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## CDC Takes Action to Improve the Reporting of Environmental Assessment Data During Foodborne Illness Outbreak Investigations

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### Editor's Note:

NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature a column from the Environmental Health Services Branch (EHSB) of the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, EHSB and guest authors share insights and information about environmental health programs, trends, issues, and resources. The conclusions in this article are those of the author(s) and do not necessarily represent the views of CDC.

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When a foodborne illness outbreak is detected, food safety officials work quickly to collect as much information as possible to determine the cause and prevent more people from getting sick (Centers for Disease Control and Prevention, 2016). Environmental assessments are an essential component of foodborne illness outbreak investigations. Typically conducted by food safety officials (e.g., environmental health specialists), environmental assessments help determine how and why the environment contributed to the introduction or transmission of agents that cause illness. Critical data from these assessments help prevent and reduce future outbreaks and improve food safety in the U.S.

The National Outbreak Reporting System (NORS) is a Centers for Disease Control and Prevention (CDC) surveillance system that collects foodborne illness outbreak data (e.g., date and location of the outbreak, number of people who became ill, and illness symptoms) from state, local, and territorial food safety programs. NORS collects, however, limited environmental assessment data. To address this gap in foodborne illness outbreak data collection, CDC launched in 2014 a companion surveillance system to NORS, the National Environmental Assessment Reporting System (NEARS) (Figure 1).

NEARS is a surveillance system that collects environmental assessment data as part of foodborne illness outbreak investigations. Since NEARS launched, CDC has worked to

- promote the importance of conducting environmental assessments during foodborne illness outbreak investigations,
- increase the amount of environmental assessment data reported from food safety programs, and
- improve the quality of environmental assessment data collected and reported.

To promote NEARS, CDC staff presents at meetings where food safety officials discuss and address food safety concerns, such as the National Association of County and City Health Officials' annual conference, the Association of Public Health Laboratories' PulseNet and OutbreakNet regional meetings, and the Food and Drug Administration's regional retail food protection seminars.

Additionally, to improve competency on conducting environmental assessments and reporting data to NEARS, CDC conducted in-person NEARS training for over 180 California and Southern Nevada Health District food safety officials who conduct foodborne illness outbreak investigations. Most food safety officials indicated a high level of overall satisfaction after the training. They went on to report the following as the most useful portions of the training:

- completion of the training prerequisite, CDC's free and interactive e-Learning on Environmental Assessment of Foodborne Illness Outbreaks ([www.cdc.gov/nceh/ehs/elearn/ea\\_fio/index.htm](http://www.cdc.gov/nceh/ehs/elearn/ea_fio/index.htm));
- detailed review of the NEARS data reporting instrument; and
- live demonstration of the NEARS web-based platform.

In addition to formal NEARS presentations and trainings, CDC has streamlined and improved its NEARS Web site content ([www.cdc.gov/nceh/ehs/nears](http://www.cdc.gov/nceh/ehs/nears)), developed NEARS fact sheets ([www.cdc.gov/nceh/ehs/docs/factsheets/nears-factsheet.pdf](http://www.cdc.gov/nceh/ehs/docs/factsheets/nears-factsheet.pdf)), distributed NEARS 2014 summary reports ([www.cdc.gov/nceh/ehs/nears/docs/2014-summary-report.pdf](http://www.cdc.gov/nceh/ehs/nears/docs/2014-summary-report.pdf)), and disseminated electronic promotional messages to thousands of food safety officials via environmental health listservs and social media outlets (e.g., Twitter and LinkedIn).

CDC's successful marketing and promotional activities have increased the number of state and local food safety programs registered to report environmental assessment data to NEARS. In 2014, 11 state and local food safety programs were registered. In 2015, that number increased to 16. To date, 21 food safety programs are registered (Figure 2). A current listing of NEARS participants can be found at [www.cdc.gov/nceh/ehs/nears/participants.htm](http://www.cdc.gov/nceh/ehs/nears/participants.htm). A minimum of 100 outbreaks have been reported into the system since its launch. Prior to the NEARS launch, these data were not reported on a national level. More frequent reporting of environmental data helps to improve the quality of foodborne illness outbreak data collected by CDC and provides opportunities to link outbreaks across NORS and NEARS.

