

**LITTLE BURNT MILL CREEK  
CONSERVATION UNIT**

**TABLE OF CONTENTS**

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**I. GENERAL DESCRIPTION OF CONSERVATION UNIT ..... 1**  
**II. REGIONAL SIGNIFICANCE ..... 1**  
**III. BIODIVERSITY ..... 2**  
**IV. WATER QUALITY ..... 3**  
**IV. ESSENTIAL FISH HABITAT AND MARINE RESOURCES ..... 3**

**LIST OF FIGURES**

1. GENERAL LOCATION MAP
2. CURRENT AERIAL PHOTOGRAPH

**LIST OF TABLES**

1. LITTLE BURNT MILL CREEK CU POTENTIAL THREATENED AND ENDANGERED SPECIES OCCURRENCES
2. LITTLE BURNT MILL CREEK CONSERVATION UNIT ATTRIBUTES

## I. GENERAL DESCRIPTION OF CONSERVATION UNIT

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The Little Burnt Mill Creek Conservation Unit (CU) is a 5,644 (+/-) acre tract located northeast of West Bay in Sections 15, 22,23, 26, and 27 of Township 1 South, Range 15 West in Bay County Florida (see Figure 1: General Location Map). The 5,644 total acres are broken into 2,472 acres of Type 1 CU and 3,172 acres of Type 2 CU. The geographic position of the Little Burnt Mill Creek CU is within the headwaters of the Burnt Mill Creek watershed. Little Burnt Mill Creek is a major tributary to Burnt Mill Creek and has a 12,500 acre drainage area within the GPEMA2. The wetlands in this area are dominated by blackwater seepage, which is recharged from the adjacent Sandhills. Since this creek provides a significant amount of input to Burnt Mill Creek, the CU is vital to the protection of the Burnt Mill Creek Watershed and West Bay.

The land cover of the Little Burnt Mill Creek CU is dominated by coniferous plantation (64%), wetland forested mix (26%), and wetland coniferous forest (4%) with small inclusions of forest regeneration areas, utilities, mixed coniferous/hardwood, shrub and brushland, upland coniferous forests, and wetland shrub. The National Wetland Inventory identifies 59% of the CU as palustrine wetlands and the remainder as uplands (41%), which is different than the wetland coverage based on the soil types. Based on soil types the CU is comprised of 71% wetlands. The majority of the uplands and approximately half of the wetlands are currently planted with slash pine (*Pinus elliottii*).

The wetlands within the Little Burnt Mill Creek CU are comprised of Basin Swamps, Seepage Slopes/Wet Prairies, Floodplain Forests that drain into Blackwater Streams. This CU also has upland areas that are classified as Sandhills and Mesic Flatwoods. Groundwater seeps from the Sandhills and Mesic Flatwoods through the wetlands and into the Blackwater Streams. Many of these plant communities have been replaced by pine plantations; however, these areas currently provide forestry resources and habitat for wildlife. Once these areas are placed into a conservation easement, they can potentially be restored to their historical plant communities. These plant communities provide habitat for many State and Federally listed flora and fauna. There are documented threatened species within the CU and within 1 mile of this site (FLEO, 2009). Table 1 provides a list of species that would be expected to use these habitats.

## II. REGIONAL SIGNIFICANCE

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The Little Burnt Mill Creek CU protects both uplands and wetlands that are important for recharge within the Burnt Mill Creek watershed and West Bay. This CU protects the headwaters of Burnt Mill Creek and is adjacent to the Pine Log Creek CU. Conserving this unit will contribute to sustained water quality and water quantity treatment for Little Burnt Mill Creek, Burnt Mill Creek, West Bay, and ultimately, St. Andrews Bay.

The Little Burnt Mill Creek CU is identified as a priority Strategic Habitat Conservation

Area (SHCA) by the Florida Fish and Wildlife Conservation Commission (FFWCC) (Endries et al., 2008). Further, this CU is ranked as a priority area by FFWCC based on their Integrated Habitat Ranking System (IHRS) (FFWCC, 2008). These rankings take into consideration the types of habitat and the species likely to use these habitats. Due to the landscape-scale conversion of this CU to pine plantation, the historical habitats are listed on FNAI's list of underrepresented plant communities (FNAI, 2009).

This CU is vital to water quality treatment and storage, habitat conservation, and species conservation. It also provides an essential corridor connecting CUs in the headwaters of Burnt Mill Creek.

