

Waterborne Disease Prevention: State Program Infrastructure and Capacity Building Needs Assessment

OSTLTS Generic Information Collection Request
OMB No. 0920-0879

Supporting Statement – Section A

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Program Official/Project Officer

Kathleen Fullerton

Team Lead, Domestic Epidemiology

Waterborne Disease Prevention Branch

Division of Foodborne, Waterborne, and Environmental Diseases

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

1600 Clifton Rd, Mailstop C09, Atlanta, GA 30329

404-718-4714

Fax: 404-718-4842

Kgf9@cdc.gov

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- **Goal of the study:** To assess state-level waterborne disease prevention program infrastructure and capacity building efforts.
- **Intended use of the resulting data:** To help CDC identify infrastructure and capacity building-related technical assistance and support needs. This information will inform ongoing CDC programmatic efforts.
- **Methods to be used to collect:** Telephone interviews will be conducted to collect information from respondents.
- **The subpopulation to be studied:** 28 state-level waterborne disease prevention program coordinators.
- **How data will be analyzed:** Qualitative analyses of narrative responses will be conducted.

Section A – Justification

1. Circumstances Making the Collection of Information Necessary

Background

This information collection is being conducted using the Generic Information Collection mechanism of the OSTLTS OMB Clearance Center (O2C2) – OMB No. 0920-0879. The respondent universe for this information collection aligns with that of the O2C2. Data will be collected from 28 waterborne disease prevention program coordinators acting in their official capacities, within 28 state health departments. 14 program coordinators will be from CDC supported states and another 14 from non-CDC supported states (description of CDC supported states and non-CDC supported states provided below). A listing of these states can be found in **Attachment A-List of States**.

This information collection is authorized by Section 301 of the Public Health Service Act (42 U.S.C. 241). This information collection falls under the essential public health service(s) of:

- 1. Monitoring health status to identify community health problems
- 2. Diagnosing and investigating health problems and health hazards in the community
- 3. Informing, educating, and empowering people about health issues
- 4. Mobilizing community partnerships to identify and solve health problems
- 5. Development of policies and plans that support individual and community health efforts
- 6. Enforcement of laws and regulations that protect health and ensure safety
- 7. Linking people to needed personal health services and assure the provision of health care when otherwise unavailable
- 8. Assuring a competent public health and personal health care workforce
- 9. Evaluating effectiveness, accessibility, and quality of personal and population-based health services
- 10. Research for new insights and innovative solutions to health problems¹

Water has many uses, including drinking, recreation, sanitation, hygiene, and industry.² While access to clean and safe water, adequate sanitation, and improved hygiene is essential for life, water can spread illness or result in injuries when it is contaminated by disease-causing organisms.² Waterborne diseases can be caused by a wide variety of organisms, such as *Cryptosporidium*, *Giardia*, *Shigella*, *Norovirus*, and *Campylobacter*.^{3,4}

CDC's Waterborne Disease Prevention Branch (WDPB) was created in 2010.⁵ The Branch's main activities include developing partnerships, providing technical and emergency assistance, monitoring and evaluating new interventions and ongoing programs, building laboratory expertise and capacity, and conducting surveillance and applied research to support activities and programs related to waterborne disease prevention.⁵ WDPB provides financial support to state health departments to build infrastructure and capacity for waterborne disease detection, investigation, reporting, and prevention at the state-level. Support is provided through two capacity building mechanisms:

1. **Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases Cooperative Agreement:** The purpose of this cooperative agreement is to build capacity for detection, investigation, reporting, and prevention of waterborne diseases at the state and local level. Funding is provided to conduct activities around the following strategies:
 - a. Enhance outbreak investigation response and reporting
 - b. Improve surveillance to drive public health action
 - c. Implement and evaluate epidemiological public health practice, and prevention and control strategies
 - d. Coordination and collaboration
 - e. Sustain and enhance laboratory diagnostic capacity

2. **Council of State and Territorial Epidemiologists (CSTE) Applied Epidemiology Fellowship:** The purpose of this fellowship program is to place fellows in state health departments to support critical needs in waterborne disease surveillance, education and response; develop expertise on water and health issues, and conduct projects that inform public health actions and resources for waterborne diseases, in particular responses to harmful algal blooms (HAB).

