

Lainhart Dam on
Loxahatchee River

DRAFT

Lainhart and Masten Dam Refurbishment Project

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April 5, 2018

NW Fork of Loxahatchee River Location Map **DRAFT**

**Designated as
Florida's first
National Wild &
Scenic River in
1985**



Lainhart and Masten Dams



Lainhart Dam

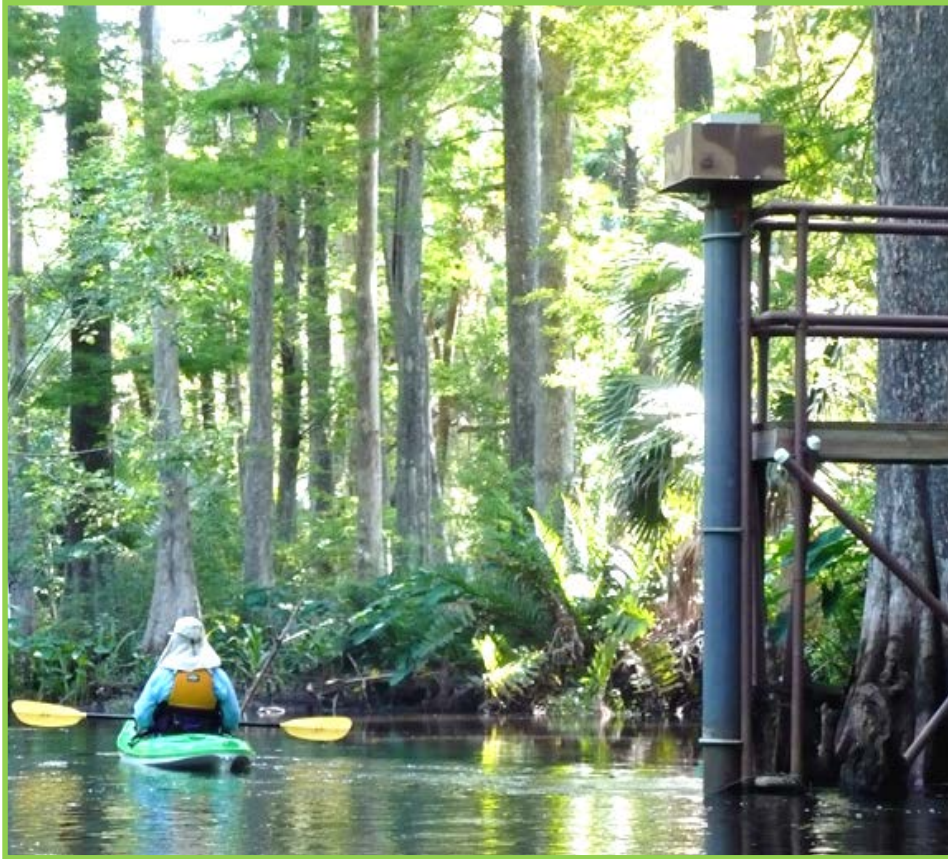
Dams rebuilt in 1986 and retained their rustic nature fitting the river's "wild and scenic" designation

Originally constructed in the 1930's by local families to slow the flow of freshwater between Indiantown Road and Trapper Nelson's settlement



Masten Dam

Project Background



USGS Monitoring Station at Lainhart

Minimum Flows and Levels Rule was adopted in 2003

Lainhart Dam functions as a stage and flow monitoring location

Changes in the stage-discharge relationships can cause errors in reported flows

- **Natural occurring banks are subject to erosion**
- **Piping of material and seepage loss occurs through the dams**
- **Degraded sheet piling system allows flow around the dams**

Scope of Project

- Refurbishment of the dam abutments and overflow weirs
- Installation of seepage barrier walls
- Installation of slope protection systems for proposed earth embankments
- Installation of floodplain and river bed erosion protection systems
- Replacement of existing canoe/kayak portages
- Implementation of architectural design features in keeping with the wild and scenic river designation



Public Coordination

- Project considered historical resources, Outstanding Florida Water issues, and minimized vegetation impacts
- Extensive public input and design reviews through Loxahatchee River Management Coordination Council
- Presentations were made at 4 Council meetings to receive design input and 4 Council meetings to provide construction updates
- Council sent letter supporting the project design and commending District staff on its efforts to coordinate and incorporate input



Lainhart Dam

Pre Project Condition
looking southeast



Lainhart Dam

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Old West Portage upstream
ramp southwest side



Old West Portage looking
north (upstream)



