

Appendix E



USFWS

Blue crayfish

Process for Establishing Refuge Focal Species and Priority Habitats for Management under Alternative B

Introduction and Background

Biological goals and objectives for managing species and habitats serve as the foundation for developing respective refuge Comprehensive Conservation Plans (CCPs) and Habitat Management Plans. What follows is the description of a process the Canaan Valley National Wildlife Refuge (refuge) CCP planning team used to determine which species and associated habitats should be a management priority on this refuge.

The U.S. Fish and Wildlife Service (Service) is entrusted by congress to conserve and protect migratory birds and fish, Federally listed threatened and endangered species, inter-jurisdictional fish, wetlands, and certain marine mammals. These are collectively and individually referred to as Federal trust resources. In addition to this mission to protect and conserve Federal trust resources, each refuge has one or more purposes for which it was established that further guide its management goals and objectives. Finally, there are also a multitude of laws, mandates, policies, and conservation plans at various geographic scales, which influence refuge management priorities.

During the CCP process for Canaan Valley refuge, the planning team identified which species of conservation concern and associated habitats should be a focus for refuge management. In making this determination, the team considered the factors noted above, as well as the refuge's geographic location, local site capabilities, species' relative abundance and distribution, respective specie's status in national and regional conservation plans, and a determination of what the most important and effective ecological contribution the refuge could make within the context of the managed lands in the local landscape (Monongahela National Forest and State lands) and the National Wildlife Refuge System (Refuge System). Lastly, species were selected because their habitat needs broadly represent the habitat requirements for many other native wildlife dependent on these same habitat types, including other Federal trust resources. The selected species are referred to herein, and in the CCP, as "refuge focal species."

Following are the details used in the process to identify priority resources of concern, and ultimately, the refuge focal species and the habitat management priorities to benefit these resources. For each step, a brief synopsis is given, followed by a discussion of the details of each step.

1.0) Collect Information and Data

1.1) Identify Legal Mandates, Policies, and Establishing Purposes of the Refuge

1.2) Compile Matrix of Potential Resources of Concern Based on National, Regional, State, and Local Plans

1.3) Gather Expert Opinion

1.4) Develop Maps

1.5) Compile Existing Data

2.0) Identify Resources of Concern and Biological Goals and Objectives

1.0) Collect Information and Data

1.1) Legal Mandates, Policies and Establishing Purpose of the Refuge

Legal mandates for the Refuge System along with a refuge's establishing legislation and Service policies guide the process for selecting resources of concern. The Canaan Valley refuge was established under the Emergency Wetlands Resource Act (1986), and the Fish and Wildlife Act (1956).

The Environmental Assessment (EA), used to establish the refuge, states that the refuge was proposed to "insure the ecological integrity of the Valley and the continued availability of its wetland, botanical, and wildlife resources to the citizens of West Virginia and the United States."

Supporting Discussion:

Legal Mandates:

The establishing authorities allowing purchase of lands for Canaan Valley National Wildlife Refuge are:

1. The Emergency Wetlands Resources Act of 1986 (16 U.S. C. 3901 (b)):

“...for the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions.”

2. Fish and Wildlife Act of 1956 (16 U.S.C. 742 f(a)(4)):

“...for the development, advancement, management, conservation, and protection of fish and wildlife resources....”

3. Migratory Bird Conservation Act (16 U.S.C. 715d)

“...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

The 1994 EA for establishing Canaan Valley refuge states that to support the purpose of the refuge system, each refuge emphasizes contributions it can make that support long-range objectives, given in priority order:

1. To preserve, restore, and enhance in their natural ecosystem (when practicable) all species of animals and plants that are endangered or threatened with becoming endangered.
2. To perpetuate the migratory bird resource.
3. To preserve a natural diversity and abundance of fauna and flora on refuge lands.
4. To provide an understanding and appreciation of fish and wildlife ecology and people's role in their environment, and to provide refuge visitors with high quality, safe, wholesome, and enjoyable recreational experiences oriented toward wildlife to the extent that these activities are compatible with the purposes for which the refuge was established.

Additionally the EA goes on to state that “Management activities in Canaan Valley will for the most part be related to monitoring and documenting successional change. In limited areas, active management may be pursued for specific purposes such as woodcock research and management, and wildlife habitat enhancement... A determination to adopt any management practice would come only after careful consideration of its effect on floral and faunal components at the specific site, and its effect on the overall integrity and character of the valley.”

More specific objectives were detailed in the 1994 EA and Station Management Plan:

1. Preserve in perpetuity approximately 28,000 acres of relict boreal habitat and a unique ecosystem, with its diverse flora and fauna.
2. Provide a unique educational opportunity by assisting with field studies of environmental inter-relationships and stimulating curiosity of living things by offering a variety of first-hand outdoor experiences.
3. Provide for bird watching, photography, nature study, hunting, fishing, and other wildlife-oriented activities consistent with other refuge objectives.
4. Establish a woodcock research and management area consistent with other Refuge objectives.
5. Provide and develop habitat for waterfowl consistent with preservation of existing ecosystems.

