Public Health Update

Wednesday, September 20, 2006

EPA's BEACH Program: 2005 Swimming Season Update

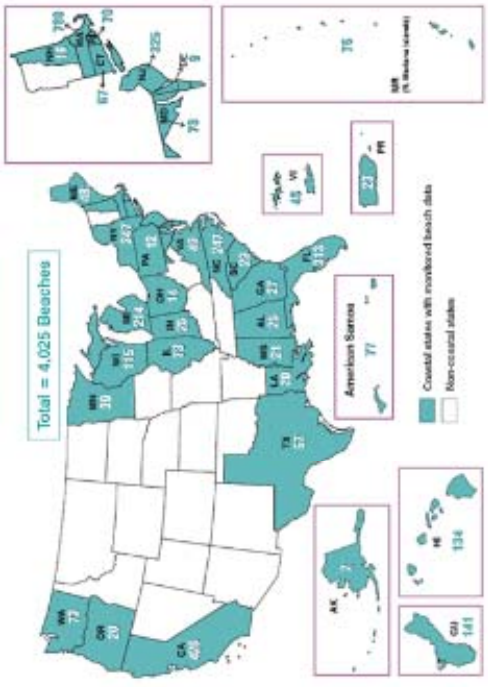
Source: U.S. EPA

Introduction

Coastal states with 2005 monitored beach data.

To further its commitment to reducing the risk of exposure to disease-causing bacteria at recreational beaches, EPA is posting its latest data about beach closings and advisories for the 2005 swimming season. Congress passed the BEACH Act of 2000 (BEACH Act), requiring that coastal and Great Lakes states and territories report to EPA on beach monitoring and notification data for their coastal recreation waters.

To help protect the public, the BEACH Act also requires EPA to maintain an electronic monitoring and notification database of that data.



The BEACH Act defines coastal recreation waters as the Great Lakes and coastal waters

(including coastal estuaries) that states, territories, and authorized tribes officially recognize or designate for swimming, bathing, surfing, or similar activities in the water.

Monitoring and Notification

When monitoring of water at swimming beaches shows that levels of certain bacteria exceed standards, states or local agencies notify the public of potential health risks. This public notification may be either a beach advisory, warning people of possible risks of swimming, or closing a beach to the public.

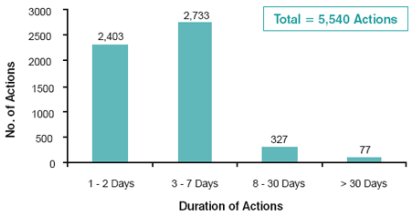
EPA calculates beach days to get a better sense of the extent of beach advisory and closure information. We do this by multiplying the number of beaches by the number of days in the swimming season. For the 2005 swimming season, EPA determined there were a total of 743,036 beach days for all of the 4,025 monitored beaches. Of those, actions were reported on 27,177 days, meaning that beaches were closed only about 4% of the time.

For the 2005 swimming season, all of the thirty coastal states and five territories reported public notification actions to EPA. The data show that only four percent of beach days were lost due to advisory or closures triggered by monitoring. Even then, most actions were of relatively short duration. Of the 4,025 beaches that were monitored in 2005, 1,109 or 28 percent had at least one advisory or closing during the 2005 season. A total of 5,540 beach notification actions were reported.

The data consist primarily of advisories issued as a result of local monitoring and localized precautionary advisories. Certain preemptive advisories that apply to large areas are not included in these counts.

State Reporting Data

Data trends are difficult to establish due to the new reporting requirements that began in 2003. The data from 2003 to 2005 cannot easily be compared to data gathered from 1997 to 2002. From 1997-2002 beach monitoring data was collected and submitted to EPA on a voluntary basis and included coastal, Great Lakes, and some inland waters. Beginning with the 2003 season, states are required to submit data to EPA under the BEACH Act for beaches which are in coastal and Great Lakes waters. EPA is working to complete the data sets.



