

Ocklawaha River Green and Gold Report

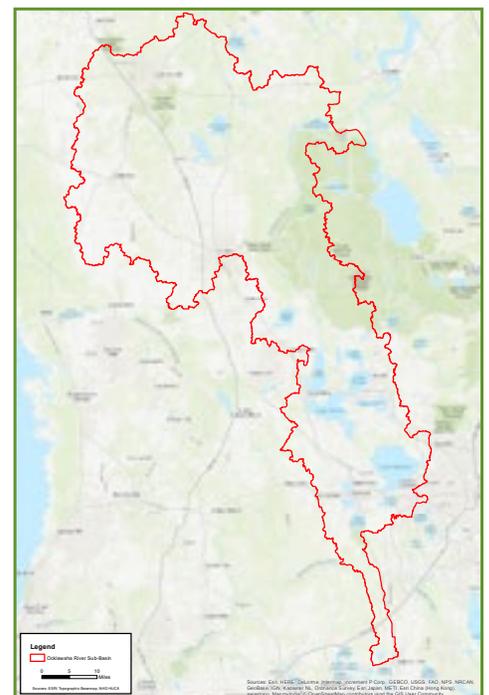
Investing in North Florida Waters



A Stimulus-Ready Project

The Ocklawaha River was unnecessarily dammed in 1968 before the Cross Florida Barge Canal was halted. The Rodman/Kirkpatrick Dam devastated over 7,500 acres of wetland forest, 20 springs, and 16 miles of the Ocklawaha River. The destruction continues today. Water quality is declining, fueling blue-green algae events. Thousands of acres of forests are stressed and dying upstream and down. The 100-mile St. Johns River Estuary is being deprived of its full natural water flow. Massive, invasive aquatic weed blockages make the dammed river an unreliable recreation resource.

Removing a portion of the earthen Rodman/Kirkpatrick dam at the site of the historic river channel will allow access to essential habitat for hundreds of manatees and bring back migratory fish and shellfish to the Ocklawaha and Silver Springs. It will reconnect the historic blueway from Lake Apopka near Orlando to the Atlantic Ocean at Jacksonville for outdoor recreation. Partial restoration will help restore the St. Johns, Ocklawaha and Silver Rivers, 20 lost springs of the Ocklawaha and one of Florida's largest artesian springs – Silver Springs.



This stimulus-ready, water resource restoration project of state significance would create an economic lift to Northeast Florida during this economic downturn by providing jobs and increasing tourism. The needed land is already in public ownership and a completed environmental impact statement and plan are in place. The project has been deemed permissible by the St. Johns River Water Management District. A variety of state, federal and private water restoration funding sources are available. The dam's 50-year life expectancy has come to an end. To pour millions of Florida taxpayer dollars into repairing and maintaining this relic dam does not make sense economically nor environmentally.

Ocklawaha Partial Restoration: Project-at-a-Glance

This Ocklawaha River Green and Gold Report provides a snapshot of the environmental and economic benefits of partial restoration of the Ocklawaha River. The projects' return on investment is extremely attractive for use of taxpayer dollars.

Projected Partial Restoration Project Costs Over 4 Years:

Option 1: Core Partial Restoration Project without plantings - \$12.9 million
(1992 Greenway Management Plan, updated to 2020 dollars)

Option 2: Core Project plus plantings - \$25.8 million
(2018 Marjorie Harris Carr Cross Florida Greenway Management Plan)

