A collaborative project between SC DNR and the NOAA Laboratory was conducted to assess human enteric bacterial indicator loads and Vibrios of public health concern in oysters. Twenty-seven composite oyster samples were collected at South Carolina Estuarine and Coastal Assessment Program (SCECAP) stations and DNR oyster long term disease (LTD) monitoring sites (see Richardson et al. poster for more project information) during July/August 2005 (summer) and January/February 2006 (winter). Fecal coliforms and Enterococci were enumerated using traditional culture based methods; Vibrio vulnificus and Vibrio parahaemolyticus densities were determined using a DNA non-radioactive probe hybridization technique. The major objective was to obtain a baseline of enteric bacterial indicators and Vibrio pathogens in oysters, as well as elucidate the relationship between these numbers and other environmental variables, oyster population indices, and oyster physiological responses. These factors might also affect shellfish restoration projects.

### RESULTS

#### FECAL COLIFORMS

Oyster summer FC densities ranged from 8 to 34,000 MPN/100g. Since growing areas are classified according to overlying water quality and pollution source surveys, there is no bacterium that can be pathogenic, depending upon the situation. VIBRIO VULNIFICUS

Most Probable Numbers (MPNs) of enterococcal bacteria for oyster samples was determined using the the Multiple Tube Procedures (MTP) and the multiplex tube- fermentation technique in A-1 media according to Section 9230 B of Standard Methods for the Examination of Water and Wastewater (APHA, 1998). Bacterial growth of Enterococci from positive Azide Dextrose tubes was confirmed on Brain Heart Infusion (BHI) agar with 6.5% sodium chloride.

### CONCLUSIONS

The analyses were performed by SASS. Summer FC and V. vulnificus densities were positively correlated with each other. Summer V. vulnificus and summer V. parahaemolyticus densities were also positively correlated with each other. Densities of FC bacteria and Enterococci were not correlated with each other. The risk of oysters containing greater numbers of FC bacteria increases as the water temperature decreases, which is consistent with the opposite pattern observed for Enterococci.