



Prevention and Recovery Strategy for the Lower Santa Fe and Ichetucknee Rivers and Priority Springs



MFL Status by River Gage (cfs)



Evaluation Condition	Lower Santa Fe Fort White	Lower Santa Fe US441	Ichetucknee Hwy 27
RTF Less MFL flow	103	50	10
Current 2015 Impact	70.7	48.9	15.4
Current 2015 Net	32.3	1.1	-5.4
Projected 2040 Impact	106	71.5	24.0
Projected 2040 Net	-3	-21.5	-14.0
Proposed Status	Prevention	Prevention	Recovery

Note: Median daily values

Potential Recovery and Prevention Strategy Tools



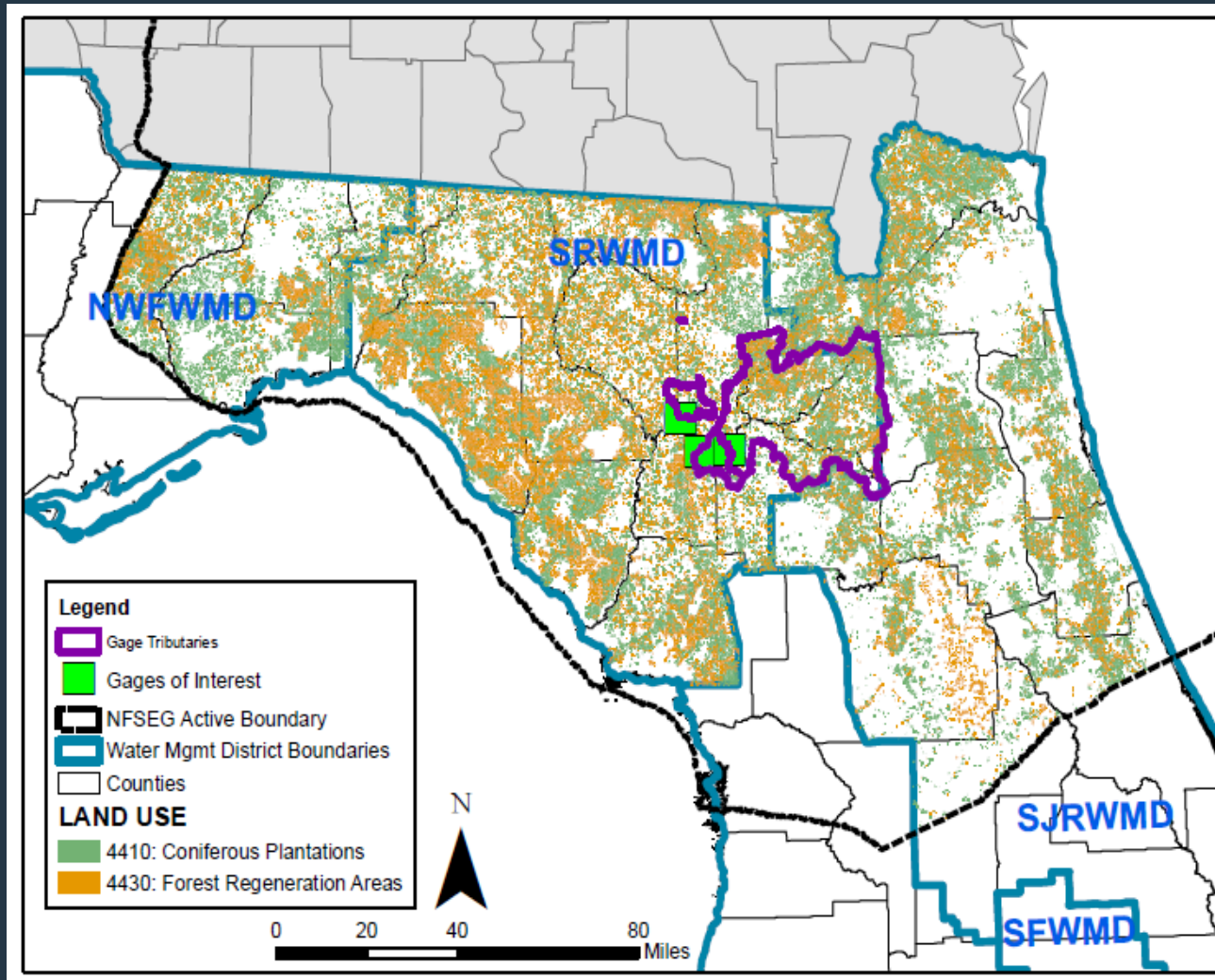
- PROJECTS:
 - Water Conservation/Alternative Water Supply (AWS)
 - Public Supply (PS)
 - Commercial/Industrial/Institutional (CII)
 - Agriculture (cost-share)
 - Aquifer Recharge
 - Land Acquisition, Land Use Changes, and Conservation Easements
- REGULATORY:
 - Permitted use impact offset requirements
 - Efficiency/conservation requirements and monitoring
 - High-pressure end gun restrictions
 - Permit duration limits
 - Increased reporting requirements

