

TESTIMONY PRESENTED BEFORE THE
US SENATE ENVIRONMENT & PUBLIC WORKS COMMITTEE,
SUBCOMMITTEE ON TRANSPORTATION SAFETY,
INFRASTRUCTURE SECURITY, AND WATER QUALITY

A HEARING ON
“PROTECTING WATER QUALITY AT AMERICA’S BEACHES”

JUNE 27, 2007

ON BEHALF OF
CLEAN OCEAN ACTION

INTRODUCTION:

Thank you Mr. Chairman, for the opportunity to testify on the implementation and reauthorization issues concerning the Beaches Environmental Assessment and Coastal Health Act, better known as the BEACH Act (Public Law 106-284). It is indeed an honor to testify here today. Over the years your efforts to improve and protect our nation’s ocean and coasts have been bold, outstanding, and successful. Our ocean is cleaner and healthier thanks to your leadership, New Jersey’s delegation, and the bi-partisan good work of Congress to safeguard our most valuable natural asset.

My name is Cindy Zipf, Executive Director of Clean Ocean Action. I am here with Dr. Jennifer Samson, Principle Scientist for Clean Ocean Action. We represent a broad-based coalition of groups dedicated to improving the degraded water quality of the marine environment off the New Jersey/New York coast. We identify sources of pollution and mount attacks on each source by using research, public education, and citizen action to convince our public officials to enact and enforce measures that will clean up and protect our ocean.¹

NEMESIS OF PUBLIC HEALTH AND ECONOMY:

This hearing could not be more timely. As the nation is poised to celebrate Independence Day, hundreds of millions of Americans will enjoy our beaches. Since 2000, citizens have relied on the benefits of the BEACH Act to help answer the question, “Am I swimming in a sewer?” and to help ensure that their fun at the shore is not followed by an inconvenient and uncomfortable ailment.

This significant progress actually has its roots at the Jersey Shore. Twenty years ago, during the infamous summers of 1987-88, New Jersey beaches became a national scandal, suffering from over one thousand beach closures due to raw sewage, garbage, and medical waste wash-ups. While the impact of these events was devastating to the ecosystem they were disastrous to the

¹ Visit <http://www.cleanoceanaction.org> for more information.

economy. One estimate put losses between \$820 million and \$3 billion (in 1987 dollars).² While this legacy of pollution in New Jersey is not a proud one, there is a sense of pride that NJ was the first state to require comprehensive monitoring of swimming beaches with mandatory closures when waters did not meet health standards. Clearly, New Jersey took public health protection seriously. Most other states chose not to conduct such a public health program or held weaker or different standards. The quest for a national program was launched, and this led to the BEACH Act of 2000. For its time, it was a bold and essential public health protection program.

By establishing and implementing a national standard for recreational water quality, the BEACH Act provided a mandatory, uniform benchmark for the protection of public health. The hundreds of thousands of beach closures nationally over the years is a testament that NJ wasn't the only state with water quality problems.

Most importantly, a closed beach is one of the most motivating incentives to identify and eliminate the source of the pollution. As a result, many spigots of pollution have been eliminated, improving the entire marine ecosystem. Though progressive at the time of passage, the BEACH Act is based on a testing protocol that takes 24 hours for results. Thus, depending on a state's program, it can take from two to three days to close a beach. Recognizing this concern at the time, the BEACH Act required USEPA to identify and adopt a faster test making the program more protective. However the implementation of that mandate is slothful.

Since the BEACH Act answers the question, "Should I have been swimming 3 days ago?" and as there are additional concerns to be addressed, the BEACH Act is overdue for change.

The next evolution of beach water quality protection must do the following:

- Provide **same-day** answers to the question, "Is it safe to swim today?" by 2009.
- **Increase notification speed** of test results and information about closures as well as provide easy access to all data to the public.
- Assure states are **accountable** for implementing, at minimum, the federal program.
- **Increase funding** for states to implement the rapid test and reporting systems.
- **Require and fund tracking, identification, and source reduction** or elimination.
- Allow for **continued evolution** of the water quality monitoring program with collaboration and participation of academia, scientists, and the public. Research should include improved indicators for protection of public health and the environment. This research should lead to programs to assist in the track-down and elimination of pollution sources. To assure public health, monitoring programs should also be expanded in the future to require testing immediately after rain events.

