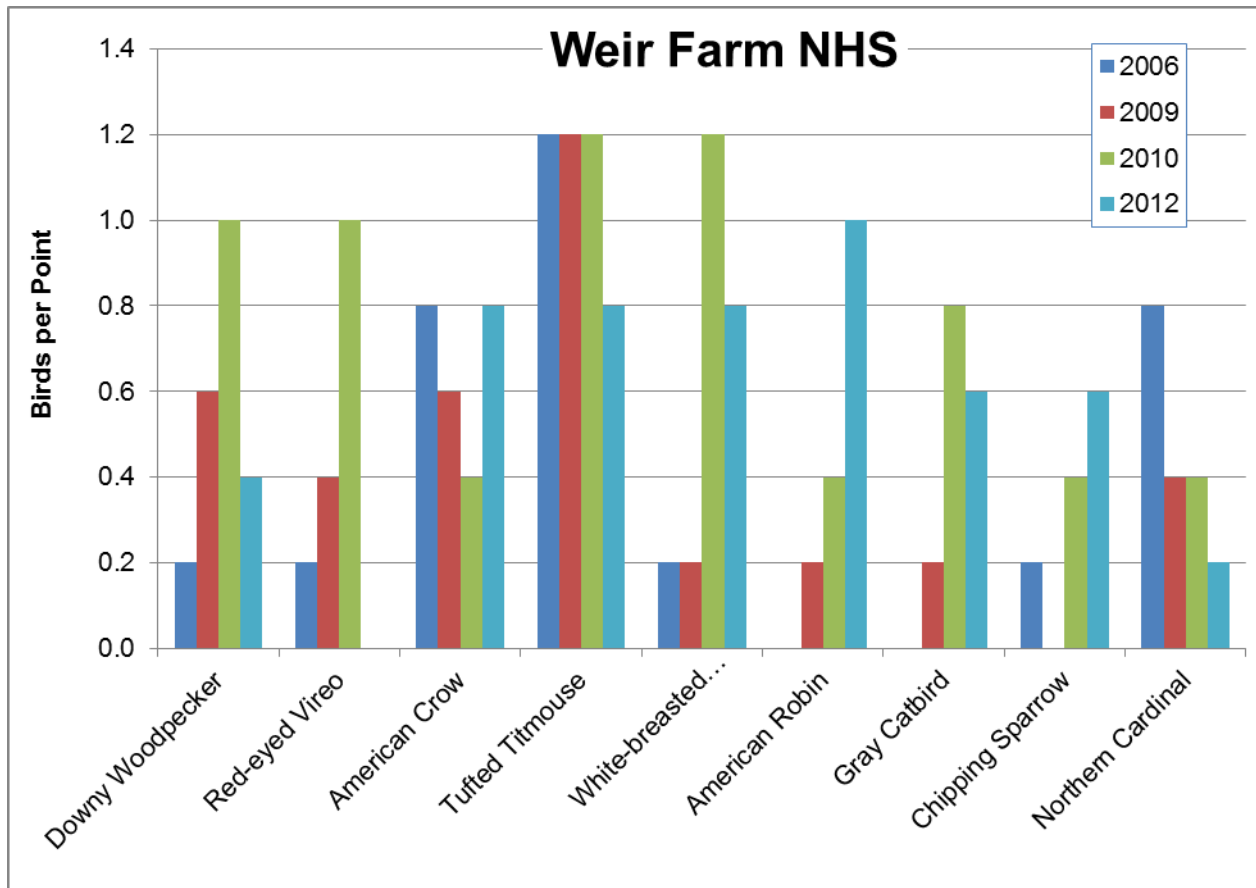


**Figure 23.** Relative abundance of the most common species detected at Weir Farm National Historic Site, 2006, 2009, 2010, and 2012.

**Table 16.** Forest Avian Ecological Integrity Assessment for Weir Farm National Historic Site, 2006-2012.

**Weir Farm NHS**

**2006 to 2012**

***Integrity Element: Compositional***

| <b><i>Response Guild</i></b>   | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|--------------------------------|--------------------------|----------------------|
| Exotic                         | 0%                       | Good                 |
| Nest Predator / Brood Parasite | 5%                       | Good                 |
| Resident                       | 32%                      | Caution              |
| Single Brooded                 | 47%                      | Sig Concern          |

***Integrity Element: Functional***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Bark Prober                  | 11%                      | Caution              |
| Ground Gleaner               | 5%                       | Caution              |
| High Canopy Forager          | 13%                      | Good                 |
| Low Canopy Forager           | 26%                      | Good                 |
| Omnivore                     | 34%                      | Caution              |

***Integrity Element: Structural***

| <b><i>Response Guild</i></b> | <b><i>Percentage</i></b> | <b><i>Rating</i></b> |
|------------------------------|--------------------------|----------------------|
| Canopy Nester                | 26%                      | Sig Concern          |
| Forest-ground Nester         | 5%                       | Caution              |
| Interior Forest Obligate     | 21%                      | Caution              |
| Shrub Nester                 | 32%                      | Sig Concern          |

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## Appendix A—Park Summaries

This appendix contains a list of species detected during monitoring activities in each park, and the relative abundance (birds per point count station) of each species for each year. It only includes data for the first survey of each point count station in a given year, in order to promote consistent comparisons between years and to avoid artificially inflating abundances due to counting the same individuals in repeat visits. Species in boldface are Partners in Flight (PIF) priority species, and species in italics are the 10 most common species for each park. There will occasionally be more than 10 italicized species, if multiple species have the same abundance.

Beginning with this report, we have included the PIF Priority Species codes. If these tables are compared with those from previous years, you will note an increase in the number of PIF Priority species designated for each park. This is due to the fact that we are now including “stewardship” species, in addition to those of regional or USA/Canada concern, as well as relatively common species that are exhibiting significant population declines. For more information about the PIF Species Assessment, go to <http://pif.rmbo.org/>.

This appendix also lists the number of point count stations surveyed per park each year, the number of birds detected per point count, the species richness, and the Shannon diversity index for each park for each year.

# Appendix A. Park Summaries (continued).

## Acadia NP

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Ruffed Grouse</b>                      | <b>CBSD</b>      |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.05        | 0.04        | 0.01        |
| Spruce Grouse                             |                  |             | 0.00        | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.01        |
| Common Loon                               |                  |             | 0.00        | 0.04        | 0.03        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Broad-winged Hawk</b>                  | <b>RS UCS</b>    |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.01        |
| Herring Gull                              |                  |             | 0.04        | 0.00        | 0.00        | 0.05        | 0.07        | 0.00        | 0.03        |
| <i>Mourning Dove</i>                      |                  |             | 0.68        | 0.61        | 0.33        | 0.11        | 0.26        | 0.21        | 0.37        |
| Barred Owl                                |                  |             | 0.00        | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.01        |
| Ruby-throated Hummingbird                 |                  |             | 0.00        | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.01        |
| Downy Woodpecker                          |                  |             | 0.00        | 0.00        | 0.05        | 0.16        | 0.02        | 0.00        | 0.04        |
| <b>Hairy Woodpecker</b>                   | <b>UCS</b>       |             | 0.21        | 0.00        | 0.10        | 0.37        | 0.05        | 0.18        | 0.15        |
| Northern Flicker (Yellow-shafted Flicker) |                  |             | 0.00        | 0.00        | 0.03        | 0.00        | 0.07        | 0.04        | 0.02        |
| Pileated Woodpecker                       |                  |             | 0.18        | 0.09        | 0.03        | 0.11        | 0.10        | 0.07        | 0.09        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        |             | 0.00        | 0.00        | 0.15        | 0.00        | 0.02        | 0.00        | 0.03        |
| Yellow-bellied Flycatcher                 |                  |             | 0.00        | 0.00        | 0.00        | 0.26        | 0.07        | 0.04        | 0.06        |
| Alder Flycatcher                          |                  |             | 0.04        | 0.00        | 0.00        | 0.00        | 0.02        | 0.04        | 0.02        |
| Least Flycatcher                          |                  |             | 0.14        | 0.09        | 0.15        | 0.16        | 0.00        | 0.04        | 0.10        |
| Eastern Phoebe                            |                  |             | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.00        | 0.01        |
| Great Crested Flycatcher                  |                  |             | 0.04        | 0.00        | 0.21        | 0.00        | 0.05        | 0.00        | 0.05        |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       |             | 0.36        | 0.61        | 0.41        | 0.26        | 0.29        | 0.29        | 0.37        |
| Warbling Vireo                            |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        | 0.00        | 0.00        |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       |             | 0.00        | 0.04        | 0.38        | 0.26        | 0.05        | 0.18        | 0.15        |
| Blue Jay                                  |                  |             | 0.18        | 0.17        | 0.44        | 0.11        | 0.05        | 0.11        | 0.17        |
| <i>American Crow</i>                      |                  |             | 0.39        | 0.48        | 0.23        | 0.84        | 0.26        | 0.11        | 0.39        |
| Common Raven                              |                  |             | 0.32        | 0.09        | 0.23        | 0.26        | 0.14        | 0.07        | 0.19        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       |             | 0.18        | 0.35        | 0.69        | 0.21        | 0.21        | 0.11        | 0.29        |
| <b>Boreal Chickadee</b>                   | <b>CBSD RC</b>   |             | 0.21        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Acadia NP

| <i>Common Name</i>                            | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Red-breasted Nuthatch</i>                  |                  | 0.54        | 0.26        | 0.26        | 0.28        | 0.89        | 0.31        | 0.57        | 0.48        |
| <i>Brown Creeper</i>                          |                  | 0.07        | 0.35        | 0.35        | 0.15        | 0.37        | 0.07        | 0.21        | 0.20        |
| <b>Winter Wren</b>                            | UCS              | 0.25        | 0.22        | 0.22        | 0.03        | 0.68        | 0.36        | 0.04        | 0.26        |
| <i>Golden-crowned Kinglet</i>                 |                  | 0.36        | 0.83        | 0.83        | 0.28        | 0.53        | 0.36        | 0.21        | 0.43        |
| <i>Ruby-crowned Kinglet</i>                   |                  | 0.07        | 0.00        | 0.00        | 0.00        | 0.05        | 0.02        | 0.00        | 0.02        |
| <b>Veery</b>                                  | RC RS UCS        | 0.00        | 0.00        | 0.00        | 0.03        | 0.05        | 0.02        | 0.00        | 0.02        |
| <i>Swainson's Thrush</i>                      |                  | 0.14        | 0.04        | 0.04        | 0.03        | 0.16        | 0.33        | 0.36        | 0.18        |
| <i>Hermit Thrush</i>                          |                  | 0.39        | 0.04        | 0.04        | 1.00        | 0.37        | 0.21        | 0.50        | 0.42        |
| <b>Wood Thrush</b>                            | RC UCC           | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <i>American Robin</i>                         |                  | 0.50        | 0.30        | 0.30        | 0.28        | 0.16        | 0.14        | 0.21        | 0.27        |
| <b>Brown Thrasher</b>                         | RC               | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Cedar Waxwing</b>                          | UCS              | 0.11        | 0.04        | 0.04        | 0.10        | 0.00        | 0.05        | 0.00        | 0.05        |
| <i>Nashville Warbler</i>                      |                  | 0.00        | 0.00        | 0.00        | 0.03        | 0.11        | 0.12        | 0.07        | 0.05        |
| <b>Northern Parula</b>                        | UCS              | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <i>Chestnut-sided Warbler</i>                 |                  | 0.07        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Magnolia Warbler</b>                       | UCS              | 0.14        | 0.17        | 0.17        | 0.00        | 0.37        | 0.19        | 0.11        | 0.16        |
| <b>Black-throated Blue Warbler</b>            | RS UCS           | 0.07        | 0.30        | 0.30        | 0.31        | 0.00        | 0.07        | 0.07        | 0.14        |
| <i>Yellow-rumped Warbler (Myrtle Warbler)</i> |                  | 0.14        | 0.30        | 0.30        | 0.59        | 0.47        | 0.36        | 0.14        | 0.34        |
| <b>Black-throated Green Warbler</b>           | RS UCS           | 1.75        | 1.87        | 1.87        | 1.49        | 2.05        | 1.19        | 1.43        | 1.63        |
| <b>Blackburnian Warbler</b>                   | RS UCS           | 0.25        | 0.39        | 0.39        | 0.18        | 0.11        | 0.10        | 0.18        | 0.20        |
| <i>Pine Warbler</i>                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.05        | 0.00        | 0.11        | 0.03        |
| <i>Palm Warbler</i>                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        | 0.00        | 0.00        |
| <i>Blackpoll Warbler</i>                      |                  | 0.00        | 0.04        | 0.04        | 0.00        | 0.00        | 0.02        | 0.00        | 0.01        |
| <b>Black-and-white Warbler</b>                | RS UCS           | 0.14        | 0.04        | 0.04        | 0.28        | 0.00        | 0.31        | 0.11        | 0.15        |
| <b>American Redstart</b>                      | RS UCS           | 0.00        | 0.00        | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.01        |
| <b>Ovenbird</b>                               | UCS              | 0.71        | 1.43        | 1.43        | 1.41        | 0.47        | 0.79        | 0.75        | 0.93        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Acadia NP

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Common Yellowthroat                                       | UCS              |             | 0.00        | 0.04        | 0.00        | 0.00        | 0.07        | 0.07        | 0.03        |
| Scarlet Tanager                                           | RC               |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.01        |
| Eastern Towhee                                            |                  |             | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Song Sparrow                                              | UCS              |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        | 0.01        |
| Swamp Sparrow                                             |                  |             | 0.00        | 0.00        | 0.05        | 0.00        | 0.00        | 0.07        | 0.02        |
| White-throated Sparrow                                    |                  |             | 0.00        | 0.00        | 0.00        | 0.21        | 0.05        | 0.04        | 0.05        |
| Dark-eyed Junco (Slate-colored Junco)                     |                  |             | 0.25        | 0.17        | 0.33        | 0.79        | 0.17        | 0.32        | 0.34        |
| Northern Cardinal                                         |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        | 0.00        | 0.00        |
| Rose-breasted Grosbeak                                    |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.01        |
| Red-winged Blackbird                                      |                  |             | 0.04        | 0.09        | 0.03        | 0.00        | 0.02        | 0.04        | 0.03        |
| Common Grackle                                            |                  |             | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Baltimore Oriole                                          |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        | 0.00        | 0.00        |
| Purple Finch                                              | RS UCS           |             | 0.18        | 0.13        | 0.13        | 0.21        | 0.05        | 0.04        | 0.12        |
| White-winged Crossbill                                    |                  |             | 0.00        | 0.00        | 0.00        | 0.16        | 0.00        | 0.04        | 0.03        |
| Pine Siskin                                               | CBSD             |             | 0.29        | 0.65        | 0.05        | 0.05        | 0.02        | 0.04        | 0.18        |
| American Goldfinch                                        |                  |             | 0.00        | 0.00        | 0.05        | 0.00        | 0.05        | 0.11        | 0.03        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             | 28          | 23          | 39          | 19          | 42          | 28          |             |
| <i>Species Richness:</i>                                  |                  |             | 9.61        | 10.30       | 10.62       | 11.68       | 7.33        | 7.50        | 9.51        |
| <i>Shannon Diversity:</i>                                 |                  |             | 39          | 31          | 38          | 38          | 47          | 43          | 68          |
|                                                           |                  |             | 3.18        | 2.89        | 3.07        | 3.16        | 3.26        | 3.17        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Eleanor Roosevelt NHS*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                           |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |
| Canada Goose                              |                  | 0.00                                                      | 0.00        | 0.00        | 0.09        | 0.18        | 0.09        | 0.00        | 0.05        |
| Wood Duck                                 |                  | 0.00                                                      | 0.00        | 0.00        | 0.09        | 0.00        | 0.00        | 0.00        | 0.01        |
| Wild Turkey                               |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.00        | 0.01        |
| Cooper's Hawk                             |                  | 0.00                                                      | 0.09        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Red-shouldered Hawk                       |                  | 0.00                                                      | 0.00        | 0.00        | 0.18        | 0.09        | 0.00        | 0.27        | 0.08        |
| Red-tailed Hawk                           |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.09        | 0.00        | 0.00        | 0.01        |
| Mourning Dove                             |                  | 0.00                                                      | 0.27        | 0.00        | 0.27        | 0.45        | 0.36        | 0.55        | 0.27        |
| <b>Yellow-billed Cuckoo</b>               | <b>CBSD</b>      | <b>0.17</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| Barred Owl                                |                  | 0.00                                                      | 0.09        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Chimney Swift</b>                      | <b>CBSD</b>      | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.09</b> | <b>0.00</b> | <b>0.01</b> |
| Ruby-throated Hummingbird                 |                  | 0.00                                                      | 0.00        | 0.09        | 0.00        | 0.00        | 0.09        | 0.09        | 0.04        |
| <i>Red-bellied Woodpecker</i>             |                  | 0.83                                                      | 0.55        | 0.36        | 0.18        | 0.91        | 0.73        | 0.73        | 0.61        |
| Downy Woodpecker                          |                  | 0.33                                                      | 0.00        | 0.18        | 0.45        | 0.00        | 0.18        | 0.64        | 0.26        |
| Hairy Woodpecker                          |                  | 0.33                                                      | 0.18        | 0.36        | 0.00        | 0.00        | 0.27        | 0.09        | 0.18        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.00                                                      | 0.00        | 0.18        | 0.00        | 0.00        | 0.09        | 0.09        | 0.05        |
| Pileated Woodpecker                       |                  | 0.17                                                      | 0.09        | 0.27        | 0.00        | 0.18        | 0.27        | 0.36        | 0.19        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        | <b>0.00</b>                                               | <b>0.27</b> | <b>0.09</b> | <b>0.36</b> | <b>0.09</b> | <b>0.82</b> | <b>0.91</b> | <b>0.36</b> |
| Eastern Phoebe                            |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.01        |
| Great Crested Flycatcher                  |                  | 0.00                                                      | 0.09        | 0.09        | 0.27        | 0.55        | 0.36        | 0.36        | 0.25        |
| Yellow-throated Vireo                     |                  | 0.17                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.18        | 0.00        | 0.05        |
| <i>Red-eyed Vireo</i>                     |                  | 1.17                                                      | 0.91        | 0.64        | 1.00        | 0.73        | 0.64        | 0.64        | 0.82        |
| <i>Blue Jay</i>                           |                  | 0.33                                                      | 0.27        | 0.27        | 0.27        | 0.36        | 0.64        | 0.55        | 0.39        |
| <i>American Crow</i>                      |                  | 0.83                                                      | 0.45        | 0.36        | 0.82        | 0.55        | 0.45        | 0.36        | 0.55        |
| Black-capped Chickadee                    |                  | 0.00                                                      | 0.00        | 0.09        | 0.09        | 0.00        | 0.36        | 0.27        | 0.12        |
| <i>Tufted Titmouse</i>                    |                  | 0.50                                                      | 1.27        | 0.27        | 0.64        | 0.73        | 1.00        | 0.55        | 0.71        |
| <i>White-breasted Nuthatch</i>            |                  | 0.17                                                      | 0.45        | 0.82        | 0.18        | 0.36        | 0.55        | 0.45        | 0.43        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Eleanor Roosevelt NHS*

| <i>Common Name</i>        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|---------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                           |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |
| Brown Creeper             |                  | 0.00                                                      | 0.09        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Carolina Wren             |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.09        | 0.18        | 0.00        | 0.04        |
| Eastern Bluebird          |                  | 0.00                                                      | 0.00        | 0.00        | 0.09        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Veery</b>              | <b>RC</b>        | <b>0.50</b>                                               | <b>0.27</b> | <b>0.27</b> | <b>0.09</b> | <b>0.18</b> | <b>0.09</b> | <b>0.00</b> | <b>0.20</b> |
| <b>Wood Thrush</b>        | <b>RC UCC</b>    | <b>1.83</b>                                               | <b>1.27</b> | <b>0.55</b> | <b>0.82</b> | <b>1.00</b> | <b>0.45</b> | <b>0.55</b> | <b>0.92</b> |
| <i>American Robin</i>     |                  | 0.67                                                      | 0.73        | 0.73        | 0.45        | 0.45        | 0.27        | 0.55        | 0.55        |
| Gray Catbird              |                  | 0.17                                                      | 0.36        | 0.36        | 0.18        | 0.18        | 0.27        | 1.09        | 0.37        |
| Northern Mockingbird      |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.00        | 0.01        |
| <b>Cedar Waxwing</b>      | <b>UCS</b>       | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.18</b> | <b>0.09</b> | <b>0.04</b> |
| <b>Prairie Warbler</b>    | <b>CBSD UCC</b>  | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.27</b> | <b>0.55</b> | <b>0.12</b> |
| Black-and-white Warbler   |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.00        | 0.01        |
| Worm-eating Warbler       |                  | 0.33                                                      | 0.09        | 0.00        | 0.18        | 0.00        | 0.09        | 0.18        | 0.13        |
| <i>Ovenbird</i>           |                  | 0.50                                                      | 0.36        | 0.45        | 0.27        | 0.45        | 0.27        | 1.00        | 0.47        |
| Louisiana Waterthrush     |                  | 0.00                                                      | 0.00        | 0.00        | 0.09        | 0.00        | 0.09        | 0.09        | 0.04        |
| Common Yellowthroat       |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.18        | 0.03        |
| Scarlet Tanager           |                  | 1.00                                                      | 0.09        | 0.36        | 0.27        | 0.09        | 0.45        | 0.27        | 0.36        |
| Chipping Sparrow          |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.18        | 0.03        |
| <b>Song Sparrow</b>       | <b>UCS</b>       | <b>0.00</b>                                               | <b>0.09</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.18</b> | <b>0.09</b> | <b>0.05</b> |
| <i>Northern Cardinal</i>  |                  | 0.50                                                      | 1.09        | 0.45        | 1.00        | 0.64        | 0.27        | 0.55        | 0.64        |
| Rose-breasted Grosbeak    |                  | 0.00                                                      | 0.36        | 0.00        | 0.00        | 0.00        | 0.36        | 0.09        | 0.12        |
| Indigo Bunting            |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.18        | 0.18        | 0.05        |
| Red-winged Blackbird      |                  | 0.00                                                      | 0.18        | 0.00        | 0.09        | 0.09        | 0.09        | 0.09        | 0.08        |
| Common Grackle            |                  | 0.00                                                      | 0.09        | 0.00        | 0.00        | 0.00        | 0.09        | 0.00        | 0.03        |
| Brown-headed Cowbird      |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.01        |
| <b>Baltimore Oriole</b>   | <b>RC RS UCS</b> | <b>0.00</b>                                               | <b>0.09</b> | <b>0.09</b> | <b>0.00</b> | <b>0.00</b> | <b>0.09</b> | <b>0.00</b> | <b>0.04</b> |
| <b>American Goldfinch</b> | <b>UCS</b>       | <b>0.00</b>                                               | <b>0.09</b> | <b>0.09</b> | <b>0.00</b> | <b>0.00</b> | <b>0.36</b> | <b>0.36</b> | <b>0.13</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix A. Park Summaries (continued).**

***Eleanor Roosevelt NHS***

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |       |      |      |      |       |       |  |  |  | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------|------|------|------|-------|-------|--|--|--|-------------|
|                                             |                  | 2006                                                      | 2007  | 2008 | 2009 | 2010 | 2011  | 2012  |  |  |  |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  | 6                                                         | 11    | 11   | 11   | 11   | 11    | 11    |  |  |  |             |
|                                             |                  | 10.50                                                     | 10.27 | 7.45 | 8.45 | 8.45 | 11.73 | 13.18 |  |  |  | 10.01       |
| <i>Species Richness:</i>                    |                  | 19                                                        | 28    | 23   | 25   | 22   | 40    | 35    |  |  |  | 52          |
| <i>Shannon Diversity:</i>                   |                  | 2.70                                                      | 2.93  | 2.94 | 2.91 | 2.83 | 3.43  | 3.29  |  |  |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Home of Franklin D. Roosevelt NHS*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |      |             |             |             | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|------|-------------|-------------|-------------|-------------|
|                                           |                  | 2006                                                      | 2007        | 2008        | 2009 | 2010        | 2011        | 2012        |             |
| Canada Goose                              |                  | 0.00                                                      | 0.08        | 0.00        |      | 0.17        | 0.00        | 0.00        | 0.04        |
| Mute Swan                                 |                  | 0.00                                                      | 0.00        | 0.08        |      | 0.00        | 0.00        | 0.00        | 0.01        |
| Wild Turkey                               |                  | 0.08                                                      | 0.08        | 0.00        |      | 0.00        | 0.00        | 0.00        | 0.03        |
| Red-tailed Hawk                           |                  | 0.00                                                      | 0.08        | 0.00        |      | 0.00        | 0.00        | 0.00        | 0.01        |
| <i>Mourning Dove</i>                      |                  | 0.08                                                      | 0.33        | 0.50        |      | 0.50        | 0.42        | 0.58        | 0.40        |
| <b>Yellow-billed Cuckoo</b>               | <b>CBSD</b>      | <b>0.00</b>                                               | <b>0.08</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.01</b> |
| Barred Owl                                |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.00        | 0.08        | 0.00        | 0.01        |
| <i>Red-bellied Woodpecker</i>             |                  | 0.25                                                      | 0.58        | 0.50        |      | 0.50        | 0.42        | 0.58        | 0.47        |
| Downy Woodpecker                          |                  | 0.17                                                      | 0.17        | 0.17        |      | 0.00        | 0.17        | 0.17        | 0.14        |
| Hairy Woodpecker                          |                  | 0.08                                                      | 0.00        | 0.00        |      | 0.08        | 0.08        | 0.00        | 0.04        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.25                                                      | 0.00        | 0.25        |      | 0.08        | 0.00        | 0.08        | 0.11        |
| Pileated Woodpecker                       |                  | 0.00                                                      | 0.25        | 0.08        |      | 0.08        | 0.25        | 0.00        | 0.11        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        | <b>0.17</b>                                               | <b>0.17</b> | <b>0.17</b> |      | <b>0.33</b> | <b>0.17</b> | <b>0.00</b> | <b>0.17</b> |
| <b>Least Flycatcher</b>                   | <b>RC</b>        | <b>0.00</b>                                               | <b>0.08</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.01</b> |
| Great Crested Flycatcher                  |                  | 0.25                                                      | 0.33        | 0.00        |      | 0.58        | 0.25        | 0.17        | 0.26        |
| Yellow-throated Vireo                     |                  | 0.00                                                      | 0.00        | 0.08        |      | 0.00        | 0.00        | 0.00        | 0.01        |
| Blue-headed Vireo                         |                  | 0.00                                                      | 0.08        | 0.00        |      | 0.00        | 0.00        | 0.00        | 0.01        |
| <i>Red-eyed Vireo</i>                     |                  | 0.75                                                      | 0.67        | 0.58        |      | 0.75        | 0.42        | 0.67        | 0.64        |
| <i>Blue Jay</i>                           |                  | 0.33                                                      | 0.42        | 0.42        |      | 0.50        | 0.33        | 0.25        | 0.38        |
| American Crow                             |                  | 0.33                                                      | 0.00        | 0.25        |      | 0.00        | 0.17        | 0.08        | 0.14        |
| Fish Crow                                 |                  | 0.08                                                      | 0.08        | 0.08        |      | 0.00        | 0.00        | 0.00        | 0.04        |
| Black-capped Chickadee                    |                  | 0.25                                                      | 0.33        | 0.17        |      | 0.00        | 0.00        | 0.00        | 0.13        |
| <i>Tufted Titmouse</i>                    |                  | 0.83                                                      | 1.08        | 0.92        |      | 1.00        | 0.67        | 0.08        | 0.76        |
| <i>White-breasted Nuthatch</i>            |                  | 0.42                                                      | 0.33        | 0.50        |      | 0.08        | 0.08        | 0.58        | 0.33        |
| Brown Creeper                             |                  | 0.08                                                      | 0.00        | 0.08        |      | 0.00        | 0.00        | 0.00        | 0.03        |
| Carolina Wren                             |                  | 0.00                                                      | 0.00        | 0.17        |      | 0.17        | 0.00        | 0.00        | 0.06        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Home of Franklin D. Roosevelt NHS

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |      |             |             |             |  |             |  | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|------|-------------|-------------|-------------|--|-------------|--|-------------|
|                                             |                  | 2006                                                      | 2007        | 2008        | 2009 | 2010        | 2011        | 2012        |  |             |  |             |
| Ruby-crowned Kinglet                        |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.00        | 0.00        | 0.08        |  | 0.01        |  | 0.01        |
| Blue-gray Gnatcatcher                       |                  | 0.00                                                      | 0.08        | 0.00        |      | 0.00        | 0.08        | 0.00        |  | 0.03        |  | 0.03        |
| Eastern Bluebird                            |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.00        | 0.08        | 0.00        |  | 0.01        |  | 0.01        |
| <b>Veery</b>                                | <b>RC</b>        | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.08</b> | <b>0.00</b> |  | <b>0.01</b> |  | <b>0.01</b> |
| <b>Wood Thrush</b>                          | <b>RC UCC</b>    | <b>1.33</b>                                               | <b>0.58</b> | <b>0.58</b> |      | <b>0.58</b> | <b>0.58</b> | <b>0.75</b> |  | <b>0.74</b> |  | <b>0.74</b> |
| <i>American Robin</i>                       |                  | 0.33                                                      | 0.67        | 0.42        |      | 0.25        | 0.33        | 0.08        |  | 0.35        |  | 0.35        |
| Northern Mockingbird                        |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.00        | 0.08        | 0.00        |  | 0.01        |  | 0.01        |
| Worm-eating Warbler                         |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.08        | 0.00        | 0.00        |  | 0.01        |  | 0.01        |
| Ovenbird                                    |                  | 0.08                                                      | 0.00        | 0.08        |      | 0.00        | 0.08        | 0.08        |  | 0.06        |  | 0.06        |
| Louisiana Waterthrush                       |                  | 0.25                                                      | 0.25        | 0.08        |      | 0.17        | 0.00        | 0.00        |  | 0.13        |  | 0.13        |
| Common Yellowthroat                         |                  | 0.08                                                      | 0.00        | 0.00        |      | 0.00        | 0.00        | 0.00        |  | 0.01        |  | 0.01        |
| <i>Scarlet Tanager</i>                      |                  | 0.83                                                      | 0.50        | 0.42        |      | 0.08        | 0.25        | 0.25        |  | 0.39        |  | 0.39        |
| Chipping Sparrow                            |                  | 0.00                                                      | 0.00        | 0.00        |      | 0.00        | 0.00        | 0.08        |  | 0.01        |  | 0.01        |
| <i>Northern Cardinal</i>                    |                  | 0.25                                                      | 0.25        | 0.33        |      | 0.67        | 0.25        | 0.33        |  | 0.35        |  | 0.35        |
| Rose-breasted Grosbeak                      |                  | 0.00                                                      | 0.17        | 0.00        |      | 0.33        | 0.00        | 0.08        |  | 0.10        |  | 0.10        |
| Red-winged Blackbird                        |                  | 0.08                                                      | 0.25        | 0.00        |      | 0.17        | 0.25        | 0.08        |  | 0.14        |  | 0.14        |
| Common Grackle                              |                  | 0.17                                                      | 0.00        | 0.00        |      | 0.33        | 0.00        | 0.08        |  | 0.10        |  | 0.10        |
| Brown-headed Cowbird                        |                  | 0.00                                                      | 0.17        | 0.00        |      | 0.08        | 0.00        | 0.00        |  | 0.04        |  | 0.04        |
| <b>Baltimore Oriole</b>                     | <b>RC RS UCS</b> | <b>0.00</b>                                               | <b>0.17</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |  | <b>0.03</b> |  | <b>0.03</b> |
| <b>American Goldfinch</b>                   | <b>UCS</b>       | <b>0.00</b>                                               | <b>0.08</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |  | <b>0.01</b> |  | <b>0.01</b> |
| <b>Points Surveyed:</b>                     |                  | 12                                                        | 12          | 12          |      | 12          | 12          | 12          |  |             |  |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  | 7.83                                                      | 8.42        | 6.92        |      | 7.58        | 5.58        | 5.17        |  | 6.92        |  |             |
| <b>Species Richness:</b>                    |                  | 25                                                        | 29          | 23          |      | 23          | 23          | 20          |  | 46          |  |             |
| <b>Shannon Diversity:</b>                   |                  | 2.85                                                      | 3.08        | 2.88        |      | 2.85        | 2.92        | 2.64        |  |             |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Marsh-Billings-Rockefeller NHP*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |  | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|
| <i>Common Name</i>                        | <i>PIF Codes</i> | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |  | <i>Mean</i> |
| Wild Turkey                               |                  | 0.00                                                      | 0.00        | 0.05        | 0.00        | 0.00        | 0.04        | 0.00        |  | 0.01        |
| <b>Broad-winged Hawk</b>                  | <b>RS UCS</b>    | <b>0.04</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> | <b>0.00</b> |  | <b>0.01</b> |
| Mourning Dove                             |                  | 0.12                                                      | 0.16        | 0.15        | 0.16        | 0.32        | 0.00        | 0.04        |  | 0.14        |
| Barred Owl                                |                  | 0.00                                                      | 0.28        | 0.00        | 0.04        | 0.00        | 0.00        | 0.08        |  | 0.06        |
| <b>Chimney Swift</b>                      | <b>CBSD</b>      | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |  | <b>0.01</b> |
| <b>Yellow-bellied Sapsucker</b>           | <b>UCS</b>       | <b>0.12</b>                                               | <b>0.32</b> | <b>0.20</b> | <b>0.20</b> | <b>0.28</b> | <b>0.40</b> | <b>0.20</b> |  | <b>0.25</b> |
| Downy Woodpecker                          |                  | 0.16                                                      | 0.12        | 0.00        | 0.08        | 0.00        | 0.00        | 0.08        |  | 0.06        |
| <b>Hairy Woodpecker</b>                   | <b>UCS</b>       | <b>0.16</b>                                               | <b>0.20</b> | <b>0.20</b> | <b>0.00</b> | <b>0.04</b> | <b>0.04</b> | <b>0.08</b> |  | <b>0.10</b> |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.08                                                      | 0.04        | 0.00        | 0.00        | 0.04        | 0.00        | 0.00        |  | 0.02        |
| Pileated Woodpecker                       |                  | 0.08                                                      | 0.04        | 0.00        | 0.08        | 0.00        | 0.08        | 0.08        |  | 0.05        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        | <b>0.60</b>                                               | <b>0.72</b> | <b>0.55</b> | <b>0.52</b> | <b>0.48</b> | <b>0.64</b> | <b>0.40</b> |  | <b>0.56</b> |
| Least Flycatcher                          |                  | 0.04                                                      | 0.12        | 0.05        | 0.00        | 0.04        | 0.00        | 0.00        |  | 0.04        |
| Great Crested Flycatcher                  |                  | 0.08                                                      | 0.04        | 0.25        | 0.08        | 0.12        | 0.08        | 0.16        |  | 0.12        |
| <b>Eastern Kingbird</b>                   | <b>RC</b>        | <b>0.00</b>                                               | <b>0.04</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |  | <b>0.01</b> |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       | <b>0.32</b>                                               | <b>0.20</b> | <b>0.20</b> | <b>0.12</b> | <b>0.20</b> | <b>0.16</b> | <b>0.16</b> |  | <b>0.19</b> |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       | <b>2.40</b>                                               | <b>1.80</b> | <b>1.85</b> | <b>2.00</b> | <b>2.28</b> | <b>2.20</b> | <b>1.72</b> |  | <b>2.04</b> |
| <i>Blue Jay</i>                           |                  | 0.56                                                      | 0.84        | 0.40        | 0.56        | 0.28        | 0.52        | 0.72        |  | 0.55        |
| American Crow                             |                  | 0.20                                                      | 0.36        | 0.15        | 0.20        | 0.16        | 0.28        | 0.28        |  | 0.23        |
| Common Raven                              |                  | 0.08                                                      | 0.00        | 0.05        | 0.00        | 0.04        | 0.04        | 0.12        |  | 0.05        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       | <b>0.32</b>                                               | <b>0.84</b> | <b>0.50</b> | <b>0.56</b> | <b>0.28</b> | <b>0.40</b> | <b>0.16</b> |  | <b>0.44</b> |
| Tufted Titmouse                           |                  | 0.04                                                      | 0.04        | 0.05        | 0.04        | 0.00        | 0.00        | 0.00        |  | 0.02        |
| Red-breasted Nuthatch                     |                  | 0.04                                                      | 0.08        | 0.00        | 0.04        | 0.20        | 0.08        | 0.00        |  | 0.06        |
| White-breasted Nuthatch                   |                  | 0.32                                                      | 0.32        | 0.10        | 0.36        | 0.12        | 0.16        | 0.16        |  | 0.22        |
| Brown Creeper                             |                  | 0.52                                                      | 0.52        | 0.40        | 0.36        | 0.28        | 0.08        | 0.16        |  | 0.33        |
| <b>Winter Wren</b>                        | <b>UCS</b>       | <b>0.04</b>                                               | <b>0.04</b> | <b>0.20</b> | <b>0.04</b> | <b>0.04</b> | <b>0.04</b> | <b>0.00</b> |  | <b>0.06</b> |
| Golden-crowned Kinglet                    |                  | 0.04                                                      | 0.04        | 0.05        | 0.00        | 0.00        | 0.04        | 0.00        |  | 0.02        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Marsh-Billings-Rockefeller NHP

