

South
Carolina
Task Group

on Harmful Algae

About the S.C. Task Group on Harmful Algae

The S.C. Task Group on Harmful Algae was organized in 1997 as a proactive response to a *Pfiesteria* outbreak in Maryland. The Task Group—a multi-institutional collaboration to monitor

and study harmful algal blooms (HABs) in South Carolina—is at the forefront of scientific research, human health surveillance, and public education about HABs. The mission of the Task Group is to discuss, plan, develop, and coordinate the activities of scientists, medical professionals, natural resource managers, communications staff, and extension personnel to inform South Carolinians about HABs and prepare them in the event of a harmful algae outbreak in the state's waterways. The goal of the S.C. Task Group on Harmful Algae is to develop the steps necessary to prevent HABs from becoming an environmental and public health problem in South Carolina.

The Task Group was established to:

- Identify environmental settings and sites within South Carolina that are most vulnerable to HABs;
- Assess the risks of HABs to human health, the environment, and the economy;
- Identify conditions that lead to the development of blooms, and offer guidance to prevent blooms from occurring in South Carolina;
- Develop educational and training materials to inform health care workers, environmental professionals, and the public about potential risks and impacts of HABs; and
- Organize Rapid Comprehensive Response Teams for fish kills, algal blooms, and reports of human health effects.

With support provided by the Centers for Disease Control and Prevention (CDC), the National Oceanic and Atmospheric Administration (NOAA), and other sources, the S.C. Task Group on Harmful Algae has developed and implemented a Harmful Algal Bloom Strategy for South Carolina. Strategy elements include a review of existing information about HABs, a sampling and monitoring program, assessment and modeling studies, protocols for identifying human health effects, training workshops, and public outreach activities.

Task Group Research and Monitoring

ECOSYSTEM EFFORTS

Task Group scientists are in the process of assessing the potential environmental impacts of red tides, *Pfiesteria*, and toxic algae by determining the present distribution of harmful algae in S.C. estuaries, identifying the environmental factors that favor HAB formation in S.C. estuaries so that future effects on ecosystem and human health can be predicted, and establishing a statewide surveillance system for HAB detection and response.

More recently, research efforts have been broadened to assess the risks of *Pfiesteria* and other toxic algal blooms in South Carolina coastal estuarine ponds. Task Group researchers have enhanced their studies to include HAB abundance and toxicity in residential ponds, which dot

S.C. TASK GROUP ON HARMFUL ALGAE

S.C. Sea Grant Consortium

Communications

Extension Program

S.C. Department of Natural Resources

Marine Resources Division

NOAA/NOS/Center for Coastal Environmental Health and Biomolecular Research

S.C. Department of Health and Environmental Control

Bureau of Water

Bureau of Preventive Health Services

Ocean and Coastal Resource Management

Emergency Response Team

University of South Carolina

Belle W. Baruch Institute

Marine Science Program

Hollings Marine Laboratory

Medical University of South Carolina

Marine Biomedical Program

School of Medicine

Charleston VA Medical Center

Clemson University



the South Carolina coastline from Myrtle Beach to Hilton Head Island. Scientists are studying toxin production and fish pathology, and will correlate findings with any reported human health effects through an academic-based medical evaluation system.

HUMAN HEALTH EFFORTS

The Task Group is addressing the potential effects of harmful algal blooms on human health.

The *Pfiesteria*-Related Illness Surveillance and Prevention Program, initiated in 1998, enables the Task Group to identify people at risk of exposure to waters that contain *Pfiesteria*. If *Pfiesteria* or other HABs are present in the water, then people in the surrounding area will be notified, reported cases will be investigated to determine risk factors for illness, and medical evaluation and follow-up will be coordinated. This system provides ready access to a medical epidemiologist, more timely and thorough sample HAB toxin data to correlate with patient evaluation, and several medical tests on appropriate cases.

HAB MONITORING AND RESPONSE

The Task Group has developed a Rapid Comprehensive Response Team for fish kills, potentially harmful algal blooms, and suspected reports of human health effects due to HAB events. Telephone numbers for reporting a fish kill or algae bloom are publicized, and Task Group agencies immediately investigate all reports of fish kills and algal blooms for potential toxicity. Task Group members continue to assess the present status of HABs in South Carolina, and have established a statewide monitoring and rapid-response system to determine the present and future impact on natural resources and human health.

Task Group Outreach

The Task Group is also engaged in expanding current communication and education efforts related to HABs, implementing new efforts to increase awareness of the HAB issue among resource managers, community officials, coastal users, and the general public, and ensuring the continued operation of the S.C. Task Group on Harmful Algae.

S.C. TASK GROUP ON HARMFUL ALGAE NEWSLETTER

The newsletter is published three times per year to share knowledge about harmful algae and communicate activities of the Task Group. The audience includes elected and appointed officials, natural resource managers, public health organizations, and the general public. Contact the S.C. Sea Grant Consortium at (843) 727-2078 for a sample issue.

TASK GROUP WEB SITE

The Web site is another medium employed to share information about Task Group activities with the general public. The Web site features the Task Group's monitoring programs, education efforts, bloom or fish kill reporting system, newsletter back issues, and HAB Web site links. Visit www.scseagrant.org/schab.htm for more information.

VOLUNTEER MONITORING NETWORK

The South Carolina Phytoplankton Monitoring Network (SCPMN) is comprised of volunteer student and citizen groups who sample water for phytoplankton distribution and abundance and report their findings to Task Group scientists. Ultimately slated as a citizen surveillance program for early HAB detection and response, the SCPMN complements on-going monitoring of

potential "hot spots" and monthly statewide sampling by Task Group members while engaging the public in the issue of HABs. Visit www.chbr.noaa.gov/CoastalResearch/SCPMN/SCPMNmain.htm for more information, or contact Kate Schaefer, SCPMN coordinator, at (843) 762-8500.

TEACHER EDUCATION

The Task Group supplies a publication titled "*Algae: A Sourcebook for Teaching about Harmful Algal Blooms*" to public and private schools in coastal South Carolina. Two copies of the sourcebook are mailed, along with information about the SCPMN, to the lead science teacher and librarian in each school. To date, 130 schools were sent the sourcebooks, and another mailing is planned to 130 more schools.

PUBLIC EDUCATION

Task Group communications and extension personnel are available to inform the public about significant fish kill events, HABs, or human health effects through press conferences, local community forums, and informational material.

For More Information

To learn more about the S.C. Task Group on Harmful Algae, visit the Task Group Web site at www.scseagrant.org/schab.htm or contact Susan Ferris, public information specialist with the S.C. Sea Grant Consortium, at Susan.Ferris@scseagrant.org or (843) 727-2078.