Regional Aquifer Recharge Projects

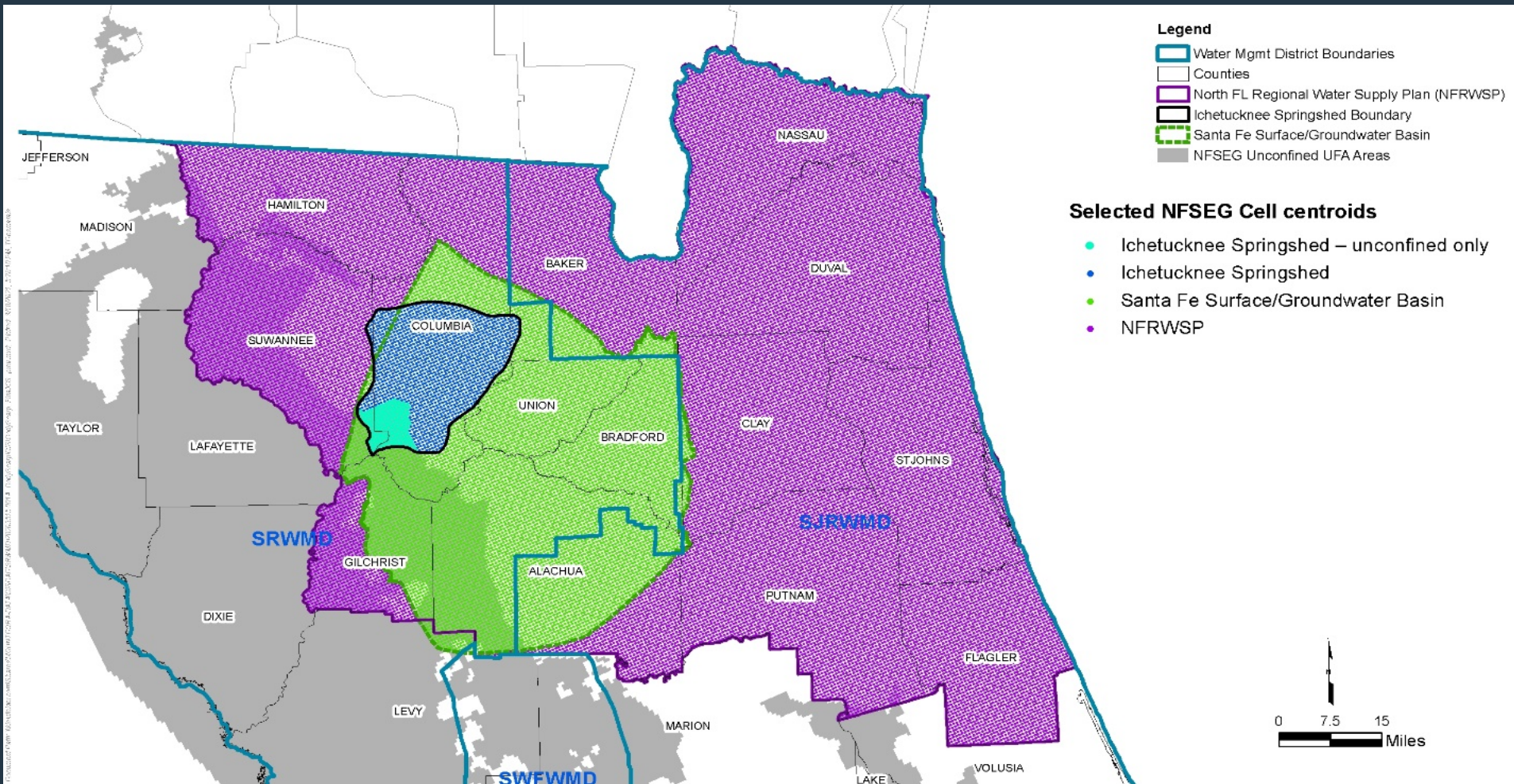


- Forest Management for Ecosystem Services
 - Establish a program to pay landowners to manage forests to increase groundwater recharge
 - Recharge benefits based on statewide study led by UF
 - Benefits and costs being further evaluated
 - Types of management activities may include:
 - Tree thinning
 - Understory control (prescribed fire, hardwood removal)
 - Shorter harvest rotations
 - Longleaf pine transition
 - Benefits to wildlife habitat and conservation
 - Additional funding sources and partnership opportunities

Regional Aquifer Recharge Projects



Regional Aquifer Recharge Projects



Regional Aquifer Recharge Projects



Simulation Number	Simulation Boundary	Additional Recharge (inch/year)	Additional Volume (mgd)	Ichetucknee Hwy 27	Lower Santa Fe Fort White	Lower Santa Fe US 441
				change in baseflow (cfs)		
1	North FL Regional Water Supply Plan	2.6	284	4.9	30.0	20.1
2	Santa Fe Surface/Groundwater Basin	2.6	77	3.5	27.8	18.8
3	Santa Fe Surface/Groundwater Basin	7.0	209	9.2	79.6	55.7
4	Ichetucknee Springshed	2.6	12	2.2	4.1	2.7
5	Ichetucknee Springshed	7.0	32	6.0	11.2	7.5
6	Ichetucknee Springshed (unconfined only)	7.0	3.1	1.8	2.0	1.0

Regional Aquifer Recharge Projects

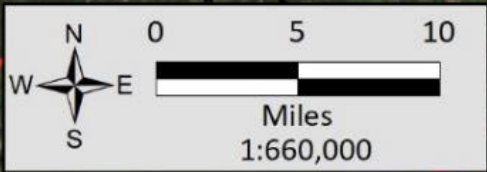


- Suwannee River High-flow Diversions
 - Capture water from the river during higher flow periods and route to appropriate recharge locations