Lainhart Dam

Old East Portage
looking east



Lainhart Dam

**Seepage Barrier
Installation:
Tubes used to inject
the barrier forming
material (Uretek)**

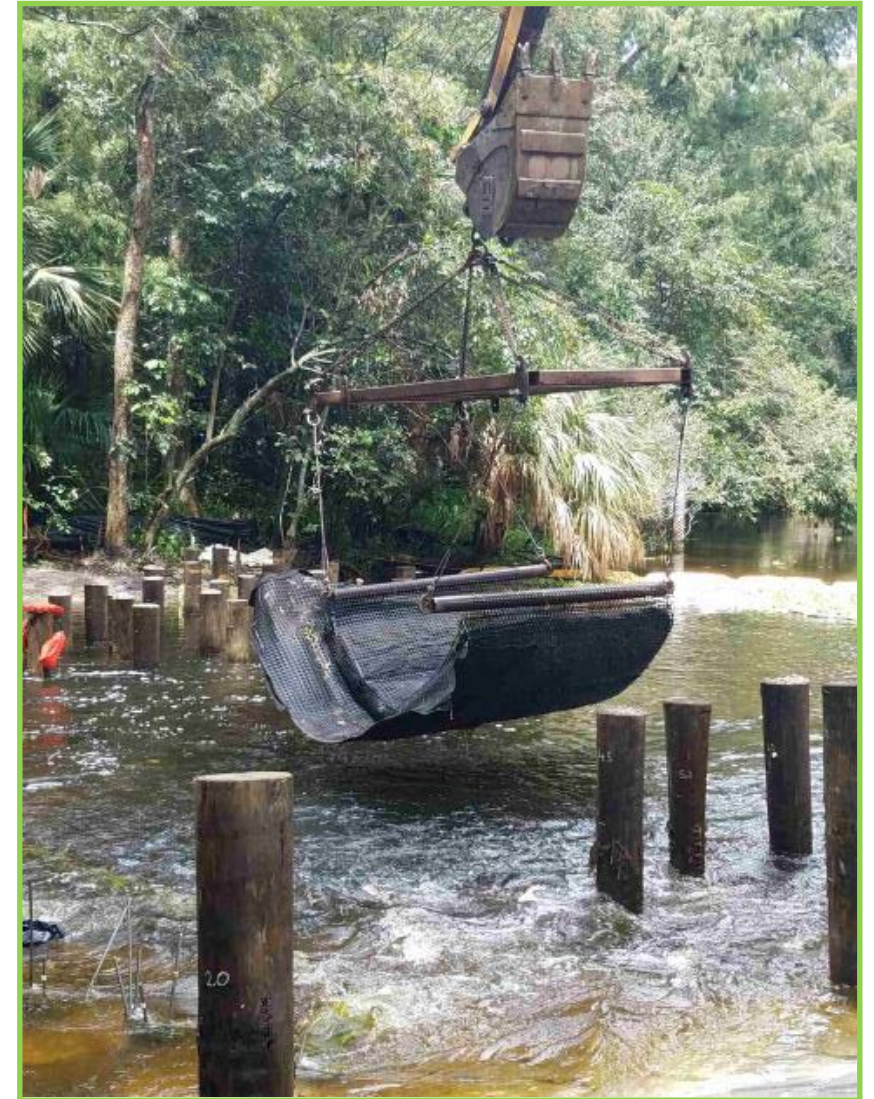


Lainhart Dam



**Articulated
blocks placed
on the west
side of the
Lainhart Dam**

**Marine
Mattress
placement on
the bottom of
the river**



Lainhart Dam - Portages

**New East Portage
looking southeast**



Lainhart Dam - Portages



New West Portage looking south (upstream)