In 2014, CDC formed an intra-agency NORS-NEARS workgroup to aid foodborne illness outbreak response and prevention to improve reporting and analysis of foodborne illness outbreak data. This group is also exploring ways to ensure that the burden of reporting

overlapping foodborne illness outbreak data in both NORS and NEARS is minimized. Based on an analysis of 2014 outbreak data reported to NORS and NEARS, the workgroup learned that 87% (97 of 111) of foodborne illness outbreaks reported to NEARS were also reported to NORS. These dually-reported data provide additional context about the series of foodborne illness outbreak events. For example, these data will allow us to monitor and evaluate timeliness and outbreak response by comparing the date of initial exposure (reported to NORS) to the date the establishment was identified for an environmental assessment (reported to NEARS).

As CDC continues its work to improve food safety, understanding how and why foodborne illness outbreaks occur will be pivotal in its reduction and prevention. To achieve this goal, CDC encourages food safety programs to improve competency on conducting environmental assessments and report these data to NEARS.

## Biography



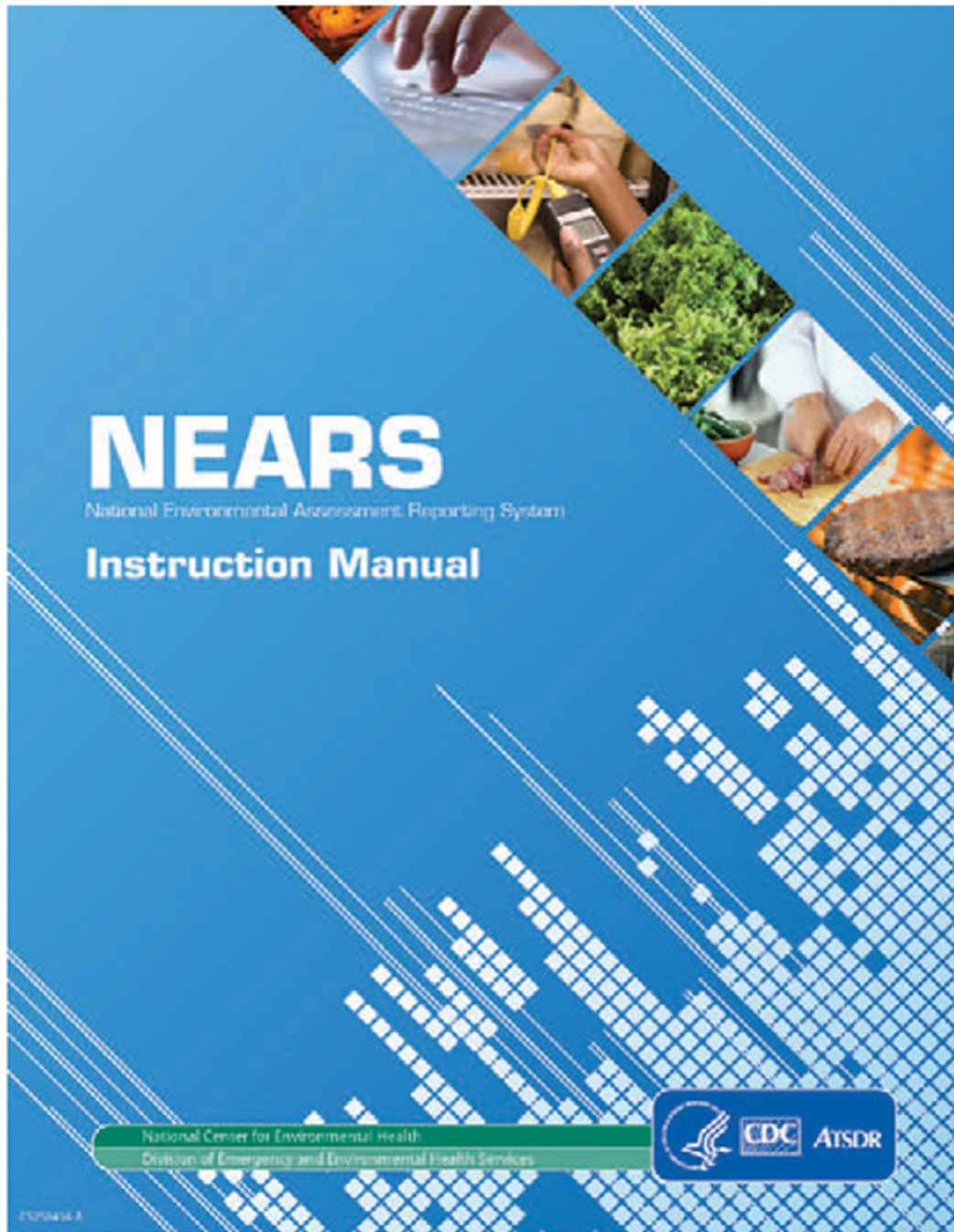
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## Reference