Regional Aquifer Recharge Projects





Legend

★ Potential Intake Locations

From Intake

— Branford

— White Springs

Recharge %

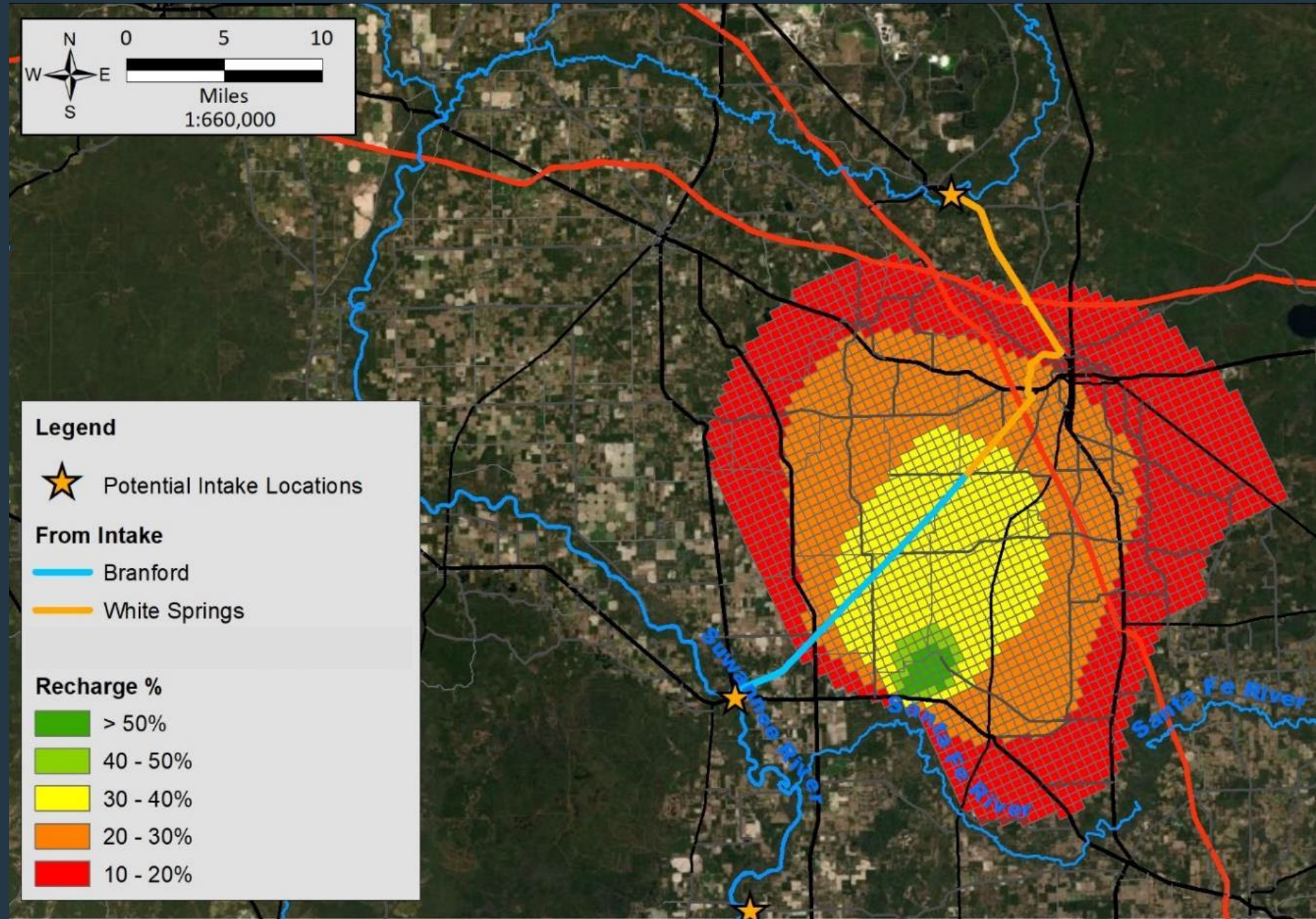
> 50%

40 - 50%

30 - 40%

20 - 30%

10 - 20%



Regional Aquifer Recharge Projects



Planning Level Assessment

Scenario	Intake Location	Annual Average Recharge Rate (mgd)	Intake Pump Size (max cfs)	Pipeline Length (miles)	Pipe Size (diameter)	Estimated Total Cost	Estimated Annual O&M Cost
1	White Springs	19	180	19	Two 72-inch	\$457M (\$320-\$594M)	\$4.4M
2	Branford	19	180	16	Two 72-inch	\$361M (\$253-\$469M)	\$3.5M
3	Branford	10	90	16	Two 36-inch	\$209M (\$146-\$272M)	\$2.0M

- ± 30% for cost estimates
- 2,500-acre recharge site
- Potential additional treatment costs not included



Next Steps...

- Draft Recovery and Prevention Strategy
- FDEP rule development workshop(s)
- Public comment period
- Finalize Recovery and Prevention Strategy
- Present to SRWMD/SJRWMD Governing Boards
- Submit to FL legislature for ratification

Questions ?

**Water for Nature,
Water for People.**

