Eight Reasons a Free-Flowing Ocklawaha River Makes Economic Sense

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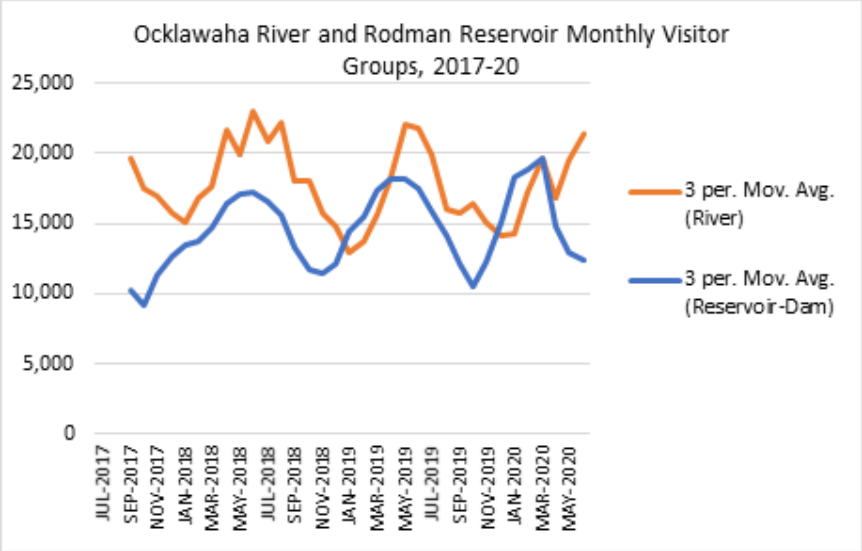
A team of economists, scientists and tourism experts have jointly outlined the strong economic benefits of breaching the Rodman/Kirkpatrick Dam to create a free-flowing Ocklawaha River, reconnecting Silver Springs and the Ocklawaha and St. Johns rivers. The Great Florida Riverway, a 217-mile system reaching from the Green Swamp and Lake Apopka in Central Florida to the Atlantic Ocean via the Ocklawaha and St. Johns rivers, is fractured by the Rodman/Kirkpatrick dam constructed over 50 years ago for the halted Cross Florida Barge Canal.

Following is a summary of that collective, far-reaching economic data. Economic benefits are also highlighted in a nine-minute segment from The Great Florida Riverway Documentary. https://youtu.be/AlLD7zm2_xE

1. The projected ten-year return on investment (ROI) for Ocklawaha restoration is 7.6% or a $1.76 return for every dollar invested. The return surpasses the average ROI for most public infrastructure projects. Important economic metrics are outlined in the attached Ocklawaha Green and Gold Report including ROI, economic output, visitation numbers, and maintenance savings. https://www.freetheocklawaha.com/wp-content/uploads/2020/09/Green-Gold-Report-1.pdf

2. Regional visitation is estimated to increase by 28% due to diversifying the outdoor recreation offerings and improving the overall state of the river including habitat, water quality, and wildlife. "According to a 2017 UF study, overall use of the natural sections of the Ocklawaha River is going up and use of the impounded portions of the river is going down. Annual use of the Rodman Reservoir recreation sites has been on a downward trend since 2010, declining by an average of 3,627 visitor parties per year," explains UF Economics Professor Emeritus Alan Hodges. "During the drawdown from November 2019 through February 2020, the Ocklawaha River's recreational opportunities closely resembled the situation after dam breaching, with visitation at Rodman reservoir access points increasing by 81 percent compared to the same four-month period in 2017-18 and 2018-19," Hodges added. This demonstrates a pent-up demand for recreation in a more natural river environment.



Data source: FDEP Office of Greenways and Trails. Prepared by Alan Hodges, PhD.
Note: A three-month moving average is a series of three-month averages to summarize and better show trends and directions by smoothing out the effects of month-to-month changes.

