

Minimum Levels for Lakes Brooklyn and Geneva

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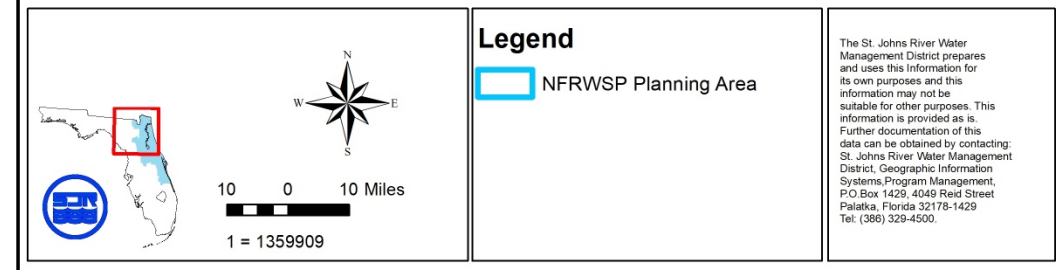
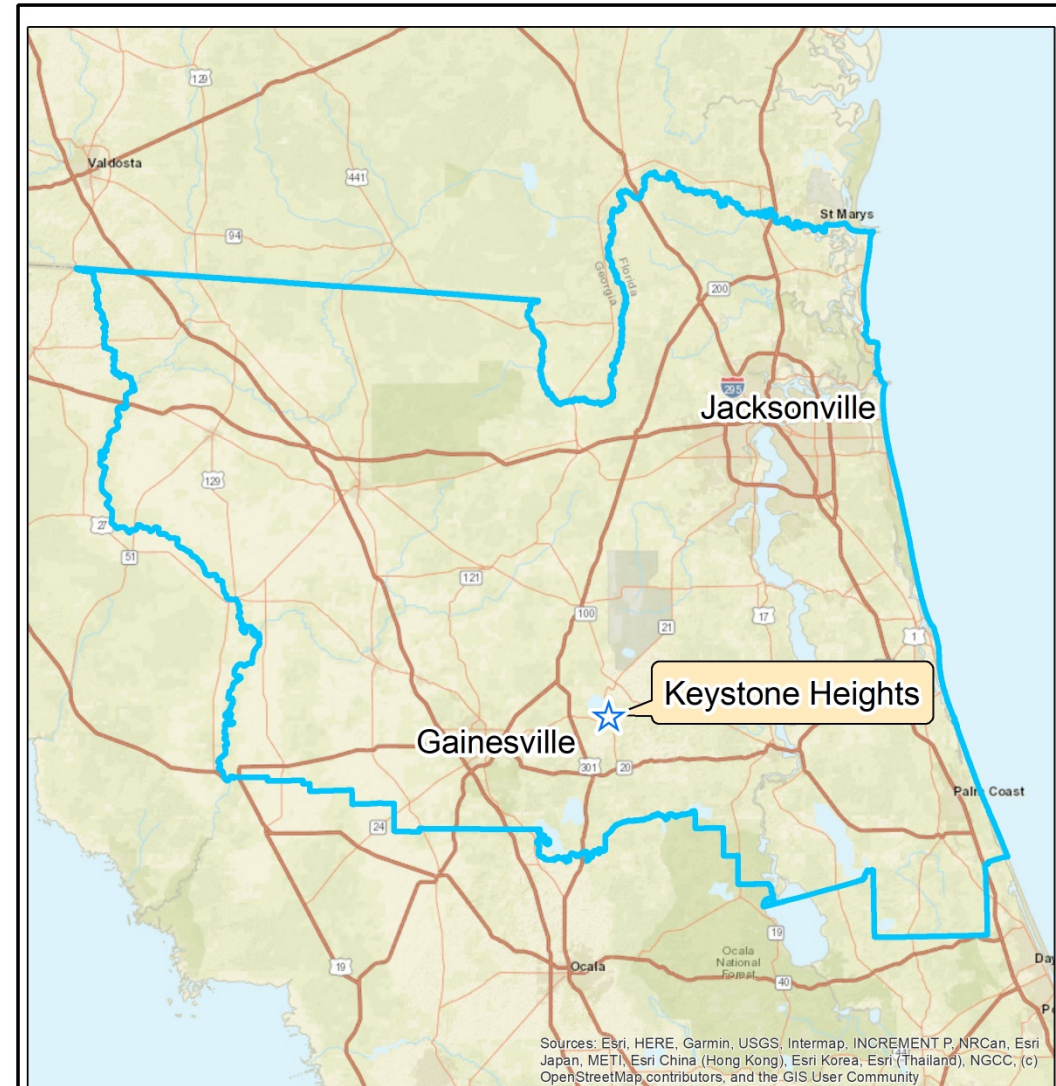
St. Johns River
Water Management District

