

### 3.0 DISSOLVED OXYGEN RESULTS

The following section presents the dissolved oxygen results for the Current Assimilative Capacity Resource Assessment. More details results are presented in Appendix B.

#### 3.1 Water Quality Standards

The criteria for dissolved oxygen (DO) that is applicable to all waters within the State, as stated in Georgia’s Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03(6)(ii) is: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for water supporting warm water species of fish.

The Coastal Fishing criteria is a daily average of 5.0 mg/L and no less than 4.0 mg/L. If it is determined that the “natural DO” in the waterbody is less than the values stated above, then the criteria would revert to the “natural DO” and the water quality standard would allow for up to a 0.10 mg/L deficit from “natural.” Up to a 10% deficit will be allowed if it is demonstrated that resident aquatic species shall not be adversely affected.

The specific criteria for dissolved oxygen in Georgia’s lakes including West Point, Walter F. George, Jackson, Allatoona, Lanier, and Carter’s as stated in Georgia’s Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03(17) is: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g). This criteria also applies to Brunswick Harbor.

GA EPD has a modeling strategy that is used for developing wasteload allocations in areas where the natural DO lower that the warm water Fishing DO criteria. It allows for a 10% deficit in waters where the natural DO is above 3.3 mg/L and 0.1 mg/L deficit in waters where the natural DO is 3.3 mg/L or below.

The following figure presents the scale that was used to show the dissolved oxygen results available above the standard or the natural DO in the streams that were modeled.

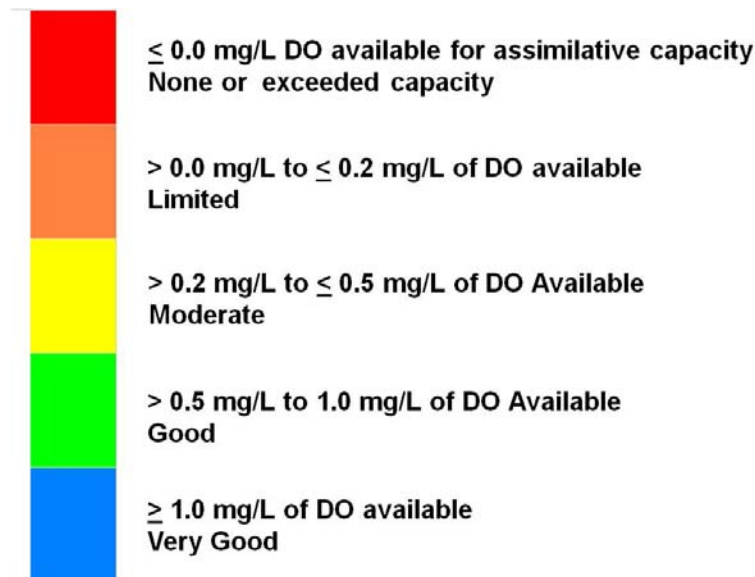


Figure 3-1 Description of Dissolved Oxygen Results

### 3.2 *Chattahoochee River Watershed*

Figure 3-2 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Chattahoochee River Basin.

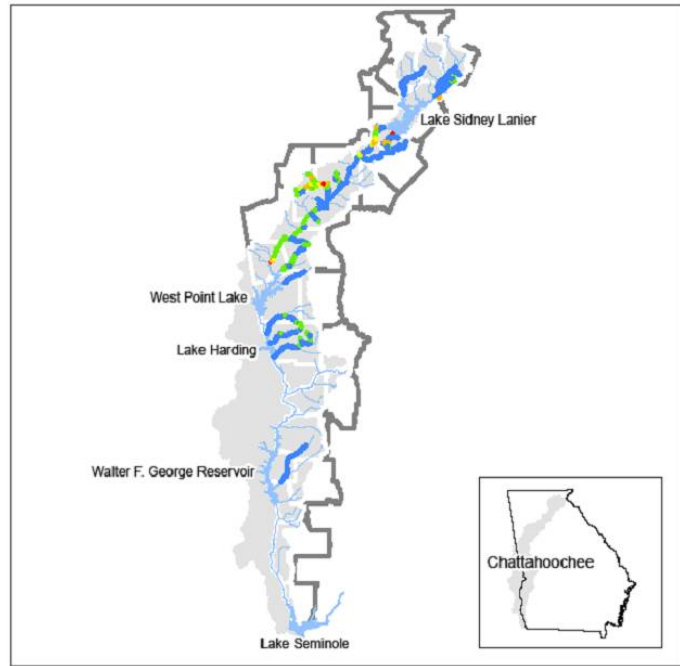


Figure 3-2 Results of Dissolved Oxygen Models in the Chattahoochee River Watershed

### 3.3 *Flint and Ochlocknee River Watersheds*

Figure 3-3 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Flint and Ochlocknee River Basins.