Service Policies:

Section 4(a)(3) of the National Wildlife Refuge System Improvement Act (Improvement Act) states, “(A) each refuge shall be managed to fulfill the Mission of the System, as well as the specific purposes for which that refuge was established.....”

The Improvement Act further states, “In administering the System, the Secretary shall....ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans.....” To meet this mandate the Service developed a Biological Integrity, Diversity, and Environmental Health Policy (Integrity Policy) to provide implementation guidance (601 FW 3). The Integrity Policy uses historical conditions and the evaluation of a refuge at various landscape scales, including refuge, ecosystem, national, and international scales, to determine the integrity and environmental health of a refuge’s lands and its contribution to biological diversity.

1. 2) Matrix of Potential Resources of Concern Based on National, Regional, State, and Local Conservation Plans

An overall list of species and habitats of conservation concern which were known or likely to occur on the refuge was developed during planning stages of the CCP. The list was compiled by the CCP planning team using national, regional, State, and local conservation plans. In particular the State Wildlife Conservation Action Plan (2006) and Natural Heritage Program lists as well as the U.S. Forest Service (USFS) Forest Plan (2006) were used extensively to develop appendix A.

Sources used to compile the list of resources of concern included:

- Bird Conservation Region (BCR) 28 – Appalachian Mountains
- Partners in Flight Physiographic Area 12
- North American Waterfowl Management Plan
- Federal Threatened and Endangered Species List
- West Virginia Natural Heritage Program – State Species of Concern
- West Virginia State Wildlife Conservation Action Plan
- USFS Forest Plan
- U.S. Fish and Wildlife Service Birds of Conservation Concern – Region 5
- Eastern Brook Trout Joint Venture Plan
- American Woodcock Conservation Plan
- American Woodcock Habitat BMP’s for Central Appalachian Mountains Region
- Brooks Bird Club Migratory Bird Observatory data

1.3) Gather Expert Opinion

Between January and July of 2007 four meetings were held to discuss key issues for the refuge CCP. The purpose was to gather local experts together to obtain their individual opinions on the refuge’s role and opportunities for management relative to the four topics proposed. These topics were: migratory birds, deer management, rare plant species, and visitor services. Attending the meetings were individuals from State and Federal agencies, non-profit organizations and universities. Meetings helped the refuge share and gather existing data, discuss regional perspectives, and help refine focal species lists.

1.4) Develop Maps

Maps were developed to assist with determining priority habitats and focal species. The following is a list of maps used throughout the CCP process.

- Current Vegetation Map
- Soils Map – U.S. Department of Agriculture Natural Resources Conservation Service Soil Types
- National Wetlands Inventory Map
- Ecological Land Units Map
- Landbird Species Distribution and Breeding Bird Survey Relative Abundance Maps

1.5) Compile Existing Data

Baseline wildlife and plant surveys have been conducted to assist with determining species presence and abundance on the refuge since 2001. Additionally historic data was reviewed from wildlife surveys conducted by State and university sources. The following is a list of inventories and surveys which have contributed to the selection of priority habitats and focal species.

- Anuran Call Counts
- Marshbird Call-Back Survey
- Waterfowl-Beaver Pond Use Survey
- Wetland Vegetation (through cooperative work with WVDNR)
- Terrestrial Amphibians and Small Mammals Survey
- Bats (Anabat and limited mist net work)
- Vernal Pool Amphibians and Stream Salamanders
- Landbirds (breeding point count data)
- American woodcock and Wilson's snipe breeding survey
- West Virginia Northern Flying Squirrel Monitoring
- Cheat Mountain Salamander Monitoring
- Invertebrate Surveys including snail, Lepidoptera, and Odonate
- Forest Inventory
- Fish Survey (through cooperative work with the West Virginia Departments of Natural Resources and Environmental Protection)
- Rare Plant Inventory

2.0) Identify Resources of Concern and Biological Goals and Objectives

Following the procedure outlined in the Service Manual “Identifying Refuge Resources of Concern and Management Priority” (USFWS 2007) the CCP Team integrated the information gathered (as described above) and moved through the process to develop a list of potential species of concern. This procedure followed multiple steps to take the biological information available and evaluate it based on the variety of plans, policies, agency mission, refuge purposes, and regional context. The overall list was further refined to eliminate species and plant communities for which the refuge had or could have little significant management or conservation contribution.

The planning team determined the most appropriate biological goals and objectives for the refuge based on Refuge System policy, and then found commonalities with the State partners in meeting State wildlife habitat goals. The freshwater wetlands and resources of concern that were identified as priorities for the refuge are a direct overlap with State wetland goals. The mixed spruce-fir/northern hardwood forest contributes to State goals for the priority landbird species that were chosen. This habitat type is also relevant for other State species of concern. The mixed forest will provide connectivity of habitats for mammals with large home ranges and some rare species and protects water quality and aquatic resources through riparian habitat management and restoration. The existing and proposed early successional habitat fits in with State and regional priorities for wildlife associated with this successional stage.

The final results of this process can be found in chapter 4, “Management Direction and Implementation,” where we structure all our habitat management goals and objectives around refuge focal species and habitat management priorities.