

membranes of the ear or nose can also allow for entry by disease-causing microorganisms. In general, children, the elderly and persons with immune system deficiencies are more susceptible to contracting an illness after exposure to waterborne bacteria.

How are bacteria samples collected?

Bacteria samples are collected at several locations within each designated swimming area. All samples are analyzed according to USEPA approved analytical methods.

When is a "Swimming Not Recommended due to High Bacteria Levels" sign posted?

A beach will be posted with a "Swimming Not Recommended due to High Bacteria Levels" notice if the state water quality standard for *E. coli* bacteria is exceeded. The standard consists of two components; a geometric mean and a one-time maximum. If the geometric mean of five consecutive *E. coli* samples exceeds 126 organisms/100 ml, the beach will be posted "Swimming Not Recommended due to High Bacteria Levels". The notice will remain in effect until the geometric mean of five consecutive samples is less than or equal to 126 organisms/100 ml. A beach will also be posted if the *E. coli* concentration exceeds 235 organisms/100 ml in consecutive samples. The notice will

be removed when the concentration is less than or equal to 235 organisms/100 ml.

Is it safe to eat fish from waters with high indicator bacteria levels?

Bacterial diseases are not generally transmitted to humans through ingestion of properly prepared fish. However, contact with the water while fishing increases the likelihood that a person may be exposed to or accidentally ingest the *E. coli* bacteria. Therefore, as a safety precaution, wash hands with soap and water following fishing.

Who should I contact for additional information?

For additional information contact a Natural Resources Specialist/Park Ranger at the following lakes:

- Saylorville Lake.....(515) 276-4656
- Lake Red Rock.....(641) 828-7522
- Coralville Lake.....(319) 338-3543

You may also call Rock Island District's Water Quality and Sedimentation Section at (309) 794-5581 or the state or local public health departments:

- State of Iowa.....(515) 281-7689
- Polk County.....(515) 286-3798
- Marion County.....(641) 828-2238
- Johnson County.....(319) 356-6040



**US Army Corps
of Engineers®**
Rock Island District



**US Army Corps
of Engineers®**
Rock Island District

Coralville Lake Beach Bacteria Monitoring



Coralville Lake
2850 Prairie du Chien Rd NE
Iowa City, IA 52240-7820
(319) 338-3543 x6300

Beach Monitoring Program

The Rock Island District of the U.S. Army Corps of Engineers (USACE) manages three* multi-purpose lakes in the State of Iowa: Saylorville, Red Rock and Coralville. The lakes were authorized for the primary purpose of providing flood control, however outdoor recreation is also an important benefit. Swimming beaches at each lake provide for the enjoyment of thousands of visitors each year.



In an effort to minimize the health risks associated with waterborne recreation, the Rock Island District has developed a beach bacteria monitoring program. The primary objectives of the program are to inform the public when monitoring data indicate that a temporary health risk may exist at specific beaches and to protect the public health. The program calls for monitoring indicator bacteria levels at the following beaches: Oak Grove and Sandpiper at Saylorville Lake; Whitebreast and North Overlook at Red Rock Lake; and Sandy Beach, Sugar Bottom and West Overlook at Coralville Lake.

*Rathbun Lake in Iowa is operated by the Kansas City District of USACE.

Frequently Asked Questions

What is being monitored and why?

The bacteria monitored at the beaches is *E. coli*. *E. coli* belongs to the fecal coliform group of bacteria, which occur naturally in the intestinal tract of warm-blooded animals (including humans). Unlike the well-publicized disease-causing strain of *E. coli*, most *E. coli* strains are harmless to humans. Studies performed by the U.S. Environmental Protection Agency (USEPA) show a strong correlation between *E. coli* bacteria levels and the incidence of swimmer-related illnesses. When *E. coli* bacteria concentrations at a beach are high, the likelihood of fecal contamination and the presence of disease-causing microorganisms are also high. Thus, the potential for becoming ill increases when *E. coli* bacteria levels are high.

How often are the beaches sampled?

Each beach is sampled once per week, on a Monday or Tuesday. An additional sample is collected later in the week if high bacteria concentrations are measured. Sampling commences two weeks prior to Memorial Day and extends to the second week following Labor Day.

What are the sources of the bacteria?

Fecal bacteria occur naturally in the intestinal tract of warm-blooded animals (including humans); therefore, a primary source of contamination is animal fecal matter. Significant non-human sources include livestock, waterfowl and gulls that frequent areas near lakes and streams. Fecal material is typically transported from land to a waterway following a heavy rainfall event. In rural areas, runoff from farm fields following manure application and discharges from manure holding/treatment facilities are potential sources of contamination. In urban areas, pet droppings can be a significant source of bacteria. Domestic sources include wastewater treatment plant discharges, leaking sewage lagoons, faulty septic systems, wastewater discharge from boats and dirty diapers.

What are the health risks associated with swimming in contaminated waters?

Gastroenteritis is the most common illness associated with swimming in contaminated waters. The symptoms of gastroenteritis include diarrhea, vomiting, chills, nausea and fever. In addition to diseases of the gastrointestinal tract, illnesses affecting the upper respiratory tract, eyes, ears and skin can also be contracted. Accidental ingestion of contaminated water is a common route of exposure to disease-causing organisms. Skin wounds or ruptures in the