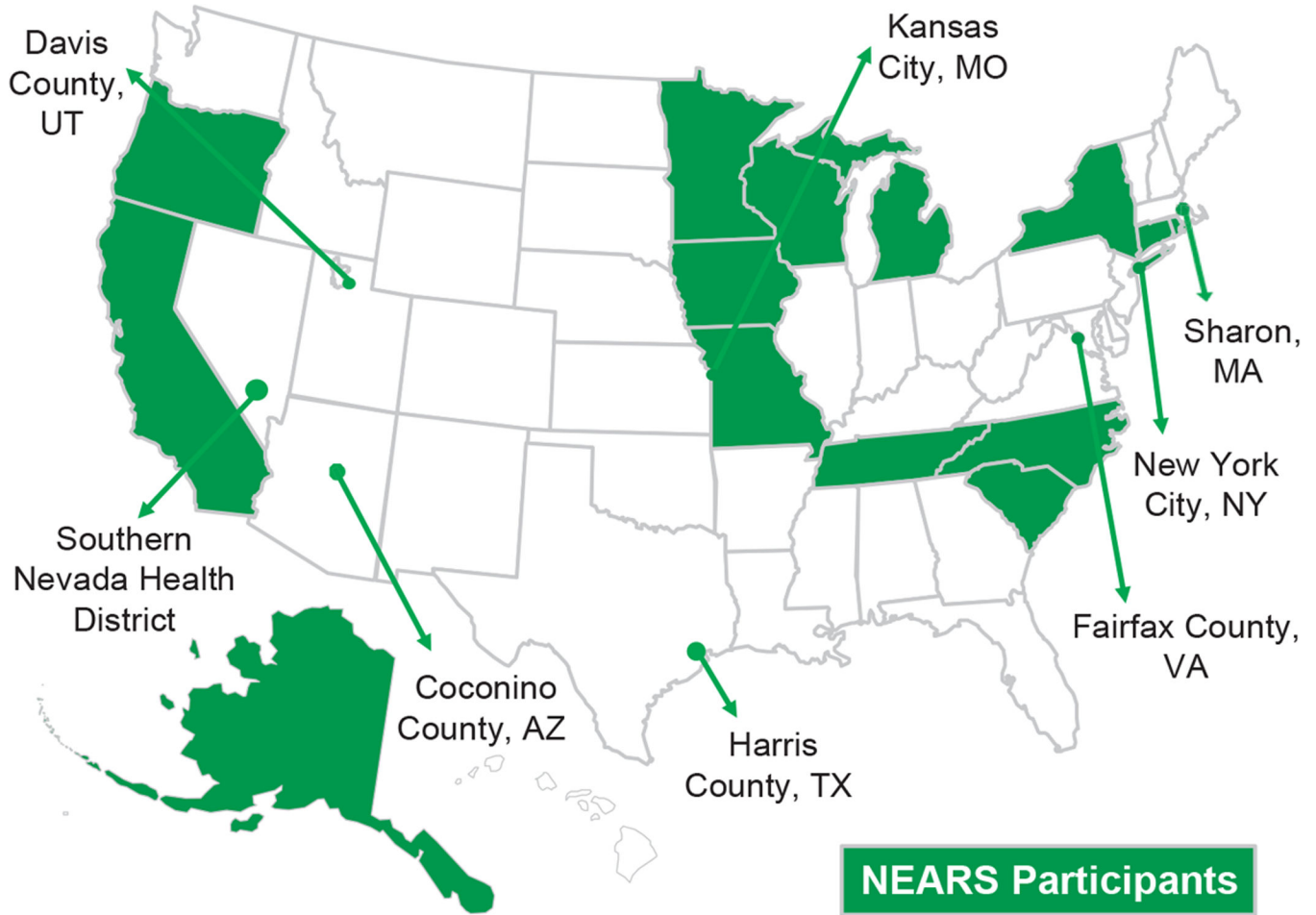
Centers for Disease Control and Prevention. (2016). Investigating outbreaks: Using data to link foodborne disease outbreaks to a contaminated source. Retrieved from <http://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/index.html>

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Students can now apply for a 2017 summer internship at health departments across the country as part of the National Environmental Public Health Internship Program funded by the Centers for Disease Control and Prevention. Learn more at [www.neha.org/professional-development/students/internships](http://www.neha.org/professional-development/students/internships).



**FIGURE 1.**  
National Environmental Assessment Reporting System: Instruction Manual



**FIGURE 2.**  
National Environmental Assessment Reporting System (NEARS) Participants