| Common Name                                   | PIF Codes   | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      |
|-----------------------------------------------|-------------|----------------------------------------------------|------|------|------|------|------|------|------|
|                                               |             | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Mean |
| <b>Veery</b>                                  | RC RS UCS   | 0.12                                               | 0.12 | 0.10 | 0.00 | 0.00 | 0.08 | 0.00 | 0.06 |
| <i>Hermit Thrush</i>                          |             | 0.52                                               | 0.72 | 1.05 | 0.96 | 0.68 | 0.68 | 0.72 | 0.76 |
| <b>Wood Thrush</b>                            | RC UCC      | 0.40                                               | 0.24 | 0.35 | 0.16 | 0.48 | 0.28 | 0.36 | 0.32 |
| <i>American Robin</i>                         |             | 0.76                                               | 0.64 | 0.35 | 0.52 | 0.72 | 0.32 | 0.60 | 0.56 |
| <b>Cedar Waxwing</b>                          | UCS         | 0.00                                               | 0.04 | 0.05 | 0.00 | 0.04 | 0.08 | 0.04 | 0.04 |
| <i>Nashville Warbler</i>                      |             | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 |
| <i>Chestnut-sided Warbler</i>                 |             | 0.00                                               | 0.00 | 0.05 | 0.00 | 0.00 | 0.04 | 0.12 | 0.03 |
| <b>Black-throated Blue Warbler</b>            | RS UCS      | 0.16                                               | 0.24 | 0.15 | 0.28 | 0.16 | 0.12 | 0.40 | 0.22 |
| <i>Yellow-rumped Warbler (Myrtle Warbler)</i> |             | 0.08                                               | 0.08 | 0.05 | 0.08 | 0.08 | 0.04 | 0.00 | 0.06 |
| <b>Black-throated Green Warbler</b>           | RS UCS      | 0.92                                               | 0.72 | 0.60 | 0.44 | 0.48 | 0.76 | 0.48 | 0.63 |
| <b>Blackburnian Warbler</b>                   | RS UCS      | 0.72                                               | 0.68 | 0.50 | 0.68 | 0.48 | 0.56 | 0.40 | 0.57 |
| <i>Pine Warbler</i>                           |             | 0.00                                               | 0.04 | 0.10 | 0.16 | 0.20 | 0.16 | 0.12 | 0.11 |
| <b>Black-and-white Warbler</b>                | RS UCS      | 0.12                                               | 0.08 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.05 |
| <b>American Redstart</b>                      | RS UCS      | 0.04                                               | 0.04 | 0.00 | 0.04 | 0.00 | 0.04 | 0.00 | 0.02 |
| <b>Ovenbird</b>                               | UCS         | 3.36                                               | 3.40 | 3.45 | 3.52 | 2.84 | 3.32 | 3.28 | 3.31 |
| <i>Louisiana Waterthrush</i>                  |             | 0.00                                               | 0.08 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.02 |
| <i>Mourning Warbler</i>                       |             | 0.00                                               | 0.00 | 0.00 | 0.04 | 0.08 | 0.00 | 0.00 | 0.02 |
| <b>Common Yellowthroat</b>                    | UCS         | 0.08                                               | 0.12 | 0.20 | 0.08 | 0.08 | 0.12 | 0.04 | 0.10 |
| <b>Scarlet Tanager</b>                        | RC          | 0.24                                               | 0.56 | 0.25 | 0.56 | 0.40 | 0.48 | 0.44 | 0.42 |
| <i>Chipping Sparrow</i>                       |             | 0.12                                               | 0.04 | 0.00 | 0.04 | 0.00 | 0.04 | 0.00 | 0.03 |
| <b>Song Sparrow</b>                           | UCS         | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 |
| <i>Dark-eyed Junco (Slate-colored Junco)</i>  |             | 0.24                                               | 0.44 | 0.05 | 0.16 | 0.40 | 0.48 | 0.32 | 0.30 |
| <i>Rose-breasted Grosbeak</i>                 |             | 0.32                                               | 0.12 | 0.05 | 0.20 | 0.16 | 0.16 | 0.12 | 0.16 |
| <i>Indigo Bunting</i>                         |             | 0.00                                               | 0.20 | 0.10 | 0.00 | 0.04 | 0.04 | 0.00 | 0.05 |
| <b>Bobolink</b>                               | CBSD RC UCC | 0.04                                               | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| <i>Red-winged Blackbird</i>                   |             | 0.04                                               | 0.28 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix A. Park Summaries (continued).**

***Marsh-Billings-Rockefeller NHP***

| <i>Common Name</i>                                 | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |             |             |             | <i>Mean</i> |
|----------------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                                    |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |             |             |             |
| Common Grackle                                     |                  | 0.00                                                      | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.01        |
| Brown-headed Cowbird                               |                  | 0.04                                                      | 0.08        | 0.05        | 0.04        | 0.04        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.04        |
| Baltimore Oriole                                   |                  | 0.04                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.01        |
| <b>Purple Finch</b>                                | <b>RS UCS</b>    | <b>0.00</b>                                               | <b>0.04</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.01</b> | <b>0.01</b> |
| American Goldfinch                                 |                  | 0.00                                                      | 0.04        | 0.05        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.08        |             | 0.02        |
| <b><i>Points Surveyed:</i></b>                     |                  |                                                           |             |             |             |             |             |             |             |             |             |             |
| <b><i>Ave # Birds Per Point Count Station:</i></b> |                  | 25                                                        | 25          | 20          | 25          | 25          | 25          | 25          | 25          | 25          |             |             |
|                                                    |                  | 14.72                                                     | 16.28       | 13.10       | 13.44       | 12.60       | 13.40       | 12.12       |             |             |             | 13.67       |
| <b><i>Species Richness:</i></b>                    |                  | 42                                                        | 48          | 38          | 35          | 35          | 41          | 31          |             |             |             | 57          |
| <b><i>Shannon Diversity:</i></b>                   |                  | 2.91                                                      | 3.12        | 2.84        | 2.76        | 2.83        | 2.84        | 2.75        |             |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Minute Man NHP

| Common Name                               | PIF Codes | Relative Abundance (birds per point count station) |      |      |      |      |      |      | Mean |
|-------------------------------------------|-----------|----------------------------------------------------|------|------|------|------|------|------|------|
|                                           |           | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |      |
| Canada Goose                              |           | 0.00                                               | 0.04 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.02 |
| Wild Turkey                               |           | 0.09                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.04 | 0.02 |
| Great Blue Heron                          |           | 0.00                                               | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.01 |
| Red-tailed Hawk                           |           | 0.00                                               | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.04 | 0.02 |
| Killdeer                                  |           | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Mourning Dove                             |           | 0.09                                               | 0.00 | 0.09 | 0.00 | 0.27 | 0.13 | 0.04 | 0.09 |
| Black-billed Cuckoo                       | CBSD UCC  | 0.00                                               | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Yellow-billed Cuckoo                      | CBSD RC   | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 |
| Chimney Swift                             | CBSD RC   | 0.00                                               | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.02 |
| Belted Kingfisher                         | CBSD      | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.01 |
| Red-bellied Woodpecker                    |           | 0.00                                               | 0.09 | 0.13 | 0.17 | 0.00 | 0.22 | 0.43 | 0.15 |
| Downy Woodpecker                          |           | 0.26                                               | 0.52 | 0.30 | 0.52 | 0.53 | 0.39 | 0.50 | 0.43 |
| Hairy Woodpecker                          |           | 0.04                                               | 0.17 | 0.00 | 0.04 | 0.07 | 0.09 | 0.00 | 0.06 |
| Northern Flicker (Yellow-shafted Flicker) |           | 0.09                                               | 0.00 | 0.13 | 0.09 | 0.13 | 0.09 | 0.11 | 0.09 |
| Eastern Wood-Pewee                        | RC        | 0.35                                               | 0.26 | 0.13 | 0.30 | 0.67 | 0.22 | 0.21 | 0.31 |
| Alder Flycatcher                          |           | 0.00                                               | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 |
| Eastern Phoebe                            |           | 0.04                                               | 0.00 | 0.04 | 0.04 | 0.13 | 0.00 | 0.07 | 0.05 |
| Great Crested Flycatcher                  |           | 0.09                                               | 0.00 | 0.22 | 0.13 | 0.07 | 0.22 | 0.11 | 0.12 |
| Eastern Kingbird                          | RC        | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 |
| Warbling Vireo                            |           | 0.04                                               | 0.00 | 0.04 | 0.13 | 0.00 | 0.00 | 0.00 | 0.03 |
| Red-eyed Vireo                            |           | 0.00                                               | 0.09 | 0.35 | 0.09 | 0.20 | 0.13 | 0.39 | 0.18 |
| Blue Jay                                  |           | 1.09                                               | 1.13 | 1.22 | 0.74 | 1.33 | 0.91 | 0.75 | 1.02 |
| American Crow                             |           | 0.52                                               | 0.74 | 0.83 | 0.87 | 1.20 | 1.39 | 0.93 | 0.93 |
| Fish Crow                                 |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.01 |
| Tree Swallow                              |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.01 |
| Barn Swallow                              |           | 0.00                                               | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 0.00 | 0.01 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Minute Man NHP

| Common Name             | PIF Codes | Relative Abundance (birds per point count station) |      |      |      |      |      |      | Mean |
|-------------------------|-----------|----------------------------------------------------|------|------|------|------|------|------|------|
|                         |           | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |      |
| Black-capped Chickadee  |           | 1.00                                               | 0.65 | 0.48 | 0.48 | 0.60 | 0.52 | 0.57 | 0.61 |
| Tufted Titmouse         |           | 1.04                                               | 1.48 | 1.43 | 1.87 | 1.27 | 1.22 | 1.29 | 1.37 |
| Red-breasted Nuthatch   |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.01 |
| White-breasted Nuthatch |           | 0.39                                               | 0.39 | 0.13 | 0.65 | 1.20 | 0.22 | 0.86 | 0.55 |
| Carolina Wren           |           | 0.13                                               | 0.17 | 0.00 | 0.04 | 0.00 | 0.00 | 0.04 | 0.05 |
| House Wren              |           | 0.04                                               | 0.04 | 0.00 | 0.09 | 0.00 | 0.00 | 0.07 | 0.04 |
| Blue-gray Gnatcatcher   |           | 0.00                                               | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 |
| Eastern Bluebird        |           | 0.00                                               | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.07 | 0.02 |
| Veery                   | RC        | 0.04                                               | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.04 |
| Hermit Thrush           |           | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Wood Thrush             | RC UCC    | 0.30                                               | 0.30 | 0.35 | 0.35 | 0.27 | 0.17 | 0.29 | 0.29 |
| American Robin          |           | 0.35                                               | 0.91 | 1.13 | 1.13 | 0.73 | 0.70 | 1.07 | 0.86 |
| Gray Catbird            | UCS       | 0.30                                               | 0.48 | 0.48 | 0.83 | 0.40 | 0.48 | 0.64 | 0.52 |
| Northern Mockingbird    |           | 0.00                                               | 0.09 | 0.00 | 0.09 | 0.00 | 0.04 | 0.14 | 0.05 |
| European Starling       |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 |
| Cedar Waxwing           |           | 0.04                                               | 0.04 | 0.00 | 0.26 | 0.00 | 0.00 | 0.07 | 0.06 |
| Blue-winged Warbler     | RC RS UCS | 0.13                                               | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.03 |
| Yellow Warbler          |           | 0.04                                               | 0.00 | 0.13 | 0.09 | 0.07 | 0.04 | 0.07 | 0.06 |
| Pine Warbler            |           | 0.22                                               | 0.30 | 0.39 | 0.74 | 0.67 | 0.17 | 0.11 | 0.37 |
| American Redstart       |           | 0.00                                               | 0.04 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 |
| Ovenbird                |           | 0.39                                               | 0.52 | 0.30 | 0.48 | 0.27 | 0.39 | 0.39 | 0.39 |
| Common Yellowthroat     |           | 0.43                                               | 0.43 | 0.35 | 0.65 | 0.40 | 0.22 | 0.32 | 0.40 |
| Scarlet Tanager         | RC        | 0.26                                               | 0.09 | 0.22 | 0.65 | 0.20 | 0.13 | 0.25 | 0.26 |
| Chipping Sparrow        |           | 0.04                                               | 0.00 | 0.17 | 0.13 | 0.13 | 0.22 | 0.18 | 0.13 |
| Song Sparrow            |           | 0.61                                               | 0.61 | 0.48 | 0.48 | 0.47 | 0.52 | 0.32 | 0.50 |
| Swamp Sparrow           |           | 0.00                                               | 0.00 | 0.04 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Minute Man NHP

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |             |             | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Northern Cardinal</i>                    |                  | 0.83                                                      | 0.74        | 0.70        | 0.57        | 0.20        | 0.57        | 0.61        | 0.57        | 0.61        | 0.60        |
| <b>Rose-breasted Grosbeak</b>               | <b>RC</b>        | <b>0.17</b>                                               | <b>0.17</b> | <b>0.13</b> | <b>0.39</b> | <b>0.27</b> | <b>0.26</b> | <b>0.04</b> | <b>0.26</b> | <b>0.04</b> | <b>0.20</b> |
| <i>Indigo Bunting</i>                       |                  | 0.04                                                      | 0.13        | 0.13        | 0.04        | 0.20        | 0.00        | 0.04        | 0.00        | 0.04        | 0.08        |
| <i>Red-winged Blackbird</i>                 |                  | 0.57                                                      | 0.43        | 0.48        | 0.65        | 0.20        | 0.83        | 0.39        | 0.83        | 0.39        | 0.51        |
| <i>Common Grackle</i>                       |                  | 0.35                                                      | 0.13        | 0.09        | 0.52        | 0.20        | 0.57        | 0.18        | 0.57        | 0.18        | 0.29        |
| <i>Brown-headed Cowbird</i>                 |                  | 0.17                                                      | 0.48        | 0.13        | 0.30        | 0.00        | 0.30        | 0.07        | 0.30        | 0.07        | 0.21        |
| <b>Baltimore Oriole</b>                     | <b>RC</b>        | <b>0.13</b>                                               | <b>0.13</b> | <b>0.00</b> | <b>0.26</b> | <b>0.13</b> | <b>0.13</b> | <b>0.04</b> | <b>0.13</b> | <b>0.04</b> | <b>0.12</b> |
| <i>House Finch</i>                          |                  | 0.13                                                      | 0.09        | 0.04        | 0.09        | 0.13        | 0.04        | 0.04        | 0.04        | 0.04        | 0.08        |
| <i>American Goldfinch</i>                   |                  | 0.65                                                      | 0.48        | 0.22        | 0.22        | 0.87        | 0.35        | 0.50        | 0.35        | 0.50        | 0.47        |
| <i>House Sparrow</i>                        |                  | 0.04                                                      | 0.13        | 0.04        | 0.04        | 0.07        | 0.22        | 0.11        | 0.22        | 0.11        | 0.09        |
| <b>Points Surveyed:</b>                     |                  |                                                           |             |             |             |             |             |             |             |             |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  | 23                                                        | 23          | 23          | 23          | 15          | 23          | 28          | 23          | 28          | 12.92       |
| <b>Species Richness:</b>                    |                  | 42                                                        | 36          | 35          | 47          | 34          | 38          | 45          | 38          | 45          | 62          |
| <b>Shannon Diversity:</b>                   |                  | 3.27                                                      | 3.20        | 3.12        | 3.37        | 3.15        | 3.23        | 3.30        | 3.23        | 3.30        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Morristown NHP

| Common Name                               | PIF Codes | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      |
|-------------------------------------------|-----------|----------------------------------------------------|------|------|------|------|------|------|------|
|                                           |           | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Mean |
| Wild Turkey                               |           | 0.00                                               | 0.11 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.02 |
| Turkey Vulture                            |           | 0.05                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Red-tailed Hawk                           |           | 0.05                                               | 0.05 | 0.10 | 0.05 | 0.17 | 0.05 | 0.11 | 0.08 |
| Mourning Dove                             |           | 0.05                                               | 0.05 | 0.15 | 0.05 | 0.28 | 0.05 | 0.32 | 0.14 |
| Yellow-billed Cuckoo                      | CBSD      | 0.00                                               | 0.21 | 0.05 | 0.25 | 0.10 | 0.00 | 0.00 | 0.09 |
| Eastern Screech-Owl                       |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.01 |
| Great Horned Owl                          |           | 0.00                                               | 0.00 | 0.10 | 0.15 | 0.10 | 0.16 | 0.21 | 0.10 |
| Barred Owl                                |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.02 |
| Red-bellied Woodpecker                    |           | 0.53                                               | 0.26 | 0.90 | 0.70 | 0.69 | 0.26 | 0.53 | 0.55 |
| Downy Woodpecker                          | RS UCS    | 0.11                                               | 0.11 | 0.30 | 0.35 | 0.28 | 0.21 | 0.21 | 0.22 |
| Hairy Woodpecker                          |           | 0.00                                               | 0.00 | 0.25 | 0.20 | 0.34 | 0.21 | 0.37 | 0.20 |
| Northern Flicker (Yellow-shafted Flicker) |           | 0.21                                               | 0.53 | 0.25 | 0.25 | 0.45 | 0.21 | 0.37 | 0.32 |
| Pileated Woodpecker                       | UCS       | 0.11                                               | 0.11 | 0.10 | 0.20 | 0.24 | 0.32 | 0.37 | 0.21 |
| Eastern Wood-Pewee                        | RC        | 0.74                                               | 0.89 | 0.65 | 0.45 | 0.93 | 0.89 | 0.58 | 0.73 |
| Acadian Flycatcher                        | RC RS UCS | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| Eastern Phoebe                            | UCS       | 0.00                                               | 0.05 | 0.05 | 0.00 | 0.07 | 0.00 | 0.05 | 0.03 |
| Great Crested Flycatcher                  |           | 0.05                                               | 0.05 | 0.20 | 0.10 | 0.03 | 0.16 | 0.11 | 0.10 |
| Yellow-throated Vireo                     | RC RS UCS | 0.05                                               | 0.11 | 0.05 | 0.00 | 0.00 | 0.05 | 0.05 | 0.04 |
| Blue-headed Vireo                         |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| Red-eyed Vireo                            | UCS       | 1.16                                               | 1.00 | 0.35 | 0.45 | 0.48 | 0.68 | 0.47 | 0.66 |
| Blue Jay                                  |           | 0.42                                               | 1.05 | 1.10 | 0.85 | 1.38 | 1.37 | 1.11 | 1.04 |
| American Crow                             |           | 0.05                                               | 0.53 | 0.40 | 0.35 | 0.48 | 0.26 | 0.26 | 0.33 |
| Fish Crow                                 |           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| Black-capped Chickadee                    |           | 0.05                                               | 0.05 | 0.05 | 0.00 | 0.03 | 0.05 | 0.00 | 0.03 |
| Tufted Titmouse                           | UCS       | 0.58                                               | 0.47 | 0.90 | 1.40 | 0.93 | 0.37 | 0.74 | 0.77 |
| White-breasted Nuthatch                   | UCS       | 0.16                                               | 0.26 | 0.60 | 0.40 | 0.48 | 0.32 | 0.53 | 0.39 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCS = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Morristown NHP

| Common Name             | PIF Codes     | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      |      |      | Mean |
|-------------------------|---------------|----------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|                         |               | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |      |      |      |      |
| Carolina Wren           |               | 0.00                                               | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |      |      |
| House Wren              |               | 0.00                                               | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |      |
| Blue-gray Gnatcatcher   |               | 0.00                                               | 0.00 | 0.00 | 0.10 | 0.14 | 0.05 | 0.16 |      | 0.06 |      |      |
| Eastern Bluebird        | UCS           | 0.00                                               | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 |      |
| Veery                   |               | 0.42                                               | 0.74 | 0.50 | 0.50 | 0.86 | 0.84 | 0.95 |      | 0.69 | 0.69 |      |
| Swainson's Thrush       |               | 0.05                                               | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 |      |
| Wood Thrush             | RC RS UCC UCS | 1.21                                               | 1.58 | 1.20 | 1.25 | 1.76 | 1.37 | 1.26 |      | 1.38 | 1.38 |      |
| American Robin          |               | 0.79                                               | 1.05 | 0.95 | 1.05 | 1.03 | 0.68 | 0.58 |      | 0.88 | 0.88 |      |
| Gray Catbird            | UCS           | 0.05                                               | 0.11 | 0.10 | 0.10 | 0.17 | 0.32 | 0.68 |      | 0.22 | 0.22 |      |
| Cedar Waxwing           | UCS           | 0.05                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      | 0.01 | 0.01 |      |
| Blackpoll Warbler       |               | 0.26                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      | 0.04 | 0.04 |      |
| Cerulean Warbler        | RC RS UCC UCS | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 |      | 0.00 | 0.00 |      |
| Black-and-white Warbler | RC            | 0.05                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      | 0.01 | 0.01 |      |
| American Redstart       |               | 0.21                                               | 0.32 | 0.00 | 0.10 | 0.21 | 0.26 | 0.42 |      | 0.22 | 0.22 |      |
| Worm-eating Warbler     | RC RS UCS     | 0.00                                               | 0.21 | 0.20 | 0.05 | 0.00 | 0.00 | 0.11 |      | 0.08 | 0.08 |      |
| Ovenbird                |               | 0.84                                               | 1.11 | 0.50 | 0.40 | 1.38 | 0.74 | 1.32 |      | 0.90 | 0.90 |      |
| Louisiana Waterthrush   | RC RS UCS     | 0.16                                               | 0.11 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 |      | 0.07 | 0.07 |      |
| Kentucky Warbler        | RC UCC        | 0.00                                               | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      | 0.01 | 0.01 |      |
| Common Yellowthroat     | UCS           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 |      | 0.01 | 0.01 |      |
| Hooded Warbler          | RS UCS        | 0.16                                               | 0.21 | 0.00 | 0.00 | 0.14 | 0.16 | 0.63 |      | 0.19 | 0.19 |      |
| Canada Warbler          | UCC           | 0.05                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      | 0.01 | 0.01 |      |
| Scarlet Tanager         | RS UCS        | 0.58                                               | 0.79 | 0.50 | 0.65 | 0.72 | 1.16 | 0.53 |      | 0.70 | 0.70 |      |
| Eastern Towhee          | RC RS UCS     | 0.47                                               | 0.58 | 0.05 | 0.30 | 0.66 | 0.42 | 0.79 |      | 0.47 | 0.47 |      |
| Chipping Sparrow        |               | 0.00                                               | 0.05 | 0.00 | 0.00 | 0.07 | 0.05 | 0.00 |      | 0.02 | 0.02 |      |
| Song Sparrow            | UCS           | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 |      | 0.01 | 0.01 |      |
| Northern Cardinal       |               | 0.16                                               | 0.47 | 0.10 | 0.40 | 0.14 | 0.21 | 0.05 |      | 0.22 | 0.22 |      |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Morristown NHP

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |             | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                             |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |             |
| Rose-breasted Grosbeak                      |                  | 0.05                                                      | 0.21        | 0.10        | 0.05        | 0.10        | 0.05        | 0.37        | 0.13        |             |
| <b>Indigo Bunting</b>                       | <b>UCS</b>       | <b>0.00</b>                                               | <b>0.00</b> | <b>0.10</b> | <b>0.00</b> | <b>0.03</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |             |
| Common Grackle                              |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.05        | 0.01        |             |
| Brown-headed Cowbird                        |                  | 0.11                                                      | 0.16        | 0.00        | 0.05        | 0.07        | 0.16        | 0.00        | 0.08        |             |
| Baltimore Oriole                            |                  | 0.47                                                      | 0.11        | 0.30        | 0.10        | 0.03        | 0.00        | 0.16        | 0.17        |             |
| <b>American Goldfinch</b>                   | <b>RS UCS</b>    | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.05</b> | <b>0.00</b> | <b>0.01</b> |             |
| <i>Points Surveyed:</i>                     |                  |                                                           |             |             |             |             |             |             |             |             |
|                                             |                  | 19                                                        | 19          | 20          | 20          | 29          | 19          | 19          |             |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  |                                                           |             |             |             |             |             |             |             |             |
|                                             |                  | 10.53                                                     | 13.84       | 11.35       | 11.35       | 15.21       | 12.58       | 14.47       | 12.76       |             |
| <i>Species Richness:</i>                    |                  |                                                           |             |             |             |             |             |             |             |             |
|                                             |                  | 35                                                        | 36          | 33          | 31          | 39          | 36          | 33          | 58          |             |
| <i>Shannon Diversity:</i>                   |                  |                                                           |             |             |             |             |             |             |             |             |
|                                             |                  | 3.06                                                      | 3.13        | 3.08        | 3.03        | 3.12        | 3.12        | 3.19        |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Saint-Gaudens NHS*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |  | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|
| <i>Common Name</i>                        | <i>PIF Codes</i> | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |  | <i>Mean</i> |
| Wild Turkey                               |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        |  | 0.02        |
| Mourning Dove                             |                  |                                                           | 0.00        | 0.00        | 0.13        | 0.00        | 0.50        | 0.00        |  | 0.10        |
| Belted Kingfisher                         | CBSD RC          |                                                           | 0.00        | 0.13        | 0.00        | 0.13        | 0.00        | 0.25        |  | 0.08        |
| Yellow-bellied Sapsucker                  | UCS              |                                                           | 0.13        | 0.00        | 0.00        | 0.25        | 0.50        | 0.25        |  | 0.19        |
| Hairy Woodpecker                          | UCS              |                                                           | 0.00        | 0.00        | 0.38        | 0.00        | 0.13        | 0.00        |  | 0.08        |
| Northern Flicker (Yellow-shafted Flicker) |                  |                                                           | 0.00        | 0.13        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.02        |
| Pileated Woodpecker                       |                  |                                                           | 0.38        | 0.00        | 0.25        | 0.00        | 0.00        | 0.13        |  | 0.13        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        |                                                           | <b>0.63</b> | <b>0.63</b> | <b>0.88</b> | <b>0.25</b> | <b>0.38</b> | <b>0.38</b> |  | <b>0.52</b> |
| Alder Flycatcher                          |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        |  | 0.02        |
| Willow Flycatcher                         |                  |                                                           | 0.13        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.02        |
| Least Flycatcher                          |                  |                                                           | 0.13        | 0.25        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.06        |
| Eastern Phoebe                            |                  |                                                           | 0.00        | 0.13        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.02        |
| Great Crested Flycatcher                  |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.13        | 0.13        | 0.00        |  | 0.06        |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       |                                                           | <b>0.13</b> | <b>0.13</b> | <b>0.13</b> | <b>0.25</b> | <b>0.00</b> | <b>0.25</b> |  | <b>0.15</b> |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       |                                                           | <b>1.13</b> | <b>1.75</b> | <b>1.63</b> | <b>1.75</b> | <b>2.00</b> | <b>1.75</b> |  | <b>1.67</b> |
| Blue Jay                                  |                  |                                                           | 0.38        | 0.50        | 0.00        | 0.25        | 0.00        | 0.00        |  | 0.19        |
| <i>American Crow</i>                      |                  |                                                           | 0.38        | 0.75        | 0.63        | 0.38        | 0.63        | 1.00        |  | 0.63        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       |                                                           | <b>0.25</b> | <b>0.13</b> | <b>0.38</b> | <b>0.38</b> | <b>0.25</b> | <b>0.00</b> |  | <b>0.23</b> |
| Tufted Titmouse                           |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.00        | 0.50        | 0.25        |  | 0.13        |
| Red-breasted Nuthatch                     |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.25        | 0.00        | 0.00        |  | 0.04        |
| White-breasted Nuthatch                   |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.25        | 0.13        | 0.00        |  | 0.08        |
| Brown Creeper                             |                  |                                                           | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        |  | 0.02        |
| <b>Winter Wren</b>                        | <b>UCS</b>       |                                                           | <b>0.00</b> | <b>0.00</b> | <b>0.25</b> | <b>0.13</b> | <b>0.13</b> | <b>0.13</b> |  | <b>0.10</b> |
| <b>Veery</b>                              | <b>RC RS UCS</b> |                                                           | <b>0.38</b> | <b>1.38</b> | <b>0.50</b> | <b>0.88</b> | <b>0.75</b> | <b>0.88</b> |  | <b>0.79</b> |
| <i>Hermit Thrush</i>                      |                  |                                                           | 0.00        | 0.13        | 0.25        | 0.50        | 0.50        | 0.38        |  | 0.29        |
| <b>Wood Thrush</b>                        | <b>RC UCC</b>    |                                                           | <b>0.25</b> | <b>0.25</b> | <b>0.13</b> | <b>0.75</b> | <b>0.25</b> | <b>0.63</b> |  | <b>0.38</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Saint-Gaudens NHS*

| <i>Common Name</i>                    | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |      |      |      |      |      |      | <i>Mean</i> |
|---------------------------------------|------------------|-----------------------------------------------------------|------|------|------|------|------|------|-------------|
|                                       |                  | 2006                                                      | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |             |
| American Robin                        |                  |                                                           | 0.13 | 0.50 | 0.50 | 0.38 | 0.25 | 0.25 | 0.33        |
| Gray Catbird                          |                  |                                                           | 0.25 | 0.13 | 0.13 | 0.13 | 0.00 | 0.00 | 0.10        |
| Yellow Warbler                        |                  |                                                           | 0.13 | 0.00 | 0.25 | 0.25 | 0.13 | 0.00 | 0.13        |
| Chestnut-sided Warbler                |                  |                                                           | 0.25 | 0.13 | 0.00 | 0.13 | 0.00 | 0.13 | 0.10        |
| Magnolia Warbler                      | UCS              |                                                           | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.13 | 0.04        |
| Black-throated Green Warbler          | RS UCS           |                                                           | 0.50 | 0.38 | 1.00 | 0.88 | 0.63 | 0.38 | 0.63        |
| Blackburnian Warbler                  | RS UCS           |                                                           | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.50 | 0.15        |
| Pine Warbler                          |                  |                                                           | 0.00 | 0.25 | 0.00 | 0.38 | 0.00 | 0.50 | 0.19        |
| Black-and-white Warbler               | RS UCS           |                                                           | 0.13 | 0.13 | 0.00 | 0.00 | 0.00 | 0.13 | 0.06        |
| American Redstart                     | RS UCS           |                                                           | 0.13 | 0.00 | 0.25 | 0.13 | 0.13 | 0.38 | 0.17        |
| Ovenbird                              | UCS              |                                                           | 1.50 | 2.00 | 1.88 | 1.75 | 1.50 | 1.38 | 1.67        |
| Northern Waterthrush                  |                  |                                                           | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.02        |
| Louisiana Waterthrush                 |                  |                                                           | 0.25 | 0.13 | 0.00 | 0.13 | 0.00 | 0.13 | 0.10        |
| Common Yellowthroat                   | UCS              |                                                           | 0.25 | 0.25 | 0.13 | 0.25 | 0.38 | 0.13 | 0.23        |
| Scarlet Tanager                       | RC               |                                                           | 0.38 | 0.88 | 0.38 | 0.25 | 0.13 | 0.38 | 0.40        |
| Song Sparrow                          | UCS              |                                                           | 0.00 | 0.13 | 0.25 | 0.00 | 0.13 | 0.13 | 0.10        |
| White-throated Sparrow                |                  |                                                           | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02        |
| Dark-eyed Junco (Slate-colored Junco) |                  |                                                           | 0.00 | 0.00 | 0.00 | 0.38 | 0.38 | 0.13 | 0.15        |
| Rose-breasted Grosbeak                |                  |                                                           | 0.00 | 0.13 | 0.00 | 0.13 | 0.00 | 0.00 | 0.04        |
| Red-winged Blackbird                  |                  |                                                           | 0.25 | 0.25 | 0.38 | 0.38 | 0.25 | 0.00 | 0.25        |
| Baltimore Oriole                      |                  |                                                           | 0.13 | 0.13 | 0.00 | 0.13 | 0.13 | 0.13 | 0.10        |
| American Goldfinch                    |                  |                                                           | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0.00 | 0.08        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# **Appendix A. Park Summaries (continued).**