3. Two manatee viewing areas at uncovered Ocklawaha River springs could result in 30,000 new visitors a year and $3 million in annual economic impact. Scientists predict that hundreds of manatees will utilize the Ocklawaha and Silver Springs as much needed natural, warm water, winter habitat. UF Tourism Professor Emeritus Stephen Holland, PhD, explains in his white paper on springs recreation, "When the Ocklawaha River is restored to its natural level, there are about 20 known currently 'drowned' springs that will be restored to greater visibility." Six Ocklawaha springs sites plus Silver Springs were identified by scientists as potential manatee viewing areas. "If two Ocklawaha River springs were to be opened to the public with some recreational facilities (signage, parking, bathrooms, picnic tables, boardwalks, etc.), it appears that about 30,000 visitors and $3 million in annual economic impact due to expenditures by those visitors would be a reasonable estimate for the early years of their existence," added Holland. These visitation counts and dollar estimates are based on recent information for other natural springs in rural areas of Florida. This does not include increased revenues for Silver Springs State Park.

State Park Name	2019 Visitors	Economic Impact
DeLeon Springs	243,825	$21,414,647
Fanning Springs	180,423	$15,689,400
Lafayette Blue Springs *	17,671	$1,827,998
Madison Blue Springs *	24,558	$2,234,495
Troy Springs *	6,450	$637,125
Average for 5 Parks	94,585	$8,360,733
Average for 3 * Less Visited Parks	16,226	$1,566,539

Data source: Florida State Parks Foundation. Prepared by Stephen Holland, PhD.

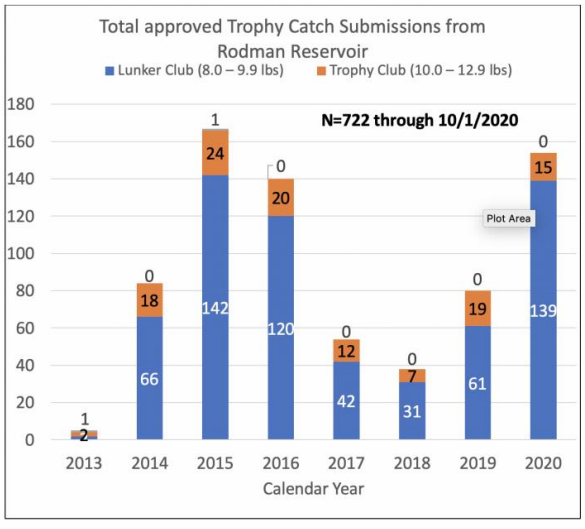
4. Silver Springs State Park could become one of the top inland manatee viewing areas in the Florida. Manatees are a major draw at public conservation areas across the state including Three Sisters Springs and other areas in Kings Bay (Crystal River), Homosassa Springs Wildlife State Park (Homosassa), Manatee Springs State Park (Chiefland), and Blue Springs State Park (DeLand). Blue Springs's manatee

magnetism grew quickly as the population increased from 14 manatees in 1970 to 485 in 2018. The primary manatee viewing season, November to March, would complement Ocklawaha and Silver Springs active summer recreation activities, providing year-round visitor opportunities.

This could revitalize the designated and blighted Community Redevelopment Area (CRA) of Silver Springs and drive Silver Springs State Park's attendance figures up dramatically, according to Dr. Bob Knight, executive director of Florida Springs Institute. Silver Springs State Park is a good location because it has a large parking lot and visitor facilities, as well as open shoreline and dock viewing areas, making manatee watching accessible for all and safe for manatees.