Lakes Brooklyn and Geneva Bradford and Clay Counties

- Located in Keystone Heights
- Within the North Florida Regional Water Supply Planning Area

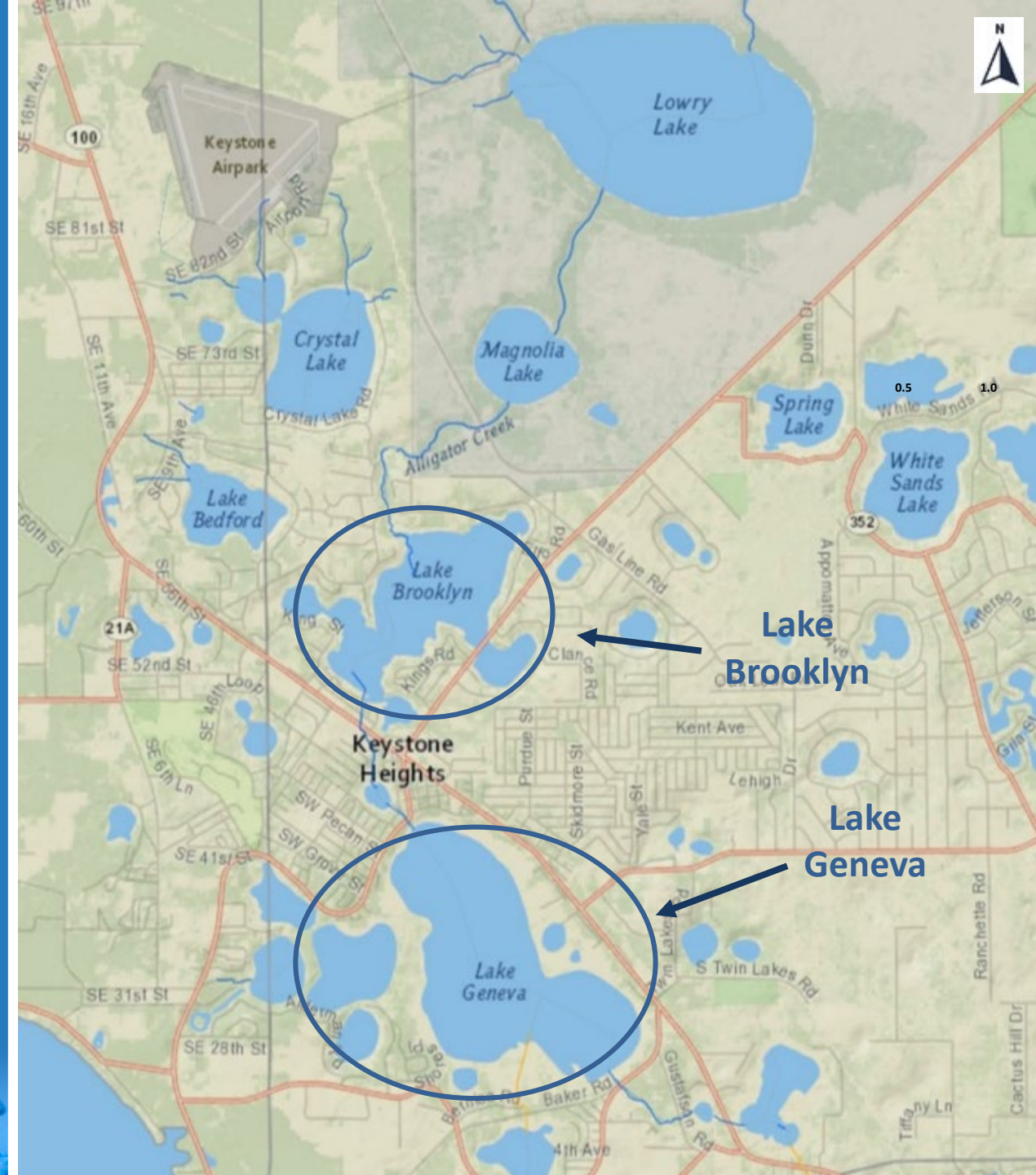


St. Johns River
Water Management District



Lakes Brooklyn and Geneva Bradford and Clay Counties

- Sandhill / sinkhole lakes with large natural fluctuation range
- MFLs originally adopted in 1996



Statutory Directive

Water management districts must establish MFLs that set...

