MAINE HEALTHY BEACHES

PROGRAM SURVEY

CODE BOOK

Kathleen P. Bell, Abigail Kaminski, Caroline Noblet, and Emma Fox

School of Economics

March 2016

1865 THE UNIVERSITY OF MAINE
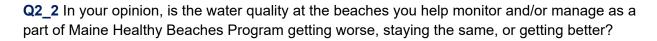
SCHOOL OF ECONOMICS

SURVEY DESIGN, IMPLEMENTATION, & RESPONSE CODING

We developed this survey to collect information on Maine Healthy Beach (MHB) program participants' motivations for and experiences participating in the program, opinions and attitudes about the current program, suggestions for improving the program, and reactions to proposed changes to the program.

We designed and administered the 2015 Maine Healthy Beaches (MHB) Program Survey following scientific survey-research principles. The survey instrument gathered responses using both open-ended and categorical response formats. We used a web-based survey as the primary mode of data collection and collected slightly different information from job-based and volunteer program participants. We obtained approval from the University of Maine's Institutional Review Board for the Protection of Human Subjects. We administered the 2015 Maine Healthy Beaches (MHB) Program Survey in the fall of 2015. We contacted 150 potential respondents via email and asked them to complete a web-based survey. 71 respondents (49 job-based & 22 volunteer participants from 1 National Park, 1 Reserve, 3 State Parks, and 18 MHB communities; 47 percent of those contacted) interacted with the web-survey. In the process of completing our initial response report (Bell et al. 2016), we identified several observations with largely incomplete records (less than 3 questions completed in full). We drop these observations from the dataset of completed surveys. Accordingly, our final sample of completed surveys includes 63 MHB Program Participants (46 job-based and 17 volunteer participants), generating a response rate of 42 percent.

We conducted the survey to: (1) learn about why individuals, communities, and parks participate in the MHB program; (2) better understand how the MHB program works, and (3) obtain feedback from MHB participants about the program. We hope the results will help guide future program decisions and be of interest and assistance to program participants. In addition to helping the MHB program staff and participants, the results will allow our research team to continue studying the interactions among beach management, beach recreation and tourism, water quality, and public health. We intend this codebook to serve as a guide, connecting our original survey questions with data observations. When we implemented the survey, we had two versions of the web questionnaire, one for job-based MHB participants and one for volunteer MHB program participants. We asked the job-based MHB program participants a few more questions than the volunteer participants. To facilitate analysis of these survey data, we created a combined datafile that includes 63 responses from both the volunteer participants (version="vol" and job-based participants (version="job"). To uphold the specifications of our Human Subjects Application and protect our human subjects, we have dropped some responses, including open-ended responses, from this data file.

Q2_1 In your opinion, is summer visitation at the beaches you help monitor and/or manage as part of the Maine Healthy Beaches Program decreasing, staying the same, or increasing?

○ Decreasing (1)
○ Staying the same (2)
○ Increasing (3)

Q2_2 In your opinion, is the water quality at the beaches you help monitor and/or manage as a part of Maine Healthy Beaches Program getting worse, staying the same, or getting better?

- ○ Getting worse (1)
- ○ Staying the same (2)
- ○ Getting better (3)

What are the first three words or phrases that come to mind when you think about the beaches you monitor and/or manage as a part of the Maine Healthy Beaches Program?

Q2_3_4_Text   (Text - First word or phrase)

Q2_3_5_Text   (Text - Second word or phrase)

Q2_3_6_Text   (Text - Third word or phrase)

Q3_1 For how many years have you participated in the Maine Healthy Beaches Program?

Please enter the number of years below

_____ (years)

Individuals participate in the Maine Healthy Beaches Program for different reasons. Which, if any, of these statements correspond with your motivations to participate in this program? (Please select all that apply)

- ❑ I enjoy spending time at the beach **Q3_3_1**
- ❑ I participate because it is part of my job **Q3_3_2**
- ❑ I enjoy helping my community or park **Q3_3_3**
- ❑ I am interested in water quality **Q3_3_4**
- ❑ I am interested in science **Q3_3_5**
- ❑ I enjoy learning about beaches in my community or park **Q3_3_6**
- ❑ I can teach others about coastal water quality at our beaches **Q3_3_7**
- ❑ I can meet people with similar interests **Q3_3_8**
- ❑ I am interested in public health **Q3_3_9**

(Equal to 1 if selected by respondents)

