

Monitoring and posting of recreational waters in New Hanover County, North Carolina

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Background

On July 1, 2005 a major raw sewage spill occurred at the Hewlett's Creek pump station. The resultant 3 million or more gallons of raw sewage that entered the marine estuaries caused an imminent environmental health hazard for humans and wildlife. Delays in discovery of the spill and public notification created an uproar within the citizenry of New Hanover County. Having happened during the July 4th holiday weekend, numerous people were exposed to potential contaminants in the recreational waters surrounding New Hanover County.

Background (cont.)

At the time of the incident, there was no established regular protocol for the monitoring of recreational waters in New Hanover County. As a result there also was not a system in place for proper public notification of potential hazards to bathers, boaters, and beach combers.

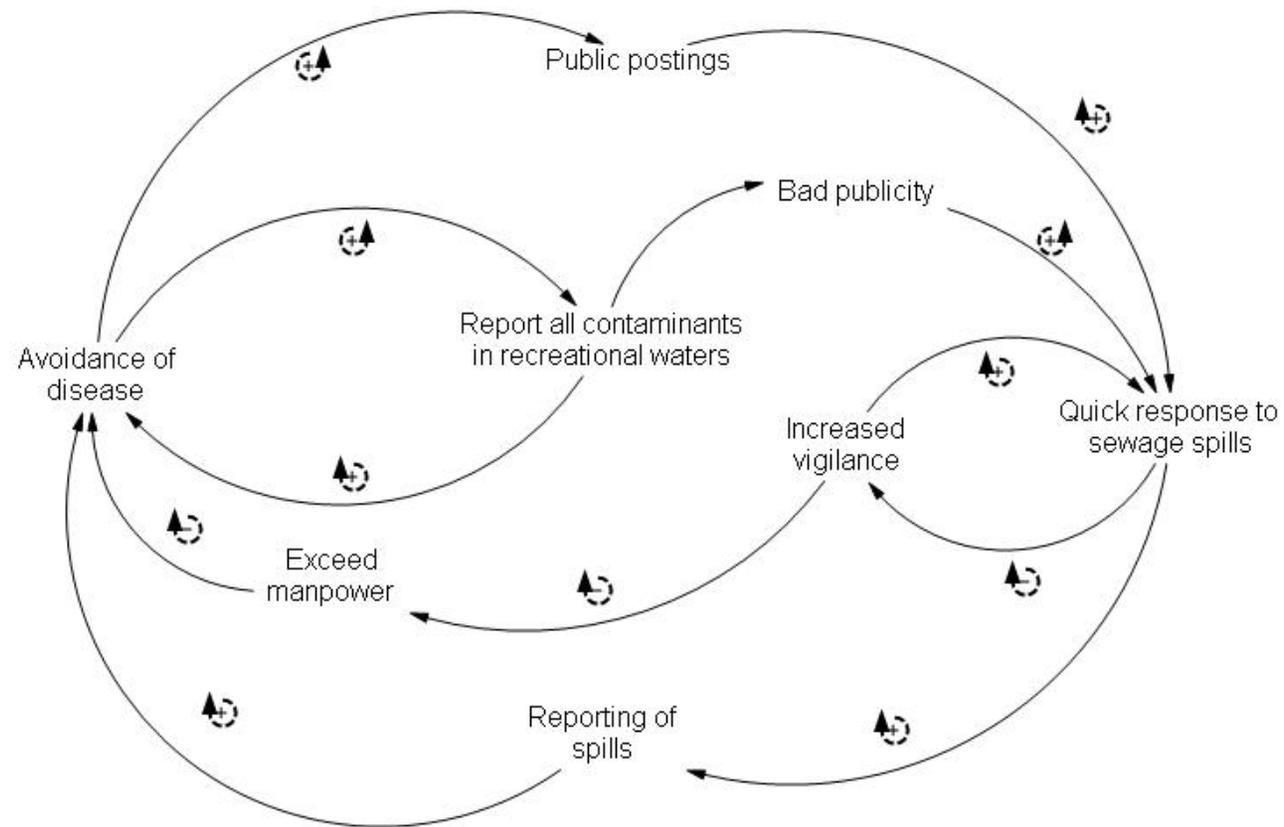
Historically, interagency cooperation has been minimal, and existing resources were not being used.

Background (cont.)

Since the July 4th incident, there have been several smaller spills from sewage pump stations that infiltrated the recreational waters of the surrounding area. In addition, the community has experienced multiple natural flooding events that have caused unhealthy levels of bacterial intrusion into these same recreational waters.