“...the limit at which further withdrawals would be significantly harmful to the water resources or the ecology of the area.”

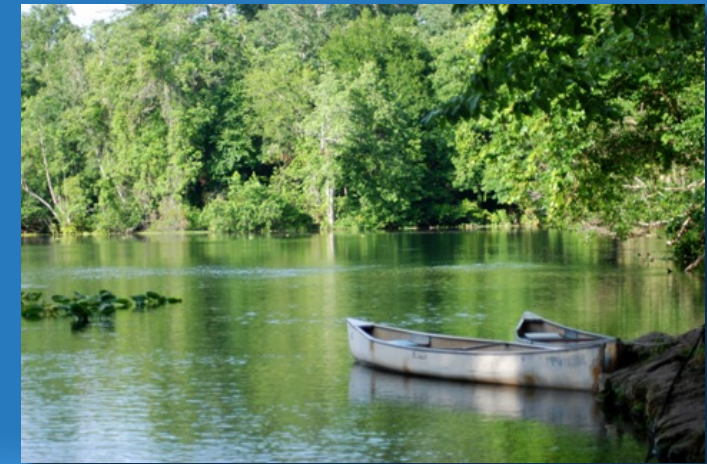
Section 373.042(1), Florida Statutes (F.S.)



Water Resource Values

*“...consideration shall be given to... non-consumptive uses,
and environmental values...” 62-40.473, F.A.C.*

- Recreation in and on the water
- Fish and wildlife habitats and the passage of fish
- Estuarine resources
- Transfer of detrital material
- Maintenance of freshwater storage and supply
- Aesthetic and scenic attributes
- Filtration / absorption of nutrients and pollutants
- Sediment loads
- Water quality
- Navigation



Peer Review and Stakeholder Collaboration

- Independent scientific peer review: Cardno, HSW, Brown and Caldwell, and Intera (model review)
- Numerous meetings with stakeholder groups*

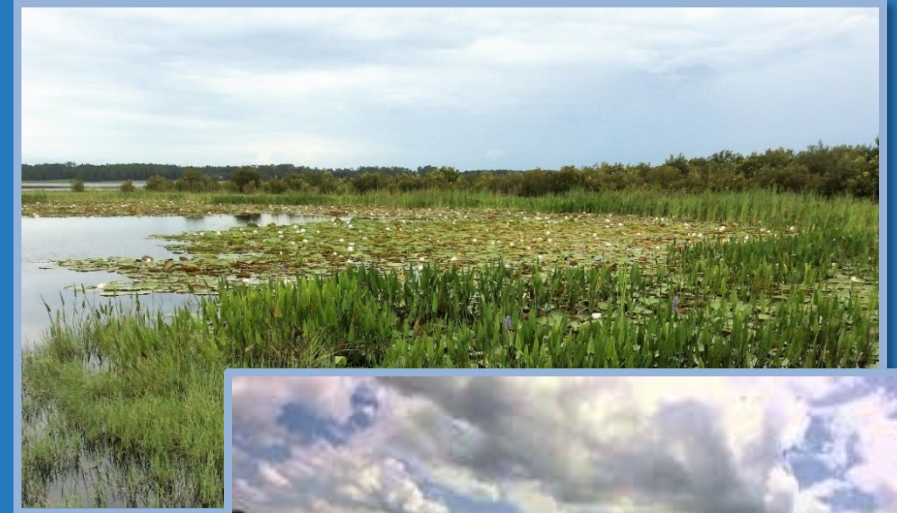
Meeting Date	Meeting Type	Attendees
4/2/2021	Stakeholder Requested Update	SOLO
3/31/2021	Stakeholder Requested Update	Westrock
3/30/2021	Stakeholder Requested Update	NFUCG
2/4/2021	Stakeholder Requested Update	NFUCG
1/13/2021	Stakeholder Requested Update	Westrock
12/10/2020	Recovery Strategy Rule Workshop	SOLO/NFUCG
12/1/2020	Stakeholder Requested Update	NFUCG
9/24/2020	Lake Brooklyn and Geneva draft MFLs Public Workshop	SOLO/NFUCG
8/27/2020	Stakeholder Requested Update	NFUCG
8/21/2020	Stakeholder Requested Update	SOLO
5/7/2020	Stakeholder Requested Update	NFUCG