## ***Saint-Gaudens NHS***

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |       |       |       |       |       |    |    | <i>Mean</i> |
|---------------------------------------------|------------------|-------------|-----------------------------------------------------------|-------|-------|-------|-------|-------|----|----|-------------|
|                                             |                  |             |                                                           |       |       |       |       |       |    |    |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  |             | 8                                                         | 8     | 8     | 8     | 8     | 8     | 8  | 8  | 11.08       |
|                                             |                  |             | 8.50                                                      | 12.13 | 11.63 | 12.00 | 11.25 | 11.00 |    |    |             |
| <i>Species Richness:</i>                    |                  |             | 25                                                        | 30    | 27    | 31    | 27    | 27    | 27 | 27 | 48          |
| <i>Shannon Diversity:</i>                   |                  |             | 2.91                                                      | 2.90  | 2.93  | 3.03  | 2.92  | 2.93  |    |    |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Saugus Iron Works NHS

| Common Name                               | PIF Codes      | Relative Abundance (birds per point count station) |             |             |             |             |             |             | Mean        |
|-------------------------------------------|----------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                           |                | 2006                                               | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |
| Canada Goose                              |                |                                                    | 0.00        | 0.00        | 0.00        | 0.67        | 0.00        | 1.00        | 0.33        |
| <i>Mallard</i>                            |                |                                                    | 0.33        | 0.33        | 2.33        | 1.33        | 0.67        | 1.67        | 1.27        |
| Great Blue Heron                          |                |                                                    | 0.00        | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.07        |
| Snowy Egret                               |                |                                                    | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.33        | 0.07        |
| Black-crowned Night-Heron                 |                |                                                    | 0.00        | 0.00        | 0.33        | 0.67        | 0.00        | 0.00        | 0.20        |
| Red-tailed Hawk                           |                |                                                    | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.00        | 0.07        |
| Spotted Sandpiper                         |                |                                                    | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.33        | 0.13        |
| Herring Gull                              |                |                                                    | 0.33        | 0.33        | 0.67        | 0.67        | 0.67        | 0.67        | 0.60        |
| Great Black-backed Gull                   |                |                                                    | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.33        | 0.07        |
| Rock Pigeon                               |                |                                                    | 0.33        | 0.33        | 0.33        | 0.67        | 0.00        | 0.67        | 0.40        |
| Mourning Dove                             |                |                                                    | 0.33        | 0.33        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| <b>Chimney Swift</b>                      | <b>CBSD RC</b> |                                                    | <b>0.00</b> | <b>0.00</b> | <b>0.67</b> | <b>1.00</b> | <b>0.67</b> | <b>1.00</b> | <b>0.67</b> |
| <b>Belted Kingfisher</b>                  | <b>CBSD</b>    |                                                    | <b>0.33</b> | <b>0.33</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.33</b> | <b>0.13</b> |
| Downy Woodpecker                          |                |                                                    | 0.67        | 0.67        | 0.00        | 0.33        | 0.00        | 0.00        | 0.20        |
| Northern Flicker (Yellow-shafted Flicker) |                |                                                    | 0.33        | 0.33        | 0.00        | 0.33        | 0.00        | 0.33        | 0.20        |
| Eastern Phoebe                            |                |                                                    | 0.00        | 0.00        | 0.67        | 0.00        | 0.00        | 0.33        | 0.20        |
| <b>Eastern Kingbird</b>                   | <b>RC</b>      |                                                    | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.33</b> | <b>0.33</b> | <b>0.67</b> | <b>0.27</b> |
| Warbling Vireo                            |                |                                                    | 0.00        | 0.00        | 0.00        | 0.33        | 0.33        | 0.33        | 0.20        |
| Red-eyed Vireo                            |                |                                                    | 0.00        | 0.00        | 0.33        | 0.00        | 0.00        | 0.00        | 0.07        |
| <i>Blue Jay</i>                           |                |                                                    | 0.67        | 0.67        | 0.33        | 0.33        | 1.67        | 0.33        | 0.67        |
| <i>American Crow</i>                      |                |                                                    | 1.00        | 1.00        | 0.67        | 0.00        | 1.33        | 0.00        | 0.60        |
| <i>Barn Swallow</i>                       |                |                                                    | 0.67        | 0.67        | 0.67        | 1.00        | 1.00        | 0.33        | 0.73        |
| Black-capped Chickadee                    |                |                                                    | 0.00        | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.07        |
| Tufted Titmouse                           |                |                                                    | 0.33        | 0.33        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| House Wren                                |                |                                                    | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.00        | 0.07        |
| <i>American Robin</i>                     |                |                                                    | 0.67        | 0.67        | 1.00        | 1.67        | 1.00        | 0.67        | 1.00        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Saugus Iron Works NHS

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <b>Gray Catbird</b>                                       | UCS              |             | 0.67        | 0.67        | 0.67        | 0.67        | 0.33        | 0.67        | 0.60        |
| European Starling                                         |                  |             | 0.67        | 0.67        | 2.33        | 0.33        | 0.33        | 0.67        | 0.87        |
| Yellow Warbler                                            |                  |             | 0.00        | 0.00        | 0.00        | 0.33        | 0.00        | 0.33        | 0.13        |
| Common Yellowthroat                                       |                  |             | 0.33        | 0.33        | 0.33        | 0.00        | 0.00        | 0.00        | 0.13        |
| Song Sparrow                                              |                  |             | 1.00        | 2.00        | 3.00        | 3.00        | 1.33        | 1.33        | 1.73        |
| Northern Cardinal                                         |                  |             | 1.00        | 0.33        | 0.33        | 0.33        | 0.00        | 0.33        | 0.40        |
| Red-winged Blackbird                                      |                  |             | 0.33        | 2.33        | 2.33        | 2.33        | 3.00        | 1.33        | 1.87        |
| Common Grackle                                            |                  |             | 0.33        | 0.33        | 0.67        | 0.67        | 0.67        | 1.67        | 0.73        |
| Brown-headed Cowbird                                      |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.33        | 0.07        |
| <b>Baltimore Oriole</b>                                   | RC               |             | 0.33        | 0.33        | 0.33        | 0.00        | 0.33        | 0.33        | 0.27        |
| American Goldfinch                                        |                  |             | 0.00        | 0.33        | 0.33        | 0.33        | 0.33        | 0.00        | 0.20        |
| House Sparrow                                             |                  |             | 1.00        | 0.00        | 0.33        | 0.33        | 0.00        | 1.00        | 0.47        |
| <b>Points Surveyed:</b>                                   |                  |             |             |             |             |             |             |             |             |
| <b>Ave # Birds Per Point Count Station:</b>               |                  | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 15.87       |
| <b>Species Richness:</b>                                  |                  | 11.67       | 17.00       | 18.67       | 14.67       | 17.33       |             |             | 38          |
| <b>Shannon Diversity:</b>                                 |                  | 21          | 20          | 25          | 18          | 26          |             |             |             |
|                                                           |                  | 2.94        | 2.69        | 2.92        | 2.62        | 3.08        |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Saratoga NHP

| Common Name                               | PIF Codes          | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      | Mean |
|-------------------------------------------|--------------------|----------------------------------------------------|------|------|------|------|------|------|------|------|
|                                           |                    | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |      |      |
| Canada Goose                              |                    | 0.16                                               | 0.05 | 0.08 | 0.00 | 0.02 | 0.04 | 0.06 | 0.06 |      |
| Wild Turkey                               |                    | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |      |
| Northern Bobwhite                         |                    | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Great Blue Heron                          |                    | 0.12                                               | 0.05 | 0.00 | 0.02 | 0.02 | 0.00 | 0.03 | 0.04 |      |
| Green Heron                               |                    | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |      |
| Turkey Vulture                            |                    | 0.00                                               | 0.00 | 0.00 | 0.02 | 0.02 | 0.07 | 0.06 | 0.03 |      |
| Northern Harrier                          |                    | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Sharp-shinned Hawk                        |                    | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 |      |
| Cooper's Hawk                             |                    | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |      |
| Red-tailed Hawk                           |                    | 0.04                                               | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.06 | 0.02 |      |
| American Kestrel                          |                    | 0.16                                               | 0.00 | 0.04 | 0.05 | 0.10 | 0.22 | 0.09 | 0.09 |      |
| American Woodcock                         |                    | 0.00                                               | 0.00 | 0.00 | 0.02 | 0.10 | 0.22 | 0.00 | 0.05 |      |
| Mourning Dove                             |                    | 0.24                                               | 0.60 | 0.43 | 0.27 | 0.49 | 0.48 | 0.33 | 0.41 |      |
| Black-billed Cuckoo                       | CBSD RC RS UCC UCS | 0.16                                               | 0.00 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 | 0.03 |      |
| Yellow-billed Cuckoo                      | CBSD               | 0.04                                               | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Ruby-throated Hummingbird                 |                    | 0.04                                               | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Red-bellied Woodpecker                    |                    | 0.28                                               | 0.00 | 0.04 | 0.05 | 0.07 | 0.00 | 0.09 | 0.08 |      |
| Yellow-bellied Sapsucker                  |                    | 0.08                                               | 0.05 | 0.14 | 0.29 | 0.56 | 0.07 | 0.18 | 0.20 |      |
| Downy Woodpecker                          |                    | 0.00                                               | 0.10 | 0.20 | 0.05 | 0.12 | 0.22 | 0.18 | 0.12 |      |
| Hairy Woodpecker                          |                    | 0.00                                               | 0.00 | 0.00 | 0.00 | 0.10 | 0.07 | 0.00 | 0.02 |      |
| Northern Flicker (Yellow-shafted Flicker) |                    | 0.20                                               | 0.15 | 0.04 | 0.02 | 0.20 | 0.19 | 0.24 | 0.15 |      |
| Pileated Woodpecker                       |                    | 0.08                                               | 0.00 | 0.04 | 0.15 | 0.15 | 0.00 | 0.09 | 0.07 |      |
| Eastern Wood-Pewee                        | RC                 | 0.16                                               | 0.35 | 0.59 | 0.41 | 0.51 | 0.11 | 0.39 | 0.36 |      |
| Acadian Flycatcher                        |                    | 0.00                                               | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      |
| Alder Flycatcher                          |                    | 0.00                                               | 0.05 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |      |
| Willow Flycatcher                         | UCS                | 0.08                                               | 0.00 | 0.16 | 0.00 | 0.02 | 0.04 | 0.09 | 0.06 |      |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Saratoga NHP

| <i>Common Name</i>            | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                               |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |             |
| <b>Least Flycatcher</b>       | <b>RC</b>        | <b>0.00</b>                                               | <b>0.00</b> | <b>0.08</b> | <b>0.02</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.01</b> | <b>0.01</b> |
| Eastern Phoebe                |                  | 0.00                                                      | 0.05        | 0.08        | 0.02        | 0.10        | 0.04        | 0.06        | 0.05        | 0.05        |
| Great Crested Flycatcher      |                  | 0.20                                                      | 0.55        | 0.35        | 0.22        | 0.20        | 0.04        | 0.03        | 0.23        | 0.23        |
| Eastern Kingbird              |                  | 0.48                                                      | 0.10        | 0.16        | 0.29        | 0.68        | 0.63        | 0.48        | 0.40        | 0.40        |
| Yellow-throated Vireo         |                  | 0.00                                                      | 0.05        | 0.02        | 0.00        | 0.02        | 0.00        | 0.03        | 0.02        | 0.02        |
| Blue-headed Vireo             |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        | 0.00        | 0.00        |
| Warbling Vireo                |                  | 0.08                                                      | 0.00        | 0.02        | 0.00        | 0.00        | 0.11        | 0.03        | 0.03        | 0.03        |
| Red-eyed Vireo                |                  | 0.16                                                      | 0.50        | 0.49        | 0.22        | 0.39        | 0.07        | 0.06        | 0.27        | 0.27        |
| Blue Jay                      |                  | 0.32                                                      | 0.40        | 0.37        | 0.34        | 0.29        | 0.37        | 0.18        | 0.33        | 0.33        |
| <i>American Crow</i>          |                  | <i>0.88</i>                                               | <i>0.75</i> | <i>0.57</i> | <i>1.07</i> | <i>0.73</i> | <i>0.96</i> | <i>1.12</i> | <i>0.87</i> | <i>0.87</i> |
| Common Raven                  |                  | 0.04                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        | 0.00        | 0.02        | 0.02        |
| Tree Swallow                  |                  | 0.28                                                      | 0.40        | 0.20        | 0.05        | 0.66        | 1.04        | 0.70        | 0.47        | 0.47        |
| Northern Rough-winged Swallow |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        | 0.01        | 0.01        |
| Barn Swallow                  |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.00        | 0.01        | 0.01        |
| Black-capped Chickadee        |                  | 0.40                                                      | 0.70        | 0.47        | 0.49        | 0.37        | 0.30        | 0.36        | 0.44        | 0.44        |
| Tufted Titmouse               |                  | 0.52                                                      | 0.30        | 0.31        | 0.02        | 0.12        | 0.04        | 0.03        | 0.19        | 0.19        |
| Red-breasted Nuthatch         |                  | 0.00                                                      | 0.00        | 0.04        | 0.00        | 0.02        | 0.00        | 0.00        | 0.01        | 0.01        |
| White-breasted Nuthatch       |                  | 0.16                                                      | 0.15        | 0.06        | 0.17        | 0.27        | 0.07        | 0.12        | 0.14        | 0.14        |
| Brown Creeper                 |                  | 0.00                                                      | 0.05        | 0.14        | 0.07        | 0.10        | 0.00        | 0.00        | 0.05        | 0.05        |
| House Wren                    |                  | 0.32                                                      | 0.00        | 0.02        | 0.05        | 0.20        | 0.00        | 0.09        | 0.10        | 0.10        |
| Winter Wren                   |                  | 0.00                                                      | 0.05        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        | 0.01        |
| Blue-gray Gnatcatcher         |                  | 0.00                                                      | 0.00        | 0.06        | 0.02        | 0.00        | 0.04        | 0.00        | 0.02        | 0.02        |
| Eastern Bluebird              |                  | 0.32                                                      | 0.00        | 0.02        | 0.00        | 0.24        | 0.41        | 0.39        | 0.20        | 0.20        |
| <b>Veery</b>                  | <b>RC</b>        | <b>0.04</b>                                               | <b>0.10</b> | <b>0.18</b> | <b>0.27</b> | <b>0.37</b> | <b>0.04</b> | <b>0.15</b> | <b>0.16</b> | <b>0.16</b> |
| Hermit Thrush                 |                  | 0.00                                                      | 0.10        | 0.10        | 0.20        | 0.12        | 0.00        | 0.03        | 0.08        | 0.08        |
| <b>Wood Thrush</b>            | <b>RC UCC</b>    | <b>0.16</b>                                               | <b>0.50</b> | <b>0.39</b> | <b>0.20</b> | <b>0.34</b> | <b>0.07</b> | <b>0.12</b> | <b>0.25</b> | <b>0.25</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Saratoga NHP

| Common Name                            | PIF Codes | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      | Mean |
|----------------------------------------|-----------|----------------------------------------------------|------|------|------|------|------|------|------|------|
|                                        |           | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |      |      |
| American Robin                         |           | 0.44                                               | 0.90 | 0.63 | 0.37 | 0.51 | 0.96 | 0.36 | 0.60 |      |
| Gray Catbird                           |           | 0.20                                               | 0.05 | 0.16 | 0.17 | 0.34 | 0.41 | 0.12 | 0.21 |      |
| Northern Mockingbird                   |           | 0.00                                               | 0.00 | 0.00 | 0.02 | 0.10 | 0.11 | 0.00 | 0.03 |      |
| Brown Thrasher                         |           | 0.08                                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 |      |
| European Starling                      |           | 0.40                                               | 0.00 | 0.00 | 0.17 | 0.07 | 0.04 | 0.00 | 0.10 |      |
| Cedar Waxwing                          | UCS       | 0.36                                               | 0.60 | 0.22 | 0.22 | 0.34 | 0.70 | 0.94 | 0.48 |      |
| Blue-winged Warbler                    | RC RS UCS | 0.20                                               | 0.20 | 0.20 | 0.07 | 0.10 | 0.22 | 0.06 | 0.15 |      |
| Golden-winged Warbler                  | RC UCC    | 0.00                                               | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Yellow Warbler                         |           | 0.32                                               | 0.10 | 0.16 | 0.12 | 0.24 | 0.33 | 0.09 | 0.20 |      |
| Chestnut-sided Warbler                 |           | 0.08                                               | 0.10 | 0.20 | 0.02 | 0.17 | 0.00 | 0.03 | 0.09 |      |
| Yellow-rumped Warbler (Myrtle Warbler) |           | 0.00                                               | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Prairie Warbler                        |           | 0.08                                               | 0.15 | 0.06 | 0.00 | 0.24 | 0.00 | 0.24 | 0.11 |      |
| Black-and-white Warbler                |           | 0.00                                               | 0.00 | 0.04 | 0.02 | 0.02 | 0.00 | 0.00 | 0.01 |      |
| American Redstart                      |           | 0.12                                               | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |      |
| Ovenbird                               |           | 0.24                                               | 1.15 | 0.82 | 0.44 | 0.63 | 0.04 | 0.55 | 0.55 |      |
| Northern Waterthrush                   |           | 0.00                                               | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |      |
| Louisiana Waterthrush                  |           | 0.00                                               | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Common Yellowthroat                    |           | 0.84                                               | 0.80 | 0.94 | 1.07 | 1.41 | 1.48 | 1.73 | 1.18 |      |
| Scarlet Tanager                        |           | 0.20                                               | 0.20 | 0.29 | 0.17 | 0.22 | 0.07 | 0.09 | 0.18 |      |
| Eastern Towhee                         | RC        | 0.20                                               | 0.30 | 0.27 | 0.22 | 0.39 | 0.56 | 0.85 | 0.40 |      |
| Chipping Sparrow                       |           | 0.40                                               | 0.50 | 0.27 | 0.32 | 0.29 | 0.26 | 0.48 | 0.36 |      |
| Field Sparrow                          | CBSD RC   | 1.08                                               | 0.55 | 0.67 | 0.76 | 1.27 | 1.26 | 1.15 | 0.96 |      |
| Vesper Sparrow                         |           | 0.00                                               | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |      |
| Savannah Sparrow                       |           | 0.08                                               | 0.00 | 0.04 | 0.05 | 0.00 | 0.11 | 0.00 | 0.04 |      |
| Song Sparrow                           | UCS       | 1.84                                               | 1.20 | 0.65 | 1.05 | 0.95 | 1.48 | 1.52 | 1.24 |      |
| Northern Cardinal                      |           | 0.28                                               | 0.15 | 0.24 | 0.17 | 0.10 | 0.19 | 0.21 | 0.19 |      |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species; UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Saratoga NHP

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |  |             | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|-------------|
|                                             |                  | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |  |             |             |
| Rose-breasted Grosbeak                      |                  | 0.08                                                      | 0.05        | 0.12        | 0.07        | 0.00        | 0.04        | 0.03        |  | 0.06        |             |
| Indigo Bunting                              |                  | 0.04                                                      | 0.00        | 0.06        | 0.00        | 0.00        | 0.00        | 0.03        |  | 0.02        |             |
| <i>Bobolink</i>                             |                  | 1.48                                                      | 0.60        | 0.65        | 1.71        | 3.15        | 9.19        | 3.06        |  | 2.83        |             |
| <i>Red-winged Blackbird</i>                 |                  | 1.72                                                      | 0.70        | 1.82        | 2.05        | 3.07        | 5.41        | 6.09        |  | 2.98        |             |
| <i>Eastern Meadowlark</i>                   |                  | 0.64                                                      | 0.15        | 0.43        | 1.05        | 0.80        | 1.26        | 1.12        |  | 0.78        |             |
| Common Grackle                              |                  | 0.12                                                      | 0.00        | 0.00        | 0.02        | 0.07        | 0.04        | 0.03        |  | 0.04        |             |
| Brown-headed Cowbird                        |                  | 0.00                                                      | 0.05        | 0.06        | 0.05        | 0.10        | 0.04        | 0.00        |  | 0.04        |             |
| Orchard Oriole                              |                  | 0.12                                                      | 0.00        | 0.00        | 0.02        | 0.00        | 0.00        | 0.00        |  | 0.02        |             |
| <b>Baltimore Oriole</b>                     | <b>RC RS UCS</b> | <b>0.44</b>                                               | <b>0.25</b> | <b>0.16</b> | <b>0.17</b> | <b>0.29</b> | <b>0.22</b> | <b>0.00</b> |  | <b>0.22</b> |             |
| Purple Finch                                |                  | 0.04                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.01        |             |
| <b>American Goldfinch</b>                   | <b>UCS</b>       | <b>0.64</b>                                               | <b>1.15</b> | <b>0.94</b> | <b>0.76</b> | <b>1.12</b> | <b>1.22</b> | <b>0.82</b> |  | <b>0.95</b> |             |
| <b>Points Surveyed:</b>                     |                  |                                                           |             |             |             |             |             |             |  |             |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  | 25                                                        | 20          | 51          | 41          | 41          | 27          | 33          |  |             |             |
|                                             |                  | 19.04                                                     | 16.20       | 16.27       | 16.49       | 23.80       | 31.74       | 25.73       |  | 21.33       |             |
| <b>Species Richness:</b>                    |                  |                                                           |             |             |             |             |             |             |  |             |             |
|                                             |                  | 60                                                        | 48          | 64          | 57          | 59          | 53          | 57          |  | 89          |             |
| <b>Shannon Diversity:</b>                   |                  |                                                           |             |             |             |             |             |             |  |             |             |
|                                             |                  | 3.59                                                      | 3.45        | 3.61        | 3.33        | 3.41        | 2.78        | 3.03        |  |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### *Vanderbilt Mansion NHS*

| <i>Common Name</i>                        | <i>PIF Codes</i>          | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------------------|---------------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                           |                           | 2006                                                      | 2007        | 2008        | 2009        | 2010        | 2011        | 2012        |             |
| Canada Goose                              |                           | 0.14                                                      | 0.29        | 0.29        | 0.14        | 0.71        | 0.86        | 0.00        | 0.35        |
| Mallard                                   |                           | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.02        |
| Mourning Dove                             |                           | 0.00                                                      | 0.00        | 0.14        | 0.14        | 0.00        | 0.00        | 0.29        | 0.08        |
| <b>Black-billed Cuckoo</b>                | <b>CBSD RC RS UCC UCS</b> | <b>0.14</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| Great Horned Owl                          |                           | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.02        |
| Barred Owl                                |                           | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.02        |
| Red-bellied Woodpecker                    |                           | 0.43                                                      | 1.00        | 0.14        | 0.57        | 1.14        | 0.57        | 0.57        | 0.63        |
| Downy Woodpecker                          |                           | 0.29                                                      | 0.14        | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.08        |
| Hairy Woodpecker                          |                           | 0.00                                                      | 0.29        | 0.00        | 0.29        | 0.14        | 0.00        | 0.00        | 0.10        |
| Northern Flicker (Yellow-shafted Flicker) |                           | 0.57                                                      | 0.14        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.12        |
| Pileated Woodpecker                       |                           | 0.14                                                      | 0.00        | 0.14        | 0.00        | 0.14        | 0.29        | 0.00        | 0.10        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>                 | <b>0.29</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.29</b> | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.10</b> |
| Eastern Phoebe                            |                           | 0.14                                                      | 0.00        | 0.29        | 0.14        | 0.00        | 0.00        | 0.00        | 0.08        |
| Great Crested Flycatcher                  |                           | 0.14                                                      | 0.71        | 0.57        | 0.86        | 1.14        | 1.00        | 0.14        | 0.65        |
| Red-eyed Vireo                            |                           | 0.71                                                      | 1.29        | 0.57        | 0.86        | 1.14        | 1.14        | 0.71        | 0.92        |
| Blue Jay                                  |                           | 0.29                                                      | 0.43        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        |
| American Crow                             |                           | 0.86                                                      | 0.43        | 0.29        | 0.43        | 0.43        | 0.86        | 1.00        | 0.61        |
| Fish Crow                                 |                           | 0.14                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Tufted Titmouse                           |                           | 0.71                                                      | 0.57        | 0.29        | 1.29        | 1.14        | 1.57        | 0.14        | 0.82        |
| White-breasted Nuthatch                   |                           | 0.00                                                      | 0.71        | 0.00        | 0.57        | 0.14        | 0.29        | 0.29        | 0.29        |
| Carolina Wren                             |                           | 0.00                                                      | 0.00        | 0.57        | 0.00        | 0.14        | 0.00        | 0.00        | 0.10        |
| House Wren                                |                           | 0.00                                                      | 0.14        | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        |
| Eastern Bluebird                          |                           | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.02        |
| <b>Wood Thrush</b>                        | <b>RC UCC</b>             | <b>0.86</b>                                               | <b>1.14</b> | <b>0.57</b> | <b>0.29</b> | <b>1.00</b> | <b>0.00</b> | <b>1.57</b> | <b>0.78</b> |
| American Robin                            |                           | 0.00                                                      | 0.00        | 0.29        | 0.57        | 0.14        | 0.43        | 0.57        | 0.29        |
| American Redstart                         |                           | 0.14                                                      | 0.29        | 0.00        | 0.29        | 0.00        | 0.00        | 0.00        | 0.10        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

# Appendix A. Park Summaries (continued).

## Vanderbilt Mansion NHS

| <i>Common Name</i>                                 | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |      |      |      |      |      |      |      |      | <i>Mean</i> |
|----------------------------------------------------|------------------|-----------------------------------------------------------|------|------|------|------|------|------|------|------|-------------|
| Worm-eating Warbler                                |                  | 0.00                                                      | 0.29 | 0.14 | 0.14 | 0.14 | 0.14 | 0.00 | 0.00 | 0.00 | 0.10        |
| Ovenbird                                           |                  | 0.00                                                      | 0.14 | 0.29 | 0.14 | 0.14 | 0.14 | 0.00 | 0.00 | 0.14 | 0.10        |
| Louisiana Waterthrush                              |                  | 0.00                                                      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.02        |
| Common Yellowthroat                                |                  | 0.14                                                      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02        |
| Scarlet Tanager                                    |                  | 0.43                                                      | 0.00 | 0.14 | 0.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14        |
| Chipping Sparrow                                   |                  | 0.29                                                      | 0.14 | 0.14 | 0.14 | 0.14 | 0.00 | 0.00 | 0.14 | 0.14 | 0.12        |
| Northern Cardinal                                  |                  | 1.14                                                      | 0.86 | 0.86 | 0.86 | 1.00 | 0.86 | 0.86 | 0.86 | 0.86 | 0.92        |
| Rose-breasted Grosbeak                             |                  | 0.14                                                      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02        |
| Indigo Bunting                                     |                  | 0.29                                                      | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06        |
| Red-winged Blackbird                               |                  | 0.00                                                      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.04        |
| Common Grackle                                     |                  | 0.00                                                      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.02        |
| <b><i>Points Surveyed:</i></b>                     |                  |                                                           |      |      |      |      |      |      |      |      |             |
| <b><i>Ave # Birds Per Point Count Station:</i></b> |                  | 7                                                         | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 8.04        |
| <b><i>Species Richness:</i></b>                    |                  | 8.43                                                      | 9.00 | 6.14 | 6.14 | 8.29 | 9.29 | 8.14 | 7.00 |      | 37          |
| <b><i>Shannon Diversity:</i></b>                   |                  | 22                                                        | 18   | 20   | 20   | 18   | 19   | 12   | 15   |      |             |
|                                                    |                  | 2.84                                                      | 2.64 | 2.80 | 2.80 | 2.67 | 2.56 | 2.28 | 2.38 |      |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Weir Farm NHS

| Common Name                               | PIF Codes     | Relative Abundance (birds per point count station) |      |      |             |             |      |             | Mean        |
|-------------------------------------------|---------------|----------------------------------------------------|------|------|-------------|-------------|------|-------------|-------------|
|                                           |               | 2006                                               | 2007 | 2008 | 2009        | 2010        | 2011 | 2012        |             |
| Red-shouldered Hawk                       |               | 0.00                                               |      |      | 0.00        | 0.00        |      | 0.40        | 0.10        |
| Red-tailed Hawk                           |               | 0.00                                               |      |      | 0.20        | 0.00        |      | 0.00        | 0.05        |
| Mourning Dove                             |               | 0.00                                               |      |      | 0.00        | 0.20        |      | 0.00        | 0.05        |
| Red-bellied Woodpecker                    |               | 0.00                                               |      |      | 0.20        | 0.40        |      | 0.00        | 0.15        |
| Downy Woodpecker                          |               | 0.20                                               |      |      | 0.60        | 1.00        |      | 0.40        | 0.55        |
| Hairy Woodpecker                          |               | 0.00                                               |      |      | 0.00        | 0.00        |      | 0.20        | 0.05        |
| Northern Flicker (Yellow-shafted Flicker) |               | 0.20                                               |      |      | 0.00        | 0.20        |      | 0.00        | 0.10        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>     | <b>0.00</b>                                        |      |      | <b>0.40</b> | <b>0.20</b> |      | <b>0.20</b> | <b>0.20</b> |
| Eastern Phoebe                            |               | 0.20                                               |      |      | 0.00        | 0.00        |      | 0.60        | 0.20        |
| Great Crested Flycatcher                  |               | 0.20                                               |      |      | 0.00        | 0.40        |      | 0.00        | 0.15        |
| <b>Yellow-throated Vireo</b>              | <b>RC</b>     | <b>0.20</b>                                        |      |      | <b>0.00</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.05</b> |
| Warbling Vireo                            |               | 0.20                                               |      |      | 0.00        | 0.00        |      | 0.00        | 0.05        |
| Red-eyed Vireo                            |               | 0.20                                               |      |      | 0.40        | 1.00        |      | 0.00        | 0.40        |
| Blue Jay                                  |               | 0.40                                               |      |      | 0.20        | 0.00        |      | 0.20        | 0.20        |
| American Crow                             |               | 0.80                                               |      |      | 0.60        | 0.40        |      | 0.80        | 0.65        |
| Black-capped Chickadee                    |               | 0.00                                               |      |      | 0.20        | 0.60        |      | 0.00        | 0.20        |
| Tufted Titmouse                           |               | 1.20                                               |      |      | 1.20        | 1.20        |      | 0.80        | 1.10        |
| White-breasted Nuthatch                   |               | 0.20                                               |      |      | 0.20        | 1.20        |      | 0.80        | 0.60        |
| Carolina Wren                             |               | 0.20                                               |      |      | 0.00        | 0.00        |      | 0.00        | 0.05        |
| House Wren                                |               | 0.40                                               |      |      | 0.20        | 0.00        |      | 0.00        | 0.15        |
| <b>Wood Thrush</b>                        | <b>RC UCC</b> | <b>0.00</b>                                        |      |      | <b>0.20</b> | <b>0.00</b> |      | <b>0.20</b> | <b>0.10</b> |
| American Robin                            |               | 0.00                                               |      |      | 0.20        | 0.40        |      | 1.00        | 0.40        |
| <b>Gray Catbird</b>                       | <b>UCS</b>    | <b>0.00</b>                                        |      |      | <b>0.20</b> | <b>0.80</b> |      | <b>0.60</b> | <b>0.40</b> |
| Yellow Warbler                            |               | 0.00                                               |      |      | 0.00        | 0.00        |      | 0.20        | 0.05        |
| Blackpoll Warbler                         |               | 0.00                                               |      |      | 0.20        | 0.00        |      | 0.00        | 0.05        |
| American Redstart                         |               | 0.20                                               |      |      | 0.00        | 0.00        |      | 0.00        | 0.05        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix A. Park Summaries (continued).

