

The Pump Handle



"I had an interview with the Board of Guardians of St. James's parish, on the evening of Thursday, 7th September, and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."

John Snow, 1855

May 2011 Topics

- Flooding: It's Important to take Precautions!
- Flood Surveillance
- Outbreak of Shiga toxin-producing *Escherichia coli* in Germany
- North Dakota has Water and Mosquitoes – Will Human WNV Cases be Flooding in as Well?
- Summertime Foodborne Illness



Flooding: It's important to take precautions!

On May 13, 2011, the Army Corps of Engineers issued a news release indicating that run-off from mountain snowmelt, as well as increasing rainfall, has resulted in the need to release large volumes of water from Garrison Dam and Oahe Dam. This will be the first time in Garrison Dam history that water has been released from its spillway.

Since that time, cities along the Missouri River such as Bismarck and Mandan have been busy sandbagging and making preparations for flooding. On June 1, 2011, the North Dakota Department of Health (NDDoH) issued a news release regarding safety tips for flood response.

The Department of Health offers the following tips:

- When sandbagging, make sure to take breaks on a regular basis. Over-exertion can lead to health emergencies, including heart attacks. Additionally during periods of excessive heat, take a break in the shade or an air-conditioned vehicle.
- To avoid back injuries, use only the muscles in the legs to lift the load.

- Do not twist your body when moving the load. Instead take small steps with your feet turning until you are in the correct position.
- Drink plenty of water to avoid dehydration. With current cool temperatures, you may not feel thirsty, but it's important to drink something regularly. Water is the best choice.
- If you are injured, wash the wound with soapy water and seek medical care if needed. Make sure your tetanus vaccination is up to date (within 10 years).
- Wash your hands before you eat and drink, or use a hand sanitizer.
- Wear sunscreen to protect against sunburns and always wear mosquito spray to avoid being bitten. Information about West Nile virus and other arboviruses can be found at www.ndhealth.gov/WNV/.
- Take precautions when cleaning areas that contain mice droppings, nests or dead mice. For more information, see the "Hantavirus Pulmonary Syndrome" fact sheet available at www.ndhealth.gov/disease.
- Never use an electric generator, or other gas-powered equipment or tools indoors because of the risk of carbon monoxide poisoning.
- Always wear lifejackets when using watercrafts for flood-related work.
- As families and friends are busy with flood-related activities, it is important that children are properly supervised in a safe area.

The NDDoH has a wide variety of flood-related information available at www.ndhealth.gov/flood.

For daily river updates, visit the Army Corps of Engineers Missouri River Watch website, at us.vocuspr.com/Publish/520028/PRAAssetNWORiverwatch.xml.

For more information, contact the NDDoH, at 701.328.2378.



Flood Surveillance Update

Starting May 26, 2011, the North Dakota Department of Health (NDDoH) initiated emergency department-based surveillance for flood-related injuries in the Bismarck/Mandan region. Since that time there have been injuries reported ranging from sore backs to anxiety and broken limbs. No deaths have been reported to the NDDoH in relation to the flood. We will continue this surveillance until the flood event is over and most of the cleanup activities have ceased.

In addition to counting the number of injuries, the North Dakota Department of Health is monitoring for increases in communicable diseases that could be indicative of an outbreak. This information is important in seeing trends occurring in the population and possibly having the ability to warn the public about anything they can do to protect themselves.

For more information about flood cleanup, health and safety information, please visit www.ndhealth.gov/flood.



Outbreak of Shiga toxin-producing *Escherichia coli* in Germany

The Centers for Disease Control and Prevention (CDC) is monitoring a large outbreak of Shiga toxin-producing *Escherichia coli* O104:H4 (STEC O104:H4) infections ongoing in Germany. As of June 9, 2011, case counts confirmed by Germany's Robert Koch Institute include 759 patients with hemolytic uremic syndrome (HUS) and 21 deaths. HUS is a type of kidney failure that is associated with *E. coli* or STEC infections. In the United States, one confirmed and four suspected cases of STEC O104:H4 infections have been identified. Four of these cases recently have traveled to Hamburg, Germany, where they were likely exposed. One case of HUS in Massachusetts has been confirmed as matching the German outbreak strain. Among the four suspected cases, two are cases of HUS, one case each in Michigan and Wisconsin, and the other two suspect cases are still under investigation. One case is possible secondary transmission of an individual who had traveled to Germany. There have been no cases of the German outbreak strain of *E. coli* in North Dakota.

Substantial epidemiologic and trace-back evidence indicate that fresh sprouts produced by a farm in Lower Saxony are responsible for the current outbreak. German public health authorities currently recommend that people in Germany not eat raw sprouts of any origin. United States public health and regulatory authorities currently have no indication that any of these foods have been shipped from Europe to the United States.

