



STATEMENT OF OUTSTANDING UNIVERSAL VALUE

Brief synthesis:

Vast stretches of intact temperate wetlands bustle with life amidst the 400,000 acres of the Okefenokee National Wildlife Refuge (ONWR). Rare Red-Cockaded Woodpeckers busily search for their breakfast in one of the many longleaf pine stands. Alligators bask in the sun above a 6,500 year old peat bog. The ONWR is an exceptionally large representation of wetland and upland habitats, despite sitting amidst one of the world's most highly developed temperate zones.

Here, Outstanding Universal Value means natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole.

Justifications for Criteria:

Criterion (ix): The ONWR exceeds the requirements for criterion (ix), which requires a property to have significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.

The ONWR sits amidst a diverse mosaic of wetland, forest and prairie ecosystems, habitats and ecotones. The sheer scale, remoteness, and integrity of this mosaic are unusual for the temperate region. The ONWR has both ecologically significant processes and natural means of cyclically maintaining the balance of interdependent flora and fauna through forest fires and seasonal rains.

First, ecological processes on the ONWR have great significance. The ONWR is home to the largest remaining undisturbed freshwater peat deposit within the eastern US and one of the largest in the subtropical zone worldwide. Peat acts as a carbon reservoir and thus has high ecological value, as the release of carbon dioxide contributed to continued climate change. The ONWR peat stores 95 million tons of carbon dioxide, and is a significant environmental stabilizer. Further, the ONWR's peat allows scientists to discover valuable information about the processes that formed the terrestrial and fresh-water ecosystems as peat well-preserved the presence of pollen, animal fecal matter and charcoal.

Very specific conditions are necessary for peat formation and contribute to its rarity. The ONWR's peat formed through the accumulation of plant materials over base sands for over 6,500 years. Anaerobic waterlogged conditions, due to the ONWR's slow-moving water, reduced decomposition and allowed for deep deposits of peat to form.

Second, the ONWR cyclically maintains complex conditions which are vital to support the ONWR's diverse flora and fauna. One way this balance is sustained is through natural fires, which are often ignited by lightning. The ONWR sits in a region with some of the highest occurrences of lightning in North America, due unique seasonal wind patterns that form convective storm systems. The Longleaf Pine-wire grass communities, for example, are dependent on the natural interplay between fire and precipitation. Fire removes invasive competitors while also preparing a seedbed favorable for regeneration of longleaf pine seedlings. Precipitation, in turn, waters the seedlings and ensures that the fires do not run rampant.

The ONWR's landscape changes yearly because of seasonally ponded isolated wetlands. These wetlands fill with fall rain and dry out by June. This cycle along the edges of the ponds is critical for the successful reproduction of amphibian and invertebrate species.

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Criterion (x): The ONWR also satisfies criterion (x) because the ONWR has unique and significant natural habitats for in-situ conservation of biological diversity. The ONWR has a vast range of inter-dependent ecosystems and habitats. It also is home to many globally threatened species.

Significantly, the St. Mary's River and the Suwanee River originate in the refuge. The St. Mary's River forms the Florida-Georgia border and eventually empties in the Atlantic Ocean while the Suwanee River cuts across 246 miles of Georgia and Florida to eventually reach the Gulf of Mexico. Protection of the river origin is essential, considering the rivers' far-reaching impact on the surrounding land. The estuary of the Suwanee River, for example, is a large National Wildlife refuge, and adjacent floodplains and marine ecosystems are entirely dependent upon the rivers' flow.

The ONWR is teeming with biodiversity. Okefenokee Refuge is home to 48 species of mammals, 238 species of birds, 39 species of fish, 101 species of reptiles and amphibians, and an undetermined number of invertebrates. The herpetofauna is consistently noted as having particularly impressive numbers rarely seen in a temperate ecosystem, including 64 reptile species, and 37 amphibian species. The ONWR has an important population of American Alligators, which are recovering from historic near-extinction in the wild. Fewer alligators are found outside the refuge boundary as development increases in the area.

Many endangered species populations have declined due to loss of habitat. The ONWR's undeveloped and continuous land acts as a refuge for a wide variety of species. For example, the endangered red-cockaded woodpecker's numbers have increased in the past couple decades and it has been theorized that the increasing maturity of the ONWR's longleaf pine stands, an important component of their habitat, contributed to their population growth. Similarly, significant populations of the Flatwoods Salamander reside in the ONWR because the ONWR's longleaf pine and wiregrass communities provide a haven for the Flatwoods Salamander's niche mesic flatwoods habitat.

Other rare and endangered species call the ONWR home, including indigo snakes, wood storks, and gopher tortoises. The ONWR is an important area for the Florida Black Bear, which requires large home ranges, and serves as a vital resting place for birds migrating across continents.

The Taxodium forests continue to thrive as natural and unmanaged forests in the ONWR. The remnants of the once verdant Longleaf pine forests have been able to find sanctuary in the ONWR. Further, more than 620 species of plants live in the ONWR, including the endemic Okefenokee pitcher plant. Endangered plants, such as the Hairy Rattleweed, and plants on the Georgia list of plants of concern, such as the silver buckthorn, greenfly orchid, and the hooded pitcher plant, have verdant populations within the ONWR.

ONWR is uniquely situated to be a thriving habitat for many important and rare plant and animal species.

Statement of Integrity:

The ONWR meets the requirements of integrity, which requires an analysis of the extent to which the property a) includes all elements necessary to express its Outstanding Universal Value, b) is of adequate size to ensure the complete representation of the features and processes which convey the property's significance, and c) suffers from adverse effects of development and/or neglect.

The ONWR meets all the necessary elements of Outstanding Universal Value through criteria ix and x. Second, the ONWR's size is significant: it stretches across 400,000 acres, and is even larger when taking account of the buffer zones contiguous with the ONFR, including a national forest, a two state forests, and commercial timber land. The ONWR has naturally replenishing ecosystems and contains habitats which maintain the most diverse fauna and flora characteristic of the bio-geographic province and ecosystems. Third, the ONWR suffered from adverse effects of logging predating the establishment of the refuge but this damage was followed by nearly a century of natural recovery and an active restoration program. Human manipulation of the landscape is used primarily to restore native vegetative communities.

Protection and Management:

The ONWR has an excellent protection and management system to ensure its safeguarding. The ONWR was established in 1937 by an executive order, and was classified as a wilderness by Congress in 1974. Additional environmental protection is provided to the refuge due to its designation as a wilderness. The ONWR is currently managed by the U.S. Fish and Wildlife Service. A key

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instrument guiding management is the use of Comprehensive Conservation Plans for periods of 15 years, which limit visitors to only a small fraction of the land.

An example of the effectiveness of the ONWR's management can be seen in the active restoration and maintenance of longleaf pine communities. Between 1974 and 2003, 1,437 acres of refuge land were reforested, primarily with longleaf seedlings. Through a combination of strategic planting, selective thinning, and prescribed fires, the longleaf pine has naturally regenerated in low areas. The ONWR continues its stalwart commitment to the restoration of the longleaf pine and the preservation of the integrity of the surrounding area.