

PROJECTING THE IMPACT OF LAND USE CHANGE ON FORESTED HABITATS IN A RAPIDLY URBANIZING COASTAL REGION: THE FORGOTTEN COAST OF FLORIDA

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ABSTRACT: In order to identify plant species and communities that may be impacted by increasing urbanization in the coastal Apalachicola region of the panhandle of Florida, our study integrates plot level species data collection with GIS remote sensing. Two hundred and eighty-nine plant species were identified during field survey including fourteen Florida listed rare species. Hierarchical classification of plant species cover data yielded the identification of five upland habitats: bayhead, flatwoods, sand pine scrub, sandhill, and scrubby flatwoods. Classification trees were used to classify Landsat Thematic Mapper images and identify and map pine dominated habitats in the study area. Using the predicted rate of land use change from natural habitat to urban for the state of Florida, we estimate the loss of 437 ha of globally imperiled sand pine scrub and 621 ha of Florida imperiled sandhill habitats in the study area in the next 50 years. This land is predominately located nearest the Gulf of Mexico and knowledge of the potential impacts of urbanization on the marine and estuarine communities in this area is needed. This data is necessary in order to inform urban planning and help find a balance between economic growth and ecological stability for this and other seaside communities.