New West Portage north ramp and steps



Lainhart Dam – Completed Project

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Masten Dam

**Pre Project
Condition**



Masten Dam

West side of dam
showing the
impacted alluvial
area



Masten Dam

Old Portage
upstream side



Masten Dam



Cypress Logs being installed on
the upstream side of dam

Masten Dam

**Alluvial Area:
Vegetation
Reinforced Soil
Slope construction
and new plantings**



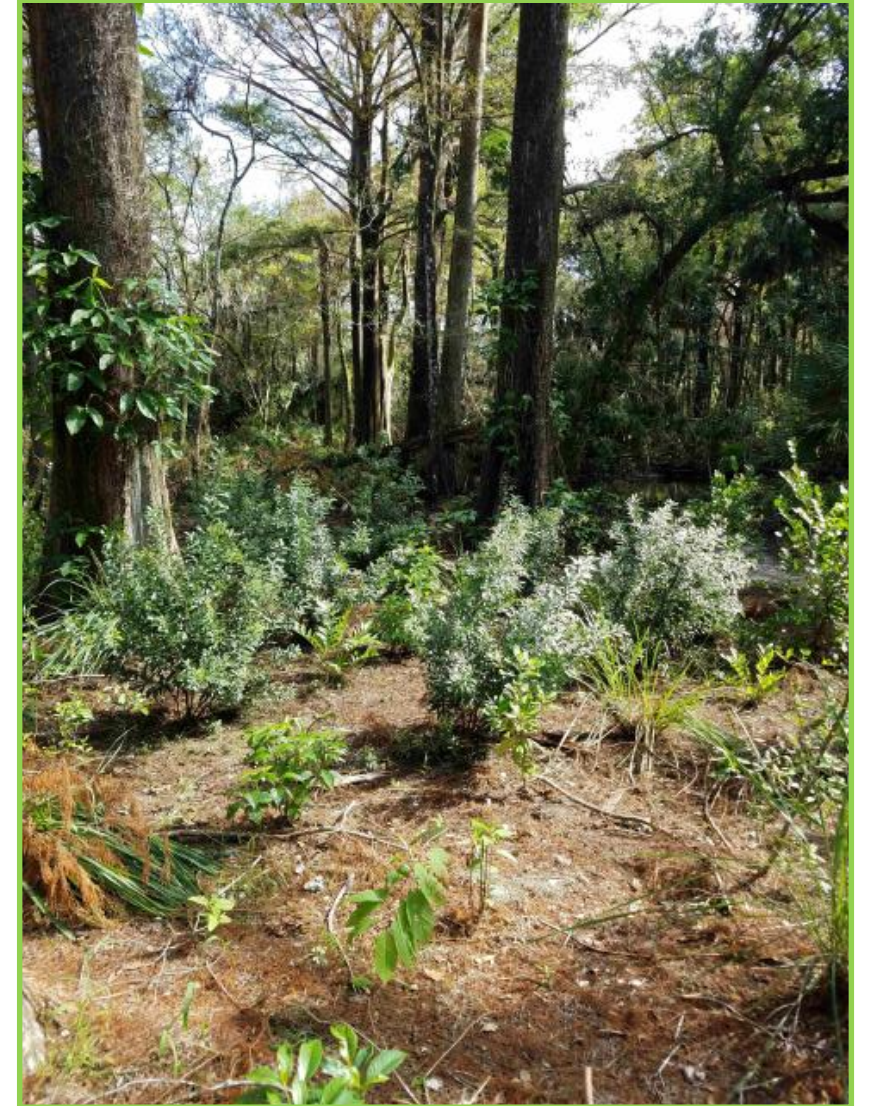
Masten Dam

**Vegetation
Reinforced Soil
Slope ready for new
plantings and
Articulated Block
transition**



Masten Dam

**Alluvial Area
Plantings
after Hurricane Irma**



Masten Dam

**Driven Pilings
for the new
portage**



Masten Dam

**Articulated Block
Area being
prepared for block
placement**

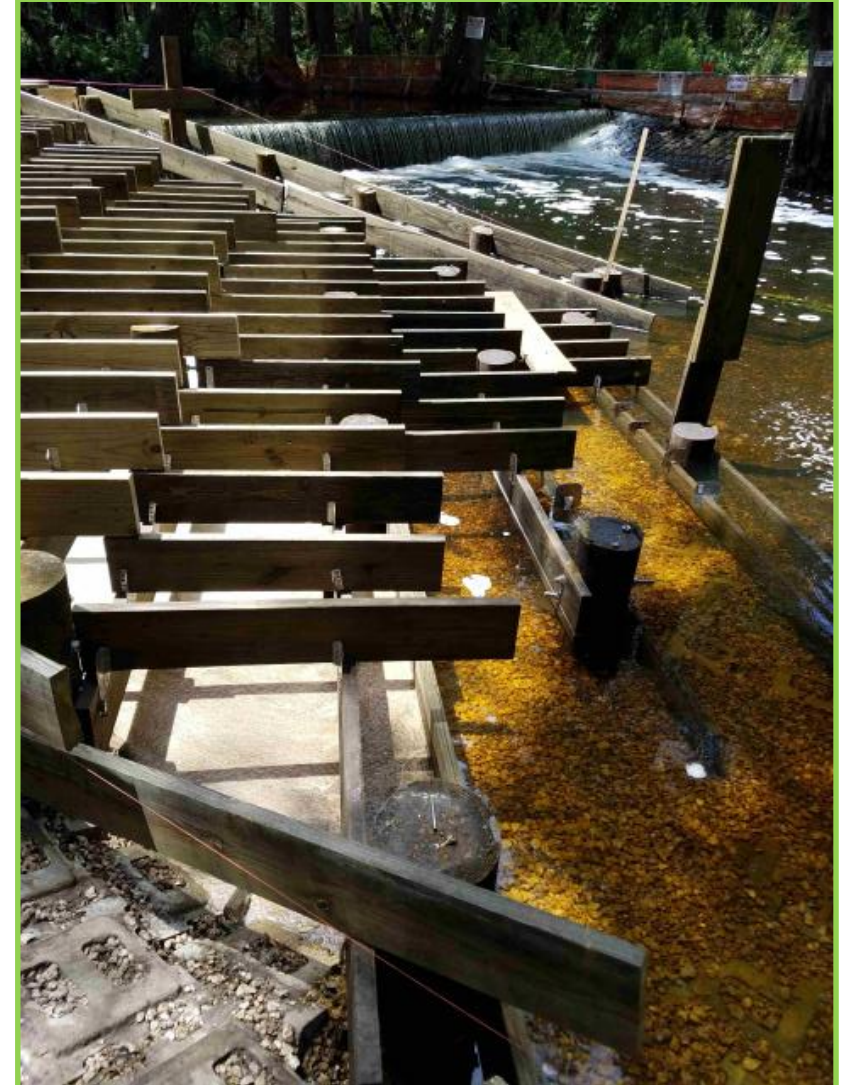


Masten Dam

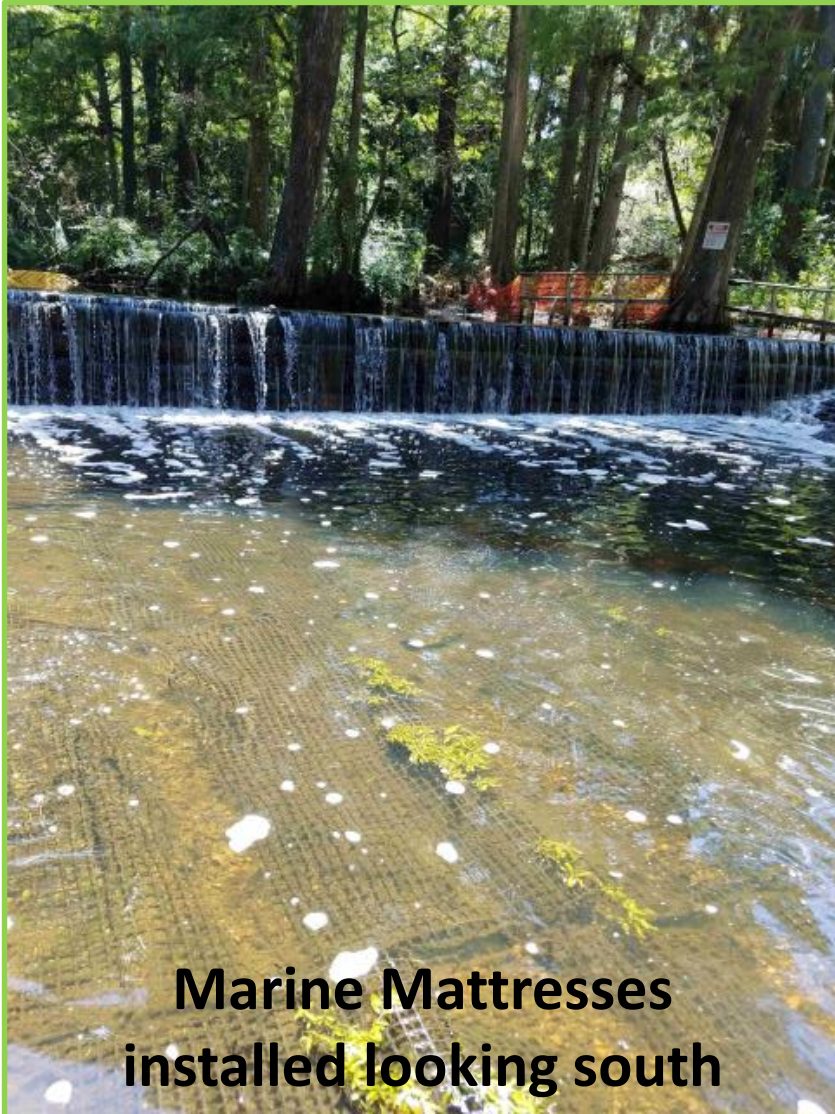


**Articulated Block
Placement
underwater and
on water's edge**

**Portage Construction
on the north side
(downstream)**



Masten Dam



**Marine Mattresses
installed looking south**



**New Portage
looking south west**

Masten Dam – Completed Project

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Masten Dam – Completed Project


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Project Update

- **Project Awarded February 2017 Governing Board**
- **Contractual Substantial Completion May 2018**
- **Contractual Final Completion July 2018**
- **Actual Final Completion March 2018**
- **Total Contractual Expenditures for Design and Construction \$3.64M**

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A scenic view of the Loxahatchee River. The foreground shows the calm water reflecting the surrounding trees and sky. Several large, mature trees with thick trunks and dense foliage line the banks. The background features more trees and a clear blue sky. The overall atmosphere is peaceful and natural.

VIDEO: Loxahatchee River Historic Dams Restored
to Ensure Future of the “Wild and Scenic” River

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Discussion