Maine Healthy Beaches Program participants take on a variety of roles. What roles have you undertaken as a part of the Maine Healthy Beaches Program? (Please select all that apply)

❑ Collecting water samples	**Q3_4_1**
❑ Making beach advisory/closure decisions	**Q3_4_2**
❑ Communicating beach advisory/closure decisions	**Q3_4_3**
❑ Attending Maine Healthy Beaches Program meetings	**Q3_4_4**
❑ Coordinating Maine Healthy Beaches Program	**Q3_4_5**
❑ Conducting education and outreach	**Q3_4_6**
❑ Completing scientific research	**Q3_4_7**
❑ Other (8) _____	**Q3_4_8**
	Q3_4_8_TEXT

(Q3_4_1 - Q_3_4_8 equal 1 if selected by respondents)

(Q3_4_8_TEXT stores text for "Other" responses)

Q3_5 How satisfied or dissatisfied are you with your current role(s) in the Maine Healthy Beaches Program?

- ❍ Very Satisfied (1)
- ❍ Somewhat Satisfied (2)
- ❍ Neither Satisfied nor Dissatisfied (3)
- ❍ Somewhat Dissatisfied (4)
- ❍ Very Dissatisfied (5)

Communities and parks benefit from participating in the Maine Healthy Beaches Program in different ways. In your opinion, which, if any, of these benefits accrue to your community or park from participating in the program? (Please select all that apply).

❑ Greater protection of public health **Q4_2_1**
❑ Improved coastal water quality **Q4_2_2**
❑ More opportunities for collaboration with scientists **Q4_2_3**
❑ Improved beach information for local officials **Q4_2_4**
❑ Improved beach information for residents and visitors **Q4_2_5**

(Equal to 1 if selected by respondents)

Q4_3 In your opinion, if funding for the Maine Healthy Beaches Program ended, how likely or unlikely is it that your community or park would continue monitoring water quality at its beaches?

❍ Very likely to continue monitoring (1)
❍ Somewhat likely to continue monitoring (2)
❍ Neither likely nor unlikely to continue monitoring (3)
❍ Somewhat unlikely to continue monitoring (4)
❍ Very unlikely to continue monitoring (5)

Beach managers in the Maine Healthy Beaches Program balance many competing factors when making decisions to post advisories. Thinking across the many communities and parks involved in the Maine Healthy Beaches Program, how important do you believe these factors are to managers, generally, when making beach advisory decisions?

	Not at all important (1)	Slightly important (2)	Somewhat Important (3)	Very important (4)

Public health risks		**Q5_1_1**
Local business impacts		**Q5_1_2**
Community impacts		**Q5_1_3**
Media coverage		**Q5_1_4**
Maine Healthy Beaches Program Guidance		**Q5_1_5**
US EPA Guidance		**Q5_1_6**
Extent to which water quality test result exceeds safety limit		**Q5_1_7**
Tourism impacts		**Q5_1_8**
Maine Healthy Beaches Program Risk Assessment Matrix		**Q5_1_9**

(Respondents provided one indicator of importance for each of the nine factors listed above; valid responses are coded from not important at all (1) to very important (4))

Q5_3 Generally, do you believe beach managers pay attention to the beach advisory posting behavior of neighboring communities?

❍ Yes (1)
❍ No (2)

Q5_4 The Maine Healthy Beaches Program recommends posting beach advisories after all high bacteria tests (water quality tests that exceed the safety threshold of 104 MPN/100mL). To what extent do you approve or disapprove of this recommendation?

○ Very much approve (1)
○ Somewhat approve (2)
○ Neither approve nor disapprove (3)
○ Somewhat disapprove (4)
○ Very much disapprove (5)

Community and park officials in the Maine Healthy Beaches Program respond differently to high bacteria test results and therefore post advisories at their beaches differently. Which, if any, of these factors do you believe explain these differences in posting behavior? (Please select all that apply).

- ❑ Some prefer to have multiple tests confirm high bacteria levels **Q5_5_1**
- ❑ Some use their own safety threshold based on local knowledge of beach conditions **Q5_5_2**
- ❑ Differences in trust in water quality tests **Q5_5_3**
- ❑ Concerns that the water quality test result is yesterday's information **Q5_5_4**
- ❑ Differences in opinion about whether people will actually get sick **Q5_5_5**
- ❑ Differences in public support of the Maine Healthy Beaches Program **Q5_5_6**
- ❑ Differences in municipal/park support of the Maine Healthy Beaches Program **Q5_5_7**

(Equal to 1 if selected by respondents)

Q5_6 The Maine Healthy Beaches Program has recommended posting precautionary beach advisories after excessive rainfall events (for example, if more than 1 inch of rain falls in 24 hours). To what extent do you approve or disapprove of this recommendation?