### Weir Farm NHS

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Ovenbird                                                  |                  | 0.20        |             |             | 0.00        | 0.00        |             | 0.00        | 0.05        |
| <b>Scarlet Tanager</b>                                    | <b>RC</b>        | <b>0.00</b> |             |             | <b>0.20</b> | <b>0.00</b> |             | <b>0.00</b> | <b>0.05</b> |
| Chipping Sparrow                                          |                  | 0.20        |             |             | 0.00        | 0.40        |             | 0.60        | 0.30        |
| Song Sparrow                                              |                  | 0.00        |             |             | 0.20        | 0.40        |             | 0.20        | 0.20        |
| Northern Cardinal                                         |                  | 0.80        |             |             | 0.40        | 0.40        |             | 0.20        | 0.45        |
| Red-winged Blackbird                                      |                  | 0.20        |             |             | 0.00        | 0.00        |             | 0.00        | 0.05        |
| Common Grackle                                            |                  | 0.00        |             |             | 0.20        | 1.20        |             | 0.00        | 0.35        |
| <b>Baltimore Oriole</b>                                   | <b>RC</b>        | <b>0.20</b> |             |             | <b>0.00</b> | <b>0.00</b> |             | <b>0.00</b> | <b>0.05</b> |
| American Goldfinch                                        |                  | 0.00        |             |             | 0.00        | 0.20        |             | 0.20        | 0.10        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 5           |             |             | 5           | 5           |             | 5           |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 6.40        |             |             | 6.20        | 10.60       |             | 7.60        | 7.70        |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 19          |             |             | 19          | 18          |             | 17          | 35          |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 2.70        |             |             | 2.74        | 2.71        |             | 2.65        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species



## Appendix B—Site Summaries

This appendix contains the species list for each study site (when more than one site was surveyed within a park), and the relative abundance (birds per point count station) of each species for each year. It only includes data for the first survey of each point count station in a given year, in order to promote consistent comparisons between years and to avoid artificially inflating abundances due to counting the same individuals in repeat visits. Species in boldface are Partners in Flight (PIF) priority species, and species in italics are the 10 most common species for each park. There will occasionally be more than 10 italicized species, if multiple species have the same abundance.

Beginning with this report, we have included the PIF Priority Species codes. If these tables are compared with those from previous years, you will note an increase in the number of PIF Priority species designated for each site. This is due to the fact that we are now including “stewardship” species, in addition to those of regional or USA/Canada concern, as well as relatively common species that are exhibiting significant population declines. For more information about the PIF Species Assessment, go to <http://pif.rmbo.org/>.

This appendix also lists the number of point count stations surveyed per site each year, the number of birds detected per point count, the species richness, and the Shannon diversity index for each site for each year.

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Schoodic

| <i>Common Name</i>            | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Spruce Grouse                 |                  | 0.00        |             |             |             | 0.17        | 0.00        |             | 0.06        |
| Herring Gull                  |                  | 0.00        |             |             |             | 0.00        | 0.17        |             | 0.06        |
| Downy Woodpecker              |                  | 0.00        |             |             |             | 0.33        | 0.00        |             | 0.11        |
| <b>Hairy Woodpecker</b>       | <b>UCS</b>       | <b>0.67</b> |             |             |             | <b>0.17</b> | <b>0.00</b> |             | <b>0.28</b> |
| Yellow-bellied Flycatcher     |                  | 0.00        |             |             |             | 0.83        | 0.50        |             | 0.44        |
| Least Flycatcher              |                  | 0.17        |             |             |             | 0.00        | 0.00        |             | 0.06        |
| Great Crested Flycatcher      |                  | 0.17        |             |             |             | 0.00        | 0.00        |             | 0.06        |
| <b>Blue-headed Vireo</b>      | <b>UCS</b>       | <b>0.00</b> |             |             |             | <b>0.33</b> | <b>1.00</b> |             | <b>0.44</b> |
| <b>Red-eyed Vireo</b>         | <b>UCS</b>       | <b>0.00</b> |             |             |             | <b>0.67</b> | <b>0.00</b> |             | <b>0.22</b> |
| American Crow                 |                  | 0.17        |             |             |             | 0.83        | 0.17        |             | 0.39        |
| <b>Black-capped Chickadee</b> | <b>UCS</b>       | <b>0.00</b> |             |             |             | <b>0.50</b> | <b>0.17</b> |             | <b>0.22</b> |
| <b>Boreal Chickadee</b>       | <b>CBSD RC</b>   | <b>1.00</b> |             |             |             | <b>0.00</b> | <b>0.00</b> |             | <b>0.33</b> |
| Red-breasted Nuthatch         |                  | 0.17        |             |             |             | 1.50        | 0.67        |             | 0.78        |
| Brown Creeper                 |                  | 0.00        |             |             |             | 0.50        | 0.00        |             | 0.17        |
| <b>Winter Wren</b>            | <b>UCS</b>       | <b>0.00</b> |             |             |             | <b>1.17</b> | <b>1.17</b> |             | <b>0.78</b> |
| Golden-crowned Kinglet        |                  | 0.00        |             |             |             | 1.50        | 0.67        |             | 0.72        |
| Ruby-crowned Kinglet          |                  | 0.33        |             |             |             | 0.17        | 0.17        |             | 0.22        |
| <b>Veery</b>                  | <b>RC RS UCS</b> | <b>0.00</b> |             |             |             | <b>0.17</b> | <b>0.00</b> |             | <b>0.06</b> |
| Swainson's Thrush             |                  | 0.00        |             |             |             | 0.17        | 0.83        |             | 0.33        |
| Hermit Thrush                 |                  | 0.67        |             |             |             | 0.67        | 0.67        |             | 0.67        |
| <b>Wood Thrush</b>            | <b>RC UCC</b>    | <b>0.17</b> |             |             |             | <b>0.00</b> | <b>0.00</b> |             | <b>0.06</b> |
| American Robin                |                  | 0.33        |             |             |             | 0.00        | 0.00        |             | 0.11        |
| Nashville Warbler             |                  | 0.00        |             |             |             | 0.33        | 0.50        |             | 0.28        |
| Chestnut-sided Warbler        |                  | 0.33        |             |             |             | 0.00        | 0.00        |             | 0.11        |
| <b>Magnolia Warbler</b>       | <b>UCS</b>       | <b>0.00</b> |             |             |             | <b>1.00</b> | <b>0.50</b> |             | <b>0.50</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Schoodic

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <b>Black-throated Blue Warbler</b>                        | RS UCS           |             | 0.33        |             |             | 0.00        | 0.00        |             | 0.11        |
| <i>Yellow-rumped Warbler (Myrtle Warbler)</i>             |                  |             | 0.17        |             |             | 0.67        | 0.50        |             | 0.44        |
| <b>Black-throated Green Warbler</b>                       | RS UCS           |             | 1.00        |             |             | 3.33        | 1.50        |             | 1.94        |
| Palm Warbler                                              |                  |             | 0.00        |             |             | 0.00        | 0.17        |             | 0.06        |
| <b>Black-and-white Warbler</b>                            | RS UCS           |             | 0.17        |             |             | 0.00        | 0.00        |             | 0.06        |
| <b>American Redstart</b>                                  | RS UCS           |             | 0.00        |             |             | 0.17        | 0.00        |             | 0.06        |
| <b>Common Yellowthroat</b>                                | UCS              |             | 0.00        |             |             | 0.00        | 0.17        |             | 0.06        |
| Eastern Towhee                                            |                  |             | 0.17        |             |             | 0.00        | 0.00        |             | 0.06        |
| White-throated Sparrow                                    |                  |             | 0.00        |             |             | 0.67        | 0.33        |             | 0.33        |
| <i>Dark-eyed Junco (Slate-colored Junco)</i>              |                  |             | 0.33        |             |             | 1.50        | 0.33        |             | 0.72        |
| <b>Purple Finch</b>                                       | RS UCS           |             | 0.00        |             |             | 0.00        | 0.17        |             | 0.06        |
| White-winged Crossbill                                    |                  |             | 0.00        |             |             | 0.33        | 0.00        |             | 0.11        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             | 6           |             |             | 6           | 6           |             | 11.44       |
| <i>Species Richness:</i>                                  |                  |             | 6.33        |             |             | 17.67       | 10.33       |             | 37          |
| <i>Shannon Diversity:</i>                                 |                  |             | 17          |             |             | 24          | 20          |             |             |
|                                                           |                  |             | 2.60        |             |             | 2.83        | 2.76        |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Giant Slide Trail

| <i>Common Name</i>                     | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|----------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Ruffed Grouse</b>                   | <b>CBSD</b>      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.11</b> | <b>0.03</b> | <b>0.03</b> |
| Common Loon                            |                  | 0.00        | 0.10        | 0.00        |             |             | 0.00        | 0.03        | 0.03        |
| Mourning Dove                          |                  | 0.44        | 0.30        | 0.30        |             |             | 0.00        | 0.26        | 0.26        |
| <b>Hairy Woodpecker</b>                | <b>UCS</b>       | <b>0.11</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.03</b> | <b>0.03</b> |
| Pileated Woodpecker                    |                  | 0.11        | 0.10        | 0.10        |             |             | 0.22        | 0.13        | 0.13        |
| Alder Flycatcher                       |                  | 0.11        | 0.00        | 0.00        |             |             | 0.00        | 0.03        | 0.03        |
| Least Flycatcher                       |                  | 0.00        | 0.00        | 0.20        |             |             | 0.00        | 0.05        | 0.05        |
| <b>Blue-headed Vireo</b>               | <b>UCS</b>       | <b>0.78</b> | <b>0.50</b> | <b>0.60</b> | <b>0.60</b> | <b>0.00</b> | <b>0.00</b> | <b>0.47</b> | <b>0.47</b> |
| Blue Jay                               |                  | 0.44        | 0.10        | 0.50        |             |             | 0.00        | 0.26        | 0.26        |
| American Crow                          |                  | 0.33        | 0.50        | 0.30        |             |             | 0.00        | 0.28        | 0.28        |
| Common Raven                           |                  | 0.22        | 0.00        | 0.10        |             |             | 0.00        | 0.08        | 0.08        |
| <b>Black-capped Chickadee</b>          | <b>UCS</b>       | <b>0.11</b> | <b>0.60</b> | <b>0.90</b> | <b>0.90</b> | <b>0.33</b> | <b>0.33</b> | <b>0.49</b> | <b>0.49</b> |
| Red-breasted Nuthatch                  |                  | 0.67        | 0.40        | 0.60        |             |             | 0.11        | 0.44        | 0.44        |
| Brown Creeper                          |                  | 0.11        | 0.40        | 0.20        |             |             | 0.00        | 0.18        | 0.18        |
| <b>Winter Wren</b>                     | <b>UCS</b>       | <b>0.22</b> | <b>0.10</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.08</b> | <b>0.08</b> |
| Golden-crowned Kinglet                 |                  | 0.67        | 1.40        | 0.70        |             |             | 0.11        | 0.72        | 0.72        |
| <b>Veery</b>                           | <b>RC RS UCS</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.11</b> | <b>0.11</b> | <b>0.03</b> | <b>0.03</b> |
| Hermit Thrush                          |                  | 0.22        | 0.10        | 1.00        |             |             | 0.11        | 0.36        | 0.36        |
| American Robin                         |                  | 0.89        | 0.70        | 0.60        |             |             | 0.22        | 0.60        | 0.60        |
| <b>Brown Thrasher</b>                  | <b>RC</b>        | <b>0.11</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.03</b> | <b>0.03</b> |
| <b>Cedar Waxwing</b>                   | <b>UCS</b>       | <b>0.33</b> | <b>0.10</b> | <b>0.30</b> | <b>0.30</b> | <b>0.22</b> | <b>0.22</b> | <b>0.24</b> | <b>0.24</b> |
| <b>Black-throated Blue Warbler</b>     | <b>RS UCS</b>    | <b>0.00</b> | <b>0.70</b> | <b>0.50</b> | <b>0.50</b> | <b>0.22</b> | <b>0.22</b> | <b>0.36</b> | <b>0.36</b> |
| Yellow-rumped Warbler (Myrtle Warbler) |                  | 0.11        | 0.30        | 0.70        |             |             | 0.22        | 0.33        | 0.33        |
| <b>Black-throated Green Warbler</b>    | <b>RS UCS</b>    | <b>2.78</b> | <b>2.90</b> | <b>2.20</b> | <b>2.20</b> | <b>1.44</b> | <b>1.44</b> | <b>2.33</b> | <b>2.33</b> |
| <b>Blackburnian Warbler</b>            | <b>RS UCS</b>    | <b>0.33</b> | <b>0.50</b> | <b>0.50</b> | <b>0.50</b> | <b>0.00</b> | <b>0.00</b> | <b>0.33</b> | <b>0.33</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCS = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Giant Slide Trail

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Blackpoll Warbler                                         |                  |             | 0.00        | 0.00        | 0.00        |             | 0.11        |             | 0.03        |
| <i>Black-and-white Warbler</i>                            | <i>RS UCS</i>    |             | <b>0.33</b> | <b>0.10</b> | <b>0.20</b> |             | <b>1.22</b> |             | <b>0.46</b> |
| <i>Ovenbird</i>                                           | <i>UCS</i>       |             | <b>1.11</b> | <b>2.30</b> | <b>1.70</b> |             | <b>1.56</b> |             | <b>1.67</b> |
| Dark-eyed Junco (Slate-colored Junco)                     |                  |             | 0.11        | 0.10        | 0.50        |             | 0.00        |             | 0.18        |
| Purple Finch                                              | <i>RS UCS</i>    |             | <b>0.11</b> | <b>0.10</b> | <b>0.10</b> |             | <b>0.00</b> |             | <b>0.08</b> |
| Pine Siskin                                               | <i>CBSD</i>      |             | <b>0.56</b> | <b>1.00</b> | <b>0.10</b> |             | <b>0.00</b> |             | <b>0.41</b> |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 9           | 10          | 10          |             | 9           |             |             |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 11.33       | 13.40       | 12.90       |             | 6.33        |             | 10.99       |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 25          | 23          | 23          |             | 15          |             | 31          |
|                                                           |                  |             | 2.75        | 2.59        | 2.81        |             | 2.17        |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Witch Hole Pond

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |      |      |             |      |             |             | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|------|------|-------------|------|-------------|-------------|-------------|
|                                           |                  | 2006                                                      | 2007 | 2008 | 2009        | 2010 | 2011        | 2012        |             |
| <b>Ruffed Grouse</b>                      | <b>CBSD</b>      |                                                           |      |      | <b>0.00</b> |      | <b>0.11</b> | <b>0.00</b> | <b>0.04</b> |
| <b>Broad-winged Hawk</b>                  | <b>RS UCS</b>    |                                                           |      |      | <b>0.00</b> |      | <b>0.00</b> | <b>0.11</b> | <b>0.04</b> |
| <i>Mourning Dove</i>                      |                  |                                                           |      |      | 0.89        |      | 0.33        | 0.22        | 0.48        |
| Northern Flicker (Yellow-shafted Flicker) |                  |                                                           |      |      | 0.11        |      | 0.11        | 0.00        | 0.07        |
| Pileated Woodpecker                       |                  |                                                           |      |      | 0.00        |      | 0.00        | 0.11        | 0.04        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        |                                                           |      |      | <b>0.44</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.15</b> |
| Alder Flycatcher                          |                  |                                                           |      |      | 0.00        |      | 0.11        | 0.11        | 0.07        |
| Eastern Phoebe                            |                  |                                                           |      |      | 0.11        |      | 0.00        | 0.00        | 0.04        |
| Great Crested Flycatcher                  |                  |                                                           |      |      | 0.67        |      | 0.22        | 0.00        | 0.30        |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       |                                                           |      |      | <b>0.33</b> |      | <b>0.22</b> | <b>0.44</b> | <b>0.33</b> |
| Warbling Vireo                            |                  |                                                           |      |      | 0.00        |      | 0.11        | 0.00        | 0.04        |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       |                                                           |      |      | <b>1.22</b> |      | <b>0.22</b> | <b>0.44</b> | <b>0.63</b> |
| Blue Jay                                  |                  |                                                           |      |      | 0.44        |      | 0.00        | 0.00        | 0.15        |
| American Crow                             |                  |                                                           |      |      | 0.11        |      | 0.44        | 0.11        | 0.22        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       |                                                           |      |      | <b>0.89</b> |      | <b>0.00</b> | <b>0.11</b> | <b>0.33</b> |
| Red-breasted Nuthatch                     |                  |                                                           |      |      | 0.22        |      | 0.00        | 0.22        | 0.15        |
| Brown Creeper                             |                  |                                                           |      |      | 0.00        |      | 0.11        | 0.22        | 0.11        |
| Golden-crowned Kinglet                    |                  |                                                           |      |      | 0.00        |      | 0.00        | 0.11        | 0.04        |
| <b>Veery</b>                              | <b>RC RS UCS</b> |                                                           |      |      | <b>0.11</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> |
| Hermit Thrush                             |                  |                                                           |      |      | 0.78        |      | 0.22        | 0.33        | 0.44        |
| American Robin                            |                  |                                                           |      |      | 0.33        |      | 0.22        | 0.33        | 0.30        |
| Nashville Warbler                         |                  |                                                           |      |      | 0.11        |      | 0.22        | 0.22        | 0.19        |
| <b>Magnolia Warbler</b>                   | <b>UCS</b>       |                                                           |      |      | <b>0.00</b> |      | <b>0.11</b> | <b>0.00</b> | <b>0.04</b> |
| Yellow-rumped Warbler (Myrtle Warbler)    |                  |                                                           |      |      | 0.78        |      | 0.89        | 0.11        | 0.59        |
| <b>Black-throated Green Warbler</b>       | <b>RS UCS</b>    |                                                           |      |      | <b>1.89</b> |      | <b>1.11</b> | <b>1.78</b> | <b>1.59</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCS = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Witch Hole Pond

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Blackburnian Warbler                                      | RS UCS           |             |             |             | 0.00        |             | 0.00        | 0.11        | 0.04        |
| Pine Warbler                                              |                  |             |             |             | 0.00        |             | 0.00        | 0.33        | 0.11        |
| Black-and-white Warbler                                   | RS UCS           |             |             |             | 0.33        |             | 0.22        | 0.11        | 0.22        |
| Ovenbird                                                  | UCS              |             |             |             | 1.33        |             | 0.44        | 0.78        | 0.85        |
| Common Yellowthroat                                       | UCS              |             |             |             | 0.00        |             | 0.11        | 0.11        | 0.07        |
| Scarlet Tanager                                           | RC               |             |             |             | 0.00        |             | 0.00        | 0.11        | 0.04        |
| Song Sparrow                                              | UCS              |             |             |             | 0.00        |             | 0.00        | 0.11        | 0.04        |
| Swamp Sparrow                                             |                  |             |             |             | 0.00        |             | 0.00        | 0.11        | 0.04        |
| Dark-eyed Junco (Slate-colored Junco)                     |                  |             |             |             | 0.11        |             | 0.00        | 0.00        | 0.04        |
| Rose-breasted Grosbeak                                    |                  |             |             |             | 0.00        |             | 0.00        | 0.11        | 0.04        |
| Baltimore Oriole                                          |                  |             |             |             | 0.00        |             | 0.11        | 0.00        | 0.04        |
| Pine Siskin                                               | CBSD             |             |             |             | 0.11        |             | 0.00        | 0.00        | 0.04        |
| American Goldfinch                                        |                  |             |             |             | 0.22        |             | 0.00        | 0.33        | 0.19        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             | 9           |             | 9           | 9           |             |
|                                                           |                  |             |             |             | 11.56       |             | 5.67        | 7.22        | 8.15        |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             |             |             | 22          |             | 20          | 26          | 38          |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             |             |             | 2.73        |             | 2.68        | 2.82        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove Center

| <i>Common Name</i>                     | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|----------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Common Loon                            |                  | 0.00        | 0.00        | 0.00        | 0.17        | 0.00        | 0.00        | 0.00        | 0.03        |
| Herring Gull                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.00        | 0.03        |
| Mourning Dove                          |                  | 1.00        | 1.33        | 0.00        | 0.17        | 0.00        | 0.00        | 0.00        | 0.42        |
| Downy Woodpecker                       |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.17        | 0.00        | 0.06        |
| <b>Hairy Woodpecker</b>                | <b>UCS</b>       | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> | <b>0.17</b> | <b>0.83</b> | <b>0.33</b> | <b>0.17</b> | <b>0.28</b> |
| Pileated Woodpecker                    |                  | 0.50        | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.17        | 0.14        |
| Yellow-bellied Flycatcher              |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.03        |
| Least Flycatcher                       |                  | 0.50        | 0.33        | 0.00        | 0.50        | 0.50        | 0.00        | 0.00        | 0.31        |
| <b>Blue-headed Vireo</b>               | <b>UCS</b>       | <b>0.33</b> | <b>1.00</b> | <b>0.67</b> | <b>0.33</b> | <b>0.33</b> | <b>0.50</b> | <b>0.17</b> | <b>0.50</b> |
| Blue Jay                               |                  | 0.00        | 0.17        | 0.00        | 0.00        | 0.17        | 0.00        | 0.00        | 0.06        |
| American Crow                          |                  | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.17        | 0.08        |
| Common Raven                           |                  | 0.50        | 0.00        | 0.00        | 1.00        | 0.50        | 0.33        | 0.33        | 0.44        |
| <b>Black-capped Chickadee</b>          | <b>UCS</b>       | <b>0.33</b> | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.17</b> | <b>0.17</b> | <b>0.14</b> |
| Red-breasted Nuthatch                  |                  | 0.50        | 0.17        | 0.00        | 0.00        | 0.33        | 0.67        | 1.33        | 0.50        |
| Brown Creeper                          |                  | 0.17        | 0.00        | 0.00        | 0.00        | 0.33        | 0.17        | 0.00        | 0.11        |
| <b>Winter Wren</b>                     | <b>UCS</b>       | <b>0.33</b> | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> | <b>0.50</b> | <b>0.67</b> | <b>0.00</b> | <b>0.28</b> |
| Golden-crowned Kinglet                 |                  | 0.17        | 0.50        | 0.00        | 0.00        | 0.00        | 0.50        | 0.00        | 0.19        |
| Swainson's Thrush                      |                  | 0.33        | 0.00        | 0.00        | 0.00        | 0.33        | 0.33        | 0.67        | 0.28        |
| Hermit Thrush                          |                  | 0.50        | 0.00        | 0.00        | 0.00        | 0.33        | 0.17        | 0.83        | 0.31        |
| <b>Magnolia Warbler</b>                | <b>UCS</b>       | <b>0.33</b> | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.08</b> |
| Yellow-rumped Warbler (Myrtle Warbler) |                  | 0.00        | 0.00        | 0.00        | 0.17        | 0.00        | 0.00        | 0.17        | 0.06        |
| <b>Black-throated Green Warbler</b>    | <b>RS UCS</b>    | <b>1.33</b> | <b>1.00</b> | <b>1.00</b> | <b>1.00</b> | <b>1.17</b> | <b>1.33</b> | <b>1.00</b> | <b>1.14</b> |
| <b>Blackburnian Warbler</b>            | <b>RS UCS</b>    | <b>0.17</b> | <b>0.33</b> | <b>0.17</b> | <b>0.17</b> | <b>0.00</b> | <b>0.17</b> | <b>0.33</b> | <b>0.19</b> |
| Pine Warbler                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.17        | 0.00        | 0.00        | 0.03        |
| <b>Ovenbird</b>                        | <b>UCS</b>       | <b>0.33</b> | <b>0.50</b> | <b>1.83</b> | <b>0.50</b> | <b>0.50</b> | <b>1.17</b> | <b>0.50</b> | <b>0.81</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove Center

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|---------------------------------------------|------------------|-------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Dark-eyed Junco (Slate-colored Junco)       |                  |             | 0.17                                                      | 0.17        | 0.33        | 0.17        | 0.17        | 0.17        | 0.17        | 0.19        |
| <b>Purple Finch</b>                         | <b>RS UCS</b>    |             | <b>0.50</b>                                               | <b>0.17</b> | <b>0.50</b> | <b>0.17</b> | <b>0.00</b> | <b>0.17</b> | <b>0.17</b> | <b>0.25</b> |
| White-winged Crossbill                      |                  |             | 0.00                                                      | 0.00        | 0.00        | 0.17        | 0.00        | 0.17        | 0.17        | 0.06        |
| <b>Pine Siskin</b>                          | <b>CBSD</b>      |             | <b>0.00</b>                                               | <b>0.33</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.06</b> |
| <i>Points Surveyed:</i>                     |                  |             |                                                           |             |             |             |             |             |             |             |
|                                             |                  |             | 6                                                         | 6           | 6           | 6           | 6           | 6           | 6           |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  |             | 8.33                                                      | 6.50        | 6.67        | 6.67        | 7.33        | 6.67        | 6.67        | 7.03        |
| <i>Species Richness:</i>                    |                  |             | 20                                                        | 15          | 12          | 17          | 18          | 17          | 17          | 29          |
| <i>Shannon Diversity:</i>                   |                  |             | 2.80                                                      | 2.41        | 2.15        | 2.64        | 2.60        | 2.64        | 2.51        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove East

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Herring Gull                              |                  | 0.14        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.05        |
| Mourning Dove                             |                  | 1.29        | 0.43        | 0.14        | 0.14        | 0.29        | 0.14        | 0.57        | 0.48        |
| Barred Owl                                |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.02        |
| Ruby-throated Hummingbird                 |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.02        |
| Downy Woodpecker                          |                  | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Hairy Woodpecker</b>                   | <b>UCS</b>       | <b>0.00</b> | <b>0.00</b> | <b>0.43</b> | <b>0.14</b> | <b>0.14</b> | <b>0.00</b> | <b>0.14</b> | <b>0.12</b> |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.02        |
| Pileated Woodpecker                       |                  | 0.14        | 0.14        | 0.00        | 0.00        | 0.29        | 0.14        | 0.00        | 0.12        |
| Least Flycatcher                          |                  | 0.00        | 0.00        | 0.14        | 0.14        | 0.00        | 0.00        | 0.00        | 0.02        |
| Eastern Phoebe                            |                  | 0.00        | 0.00        | 0.14        | 0.14        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       | <b>0.14</b> | <b>0.43</b> | <b>0.43</b> | <b>0.14</b> | <b>0.14</b> | <b>0.14</b> | <b>0.14</b> | <b>0.24</b> |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.00</b> | <b>0.05</b> |
| Blue Jay                                  |                  | 0.14        | 0.29        | 0.00        | 0.00        | 0.14        | 0.29        | 0.43        | 0.21        |
| American Crow                             |                  | 0.86        | 0.86        | 0.71        | 0.71        | 1.57        | 0.29        | 0.14        | 0.74        |
| Common Raven                              |                  | 0.57        | 0.29        | 0.29        | 0.29        | 0.29        | 0.43        | 0.00        | 0.31        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       | <b>0.29</b> | <b>0.14</b> | <b>0.14</b> | <b>0.14</b> | <b>0.14</b> | <b>0.14</b> | <b>0.00</b> | <b>0.14</b> |
| Red-breasted Nuthatch                     |                  | 0.71        | 0.14        | 0.43        | 0.43        | 0.86        | 0.43        | 0.57        | 0.52        |
| Brown Creeper                             |                  | 0.00        | 0.57        | 0.43        | 0.43        | 0.29        | 0.14        | 0.14        | 0.26        |
| <b>Winter Wren</b>                        | <b>UCS</b>       | <b>0.43</b> | <b>0.43</b> | <b>0.14</b> | <b>0.14</b> | <b>0.43</b> | <b>0.43</b> | <b>0.14</b> | <b>0.33</b> |
| Golden-crowned Kinglet                    |                  | 0.43        | 0.29        | 0.57        | 0.57        | 0.14        | 1.00        | 0.14        | 0.43        |
| Swainson's Thrush                         |                  | 0.29        | 0.14        | 0.00        | 0.00        | 0.00        | 0.14        | 0.14        | 0.12        |
| Hermit Thrush                             |                  | 0.29        | 0.00        | 0.57        | 0.57        | 0.14        | 0.14        | 0.29        | 0.24        |
| American Robin                            |                  | 0.57        | 0.00        | 0.29        | 0.29        | 0.43        | 0.29        | 0.29        | 0.31        |
| <b>Northern Parula</b>                    | <b>UCS</b>       | <b>0.14</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| <b>Magnolia Warbler</b>                   | <b>UCS</b>       | <b>0.29</b> | <b>0.43</b> | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.43</b> | <b>0.29</b> | <b>0.26</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove East

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <b>Black-throated Blue Warbler</b>                        | RS UCS           |             | 0.00        | 0.00        | 0.43        | 0.00        | 0.00        | 0.14        | 0.10        |
| <i>Yellow-rumped Warbler (Myrtle Warbler)</i>             |                  |             | 0.29        | 0.57        | 0.57        | 0.71        | 0.14        | 0.14        | 0.40        |
| <b>Black-throated Green Warbler</b>                       | RS UCS           |             | 1.43        | 1.14        | 0.71        | 1.71        | 1.14        | 1.29        | 1.24        |
| <b>Blackburnian Warbler</b>                               | RS UCS           |             | 0.43        | 0.29        | 0.14        | 0.29        | 0.29        | 0.14        | 0.26        |
| <i>Blackpoll Warbler</i>                                  |                  |             | 0.00        | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Ovenbird</b>                                           | UCS              |             | 1.14        | 1.00        | 1.00        | 0.86        | 0.43        | 0.71        | 0.86        |
| <b>Common Yellowthroat</b>                                | UCS              |             | 0.00        | 0.14        | 0.00        | 0.00        | 0.14        | 0.14        | 0.07        |
| <i>Swamp Sparrow</i>                                      |                  |             | 0.00        | 0.00        | 0.29        | 0.00        | 0.00        | 0.14        | 0.07        |
| <i>Dark-eyed Junco (Slate-colored Junco)</i>              |                  |             | 0.43        | 0.29        | 0.71        | 0.71        | 0.57        | 0.86        | 0.60        |
| <i>Northern Cardinal</i>                                  |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.02        |
| <i>Red-winged Blackbird</i>                               |                  |             | 0.14        | 0.29        | 0.14        | 0.00        | 0.14        | 0.14        | 0.14        |
| <i>Common Grackle</i>                                     |                  |             | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Purple Finch</b>                                       | RS UCS           |             | 0.14        | 0.14        | 0.14        | 0.43        | 0.00        | 0.00        | 0.14        |
| <b>Pine Siskin</b>                                        | CBSD             |             | 0.43        | 0.43        | 0.00        | 0.14        | 0.14        | 0.00        | 0.19        |
| <i>American Goldfinch</i>                                 |                  |             | 0.00        | 0.00        | 0.00        | 0.00        | 0.29        | 0.00        | 0.05        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <b>Ave # Birds Per Point Count Station:</b>               |                  | 7           | 7           | 7           | 7           | 7           | 7           | 7           |             |
|                                                           |                  | 11.29       | 9.14        | 9.14        | 9.14        | 10.86       | 8.14        | 7.14        | 9.29        |
| <b>Species Richness:</b>                                  |                  | 25          | 24          | 24          | 24          | 26          | 26          | 22          | 40          |
| <b>Shannon Diversity:</b>                                 |                  | 2.94        | 2.96        | 2.99        | 2.99        | 2.88        | 3.00        | 2.77        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove West

