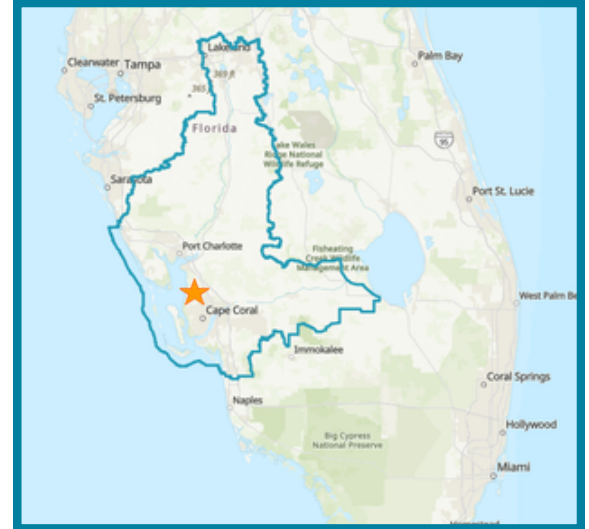


# Yucca Pens Hydrologic Restoration Project

## HYDROLOGIC RESTORATION



### Summary

The Yucca Pens Unit State Wildlife Management Area (WMA) is 13,242 acres located in the Charlotte Harbor Flatwoods area of Charlotte and Lee Counties. This project is part of a larger initiative to restore more natural flow of water across approximately 8,000 acres of wetlands in order to increase fresh surface water and groundwater availability, as well as improve water and habitat quality for fish and other wildlife.

CHNEP previously created a *Lower Charlotte Harbor Flatwoods Strategic Hydrologic Restoration Plan*, based on a preliminary conceptual surface and groundwater hydrologic model that simulates appropriate timing and quantity of water flows required to improve wetland habitat conditions, minimize erosion and offsite flooding, improve groundwater recharge, and reduce the risk of wildfires. This project is a recommendation from that strategic plan as it pertains to the Yucca Pens WMA.

The project will entail final design and permitting of 1) earthen ditch blocks in smaller ditches to increase storage and surface water hydrology, 2) concrete low water fords installed through existing off-road vehicle ruts and ditches, and 3) a groundwater seepage barrier at the southern boundary of the Yucca Pens Unit along the Gator Slough Canal to protect neighboring properties.

**Location:** Charlotte and Lee Counties

**Partners:** South Florida Water Management District, Southwest Florida Water Management District, Florida Fish and Wildlife Conservation Commission, and United States Fish and Wildlife Service