○ Very much approve (1)
○ Somewhat approve (2)
○ Neither approve nor disapprove (3)
○ Somewhat disapprove (4)
○ Very much disapprove (5)
○ No opinion (6)

Q5_8 In your opinion, how successful do you feel the Maine Healthy Beaches Program has been at improving the monitoring of water quality at public beaches?

- ○ Completely successful (1)
- ○ Very successful (2)
- ○ Somewhat successful (3)
- ○ Slightly successful (4)
- ○ Not at all successful (5)

Q5_9 In your opinion, how successful do you feel the Maine Healthy Beaches Program has been at protecting the public health of beachgoers?

- ○ Completely successful (1)
- ○ Very successful (2)
- ○ Somewhat successful (3)
- ○ Slightly successful (4)
- ○ Not at all successful (5)

The US Environmental Protection Agency (USEPA) recently published new beach management guidance. Under the guidance, states participating in beach monitoring and management programs could be asked to change their safety limit/beach advisory threshold to 70 or 60 enterococci MPN/100 mL. The Maine Healthy Beaches Program currently uses a safety limit/beach advisory threshold of 104 enterococci MPN/100 mL. If the safety limit/beach advisory threshold is lowered from 104 to 70 (or 60), this could potentially mean more exceedance events (i.e. high bacteria counts in the water tests) and advisories at Maine beaches.

Q6_2 To what extent do you approve or disapprove of the new US EPA guidance to lower the safety limit/beach advisory threshold?

○ Very much approve (1)
○ Somewhat approve (2)
○ Neither approve nor disapprove (3)
○ Somewhat disapprove (4)
○ Very much disapprove (5)

Q6_3 If the Maine Healthy Beaches Program adopted a new safety limit/beach advisory threshold of 70 enterococci MPN/100 mL, how successful do you feel the Maine Healthy Beaches Program would be at protecting the public health of beachgoers?

- ○ Completely successful (1)
- ○ Very successful (2)
- ○ Somewhat successful (3)
- ○ Slightly successful (4)
- ○ Not at all successful (5)
- ○ I'm not sure (6)

Q6_6 If the Maine Healthy Beaches Program adopted a new safety limit of 70 enterococci MPN/100mL, how likely or unlikely would it be that your current community continues to participate in the program?

- ○ Very likely (1)
- ○ Somewhat likely (2)
- ○ Neither likely nor unlikely (3)
- ○ Somewhat unlikely (4)
- ○ Very unlikely (5)

Your personal experience with the Maine Healthy Beaches Program gives you a unique perspective on the program. Accordingly, you are well-situated to help guide the future of the Maine Healthy Beaches Program. If the Maine Healthy Beaches Program were given more resources, how would you prioritize changes to the program to improve its success?

	Not a Priority (1)	Low Priority (2)	Medium Priority (3)	High Priority (4)

Improved signage at beaches
Q7_2_1

Development of web-based tools to communicate water test results to program participants
Q7_2_2

Development of web-based tools to communicate advisories to the public
Q7_2_3

Additional water testing
Q7_2_4

Improved (faster) water testing
Q7_2_5

More Maine Healthy Beaches Program staff
Q7_2_6

Resources for municipalities to address water quality problems
Q7_2_7

Resources for municipalities and program staff to do scientific research
Q7_2_8

Improved communication and networking across Maine Healthy Beaches Program participants at different sites
Q7_2_9

(Respondents provided one indicator of importance for each of the nine factors listed above; valid responses are coded from not a priority (1) to high priority (4))

We appreciate you taking the time to fill out the survey. Please take another minute to inform us about yourself to help us better compare your answers with those of other respondents. Thank you again for your participation.

Q8.2 How old are you? (Please enter your age in years below)

_____ (years)

For how many years have you lived seasonally and/or year-round in Maine?

     Number of years seasonally: **Q8_3_1** (years)
     Number of years year-round: **Q8_3_2** (years)

Q8_4 Are there any children under the age of 18 currently living in your household?

○ Yes (1)
○ No (2)

Q8_5 What is the highest degree or level of schooling you have completed? (Please select one response).

