

## Hydrology - SCDNR Open-File Report 4

---

### Color in Surface Water: A Water Supply Problem in the Grand Strand of Coastal South Carolina

By  
Joffre E. Castro  
1996

---

#### ABSTRACT

---

Increases in water demand along the Grand Strand in Horry and Georgetown Counties, S. C., and new water quality regulations have brought about a change in public-supply water source. The more plentiful but more expensive surface water has replaced the less abundant but less costly ground water as a source of drinking water. Today, in the Grand Strand nearly 90 percent of the drinking water comes from the Intracoastal Waterway and Bull Creek.

Many coastal rivers have shown periodic stages of high color, a condition known as **blackwater**. The color, although harmless to humans, is oftentimes difficult to remove and always interferes with water-treatment processes. The color in the river water has been attributed to humic substances; it comes mostly from leached organic debris.

A better understanding of the chemical composition of the organic matter is necessary to derive more effective and less costly treatment techniques, and to ascertain their diagenesis and environmental importance.

Copies of this report are available in the SCDNR's Columbia office.