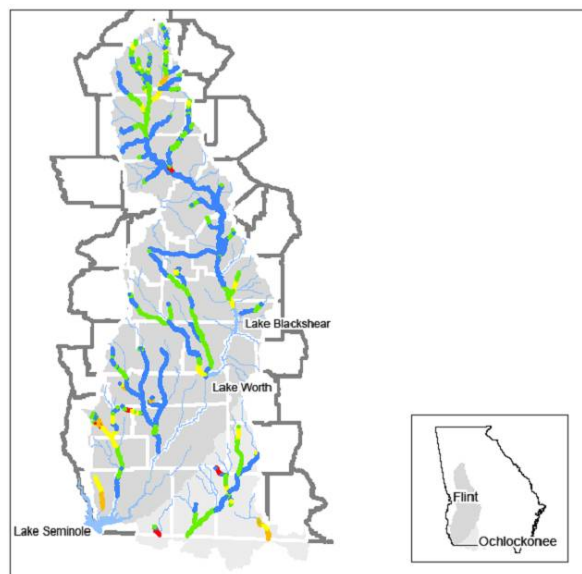


Figure 3-3 Results of Dissolved Oxygen Models in the Flint and Ochlocknee River Watersheds

### 3.4 Coosa, Tallapoosa and Tennessee River Watersheds

Figure 3-4 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Coosa, Tallapoosa, and Tennessee River Basins.

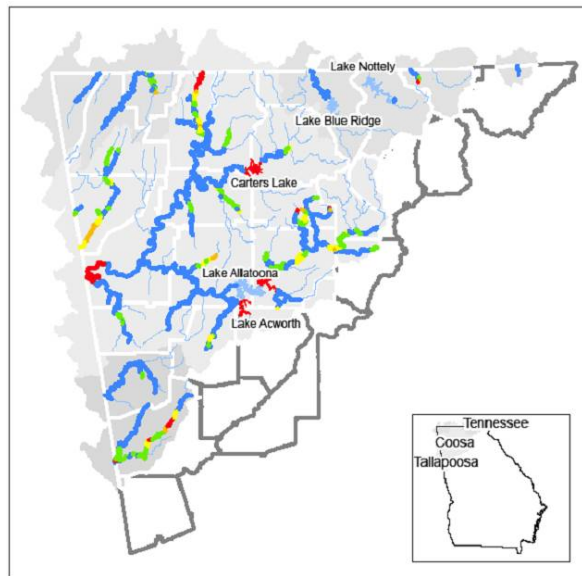


Figure 3-4 Results of Dissolved Oxygen Models in the Coosa, Tallapoosa, and Tennessee River Watersheds

### 3.5 Savannah and Ogeechee River Watersheds

Figure 3-5 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Savannah and Ogeechee River Basins.

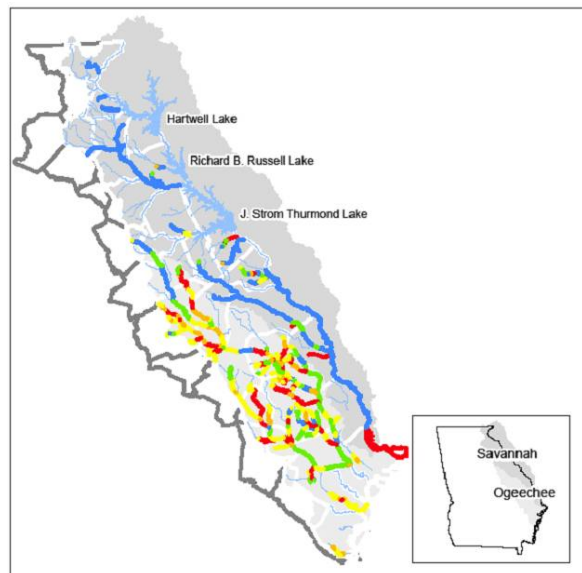


Figure 3-5 Results of Dissolved Oxygen Models in the Savannah and Ogeechee River Watersheds

### 3.6 Oconee, Ocmulgee, and Altamaha River Watersheds

Figure 3-6 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Oconee, Ocmulgee, and Altamaha River Basins.

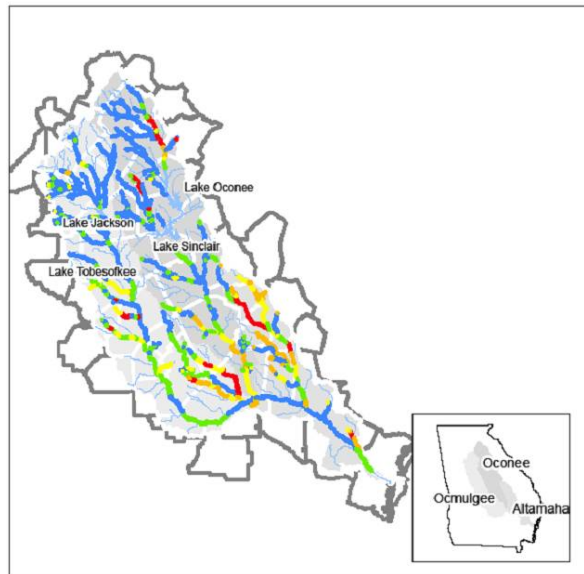


Figure 3-6 Results of Dissolved Oxygen Models in the Oconee, Ocmulgee and Altamaha River Watersheds

### 3.7 Suwannee, Satilla, and St. Mary's River Watersheds

Figure 3-7 shows the results of the DO assimilative capacity analysis for all the streams that were modeled in the Suwannee, Satilla, and St. Mary's River Basins.