Through a competitive application process, 21 of 50 states were awarded support through one of CDC's capacity building mechanisms (hereinafter referred to as "CDC supported") for FY2016. Twenty-nine (29) of 50 states received no award (hereinafter referred to as "non-CDC supported").

FY2016 will be the 4th year of providing the Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases Cooperative Agreement and 3rd year of the CSTE Applied Epidemiology Fellowship. The number of states receiving a support mechanism for FY2016 was based on total funds available for distribution. States that did not apply for a support mechanism, or did not

have a competitive application, were not awarded CDC support funds for FY 2016. The state listing of both CDC supported and non-CDC supported states can be found in **Attachment A-List of States**.

To date, no assessment has been done to measure the influence of the above support mechanisms on building capacity and infrastructure in state health departments. The purpose of this information collection is to assess similarities and differences between CDC supported and non-CDC supported state-level waterborne disease prevention program infrastructure and capacity building efforts. By comparing insights from CDC supported and non-CDC supported states, CDC can better understand the impact the two mechanisms may have on strengthening the ability of state-level waterborne disease prevention programs to detect, investigate, report, and prevent waterborne diseases.

Assessing the efforts of state-level waterborne disease prevention programs to build infrastructure and capacity can provide valuable insights to inform ongoing programmatic efforts at CDC. By identifying facilitators and barriers to build and sustain infrastructure and capacity from both CDC supported and non-CDC supported states, CDC can identify specific technical assistance and support needs of state health departments. Additionally, the information will be used to determine how to establish ongoing infrastructure and capacity building monitoring of CDC supported state-level waterborne disease prevention programs.

Overview of the Information Collection System

Information will be collected from a total of 28 state-level waterborne disease prevention program coordinators via telephone interviews conducted by one CDC Waterborne Disease Prevention Branch (WDPB) staff member (FTE or fellow). Using a standard interview guide (**Attachment B-Interview Guide**), information will be collected from 14 CDC supported and 14 non-CDC supported state waterborne disease program coordinators on infrastructure and capacity to detect, investigate, report, and prevent waterborne diseases. Interviews will be recorded in order to capture the conversation accurately. Verbal permission to be recorded will be obtained from the participant prior to the beginning of the interview.

The interview guide was pilot tested by 2 public health professionals. Feedback from these individuals was used to refine questions as needed and establish the estimated time required to complete the interview guide.

Items of Information to be Collected

The information collection will assess state-level waterborne disease prevention program infrastructure and capacity. In addition to understanding the respondents' roles, length of service in their public health departments, and organizational structure of the health departments (Introduction), the remaining questions were developed based on the following two frameworks:

- **Kurt Lewin’s force field analysis approach:** an inductive approach for program staff to describe current and desired programmatic end states along with the forces that maintain the status quo or contribute to change.⁶
- **Component Model of Infrastructure:** this approach identifies five elements key to building a strong infrastructure*. The five elements include⁷:
 - network of partnerships across various levels and organizations
 - program leaders at multiple levels engaged with the program
 - diverse set of resources: including funding, staff, and training provided to staff/partners
 - data being used to inform decisions
 - developing strategic plans that are used to respond and adapt to the environment

**Note: While these elements were linked to tobacco control program outcomes and success, it is unknown how applicable they are to other public health areas such as waterborne disease prevention.*

The interview guide (**Attachment B–Interview Guide**) developed for this information collection will serve to remind participants of the interview purpose, review interview logistics, obtain verbal permission to record the interview, and guide the assessment. The guide consists of 34 questions. The majority of questions are open-ended in nature, however there are also 4 closed-ended questions. Question probes are not considered questions, and were therefore not included in the total number of questions. An effort was made to limit questions whenever possible. Questions will be skipped if the respondent has already addressed the question in a previous response. CDC supported and non-CDC supported states will both answer the same questions except when it relates to “influence of CDC support in achieving desired capacity.” A skip pattern will be implemented in this section depending on the respondent type.