Uniform Water Quality Standards

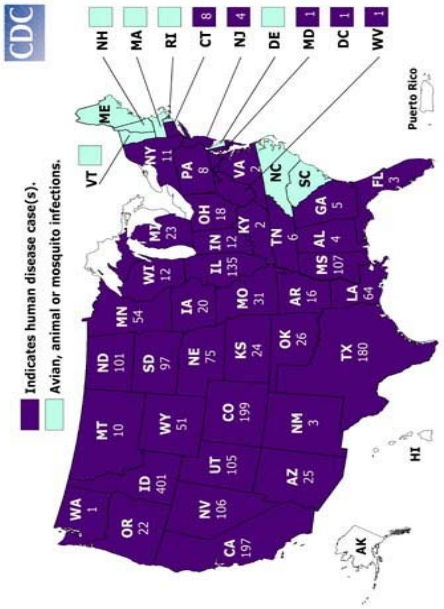
The BEACH Act of 2000 required coastal states and states bordering the Great Lakes to adopt EPA's most current recommended bacteria criteria to better protect beach bathers from harmful pathogens. On November 8, 2004, EPA finalized more protective bacteria standards for E. coli and enterococci for coastal and Great Lakes recreational waters for those states that had not yet complied with the BEACH Act of 2000. Twenty-one states and territories were affected by this rule; the other 14 had standards in place that were as protective of human health as EPA's most current bacteria criteria.

West Nile Virus Update

Source: CDC

As of September 19, 2006 avian, animal or mosquito WNV infections have been reported to CDC ArboNET from the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

2006 West Nile Virus Activity in the United States (Reported to CDC as of September 19, 2006)*



*Map shows the distribution of avian, animal, or mosquito infection occurring during 2006 with number of human cases if any, by state. If West Nile virus infection is reported to CDC from any area of a state, that entire state is shaded.

Human cases have been reported in Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

E. Coli 101

The current *E. coli* outbreak associated with fresh spinach has increased awareness about infections due to *E. coli* O157:H7, an important cause of foodborne illness with an estimated 73,000 cases and 61 deaths occurring in the United States each year.

The following frequently asked questions and answers are abstracted from the CDC webpage on *E. coli* infections (http://www.cdc.gov/ncidod/dbmd/diseaseinfo/escherichiacoli_g.htm).

What is *Escherichia coli* O157:H7?

E. coli O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*. Although most strains are harmless and live in the intestines of healthy humans and animals, this strain produces a powerful toxin and can cause severe illness.

E. coli O157:H7 was first recognized as a cause of illness in 1982 during an outbreak of severe bloody diarrhea; the outbreak was traced to contaminated hamburgers. Since then, most infections have come from eating undercooked ground beef.

The combination of letters and numbers in the name of the bacterium refers to the specific markers found on its surface and distinguishes it from other types of *E. coli*.

How is ***E. coli*** O157:H7 spread?

The organism can be found on cattle farms and can live in the intestines of healthy cattle. Meat can become contaminated during slaughter, and organisms can be thoroughly mixed into beef when it is ground. Bacteria present on the cow's udders or on equipment may get into raw milk.

Eating meat, especially ground beef, that has not been cooked sufficiently to kill *E. coli* O157:H7 can cause infection. Contaminated meat looks and smells normal. Although the number of organisms required to cause disease is not known, it is suspected to be very small.

Among other known sources of infection are consumption of sprouts, greens, salami, unpasteurized milk and juice, and swimming in or drinking sewage-contaminated water.

Bacteria in diarrheal stools of infected persons, particularly among toddlers, can be passed from one person to another if hygiene or handwashing habits are inadequate.

What illness does ***E. coli*** O157:H7 cause?

E. coli O157:H7 infection often causes severe bloody diarrhea and abdominal cramps; sometimes the infection causes non-bloody diarrhea or no symptoms. Usually little or no fever is present, and the illness resolves in 5 to 10 days.

In some persons, particularly children under 5 years of age and the elderly, the infection can also cause a complication called hemolytic uremic syndrome, in which the red blood cells are destroyed and the kidneys fail. About 2%-7% of infections lead to this complication. In the United States, hemolytic uremic syndrome is the principal cause of acute kidney failure in children, and most cases of hemolytic uremic syndrome are caused by *E. coli* O157:H7.