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Ruffed Grouse</b>                      | <b>CBSD</b>      |             |             |             |             |             | <b>0.00</b> | <b>0.17</b> | <b>0.08</b> |
| Herring Gull                              |                  |             |             |             |             |             | 0.20        | 0.00        | 0.10        |
| Mourning Dove                             |                  |             |             |             |             |             | 1.40        | 0.00        | 0.70        |
| <b>Hairy Woodpecker</b>                   | <b>UCS</b>       |             |             |             |             |             | <b>0.00</b> | <b>0.50</b> | <b>0.25</b> |
| Northern Flicker (Yellow-shafted Flicker) |                  |             |             |             |             |             | 0.20        | 0.17        | 0.18        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        |             |             |             |             |             | <b>0.20</b> | <b>0.00</b> | <b>0.10</b> |
| Least Flycatcher                          |                  |             |             |             |             |             | 0.00        | 0.17        | 0.08        |
| <b>Blue-headed Vireo</b>                  | <b>UCS</b>       |             |             |             |             |             | <b>0.00</b> | <b>0.33</b> | <b>0.17</b> |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>       |             |             |             |             |             | <b>0.00</b> | <b>0.17</b> | <b>0.08</b> |
| American Crow                             |                  |             |             |             |             |             | 0.60        | 0.00        | 0.30        |
| Common Raven                              |                  |             |             |             |             |             | 0.20        | 0.00        | 0.10        |
| <b>Black-capped Chickadee</b>             | <b>UCS</b>       |             |             |             |             |             | <b>0.60</b> | <b>0.17</b> | <b>0.38</b> |
| Red-breasted Nuthatch                     |                  |             |             |             |             |             | 0.20        | 0.33        | 0.27        |
| Brown Creeper                             |                  |             |             |             |             |             | 0.00        | 0.50        | 0.25        |
| <b>Winter Wren</b>                        | <b>UCS</b>       |             |             |             |             |             | <b>0.20</b> | <b>0.00</b> | <b>0.10</b> |
| Golden-crowned Kinglet                    |                  |             |             |             |             |             | 0.00        | 0.67        | 0.33        |
| Swainson's Thrush                         |                  |             |             |             |             |             | 1.20        | 0.83        | 1.02        |
| Hermit Thrush                             |                  |             |             |             |             |             | 0.00        | 0.67        | 0.33        |
| American Robin                            |                  |             |             |             |             |             | 0.00        | 0.17        | 0.08        |
| <b>Magnolia Warbler</b>                   | <b>UCS</b>       |             |             |             |             |             | <b>0.20</b> | <b>0.17</b> | <b>0.18</b> |
| <b>Black-throated Blue Warbler</b>        | <b>RS UCS</b>    |             |             |             |             |             | <b>0.20</b> | <b>0.17</b> | <b>0.18</b> |
| Yellow-rumped Warbler (Myrtle Warbler)    |                  |             |             |             |             |             | 0.20        | 0.17        | 0.18        |
| <b>Black-throated Green Warbler</b>       | <b>RS UCS</b>    |             |             |             |             |             | <b>0.40</b> | <b>1.50</b> | <b>0.95</b> |
| <b>Blackburnian Warbler</b>               | <b>RS UCS</b>    |             |             |             |             |             | <b>0.20</b> | <b>0.17</b> | <b>0.18</b> |
| <b>Black-and-white Warbler</b>            | <b>RS UCS</b>    |             |             |             |             |             | <b>0.00</b> | <b>0.33</b> | <b>0.17</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCS = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Seal Cove West

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Ovenbird                                                  | UCS              |             |             |             |             | 1.00        | 1.00        | 1.00        | 1.00        |
| Song Sparrow                                              | UCS              |             |             |             |             | 0.00        | 0.17        | 0.17        | 0.08        |
| White-throated Sparrow                                    |                  |             |             |             |             | 0.00        | 0.17        | 0.17        | 0.08        |
| Dark-eyed Junco (Slate-colored Junco)                     |                  |             |             |             |             | 0.00        | 0.33        | 0.33        | 0.17        |
| Purple Finch                                              | RS UCS           |             |             |             |             | 0.20        | 0.00        | 0.00        | 0.10        |
| Pine Siskin                                               | CBSD             |             |             |             |             | 0.00        | 0.17        | 0.17        | 0.08        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             |             |             |             | 5           | 6           |             |             |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             |             |             |             | 7.40        | 9.17        |             | 8.28        |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             |             |             |             | 17          | 24          |             | 31          |
|                                                           |                  |             |             |             |             | 2.52        | 2.88        |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Acadia NP

#### ACAD Youngs Mtn

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |      |      |             |      |      |      | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|------|------|-------------|------|------|------|-------------|
|                                             |                  | 2006                                                      | 2007 | 2008 | 2009        | 2010 | 2011 | 2012 |             |
| Downy Woodpecker                            |                  |                                                           |      |      | 0.14        |      |      |      | 0.14        |
| <b>Eastern Wood-Pewee</b>                   | <b>RC</b>        |                                                           |      |      | <b>0.29</b> |      |      |      | <b>0.29</b> |
| Great Crested Flycatcher                    |                  |                                                           |      |      | 0.29        |      |      |      | 0.29        |
| <b>Red-eyed Vireo</b>                       | <b>UCS</b>       |                                                           |      |      | <b>0.57</b> |      |      |      | <b>0.57</b> |
| Blue Jay                                    |                  |                                                           |      |      | 1.14        |      |      |      | 1.14        |
| <b>Black-capped Chickadee</b>               | <b>UCS</b>       |                                                           |      |      | <b>1.29</b> |      |      |      | <b>1.29</b> |
| Brown Creeper                               |                  |                                                           |      |      | 0.14        |      |      |      | 0.14        |
| Swainson's Thrush                           |                  |                                                           |      |      | 0.14        |      |      |      | 0.14        |
| Hermit Thrush                               |                  |                                                           |      |      | 2.57        |      |      |      | 2.57        |
| <b>Cedar Waxwing</b>                        | <b>UCS</b>       |                                                           |      |      | <b>0.14</b> |      |      |      | <b>0.14</b> |
| <b>Black-throated Blue Warbler</b>          | <b>RS UCS</b>    |                                                           |      |      | <b>0.57</b> |      |      |      | <b>0.57</b> |
| Yellow-rumped Warbler (Myrtle Warbler)      |                  |                                                           |      |      | 0.57        |      |      |      | 0.57        |
| <b>Black-throated Green Warbler</b>         | <b>RS UCS</b>    |                                                           |      |      | <b>1.14</b> |      |      |      | <b>1.14</b> |
| <b>Black-and-white Warbler</b>              | <b>RS UCS</b>    |                                                           |      |      | <b>0.86</b> |      |      |      | <b>0.86</b> |
| <b>Ovenbird</b>                             | <b>UCS</b>       |                                                           |      |      | <b>1.14</b> |      |      |      | <b>1.14</b> |
| <b>Points Surveyed:</b>                     |                  |                                                           |      |      |             |      |      |      |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  |                                                           |      |      | 7           |      |      |      |             |
|                                             |                  |                                                           |      |      | 11.00       |      |      |      | 11.00       |
| <b>Species Richness:</b>                    |                  |                                                           |      |      |             |      |      |      |             |
|                                             |                  |                                                           |      |      | 15          |      |      |      | 15          |
| <b>Shannon Diversity:</b>                   |                  |                                                           |      |      |             |      |      |      |             |
|                                             |                  |                                                           |      |      | 2.37        |      |      |      |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B. Site Summaries (continued).**

***Marsh-Billings-Rockefeller NHP***

***MABI East***

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <b>Broad-winged Hawk</b>                                  | RS UCS           | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.01        |
| Mourning Dove                                             |                  | 0.20        | 0.00        | 0.10        | 0.20        | 0.40        | 0.00        | 0.10        | 0.14        |
| Barred Owl                                                |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.03        |
| <b>Chimney Swift</b>                                      | CBSD             | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Yellow-bellied Sapsucker</b>                           | UCS              | 0.10        | 0.30        | 0.30        | 0.00        | 0.20        | 0.30        | 0.30        | 0.21        |
| Downy Woodpecker                                          |                  | 0.20        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.10        | 0.07        |
| <b>Hairy Woodpecker</b>                                   | UCS              | 0.00        | 0.20        | 0.30        | 0.00        | 0.10        | 0.00        | 0.00        | 0.09        |
| Pileated Woodpecker                                       |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.20        | 0.06        |
| <b>Eastern Wood-Pewee</b>                                 | RC               | 0.10        | 0.30        | 0.20        | 0.40        | 0.30        | 0.30        | 0.20        | 0.26        |
| Great Crested Flycatcher                                  |                  | 0.00        | 0.10        | 0.10        | 0.00        | 0.00        | 0.10        | 0.10        | 0.06        |
| <b>Blue-headed Vireo</b>                                  | UCS              | 0.00        | 0.10        | 0.30        | 0.20        | 0.30        | 0.00        | 0.30        | 0.17        |
| <b>Red-eyed Vireo</b>                                     | UCS              | 2.60        | 1.80        | 1.70        | 1.20        | 1.40        | 1.90        | 1.20        | 1.69        |
| Blue Jay                                                  |                  | 0.20        | 0.80        | 0.40        | 0.50        | 0.10        | 0.40        | 0.80        | 0.46        |
| American Crow                                             |                  | 0.40        | 0.40        | 0.20        | 0.20        | 0.20        | 0.40        | 0.50        | 0.33        |
| Common Raven                                              |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.03        |
| <b>Black-capped Chickadee</b>                             | UCS              | 0.30        | 1.10        | 0.40        | 0.60        | 0.30        | 0.70        | 0.20        | 0.51        |
| Tufted Titmouse                                           |                  | 0.10        | 0.00        | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.04        |
| Red-breasted Nuthatch                                     |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.01        |
| White-breasted Nuthatch                                   |                  | 0.20        | 0.20        | 0.10        | 0.00        | 0.20        | 0.20        | 0.10        | 0.14        |
| Brown Creeper                                             |                  | 0.70        | 0.40        | 0.40        | 0.50        | 0.20        | 0.10        | 0.10        | 0.34        |
| <b>Winter Wren</b>                                        | UCS              | 0.00        | 0.00        | 0.40        | 0.10        | 0.10        | 0.00        | 0.00        | 0.09        |
| Golden-crowned Kinglet                                    |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Veery</b>                                              | RC RS UCS        | 0.20        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.06        |
| Hermit Thrush                                             |                  | 0.50        | 0.70        | 1.00        | 0.50        | 0.50        | 0.50        | 0.90        | 0.66        |
| <b>Wood Thrush</b>                                        | RC UCC           | 0.00        | 0.00        | 0.30        | 0.00        | 0.50        | 0.20        | 0.00        | 0.14        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Marsh-Billings-Rockefeller NHP

#### MABI East

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <i>American Robin</i>                                     |                  | 0.40        | 0.40        | 0.20        | 0.50        | 0.70        | 0.10        | 0.50        | 0.40        |
| <b>Black-throated Blue Warbler</b>                        | RS UCS           | 0.00        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.30        | 0.07        |
| <b>Black-throated Green Warbler</b>                       | RS UCS           | 0.80        | 0.70        | 0.50        | 0.40        | 0.50        | 0.80        | 0.70        | 0.63        |
| <b>Blackburnian Warbler</b>                               | RS UCS           | 0.80        | 0.70        | 0.70        | 0.80        | 0.80        | 0.70        | 0.70        | 0.74        |
| <i>Pine Warbler</i>                                       |                  | 0.00        | 0.10        | 0.20        | 0.10        | 0.30        | 0.30        | 0.10        | 0.16        |
| <b>Black-and-white Warbler</b>                            | RS UCS           | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Ovenbird</b>                                           | UCS              | 2.60        | 3.70        | 3.20        | 3.00        | 2.60        | 2.80        | 2.70        | 2.94        |
| <i>Louisiana Waterthrush</i>                              |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.06        |
| <b>Common Yellowthroat</b>                                | UCS              | 0.00        | 0.10        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.04        |
| <b>Scarlet Tanager</b>                                    | RC               | 0.20        | 0.20        | 0.40        | 0.60        | 0.50        | 0.50        | 0.10        | 0.36        |
| <i>Chipping Sparrow</i>                                   |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.01        |
| <b>Song Sparrow</b>                                       | UCS              | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.00        | 0.03        |
| <i>Dark-eyed Junco (Slate-colored Junco)</i>              |                  | 0.00        | 0.30        | 0.00        | 0.10        | 0.20        | 0.00        | 0.00        | 0.09        |
| <i>Rose-breasted Grosbeak</i>                             |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.03        |
| <i>Indigo Bunting</i>                                     |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.04        |
| <i>Brown-headed Cowbird</i>                               |                  | 0.10        | 0.10        | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.06        |
| <i>American Goldfinch</i>                                 |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 10          | 10          | 10          | 10          | 10          | 10          | 10          |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  | 11.00       | 13.80       | 11.70       | 10.40       | 10.70       | 11.20       | 10.40       | 11.31       |
| <i>Species Richness:</i>                                  |                  | 22          | 30          | 24          | 22          | 24          | 25          | 23          | 42          |
| <i>Shannon Diversity:</i>                                 |                  | 2.45        | 2.73        | 2.62        | 2.55        | 2.71        | 2.63        | 2.60        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Marsh-Billings-Rockefeller NHP

#### MABI Northwest

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Broad-winged Hawk                                         | RS UCS           | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Mourning Dove                                             |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.30        | 0.00        | 0.00        | 0.10        |
| Barred Owl                                                |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.01        |
| Yellow-bellied Sapsucker                                  | UCS              | 0.00        | 0.30        | 0.00        | 0.50        | 0.30        | 0.40        | 0.00        | 0.21        |
| Downy Woodpecker                                          |                  | 0.00        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.03        |
| Hairy Woodpecker                                          | UCS              | 0.40        | 0.30        | 0.20        | 0.00        | 0.00        | 0.10        | 0.20        | 0.17        |
| Northern Flicker (Yellow-shafted Flicker)                 |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.03        |
| Pileated Woodpecker                                       |                  | 0.20        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.04        |
| Eastern Wood-Pewee                                        | RC               | 0.80        | 0.80        | 1.40        | 0.60        | 0.70        | 1.00        | 0.70        | 0.86        |
| Least Flycatcher                                          |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.01        |
| Great Crested Flycatcher                                  |                  | 0.20        | 0.00        | 0.80        | 0.20        | 0.30        | 0.10        | 0.10        | 0.24        |
| Blue-headed Vireo                                         | UCS              | 0.70        | 0.30        | 0.00        | 0.10        | 0.20        | 0.20        | 0.00        | 0.21        |
| Red-eyed Vireo                                            | UCS              | 2.70        | 1.70        | 3.80        | 3.20        | 2.80        | 2.80        | 2.30        | 2.76        |
| Blue Jay                                                  |                  | 0.80        | 0.60        | 0.60        | 0.60        | 0.50        | 0.70        | 0.60        | 0.63        |
| American Crow                                             |                  | 0.00        | 0.30        | 0.20        | 0.30        | 0.20        | 0.30        | 0.20        | 0.21        |
| Common Raven                                              |                  | 0.10        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        | 0.07        |
| Black-capped Chickadee                                    | UCS              | 0.20        | 0.40        | 0.60        | 0.40        | 0.30        | 0.20        | 0.00        | 0.30        |
| Red-breasted Nuthatch                                     |                  | 0.00        | 0.20        | 0.00        | 0.10        | 0.30        | 0.10        | 0.00        | 0.10        |
| White-breasted Nuthatch                                   |                  | 0.40        | 0.20        | 0.00        | 0.40        | 0.10        | 0.10        | 0.10        | 0.19        |
| Brown Creeper                                             |                  | 0.30        | 0.50        | 0.20        | 0.30        | 0.30        | 0.10        | 0.00        | 0.24        |
| Winter Wren                                               | UCS              | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.04        |
| Golden-crowned Kinglet                                    |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.03        |
| Veery                                                     | RC RS UCS        | 0.10        | 0.10        | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        |
| Hermit Thrush                                             |                  | 0.80        | 0.40        | 0.80        | 1.40        | 1.20        | 1.10        | 0.80        | 0.93        |
| Wood Thrush                                               | RC UCC           | 0.70        | 0.60        | 0.60        | 0.40        | 0.50        | 0.40        | 0.80        | 0.57        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Marsh-Billings-Rockefeller NHP

#### MABI Northwest

| <i>Common Name</i>                           | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|----------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>American Robin</i>                        |                  | 1.20        | 0.40        | 0.20        | 0.50        | 0.50        | 0.70        | 0.50        | 0.57        |
| <b>Cedar Waxwing</b>                         | UCS              | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        | 0.10        | 0.07        |
| Chestnut-sided Warbler                       |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.03        |
| <b>Black-throated Blue Warbler</b>           | RS UCS           | 0.40        | 0.50        | 0.60        | 0.60        | 0.40        | 0.30        | 0.40        | 0.46        |
| Yellow-rumped Warbler (Myrtle Warbler)       |                  | 0.00        | 0.00        | 0.00        | 0.20        | 0.20        | 0.00        | 0.00        | 0.06        |
| <b>Black-throated Green Warbler</b>          | RS UCS           | 1.50        | 0.60        | 1.20        | 0.60        | 0.50        | 1.00        | 0.40        | 0.83        |
| <b>Blackburnian Warbler</b>                  | RS UCS           | 0.90        | 0.70        | 0.00        | 0.60        | 0.10        | 0.30        | 0.10        | 0.39        |
| Pine Warbler                                 |                  | 0.00        | 0.00        | 0.00        | 0.30        | 0.10        | 0.00        | 0.00        | 0.06        |
| <b>Black-and-white Warbler</b>               | RS UCS           | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.03        |
| <b>American Redstart</b>                     | RS UCS           | 0.10        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.04        |
| <b>Ovenbird</b>                              | UCS              | 4.50        | 2.60        | 4.80        | 4.60        | 3.50        | 4.40        | 4.30        | 4.10        |
| Mourning Warbler                             |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.20        | 0.00        | 0.00        | 0.04        |
| <b>Common Yellowthroat</b>                   | UCS              | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.03        |
| <b>Scarlet Tanager</b>                       | RC               | 0.30        | 0.80        | 0.00        | 0.50        | 0.40        | 0.50        | 0.80        | 0.47        |
| <i>Dark-eyed Junco (Slate-colored Junco)</i> |                  | 0.60        | 0.20        | 0.00        | 0.20        | 0.80        | 1.00        | 0.60        | 0.49        |
| Rose-breasted Grosbeak                       |                  | 0.60        | 0.10        | 0.00        | 0.50        | 0.30        | 0.00        | 0.20        | 0.24        |
| Common Grackle                               |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Brown-headed Cowbird                         |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| <b>Purple Finch</b>                          | RS UCS           | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| American Goldfinch                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.01        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Marsh-Billings-Rockefeller NHP***

***MABI Northwest***

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |  |  |  | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|--|-------------|
|                                             |                  | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> |  |  |  |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  | 10                                                        | 10          | 5           | 10          | 10          | 10          | 10          |  |  |  | 16.06       |
|                                             |                  | 18.90                                                     | 13.60       | 17.00       | 17.50       | 15.20       | 16.40       | 13.80       |  |  |  |             |
| <i>Species Richness:</i>                    |                  | 27                                                        | 31          | 18          | 27          | 27          | 26          | 22          |  |  |  | 45          |
| <i>Shannon Diversity:</i>                   |                  | 2.72                                                      | 2.98        | 2.30        | 2.65        | 2.72        | 2.57        | 2.43        |  |  |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Marsh-Billings-Rockefeller NHP

#### MABI South

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Wild Turkey                               |                  | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        | 0.00        | 0.06        |
| Mourning Dove                             |                  | 0.20        | 0.40        | 0.20        | 0.40        | 0.20        | 0.00        | 0.00        | 0.20        |
| Barred Owl                                |                  | 0.00        | 1.20        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        |
| Yellow-bellied Sapsucker                  | UCS              | 0.40        | 0.40        | 0.20        | 0.00        | 0.40        | 0.60        | 0.40        | 0.34        |
| Downy Woodpecker                          |                  | 0.40        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.11        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.06        |
| Pileated Woodpecker                       |                  | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.20        | 0.00        | 0.06        |
| Eastern Wood-Pewee                        | RC               | 1.20        | 1.40        | 0.40        | 0.60        | 0.40        | 0.60        | 0.20        | 0.69        |
| Least Flycatcher                          |                  | 0.20        | 0.60        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        |
| Great Crested Flycatcher                  |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.06        |
| Eastern Kingbird                          | RC               | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Blue-headed Vireo                         | UCS              | 0.20        | 0.20        | 0.20        | 0.00        | 0.00        | 0.40        | 0.20        | 0.17        |
| Red-eyed Vireo                            | UCS              | 1.40        | 2.00        | 0.20        | 1.20        | 3.00        | 1.60        | 1.60        | 1.57        |
| Blue Jay                                  |                  | 0.80        | 1.40        | 0.20        | 0.60        | 0.20        | 0.40        | 0.80        | 0.63        |
| American Crow                             |                  | 0.20        | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.09        |
| Common Raven                              |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.20        | 0.00        | 0.06        |
| Black-capped Chickadee                    | UCS              | 0.60        | 1.20        | 0.60        | 0.80        | 0.20        | 0.20        | 0.40        | 0.57        |
| Tufted Titmouse                           |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Red-breasted Nuthatch                     |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        | 0.20        | 0.00        | 0.09        |
| White-breasted Nuthatch                   |                  | 0.40        | 0.80        | 0.20        | 1.00        | 0.00        | 0.20        | 0.40        | 0.43        |
| Brown Creeper                             |                  | 0.60        | 0.80        | 0.60        | 0.20        | 0.40        | 0.00        | 0.60        | 0.46        |
| Golden-crowned Kinglet                    |                  | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Veery                                     | RC RS UCS        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.06        |
| Hermit Thrush                             |                  | 0.00        | 1.40        | 1.40        | 1.00        | 0.00        | 0.20        | 0.20        | 0.60        |
| Wood Thrush                               | RC UCC           | 0.60        | 0.00        | 0.20        | 0.00        | 0.40        | 0.20        | 0.20        | 0.23        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B. Site Summaries (continued).**

***Marsh-Billings-Rockefeller NHP***

***MABI South***

| <i>Common Name</i>                            | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>American Robin</i>                         |                  | 0.60        | 1.60        | 0.80        | 0.60        | 1.20        | 0.00        | 1.00        | 0.83        |
| <i>Cedar Waxwing</i>                          | UCS              | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.06        |
| <i>Nashville Warbler</i>                      |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| <i>Chestnut-sided Warbler</i>                 |                  | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        | 0.20        | 0.09        |
| <i>Black-throated Blue Warbler</i>            | RS UCS           | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.60        | 0.09        |
| <i>Yellow-rumped Warbler (Myrtle Warbler)</i> |                  | 0.40        | 0.40        | 0.20        | 0.00        | 0.00        | 0.20        | 0.00        | 0.17        |
| <i>Black-throated Green Warbler</i>           | RS UCS           | 0.00        | 1.00        | 0.20        | 0.20        | 0.40        | 0.20        | 0.20        | 0.31        |
| <i>Blackburnian Warbler</i>                   | RS UCS           | 0.20        | 0.60        | 0.60        | 0.60        | 0.60        | 0.80        | 0.40        | 0.54        |
| <i>Pine Warbler</i>                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.20        | 0.40        | 0.11        |
| <i>Black-and-white Warbler</i>                | RS UCS           | 0.40        | 0.20        | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.14        |
| <i>American Redstart</i>                      | RS UCS           | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| <i>Ovenbird</i>                               | UCS              | 2.60        | 4.40        | 2.60        | 2.40        | 2.00        | 2.20        | 2.40        | 2.66        |
| <i>Common Yellowthroat</i>                    | UCS              | 0.20        | 0.40        | 0.60        | 0.40        | 0.20        | 0.40        | 0.20        | 0.34        |
| <i>Scarlet Tanager</i>                        | RC               | 0.20        | 0.80        | 0.20        | 0.60        | 0.20        | 0.40        | 0.40        | 0.40        |
| <i>Chipping Sparrow</i>                       |                  | 0.60        | 0.20        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.14        |
| <i>Dark-eyed Junco (Slate-colored Junco)</i>  |                  | 0.00        | 1.20        | 0.20        | 0.20        | 0.00        | 0.40        | 0.40        | 0.34        |
| <i>Rose-breasted Grosbeak</i>                 |                  | 0.20        | 0.40        | 0.20        | 0.00        | 0.20        | 0.60        | 0.20        | 0.26        |
| <i>Indigo Bunting</i>                         |                  | 0.00        | 0.60        | 0.40        | 0.00        | 0.20        | 0.00        | 0.00        | 0.17        |
| <i>Bobolink</i>                               | CBSD RC UCC      | 0.20        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.06        |
| <i>Red-winged Blackbird</i>                   |                  | 0.20        | 1.40        | 0.60        | 0.00        | 0.00        | 0.00        | 0.00        | 0.31        |
| <i>Brown-headed Cowbird</i>                   |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.03        |
| <i>Baltimore Oriole</i>                       |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| <i>American Goldfinch</i>                     |                  | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.20        | 0.06        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Marsh-Billings-Rockefeller NHP***

***MABI South***

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |       |       |       |       |       |       |  |  |  | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------|-------|-------|-------|-------|-------|--|--|--|-------------|
|                                             |                  | 2006                                                      | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  |  |  |  |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  | 5                                                         | 5     | 5     | 5     | 5     | 5     | 5     |  |  |  |             |
|                                             |                  | 13.80                                                     | 26.60 | 12.00 | 11.40 | 11.20 | 11.80 | 12.20 |  |  |  | 14.14       |
| <i>Species Richness:</i>                    |                  | 27                                                        | 32    | 27    | 18    | 21    | 27    | 24    |  |  |  | 48          |
| <i>Shannon Diversity:</i>                   |                  | 2.96                                                      | 3.11  | 2.90  | 2.61  | 2.51  | 2.95  | 2.84  |  |  |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Minute Man NHP*

#### *MIMA Hartwell Tavern*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada Goose                              |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.02        |
| Wild Turkey                               |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.02        |
| Red-tailed Hawk                           |                  | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Black-billed Cuckoo</b>                | <b>CBSD UCC</b>  | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| <b>Yellow-billed Cuckoo</b>               | <b>CBSD RC</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.02</b> |
| Red-bellied Woodpecker                    |                  | 0.00        | 0.29        | 0.29        | 0.57        | 0.00        | 0.43        | 1.14        | 0.39        |
| <i>Downy Woodpecker</i>                   |                  | 0.29        | 0.71        | 0.57        | 0.57        | 0.86        | 1.14        | 0.86        | 0.71        |
| Hairy Woodpecker                          |                  | 0.00        | 0.29        | 0.00        | 0.14        | 0.14        | 0.00        | 0.00        | 0.08        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.00        | 0.00        | 0.14        | 0.00        | 0.29        | 0.00        | 0.14        | 0.08        |
| <b><i>Eastern Wood-Pewee</i></b>          | <b>RC</b>        | <b>0.86</b> | <b>0.86</b> | <b>0.43</b> | <b>0.86</b> | <b>1.00</b> | <b>0.57</b> | <b>0.71</b> | <b>0.76</b> |
| Eastern Phoebe                            |                  | 0.14        | 0.00        | 0.14        | 0.00        | 0.14        | 0.00        | 0.00        | 0.06        |
| Great Crested Flycatcher                  |                  | 0.29        | 0.00        | 0.43        | 0.14        | 0.14        | 0.57        | 0.29        | 0.27        |
| <b><i>Eastern Kingbird</i></b>            | <b>RC</b>        | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.00</b> | <b>0.02</b> |
| Red-eyed Vireo                            |                  | 0.00        | 0.29        | 0.71        | 0.14        | 0.43        | 0.14        | 0.71        | 0.35        |
| <i>Blue Jay</i>                           |                  | 2.14        | 0.86        | 1.43        | 1.00        | 1.43        | 0.86        | 0.57        | 1.18        |
| <i>American Crow</i>                      |                  | 1.00        | 1.00        | 1.29        | 0.86        | 1.29        | 1.14        | 1.00        | 1.08        |
| Barn Swallow                              |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.14        | 0.00        | 0.02        |
| <i>Black-capped Chickadee</i>             |                  | 0.71        | 0.71        | 0.86        | 0.86        | 1.00        | 0.86        | 0.86        | 0.84        |
| <i>Tufted Titmouse</i>                    |                  | 0.71        | 1.86        | 2.57        | 2.14        | 1.29        | 1.86        | 1.71        | 1.73        |
| Red-breasted Nuthatch                     |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.29        | 0.04        |
| <i>White-breasted Nuthatch</i>            |                  | 0.43        | 0.57        | 0.43        | 0.57        | 1.57        | 0.43        | 1.29        | 0.76        |
| Carolina Wren                             |                  | 0.14        | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        |
| <b>Veery</b>                              | <b>RC</b>        | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.14</b> | <b>0.02</b> |
| Hermit Thrush                             |                  | 0.14        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| <b>Wood Thrush</b>                        | <b>RC UCC</b>    | <b>0.43</b> | <b>0.14</b> | <b>0.57</b> | <b>0.43</b> | <b>0.57</b> | <b>0.29</b> | <b>0.29</b> | <b>0.39</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Minute Man NHP

#### MIMA Hartwell Tavern

| <i>Common Name</i>            | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |      |      |      |      |      |      |  | <i>Mean</i> |
|-------------------------------|------------------|-----------------------------------------------------------|------|------|------|------|------|------|--|-------------|
| <i>Common Name</i>            | <i>PIF Codes</i> | 2006                                                      | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |  |             |
| <i>American Robin</i>         |                  | 0.57                                                      | 1.00 | 2.14 | 1.57 | 0.29 | 0.57 | 0.86 |  | 1.00        |
| <b>Gray Catbird</b>           | UCS              | 0.57                                                      | 0.14 | 0.57 | 0.71 | 0.57 | 0.71 | 1.00 |  | 0.61        |
| Northern Mockingbird          |                  | 0.00                                                      | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 |  | 0.02        |
| Cedar Waxwing                 |                  | 0.00                                                      | 0.14 | 0.00 | 0.71 | 0.00 | 0.00 | 0.29 |  | 0.16        |
| Yellow Warbler                |                  | 0.00                                                      | 0.00 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |  | 0.10        |
| Pine Warbler                  |                  | 0.14                                                      | 0.14 | 0.00 | 0.29 | 0.29 | 0.00 | 0.00 |  | 0.12        |
| <i>Overbird</i>               |                  | 0.71                                                      | 0.86 | 0.43 | 1.00 | 0.57 | 0.57 | 0.71 |  | 0.69        |
| Common Yellowthroat           |                  | 0.14                                                      | 0.29 | 0.57 | 0.71 | 0.57 | 0.00 | 0.43 |  | 0.39        |
| <b>Scarlet Tanager</b>        | RC               | 0.57                                                      | 0.29 | 0.57 | 1.00 | 0.43 | 0.43 | 0.71 |  | 0.57        |
| Chipping Sparrow              |                  | 0.14                                                      | 0.00 | 0.43 | 0.29 | 0.29 | 0.57 | 0.29 |  | 0.29        |
| Song Sparrow                  |                  | 0.14                                                      | 0.14 | 0.14 | 0.14 | 0.43 | 0.14 | 0.14 |  | 0.18        |
| <i>Northern Cardinal</i>      |                  | 1.29                                                      | 0.57 | 1.00 | 0.71 | 0.29 | 1.29 | 0.29 |  | 0.78        |
| <b>Rose-breasted Grosbeak</b> | RC               | 0.00                                                      | 0.14 | 0.00 | 0.43 | 0.43 | 0.29 | 0.14 |  | 0.20        |
| Indigo Bunting                |                  | 0.14                                                      | 0.00 | 0.29 | 0.00 | 0.43 | 0.00 | 0.00 |  | 0.12        |
| Red-winged Blackbird          |                  | 0.43                                                      | 0.00 | 0.14 | 0.57 | 0.14 | 0.43 | 0.14 |  | 0.27        |
| Common Grackle                |                  | 0.43                                                      | 0.14 | 0.14 | 0.71 | 0.29 | 0.29 | 0.00 |  | 0.29        |
| Brown-headed Cowbird          |                  | 0.29                                                      | 0.43 | 0.29 | 0.43 | 0.00 | 0.57 | 0.14 |  | 0.31        |
| <b>Baltimore Oriole</b>       | RC               | 0.00                                                      | 0.14 | 0.00 | 0.29 | 0.29 | 0.29 | 0.00 |  | 0.14        |
| House Finch                   |                  | 0.00                                                      | 0.00 | 0.00 | 0.29 | 0.14 | 0.14 | 0.00 |  | 0.08        |
| American Goldfinch            |                  | 1.00                                                      | 0.29 | 0.29 | 0.14 | 0.71 | 1.00 | 1.29 |  | 0.67        |
| House Sparrow                 |                  | 0.00                                                      | 0.00 | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 |  | 0.02        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Minute Man NHP***

***MIMA Hartwell Tavern***

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |  | <i>Mean</i> |
|---------------------------------------------|------------------|-------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--|-------------|
|                                             |                  |             | <i>2007</i>                                               | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> |  |             |
| <i>Ave # Birds Per Point Count Station:</i> |                  | 7           | 7                                                         | 7           | 7           | 7           | 7           | 7           |  | 15.96       |
|                                             |                  | 13.86       | 12.43                                                     | 17.14       | 18.71       | 16.57       | 16.43       | 16.57       |  |             |
| <i>Species Richness:</i>                    |                  | 26          | 26                                                        | 28          | 32          | 31          | 31          | 28          |  | 46          |
| <i>Shannon Diversity:</i>                   |                  | 2.96        | 2.95                                                      | 2.97        | 3.21        | 3.17        | 3.17        | 3.07        |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Minute Man NHP