The interview guide will collect information to assess state-level waterborne disease prevention program infrastructure and capacity building efforts through the following:

- **Introduction Questions (3 questions):** these questions ask about background information on respondent’s role in the health department and structure of waterborne disease prevention program.
- **Force Field Analysis Questions (6 questions):** these question ask about current and desired infrastructure/capacity of waterborne disease prevention program to detect, respond, and prevent waterborne diseases and facilitators/obstacles to making progress towards the desired capacity and infrastructure.
- **Component Model of Infrastructure Questions (22 questions):** these questions ask about the influence of Component Model of Infrastructure components in achieving desired capacity and infrastructure and the influence of CDC support in achieving

desired capacity*. **Note: As mentioned above, a skip pattern will be implemented for the questions regarding influence of CDC support based upon respondent group.*

- **Assessment of Presence/Absence of Component Model of Infrastructure components (3 questions):** these questions ask respondents to assess the presence/absence of Component Model of Infrastructure components in their Waterborne Disease Prevention Program and identify their program's top needs in order to achieve desired capacity to detect, investigate, report, and prevent waterborne diseases.

2. Purpose and Use of the Information Collection

The purpose of this information collection is to assess similarities and differences between CDC supported and non-CDC supported state-level waterborne disease prevention program infrastructure and capacity building efforts. This assessment will identify facilitators and barriers to build and sustain infrastructure and capacity building which will provide valuable insights to inform ongoing programmatic efforts.

Information collected from this assessment will be used to identify current and future needs of state-level waterborne disease prevention programs. Targeted technical assistance and support will be created based on information collected in this assessment. Additionally, the information will be used to establish ongoing monitoring of infrastructure and capacity building efforts in CDC supported state-level waterborne disease prevention programs.

3. Use of Improved Information Technology and Burden Reduction

All information collected will be gathered via telephone interviews. While online questionnaires are quick, effective methods for collecting quantitative data from many respondents, telephone interviews can solicit rich qualitative data, which aligns to the purpose of this information collection.

Collecting data via telephone interviews will also help to minimize the burden on CDC staff by reducing the time required for follow-up. CDC staff will be able to verify responses and request clarification in real time as needed during the information collection process. Embedded within the interview guide are skip patterns which will customize the interview to respondent answers and help minimize overall burden to the respondent.

4. Efforts to Identify Duplication and Use of Similar Information

To date, no assessment has been done to assess the influence of WDPB's support mechanisms on building capacity and infrastructure to detect, investigate, report, and prevent waterborne diseases at the state-level. The information that will be gathered through this information collection is not available from other data sources or through other means. Additionally, there

is no similar information currently available that meets the needs of this proposed assessment^{7,8}.

5. Impact on Small Businesses or Other Small Entities

No small businesses will be involved in this information collection.

6. Consequences of Collecting the Information Less Frequently

This request is for a one time information collection. There are no legal obstacles to reduce the burden. If no data are collected, CDC will be unable to:

- Capture in-depth information about state-level waterborne disease prevention program infrastructure and capacity building early into CDC's deployment of two support mechanisms (ELC Cooperative Agreement and CSTE Applied Epidemiology Fellowship)
- Assess the linkages between state-level program infrastructure, implementation, and outcomes
- Inform future support and technical assistance to CDC supported and non-CDC supported state-level waterborne disease prevention programs

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

There are no special circumstances with this information collection package. This request fully complies with the regulation 5 CFR 1320.5 and will be voluntary.

8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

This information collection is being conducted using the Generic Information Collection mechanism of the OSTLTS OMB Clearance Center (O2C2) – OMB No. 0920-0879. A 60-day Federal Register Notice was published in the Federal Register on October 31, 2013, Vol. 78, No. 211; pp. 653 25-26. No comments were received.

CDC partners with professional STLT organizations, such as the Association of State and Territorial Health Officials (ASTHO), the National Association of County and City Health Officials (NACCHO), and the National Association of Local Boards of Health (NALBOH) along with the National Center for Health Statistics (NCHS) to ensure that the collection requests under individual ICs are not in conflict with collections they have or will have in the field within the same timeframe.

9. Explanation of Any Payment or Gift to Respondents

CDC will not provide payments or gifts to respondents.

10. Protection of the Privacy and Confidentiality of Information Provided by Respondents

The Privacy Act does not apply to this information collection. STLT governmental staff and / or delegates will be speaking from their official roles and will not be asked, nor will they provide individually identifiable information.

This information collection is not research involving human subjects.

