



# Introduction to Environmental Public Health Tracking Homework 3

## Real World Application

### Scenarios – Statistician

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

You are a statistician with the Massachusetts Department of Public Health/Bureau of Environmental Health and your office receives a letter from a concerned resident of Billerica, MA. In the letter, the resident expresses concern about potential health threats from a local power plant. They are particularly interested in elevated asthma-related hospitalizations.

#### Your task

Use the Tracking Network to determine if communities surrounding the power plant— Billerica, Chelmsford, Lowell, and Tewksbury—have higher rates of asthma hospitalizations than the rest of the state of Massachusetts. Write a letter to the concerned resident, as well as the Billerica Board of Health summarizing your findings.

**Planning notes** - Use this area to take notes as you research your topic:

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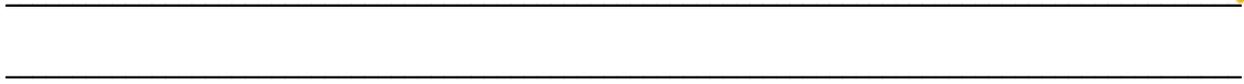
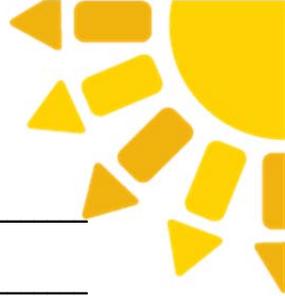
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## Real World Application

### Scenarios – Health Policy

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

Carbon monoxide (CO) poisoning is a big problem in Maine because of snow storms. These storms knock out power in homes, so people use generators for electricity and heat. If the generators are not used properly, they can cause CO poisoning. The state legislature is considering passing a CO detector law which will require CO detectors in all new Maine homes, rental properties, and existing homes at the time of transfer of ownership.

#### Your Task

Your boss asks you, the health policy analyst for Maine Department of Health, to prepare a testimony to the state legislature. Using data from the National and Maine Tracking Networks (<http://tracking.publichealth.maine.gov>) prepare the testimony stating the health department’s position on the legislation. Your testimony should include the problem and how legislation may or may not help to solve it.

**Planning notes** - Use this area to take notes as you research your topic:

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## Real World Application

### Scenarios – Medical Epidemiologist

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

Every year in New York City, there are reports in the media about fires and explosions triggered by indoor pesticide foggers, also known as “bug bombs”. Bug bombs can also cause short-term injuries and illnesses like severe irritation of the eyes and throat, nausea, and shortness of breath. The mayor has asked the NYC Health Department to look into the long-term health effects related to bug bomb exposure. Before he makes a final decision about the budget for this project, he has asked the health department to prepare a report describing personal bug bomb use across the city.

#### Your Task

As a medical epidemiologist with the NYC Health Department, you have been asked to work on the report for the mayor. Use the NYC Tracking Network (<https://gis.nyc.gov/doh/track/>) to identify the numbers and percentages of households using pesticide sprays, bombs, or foggers by borough and neighborhood. Write a summary of the data including your recommendation, with justification, for where the study should take place.

**Planning notes** - Use this area to take notes as you research your topic:

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## Real World Application

### Scenarios – Health Communications

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

The Pueblo of Laguna is a Native American community situated within the Grants Mineral Belt of New Mexico. The Grants Mineral Belt is a region that is high in uranium mineralization and home to past and present mining operations. The Tribal Council of the Pueblo of Laguna has contacted the New Mexico Department of Health for information about its community’s risk of health problems due to the uranium exposure.

#### Your Task

As a health communications specialist with the New Mexico Department of Health, you have been asked to develop health risk communication messages for the council. First, you must work with the epidemiologists in your department to interpret the data available on the New Mexico Tracking Network (<https://nmtracking.unm.edu/>) about uranium concentrations in the region’s community water supply. Using those results, develop messages communicating the risk of exposure to the council, potential health problems that exposure may cause, and how to prevent those health problems. When creating your health risk messages, remember that careful cultural considerations are required in order to appropriately present the messages to this audience.