Mr. Lautenberg in the Senate and Mr. Pallone in the House of Representatives are currently introducing **the Beach Protection Act of 2007**. This bill is a strong and welcome start toward meeting these goals and we submit the following rationale for these above recommendations.

² Ofiara, Douglas D. and Bernard Brown, "Marine Pollution Events of 1988 and Their Effect on Travel, Tourism, and Regional Activities in New Jersey," referenced as an "Invited Paper presented at the Conference on Floatable Wastes in the Ocean: Social Economic and Public Health Implications. March 21-22, 1989 at SUNY- Stony Brook."

USEPA SAME-DAY RAPID TEST ADOPTION BY 2009:

In the interest of water quality and public health, the implementation of a rapid test for bacteria in recreational waters must be our first priority. The current USEPA approved methods take 24 hours to get results, and many states, including NJ, require two consecutive failing tests to close the beaches. Considering the fact that 70% of contaminated beaches are clean 24 hours later³, the resulting delay allows beaches to remain open when contamination is at its peak and forces closures after the threat may have passed. This system fails to protect public health and causes unnecessary negative economic effects to beach communities. Now, thanks to tremendous advances in molecular biology, it is possible to determine the concentration of bacteria in marine and fresh water within two hours. These rapid methodologies must be swiftly adopted and utilized.

Despite their ongoing efforts USEPA, for whatever reason, has been unable to advance rapid methodologies at the pace necessary to adequately protect public health. Yet, academia and the private sector have been making great strides in the development, evaluation and accuracy of several different rapid methodologies. In fact, the Southern California Coastal Water Research Project recently released a report that found two different rapid tests, including the QPCR method currently being investigated by USEPA, that were more than 85% accurate with respect to the USEPA approved method⁴. This QPCR is within eight percent of USEPA's current proved method. Ongoing efforts this year continue to improve the accuracy of these rapid methods, and these researchers expect to achieve equivalency with approved USEPA methods by next year. The USEPA is moving forward and will be partnering with the New Jersey Department of Environmental Protection (NJDEP), which has again stepped-up to its leadership role in beach monitoring by being one of two states participating in the field verification of this method this summer. USEPA must take advantage of these significant advances through collaboration with researchers outside the Agency.

The use of Enterococci and *Escherichia coli* as indicators of the possible presence of pathogens in surface waters is based on extensive nationwide epidemiology studies. The difference between the currently approved methods and the new rapid test methods, such as QPCR, are that the former require growth of the bacteria in culture, while the later are able to directly measure the genetic material of these two species. These methods provide results within *two* hours, instead of 24 hours with the current method. **For the public, the difference is same-day notification instead of a two or three day delay.** To be clear, to protect **health and for good governance** it is vital that the adoption of the rapid test require states to conduct the sampling in such a way as to ensure that water quality decisions are made the same day. Essentially, it is the whole point of the new testing measures.

Because the new rapid test methods continue to utilize the same indicator species (Enterococci and *Escherichia coli*) it is not necessary, and could even be considered irresponsible and dangerous, to delay approval of rapid tests until additional epidemiology studies are complete. In the interest of public health, QPCR, or an appropriate rapid test methodology, must be adopted

³ Leecaster, M.K. and S.B. Weisburg, (2001) Effects of sampling frequency of shoreline microbiology assessments. Mar. Poll. Bull. 42(11): 1150-1154.

⁴ Griffith, J.F., et al. (2007) Beta testing of rapid methods for measuring beach water quality. Technical Report 506. ftp://ftp.sccwrp.org/pub/download/PDFs/506_beta_testing.pdf.

by USEPA once they are shown to be statistically equivalent to currently approved methods. As stated above, this level of accuracy can be achieved by 2009. ***Thus, legislation should require same-day rapid test application and should include the 2009 deadline.***

INCREASE SPEED OF NOTIFICATION:

