# Moss Bluff Wetland Restoration and Resilience Enhancement Project

## Project Overview

The proposed project covers approximately 20–25 acres of historic Ocklawaha River floodplain within a 60-acre A-1-zoned parcel adjoining SJRWMD’s Moss Bluff Lock and Dam and U.S. Forest Service holdings. The area includes mature cypress strands, mixed hardwood swamp, and remnant oxbows containing nutrient-rich muck and invasive vegetation. The goal is to restore hydrology, improve water quality, and expand wildlife habitat as part of a larger watershed-resilience corridor.

## Restoration Objectives

1. Hydrologic Reconnection: Re-establish seasonal water flow to old river channels and cypress basins. Improve flood storage and groundwater recharge adjacent to SJRWMD property.  
2. Invasive Species Removal: Remove cogon grass, air potato, and Chinese tallow. Replace with native wetland species (cypress, red maple, buttonbush, maidencane).  
3. Muck and Sediment Reuse: Excavate accumulated muck from degraded basins; reuse on-site to create filtration berms. Reduce nutrient loading (estimated 20–40% phosphorus reduction).  
4. Habitat Enhancement: Restore 20+ acres of floodplain forest supporting wading birds, amphibians, and pollinators. Establish permanent conservation buffer protecting adjacent public lands.  
5. Monitoring and Education: Integrate low-impact water-quality sensors and data collection powered by Thoredome renewable microgrid units. Provide data to SJRWMD, NRCS, and FDEP resilience networks.

## Public and Environmental Benefits

• Restores hydrologic function of a key Ocklawaha River sub-basin.  
• Reduces sediment and nutrient discharge to downstream waters.  
• Creates a living demonstration of private–public wetland restoration within a veteran-owned resilience campus.  
• Enhances flood protection and climate resilience for state and federal lands.  
• Provides a model for agricultural-zoned wetland rehabilitation in Marion County.

## Partnership Opportunities

SJRWMD – Hydrology data, technical oversight (cost-share funding)  
NRCS (EQIP/WRE) – Funding for invasive removal and wetland easement (up to 100% cost share)  
FDEP (319 / Resilient Florida) – Grant funding for muck removal and replanting (60–80% coverage)  
USFS / Ocala National Forest – Cross-boundary restoration coordination (technical and outreach support)  
UF IFAS / Marion County Extension – Ecological assessment and monitoring (academic support and reporting)

## Implementation Timeline

Phase 1: Assessment & Planning (0–6 months) – Ecological survey, mapping, permit prep.  
Phase 2: Invasive Removal & Muck Regrade (6–12 months) – Removal, berm formation, erosion control.  
Phase 3: Native Replanting & Hydrology Restoration (12–24 months) – Cypress and wetland planting, minor channel reconnection.  
Phase 4: Monitoring & Maintenance (24–36 months) – Sensor deployment, performance tracking, adaptive management.

## Estimated Cost & Funding

Total project cost: $350,000 – $600,000  
Expected grant share: 75–100% through combined SJRWMD + NRCS + FDEP funding  
Landowner match: Provision of site access and long-term maintenance (in-kind)

## Next Steps

1. Submit this concept to SJRWMD Land Resources and FDEP Resilient Florida Office for pre-review.  
2. Request NRCS EQIP site visit to assess eligibility for Wetland Reserve or Cost-Share programs.  
3. Coordinate with UF IFAS Marion County Extension to perform initial ecological inventory.  
4. Use findings to prepare full grant applications and engineering designs.