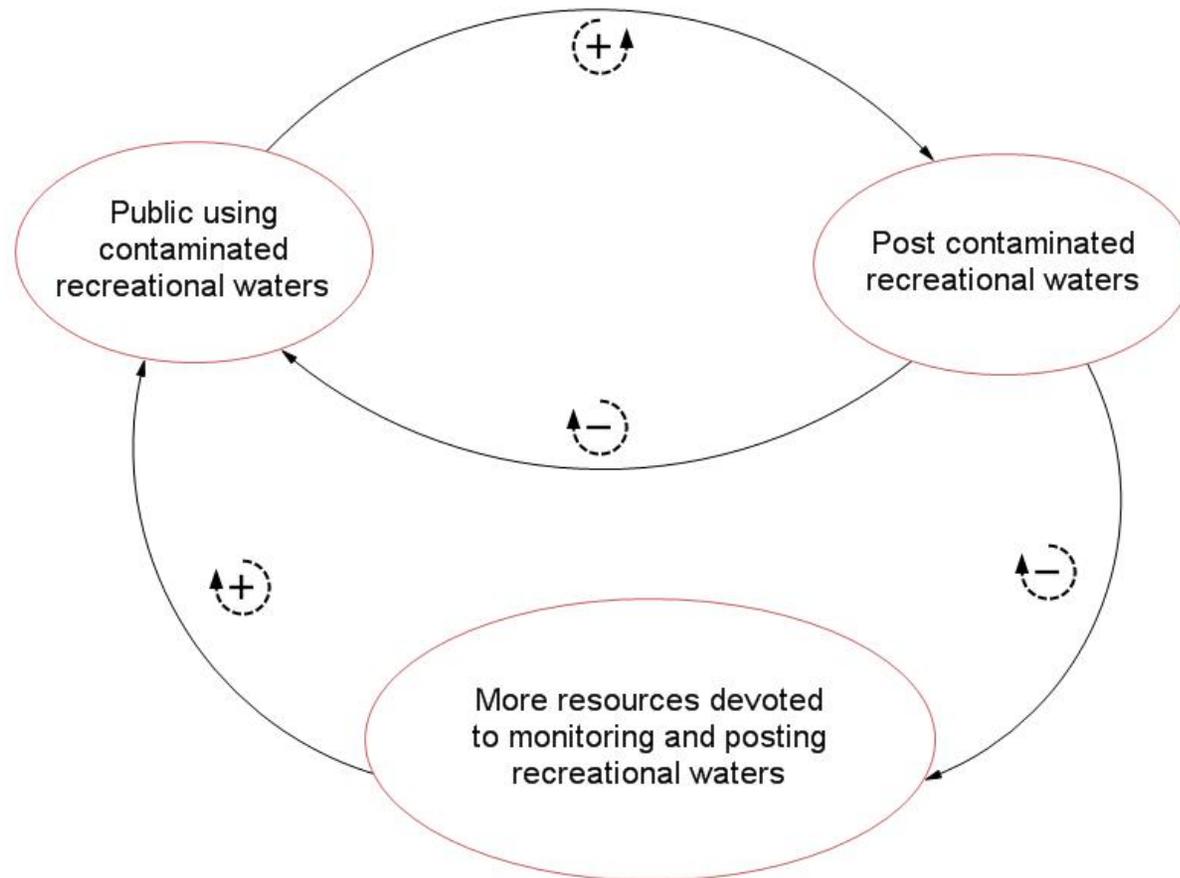
Systems Thinking Approach

"Accidental Adversaries"