Public notification and posting of degraded water quality must occur without delay. With the availability of rapid testing methods comes the ability for the public to truly know the answer to the question “Is it safe to swim today?” The internet system, phones, instant messaging, radio, local emergency response teams, and beach personnel (where applicable) make such *instant* notification real and achievable. Current language in the BEACH Act allows up to 24 hours for the public to be informed. This allows far too much discretion, and the public may not be informed in a timely manner. ***Thus, legislation should require “instant” or “immediate” public notification.***

INCREASE FUNDING:

A clean, healthy, and swimmable ocean is the lifeblood of the nation’s economy. According to the 2004 Final Report of the US Commission on Ocean Policy, *An Ocean Blue Print for the 21st Century*, the value of the ocean and coast are “priceless assets.” For example, in 2000, the ocean economy contributed more than \$117 billion. The overall economic activity within the coastal watershed counties is even more staggering – contributing to a total of over \$4.5 trillion of the nation’s Gross Domestic Product (GNP), which is equal to half of the national GNP⁵.

For such a magnificent return, we fail to adequately invest in protecting this extraordinary asset. In recent years, grants states’ programs been paltry. For example, this year USEPA will issue a mere \$9.9 million⁶ to 35 states to implement BEACH Act programs. The coastal economy is worth much greater investments.

To assist states, the bill would double the authorization amounts for state grants from \$30 million to \$60 million, which is an important improvement. However, given the expanded charges and their importance, additional funding is needed. While the authorization is warranted, it is most imperative that Congress and the Administration fully fund this appropriation in the budget each year. In recent years, funding has been paltry. For example although \$30 million is authorized under the BEACH act, for most years congress has only appropriated \$10 million⁷. Thus, we would urge that the Beach Protection Act provide an authorization and that future budgets appropriate \$100 million annually.

⁵ U.S. Commission on Ocean Policy. *An Ocean Blueprint for the 21st Century*. Final Report. Washington, DC, 2004 ISBN#0-9759462-0-X.

⁶ USEPA Fact Sheet; EPA-821-F-06-012; January 2007 “EPA Makes Grants Available to States to Implement Water Quality Monitoring and Public Notification Programs at the Nation's Beaches.”

⁷ Coast Alliance Report, 2005; *Funding Our Coastal Heritage, A Guide to Federal Investments in Our Coastal Resources*.

ASSURE STATES AND USEPA ARE HELD ACCOUNTABLE:

Laws and regulations are only as strong as their accountability and enforcement. By allowing USEPA the ability to cut funding by 50%, the Beach Protection Act provides a highly motivating tool to keep states' programs in compliance. It is also important that citizens be able to keep states and USEPA accountable to the requirements. Establishing timelines for meeting or implementing objectives and reporting deadlines are effective tools. *The Beach Protection Act should eliminate discretion where possible and establish timelines and deadlines.*

CONTINUED PROGRESS FOR THE MONITORING PROGRAM:

There are many different research efforts currently underway to advance the science of recreational water quality, including improved techniques for source identification and track-down, exploration of new indicator species, and source specific epidemiology studies. As our knowledge and understanding of bacterial contamination improves, so must our approach to beach water quality monitoring. It is critical that the USEPA program is adaptable and can implement necessary changes to improve the protection of public health and the environment.

Studies show that most beach closings occur from stormwater discharge following rain events. Indeed, Natural Resources Defense Council's Testing the Waters 2006 stated, "Stormwater discharges from roads, buildings, industrial sites, construction sites, and other impervious surfaces are the largest known cause of beach closures and advisories."⁸ However, not all monitoring programs conduct sampling during rain events. For example, samples in NJ are taken on Monday, rain or shine, and not after rain events on the other six days of the week.

As funding and programs evolve, it is important to link monitoring activity to rain events. As mentioned earlier, 70% of contaminated beaches are clean 24 hours later. If a state is only sampling once a week and it rains in between, people unaware of the threat, may be exposed to harmfully contaminated water.

We urge that the Beach Protection Act require the continued evolution of testing techniques as well as the development of a program to address testing following rain events.

In closing Mr. Chairman, thank you for the opportunity to testify and we look forward to continuing our successful collaboration to improve and protect the health of the coast and ocean.

⁸ Natural Resources Defense Council, Testing the Waters 2006: A Guide to Water Quality at Vacation Beaches.