For travel information related to this outbreak, please view the CDC Traveler's Health website at wwwnc.cdc.gov/travel/notices/outbreak-notice/2011-germany-europe-e-coli.htm. If you have further questions regarding *E. coli*, please call the North Dakota Department of Health, at 701.328.2378.



North Dakota Has Water and Mosquitoes – Will Human WNV Cases be Flooding in as Well?

Mosquitoes need water as part of their life cycle and statewide flooding and above normal moisture increases the potential for more mosquitoes this year. However, arboviral life cycles are complex and involve host and primary vector species. As a result, we cannot predict if there will be more human West Nile virus (WNV) cases this summer.

The NDDoH will monitor WNV activity in the state through surveillance activities that include reporting and testing sick horses, trapping and testing mosquitoes, monitoring illness in humans, and reporting and testing dead birds.

As of June 1, 2011, the NDDoH Division of Laboratory Services will offer free human WNV testing through September 30, 2011, on serum specimens from patients meeting any one of the following criteria and in the absence of a more likely clinical explanation:

Criteria I – Neuroinvasive Disease

- The presence of fever is required with at least one of the following:
 - Signs of brain dysfunction (e.g., altered mental status, confusion, coma, disorientation and stupor)

- Signs of other neurologic dysfunction (e.g., stiff neck, sensory deficits, abnormal reflexes or movements, paralysis and pleocytosis in cerebrospinal fluid)

Criteria II – Non-neuroinvasive Disease

- The presence of documented fever is required and should include at least one additional symptom such as:
 - Headache, myalgia, arthralgia, malaise, skin rash, photo-phobia, lymphadenopathy, etc.

Questions regarding laboratory testing may be directed to the Division of Laboratory Services, at 701.328.6272. For more information about WNV reporting and surveillance, visit the NDDoH West Nile virus website at www.ndhealth.gov/wnv.



Summertime Foodborne Illness

Incidence of infections associated with foodborne illnesses increase in the summer. Since summertime is when many people enjoy backyard barbecues, picnics or dinners around a campfire, it is important to remind people of proper handling and preparation of food to prevent illnesses this summer.

Improper handling and cooking of poultry products and ground beef are common sources of foodborne illnesses, such as salmonella, campylobacter and *E. coli*. These diseases can cause diarrhea, bloody diarrhea, abdominal cramping, nausea and vomiting. Young children and the elderly are at greatest risk for severe illness, including dehydration, infection of the bloodstream and kidney failure.

The following tips can help keep summer barbecues and outdoor trips safe from foodborne illness:

- Always wash your hands before preparing food, after handling raw foods and before eating. If warm running water and soap are not available, use an alcohol-based hand sanitizer.
- Do not utilize or drink water from a lake, stream or river.
- Keep cold foods – such as sliced fruits and vegetables, cold salads and meat trays – cold. During summer picnics, it is important to pack a refrigerator thermometer in your cooler to ensure the food in the cooler is kept at 41 degrees F or below.
- Keep raw foods separate from other foods.
- Completely thaw meat and poultry before grilling so it cooks evenly.
- Marinate food in the refrigerator, not on the counter. Poultry can be marinated up to two days. Beef, pork and steaks may be marinated up to five days.
- Cook foods properly. Cook meat to proper internal temperatures (www.fda.gov).
 - Chicken and Turkey, whole and parts to 165 degrees F.
 - Ground beef, pork, veal or lamb to 155 degrees F.
 - Fresh beef, pork, veal or lamb to 145 degrees F.
 - Fish to 145 degrees F.
- Wash fruits and vegetables before slicing and serving.

Some foodborne illnesses – including norovirus, hepatitis A, shigella and *E. coli* – also can be spread easily in contaminated water and from direct contact with infected people. For that reason, people who have diarrhea should not go swimming, work as food handlers or in a health-care setting, or attend day care. Prompt identification and reporting from physicians and laboratories are necessary to prevent the illness from spreading. Notify your local or state public health department for more information if any cases are identified associated with these risk factors.

For more information or to report a possible foodborne illness, call the North Dakota Department of Health, at 701.328.2378 or 800.472.2180, or visit www.ndhealth.gov/disease/GI.

Contributing authors of The Pump Handle include, Michelle Feist, Lindsey VanderBusch, Sarah Weninger, Julie Wagendorf, Tracy Miller, and Kirby Kruger. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Sarah Weninger of the Division of Disease Control at 701.328.2366 or by email at sweninger@nd.gov.

The pump handle picture in the title was obtained from the website www.ph.ucla.edu/epi/snow.html.



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