Project Phases

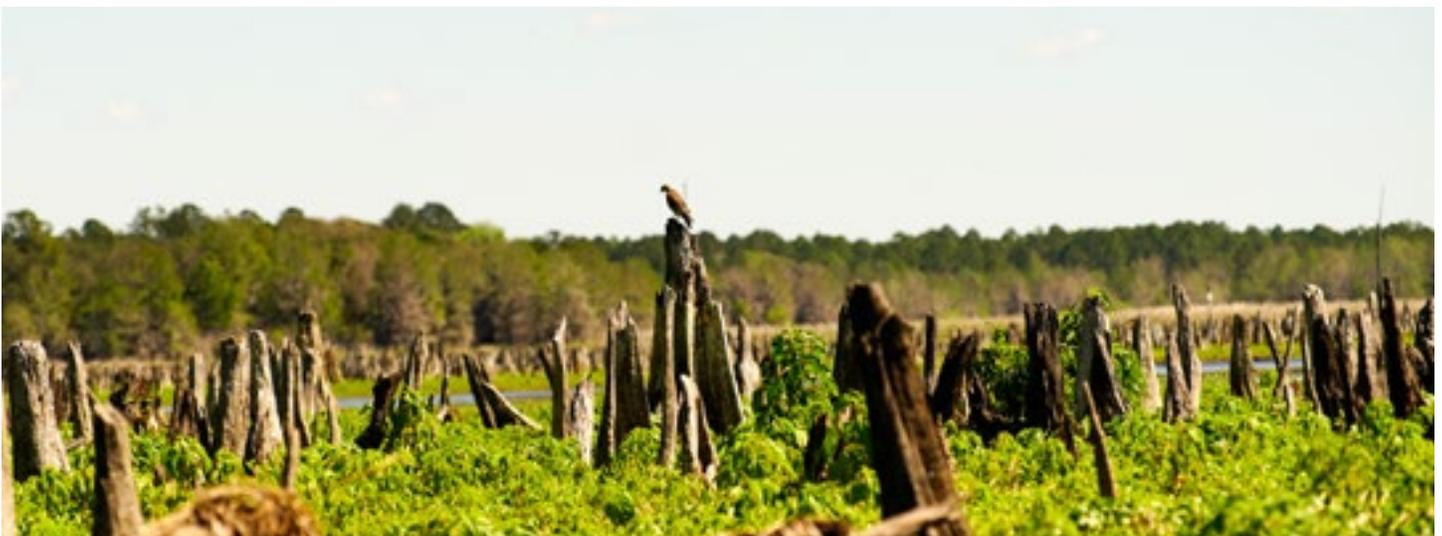
Phase One: During the pre-drawdown phase, an access/haul road will be constructed, the sediment disposal site will be created, and turbidity barriers will be installed.

Phases One – Three: Each of these phases include: dredging of the historic river channel near Rodman/ Kirkpatrick Dam to remove accumulated sediments; drawdown of the reservoir water surface; restoring of the channel and floodplain including exotic and nuisance plant control, monitoring for water quality, erosion and sediment and vegetation succession.

Phase One and Two: Surface water in Reservoir lowered from 18 feet to 12 feet NGVD. Reconstruction of the historic Ocklawaha River, Deep Creek, and Camp Branch channels. Construction of a temporary portage system at the Dam and closure of Buckman Lock.

Phase Three: Draw down river to natural river levels. Reconnect the historic Ocklawaha River channel at the Dam by making a 2,000-foot opening in the earthen dam berm on the western side to allow for a free-flowing river. Remove the spillway superstructure and cover the berm with earthen material.

