Ocklawaha River - Silver Springs - St. Johns River Estuary

Providing Water Resources for Florida's Future

The Great Florida Riverway, a vast 217-mile system, reaches from the Green Swamp and Lake Apopka in Central Florida to the Atlantic Ocean via the Ocklawaha and St. Johns rivers. The Great Florida Riverway is home to more than 50 springs including one of the largest artesian springs in the world, Silver Springs. Restoring this riverway is vital to improving the environmental and economic health of North and Central Florida.

The Ocklawaha River, the heart of the Great Florida Riverway and the largest tributary of the St. Johns River, was dammed in 1968. Constructed for a canal that was never completed and never served its intended purpose, the dam flooded more than 7,500 acres of forested wetlands, 20 springs and 16 miles of the Ocklawaha River. The continued decline of water quality, spring flow, wetland forests, fish, wildlife, and recreation has led American Rivers to designate the Ocklawaha River as one of American's Most Endangered Rivers® of 2020. Breaching the Rodman/Kirkpatrick Dam and restoring the flow back to the natural Ocklawaha River channel will have far-reaching water quality and water quantity benefits.

Water Quality Benefits from a Free-Flowing Ocklawaha River

1. Creates a much cooler, clearer, free-flowing Ocklawaha River reducing the need for repetitive herbicide spraying of invasive aquatic plants to avoid frequent boat ramp and river blockages. Discontinuation, or significant decrease, of long-term herbicide application would improve water quality and habitat.
2. Promotes submerged aquatic vegetation growth in the St. Johns River essential for fish and wildlife by increasing water clarity and available light.
3. Enhances the entire Lower St. Johns River by reestablishing natural water flow and minimizing negative blue-green algal impacts. Toxic blue-green algal blooms represent the most significant water quality problem for the Lower St. Johns River. Restoring a better balance between nitrogen and phosphorus would favor a more beneficial algal community and enhance the aquatic food chain.
4. Reduces impacts to the Lower Ocklawaha and St. Johns Rivers from periodic drawdowns that occur every three to four years. Drawdowns, although helpful in managing aquatic weeds and increasing fish productivity, can impact the lower Ocklawaha and St. Johns Rivers by 1) repeated discharge of slugs of nitrogen and phosphorus downstream and 2) altering the estuary salinity balance.
5. Restores over 15,000 acres of forested wetlands – 7,500 near the dam and reservoir and more than 8,000 acres of stressed floodplain forest upstream and downstream of the dam. Regrown forests will provide natural water filtering reducing the threat of toxic blue-green algae and removing other pollutants while providing natural flood protection and a cooling tree canopy.

The original tree destruction removed the natural filtering of contaminants, and, therefore, the water in the reservoir and below the dam is especially high in contaminants and nutrients.

6. Helps restore Silver Springs, a premier Florida State Park. Restoring the Silver Springs ecosystem cannot fully occur without a free-flowing Ocklawaha. For example, allowing the return of schools of algae-eating mullet, now blocked by the dam, will naturally reduce the brown algae that now coat the green eel grass of Silver Springs.

Water Quantity Benefits from a Free-flowing Ocklawaha River

1. Provides 156-276 million gallons a day of additional natural water flow for the Lower Ocklawaha River and St. Johns River Estuary. Compare this to the daily use in the City of Jacksonville (JEA) of 110 million gallons a day.
2. Increases water flow by uncovering 20 freshwater springs drowned by the waters behind the dam and eliminates substantial evaporation from the reservoir.
3. Helps balance salt and freshwater in the Lower St. Johns River Estuary to protect its sports fishing and shellfish industries and vital habitat, while assuring coastal resiliency and reduction of saltwater intrusion.

Five Reasons Why the Rodman Reservoir is not a Good Water Supply Source

The Rodman Reservoir near Palatka, Florida has been rejected as an alternative water supply. Several studies and plans evaluated the reservoir as a source and determined that using the Rodman Reservoir as a source of water supply was not practical because:

1. Rodman Reservoir is broad, and shallow compared with typical water supply reservoirs and would provide relatively limited water storage to address water supply needs.
2. Treatment of surface water is two to four times more expensive than what over 90% of Floridians use — groundwater from the aquifer.
3. Water pumping, piping, and transport would be too costly since the reservoir is not located near a large customer base.
4. A free-flowing Ocklawaha would provide 156-276 million gallons per day of additional natural water flow not available from an impounded reservoir by uncovering 20 springs drowned by water behind the dam and greatly reducing evaporation from the reservoir.
5. Restoring the natural downstream flow is needed in the St. Johns River for improved fish and wildlife habitat, reduced saltwater intrusion, improved system resiliency and support for water dependent industries and tourism.

Fish and Wildlife Benefits

1. Breaching the dam will re-establish the migratory pathways used by important species of fish such as American shad, American eel, and Atlantic striped bass.
2. Silver Springs has suffered a massive decline in native fish populations. Restoration of unobstructed river flow will increase fish populations including mullet, catfish, and sunfish.
3. The springs along the Ocklawaha River and Silver Springs once served as warm-water refuges for manatees. Re-establishing these refuges will provide expanded habitat for this threatened species recently experiencing a record rate of mortality.

4. The Lower St. Johns River estuary and the South Atlantic Bight support numerous economically import species fish and shellfish. A free-flowing Ocklawaha River will benefit these species by providing the freshwater flow that is necessary to maintain the habitats they need for reproduction and growth. This is a benefit with regional significance for the southeastern coast of the U.S.

This fact sheet was produced by members of the Free the Ocklawaha River Coalition for Everyone science team. https://www.freetheocklawaha.com/science-team/

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