

# Understanding the Needs, Challenges, Opportunities, Vision and Emerging Roles in Environmental Health (UNCOVER EH)

OMB Control No. 0920-NEW

New

Supporting Statement Part B –

Collections of Information Employing Statistical Methods

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Date: January 4, 2017

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## Part B. Collections of Information Employing Statistical Methods

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### B.1. Respondent Universe and Sampling Methods

The respondent universe represents a census of the public health department environmental health (EH) workforce. The best estimate of this entire workforce is 20,000 professionals. This estimate is based on results of public health departments profile studies and discussions with EH experts about workforce estimates and identifying potential EH professionals not represented in the studies.<sup>1,2</sup> The entire respondent universe will be offered the opportunity to complete the survey; however, we expect approximately 16,000 respondents based on an 80% response rate.

The respondent universe includes the entire workforce because a census would allow stratification by level of government (state, tribal, local, territorial), level of position (director, supervisor, field staff), and experience and education. In addition, this effort will be an attempt at enumerating the public health department EH workforce. Enumerating the workforce is essential for this collection of information and, once established, will contribute to future public health workforce and enumeration initiatives.

### B.2. Procedures for the Collection of Information

The procedures for the collection of information include:

- Enumerating and generating a list of email addresses for all public health department EH environmental health professionals.
- Pre-survey email (Attachment 4a) sent to all public health department EH professionals, several days prior to sending the survey link, to inform them of the upcoming survey and encourage their participation.
- Invitation letter (Attachment 4b) emailed to all public health department EH professionals inviting them to participate and directing them to the website where the survey is located.
- Data collection by web-based questionnaire using Sawtooth software.
- Follow-up email sent to all public health department EH professionals one week after invitation email (Attachment 4c).
- Follow-up email sent to all non-respondents several weeks after invitation email (Attachment 4d).
- Follow-up email sent to all non-respondents one month after the invitation email (Attachment 4e).

EH workforce members (respondents) will be identified and enumerated by identifying a point of contact in each state and requesting a roster of public health department EH professionals (Attachment 3). A list of respondents and their business email addresses will be generated and used for recruitment and survey administration. Any contact information collected will be related to their role in the organization. The Centers for Disease Control and Prevention, National Environmental Health Association (funded by a contract), and Baylor University, the academic consultant (funded by an intergovernmental personnel agreement), will maintain the list of respondent email addresses, along with any other contact information, that will remain secure and stored on secure servers with controlled access.

The Understanding the Needs, Challenges, Opportunities, Vision and Emerging Roles in Environmental Health (UNCOVER EH) survey (Attachment 5a and 5b) will collect standardized information from public health department EH professionals on their demographics, education and training, experience, areas of practice, job satisfaction, and current and future needs to address emerging environmental issues. The survey will be administered by a trained academic consultant at Baylor University using Sawtooth survey software to develop and distribute the electronic survey to the respondent universe.

The academic consultant, funded through an intergovernmental personnel agreement, will download the data and prepare it for analysis. In the dataset, survey respondents will be coded for anonymity. Any potential personal identifiers will be removed from the dataset and the de-identified dataset will be provided to the CDC. CDC will maintain the dataset on secure servers with controlled access at all times.

### B.3. Methods to Maximize Response Rates and Deal with No Response

To maximize response rates, Dillman's recommendation for 5 points of contact will be followed.<sup>3</sup> This includes:

1. an introductory message sent several days before respondents receive the survey (Attachment 4a);
2. an invitation message containing the survey link (Attachment 4b);
3. a thank you message and reminder sent 1 week after the introductory message, for those who have not yet completed the survey (Attachment 4c);
4. a reminder message with survey link sent 2 weeks after the introductory message (Attachment 4d) ; and
5. a final message sent 2 weeks after the last reminder to complete the survey (Attachment 4e).

We expect the response rate for this survey to be approximately 80% through the use of Dillman's recommendation for 5 points of contact. Similar surveys, such as workforce surveys conducted by the American Academy of Pediatrics, saw response rates ranging from 52% to

81%<sup>4</sup>. Limitations will be thoroughly addressed and explained in any publications and when survey data are otherwise presented. Potential sources of bias are:

1. non-response, which will be lessened by following an aggressive methodology for increasing responses,
2. not identifying all potential respondents, and
3. missing data, which could impact representation.