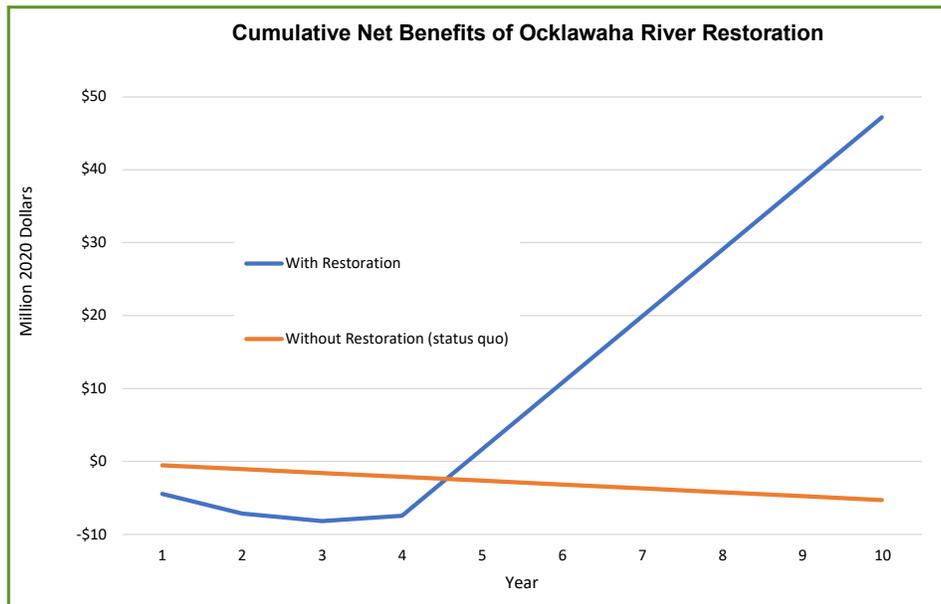
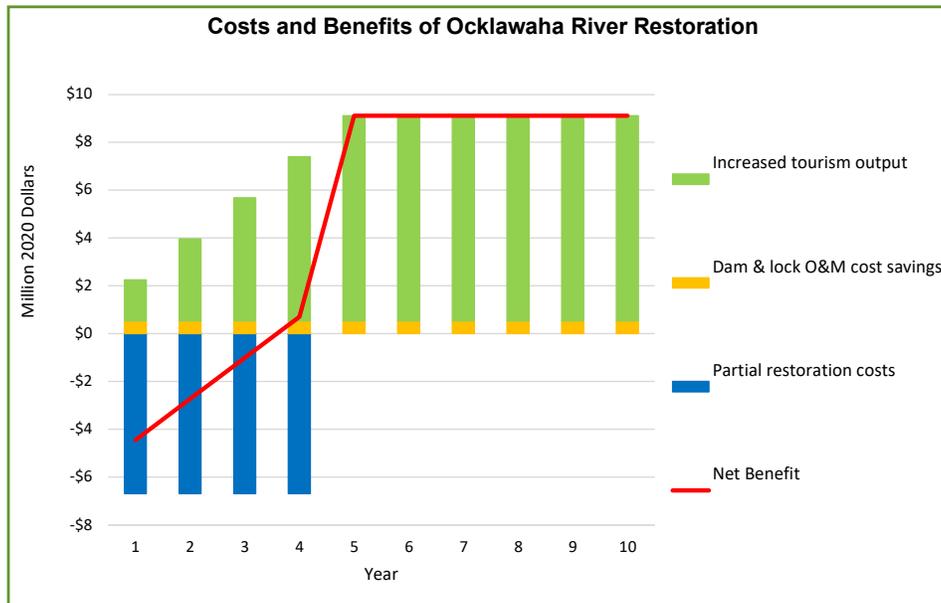
USDA Forest Service, Environmental Impact Statement, 2001



Funding Restoration in the Current Economy

With the current state of the economy, state leaders must look at diverse ways of funding the project. Paying for restoration can come from a variety of sources. In addition to state sources earmarked for conservation projects such as Amendment One, removal of antiquated, non-essential dams has become a national priority and several federal funding sources exist. In addition to federal and state sources, private/public partnership options are feasible.

The following two charts demonstrate that funding for this project is an investment, not an expense, and can be spread over multiple years.



Restoration of the Ocklawaha River was assumed to occur over a four year period with average annual costs of \$6.7 million. Historic operating costs for repair and maintenance of the Rodman Dam, Buckman Locks and canal works were considered as potential avoided cost benefits associated with river restoration, with ongoing operating costs for the area around the dam and locks netted-out of the benefits. Increased regional economic contributions from recreational tourism were assumed to develop over a period of five years as wildlife populations recover and native vegetation matures along the river banks. Costs and benefits were estimated over a ten year period, with restoration costs treated as negative amounts, while dam/lock cost savings and recreational industry output are positive values for calculating annual net benefits. The net benefits are negative during the first three years, reflecting the large upfront restoration costs for four years, then net benefits rise to over \$9 million in year five due to increased recreational tourism in the area (chart 1). Total cumulative net benefits over ten years are estimated at \$16.4 million (chart 2).

Green Scorecard: Environmental Benefits of Ocklawaha Restoration



**150 MGD
Water Flow
Restored**

**100 Mile
St. Johns
River Estuary
Sustained**

**56-Miles of
Wildlife Habitat
Silver Springs to
St. Johns River**

**17500+ Acres
Floodplain
Forests
Restored**

Restores 150 million gallons per day of natural water flow by uncovering 20 springs and reducing evapotranspiration off the reservoir

Improves water quality by reducing water temperature, increasing flow velocity, and adding wetlands water filtration through thousands of acres of restored wetlands forest

Reduces invasive aquatic vegetation, contaminant buildup, nutrient load and harmful blue-green algal blooms

Sustains one of the largest estuaries in Florida, the 100-mile St. Johns River Estuary.