#### MIMA Meriam's Corner

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
| Canada Goose                              |                  | 0.00                                                      | 0.13        | 0.00        | 0.00        |             | 0.13        | 0.00        | 0.04        |
| Great Blue Heron                          |                  | 0.00                                                      | 0.00        | 0.00        | 0.25        |             | 0.00        | 0.00        | 0.04        |
| Red-tailed Hawk                           |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |             | 0.00        | 0.00        | 0.02        |
| Killdeer                                  |                  | 0.13                                                      | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.00        | 0.02        |
| Mourning Dove                             |                  | 0.00                                                      | 0.00        | 0.25        | 0.00        |             | 0.38        | 0.14        | 0.13        |
| <b>Chimney Swift</b>                      | <b>CBSD RC</b>   | <b>0.00</b>                                               | <b>0.25</b> | <b>0.00</b> | <b>0.00</b> |             | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> |
| Red-bellied Woodpecker                    |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        |             | 0.25        | 0.43        | 0.11        |
| Downy Woodpecker                          |                  | 0.50                                                      | 0.88        | 0.38        | 1.00        |             | 0.13        | 0.43        | 0.55        |
| Hairy Woodpecker                          |                  | 0.13                                                      | 0.25        | 0.00        | 0.00        |             | 0.25        | 0.00        | 0.10        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.25                                                      | 0.00        | 0.25        | 0.25        |             | 0.25        | 0.14        | 0.19        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        | <b>0.13</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.13</b> |             | <b>0.13</b> | <b>0.00</b> | <b>0.06</b> |
| Alder Flycatcher                          |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |             | 0.00        | 0.00        | 0.02        |
| Eastern Phoebe                            |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |             | 0.00        | 0.14        | 0.04        |
| Great Crested Flycatcher                  |                  | 0.00                                                      | 0.00        | 0.25        | 0.00        |             | 0.13        | 0.00        | 0.06        |
| <b>Eastern Kingbird</b>                   | <b>RC</b>        | <b>0.13</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |             | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| Warbling Vireo                            |                  | 0.13                                                      | 0.00        | 0.13        | 0.13        |             | 0.00        | 0.00        | 0.06        |
| Red-eyed Vireo                            |                  | 0.00                                                      | 0.00        | 0.13        | 0.00        |             | 0.00        | 0.00        | 0.02        |
| Blue Jay                                  |                  | 0.75                                                      | 0.75        | 0.50        | 0.50        |             | 0.63        | 0.71        | 0.64        |
| American Crow                             |                  | 0.13                                                      | 0.63        | 0.38        | 1.13        |             | 0.88        | 1.14        | 0.71        |
| Tree Swallow                              |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.14        | 0.02        |
| Barn Swallow                              |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |             | 0.00        | 0.00        | 0.02        |
| Black-capped Chickadee                    |                  | 1.25                                                      | 1.00        | 0.25        | 0.38        |             | 0.13        | 0.71        | 0.62        |
| Tufted Titmouse                           |                  | 1.00                                                      | 0.88        | 0.50        | 1.00        |             | 1.13        | 0.86        | 0.89        |
| White-breasted Nuthatch                   |                  | 0.50                                                      | 0.13        | 0.00        | 0.50        |             | 0.13        | 0.43        | 0.28        |
| Carolina Wren                             |                  | 0.25                                                      | 0.13        | 0.00        | 0.13        |             | 0.00        | 0.14        | 0.11        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Minute Man NHP

#### MIMA Meriam's Corner

| <i>Common Name</i>            | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |      |             |             | <i>Mean</i> |
|-------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|------|-------------|-------------|-------------|
| <i>Common Name</i>            | <i>PIF Codes</i> | 2006                                                      | 2007        | 2008        | 2009        | 2010 | 2011        | 2012        | <i>Mean</i> |
| House Wren                    |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |      | 0.00        | 0.00        | 0.02        |
| Blue-gray Gnatcatcher         |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |      | 0.00        | 0.00        | 0.02        |
| Eastern Bluebird              |                  | 0.00                                                      | 0.00        | 0.00        | 0.13        |      | 0.00        | 0.00        | 0.02        |
| <b>Veery</b>                  | <b>RC</b>        | <b>0.13</b>                                               | <b>0.38</b> | <b>0.00</b> | <b>0.00</b> |      | <b>0.00</b> | <b>0.14</b> | <b>0.11</b> |
| <b>Wood Thrush</b>            | <b>RC UCC</b>    | <b>0.50</b>                                               | <b>0.75</b> | <b>0.50</b> | <b>0.38</b> |      | <b>0.25</b> | <b>0.86</b> | <b>0.54</b> |
| American Robin                |                  | 0.38                                                      | 1.00        | 0.00        | 0.25        |      | 0.25        | 0.29        | 0.36        |
| <b>Gray Catbird</b>           | <b>UCS</b>       | <b>0.38</b>                                               | <b>0.88</b> | <b>0.25</b> | <b>1.13</b> |      | <b>0.63</b> | <b>0.86</b> | <b>0.68</b> |
| Northern Mockingbird          |                  | 0.00                                                      | 0.25        | 0.00        | 0.13        |      | 0.00        | 0.14        | 0.09        |
| Cedar Waxwing                 |                  | 0.13                                                      | 0.00        | 0.00        | 0.13        |      | 0.00        | 0.00        | 0.04        |
| <b>Blue-winged Warbler</b>    | <b>RC RS UCS</b> | <b>0.38</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.25</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.10</b> |
| Yellow Warbler                |                  | 0.13                                                      | 0.00        | 0.25        | 0.13        |      | 0.00        | 0.00        | 0.08        |
| Pine Warbler                  |                  | 0.25                                                      | 0.50        | 0.25        | 0.63        |      | 0.13        | 0.14        | 0.32        |
| American Redstart             |                  | 0.00                                                      | 0.13        | 0.00        | 0.13        |      | 0.00        | 0.00        | 0.04        |
| <i>Overbird</i>               |                  | 0.50                                                      | 0.75        | 0.50        | 0.50        |      | 0.63        | 0.57        | 0.57        |
| <i>Common Yellowthroat</i>    |                  | 1.00                                                      | 1.00        | 0.25        | 0.63        |      | 0.50        | 0.86        | 0.71        |
| <b>Scarlet Tanager</b>        | <b>RC</b>        | <b>0.25</b>                                               | <b>0.00</b> | <b>0.13</b> | <b>0.38</b> |      | <b>0.00</b> | <b>0.00</b> | <b>0.13</b> |
| Chipping Sparrow              |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        |      | 0.13        | 0.00        | 0.02        |
| <i>Song Sparrow</i>           |                  | 1.25                                                      | 0.88        | 0.63        | 1.13        |      | 0.75        | 0.43        | 0.84        |
| Swamp Sparrow                 |                  | 0.00                                                      | 0.00        | 0.13        | 0.13        |      | 0.00        | 0.00        | 0.04        |
| <i>Northern Cardinal</i>      |                  | 0.38                                                      | 0.63        | 0.50        | 0.75        |      | 0.38        | 0.86        | 0.58        |
| <b>Rose-breasted Grosbeak</b> | <b>RC</b>        | <b>0.50</b>                                               | <b>0.38</b> | <b>0.38</b> | <b>0.50</b> |      | <b>0.50</b> | <b>0.00</b> | <b>0.38</b> |
| Indigo Bunting                |                  | 0.00                                                      | 0.38        | 0.13        | 0.13        |      | 0.00        | 0.14        | 0.13        |
| Red-winged Blackbird          |                  | 0.88                                                      | 0.13        | 0.50        | 0.63        |      | 0.88        | 0.29        | 0.55        |
| Common Grackle                |                  | 0.38                                                      | 0.00        | 0.00        | 0.25        |      | 0.75        | 0.43        | 0.30        |
| Brown-headed Cowbird          |                  | 0.25                                                      | 0.50        | 0.13        | 0.38        |      | 0.25        | 0.14        | 0.27        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Minute Man NHP***

***MIMA Meriam's Corner***

| <i>Common Name</i>                                 | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |             | <i>Mean</i> |
|----------------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Baltimore Oriole</b>                            | <b>RC</b>        | <b>0.25</b>                                               | <b>0.25</b> | <b>0.00</b> | <b>0.38</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.15</b> |             |
| House Finch                                        |                  | 0.25                                                      | 0.00        | 0.13        | 0.00        | 0.00        | 0.00        | 0.14        | 0.09        |             |
| American Goldfinch                                 |                  | 0.38                                                      | 0.63        | 0.25        | 0.38        | 0.00        | 0.00        | 0.14        | 0.29        |             |
| House Sparrow                                      |                  | 0.00                                                      | 0.25        | 0.00        | 0.13        | 0.63        | 0.63        | 0.00        | 0.17        |             |
| <b><i>Points Surveyed:</i></b>                     |                  |                                                           |             |             |             |             |             |             |             |             |
| <b><i>Ave # Birds Per Point Count Station:</i></b> |                  | 8                                                         | 8           | 8           | 8           | 8           | 8           | 7           |             |             |
|                                                    |                  | 13.75                                                     | 14.63       | 7.88        | 15.63       | 11.13       | 11.86       |             | 12.48       |             |
| <b><i>Species Richness:</i></b>                    |                  | 33                                                        | 28          | 26          | 41          | 27          | 28          |             | 54          |             |
| <b><i>Shannon Diversity:</i></b>                   |                  | 3.24                                                      | 3.15        | 3.13        | 3.42        | 3.06        | 3.08        |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Minute Man NHP*

#### *MIMA The Bluff*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Wild Turkey                               |                  | 0.25        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        |
| Red-tailed Hawk                           |                  | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        | 0.00        | 0.02        |
| Mourning Dove                             |                  | 0.25        | 0.00        | 0.00        | 0.00        | 0.50        | 0.00        | 0.00        | 0.11        |
| <b>Belted Kingfisher</b>                  | <b>CBSD</b>      | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.13</b> | <b>0.00</b> | <b>0.00</b> | <b>0.02</b> |
| Red-bellied Woodpecker                    |                  | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        | 0.00        | 0.13        | 0.04        |
| Downy Woodpecker                          |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.25        | 0.00        | 0.38        | 0.09        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.13        | 0.02        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>        | <b>0.13</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.38</b> | <b>0.00</b> | <b>0.13</b> | <b>0.09</b> |
| Eastern Phoebe                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        | 0.02        |
| Great Crested Flycatcher                  |                  | 0.00        | 0.00        | 0.00        | 0.25        | 0.00        | 0.00        | 0.00        | 0.04        |
| Warbling Vireo                            |                  | 0.00        | 0.00        | 0.00        | 0.25        | 0.00        | 0.00        | 0.00        | 0.04        |
| Red-eyed Vireo                            |                  | 0.00        | 0.00        | 0.25        | 0.13        | 0.00        | 0.25        | 0.75        | 0.20        |
| <i>Blue Jay</i>                           |                  | <i>0.50</i> | <i>1.75</i> | <i>1.75</i> | <i>0.75</i> | <i>1.25</i> | <i>1.25</i> | <i>1.38</i> | <i>1.23</i> |
| <i>American Crow</i>                      |                  | <i>0.50</i> | <i>0.63</i> | <i>0.88</i> | <i>0.63</i> | <i>1.13</i> | <i>2.13</i> | <i>1.00</i> | <i>0.98</i> |
| Fish Crow                                 |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        | 0.02        |
| <i>Black-capped Chickadee</i>             |                  | <i>1.00</i> | <i>0.25</i> | <i>0.38</i> | <i>0.25</i> | <i>0.25</i> | <i>0.63</i> | <i>0.63</i> | <i>0.48</i> |
| <i>Tufted Titmouse</i>                    |                  | <i>1.38</i> | <i>1.75</i> | <i>1.38</i> | <i>2.50</i> | <i>1.25</i> | <i>0.75</i> | <i>2.25</i> | <i>1.61</i> |
| <i>White-breasted Nuthatch</i>            |                  | <i>0.25</i> | <i>0.50</i> | <i>0.00</i> | <i>0.88</i> | <i>0.88</i> | <i>0.13</i> | <i>1.25</i> | <i>0.55</i> |
| Carolina Wren                             |                  | 0.00        | 0.25        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        |
| House Wren                                |                  | 0.13        | 0.13        | 0.00        | 0.13        | 0.00        | 0.00        | 0.13        | 0.07        |
| <b>Wood Thrush</b>                        | <b>RC UCC</b>    | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.25</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> |
| <i>American Robin</i>                     |                  | <i>0.13</i> | <i>0.75</i> | <i>1.38</i> | <i>1.63</i> | <i>1.13</i> | <i>1.25</i> | <i>2.75</i> | <i>1.29</i> |
| <b>Gray Catbird</b>                       | <b>UCS</b>       | <b>0.00</b> | <b>0.38</b> | <b>0.63</b> | <b>0.63</b> | <b>0.25</b> | <b>0.13</b> | <b>0.38</b> | <b>0.34</b> |
| Northern Mockingbird                      |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.13        | 0.00        | 0.02        |
| <i>Pine Warbler</i>                       |                  | <i>0.25</i> | <i>0.25</i> | <i>0.88</i> | <i>1.25</i> | <i>1.00</i> | <i>0.38</i> | <i>0.25</i> | <i>0.61</i> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Minute Man NHP

#### MIMA The Bluff

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             |  | <i>Mean</i> |
|---------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|-------------|
| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> |  | <i>Mean</i> |
| Ovenbird                                    |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.25        |  | 0.04        |
| Common Yellowthroat                         |                  | 0.13                                                      | 0.00        | 0.25        | 0.63        | 0.25        | 0.13        | 0.00        |  | 0.20        |
| <b>Scarlet Tanager</b>                      | <b>RC</b>        | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.63</b> | <b>0.00</b> | <b>0.00</b> | <b>0.25</b> |  | <b>0.13</b> |
| Chipping Sparrow                            |                  | 0.00                                                      | 0.00        | 0.13        | 0.13        | 0.00        | 0.00        | 0.13        |  | 0.05        |
| <i>Song Sparrow</i>                         |                  | 0.38                                                      | 0.75        | 0.63        | 0.13        | 0.50        | 0.63        | 0.38        |  | 0.48        |
| <i>Northern Cardinal</i>                    |                  | 0.88                                                      | 1.00        | 0.63        | 0.25        | 0.13        | 0.13        | 1.00        |  | 0.57        |
| <b>Rose-breasted Grosbeak</b>               | <b>RC</b>        | <b>0.00</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.25</b> | <b>0.13</b> | <b>0.00</b> | <b>0.00</b> |  | <b>0.05</b> |
| <i>Red-winged Blackbird</i>                 |                  | 0.38                                                      | 1.13        | 0.75        | 0.75        | 0.25        | 1.13        | 1.00        |  | 0.77        |
| Common Grackle                              |                  | 0.25                                                      | 0.25        | 0.13        | 0.63        | 0.13        | 0.63        | 0.25        |  | 0.32        |
| Brown-headed Cowbird                        |                  | 0.00                                                      | 0.50        | 0.00        | 0.13        | 0.00        | 0.13        | 0.00        |  | 0.11        |
| <b>Baltimore Oriole</b>                     | <b>RC</b>        | <b>0.13</b>                                               | <b>0.00</b> | <b>0.00</b> | <b>0.13</b> | <b>0.00</b> | <b>0.13</b> | <b>0.13</b> |  | <b>0.07</b> |
| House Finch                                 |                  | 0.13                                                      | 0.25        | 0.00        | 0.00        | 0.13        | 0.00        | 0.00        |  | 0.07        |
| American Goldfinch                          |                  | 0.63                                                      | 0.50        | 0.13        | 0.13        | 1.00        | 0.13        | 0.13        |  | 0.38        |
| House Sparrow                               |                  | 0.13                                                      | 0.13        | 0.13        | 0.00        | 0.00        | 0.00        | 0.00        |  | 0.05        |
| <b>Points Surveyed:</b>                     |                  |                                                           |             |             |             |             |             |             |  |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  | 8                                                         | 8           | 8           | 8           | 8           | 8           | 8           |  |             |
| <b>Species Richness:</b>                    |                  | 7.75                                                      | 11.13       | 10.38       | 13.38       | 11.13       | 10.00       | 15.00       |  | 11.25       |
| <b>Shannon Diversity:</b>                   |                  | 20                                                        | 18          | 17          | 25          | 22          | 18          | 23          |  | 39          |
|                                             |                  | 2.69                                                      | 2.62        | 2.52        | 2.80        | 2.76        | 2.46        | 2.67        |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Minute Man NHP*

#### *MIMA Battle Road*

| <i>Common Name</i>       | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|--------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Wild Turkey              |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Red-tailed Hawk          |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Chimney Swift            |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Downy Woodpecker         |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| Eastern Phoebe           |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Great Crested Flycatcher |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Blue Jay                 |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| American Crow            |                  |             |             |             |             |             |             | 0.50        | 0.50        |
| Tree Swallow             |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| White-breasted Nuthatch  |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| House Wren               |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Eastern Bluebird         |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| Gray Catbird             |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| Northern Mockingbird     |                  |             |             |             |             |             |             | 0.50        | 0.50        |
| European Starling        |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Yellow Warbler           |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| Chipping Sparrow         |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| Song Sparrow             |                  |             |             |             |             |             |             | 0.33        | 0.33        |
| Northern Cardinal        |                  |             |             |             |             |             |             | 0.17        | 0.17        |
| American Goldfinch       |                  |             |             |             |             |             |             | 0.50        | 0.50        |
| House Sparrow            |                  |             |             |             |             |             |             | 0.50        | 0.50        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Minute Man NHP***

***MIMA Battle Road***

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             | 6           | 5.83        |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             | 21          | 21          |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             | 2.94        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Morristown NHP

#### MORR Mt. Kemble

| <i>Common Name</i>                        | <i>PIF Codes</i>     | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Red-tailed Hawk                           |                      |             | 0.20        |             | 0.10        | 0.30        | 0.10        |             | 0.18        |
| Mourning Dove                             |                      |             | 0.30        |             | 0.00        | 0.20        | 0.10        |             | 0.15        |
| <b>Yellow-billed Cuckoo</b>               | <b>CBSD</b>          |             | <b>0.10</b> |             | <b>0.50</b> | <b>0.00</b> | <b>0.00</b> |             | <b>0.15</b> |
| Great Horned Owl                          |                      |             | 0.20        |             | 0.30        | 0.10        | 0.00        |             | 0.15        |
| Red-bellied Woodpecker                    |                      |             | 0.60        |             | 0.20        | 0.90        | 0.10        |             | 0.45        |
| <b>Downy Woodpecker</b>                   | <b>RS UCS</b>        |             | <b>0.60</b> |             | <b>0.50</b> | <b>0.20</b> | <b>0.20</b> |             | <b>0.38</b> |
| Hairy Woodpecker                          |                      |             | 0.50        |             | 0.40        | 0.90        | 0.20        |             | 0.50        |
| Northern Flicker (Yellow-shafted Flicker) |                      |             | 0.40        |             | 0.40        | 0.50        | 0.10        |             | 0.35        |
| <b>Pileated Woodpecker</b>                | <b>UCS</b>           |             | <b>0.20</b> |             | <b>0.20</b> | <b>0.10</b> | <b>0.30</b> |             | <b>0.20</b> |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>            |             | <b>1.10</b> |             | <b>0.80</b> | <b>1.40</b> | <b>0.80</b> |             | <b>1.03</b> |
| <b>Eastern Phoebe</b>                     | <b>UCS</b>           |             | <b>0.10</b> |             | <b>0.00</b> | <b>0.10</b> | <b>0.00</b> |             | <b>0.05</b> |
| Great Crested Flycatcher                  |                      |             | 0.20        |             | 0.20        | 0.00        | 0.00        |             | 0.10        |
| Blue-headed Vireo                         |                      |             | 0.00        |             | 0.00        | 0.10        | 0.00        |             | 0.03        |
| <b>Red-eyed Vireo</b>                     | <b>UCS</b>           |             | <b>0.20</b> |             | <b>0.30</b> | <b>0.30</b> | <b>0.50</b> |             | <b>0.33</b> |
| Blue Jay                                  |                      |             | 1.30        |             | 1.10        | 2.20        | 1.50        |             | 1.53        |
| American Crow                             |                      |             | 0.70        |             | 0.60        | 0.60        | 0.40        |             | 0.58        |
| Black-capped Chickadee                    |                      |             | 0.10        |             | 0.00        | 0.00        | 0.10        |             | 0.05        |
| <b>Tufted Titmouse</b>                    | <b>UCS</b>           |             | <b>1.00</b> |             | <b>1.40</b> | <b>1.30</b> | <b>0.50</b> |             | <b>1.05</b> |
| <b>White-breasted Nuthatch</b>            | <b>UCS</b>           |             | <b>0.80</b> |             | <b>0.70</b> | <b>0.60</b> | <b>0.20</b> |             | <b>0.58</b> |
| House Wren                                |                      |             | 0.10        |             | 0.00        | 0.00        | 0.00        |             | 0.03        |
| Blue-gray Gnatcatcher                     |                      |             | 0.00        |             | 0.20        | 0.00        | 0.00        |             | 0.05        |
| <b>Eastern Bluebird</b>                   | <b>UCS</b>           |             | <b>0.20</b> |             | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |             | <b>0.05</b> |
| Veery                                     |                      |             | 0.40        |             | 0.00        | 0.30        | 0.20        |             | 0.23        |
| <b>Wood Thrush</b>                        | <b>RC RS UCC UCS</b> |             | <b>1.50</b> |             | <b>1.60</b> | <b>1.70</b> | <b>0.70</b> |             | <b>1.38</b> |
| American Robin                            |                      |             | 0.90        |             | 1.10        | 1.20        | 0.70        |             | 0.98        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B. Site Summaries (continued).**

***Morristown NHP***

***MORR Mt. Kemble***

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Gray Catbird                                              | UCS              |             | 0.10        | 0.10        | 0.10        | 0.10        | 0.10        | 0.10        | 0.10        |
| American Redstart                                         |                  |             | 0.00        | 0.20        | 0.00        | 0.00        | 0.10        |             | 0.08        |
| Worm-eating Warbler                                       | RC RS UCS        |             | 0.40        | 0.10        | 0.00        | 0.00        | 0.00        |             | 0.13        |
| Ovenbird                                                  |                  |             | 0.60        | 0.10        | 1.30        | 0.60        |             |             | 0.65        |
| Louisiana Waterthrush                                     | RC RS UCS        |             | 0.00        | 0.00        | 0.00        | 0.20        |             |             | 0.05        |
| Scarlet Tanager                                           | RS UCS           |             | 0.50        | 1.00        | 0.80        | 1.10        |             |             | 0.85        |
| Eastern Towhee                                            | RC RS UCS        |             | 0.00        | 0.20        | 0.20        | 0.30        |             |             | 0.18        |
| Chipping Sparrow                                          |                  |             | 0.00        | 0.00        | 0.20        | 0.10        |             |             | 0.08        |
| Song Sparrow                                              | UCS              |             | 0.00        | 0.00        | 0.00        | 0.10        |             |             | 0.03        |
| Northern Cardinal                                         |                  |             | 0.10        | 0.40        | 0.10        | 0.20        |             |             | 0.20        |
| Rose-breasted Grosbeak                                    |                  |             | 0.10        | 0.00        | 0.20        | 0.00        |             |             | 0.08        |
| Indigo Bunting                                            | UCS              |             | 0.20        | 0.00        | 0.10        | 0.00        |             |             | 0.08        |
| Brown-headed Cowbird                                      |                  |             | 0.00        | 0.10        | 0.00        | 0.10        |             |             | 0.05        |
| American Goldfinch                                        | RS UCS           |             | 0.00        | 0.00        | 0.00        | 0.10        |             |             | 0.03        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 10          | 10          | 10          | 10          | 10          |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 13.70       | 12.80       | 16.00       | 9.70        |             |             | 13.05       |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 30          | 26          | 27          | 28          |             |             | 39          |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 3.09        | 2.93        | 2.87        | 2.94        |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Morristown NHP

#### MORR Primrose Brook

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Wild Turkey                               |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        |             | 0.00        | 0.07        |
| Red-tailed Hawk                           |                  | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        |             | 0.10        | 0.05        |
| Mourning Dove                             |                  | 0.10        | 0.10        | 0.00        | 0.10        | 0.00        |             | 0.00        | 0.05        |
| Yellow-billed Cuckoo                      | CBSD             | 0.00        | 0.40        | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.07        |
| Red-bellied Woodpecker                    |                  | 0.60        | 0.40        | 1.20        | 1.20        | 0.30        |             | 0.70        | 0.73        |
| Downy Woodpecker                          | RS UCS           | 0.20        | 0.10        | 0.00        | 0.20        | 0.10        |             | 0.00        | 0.10        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.20        | 0.70        | 0.10        | 0.10        | 0.20        |             | 0.20        | 0.25        |
| Pileated Woodpecker                       | UCS              | 0.00        | 0.10        | 0.00        | 0.20        | 0.20        |             | 0.20        | 0.12        |
| Eastern Wood-Pewee                        | RC               | 0.80        | 0.80        | 0.20        | 0.10        | 0.40        |             | 0.60        | 0.48        |
| Eastern Phoebe                            | UCS              | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.02        |
| Great Crested Flycatcher                  |                  | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        |             | 0.20        | 0.07        |
| Yellow-throated Vireo                     | RC RS UCS        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        |             | 0.00        | 0.03        |
| Red-eyed Vireo                            | UCS              | 1.40        | 1.10        | 0.50        | 0.60        | 0.20        |             | 0.20        | 0.67        |
| Blue Jay                                  |                  | 0.60        | 1.70        | 0.90        | 0.60        | 1.10        |             | 0.80        | 0.95        |
| American Crow                             |                  | 0.10        | 0.90        | 0.10        | 0.10        | 0.20        |             | 0.00        | 0.23        |
| Black-capped Chickadee                    |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.02        |
| Tufted Titmouse                           | UCS              | 0.60        | 0.50        | 0.80        | 1.40        | 0.50        |             | 0.40        | 0.70        |
| White-breasted Nuthatch                   | UCS              | 0.20        | 0.50        | 0.40        | 0.10        | 0.20        |             | 0.20        | 0.27        |
| Carolina Wren                             |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        |             | 0.00        | 0.03        |
| Eastern Bluebird                          | UCS              | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        |             | 0.00        | 0.02        |
| Veery                                     |                  | 0.40        | 0.70        | 0.60        | 1.00        | 0.50        |             | 0.20        | 0.57        |
| Swainson's Thrush                         |                  | 0.10        | 0.00        | 0.00        | 0.10        | 0.00        |             | 0.00        | 0.03        |
| Wood Thrush                               | RC RS UCC UCS    | 1.30        | 1.90        | 0.90        | 0.90        | 1.50        |             | 0.70        | 1.20        |
| American Robin                            |                  | 0.90        | 1.30        | 1.00        | 1.00        | 0.60        |             | 0.30        | 0.85        |
| Gray Catbird                              | UCS              | 0.00        | 0.00        | 0.10        | 0.10        | 0.10        |             | 0.10        | 0.07        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B. Site Summaries (continued).**

***Morristown NHP***

***MORR Primrose Brook***

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Worm-eating Warbler                                       | RC RS UCS        | 0.00        | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.08        |
| <i>Overbird</i>                                           |                  | 0.90        | 1.10        | 0.40        | 0.70        | 0.60        |             | 0.80        | 0.75        |
| Louisiana Waterthrush                                     | RC RS UCS        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Hooded Warbler                                            | RS UCS           | 0.10        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.12        |
| <i>Scarlet Tanager</i>                                    | <i>RS UCS</i>    | <i>0.60</i> | <i>1.20</i> | <i>0.50</i> | <i>0.30</i> | <i>0.40</i> |             | <i>0.10</i> | <i>0.52</i> |
| Eastern Towhee                                            | RC RS UCS        | 0.40        | 0.50        | 0.10        | 0.40        | 0.40        | 0.40        | 0.60        | 0.40        |
| Northern Cardinal                                         |                  | 0.30        | 0.90        | 0.10        | 0.40        | 0.20        | 0.00        | 0.00        | 0.32        |
| Rose-breasted Grosbeak                                    |                  | 0.10        | 0.10        | 0.10        | 0.10        | 0.00        | 0.10        | 0.10        | 0.08        |
| Common Grackle                                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.02        |
| Brown-headed Cowbird                                      |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Baltimore Oriole                                          |                  | 0.60        | 0.10        | 0.60        | 0.20        | 0.00        | 0.00        | 0.20        | 0.28        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  | 10          | 10          | 10          | 10          | 10          | 10          | 10          | 10.23       |
| <i>Species Richness:</i>                                  |                  | 23          | 30          | 21          | 22          | 19          | 22          | 22          | 36          |
| <i>Shannon Diversity:</i>                                 |                  | 2.82        | 3.01        | 2.72        | 2.71        | 2.67        | 2.71        | 2.84        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Morristown NHP

#### MORR Soldier's Huts

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Turkey Vulture                            |                  | 0.11        | 0.00        |             |             | 0.00        | 0.00        | 0.00        | 0.02        |
| Red-tailed Hawk                           |                  | 0.00        | 0.00        |             |             | 0.22        | 0.00        | 0.11        | 0.07        |
| Mourning Dove                             |                  | 0.00        | 0.00        |             |             | 0.67        | 0.00        | 0.67        | 0.27        |
| Yellow-billed Cuckoo                      | CBSD             | 0.00        | 0.00        |             |             | 0.33        | 0.00        | 0.00        | 0.07        |
| Eastern Screech-Owl                       |                  | 0.00        | 0.00        |             |             | 0.00        | 0.00        | 0.11        | 0.02        |
| Great Horned Owl                          |                  | 0.00        | 0.00        |             |             | 0.22        | 0.33        | 0.44        | 0.20        |
| Barred Owl                                |                  | 0.00        | 0.00        |             |             | 0.00        | 0.22        | 0.00        | 0.04        |
| Red-bellied Woodpecker                    |                  | 0.44        | 0.11        |             |             | 0.89        | 0.44        | 0.33        | 0.44        |
| Downy Woodpecker                          | RS UCS           | 0.00        | 0.11        |             |             | 0.56        | 0.22        | 0.44        | 0.27        |
| Hairy Woodpecker                          |                  | 0.00        | 0.00        |             |             | 0.11        | 0.22        | 0.78        | 0.22        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.22        | 0.33        |             |             | 0.67        | 0.33        | 0.56        | 0.42        |
| Pileated Woodpecker                       | UCS              | 0.22        | 0.11        |             |             | 0.44        | 0.33        | 0.56        | 0.33        |
| Eastern Wood-Pewee                        | RC               | 0.67        | 1.00        |             |             | 1.00        | 1.00        | 0.56        | 0.84        |
| Acadian Flycatcher                        | RC RS UCS        | 0.00        | 0.00        |             |             | 0.11        | 0.00        | 0.00        | 0.02        |
| Eastern Phoebe                            | UCS              | 0.00        | 0.00        |             |             | 0.11        | 0.00        | 0.11        | 0.04        |
| Great Crested Flycatcher                  |                  | 0.11        | 0.11        |             |             | 0.11        | 0.33        | 0.00        | 0.13        |
| Yellow-throated Vireo                     | RC RS UCS        | 0.00        | 0.22        |             |             | 0.00        | 0.11        | 0.11        | 0.09        |
| Red-eyed Vireo                            | UCS              | 0.89        | 0.89        |             |             | 1.00        | 0.89        | 0.78        | 0.89        |
| Blue Jay                                  |                  | 0.22        | 0.33        |             |             | 0.78        | 1.22        | 1.44        | 0.80        |
| American Crow                             |                  | 0.00        | 0.11        |             |             | 0.67        | 0.11        | 0.56        | 0.29        |
| Fish Crow                                 |                  | 0.00        | 0.00        |             |             | 0.11        | 0.00        | 0.00        | 0.02        |
| Black-capped Chickadee                    |                  | 0.11        | 0.00        |             |             | 0.11        | 0.00        | 0.00        | 0.04        |
| Tufted Titmouse                           | UCS              | 0.56        | 0.44        |             |             | 1.00        | 0.22        | 1.11        | 0.67        |
| White-breasted Nuthatch                   | UCS              | 0.11        | 0.00        |             |             | 0.67        | 0.44        | 0.89        | 0.42        |
| Blue-gray Gnatcatcher                     |                  | 0.00        | 0.00        |             |             | 0.44        | 0.11        | 0.33        | 0.18        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCS = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Morristown NHP