## B.4. Test of Procedures or Methods to be Undertaken

The survey instrument was pilot tested by six EH professionals to: 1) establish burden; 2) identify any sources of confusion or lack of clarity in wording of the questions; and 3) refine questions for minimizing burden and improving utility. Results from the pilot study were used to refine and strengthen the UNCOVER EH survey. Respondents were emailed a web link to a draft version of the instrument, asked to fill it out, and provided us with comments and feedback by email a few days later. Based on the pilot test results, we improved the wording of several questions and adjusted the instrument format.

Data will be analyzed using descriptive and inferential statistical analyses. Descriptive statistics will examine responses to the various survey measures, while frequencies will explain the categorical variables. The results of these analyses will be summarized in a comprehensive report that will be publicly available. This information provided in the report will serve as a reference for EH agencies, programs, and professionals interested in understanding national EH workforce and practice trends and future needs. The report may serve as an important resource for establishing EH workforce and practice benchmarks and informing decision-making to support and enhance the EH workforce and practice. Inferential statistics will be used to further examine the relationships between certain workforce and practice characteristics, while qualitative approaches (content analysis) will be used to analyze responses to open-ended questions. Findings of the analyses will be published in peer-reviewed journals.

## B.5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

**Table 1.** Personnel Consulted on Statistical Design

Name	Title	Affiliation	Phone	Email
<i>OUTSIDE CONSULTANTS</i>				
David Dyjack, DrPH	Executive Director	National Environmental Health Association	(303) 756-9090	ddyjack@neha.org

Sandra Whitehead, PhD	Manager, Research & Development	National Environmental Health Association	(850) 727-2431	swhitehead@neha.org
<i>ACADEMIC INSTITUTIONS</i>				
Bryan Brooks, PhD	Professor, Environmental Health Sciences	Baylor University	(254) 710-6553	Bryan_Brooks@baylor.edu
Murray Rudd, PhD	Associate Professor, Department of Environmental Sciences	Emory University	(404) 727-3262	murray.a.rudd@emory.edu

**Table 2.** Personnel Responsible for Collection and Analysis of Information

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Phone</b>	<b>Email</b>
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David Dyjack, DrPH	Executive Director	National Environmental Health Association	(303) 756-9090	ddyjack@neha.org
Sandra Whitehead, PhD	Manager, Research& Development	National Environmental Health Association	(850) 727-2431	swhitehead@neha.org

## References

1. National Association of County & City Health Officials. 2013 National Profile of Local Health Departments. Available at

<http://archived.naccho.org/topics/infrastructure/profile/upload/2013-national-profile-of-local-health-departments-report.pdf>. Accessed May 24, 2016.

2. Association of State and Territorial Health Officials. Profile of State Public Health, Volume Three. Available at <http://www.astho.org/Profile/Volume-Three/>. Accessed May 24, 2016.
3. Dillman DA. *Mail and internet surveys: the tailored design method*. 2<sup>nd</sup> ed. Hoboken, NJ: John Wiley & Sons, Inc.; 2007.
4. Cull, WL, O'Connor, KG, Sharp, S, & Tang, SS. Response rates and response bias for 50 surveys of pediatricians. *Health Services Research*, Volume 40(1); 2005. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361134/>. Accessed January 9, 2017

## List of Attachments

Attachment 1. Authorizing Legislation

Attachment 2. 60-day Federal Register Notice

Attachment 2a. Public Comment

Attachment 2b. Program Response

Attachment 3. Health Department Roster

Attachment 4a. Pre-Survey Email

Attachment 4b. Invitation Email

Attachment 4c. Thanks-Reminder Email

Attachment 4d. Reminder Email

Attachment 4e. Final Notice Email

Attachment 5a. UNCOVER EH Survey (text)

Attachment 5b. UNCOVER EH Survey (online)

Attachment 6. Study Protocol

Attachment 7. IRB Exemption Determination Letter