### III. BIODIVERSITY

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The habitats within the Little Burnt Mill Creek watershed are a landscape of herbaceous and forested wetlands and uplands. The Wet Prairie/Seepage Slope component has a dense herbaceous layer, while the Basin Swamps contain the majority of their diversity in the canopy and subcanopy stratus. The Basin Swamps grade into the Floodplain Forests that surround Blackwater Streams. Groundwater seeps through these systems from the surrounding Sandhills and Mesic Flatwoods. In the current condition, the existing pine plantations and fire suppression of woody shrubs have altered the plant communities and wildlife composition. Although these landscapes are planted in pine, they have retained physical characteristics that would allow for restoration to their historical plant communities.

The Little Burnt Mill Creek CU has been documented to overlap with the potential habitat of at least eight wildlife species resulting in a species richness index of 8 (FFWCC, 2008). This CU has also been ranked as a SHCA by FFWCC due to the potential to protect imperiled species (Endries et al., 2008). Additionally, this CU has been ranked as a priority under the IHRS (FFWCC, 2008) due to an analysis of various factors affecting the ecological significance of land areas including species richness, listed species locations, and SHCA.

*Sarracenia leucophylla* has been documented within the CU, while *Verbesina chapmanii*, *Rhexia salicifolia*, and *Gopherus polyphemus* have been documented within 1 mile of the CU (FNAI, 2009). A portion of the CU is documented as potential habitat for the indigo snake. Further, there are 41 plants and 9 animals identified in Bay County as Threatened or Endangered Species that could potentially occur in this CU. Due to the likelihood of occurrence of species and documented species, portions of this CU are ranked by FNAI as a Rare Species Habitat Conservation Priority (FNAI, 2009). Conserving these areas will help to maintain habitat for listed species in the region. Table 1 provides a list of species that may be expected to use these areas if the planted pine areas are restored to their historical plant communities.

#### **IV. WATER QUALITY**

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The Little Burnt Mill Creek CU is located within the Burnt Mill Creek subwatershed of the St. Andrews Bay watershed. Little Burnt Mill Creek flows into Burnt Mill Creek and then into West Bay. The CU is comprised of 43% of the Little Burnt Mill Creek Hydrologic Unit Code 12 drainage area within the GPEMA2; therefore, the preservation of this CU will provide significant protection to this stream and ultimately, Burnt Mill Creek and West Bay.

Little Burnt Mill Creek is not listed on either the 305(b) or 303(d) list of impaired waters. There are currently no known point sources in the watershed and non-point sources are limited to forestry roads. Conserving lands within the CU will help to maintain a restored buffer around the open water portion of Little Burnt Mill Creek. Maintaining this buffer in a natural condition will ensure water quality protection and will reduce future impairment from point and non-point sources

The habitats within the Little Burnt Mill Creek CU are shallow Wet Prairie/Seepage Slopes that grade into Basin Swamps and then eventually into Blackwater Streams. Seepage through these systems comes from the adjacent Mesic Pine Flatwoods and significantly contributes to surface water inflows to both Burnt Mill Creek and West Bay. These habitats have experienced minor alterations from being planted in pine; however, they still provide valuable water input, water filtration, and water storage function.

This CU has been identified by FNAI as a significant surface water priority (FNAI, 2009) primarily due to the support it provides to coastal surface waters. Little Burnt Mill Creek provides a large portion of the recharge for Burnt Mill Creek, which ultimately outflows into West Bay. West Bay is a Class II Waterbody that supports extensive Tidal Marsh and seagrass beds at the mouth of Burnt Mill Creek. Preserving the lands surrounding Little Burnt Mill Creek will help to maintain the brackish shallow water estuaries.

#### **IV. ESSENTIAL FISH HABITAT AND MARINE RESOURCES**

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Land areas within Little Burnt Mill Creek subwatershed drain into Blackwater Streams that flow into Tidal Creeks associated with Burnt Mill Creek and eventually West Bay. West Bay is classified as Class II waters. The majority of West Bay is conditionally approved for shellfish harvesting with some areas classified as prohibited for shellfish harvesting. West Bay and St. Andrews Bay are not classified as Essential Fish Habitat but seagrasses in both West Bay and St. Andrews Bay provide resources for fish and a variety of non-game species. As mentioned above, preserving this CU will contribute to water quality protection and will help maintain the downstream aquatic resources.