# Water Quality & Risk Perception: Examining Surfer's Perceptions of Safe Beaches in Maine and New Hampshire

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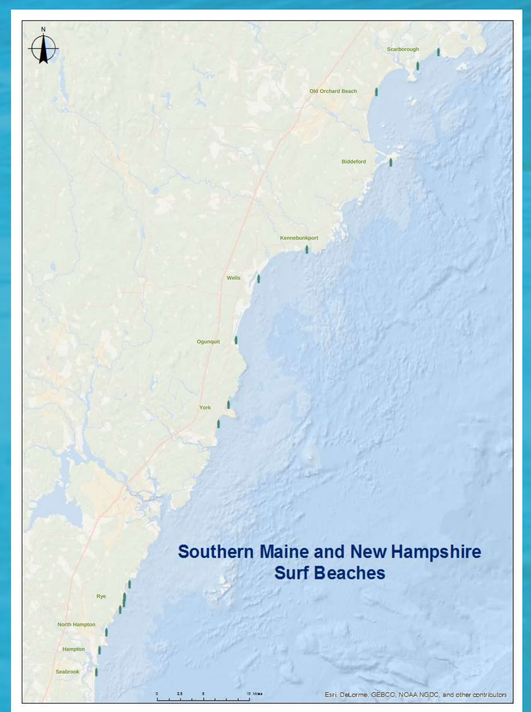
## Statement of Problem

Water quality and the subsequent beach advisories and closures are a significant problem facing the Gulf of Maine. Beach advisories and closures arise when water quality is below an accepted threshold for human health and safety. Surfers are a sub population of beach goers that are a higher risk of suffering from the effects of microbial pathogens. This occurs for a number of different reasons. 1) Surfers are in the water for longer periods of time and become fully emerged (versus wading), 2) surfers participate in the sport year round (seasonal variation in rainfall, changes in waste water treatment plant outputs), 3) given the nature of the sport surfers are more apt to ingest water or get cuts or scrapes, and 4) they often surf during or after storm events when water quality is at the lowest. This project will investigate risk perception of water borne pathogens in the surfing population of southern Maine and New Hampshire. Given the level of pathogen exposure and the corresponding health risk, coupled with a strong sense of environmental sustainability within the local surfing community, Maine and New Hampshire surfers may provide valuable insight and local ecological knowledge into water quality issues. This study hopes to gain a better understanding of the local environmental knowledge held within this group and if risk perception plays a role in the decision to surf or not to surf.

## Maine & New Hampshire Surf Beaches




## Research Questions

RQ 1. To what extent are surfers in Maine and New Hampshire aware of the potential risk of pathogens and diminished water quality? Where does the knowledge of pathogens come from (what are the sources of this knowledge)?

RQ 2. What are the attitudes and behaviors of this group towards perceived risk of harmful pathogens? How does knowledge of pathogens drive the decision to surf or not to surf during storm events?

RQ 3. Could enhanced of knowledge within this group raise awareness of potential risks and increase the ability of individuals to make more informed decisions about when to enter the water?

RQ 4. Could heightened awareness of pathogens and water quality increase the individual drive to spread knowledge to other community members, groups, or stakeholders?

## Methods

Data collection will commence in the spring of 2015 and continue through the fall. Initial research will begin with scoping interviews with key informants within the surfing population in southern Maine and New Hampshire. These key individuals will be identified by means of primary investigation in local surfing groups such as Maine Surfrider, New Hampshire Surfrider, surf shop owners, and surf school instructors. Once a few key informants have been identified, snowball sampling methodology will further identify individual interviewees.

Specifics gathered from the initial interviews will inform intercept survey questions. Intercept surveys will be deployed on southern Maine and New Hampshire surf beaches and yield informative data on perception of pathogen risk within this community.

## Interview & Survey Questions

- Where do you go surfing and Why?
- Where does your knowledge about surf conditions come from?
- When you are surfing, what if anything do you worry about? Why do you worry about this? What for you is risk?
- How would you rank the top four risks you associate with surfing?
- Do any of these risks impact your decision to surf or not to surf?
- Are you concerned about water quality, pollution, or contamination? If so, what are your concerns? Do you consider these risks?
- Where did you learn about water quality, pollution, or contamination?
- Are there some surf spots that seem more polluted? What makes you think so? Does this deter you from surfing in these areas?
- Do you or have you ever surfed during storms or high rainfall events?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