#### MORR Soldier's Huts

| Common Name             | PIF Codes     | Relative Abundance (birds per point count station) |      |      |      |      |      |      |
|-------------------------|---------------|----------------------------------------------------|------|------|------|------|------|------|
|                         |               | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Veery                   |               | 0.44                                               | 0.78 |      |      | 1.89 | 1.56 | 1.78 |
| Wood Thrush             | RC RS UCC UCS | 1.11                                               | 1.22 |      |      | 2.11 | 2.11 | 1.89 |
| American Robin          |               | 0.67                                               | 0.78 |      |      | 1.33 | 0.67 | 0.89 |
| Gray Catbird            | UCS           | 0.11                                               | 0.22 |      |      | 0.33 | 0.56 | 1.33 |
| Cedar Waxwing           | UCS           | 0.11                                               | 0.00 |      |      | 0.00 | 0.00 | 0.00 |
| Blackpoll Warbler       |               | 0.56                                               | 0.00 |      |      | 0.00 | 0.00 | 0.00 |
| Cerulean Warbler        | RC RS UCC UCS | 0.00                                               | 0.00 |      |      | 0.11 | 0.00 | 0.00 |
| Black-and-white Warbler | RC            | 0.11                                               | 0.00 |      |      | 0.00 | 0.00 | 0.00 |
| American Redstart       |               | 0.44                                               | 0.67 |      |      | 0.67 | 0.44 | 0.89 |
| Worm-eating Warbler     | RC RS UCS     | 0.00                                               | 0.00 |      |      | 0.00 | 0.00 | 0.11 |
| Overbird                |               | 0.78                                               | 1.11 |      |      | 2.33 | 0.89 | 1.89 |
| Louisiana Waterthrush   | RC RS UCS     | 0.33                                               | 0.11 |      |      | 0.00 | 0.22 | 0.00 |
| Kentucky Warbler        | RC UCC        | 0.00                                               | 0.11 |      |      | 0.00 | 0.00 | 0.00 |
| Common Yellowthroat     | UCS           | 0.00                                               | 0.00 |      |      | 0.00 | 0.11 | 0.00 |
| Hooded Warbler          | RS UCS        | 0.22                                               | 0.22 |      |      | 0.44 | 0.33 | 0.89 |
| Canada Warbler          | UCC           | 0.11                                               | 0.00 |      |      | 0.00 | 0.00 | 0.00 |
| Scarlet Tanager         | RS UCS        | 0.56                                               | 0.33 |      |      | 1.00 | 1.22 | 1.00 |
| Eastern Towhee          | RC RS UCS     | 0.56                                               | 0.67 |      |      | 1.44 | 0.56 | 1.00 |
| Chipping Sparrow        |               | 0.00                                               | 0.11 |      |      | 0.00 | 0.00 | 0.00 |
| Northern Cardinal       |               | 0.00                                               | 0.00 |      |      | 0.11 | 0.22 | 0.11 |
| Rose-breasted Grosbeak  |               | 0.00                                               | 0.33 |      |      | 0.11 | 0.11 | 0.67 |
| Brown-headed Cowbird    |               | 0.22                                               | 0.22 |      |      | 0.22 | 0.22 | 0.00 |
| Baltimore Oriole        |               | 0.33                                               | 0.11 |      |      | 0.11 | 0.00 | 0.11 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Morristown NHP***

***MORR Soldier's Huts***

| <i>Common Name</i>                          | <i>PIF Codes</i>        | <i>Relative Abundance (birds per point count station)</i> |       |      |      |       |       |       |  |  | <i>Mean</i> |
|---------------------------------------------|-------------------------|-----------------------------------------------------------|-------|------|------|-------|-------|-------|--|--|-------------|
|                                             |                         | 2006                                                      | 2007  | 2008 | 2009 | 2010  | 2011  | 2012  |  |  |             |
| <i>Ave # Birds Per Point Count Station:</i> | <i>Points Surveyed:</i> | 9                                                         | 9     |      |      | 9     | 9     | 9     |  |  | 16.36       |
|                                             |                         | 10.33                                                     | 10.78 |      |      | 22.44 | 15.78 | 22.44 |  |  |             |
| <i>Species Richness:</i>                    |                         | 27                                                        | 26    |      |      | 35    | 30    | 31    |  |  | 48          |
| <i>Shannon Diversity:</i>                   |                         | 3.06                                                      | 2.94  |      |      | 3.18  | 3.07  | 3.17  |  |  |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Middle Ravine*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |  |  |  |  | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-----------------------------------------------------------|--|--|--|--|-------------|-------------|
| Canada Goose                              |                  | 0.00        | 0.10                                                      |  |  |  |  |             | 0.05        |
| <i>Mourning Dove</i>                      |                  | 0.80        | 0.60                                                      |  |  |  |  |             | 0.70        |
| Yellow-bellied Sapsucker                  |                  | 0.10        | 0.30                                                      |  |  |  |  |             | 0.20        |
| Downy Woodpecker                          |                  | 0.20        | 0.50                                                      |  |  |  |  |             | 0.35        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.20        | 0.00                                                      |  |  |  |  |             | 0.10        |
| <b><i>Eastern Wood-Pewee</i></b>          | <b>RC</b>        | <b>0.50</b> | <b>0.80</b>                                               |  |  |  |  |             | <b>0.65</b> |
| Eastern Phoebe                            |                  | 0.10        | 0.00                                                      |  |  |  |  |             | 0.05        |
| Great Crested Flycatcher                  |                  | 0.50        | 0.50                                                      |  |  |  |  |             | 0.50        |
| <i>Red-eyed Vireo</i>                     |                  | 0.60        | 0.70                                                      |  |  |  |  |             | 0.65        |
| <i>Blue Jay</i>                           |                  | 0.50        | 0.60                                                      |  |  |  |  |             | 0.55        |
| American Crow                             |                  | 0.60        | 0.40                                                      |  |  |  |  |             | 0.50        |
| <i>Black-capped Chickadee</i>             |                  | 1.00        | 0.70                                                      |  |  |  |  |             | 0.85        |
| Tufted Titmouse                           |                  | 0.30        | 0.40                                                      |  |  |  |  |             | 0.35        |
| Red-breasted Nuthatch                     |                  | 0.00        | 0.10                                                      |  |  |  |  |             | 0.05        |
| White-breasted Nuthatch                   |                  | 0.20        | 0.10                                                      |  |  |  |  |             | 0.15        |
| Brown Creeper                             |                  | 0.10        | 0.30                                                      |  |  |  |  |             | 0.20        |
| Winter Wren                               |                  | 0.10        | 0.00                                                      |  |  |  |  |             | 0.05        |
| <b>Veery</b>                              | <b>RC</b>        | <b>0.20</b> | <b>0.30</b>                                               |  |  |  |  |             | <b>0.25</b> |
| Hermit Thrush                             |                  | 0.20        | 0.40                                                      |  |  |  |  |             | 0.30        |
| <b><i>Wood Thrush</i></b>                 | <b>RC UCC</b>    | <b>0.80</b> | <b>0.30</b>                                               |  |  |  |  |             | <b>0.55</b> |
| <i>American Robin</i>                     |                  | 1.40        | 0.50                                                      |  |  |  |  |             | 0.95        |
| <b>Cedar Waxwing</b>                      | <b>UCS</b>       | <b>0.40</b> | <b>0.00</b>                                               |  |  |  |  |             | <b>0.20</b> |
| <b>Blue-winged Warbler</b>                | <b>RC RS UCS</b> | <b>0.00</b> | <b>0.10</b>                                               |  |  |  |  |             | <b>0.05</b> |
| <b>Golden-winged Warbler</b>              | <b>RC UCC</b>    | <b>0.10</b> | <b>0.00</b>                                               |  |  |  |  |             | <b>0.05</b> |
| Chestnut-sided Warbler                    |                  | 0.10        | 0.00                                                      |  |  |  |  |             | 0.05        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Middle Ravine

| <i>Common Name</i>                                 | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |             |  |  |  | <i>2012</i> | <i>Mean</i> |
|----------------------------------------------------|------------------|-------------|-----------------------------------------------------------|-------------|--|--|--|-------------|-------------|
| Yellow-rumped Warbler (Myrtle Warbler)             |                  |             | 0.00                                                      | 0.20        |  |  |  |             | 0.10        |
| American Redstart                                  |                  |             | 0.10                                                      | 0.00        |  |  |  |             | 0.05        |
| <i>Ovenbird</i>                                    |                  |             | 1.90                                                      | 1.30        |  |  |  |             | 1.60        |
| Common Yellowthroat                                |                  |             | 0.80                                                      | 0.80        |  |  |  |             | 0.80        |
| Scarlet Tanager                                    |                  |             | 0.40                                                      | 0.40        |  |  |  |             | 0.40        |
| <b><i>Eastern Towhee</i></b>                       | <b>RC</b>        |             | <b>0.60</b>                                               | <b>0.50</b> |  |  |  |             | <b>0.55</b> |
| Chipping Sparrow                                   |                  |             | 0.30                                                      | 0.00        |  |  |  |             | 0.15        |
| <b>Field Sparrow</b>                               | <b>CBSD RC</b>   |             | <b>0.20</b>                                               | <b>0.20</b> |  |  |  |             | <b>0.20</b> |
| <b>Song Sparrow</b>                                | <b>UCS</b>       |             | <b>0.40</b>                                               | <b>0.30</b> |  |  |  |             | <b>0.35</b> |
| Northern Cardinal                                  |                  |             | 0.10                                                      | 0.40        |  |  |  |             | 0.25        |
| Rose-breasted Grosbeak                             |                  |             | 0.10                                                      | 0.20        |  |  |  |             | 0.15        |
| Red-winged Blackbird                               |                  |             | 0.20                                                      | 0.40        |  |  |  |             | 0.30        |
| Brown-headed Cowbird                               |                  |             | 0.10                                                      | 0.20        |  |  |  |             | 0.15        |
| <b>Baltimore Oriole</b>                            | <b>RC RS UCS</b> |             | <b>0.10</b>                                               | <b>0.00</b> |  |  |  |             | <b>0.05</b> |
| <b>American Goldfinch</b>                          | <b>UCS</b>       |             | <b>1.20</b>                                               | <b>1.20</b> |  |  |  |             | <b>1.20</b> |
| <b><i>Points Surveyed:</i></b>                     |                  |             |                                                           |             |  |  |  |             |             |
|                                                    |                  |             | 10                                                        | 10          |  |  |  |             |             |
| <b><i>Ave # Birds Per Point Count Station:</i></b> |                  |             |                                                           |             |  |  |  |             |             |
|                                                    |                  |             | 15.50                                                     | 13.80       |  |  |  |             | 14.65       |
| <b><i>Species Richness:</i></b>                    |                  |             |                                                           |             |  |  |  |             |             |
|                                                    |                  |             | 36                                                        | 31          |  |  |  |             | 40          |
| <b><i>Shannon Diversity:</i></b>                   |                  |             |                                                           |             |  |  |  |             |             |
|                                                    |                  |             | 3.20                                                      | 3.24        |  |  |  |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Wilkinson Trail

| <i>Common Name</i>                        | <i>PIF Codes</i>          | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada Goose                              |                           |             | 0.10        |             | 0.00        | 0.00        |             |             | 0.03        |
| Mourning Dove                             |                           |             | 0.10        |             | 0.00        | 0.30        |             |             | 0.13        |
| <b>Black-billed Cuckoo</b>                | <b>CBSD RC RS UCC UCS</b> |             | <b>0.10</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |             |             | <b>0.03</b> |
| <b>Yellow-billed Cuckoo</b>               | <b>CBSD</b>               |             | <b>0.10</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |             |             | <b>0.03</b> |
| Red-bellied Woodpecker                    |                           |             | 0.00        | 0.10        | 0.20        |             |             |             | 0.10        |
| Yellow-bellied Sapsucker                  |                           |             | 0.20        | 0.60        | 1.60        |             |             |             | 0.80        |
| Downy Woodpecker                          |                           |             | 0.30        | 0.00        | 0.50        |             |             |             | 0.27        |
| Hairy Woodpecker                          |                           |             | 0.00        | 0.00        | 0.10        |             |             |             | 0.03        |
| Northern Flicker (Yellow-shafted Flicker) |                           |             | 0.00        | 0.10        | 0.00        |             |             |             | 0.03        |
| Pileated Woodpecker                       |                           |             | 0.10        | 0.10        | 0.20        |             |             |             | 0.13        |
| <b>Eastern Wood-Pewee</b>                 | <b>RC</b>                 |             | <b>1.20</b> | <b>1.20</b> | <b>0.90</b> | <b>0.00</b> |             |             | <b>1.10</b> |
| Acadian Flycatcher                        |                           |             | 0.10        | 0.00        | 0.00        |             |             |             | 0.03        |
| <b>Least Flycatcher</b>                   | <b>RC</b>                 |             | <b>0.20</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |             |             | <b>0.07</b> |
| Eastern Phoebe                            |                           |             | 0.30        | 0.00        | 0.10        |             |             |             | 0.13        |
| Great Crested Flycatcher                  |                           |             | 0.90        | 0.60        | 0.40        |             |             |             | 0.63        |
| Yellow-throated Vireo                     |                           |             | 0.00        | 0.00        | 0.10        |             |             |             | 0.03        |
| Red-eyed Vireo                            |                           |             | 1.20        | 0.50        | 1.10        |             |             |             | 0.93        |
| Blue Jay                                  |                           |             | 0.30        | 0.30        | 0.40        |             |             |             | 0.33        |
| American Crow                             |                           |             | 0.50        | 0.40        | 0.60        |             |             |             | 0.50        |
| Black-capped Chickadee                    |                           |             | 1.20        | 0.80        | 0.70        |             |             |             | 0.90        |
| Tufted Titmouse                           |                           |             | 0.40        | 0.10        | 0.20        |             |             |             | 0.23        |
| Red-breasted Nuthatch                     |                           |             | 0.10        | 0.00        | 0.10        |             |             |             | 0.07        |
| White-breasted Nuthatch                   |                           |             | 0.10        | 0.20        | 0.40        |             |             |             | 0.23        |
| Brown Creeper                             |                           |             | 0.40        | 0.30        | 0.40        |             |             |             | 0.37        |
| House Wren                                |                           |             | 0.00        | 0.00        | 0.10        |             |             |             | 0.03        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Wilkinson Trail

| <i>Common Name</i>         | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|----------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Blue-gray Gnatcatcher      |                  |             | 0.10        | 0.00        | 0.00        | 0.00        |             |             | 0.03        |
| <b>Veery</b>               | <b>RC</b>        |             | <b>0.20</b> | <b>0.60</b> | <b>1.20</b> |             |             |             | <b>0.67</b> |
| Hermit Thrush              |                  |             | 0.00        | 0.70        | 0.30        |             |             |             | 0.33        |
| <b>Wood Thrush</b>         | <b>RC UCC</b>    |             | <b>0.60</b> | <b>0.00</b> | <b>0.40</b> |             |             |             | <b>0.33</b> |
| American Robin             |                  |             | 0.60        | 0.20        | 0.20        |             |             |             | 0.33        |
| Gray Catbird               |                  |             | 0.40        | 0.20        | 0.30        |             |             |             | 0.30        |
| <b>Cedar Waxwing</b>       | <b>UCS</b>       |             | <b>0.00</b> | <b>0.70</b> | <b>0.20</b> |             |             |             | <b>0.30</b> |
| <b>Blue-winged Warbler</b> | <b>RC RS UCS</b> |             | <b>0.00</b> | <b>0.00</b> | <b>0.10</b> |             |             |             | <b>0.03</b> |
| Yellow Warbler             |                  |             | 0.00        | 0.00        | 0.40        |             |             |             | 0.13        |
| Chestnut-sided Warbler     |                  |             | 0.40        | 0.10        | 0.10        |             |             |             | 0.20        |
| <i>Overbird</i>            |                  |             | <b>1.70</b> | <b>0.90</b> | <b>1.40</b> |             |             |             | <b>1.33</b> |
| Northern Waterthrush       |                  |             | 0.10        | 0.00        | 0.00        |             |             |             | 0.03        |
| Louisiana Waterthrush      |                  |             | 0.20        | 0.00        | 0.00        |             |             |             | 0.07        |
| <i>Common Yellowthroat</i> |                  |             | 0.90        | 0.50        | 0.70        |             |             |             | 0.70        |
| <i>Scarlet Tanager</i>     |                  |             | 0.60        | 0.40        | 0.80        |             |             |             | 0.60        |
| <b>Eastern Towhee</b>      | <b>RC</b>        |             | <b>0.10</b> | <b>0.10</b> | <b>0.40</b> |             |             |             | <b>0.20</b> |
| Chipping Sparrow           |                  |             | 0.20        | 0.10        | 0.20        |             |             |             | 0.17        |
| <b>Song Sparrow</b>        | <b>UCS</b>       |             | <b>0.10</b> | <b>0.00</b> | <b>0.30</b> |             |             |             | <b>0.13</b> |
| Northern Cardinal          |                  |             | 0.10        | 0.40        | 0.40        |             |             |             | 0.30        |
| Rose-breasted Grosbeak     |                  |             | 0.20        | 0.00        | 0.00        |             |             |             | 0.07        |
| Indigo Bunting             |                  |             | 0.20        | 0.00        | 0.00        |             |             |             | 0.07        |
| Red-winged Blackbird       |                  |             | 0.00        | 0.00        | 0.10        |             |             |             | 0.03        |
| Common Grackle             |                  |             | 0.00        | 0.00        | 0.20        |             |             |             | 0.07        |
| <b>Baltimore Oriole</b>    | <b>RC RS UCS</b> |             | <b>0.00</b> | <b>0.00</b> | <b>0.20</b> |             |             |             | <b>0.07</b> |
| <b>American Goldfinch</b>  | <b>UCS</b>       |             | <b>0.60</b> | <b>0.40</b> | <b>0.70</b> |             |             |             | <b>0.57</b> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Saratoga NHP***

***SARA Wilkinson Trail***

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 10          | 10.20       | 10          | 10.60       | 17.00       |             | 14.27       |
| <i>Species Richness:</i>                                  |                  |             | 38          | 38          | 26          | 39          |             |             | 50          |
| <i>Shannon Diversity:</i>                                 |                  |             | 3.25        | 3.01        | 3.36        |             |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Bemis Heights

| <i>Common Name</i>         | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|----------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Mourning Dove              |                  | 0.33        | 1.00        | 0.17        | 0.50        | 0.50        | 0.50        | 0.50        | 0.50        |
| Ruby-throated Hummingbird  |                  | 0.00        | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.04        |
| Red-bellied Woodpecker     |                  | 0.00        | 0.17        | 0.17        | 0.00        | 0.00        | 0.00        | 0.08        | 0.08        |
| Yellow-bellied Sapsucker   |                  | 0.17        | 0.50        | 0.67        | 0.00        | 0.00        | 0.00        | 0.33        | 0.33        |
| Downy Woodpecker           |                  | 0.00        | 0.33        | 0.00        | 1.00        | 1.00        | 0.00        | 0.33        | 0.33        |
| Pileated Woodpecker        |                  | 0.17        | 0.33        | 0.33        | 0.00        | 0.00        | 0.00        | 0.21        | 0.21        |
| <b>Eastern Wood-Pewee</b>  | <b>RC</b>        | <b>0.50</b> | <b>0.67</b> | <b>0.50</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.42</b> | <b>0.42</b> |
| Alder Flycatcher           |                  | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.04        |
| Eastern Phoebe             |                  | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.04        | 0.04        |
| Great Crested Flycatcher   |                  | 0.00        | 0.17        | 0.17        | 0.00        | 0.00        | 0.00        | 0.08        | 0.08        |
| Red-eyed Vireo             |                  | 0.83        | 0.17        | 0.50        | 0.00        | 0.00        | 0.00        | 0.38        | 0.38        |
| Blue Jay                   |                  | 0.83        | 1.00        | 0.67        | 0.50        | 0.50        | 0.50        | 0.75        | 0.75        |
| American Crow              |                  | 0.17        | 0.17        | 0.50        | 1.00        | 1.00        | 1.00        | 0.46        | 0.46        |
| Black-capped Chickadee     |                  | 0.83        | 0.33        | 0.33        | 0.50        | 0.50        | 0.50        | 0.50        | 0.50        |
| Tufted Titmouse            |                  | 1.17        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.29        | 0.29        |
| White-breasted Nuthatch    |                  | 0.17        | 0.33        | 1.00        | 0.00        | 0.00        | 0.00        | 0.38        | 0.38        |
| Blue-gray Gnatcatcher      |                  | 0.33        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.08        | 0.08        |
| <b>Veery</b>               | <b>RC</b>        | <b>0.67</b> | <b>0.83</b> | <b>0.33</b> | <b>0.50</b> | <b>0.50</b> | <b>0.50</b> | <b>0.58</b> | <b>0.58</b> |
| Hermit Thrush              |                  | 0.00        | 0.17        | 0.33        | 0.00        | 0.00        | 0.00        | 0.13        | 0.13        |
| <b>Wood Thrush</b>         | <b>RC UCC</b>    | <b>1.83</b> | <b>1.17</b> | <b>1.67</b> | <b>0.50</b> | <b>0.50</b> | <b>0.50</b> | <b>1.29</b> | <b>1.29</b> |
| American Robin             |                  | 0.67        | 0.83        | 1.00        | 1.50        | 1.50        | 1.50        | 1.00        | 1.00        |
| Gray Catbird               |                  | 0.00        | 0.17        | 0.33        | 1.00        | 1.00        | 1.00        | 0.38        | 0.38        |
| <b>Cedar Waxwing</b>       | <b>UCS</b>       | <b>0.33</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.08</b> | <b>0.08</b> |
| <b>Blue-winged Warbler</b> | <b>RC RS UCS</b> | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.04</b> | <b>0.04</b> |
| Yellow Warbler             |                  | 0.00        | 0.00        | 0.17        | 0.00        | 0.00        | 0.00        | 0.04        | 0.04        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Bemis Heights

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Chestnut-sided Warbler                                    |                  |             | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.04        |
| Black-and-white Warbler                                   |                  |             | 0.33        | 0.00        | 0.17        | 0.00        | 0.00        |             | 0.13        |
| Ovenbird                                                  |                  |             | 1.33        | 1.33        | 1.67        | 0.00        | 0.00        |             | 1.08        |
| Louisiana Waterthrush                                     |                  |             | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.04        |
| Common Yellowthroat                                       |                  |             | 1.33        | 0.33        | 0.00        | 0.00        | 0.50        |             | 0.54        |
| Scarlet Tanager                                           |                  |             | 0.83        | 0.50        | 0.17        | 0.00        | 0.00        |             | 0.38        |
| <b>Eastern Towhee</b>                                     | <b>RC</b>        |             | <b>0.33</b> | <b>0.17</b> | <b>0.33</b> | <b>1.00</b> |             |             | <b>0.46</b> |
| Chipping Sparrow                                          |                  |             | 0.17        | 0.00        | 0.00        | 0.00        | 0.00        |             | 0.04        |
| <b>Field Sparrow</b>                                      | <b>CBSD RC</b>   |             | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.50</b> |             |             | <b>0.13</b> |
| Northern Cardinal                                         |                  |             | 0.00        | 0.17        | 0.00        | 0.00        | 0.00        |             | 0.04        |
| Rose-breasted Grosbeak                                    |                  |             | 0.00        | 0.33        | 0.00        | 0.50        |             |             | 0.21        |
| Red-winged Blackbird                                      |                  |             | 0.00        | 0.00        | 0.00        | 1.00        |             |             | 0.25        |
| Brown-headed Cowbird                                      |                  |             | 0.17        | 0.33        | 0.67        | 0.00        |             |             | 0.29        |
| <b>Baltimore Oriole</b>                                   | <b>RC RS UCS</b> |             | <b>0.00</b> | <b>0.17</b> | <b>0.17</b> | <b>0.00</b> |             |             | <b>0.08</b> |
| <b>American Goldfinch</b>                                 | <b>UCS</b>       |             | <b>0.67</b> | <b>0.17</b> | <b>0.00</b> | <b>0.00</b> |             |             | <b>0.21</b> |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  |             | 6           | 6           | 6           | 6           | 2           |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  |             | 15.00       | 12.00       | 12.00       | 10.50       |             |             | 12.38       |
| <i>Species Richness:</i>                                  |                  |             | 28          | 27          | 23          | 14          |             |             | 40          |
| <i>Shannon Diversity:</i>                                 |                  |             | 3.03        | 3.03        | 2.85        | 2.56        |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Burgoyne's Headquarters*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
| Canada Goose                              |                  | 0.20                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| Wild Turkey                               |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.03        |
| Turkey Vulture                            |                  | 0.00                                                      | 0.00        | 0.00        | 0.20        | 0.00        | 0.20        | 0.00        | 0.07        |
| Red-tailed Hawk                           |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.40        | 0.10        |
| American Kestrel                          |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.60        | 0.00        | 0.10        |
| Mourning Dove                             |                  | 0.60                                                      | 0.60        | 0.00        | 0.00        | 0.80        | 0.40        | 0.40        | 0.47        |
| Black-billed Cuckoo                       |                  | 0.00                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Red-bellied Woodpecker                    |                  | 1.00                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        |
| Yellow-bellied Sapsucker                  |                  | 0.40                                                      | 0.20        | 0.40        | 0.00        | 0.20        | 0.20        | 0.00        | 0.23        |
| Downy Woodpecker                          |                  | 0.00                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.07        |
| Hairy Woodpecker                          |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.60        | 0.20        | 0.00        | 0.13        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.60                                                      | 0.00        | 0.00        | 0.00        | 0.80        | 0.40        | 1.00        | 0.47        |
| Pileated Woodpecker                       |                  | 0.20                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.07        |
| Eastern Wood-Pewee                        |                  | 0.40                                                      | 0.40        | 0.00        | 0.00        | 0.80        | 0.00        | 0.20        | 0.30        |
| Alder Flycatcher                          |                  | 0.00                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Least Flycatcher                          |                  | 0.00                                                      | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| Eastern Phoebe                            |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.00        | 0.07        |
| Great Crested Flycatcher                  |                  | 0.20                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Eastern Kingbird                          |                  | 0.60                                                      | 0.60        | 0.60        | 0.40        | 1.60        | 0.80        | 1.00        | 0.83        |
| Warbling Vireo                            |                  | 0.20                                                      | 0.20        | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.13        |
| Red-eyed Vireo                            |                  | 0.00                                                      | 0.00        | 0.00        | 0.40        | 0.00        | 0.20        | 0.20        | 0.13        |
| Blue Jay                                  |                  | 0.40                                                      | 0.20        | 0.20        | 0.00        | 0.20        | 0.20        | 0.00        | 0.17        |
| American Crow                             |                  | 0.20                                                      | 0.20        | 0.20        | 0.20        | 0.00        | 1.00        | 0.00        | 0.27        |
| Common Raven                              |                  | 0.20                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Tree Swallow                              |                  | 0.60                                                      | 1.00        | 0.40        | 0.40        | 1.60        | 2.00        | 1.60        | 1.20        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Burgoyne's Headquarters*

| <i>Common Name</i>            | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|-------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Common Name</i>            | <i>PIF Codes</i> | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
| Northern Rough-winged Swallow |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.60        | 0.10        |
| Black-capped Chickadee        |                  | 1.00                                                      | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.20        |
| Tufted Titmouse               |                  | 0.60                                                      | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.13        |
| White-breasted Nuthatch       |                  | 0.40                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.10        |
| House Wren                    |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.07        |
| Blue-gray Gnatcatcher         |                  | 0.00                                                      | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.03        |
| <i>Eastern Bluebird</i>       |                  | 0.60                                                      | 0.00        | 0.00        | 0.00        | 2.00        | 1.00        | 2.00        | 0.93        |
| Veery                         |                  | 0.20                                                      | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.07        |
| Wood Thrush                   |                  | 0.80                                                      | 0.00        | 0.00        | 0.20        | 0.00        | 0.20        | 0.60        | 0.30        |
| American Robin                |                  | 0.80                                                      | 0.80        | 0.80        | 0.40        | 0.40        | 0.40        | 0.00        | 0.47        |
| Gray Catbird                  |                  | 0.60                                                      | 0.20        | 0.20        | 0.20        | 0.20        | 0.40        | 0.00        | 0.27        |
| Brown Thrasher                |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.03        |
| <i>Cedar Waxwing</i>          |                  | 0.60                                                      | 0.60        | 0.60        | 0.20        | 0.00        | 1.00        | 1.40        | 0.63        |
| Blue-winged Warbler           |                  | 0.00                                                      | 0.60        | 0.60        | 0.40        | 0.00        | 0.00        | 0.00        | 0.17        |
| Yellow Warbler                |                  | 0.00                                                      | 0.20        | 0.20        | 0.60        | 0.20        | 0.80        | 0.00        | 0.30        |
| Chestnut-sided Warbler        |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.20        | 0.10        |
| Prairie Warbler               |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 1.00        | 0.17        |
| Black-and-white Warbler       |                  | 0.00                                                      | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.03        |
| American Redstart             |                  | 0.40                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| Ovenbird                      |                  | 0.20                                                      | 0.00        | 0.00        | 0.00        | 0.40        | 0.20        | 0.20        | 0.17        |
| <i>Common Yellowthroat</i>    |                  | 0.60                                                      | 1.00        | 1.00        | 1.20        | 1.60        | 1.80        | 2.60        | 1.47        |
| Scarlet Tanager               |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| Eastern Towhee                |                  | 0.00                                                      | 0.00        | 0.00        | 0.00        | 0.00        | 1.00        | 0.40        | 0.23        |
| <i>Chipping Sparrow</i>       |                  | 1.20                                                      | 0.80        | 0.80        | 0.80        | 0.20        | 0.40        | 1.20        | 0.77        |
| <i>Field Sparrow</i>          |                  | 1.40                                                      | 2.00        | 2.00        | 1.80        | 2.80        | 2.40        | 3.20        | 2.27        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Burgoyne's Headquarters