- ○ Less than high school diploma (1)
- ○ High school diploma/GED (2)
- ○ Some college but no degree (or Associate degree) (3)
- ○ College degree (Bachelor degree or equivalent) (4)
- ○ Advanced degree (Master's, Doctorate, Law or other advanced degree) (5)

Q8_6 Which of the following best describes your current employment status? (Please select one response)

- ○ Student (1)
- ○ Employed full-time (2)
- ○ Employed part-time (3)
- ○ Homemaker (4)
- ○ Unemployed (5)
- ○ Retired (not working) (6)

Version

(Text format; Equals "job" if respondent participates in the MHB program as part of their job or equals "vol" if the respondent participates in the MHB program as a volunteer)

Variable	Format	Notes
SURV_ID	Text	Survey Identifier
Q2_1	Numeric	Categorical (1 (decreasing), 2 (staying the same), or 3 (increasing))
Q2_2	Numeric	Categorical (1 (getting worse), 2 (staying the same), or 3 (getting better))
Q2_3_4_TEXT	Text	
Q2_3_5_TEXT	Text	
Q2_3_6_TEXT	Text	
Q3_1	Numeric	Continuous (years)
Q3_3_1	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_2	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_3	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_4	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_5	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_6	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_7	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_8	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_3_9	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_1	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_2	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_3	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_4	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_5	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_6	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_7	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_8	Numeric	Categorical (1 (selected); 0 (otherwise))
Q3_4_8_TEXT	Text	Other responses to Q3_4_8
Q3_5	Numeric	Categorical (1 (very satisfied), 2, 3, 4 or 5 (very dissatisfied); satisfaction scale)
Q4_2_1	Numeric	Categorical (1 (selected); 0 (otherwise))
Q4_2_2	Numeric	Categorical (1 (selected); 0 (otherwise))
Q4_2_3	Numeric	Categorical (1 (selected); 0 (otherwise))
Q4_2_4	Numeric	Categorical (1 (selected); 0 (otherwise))
Q4_2_5	Numeric	Categorical (1 (selected); 0 (otherwise))
Q4_3	Numeric	Categorical (1 (very likely to continue), 2, 3, 4 or 5 (very unlikely to continue); likelihood of continued monitoring scale)
Q5_1_1	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_2	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_3	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_4	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)

Variable	Format	Notes
Q5_1_5	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_6	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_7	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_8	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_1_9	Numeric	Categorical (1 (not at all important), 2, 3, or 4 (very important); importance scale)
Q5_3	Numeric	Categorical (1 (yes); 2 (no))
Q5_4	Numeric	Categorical (1 (very much approve), 2, 3, 4 or 5 (very much disapprove); approval scale)
Q5_5_1	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_2	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_3	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_4	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_5	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_6	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_5_7	Numeric	Categorical (1 (selected); 0 (otherwise))
Q5_6	Numeric	Categorical (1 (very much approve), 2, 3, 4 or 5 (very much disapprove) - approval scale; 6 no opinion)
Q5_8	Numeric	Categorical (1 (completely successful), 2, 3, 4 or 5 (not at all successful); success scale)
Q5_9	Numeric	Categorical (1 (completely successful), 2, 3, 4 or 5 (not at all successful); success scale)
Q6_2	Numeric	Categorical (1 (completely successful), 2, 3, 4 or 5 (not at all successful); success scale)
Q6_3	Numeric	Categorical (1 (completely successful), 2, 3, 4 or 5 (not at all successful) - success scale; 6 not sure)
Q6_6	Numeric	Categorical (1 (very likely), 2, 3, 4 or 5 (very unlikely); likelihood scale)
Q7_2_1	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_2	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_3	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_4	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_5	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_6	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_7	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q7_2_8	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)

Variable	Format	Notes
Q7_2_9	Numeric	Categorical (1 (not a priority), 2, 3, or 4 (high priority); priority scale)
Q8_2	Numeric	Continuous (years)
Q8_3_1	Numeric	Continuous (years)
Q8_3_2	Numeric	Continuous (years)
Q8_4	Numeric	Categorical (1 (yes); 2 (no))
Q8_5	Numeric	Categorical (1, 2, 3, 4, or 5; level of education)
Q8_6	Numeric	Categorical (1, 2, 3, 4, 5, or 6; employment status)
Version	Text	Text ("job"- job participants; "vol" volunteer participants)