11. Institutional Review Board (IRB) and Justification for Sensitive Questions

No information will be collected that are of personal or sensitive nature.

12. Estimates of Annualized Burden Hours and Costs

The estimate for burden hours is based on a pilot test of the interview guide by two public health professionals who are representative of both respondent groups. One public health professional pilot tested the instrument as a CDC supported state, which took approximately 45 minutes to complete. The other public health professional pilot tested the instrument as a non-CDC supported state, which took approximately 40 minutes to complete. Based on the pilot testing, there are no major differences in time to complete the interview by respondent type (CDC supported vs. non-CDC supported). Based on these results, the estimated time range for actual respondents to complete the interview is 30-60 minutes. For the purposes of estimating burden hours, the upper limit for completion (i.e., 60 minutes) is used.

Estimates for the average hourly wage for respondents are based on the Department of Labor (DOL) National Compensation Survey estimate for environmental scientists and specialists, including health (<http://www.bls.gov/ncs/ocs/sp/nctb1349.pdf>). Based on DOL data, an average hourly wage of \$32.62 is estimated for all 28 respondents. Table A-12 shows estimated burden and cost information.

Table A-12: Estimated Annualized Burden Hours and Costs to Respondents

Information collection Instrument: Form Name	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Average Burden per Response (in hours)	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
Interview Guide	State waterborne disease prevention program coordinators	28	1	1.0	28	\$32.62	\$913.36

	TOTALS	28	1		28		\$913.36
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13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers

There will be no direct costs to the respondents other than their time to participate in each information collection.

14. Annualized Cost to the Government

There are no equipment or overhead costs. The costs to the federal government are the salary of a FTE CDC staff member and a fellow. The Team Lead will support the development of the assessment tool. The fellow will support the development of the assessment tool, data collection, and data analysis. The total estimated cost to the federal government is \$6539.70. Table A-14 describes how this cost estimate was calculated.

Table A-14: Estimated Annualized Cost to the Federal Government

Staff (FTE)	Average Hours per Collection	Average Hourly Rate	Average Cost
Evaluation Fellow (GS-09)	250	\$24.32	\$6,080
Team Lead, Domestic Epidemiology (GS-13)	10	\$45.97	\$459.70
Estimated Total Cost of Information Collection			\$6539.70

15. Explanation for Program Changes or Adjustments

This is a new information collection.

16. Plans for Tabulation and Publication and Project Time Schedule

Following completion of all interviews, recorded interviews will be downloaded, transcribed, and coded by one staff member using MaxQDA software. Coded text will be reviewed and major themes emerging from the responses will be identified. A report with aggregate findings will be shared with WDPB staff and state health departments. WDPB will also explore additional opportunities for presenting and publishing information collection findings following completion of the analysis and reporting activity.

Project Time Schedule

- ✓ Design interview guide (COMPLETE)
- ✓ Develop protocol, instructions, and analysis plan (COMPLETE)
- ✓ Pilot test interview guide..... (COMPLETE)
- ✓ Prepare OMB package (COMPLETE)
- ✓ Submit OMB package (COMPLETE)

- OMB approval (TBD)
- Send invitation to participants..... (1 week)
- Send reminder e-mails to schedule telephone interview date..... (2 weeks)
- Conduct information collection (telephone interviews)..... (6-8 weeks)
- Code, quality control, and analyze data..... (4-6 weeks)
- Prepare reports (4-6 weeks)
- Disseminate results/reports (4 weeks)

17. Reason(s) Display of OMB Expiration Date is Inappropriate

We are requesting no exemption.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification. These activities comply with the requirements in 5 CFR 1320.9.

LIST OF ATTACHMENTS – Section A

- A. Attachment A-List of States**
- B. Attachment B-Interview Guide**

REFERENCE LIST

1. Centers for Disease Control and Prevention (CDC). "National Public Health Performance Standards Program (NPHPSP): 10 Essential Public Health Services." Available at <http://www.cdc.gov/nphpsp/essentialservices.html>. Accessed on 8/14/14.
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8. Lavinghouze R, Snyder K, Rieker P, Ottoson J. Consideration of an applied model of public health program infrastructure. *J Public Health Manag Pract.* 2013;19(6):E28–E37.