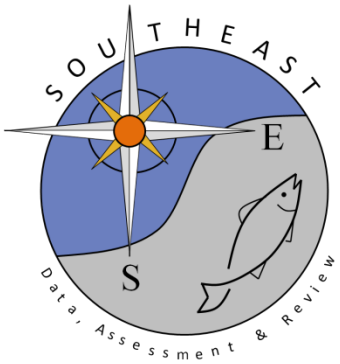
NCDMF Shellfish Sanitation Water Sampling

Trish Murphey

SEDAR-PW6-WP04

Submitted: 2 June 2014



Please cite this document as:

Murphey, T. 2014. NCDMF Shellfish Sanitation Water Sampling. SEDAR-PW6-WP04. SEDAR, North Charleston, SC. 2 pp.

Shellfish Sanitation Water Sampling Working Paper

SHRIMP SEDAR
Charleston SC
July 22-24 2014

NC DIVISION OF MARINE FISHERIES
SHELLFISH GROWING AREA PROGRAM

Prepared by: Trish Murphey, NCDMF

Program Objective

The Shellfish Sanitation Sections responsible for monitoring and classifying coastal waters as to their suitability for shellfish harvest and consumption. Recommendations are made to the NCDMF Director to close those waters that have the potential for causing illnesses and opening those that are assured of having clean, healthy shellfish.

Survey Design & Methods

Time Series

1989-2014 and is ongoing.

Spatial Range

NC Coastal waters including sounds, rivers, and bays

Survey Design

All shellfish growing areas are surveyed every three years to document all existing or potential pollution sources, to assess the bacteriological quality of the water, and to determine the hydrographic and meteorological factors that could affect water quality. Water samples are collected at least six times a year from each growing area and tested for fecal coliform bacteria, which are an indicator that human or animal wastes are present in the water.

Sampling Methods

All water samples are collected in clean, sterile, water tight, properly labeled sample containers that are of a suitable size, contain at least 100 mL of sample and leave space for shaking. The sample is collected 1-2 feet below the surface of the water. A stainless steel rod with a sample holder is used to collect the sample from the boat. All samples must be stored immediately on ice in a cooler between 0 and 10^{O}C from collection until time of processing. A temperature control will be used to determine the temperature of the samples upon arrival at the laboratory. Records of temperature control will be maintained. Seawater samples should be returned to the laboratory for analysis as soon as possible Samples cannot be tested if they are held beyond 30 hours.

Sampling Frequency

Six times a year per growing area. Number of stations per growing area varies. There is a total of 1100 stations.

Variables Recorded

Water temperature-F

Salinity-ppt

Fecal coliform bacteria- mpn (most probable number) an estimate of the number of cells per ml.

Program Evaluation

May provide temperature and salinity data for assessing the penaeid shrimp population.

Dataset Information

Shannon Jenkins,

Environmental Program Supervisor

Shannon.Jenkins@ncdenr.gov,

252-808-8148