STRENGTHENING CLIMATE RESILIENCE: KEY CERP PROJECTS FOR GREATER EVERGLADES RESTORATION

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Ecosystem restoration serves as the linchpin of climate resilience planning for the Greater Everglades region. Ecosystem restoration within the South Florida Water Management District's (SFWMD) resilience framework will bolster the Greater Everglades' capacity to face the challenges posed by climate change and other changing conditions, such as population growth and changes in land use. In this context, resilience refers to the Greater Everglades' capacity to endure acute and chronic stressors as climate conditions evolve, including elevated temperatures, extreme weather events, sea-level rise, and altered hydrological patterns. Central to these efforts is the Comprehensive Everglades Restoration Plan (CERP). Several key CERP projects significantly contribute to enhancing the Greater Everglades' resilience capacity. The Central Everglades Planning Project is key to rehydrating the Everglades, reducing risk of peat fires, and providing freshwater to Florida Bay to prevent salinity stress. The Picayune Strand Restoration Project plays a crucial role in improving the Greater Everglades' resilience by rehydrating overly drained wetlands, restoring natural hydrological patterns, including freshwater flow to the estuarine habitats, and enhancing water storage capacity to mitigate flooding during heavy rainfall events and sustain water availability during droughts. Furthermore, the restored wetlands will sequester carbon, contributing to climate change mitigation efforts. Restoration projects targeting coastal habitats, such as mangroves and seagrass beds, exemplified by the Biscayne Bay Coastal Wetlands Project, act as natural buffers against climate-induced impacts like heightened storm surges and sea-level rise, providing vital protection for both ecosystems and communities. Each of these projects provide key ecological benefits to improve the resilience of south Florida. As SFWMD moves forward with resilience planning, maximizing restoration benefits will be key to its success.

PRESENTER BIO: Dr. Armstrong is the Coastal Ecosystem Section Administrator at the SFWMD. She has worked for the District for 10 years. Her work on coastal resiliency issues started with her master's work at the Virginia Coast Reserve, which is part of the Long-term Ecological Research (LTER) program. Her master's, PhD, and postdoctoral work all focused on salt marsh response to sea level rise. Her current work focuses on coastal processes affected by freshwater flow and its use to combat salinity intrusion.