



South Carolina Beach Advocates 2022 Coastal Conversations: *Beach Water Quality*

The following findings are the result of a virtual workshop held on June 22 -23, 2022:
<https://scbeaches.org/coastal-conversations>

Challenges and Concerns

- Increasing development and impermeable surfaces in the coastal zone
- Compounding pressures and inputs: Sea level rise, flooding, stormwater, rainfall, wastewater treatment
- Funding: Beach Act is not adjusting with inflation, no state funding, moving research into implementation, monitor + analyze + report in user-friendly format, wastewater treatment upgrades
- Notifications: Balancing tourism economies with protection of public health

General Requirements

- Define water quality parameter(s) and spatial scales (coastal/watershed)
- Consider different needs of diverse coastal communities
- Update statewide inventory of federal, state, and local coastal WQ monitoring efforts (and local wastewater treatment approaches)
- Increase spatial and temporal extent of monitoring stations
- Integrate data: Is standardization needed?
- Communicate with public and decision makers:
 - Effectively notify of WQ issues
 - Educate about watershed impacts of pollution, stormwater ponds, NNBF benefits; beach is ultimate receiver of all inputs
 - Encourage local regulations and information campaigns
- Support innovation: Real-time sensors, wastewater treatment, retrofit infrastructure with sensors, train the work force

Needed New Capabilities

New parameters

- Harmful algal bloom triggers
- Vibrio in surface waters (only shellfish monitoring now)
- Water flow velocity, continuous flow, and discharge
- Toxins in biota
- Sand microbe community function and interaction with pollution
- DNA source-tracking for human health
- SC specific indices for existing and new parameters



New Observations/Modeling

- Eutrophication in coastal (estuarine, ocean) waters
- Nearshore monitoring (three-mile zone)
- Salt marsh health: Nutrient assimilation capability and increasing vulnerability
- Modeling water quality (expanded parameters, products for public)

Recommendations

Create a S.C. Water Quality Community of Practice

- Facilitate ongoing conversations/collaborations on issues, best practices, and next steps
- Provide networking opportunities for diverse stakeholders: practitioners, academics, and communities
- Encourage towns and communities to share lessons learned & coordinate on project funding
- Form collaborations between state and research communities to help address emerging issues
- Tell the Story: Educate elected officials and the public as to funding needs and ongoing activities

Address next major issues/parameters

- Focus on a few issues/parameters (e.g., related to prevention of human sickness) but ...
- Consider that diverse beach communities have different concerns (e.g., shore vs marsh impairment)

Inventory state data/knowledge

- Serve links to existing programs and reports in a singular location
- Work with S.C. Sea Grant Consortium and others (HAB Net) to expand statewide inventory of monitoring programs and encourage collaboration

Work w/in existing policy framework

- Expand existing programs where possible; new legislation/regulations/ordinances often take time