5. Valuable commercial finfishing and shellfishing in the lower St. Johns River estuary is projected to be more sustainable. Jacksonville University's Director of Research for the Marine Science Institute Dr. Quinton White explains that, "Maintaining the right salinity and good water quality by restoring freshwater flows from the Ocklawaha River is essential to the health of the fishing and the commercial crab and shrimp industries in the Lower St. Johns." The 2020 St. Johns *State of the River Report Lower St. Johns River* indicates that "The Lower St. Johns River Basin or St. Johns River Estuary, Clay, Duval, Flagler, Putnam, and St. Johns Counties, supports a diverse finfish and invertebrate community that has significant commercial and recreational value." Blue crabs account for most landings. According to the report, in 2018, the commercial crab harvest was 978,288 lbs. Commercial finfish harvesting weighed in at 630,696 lbs. According to research by Dr. Benedict Posadas, Mississippi State University, commercial crab dock value is currently $1.50 per pound. This would be an approximate $1.4 million value for commercial crab in the Lower St. Johns. This does not include the value of commercial finfish or the popular recreational sports fishing industry.

6. With transformational recreational facilities, Putnam County can continue its fishing heritage with a restored Ocklawaha River. The St. Johns River at Palatka, home of this year's National Bassmasters Tournament, is ranked 4th in the southeast by Bassmasters. The Rodman Reservoir has dropped to 8th. The largest catches of lunker bass from the Rodman/Kirkpatrick reservoir occur on or around drawdown times mimicking a more natural Ocklawaha River environment (2015-2016 and 2019-2020).



2015-2016 Drawdown Oct–April

2019-2020 Drawdown Oct-April

Source: Florida Fish and Wildlife Commission

Prior to dam construction, the Ocklawaha River had a long history of good fishing. A free-flowing Ocklawaha will once again provide a consistent, quality river fishing environment including creeks, cuts and 20 re-opened springs. A free-flowing Ocklawaha reopens the historic migratory route for fish such as the channel and white catfish, striped bass, and striped mullet allowing them to travel to the upper reaches of the Ocklawaha and Silver Springs. It reduces the need for herbicides to treat the on-going invasive aquatic weed blockages.

Transformational recreation designs can assist in maintaining and even strengthening the area's fishing economy. UF students from the College of Design, Construction and Planning, led by instructor Tom Hoctor, developed a conceptual plan for innovative reuse of the current Buckman Lock facility turning it into the Kirkpatrick Outdoor Center and Bartram Outpost for anglers, hunters, and outdoor enthusiasts. Students also created an upgraded Rodman Recreation Area plan. https://greatfloridariverway.com/student-showcase/ Other recommended fishing infrastructure includes adjustments to current ramps, additional dock fishing areas like the Eureka West fishing platform, and community fishing ponds on the infilled canal west of the current Buckman Lock.

7. Breaching the dam eliminates the risk of more than $57 million in property damages from an unplanned dam failure. The risk can be removed almost immediately and without any cost by drawing the Rodman Reservoir down to 12 feet NGVD, like drawdowns conducted every 3-4 years. This would protect citizen safety in the event of a major storm event or unplanned failure until partial restoration to breach the dam is implemented. The Rodman/Kirkpatrick Dam is past its 50-year life expectancy. The 2018 FDEP Cross Florida Greenway Management Plan states, "Approximately 400+ properties were shown to be in potential harm's way if the Kirkpatrick Dam failed and the impounded water in the reservoir flowed downstream in an uncontrolled discharge." Using the geographic boundaries for these properties from the 2006 Emergency Action Plan, 539 current private and public parcels were identified with a conservative projected property loss value of flooding from an unplanned dam failure of $57 million. Parcel numbers have increased between 2006 and today due to subdividing and development. The extent of the identified property in the inundation area maps was further expanded in the 2015 Rodman Dam Assessment making the risk much greater today.

