

Farmland Raptor Project – Barn Owl Conservation Plan

Barn Owls are experiencing population declines in much of their range in the Eastern United States. Maryland DNR ranked Barn Owls in the 2015-2025 State Wildlife Action Plan (SWAP) as a Species of Greatest Conservation Need (Chap 3, page 39, Table 3.12.) The data collected by this project will help propel Barn Owl conservation efforts in Maryland and will act as an important resource for maximizing nesting potential and guide conservation action for increasing Barn Owl survivorship.

This document is submitted to the Maryland Bird Conservation Partnership as a guide for the Farmland Raptor Project.

Recommended target area includes the State of Maryland west of the Chesapeake Bay, the entirety of the Delmarva Peninsula and potential areas of Pennsylvania north of Central Maryland.

Project Goal:

To create a successful conservation plan, we must gain a better understanding of the ecology of the regional Barn Owl population. The goal is to gather detailed data and make recommendations of conservation measures specific to local populations within the target area. The strategic direction to arrest or reverse the decline of Barn Owls in Maryland includes the following objectives:

1. Assessment of the population – ecology, dynamics and demographics.
2. Identification, protection and restoration of critical habitats
3. Increase the availability of nest sites within critical habitats
4. Public awareness

Recovery Objectives

Assessment of the population: Gather detailed information of the ecology, dynamics and demographics of the regional populations

1. Determine habitat needs – nesting, roosting and foraging relationships, locations and arrangement.
2. Spatial distribution – How are the owls using the habitat and when?
3. Seasonal movements and winter habitat use
4. Population demographics:
 - What is the survivorship of the population?
 - What are the specific threats to survivorship?
 - What is the age and sex of the breeding population?
 - Regional distribution – where are they in the target area?
 - Natal dispersal – How far do young disperse post fledging?
5. Determine reproductive success
6. Collect morphological data for comparison with other populations
7. Band and re-trap as many Barn Owls as possible
8. Utilize the most recent and relevant tracking techniques available

9. Install tracking towers at strategic locations
10. Use nest cameras where appropriate

Identification, restoration and protection of critical habitats

1. Develop a plan for acquiring Barn Owl sightings and reports of nesting and roosting
2. Maintain a central database for sightings, survey results and roost/nest locations
3. Establish Survey protocol
4. Conduct surveys such as call back detection at targeted locations
5. Create promotional products for reporting sightings
6. Develop a vetting process for determining the validity of the reports
7. Identify targeted locations based on habitat type and reports
8. Create an evaluation system (criteria and methodology) to determine the suitability of habitat for Barn Owls
9. Conduct Land Cover Assessments to determine the distribution of available habitats and select priority areas for conservation, protection or restoration
10. Alert landowners to State and Federal incentives and programs established to preserve or enhance wildlife habitat
11. Promote land trusts and conservation easements to secure habitat
12. Demonstrate and promote sustainable Barn Owl habitat management on State and County managed properties
13. Promote best farming practices and biological pest control initiatives

Increase availability of nest sites in critical habitats

1. Install and maintain a network of nest boxes.
2. Develop criteria for nest box location selection
3. Establish protocols for nest box monitoring.
4. Develop standardized data collection procedures.
5. Catalog nest boxes and create profiles, including box type, location, photo documentation and habitat analysis to determine box success characteristics.

Public Awareness

1. Promote the protection and conservation need of Barn Owls
2. Produce and distribute various informational products to the media
3. Provide presentations to targeted audiences
4. Involve the public in citizen science opportunities where appropriate

Knowledge Gaps

Extensive knowledge gaps pertaining to the Barn Owl ecology in Maryland exists, including distribution, movements, abundance, recent population trends, habitat needs, and threats.

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