How is the illness diagnosed and treated?

Infection with *E. coli* O157:H7 is diagnosed by detecting the bacterium in the stool.

Most persons recover without antibiotics or other specific treatment in 5-10 days. There is no evidence that antibiotics improve the course of disease.

Hemolytic uremic syndrome is a life-threatening condition usually treated in an intensive care unit. Blood transfusions and kidney dialysis are often required. With intensive care, the death rate for hemolytic uremic syndrome is 3%-5%.

What can you do to prevent *E. coli* O157:H7 infection?

Cook all ground beef and hamburger thoroughly.

Avoid spreading harmful bacteria in your kitchen. Keep raw meat separate from ready- to- eat foods. Wash hands, counters, and utensils with hot soapy water after they touch raw meat. Never place cooked hamburgers or ground beef on the unwashed plate that held raw patties.

Drink only pasteurized milk, juice, or cider.

Wash fruits and vegetables thoroughly, especially those that will not be cooked.

Drink municipal water that has been treated with chlorine or other effective disinfectants.

Make sure that persons with diarrhea, especially children, wash their hands carefully with soap after bowel movements to reduce the risk of spreading infection.

FDA Statement on E. coli O157:H7 Outbreak in Spinach

Update: Tuesday, September 19, 2006

To date, 131 cases of illness due to E. coli infection have been reported to the Centers for Disease Control and Prevention (CDC), including 20 cases of Hemolytic Uremic Syndrome (HUS), 66 hospitalizations, and one death. Illnesses continue to be reported to CDC. This is considered to be an ongoing investigation.

There are 21 confirmed states: California, Connecticut, Idaho, Illinois, Indiana, Kentucky, Maine, Michigan, Minnesota, Nebraska, Nevada, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Virginia, Washington, Wisconsin, and Wyoming.

FDA advises consumers to not eat fresh spinach or products that contain fresh spinach until further notice.

If individuals believe they may have experienced symptoms of illness after consuming fresh spinach or fresh spinach-containing products, FDA recommends that they seek medical advice.

On 9/17/06, River Ranch, of Salinas, California, announced a voluntary recall of packages of spring mix containing spinach. River Ranch obtained bulk spring mix containing spinach from Natural Selections. The following brands are involved: Fresh N' Easy Spring Mix and Hy- Vee Spring mix containing baby spinach, distributed to retailers in Texas, Iowa and New Mexico. Product was

packed in 5 oz. bags and 5 oz. plastic trays. Products that do not contain spinach are not part of this recall.

On 9/15/06, Natural Selection Foods, LLC, of San Juan Bautista, California, announced a voluntary recall of all products containing spinach in all brands they pack with "Best if Used by Dates" of August 17, 2006 through October 1, 2006. These products include spinach and any salad with spinach in a blend, both retail and food service products. Products that do not contain spinach are not part of this recall.

Natural Selection Foods, LLC brands include: Natural Selection Foods, Pride of San Juan, Earthbound Farm, Bellissima, Dole, Rave Spinach, Emeril, Sysco, O Organic, Fresh Point, River Ranch, Superior, Nature's Basket, Pro- Mark, Compliments, Trader Joe's, Ready Pac, Jansal Valley, Cheney Brothers, D'Arrigo Brothers, Green Harvest, Mann, Mills Family Farm, Premium Fresh, Snoboy, The Farmer's Market, Tanimura & Antle, President's Choice, Cross Valley, and Riverside Farms.

The affected products were also distributed to Canada, Mexico, and Taiwan. No illnesses have been reported from these countries. FDA continues to investigate whether other companies and brands are involved.

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In Partnership for nearly 100 years, the National Park Service and the United States Public Health Service have worked together to protect the health of visitors in Americas Parks!

Program Websites:

Internal:

http://www.nps.gov/public_health/intra/index.htm

External:

http://www.nps.gov/public_health/