



# Department of Defense Legacy Resource Management Program

PROJECT 09-429

## **Cerulean Warbler Occurrence Atlas for Military Installations**

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FINAL REPORT  
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Final Report FY2009

Introduction

The Cerulean Warbler (CERW, *Dendroica cerulea*) is a small wood-warbler that nests and forages in the upper canopy of mature forests. The breeding range falls entirely within the eastern US and Canada. Current information indicates that CERW are declining. The CERW is included on the USFWS 1995 Species of Management Concern list, the USFWS Birds of Conservation Concern 2008 list, and on Partners in Flight's 2004 Continental Watchlist; it is also listed in 16 states and 1 Canadian province.

The Cerulean Warbler Occurrence Atlas for military installations will evaluate the CERW status on all DoD lands with appropriate habitat that fall within the species' breeding range (plus a 100-mile buffer). This will allow DoD to manage proactively for CERW and to forge partnerships with state-level entities concerned with rare Neotropical migrants, such as IBA programs and natural resource agencies. The long-term goal of all CERW management activities is to support the population and to prevent the federal listing of the CERW under the Endangered Species Act.

Methods

GIS technology was used to determine the sites for this study. Habitat was evaluated at 1-mile resolution; sites that did not have habitat at this scale were evaluated at finer resolution: 38 sites were removed from the list due to lack of habitat.

POCs were sought for the remaining 379 sites on the "potential" list. Each POC was sent a short questionnaire regarding habitat and bird survey work on site. A project overview, a photo of the bird, and a sound clip were also provided. This range-wide "phone survey" was the main thrust of Year 1.

Questionnaires yielded three results: CERW present, CERW not present, or CERW status not known (ie, no bird survey work done). For locations with known populations of CERW, we requested abstracts of any studies done, along with the contact information for the primary researcher. These results were recorded in the "inventory" file.

Locations listed as "CERW status not known" need to be surveyed. Most of the survey work will occur in Years 2 and 3 of this project; 10 sites were surveyed this year. Field staff will spend a maximum of 8 hours per location to determine if CERW are present or absent. Fieldwork can only be done during the breeding season when male CERW are singing. We will use local field staff to keep travel costs down.

Field staff were instructed to focus their survey activities on CERW. The bird lists they developed were sent to the POC at each site. As a courtesy, the bird lists were also shared with active state breeding bird atlases (ie, Indiana).

### Difficulties

The largest problem encountered was the difficulty in obtaining POCs – 159 locations lack a POC. Very few Legacy projects work across such large areas; no protocols exist to alert 400+ installations that they will be contacted for a bird survey. Legacy staff asked the project staff to “cease and desist” trying to find POCs in July as these protocols were developed.

Two smaller problems bear mentioning. The GIS layer provided by Chris Eberly (DoD PIF) did not contain all of the DoD locations – 14 additional locations were discovered during the course of the project. More locations may be uncovered in Year 2. The response rate was good: Of 191 questionnaire sent out, only 53 (or 28%) have not yet been returned. A second request was made to these locations in June or July, which yielded some results. These locations will need to be contacted again during Year 2.

One final note: The 2010 proposal has the project ending on 30 September. Ending the project on 31 August 2009, the end of the fiscal year for the primary contractor, was not a good decision.

### Results

The following table summarizes the results from the questionnaires. The “other status” category covers sites with no habitat, sites that have been decommissioned and sold, and sites that have merged with other installations. The final row is sites without POCs.

CERW Status	All DoD	AF	Army	Marines	Navy	USACE	Other
CERW present	44	0	18	0	1	25	0
CERW not present	38	4	17	0	3	13	1
Unknown	52	5	11	0	2	33	1
Other	71	12	35	2	8	12	2
No response	53	13	12	0	1	27	0
No POC	159	6	48	5	26	72	2
TOTAL	417	40	141	7	41	182	6

Of all sites at this point, 11% have CERW present, 9% do not have CERW, and 12% are uncertain of CERW presence. Another 51% (212 sites) have no CERW status (either no response or no POC). An estimated 77 sites need to be surveyed. (This assumes that 12% of the “no status” sites report “CERW status unknown”.)

Ten sites were surveyed in 2009: 4 in Indiana, 1 in Minnesota, 4 in Ohio, and 1 in Wisconsin. CERW presence was confirmed at one site. However, breeding bird atlas

staff discovered CERW at a site in Indiana subsequent to our survey. This was an unexpected benefit of sharing bird survey results with Atlas coordinators.

These results are displayed on the attached map. "CERW present" is marked in blue, "CERW not present" is marked in pink, and "CERW status unknown" is marked in red. In the "inventory", sites surveyed this year are marked in rose while sites with the status "other" (no habitat, no longer DoD property, etc.) are marked in gray.

### Recommendations

No range-wide management recommendations can be made at this time, as there is no CERW status for 51% of the military installations. Management recommendations will primarily affect the Army and the Corps of Engineers, as these branches have the most installations within the CERW's breeding range; over 75% of the sites in this study belong to these two Services.

Cerulean Warblers are present on installations within their core breeding range, centered on the mountains of Pennsylvania and West Virginia. The picture will become more interesting as results from the edge of the range are filled in.

We are excited to continue this project in 2010.

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