

Potential changes for S.C. river herring due to climate change

- Sea-level Rise

Alteration of the saltwater/freshwater interface will affect many freshwater and diadromous fish species.

- Water Quantity Issues

Current models do not provide a clear direction to anticipated rainfall in SC over the next few decades.

The worst scenario for sea level rise could result in a landward shift from sea level rise accompanied by drought.

Recruitment failure may occur in severe drought conditions as a consequence of dewatering of essential habitat and absence of the seasonally elevated flows which serve as a cue for spawning migration.

- Temperature Rise

Some diadromous species are near the southern end of their ranges in SC. Many of these species are already stressed by summer conditions including high temperatures and, in some cases, low dissolved oxygen and anthropogenic impacts.

Climatic changes could change the timing of the spring phytoplankton blooms affecting zooplankton populations that many larval and juvenile clupeid species depend on as prey during this critical period of development.

Warmer winters could also affect spawning cues for diadromous species, as was evidenced in spring 2012.