Value of Properties Potentially At-Risk with Unplanned Dam Failure: $ 57,384,442

Type	Total Acres	Acres Outside Floodplain	# of Parcels	Value
Private	2,498.16		482	$47,973,792
Public	19,922.84		57	$9,410,650
Total	22,421.00	11,142	539	$57,384,442

The 400-plus properties identified as those in harm's way in the FDEP 2018 Greenway Plan most likely were derived from the 2007 document: Emergency Action Plan, Kirkpatrick Dam and Rodman Reservoir (EAP, Feb. 2007). The number of parcels shown to be in that area based on current Putnam County Property Appraiser data is now 539 parcels with 11,142 acres potentially flooded. Parcels in that area have been subdivided since the 2007 EAP. The analysis included ACRES (the original parcel area), ACRESFLOOD (acres within the flood area) and PCT_FLOOD (percent of property flooded). The GIS analyst multiplied JV (just value) by percent flooded (JV x PCT_FLOOD) to get an estimate of potential economic loss. The prorated value of the properties to be potentially affected is approximately $57,384,442.

Data Sources: Putnam County Property Appraisers Office, FDEP 2018 Greenway Plan, Emergency Action Plan, Kirkpatrick Dam and Reservoir 2007.

8. More than $4-$14 million in repairs needed to the Rodman/Kirkpatrick Dam and Buckman Lock to bring them to pre-2020 standards. Annual maintenance costs of $364,000 will be reduced. Over the last nineteen years, taxpayers have paid $6.9 million in operations, repairs and maintenance of the Rodman/Kirkpatrick Dam and Buckman Lock or an average of approximately $364,000 a year. The 2018 FDEP Greenway Plan estimated annual maintenance after restoration would be $234,000. The 2007 plan estimates $14.1 million for bringing the dam and lock to pre-2020 standards. The 2018 plan estimates $4 million in repairs. These cost estimates were created before receiving the list of repairs included in the 2019 and 2021 (in-process) Rodman/Kirkpatrick Dam Assessment Report and the new 2020 federal dam standards.

Built for the halted Cross Florida Barge Canal, the structures do not provide water supply, power, or flood protection – only an artificial fishing reservoir that is losing popularity with its users. To pour millions of Florida taxpayer dollars into repairing and maintaining this dam, past its 50-year life expectancy, does not make economic sense.

Operating maintenance and repair costs for the Rodman Dam, Buckman Locks and canal works

Fiscal year	Contractual services	Incidental expense	Salary & benefits	Water control structures	Total	Total 2020 Dollars*
2001-02				$1,614,455	$1,614,455	$2,273,945
2005-06				$925,392	$925,392	$1,177,991
2006-07				$349,333	$349,333	$432,076
2007-08				$22,560	$22,560	$27,372
2008-09	$62,139	$56,340	$56,864	$161,007	$336,350	$401,704
2009-10	$62,953	$42,755	$57,734		$163,442	$194,130
2010-11	$62,321	$26,533	$66,375		$155,229	$180,994
2011-12	$66,906	$56,683	$66,375		$189,964	$216,951
2012-13	$62,088	$10,889	$66,375		$139,352	$156,287
2013-14	$60,445	$62,741	$66,375		$189,561	$208,884
2014-15	$62,366	$113,499	$49,920		$225,785	$246,045
2015-16	$61,238	$17,524	$60,443		$139,205	$150,466
2016-17	$62,460	$95,081	$60,398		$217,939	$230,910
2017-18	$51,185	$370,987	$61,097		$483,270	$501,278
2018-19	$57,477	$169,063	$59,612		$286,152	$291,176
2019-20	$109,868	$62,871	$48,122		$220,861	$220,861
Total	$781,447	$1,084,967	$719,690	$3,072,747	$5,658,850	$6,911,070
Annual average costs for entire period (19 years)						$363,741
Annual cost for deferred maintenance $4 million (2018 CFG Management Plan) over 10 years						$400,000
Estimated ongoing annual O&M costs after restoration netted-out of benefits (2018 CFG Plan)						$234,000
Estimated annual historic costs (2001-20) plus deferred maintenance less ongoing O&M costs after restoration (value used for cost-benefit analysis)						$529,741

Source: Office of Greenways and Trails, and 2018 Cross Florida Greenway Management Plan.
* Values in 2020 dollars, adjusted for inflation with U.S. GDP Implicit Price Deflator (U.S. Commerce Dept.).

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