**Status:** Ongoing

**CHNEP Cost:** \$750,000

**Funding Source:** EPA IJA

**2025 CHNEP Plan Activity:**

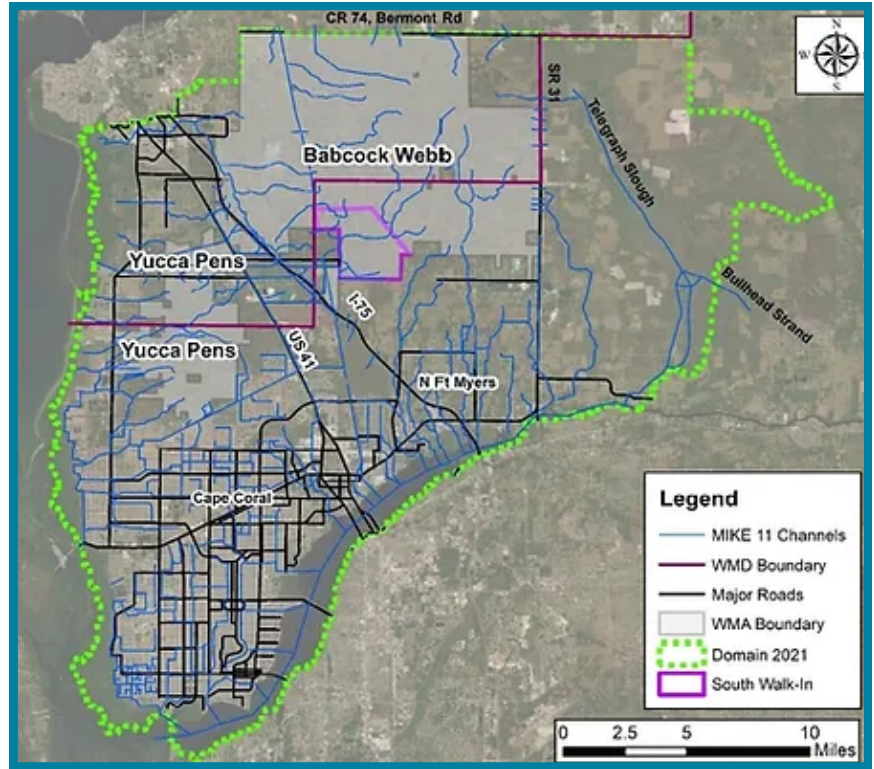


Hydrologic Restoration 3.1: Support integrated and coordinated watershed management planning to protect headwaters, restore and reduce channelization and barriers to fish and wildlife passage in flowways, restore floodplains and increase connectivity, and reestablish historical flow direction, volume, and timing to receiving waters.

## Anticipated Results and Benefits

### Enhanced Wildlife Habitat

Documented listed species on-site include American Alligator, Florida Burrowing Owl, Florida Sandhill Crane, Gopher Tortoise, Least Tern, Little Blue Heron, Tricolored Heron, and Wood Stork. This project will result in the enhancement of wildlife habitat by restoring the property to have more natural water inundation periods that are needed to support the cypress wetlands on-site - extending from the current 4.5 months to the needed 6-8 months of standing water. Restoring increased water retention times and water depths will reduce unnaturally high and low flow levels in tidal creeks; thereby increasing breeding habitat for amphibians, feeding habitat for wading birds, improving aquatic habitat for downstream fisheries, as well as providing a more consistent freshwater source for other animals.



### Restored Hydrology

Restoring more natural flows will increase fresh surface and groundwater availability to support healthy natural systems. Flows from the Yucca Pens Unit to Charlotte Harbor will be restored at several locations rather than as point source flowing into Charlotte Harbor and Gator Slough Canal. This will be accomplished through the use of green and gray solutions via earthen ditch blocks, concrete low water fords, and a long groundwater seepage barrier. Due to more water being held on site, water flows to tidal creeks during the late wet/early dry season will be extended to reduce extreme high discharge rates after storm events.

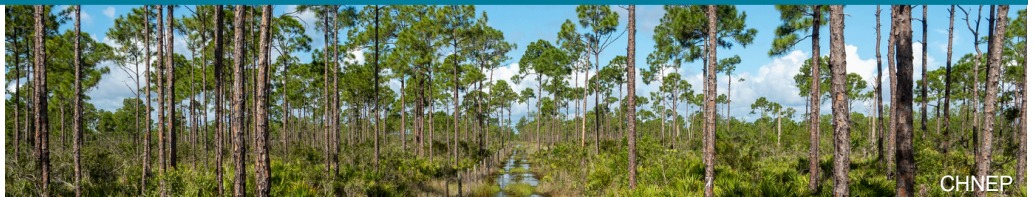
### Increased Wetlands

This project will increase the area of restored wetland habitat. Wetlands naturally filter out pollutants and provide freshwater base flow to maintain healthy salinity levels in tidal creeks and estuaries. As a result of increasing wetlands on-site, cleaner and more appropriate flows of freshwater will be moving across and off-site — supporting healthier and more abundant aquatic life downstream.

## CONTACT INFORMATION

1050 Loveland Blvd., Suite D  
Port Charlotte, FL 33980  
(941) 833-6580

[CHNEP.org](http://CHNEP.org)



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