** only includes meetings from past year*



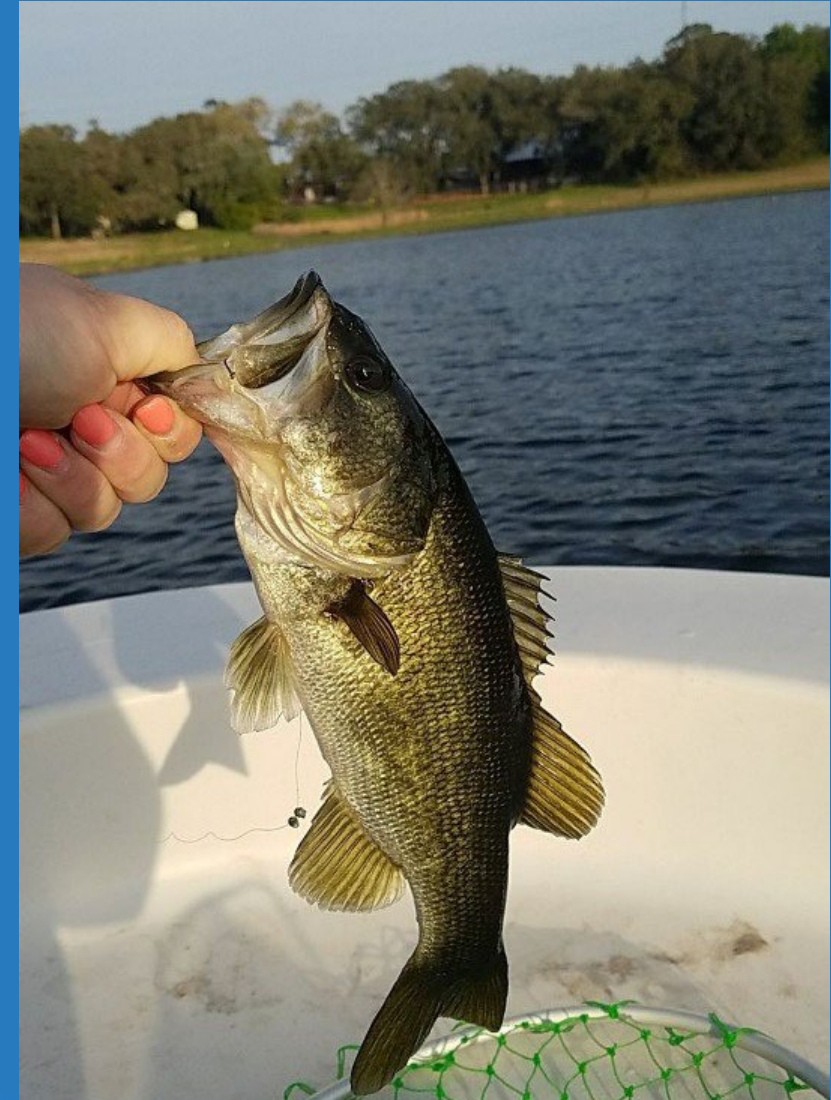
Final Environmental Criteria

- Lake lobe connection metric
- 5 Fish and wildlife nearshore metrics
 - Emergent marsh area
 - Gamefish spawning area
 - Large wading bird forage area
 - Small wading bird forage area
 - Sandhill crane nesting area
- Open water metric (≥ 5 ft deep)
- Average depth
- Surface area
- Minimum Infrequent High (upland encroachment)



Open Water Area Metric

- Recommended by peer reviewers
- Protects fish habitat
 - Strongly supported by FWC
 - Open water area important for gamefish
 - Refuge habitat important during dry periods
- Protects recreational values
 - Safe boating, swimming and other forms of recreation
 - Open water free of submerged obstacles (most wetland plants within 0 to 5 ft deep)



Lakes Brooklyn and Geneva Assessment

Environmental Criterion	Lake P50 Freeboard /Deficit (ft)	
	Lake Brooklyn	Lake Geneva
Minimum Infrequent High (Upland Encroachment)	> 10.0	> 3.2
Fish and Wildlife Nearshore Habitat	> 5.0	> 5.0
Lake Surface Area	- 0.5	1.0
Average Lake Depth	- 0.6	0.0
Lake Lobe Connectivity	-1.3	0.2
Open Water Area	-1.6	-0.3

Lakes Brooklyn and Geneva are in Recovery



NFUCG Proposed Alternative

Minimum Infrequent High Only

Prevents upland encroachment

- Would allow > 14 ft reduction in median water level



Lake Brooklyn is a wet prairie at 95 ft NAVD88