Re-establishes the historic migration path for fish and shellfish like the striped bass, American sturgeon, white and channel catfish, American shad and mullet from the Atlantic Ocean to Silver Springs

Restores the critical balance of fresh and salt water in the St. Johns River Estuary increasing abundance of submerged aquatic vegetation that provides water quality filtration and important habitat for fresh and saltwater fisheries

Strengthens major wildlife habitat corridor connecting the Ocala and Osceola National Forests for white-tailed deer, wild turkey, black bears, Florida panthers and other wildlife

Provides essential natural, warm water habitat for 500+ manatees at Silver Springs and uncovered springs of the Ocklawaha

Increases habitat for wood storks, colonial wading birds, neotropical migrants and other tree dwelling birds.

Restores 7500 acres of floodplain forest originally devastated by dam

Revitalizes 8000 acres of downstream forest and approximately 2000 acres of upstream forest that are currently stressed and dying

Significantly reduces area available for invasive exotic aquatic plants resulting in improved navigation and reduction in use of herbicides

Gold Scorecard: Economic Benefits of Ocklawaha Restoration



**+28%
Change in
Regional
Visitation**

**\$4+ Million
Repair and
Maintenance
Savings**

**\$8.1 Million
Economic Output**

**7.6%
Annual Return
on Investment**

Tourism expected to increase over 5 years as restoration proceeds

Restores a historic blueway for boaters from the Harris Chain of Lakes to the Atlantic Ocean, attracting more overnight visitors

Increases local and nonresident visitor revenues and multi-use recreational opportunities across the river system

Expands manatee viewing, increasing visitor revenues on the Ocklawaha and Silver Springs State Park

Uncovers 20 springs attracting additional visitor revenues

Avoids spending an average of \$363,741 per year in taxpayer funds (based on 2001-2019 expenditures) to maintain a dam that is past its 50-year life expectancy and never served its intended purpose

Eliminates need to fund current backlog of \$4 million in necessary repairs for Rodman Dam to meet safety standards.

Increased business revenues in the local area of Putnam, Marion, Alachua Counties due to increased tourism, including indirect multiplier effects in supporting service industries and re-spending of household income

Generates benefit-Cost Ratio of 1.76 on estimated partial restoration costs of \$25.8 million over four years

Realizes positive return in year five of restoration project

Generates average annual rate of return on investment of 7.6%. Public works projects generally average less than 5%

Cumulative net benefit of \$47.2 million over 10 years under restoration; cumulative loss of \$5.3 million for status quo alternative of no restoration

References: University of Florida economic study, 2019, X. Bi, T. Borisova, A. Hodges; 2018 Margaret Harris Carr Cross Florida Greenway Management Plan; Economic benefits of Ocklawaha River restoration, Alan Hodges, June 2020. Emergency Action Plan, Kirkpatrick Dam and Rodman Reservoir, USR Corporation, February 2007. Dam Failure Flood Boundary Parcels Property Values, Putnam County Property Appraiser's Website, 2020.

The High Costs of Status Quo

These are the high costs of not moving forward with Ocklawaha River restoration.

1. **Lost Opportunity for Economic Growth in North Central Florida**

The region is an area with chronic underinvestment, low income and high poverty. Putnam County is one of the poorest counties in the state. The area around Silver Springs has been deemed a blighted community redevelopment area.

2. **Loss of Tourists and Reduced Resident Use**

The timing is right to capitalize on the rapidly growing ecotourism market in Florida and the U.S., and to invest in enhanced outdoor recreation opportunities supporting human health and well-being. Ocklawaha visitation peaked in 2006, prior to the recession, with approximately 175,000 visitors in the reservoir area and 250,000 visitors in the natural section of the river. In 2017, visitation had dropped to approximately 100,000 in the reservoir area, while there were 260,000 to the natural section of the river. Diverse outdoor recreational opportunities increase visitation.

3. **Decline of Significant Fish, Shellfish and Aquatic Habitat**

The 100-mile St. Johns River Estuary supports a diverse community of finfish and shellfish that have significant recreational and commercial economic value. Unfortunately, saltwater intrusion due to sea level rise, harbor dredging, hurricanes, drought and overuse of the Floridan Aquifer are contributing to the loss of aquatic vegetation (SAVs.) This loss of essential habitat is reducing estuary biological productivity like the adverse impacts in Apalachicola Bay. Loss of SAVs also decreases the St. Johns' ability to filter out nutrients increasing the risk of blue green algae outbreaks. Restoration of the Ocklawaha will increase freshwater flow into the St. Johns Estuary improving flow timing and delivery that are crucial to biological productivity, increased habitat, and improved water quality.