**Planning Notes** - Use this area to take notes as you research your topic:

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## Real World Application

### Scenarios –Epidemiologist

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

The Pembroke Board of Health has contacted the Massachusetts Department of Public Health/ Bureau of Environmental Health (MDPH/BEH) to request a review of cancer incidence data for the town. The Board of Health is concerned about what appears to be an unusual occurrence of lung and bronchus cancers in Pembroke.

#### Your Task

You are an epidemiologist with the MDPH/BEH and have been asked to review the cancer incidence data (or data about new cases of cancer among the population) available through the National and Massachusetts Tracking Networks (<http://matracking.ehs.state.ma.us/>) to determine if there is indeed an unusual occurrence of lung and bronchus cancers in Pembroke. Write a report to your bureau director informing him of the outcome of your review and any factors that you think may be contributing to these cancers in Pembroke (such as drinking water quality or tobacco use).

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## Real World Application

### Scenarios – Community Health

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

The DeKalb County Alternative Transportation Works community group in Georgia wants to increase the percentage of DeKalb county workers who choose to ride a bicycle to work. The president of the county’s chapter of “Alternative Transportation Works” attended a workshop provided by OneDeKalb’s Neighborhood Capacity Building Institute (<http://www.onedekalb.com/>) and has decided to apply for a grant from the Neighborhood Fund. The average grant size is between \$3,000 and \$5,000. Typical grants include, but are not limited to, requests for cultural events, community organizing, neighborhood newsletters, community gardens, and more.

#### Your Task

You work at “Alternative Transportation Works” and have been asked to propose two community activities to encourage workers to bike to work that would be likely to be selected for a grant. Use data found on the National Environmental Public Health Tracking Network [www.cdc.gov/ephrtracking](http://www.cdc.gov/ephrtracking) to help make your argument that DeKalb County could use this type of help.

**Planning Notes** - Use this area to take notes as you research your topic:

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## Real World Application

### Scenarios – Statistician

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

In Winchester, Massachusetts unusually heavy rains cause river water levels to rise and spill into public areas like parks and playgrounds. Oftentimes these floods leave behind sediment, which can seep into the soil. Pesticides are used at recreational facilities for field maintenance, and community members are worried about an increased risk for cancer in children who play in these outdoor areas. Concerned parents contacted the Massachusetts Department of Public Health to investigate this issue.

#### Your Task

You, a statistician from the Massachusetts Department of Public Health, are asked to analyze the cancer incidence data (or the data on the number of new cancer cases in the population) in the town of Winchester to evaluate the pattern of cancer in children. You will use your findings to determine if the sediment and pesticide use is affecting children in Winchester and prepare a report. Use the National and Massachusetts Tracking Networks to assess childhood cancer rates. Write a report to the head of the Department of Public Health informing her of the outcome of your analysis and any health threats you believe the department should address.

**Planning Notes** – Use this area to take notes as you research your topic.

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## Real World Application

### Scenarios – Health Policy

#### Objective

Use CDC’s Environmental Public Health Tracking Network (Tracking Network) to gather information on real-life environmental health concerns.

#### Scenario

Secondhand smoke, also known as environmental tobacco smoke, causes cancer and other health problems in both children and adults. To help reduce exposure to secondhand smoke, Minnesota passed Freedom to Breathe legislation in 2007. The legislation banned smoking in almost all indoor public places and indoor work sites, including bars and restaurants. It was just reported that some legislators are working to repeal the legislation. The state legislature is in the process of evaluating the legislation to determine whether or not to repeal it.

#### Your Task

You, the health policy analyst for the Minnesota Department of Health, have been asked to prepare a testimony to the state legislature. Use the National and Minnesota Tracking Networks to determine if the Freedom to Breathe legislation has impacted exposures to secondhand smoke. Examine the populations (age, gender, race) who are most affected by secondhand smoke, and how these populations are commonly exposed to secondhand smoke. Include a summary of your research findings and recommendations, with justification for legislative action, in your report.

**Planning Notes** – Use this area to take notes as you research your topic.

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