

- **GRU Reclaimed Water:** Up to approximately three MGD of reclaimed water flow for aquifer recharge could be obtained by shifting flow between GRU water reclamation facilities. GRU is located closer to the effective recharge area than JEA resulting in lower transmission costs. However, the alternative offers smaller recharge benefit due to less water availability. This alternative may be beneficial in concert with the JEA alternative and/or other alternatives, and it could offer near-term benefits to the region.
- **North Fork Black Creek:** Surface water would periodically be withdrawn from the north fork of Black Creek and beneficially recharged. Preliminary analysis suggests that withdrawal of 5.2 MGD could potentially be available approximately 80 percent of the time while meeting ecological flow needs. More detailed hydrological analysis would be required to ensure source water availability. Guidance from the ongoing project on the south fork Black Creek may be beneficial with permitting and scheduling.
- **Lower Suwannee River:** Surface water would periodically be withdrawn downstream of the Branford Gage and beneficially recharged. Preliminary analysis suggests that withdrawal of 20 MGD could potentially be available approximately 45 percent of the time while meeting ecological flow needs. More detailed analysis would be required to ensure compliance with Suwannee River MFLs and no other adverse environmental impacts.

6.2.2 Observations and Discussion

- **Desalination (for comparative reference- not recommended for further study):** Several desalination alternatives were considered in the evaluation. Desalination at Coquina would desalinate ocean water from the east coast in the Jacksonville area and pump it to the conceptual recharge area. Desalination at the Gulf Coast would desalinate water from a location on the west coast and pump it to the recharge area. The Pumping Replacement alternative would desalinate saltwater from the Jacksonville area and replace groundwater as a water supply for all four participating utilities. The desalination alternatives are not recommended for further evaluation because of: 1) High capital and operation and maintenance cost, partly due to the treatment process itself, and partly due to the high cost of brine disposal, 2) Managing brine disposal incurs significant technical and regulatory challenges, 3) Replacement of all four participating utility groundwater pumping with desalinated seawater would not meet the full MFL requirements, and 4) Ocean desalination does not address the requirements of Senate Bill 64 to put reclaimed water to beneficial use.
- **Full MFL Compliance with JEA Reclaimed Water:** The concept of JEA’s reclaimed water from both Buckman and Southwest WRFs yields the potential to fully satisfy both MFL recovery and prevention targets with careful selection and possible distribution of recharge sites. It is far more cost-effective than the ocean desalination projects of similar scale. This alternative would involve lengthy development time and numerous regulatory, logistical, and operational hurdles, but it could be strategically phased over time. It may need supplemental projects to meet near-term recovery targets.
- **Compliance with Senate Bill 64:** The inclusion of reclaimed water from the JEA facilities in the recharge strategy helps to address the Senate Bill 64, which requires “certain domestic