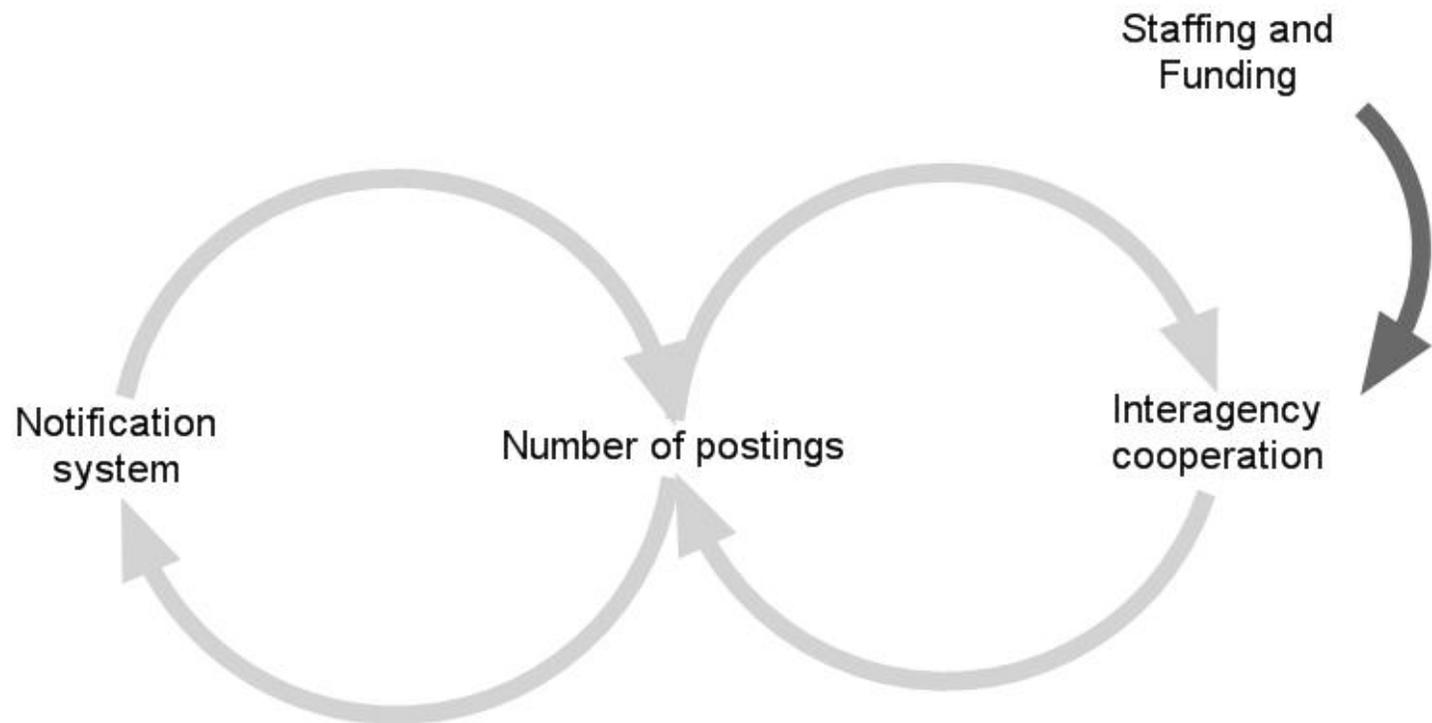
Systems Thinking Approach (cont.)

Fixes that Backfire



Systems Thinking Approach (cont.)

Limits to Growth



Achieve at least one of the Ten Essential Environmental Public Health Services

This project seeks to fulfill one of the 10 Essential Environmental Health Services as identified by the Environmental Health Services Branch of the Centers for Disease Control.

Inform, educate and empower people about health issues: Through public advisories of particular recreational waters, the public is informed of risks of exposure to potential pathogens. Public service announcements and educational forums can reduce the risk of exposure in recreational waters, as well as alleviate some of the fears caused by exposure. Education and notification may reduce the occurrence of illness post exposure by informing the public of prevention and treatment.

National Goals Supported

- The Centers for Disease Control's Health Protection Goals that this project addresses are *Healthy Travel and Recreation* and *People Prepared for Emerging Health Threats*.
- By monitoring the recreational waters of New Hanover County, North Carolina it is supposed that the residents and tourists of the area will have limited exposure to contaminated waters and thus would reduce the incidence of illness. This would fulfill the guideline of *Prevention* as monitoring and posting of recreational waters would act as a form of intervention.
- Through developing partnerships between the local Health Department, the local university, public works, the N.C. Department of Environment and Natural Resources, and the media it is hoped that there will be a decrease in the time needed to detect and report dangerous levels of contaminants in recreational waters.

National Goals Supported

- As seen in the past, many inaccuracies have occurred in the information given to the public and increased the potential for disease in New Hanover County. This accounts for an increase in the time period before proper health guidance can be disseminated. Therefore, this project is geared toward decreasing the time needed to issue health guidance and effect proper risk reduction procedures.
- This project highlights the goal of *Communicate and Market* as expressed in the CDC's National Strategy to Revitalize Environmental Health Services. The enhanced communication between government agencies, academia and the media fostered by this project has increased perception and necessity of Environmental Health Services. Lead by the public outcry over health consequences of exposure to contaminated recreational waters, policy makers have turned to environmental health for the role of education and notification, as well as the base for team-building.

Future Endeavors

- A solidification of protocol and flow from monitoring to information release.
- Development of signage to be posted in affected recreational waters due to sewage spills or natural disasters.

Example of Signage