What the Leaders are Saying

“There are good arguments for breaching the dam in 2021. For one, the reservoir is filling up with muck. To maintain the status quo, the state will have to start paying to dredge it out at some point, along with paying increasing maintenance costs for the dam, which is already past its life expectancy. As it is, the state has to draw down the reservoir every few years as part of measures to control the growth of invasive aquatic plants that flourish in the reservoir environment.”

– Mark Howard, Florida Trend, June 2020

“I am appalled that our state is spending millions of dollars to maintain and protect a dam that is not needed nor necessary. It’s time to return the area to its natural state and stop suppressing the natural beauty that is being suffocated...”

– Jolene Everett, Everett Distributing Co Inc., Palatka

“Our lodge is across from the mouth of the Ocklawaha River. Welaka in the past was known for its many fish camps that lined the river. We are now one of the few, and I am proud to say doing very well. I welcome new development, and I am a firm believer that more business brings more business. Removing the dam would be a big boost to the St. Johns River economy especially in Welaka.”

– Kevin Finch, Owner, Welaka Lodge & Resort

“Silver Springs will never be fully restored without the removal of the Rodman/Kirkpatrick Dam on the Ocklawaha River. Migratory fish from the Atlantic Ocean and St. Johns River, including striped bass, channel catfish, striped mullet, American shad, American eels, and Atlantic sturgeon, are critical to a productive Silver Springs ecosystem.”

– Dr. Robert Knight, Executive Director, Florida Springs Institute

“The recent Ocklawaha River drawdown gave us a glimpse of what the river once was and could be again. At a time when Florida’s water issues are at the forefront, restoring this special part of wild Florida makes ecological and economic sense.”

– Julie Wraithmell, Executive Director, Audubon Florida.

“I think the Rodman Reservoir is one of the greatest bass fisheries in the Southeast. However, I learned about the cost of the Rodman Dam in the *Lost Springs* film. I began to look into it. Because of the Rodman Dam, beautiful natural resources are lost to us. Twenty springs are covered up. Therefore, I am no longer a proponent of Save the Rodman. I am a strong proponent of the restoration of the Ocklawaha River the way it was.”

– Bill Rossi, Competitive Tournament Bass Fisherman

“Ocklawaha River restoration would increase freshwater flows in the Lower Ocklawaha and St. John Rivers by millions of gallons a day due to less evaporation off the artificial pool and uncovering of more than 20 springs flooded by the Rodman Dam.”

- Dr. Jim Gross, geologist and Executive Director of Florida Defenders of the Environment.

Free the Ocklawaha River Coalition

The Free the Ocklawaha River Coalition includes 40 organizations representing thousands of members from across Florida and beyond. Its mission is to restore the Ocklawaha as a free-flowing River, reconnecting the Silver and St. Johns Rivers, and elevating the regional benefits for all.

Free the Ocklawaha River Coalition – Energized! (The Force)

1. 1000 Friends of Florid
2. Alachua Audubon Society
3. Alachua Conservation Trust
4. Aquaholics
5. American Rivers
6. Audubon Florida
7. Blazing Paddles
8. Bullsugar Alliance
9. Calusa Waterkeeper
10. Center for Biological Diversity
11. Defenders of Wildlife
12. Dommelvisrecht - Netherlands
13. Duval Audubon Society
14. Earth Justice Florida
15. Florida Defenders of the Environment
16. Florida Native Plant Society
17. Florida Springs Council
18. Florida Springs Institute
19. Florida Wildlife Federation
20. Friends of Lake Apopka
21. Friends of the Everglades
22. Ichetucknee Alliance
23. Marion Audubon Society
24. Marion County Aquaholics Paddlers Group, Inc.
25. Matanzas Riverkeeper
26. Ocklawaha Valley Audubon Society
27. Orange Audubon Society
28. Our Revolution Jacksonville
29. Our Santa Fe River, Inc.
30. Paddle Florida
31. Public Trust Law
32. Putnam Land Conservancy
33. Rainbow River Conservation, Inc.
34. Riverside Presbyterian Church
35. Santa Fe Audubon Society
36. Save the Manatee Club
37. Sea Turtle Conservancy
38. Sierra Club Florida Chapter
39. Silver Springs Alliance
40. St. Johns County Audubon Society



FreetheOcklawaha.com