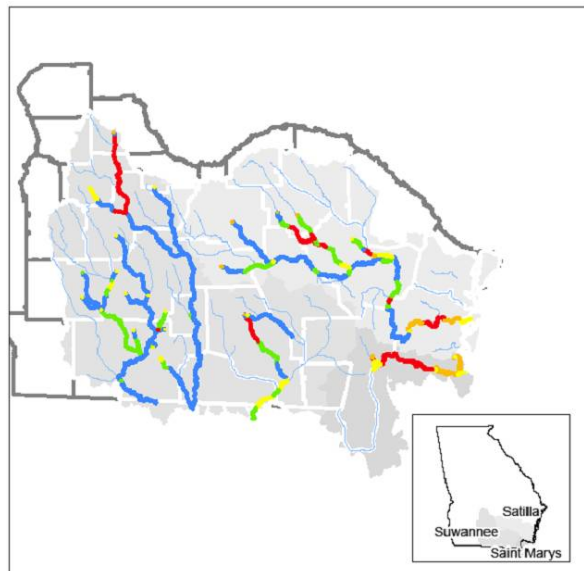


Figure 3-7 Results of Dissolved Oxygen Models in the Suwannee, Satilla, and St. Mary's River Watersheds

### 3.8 Brunswick Harbor Estuary

Figure 3-8 shows the results of the DO assimilative capacity analysis for the Brunswick Harbor estuary. Year 2007 was chosen as the most representative of years 2001 through 2007.

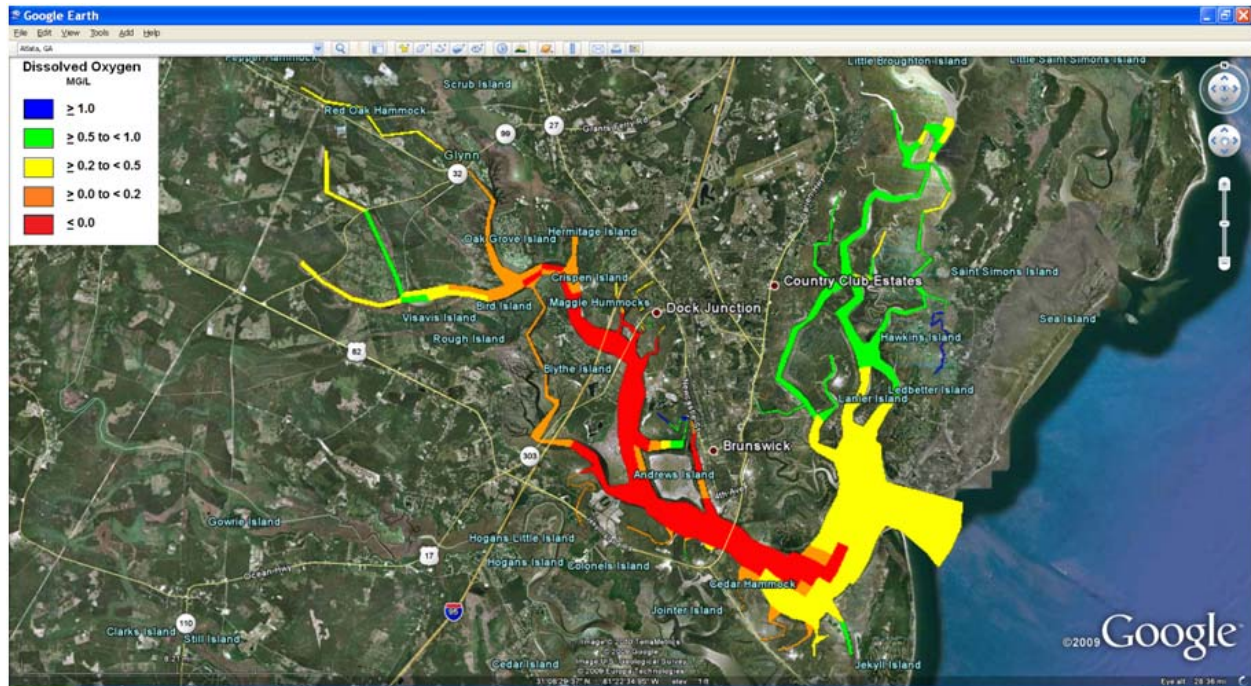


Figure 3-8 Available Dissolved Oxygen in Brunswick Harbor for Year 2007