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| Vesper Sparrow                                            |                  | 0.00        |             | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| Savannah Sparrow                                          |                  | 0.00        |             | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |
| Song Sparrow                                              |                  | 1.40        |             | 1.00        | 0.20        | 0.60        | 0.80        | 0.40        | 0.73        |
| Northern Cardinal                                         |                  | 0.20        |             | 0.00        | 0.00        | 0.00        | 0.60        | 0.00        | 0.13        |
| Rose-breasted Grosbeak                                    |                  | 0.20        |             | 0.20        | 0.20        | 0.00        | 0.00        | 0.00        | 0.10        |
| Indigo Bunting                                            |                  | 0.00        |             | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Red-winged Blackbird                                      |                  | 2.80        |             | 2.40        | 1.20        | 2.40        | 3.20        | 7.60        | 3.27        |
| Eastern Meadowlark                                        |                  | 0.20        |             | 0.40        | 0.60        | 0.00        | 0.20        | 0.00        | 0.23        |
| Common Grackle                                            |                  | 0.40        |             | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.10        |
| Brown-headed Cowbird                                      |                  | 0.00        |             | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| Orchard Oriole                                            |                  | 0.60        |             | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.13        |
| Baltimore Oriole                                          |                  | 0.20        |             | 0.40        | 0.40        | 1.20        | 0.60        | 0.00        | 0.47        |
| American Goldfinch                                        |                  | 1.40        |             | 1.80        | 0.60        | 0.80        | 1.20        | 1.60        | 1.23        |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 5           |             | 5           | 5           | 5           | 5           | 5           |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  | 22.60       |             | 18.20       | 11.60       | 21.00       | 23.40       | 29.20       | 21.00       |
| <i>Species Richness:</i>                                  |                  | 37          |             | 31          | 24          | 26          | 32          | 27          | 63          |
| <i>Shannon Diversity:</i>                                 |                  | 3.34        |             | 3.09        | 2.92        | 2.89        | 3.10        | 2.69        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Freeman Farm*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada Goose                              |                  | 0.10        | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.06        |
| Great Blue Heron                          |                  | 0.30        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.06        |
| Turkey Vulture                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.01        |
| Cooper's Hawk                             |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.01        |
| Red-tailed Hawk                           |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| American Kestrel                          |                  | 0.30        | 0.00        | 0.00        | 0.10        | 0.10        | 0.20        | 0.30        | 0.14        |
| American Woodcock                         |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.00        | 0.03        |
| Mourning Dove                             |                  | 0.30        | 0.40        | 0.50        | 0.30        | 0.90        | 0.80        | 0.90        | 0.59        |
| Black-billed Cuckoo                       |                  | 0.40        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.07        |
| Yellow-billed Cuckoo                      |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Ruby-throated Hummingbird                 |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Red-bellied Woodpecker                    |                  | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.04        |
| Yellow-bellied Sapsucker                  |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.20        | 0.10        | 0.00        | 0.06        |
| Downy Woodpecker                          |                  | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.20        | 0.00        | 0.04        |
| Hairy Woodpecker                          |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.01        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.20        | 0.10        | 0.20        | 0.00        | 0.30        | 0.20        | 0.30        | 0.19        |
| Pileated Woodpecker                       |                  | 0.00        | 0.00        | 0.00        | 0.30        | 0.10        | 0.00        | 0.20        | 0.09        |
| Eastern Wood-Pewee                        |                  | 0.20        | 0.20        | 0.30        | 0.00        | 0.40        | 0.30        | 0.50        | 0.27        |
| Alder Flycatcher                          |                  | 0.00        | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Willow Flycatcher                         |                  | 0.00        | 0.00        | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.03        |
| Eastern Phoebe                            |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.01        |
| Great Crested Flycatcher                  |                  | 0.40        | 0.60        | 0.40        | 0.10        | 0.10        | 0.10        | 0.00        | 0.24        |
| Eastern Kingbird                          |                  | 0.30        | 0.20        | 0.30        | 0.70        | 0.80        | 1.00        | 0.50        | 0.54        |
| Yellow-throated Vireo                     |                  | 0.00        | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Warbling Vireo                            |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.03        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Freeman Farm*

| <i>Common Name</i>      | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Red-eyed Vireo          |                  | 0.40        | 0.40        | 0.10        | 0.00        | 0.20        | 0.00        | 0.10        | 0.17        |
| Blue Jay                |                  | 0.40        | 0.30        | 0.20        | 0.50        | 0.30        | 0.50        | 0.20        | 0.34        |
| American Crow           |                  | 1.60        | 0.90        | 0.90        | 1.50        | 1.20        | 0.70        | 1.80        | 1.23        |
| Common Raven            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| Tree Swallow            |                  | 0.40        | 0.80        | 0.30        | 0.00        | 1.00        | 0.80        | 0.10        | 0.49        |
| Black-capped Chickadee  |                  | 0.40        | 0.40        | 0.00        | 0.90        | 0.40        | 0.20        | 0.60        | 0.41        |
| Tufted Titmouse         |                  | 0.70        | 0.30        | 0.10        | 0.00        | 0.10        | 0.10        | 0.00        | 0.19        |
| White-breasted Nuthatch |                  | 0.10        | 0.10        | 0.00        | 0.30        | 0.00        | 0.00        | 0.00        | 0.07        |
| House Wren              |                  | 0.30        | 0.00        | 0.10        | 0.20        | 0.20        | 0.00        | 0.00        | 0.11        |
| Eastern Bluebird        |                  | 0.30        | 0.00        | 0.10        | 0.00        | 0.00        | 0.20        | 0.30        | 0.13        |
| Hermit Thrush           |                  | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Wood Thrush             |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| American Robin          |                  | 0.00        | 0.40        | 0.70        | 0.50        | 0.80        | 1.80        | 0.80        | 0.71        |
| Gray Catbird            |                  | 0.00        | 0.10        | 0.20        | 0.00        | 0.70        | 0.10        | 0.00        | 0.16        |
| Northern Mockingbird    |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.01        |
| European Starling       |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| Cedar Waxwing           |                  | 0.10        | 0.80        | 0.00        | 0.00        | 0.20        | 0.50        | 0.70        | 0.33        |
| Blue-winged Warbler     |                  | 0.40        | 0.40        | 0.10        | 0.10        | 0.30        | 0.20        | 0.00        | 0.21        |
| Golden-winged Warbler   |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.01        |
| Yellow Warbler          |                  | 0.40        | 0.20        | 0.30        | 0.10        | 0.20        | 0.00        | 0.00        | 0.17        |
| Chestnut-sided Warbler  |                  | 0.20        | 0.10        | 0.50        | 0.00        | 0.00        | 0.00        | 0.00        | 0.11        |
| Prairie Warbler         |                  | 0.00        | 0.30        | 0.30        | 0.00        | 0.90        | 0.00        | 0.20        | 0.24        |
| Ovenbird                |                  | 0.50        | 0.40        | 0.40        | 0.10        | 0.00        | 0.00        | 0.40        | 0.26        |
| Common Yellowthroat     |                  | 1.10        | 0.80        | 0.80        | 1.60        | 3.10        | 1.90        | 2.60        | 1.70        |
| Scarlet Tanager         |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.04        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Freeman Farm

| <i>Common Name</i>                          | <i>PIF Codes</i> | <i>2006</i> | <i>Relative Abundance (birds per point count station)</i> |       |       |       |       | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|---------------------------------------------|------------------|-------------|-----------------------------------------------------------|-------|-------|-------|-------|-------------|-------------|-------------|-------------|
| Eastern Towhee                              |                  | 0.20        | 0.00                                                      | 0.40  | 0.40  | 0.00  | 0.40  | 1.00        | 0.60        | 1.90        | 0.64        |
| Chipping Sparrow                            |                  | 0.40        | 0.70                                                      | 0.60  | 0.80  | 0.80  | 0.80  | 0.80        | 0.50        | 0.90        | 0.67        |
| Field Sparrow                               |                  | 1.40        | 0.90                                                      | 1.60  | 1.50  | 2.40  | 2.40  | 2.40        | 1.50        | 2.00        | 1.61        |
| Vesper Sparrow                              |                  | 0.00        | 0.00                                                      | 0.10  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00        | 0.00        | 0.01        |
| Song Sparrow                                |                  | 2.30        | 2.00                                                      | 1.10  | 1.70  | 1.70  | 1.70  | 1.70        | 1.80        | 2.80        | 1.91        |
| Northern Cardinal                           |                  | 0.50        | 0.20                                                      | 0.30  | 0.20  | 0.00  | 0.00  | 0.00        | 0.00        | 0.00        | 0.17        |
| Indigo Bunting                              |                  | 0.10        | 0.00                                                      | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00        | 0.00        | 0.01        |
| Bobolink                                    |                  | 0.30        | 1.20                                                      | 1.10  | 0.90  | 4.00  | 4.00  | 4.00        | 4.10        | 0.70        | 1.76        |
| Red-winged Blackbird                        |                  | 0.70        | 1.20                                                      | 2.10  | 2.60  | 4.50  | 4.50  | 4.50        | 4.50        | 6.90        | 3.21        |
| Eastern Meadowlark                          |                  | 0.90        | 0.30                                                      | 0.70  | 1.20  | 1.00  | 1.00  | 1.00        | 0.40        | 0.50        | 0.71        |
| Common Grackle                              |                  | 0.00        | 0.00                                                      | 0.00  | 0.00  | 0.10  | 0.10  | 0.10        | 0.00        | 0.00        | 0.01        |
| Baltimore Oriole                            |                  | 1.00        | 0.40                                                      | 0.20  | 0.40  | 0.30  | 0.30  | 0.30        | 0.30        | 0.00        | 0.37        |
| Purple Finch                                |                  | 0.10        | 0.00                                                      | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00        | 0.00        | 0.01        |
| American Goldfinch                          |                  | 0.50        | 1.10                                                      | 0.90  | 1.10  | 1.90  | 1.90  | 1.90        | 1.60        | 1.10        | 1.17        |
| <b>Points Surveyed:</b>                     |                  |             |                                                           |       |       |       |       |             |             |             |             |
| <b>Ave # Birds Per Point Count Station:</b> |                  | 10          | 10                                                        | 10    | 10    | 10    | 10    | 10          | 10          | 10          |             |
| <b>Species Richness:</b>                    |                  | 19.10       | 16.90                                                     | 16.60 | 18.50 | 30.60 | 25.70 | 27.60       | 22.14       |             |             |
| <b>Shannon Diversity:</b>                   |                  | 43          | 36                                                        | 38    | 29    | 35    | 32    | 28          | 64          |             |             |
|                                             |                  | 3.39        | 3.24                                                      | 3.22  | 2.93  | 2.98  | 2.84  | 2.71        |             |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Neilson Farm*

| <i>Common Name</i>                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada Goose                              |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.10        | 0.08        |
| Northern Bobwhite                         |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Great Blue Heron                          |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.00        | 0.10        | 0.05        |
| Turkey Vulture                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.10        | 0.05        |
| Northern Harrier                          |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Sharp-shinned Hawk                        |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.02        |
| Red-tailed Hawk                           |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.02        |
| American Kestrel                          |                  | 0.10        | 0.20        | 0.10        | 0.10        | 0.30        | 0.10        | 0.00        | 0.13        |
| American Woodcock                         |                  | 0.00        | 0.00        | 0.10        | 0.10        | 0.20        | 0.60        | 0.00        | 0.15        |
| Mourning Dove                             |                  | 0.00        | 0.50        | 0.20        | 0.20        | 0.30        | 0.20        | 0.00        | 0.20        |
| Red-bellied Woodpecker                    |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Downy Woodpecker                          |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.20        | 0.00        | 0.03        |
| Northern Flicker (Yellow-shafted Flicker) |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.00        | 0.03        |
| Pileated Woodpecker                       |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.03        |
| Eastern Wood-Pewee                        |                  | 0.00        | 0.20        | 0.10        | 0.10        | 0.10        | 0.00        | 0.20        | 0.10        |
| Alder Flycatcher                          |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| Willow Flycatcher                         |                  | 0.20        | 0.70        | 0.00        | 0.00        | 0.00        | 0.10        | 0.20        | 0.20        |
| Least Flycatcher                          |                  | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.02        |
| Eastern Phoebe                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.10        | 0.20        | 0.07        |
| Great Crested Flycatcher                  |                  | 0.00        | 0.00        | 0.10        | 0.10        | 0.20        | 0.00        | 0.10        | 0.07        |
| Eastern Kingbird                          |                  | 0.60        | 0.20        | 0.30        | 0.30        | 1.20        | 0.30        | 0.60        | 0.53        |
| Warbling Vireo                            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.02        |
| Red-eyed Vireo                            |                  | 0.00        | 0.00        | 0.10        | 0.10        | 0.00        | 0.10        | 0.00        | 0.03        |
| Blue Jay                                  |                  | 0.20        | 0.20        | 0.00        | 0.00        | 0.00        | 0.30        | 0.20        | 0.15        |
| <i>American Crow</i>                      |                  | <i>0.50</i> | <i>0.90</i> | <i>2.30</i> | <i>0.90</i> | <i>0.90</i> | <i>1.20</i> | <i>0.80</i> | <i>1.10</i> |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Neilson Farm*

| <i>Common Name</i>             | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|--------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Tree Swallow</i>            |                  | 0.00        | 0.20        | 0.00        | 0.00        | 0.90        | 1.00        | 1.40        | 0.58        |
| <i>Barn Swallow</i>            |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.02        |
| <i>Black-capped Chickadee</i>  |                  | 0.10        | 0.00        | 0.00        | 0.10        | 0.10        | 0.50        | 0.00        | 0.13        |
| <i>Tufted Titmouse</i>         |                  | 0.30        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.00        | 0.07        |
| <i>White-breasted Nuthatch</i> |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.10        | 0.20        | 0.00        | 0.07        |
| <i>House Wren</i>              |                  | 0.50        | 0.00        | 0.00        | 0.00        | 0.50        | 0.00        | 0.00        | 0.17        |
| <i>Blue-gray Gnatcatcher</i>   |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.02        |
| <i>Eastern Bluebird</i>        |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.10        |
| <i>American Robin</i>          |                  | 0.70        | 0.60        | 0.10        | 0.10        | 0.30        | 0.30        | 0.10        | 0.35        |
| <i>Gray Catbird</i>            |                  | 0.20        | 0.10        | 0.30        | 0.30        | 0.10        | 0.60        | 0.10        | 0.23        |
| <i>Northern Mockingbird</i>    |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.30        | 0.00        | 0.12        |
| <i>Brown Thrasher</i>          |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |
| <i>European Starling</i>       |                  | 0.80        | 0.00        | 0.70        | 0.30        | 0.30        | 0.10        | 0.00        | 0.32        |
| <i>Cedar Waxwing</i>           |                  | 0.50        | 0.60        | 0.10        | 0.10        | 1.00        | 0.90        | 1.70        | 0.80        |
| <i>Blue-winged Warbler</i>     |                  | 0.10        | 0.40        | 0.00        | 0.00        | 0.00        | 0.40        | 0.10        | 0.17        |
| <i>Yellow Warbler</i>          |                  | 0.40        | 0.40        | 0.10        | 0.10        | 0.20        | 0.50        | 0.30        | 0.32        |
| <i>Chestnut-sided Warbler</i>  |                  | 0.00        | 0.00        | 0.00        | 0.00        | 0.40        | 0.00        | 0.00        | 0.07        |
| <i>Prairie Warbler</i>         |                  | 0.20        | 0.00        | 0.00        | 0.00        | 0.10        | 0.00        | 0.10        | 0.07        |
| <i>American Redstart</i>       |                  | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.02        |
| <i>Common Yellowthroat</i>     |                  | 0.70        | 1.00        | 1.50        | 1.20        | 1.20        | 1.10        | 1.40        | 1.15        |
| <i>Scarlet Tanager</i>         |                  | 0.30        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.05        |
| <i>Eastern Towhee</i>          |                  | 0.30        | 0.20        | 0.30        | 0.00        | 0.00        | 0.20        | 0.10        | 0.18        |
| <i>Chipping Sparrow</i>        |                  | 0.00        | 0.10        | 0.00        | 0.00        | 0.10        | 0.00        | 0.10        | 0.05        |
| <i>Field Sparrow</i>           |                  | 0.60        | 0.60        | 0.70        | 0.70        | 1.40        | 0.60        | 0.20        | 0.68        |
| <i>Savannah Sparrow</i>        |                  | 0.20        | 0.00        | 0.20        | 0.00        | 0.00        | 0.30        | 0.00        | 0.12        |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### *Saratoga NHP*

#### *SARA Neilson Farm*

| <i>Common Name</i>                                        | <i>PIF Codes</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>Mean</i> |
|-----------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Relative Abundance (birds per point count station)</i> |                  |             |             |             |             |             |             |             |             |
| <i>Song Sparrow</i>                                       |                  | 1.60        | 1.30        | 2.50        | 1.60        | 1.80        | 2.00        | 1.80        |             |
| Northern Cardinal                                         |                  | 0.10        | 0.40        | 0.00        | 0.00        | 0.20        | 0.20        | 0.15        |             |
| Rose-breasted Grosbeak                                    |                  | 0.10        | 0.10        | 0.00        | 0.00        | 0.00        | 0.00        | 0.03        |             |
| Bobolink                                                  |                  | 3.40        | 2.20        | 6.10        | 8.90        | 20.70       | 9.40        | 8.45        |             |
| <i>Red-winged Blackbird</i>                               |                  | 2.20        | 5.60        | 5.20        | 6.80        | 8.30        | 9.40        | 6.25        |             |
| <i>Eastern Meadowlark</i>                                 |                  | 0.60        | 1.30        | 2.80        | 2.30        | 2.90        | 3.20        | 2.18        |             |
| Common Grackle                                            |                  | 0.10        | 0.00        | 0.10        | 0.00        | 0.00        | 0.00        | 0.03        |             |
| Baltimore Oriole                                          |                  | 0.00        | 0.40        | 0.00        | 0.00        | 0.00        | 0.00        | 0.07        |             |
| <i>American Goldfinch</i>                                 |                  | 0.40        | 0.80        | 1.20        | 1.60        | 1.10        | 0.80        | 0.98        |             |
| <i>Points Surveyed:</i>                                   |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 10          | 10          | 10          | 10          | 10          | 10          |             |             |
| <i>Ave # Birds Per Point Count Station:</i>               |                  | 17.20       | 19.30       | 25.50       | 32.30       | 46.20       | 33.30       | 28.97       |             |
| <i>Species Richness:</i>                                  |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 37          | 26          | 26          | 35          | 37          | 28          | 59          |             |
| <i>Shannon Diversity:</i>                                 |                  |             |             |             |             |             |             |             |             |
|                                                           |                  | 3.03        | 2.65        | 2.36        | 2.55        | 2.18        | 2.20        |             |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

## Appendix B. Site Summaries (continued).

### Saratoga NHP

#### SARA Northwest

| Common Name              | PIF Codes | Relative Abundance (birds per point count station) |      |      |      |      |      |      |      |
|--------------------------|-----------|----------------------------------------------------|------|------|------|------|------|------|------|
|                          |           | 2006                                               | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Mean |
| Green Heron              |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Red-bellied Woodpecker   |           |                                                    |      |      |      |      |      | 0.25 | 0.25 |
| Yellow-bellied Sapsucker |           |                                                    |      |      |      |      |      | 0.75 | 0.75 |
| Downy Woodpecker         |           |                                                    |      |      |      |      |      | 0.63 | 0.63 |
| Eastern Wood-Pewee       | RC        |                                                    |      |      |      |      |      | 0.63 | 0.63 |
| Willow Flycatcher        | UCS       |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Yellow-throated Vireo    |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Blue-headed Vireo        |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Blue Jay                 |           |                                                    |      |      |      |      |      | 0.25 | 0.25 |
| American Crow            |           |                                                    |      |      |      |      |      | 1.38 | 1.38 |
| Black-capped Chickadee   |           |                                                    |      |      |      |      |      | 0.75 | 0.75 |
| Tufted Titmouse          |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| White-breasted Nuthatch  |           |                                                    |      |      |      |      |      | 0.38 | 0.38 |
| House Wren               |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Veery                    | RC        |                                                    |      |      |      |      |      | 0.63 | 0.63 |
| Hermit Thrush            |           |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Wood Thrush              | RC UCS    |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| American Robin           |           |                                                    |      |      |      |      |      | 0.38 | 0.38 |
| Gray Catbird             |           |                                                    |      |      |      |      |      | 0.38 | 0.38 |
| Blue-winged Warbler      | RC RS UCS |                                                    |      |      |      |      |      | 0.13 | 0.13 |
| Ovenbird                 |           |                                                    |      |      |      |      |      | 1.63 | 1.63 |
| Common Yellowthroat      |           |                                                    |      |      |      |      |      | 0.50 | 0.50 |
| Scarlet Tanager          |           |                                                    |      |      |      |      |      | 0.38 | 0.38 |
| Eastern Towhee           | RC        |                                                    |      |      |      |      |      | 0.75 | 0.75 |
| Northern Cardinal        |           |                                                    |      |      |      |      |      | 0.63 | 0.63 |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;

UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species

**Appendix B.** Site Summaries (continued).

***Saratoga NHP***

***SARA Northwest***

| <i>Common Name</i>                                 | <i>PIF Codes</i> | <i>Relative Abundance (birds per point count station)</i> |             |             |             |             |             |             | <i>Mean</i> |
|----------------------------------------------------|------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                                    |                  | <i>2006</i>                                               | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> |             |
| Rose-breasted Grosbeak                             |                  |                                                           |             |             |             |             |             | 0.13        | 0.13        |
| Indigo Bunting                                     |                  |                                                           |             |             |             |             |             | 0.13        | 0.13        |
| Common Grackle                                     |                  |                                                           |             |             |             |             |             | 0.13        | 0.13        |
| <b><i>Points Surveyed:</i></b>                     |                  |                                                           |             |             |             |             |             |             |             |
| <b><i>Ave # Birds Per Point Count Station:</i></b> |                  |                                                           |             |             |             |             |             | 11.75       | 11.75       |
| <b><i>Species Richness:</i></b>                    |                  |                                                           |             |             |             |             |             | 28          | 28          |
| <b><i>Shannon Diversity:</i></b>                   |                  |                                                           |             |             |             |             |             | 2.99        |             |

CBSD = Common Bird in Steep Decline; RC = Regional Concern Species; RS = Regional Stewardship Species;  
 UCC = USA/Canada Concern Species; UCS = USA/Canada Stewardship Species



## **Appendix C—Forest Avian Ecological Integrity Assessment by Site**

This appendix presents results of the Forest Avian Ecological Integrity Assessment for each forest site, combining data from 2006 through 2012. Assessments for parks with only one site are excluded from this appendix since they are included in the main report. Please refer to the Introduction for some important caveats pertaining to the assessment.

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Acadia NP - 30 ACAD Schoodic

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 8%                | Good          |
| Resident                       | 30%               | Caution       |
| Single Brooded                 | 60%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 13%               | Good          |
| Ground Gleaner        | 8%                | Caution       |
| High Canopy Forager   | 10%               | Caution       |
| Low Canopy Forager    | 33%               | Good          |
| Omnivore              | 25%               | Good          |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 35%               | Caution       |
| Forest-ground Nester     | 23%               | Good          |
| Interior Forest Obligate | 48%               | Good          |
| Shrub Nester             | 20%               | Caution       |

### Acadia NP - 31 ACAD Giant Slide Trail

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 10%               | Caution       |
| Resident                       | 41%               | Sig Concern   |
| Single Brooded                 | 62%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 17%               | Good          |
| Ground Gleaner        | 10%               | Good          |
| High Canopy Forager   | 7%                | Sig Concern   |
| Low Canopy Forager    | 21%               | Caution       |
| Omnivore              | 28%               | Good          |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 41%               | Good          |
| Forest-ground Nester     | 17%               | Caution       |
| Interior Forest Obligate | 52%               | Good          |
| Shrub Nester             | 17%               | Good          |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Acadia NP - 32 ACAD Witch Hole Pond

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 6%                | Good          |
| Resident                       | 25%               | Good          |
| Single Brooded                 | 64%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 14%               | Good          |
| Ground Gleaner        | 8%                | Caution       |
| High Canopy Forager   | 14%               | Good          |
| Low Canopy Forager    | 22%               | Good          |
| Omnivore              | 31%               | Caution       |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 39%               | Good          |
| Forest-ground Nester     | 17%               | Caution       |
| Interior Forest Obligate | 39%               | Good          |
| Shrub Nester             | 17%               | Good          |

### Acadia NP - 33 ACAD Seal Cove Center

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 44%               | Sig Concern   |
| Single Brooded                 | 56%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 19%               | Good          |
| Ground Gleaner        | 9%                | Good          |
| High Canopy Forager   | 9%                | Caution       |
| Low Canopy Forager    | 25%               | Good          |
| Omnivore              | 22%               | Good          |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 44%               | Good          |
| Forest-ground Nester     | 13%               | Caution       |
| Interior Forest Obligate | 53%               | Good          |
| Shrub Nester             | 16%               | Good          |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Acadia NP - 34 ACAD Seal Cove East

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 7%                | Good          |
| Resident                       | 36%               | Caution       |
| Single Brooded                 | 52%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 14%               | Good          |
| Ground Gleaner        | 9%                | Good          |
| High Canopy Forager   | 11%               | Caution       |
| Low Canopy Forager    | 23%               | Good          |
| Omnivore              | 32%               | Caution       |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 36%               | Good          |
| Forest-ground Nester     | 9%                | Caution       |
| Interior Forest Obligate | 41%               | Good          |
| Shrub Nester             | 25%               | Sig Concern   |

### Acadia NP - 35 ACAD Seal Cove West

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 38%               | Caution       |
| Single Brooded                 | 56%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 16%               | Good          |
| Ground Gleaner        | 13%               | Good          |
| High Canopy Forager   | 13%               | Good          |
| Low Canopy Forager    | 19%               | Caution       |
| Omnivore              | 28%               | Good          |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 41%               | Good          |
| Forest-ground Nester     | 16%               | Caution       |
| Interior Forest Obligate | 47%               | Good          |
| Shrub Nester             | 16%               | Good          |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Acadia NP - 36 ACAD Youngs Mtn

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 7%                | Good          |
| Resident                       | 33%               | Caution       |
| Single Brooded                 | 73%               | Good          |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 20%               | Good          |
| Ground Gleaner        | 13%               | Good          |
| High Canopy Forager   | 13%               | Good          |
| Low Canopy Forager    | 20%               | Caution       |
| Omnivore              | 13%               | Good          |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 33%               | Caution       |
| Forest-ground Nester     | 20%               | Good          |
| Interior Forest Obligate | 47%               | Good          |
| Shrub Nester             | 20%               | Caution       |

### Marsh-Billings-Rockefeller NHP - 10 MABI East

2006 to 2012

#### *Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 10%               | Caution       |
| Resident                       | 33%               | Caution       |
| Single Brooded                 | 60%               | Caution       |

#### *Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 20%               | Good          |
| Ground Gleaner        | 8%                | Caution       |
| High Canopy Forager   | 10%               | Caution       |
| Low Canopy Forager    | 15%               | Caution       |
| Omnivore              | 35%               | Caution       |

#### *Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 30%               | Caution       |
| Forest-ground Nester     | 15%               | Caution       |
| Interior Forest Obligate | 45%               | Good          |
| Shrub Nester             | 20%               | Caution       |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Marsh-Billings-Rockefeller NHP - 11 MABI Northwest

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 33%               | Caution       |
| Single Brooded                 | 60%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 19%               | Good          |
| Ground Gleaner        | 12%               | Good          |
| High Canopy Forager   | 9%                | Caution       |
| Low Canopy Forager    | 19%               | Caution       |
| Omnivore              | 28%               | Good          |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 40%               | Good          |
| Forest-ground Nester     | 14%               | Caution       |
| Interior Forest Obligate | 42%               | Good          |
| Shrub Nester             | 16%               | Good          |

### Marsh-Billings-Rockefeller NHP - 12 MABI South

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 30%               | Caution       |
| Single Brooded                 | 62%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 17%               | Good          |
| Ground Gleaner        | 6%                | Caution       |
| High Canopy Forager   | 9%                | Caution       |
| Low Canopy Forager    | 21%               | Caution       |
| Omnivore              | 34%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 38%               | Good          |
| Forest-ground Nester     | 13%               | Caution       |
| Interior Forest Obligate | 36%               | Good          |
| Shrub Nester             | 21%               | Caution       |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Minute Man NHP - 13 MIMA Hartwell Tavern

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 5%                | Caution       |
| Nest Predator / Brood Parasite | 7%                | Good          |
| Resident                       | 37%               | Caution       |
| Single Brooded                 | 44%               | Sig Concern   |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 14%               | Good          |
| Ground Gleaner        | 7%                | Caution       |
| High Canopy Forager   | 5%                | Sig Concern   |
| Low Canopy Forager    | 19%               | Caution       |
| Omnivore              | 40%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 21%               | Sig Concern   |
| Forest-ground Nester     | 7%                | Caution       |
| Interior Forest Obligate | 19%               | Caution       |
| Shrub Nester             | 33%               | Sig Concern   |

### Minute Man NHP - 14 MIMA Meriam's Corner

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 4%                | Caution       |
| Nest Predator / Brood Parasite | 6%                | Good          |
| Resident                       | 32%               | Caution       |
| Single Brooded                 | 50%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 10%               | Caution       |
| Ground Gleaner        | 4%                | Caution       |
| High Canopy Forager   | 8%                | Caution       |
| Low Canopy Forager    | 18%               | Caution       |
| Omnivore              | 38%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 26%               | Sig Concern   |
| Forest-ground Nester     | 4%                | Sig Concern   |
| Interior Forest Obligate | 14%               | Caution       |
| Shrub Nester             | 26%               | Sig Concern   |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Minute Man NHP - 15 MIMA The Bluff

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 5%                | Caution       |
| Nest Predator / Brood Parasite | 11%               | Caution       |
| Resident                       | 39%               | Caution       |
| Single Brooded                 | 42%               | Sig Concern   |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 11%               | Caution       |
| Ground Gleaner        | 5%                | Caution       |
| High Canopy Forager   | 8%                | Caution       |
| Low Canopy Forager    | 16%               | Caution       |
| Omnivore              | 45%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 29%               | Sig Concern   |
| Forest-ground Nester     | 3%                | Sig Concern   |
| Interior Forest Obligate | 11%               | Caution       |
| Shrub Nester             | 26%               | Sig Concern   |

### Morristown NHP - 16 MORR Mt. Kemble

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 8%                | Good          |
| Resident                       | 33%               | Caution       |
| Single Brooded                 | 46%               | Sig Concern   |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 13%               | Good          |
| Ground Gleaner        | 8%                | Caution       |
| High Canopy Forager   | 8%                | Caution       |
| Low Canopy Forager    | 21%               | Caution       |
| Omnivore              | 41%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 26%               | Sig Concern   |
| Forest-ground Nester     | 13%               | Caution       |
| Interior Forest Obligate | 26%               | Caution       |
| Shrub Nester             | 23%               | Caution       |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Morristown NHP - 17 MORR Primrose Brook

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 32%               | Caution       |
| Single Brooded                 | 50%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 12%               | Good          |
| Ground Gleaner        | 9%                | Caution       |
| High Canopy Forager   | 9%                | Caution       |
| Low Canopy Forager    | 18%               | Caution       |
| Omnivore              | 41%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 24%               | Sig Concern   |
| Forest-ground Nester     | 15%               | Caution       |
| Interior Forest Obligate | 26%               | Caution       |
| Shrub Nester             | 24%               | Caution       |

### Morristown NHP - 18 MORR Soldier's Huts

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 9%                | Good          |
| Resident                       | 30%               | Caution       |
| Single Brooded                 | 60%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 14%               | Good          |
| Ground Gleaner        | 9%                | Good          |
| High Canopy Forager   | 12%               | Caution       |
| Low Canopy Forager    | 21%               | Caution       |
| Omnivore              | 30%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 33%               | Caution       |
| Forest-ground Nester     | 19%               | Good          |
| Interior Forest Obligate | 37%               | Good          |
| Shrub Nester             | 23%               | Caution       |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Saratoga NHP - 23 SARA Middle Ravine

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 8%                | Good          |
| Resident                       | 31%               | Caution       |
| Single Brooded                 | 54%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 10%               | Caution       |
| Ground Gleaner        | 10%               | Good          |
| High Canopy Forager   | 5%                | Sig Concern   |
| Low Canopy Forager    | 23%               | Good          |
| Omnivore              | 41%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 26%               | Sig Concern   |
| Forest-ground Nester     | 10%               | Caution       |
| Interior Forest Obligate | 23%               | Caution       |
| Shrub Nester             | 23%               | Caution       |

### Saratoga NHP - 24 SARA Wilkinson Trail

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 4%                | Good          |
| Resident                       | 31%               | Caution       |
| Single Brooded                 | 51%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 14%               | Good          |
| Ground Gleaner        | 6%                | Caution       |
| High Canopy Forager   | 8%                | Caution       |
| Low Canopy Forager    | 20%               | Caution       |
| Omnivore              | 35%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 24%               | Sig Concern   |
| Forest-ground Nester     | 12%               | Caution       |
| Interior Forest Obligate | 24%               | Caution       |
| Shrub Nester             | 29%               | Sig Concern   |

## Appendix C. Forest Avian Ecological Integrity Assessment by Site (continued).

### Saratoga NHP - 25 SARA Bemis Heights

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 8%                | Good          |
| Resident                       | 30%               | Caution       |
| Single Brooded                 | 53%               | Caution       |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 13%               | Good          |
| Ground Gleaner        | 5%                | Caution       |
| High Canopy Forager   | 8%                | Caution       |
| Low Canopy Forager    | 18%               | Caution       |
| Omnivore              | 43%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 25%               | Sig Concern   |
| Forest-ground Nester     | 15%               | Caution       |
| Interior Forest Obligate | 20%               | Caution       |
| Shrub Nester             | 30%               | Sig Concern   |

### Saratoga NHP - 38 SARA Northwest

2006 to 2012

*Integrity Element: Compositional*

| <i>Response Guild</i>          | <i>Percentage</i> | <i>Rating</i> |
|--------------------------------|-------------------|---------------|
| Exotic                         | 0%                | Good          |
| Nest Predator / Brood Parasite | 7%                | Good          |
| Resident                       | 30%               | Caution       |
| Single Brooded                 | 48%               | Sig Concern   |

*Integrity Element: Functional*

| <i>Response Guild</i> | <i>Percentage</i> | <i>Rating</i> |
|-----------------------|-------------------|---------------|
| Bark Prober           | 11%               | Good          |
| Ground Gleaner        | 7%                | Caution       |
| High Canopy Forager   | 7%                | Caution       |
| Low Canopy Forager    | 22%               | Good          |
| Omnivore              | 44%               | Caution       |

*Integrity Element: Structural*

| <i>Response Guild</i>    | <i>Percentage</i> | <i>Rating</i> |
|--------------------------|-------------------|---------------|
| Canopy Nester            | 26%               | Sig Concern   |
| Forest-ground Nester     | 15%               | Caution       |
| Interior Forest Obligate | 22%               | Caution       |
| Shrub Nester             | 26%               | Sig Concern   |



## Appendix D—Grassland Avian Ecological Integrity Assessment by Site

This appendix presents results of the Grassland Avian Ecological Integrity Assessment for each grassland site at SARA, combining data from 2006 through 2012. Please refer to the Introduction for some important caveats pertaining to the assessment and changes to the way that the assessment is calculated for this and future reports.

### Saratoga NHP - Burgoyne's Headquarters 2006 to 2012

| <i>Guild</i>           | <i>Percentage</i> | <i>Rating</i> |
|------------------------|-------------------|---------------|
| PIF Grassland Obligate | 50%               | Caution       |
| PIF Shrub-dependent    | 71%               | Caution       |
| Edge Generalist        | 68%               | Caution       |
| Exotic                 | 0%                | Good          |
| Grassland Obligate     | 9%                | Caution       |
| Shrub-dependent        | 23%               | Caution       |

### Saratoga NHP - Freeman Farm 2006 to 2012

| <i>Guild</i>           | <i>Percentage</i> | <i>Rating</i> |
|------------------------|-------------------|---------------|
| PIF Grassland Obligate | 50%               | Caution       |
| PIF Shrub-dependent    | 86%               | Good          |
| Edge Generalist        | 67%               | Caution       |
| Exotic                 | 2%                | Good          |
| Grassland Obligate     | 9%                | Caution       |
| Shrub-dependent        | 24%               | Caution       |

### Saratoga NHP - Neilson Farm 2006 to 2012

| <i>Guild</i>           | <i>Percentage</i> | <i>Rating</i> |
|------------------------|-------------------|---------------|
| PIF Grassland Obligate | 63%               | Caution       |
| PIF Shrub-dependent    | 86%               | Good          |
| Edge Generalist        | 67%               | Caution       |
| Exotic                 | 2%                | Good          |
| Grassland Obligate     | 11%               | Good          |
| Shrub-dependent        | 22%               | Caution       |



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