



Public Health Update

Monday, April 19, 2004

Public Health: It's All About Service

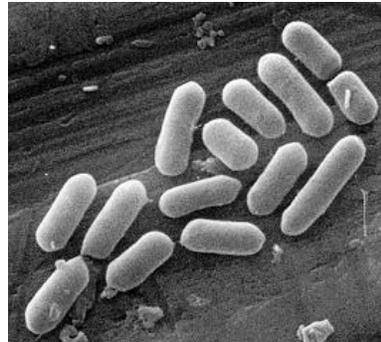
Sometimes when visiting a park, I'd get the impression that a utility foreman or a Superintendent, who ever I was working with, thought that I was "inspecting" the park to see what they were doing wrong.

Far from it. The practice of public health is much like being an ecologist. Over time, like the medical profession, our discipline has attempted to learn about how and why people become ill. Beyond the practice of medicine, however, we also attempt to understand the web of connections that lead to a state of wellness or of illness. In this regard, within public health, there are two main divisions: community health and environmental health. The former is focused on interactions of individuals and "hosts." Community health involves physicians and nurses treating people who are ill and often medically underserved. Helping people improve their health is the hallmark of this area of public health practice. Environmental Health focuses on understanding how our environment supports or detracts from health. It has been said that we live our lives in an ocean of interactions; with the biologic and physical world, with each other, and with the things we have created. It is the improvement of human health through the deepest understanding of this sea of forces that is the practice of environmental health.

Our primary work within the NPS Public Health Program is in environmental health. As such, our job is not finding out what a park is doing "right" or "wrong," but rather to understand each location, its unique character, and how this setting is supportive of health or what hazards it might create.

Understanding the cycles of disease and the nature of each park allows us not only to determine what hazards might exist, but also to evaluate how those hazards might interact with park operations and visitor activities. We also try to determine how much control

(Bacteria imaged with an electron microscope)



a park staff has over these intersections of the cycles of disease and the cycles of park activity. In this step, as one of our tools, we might compare the degree of control that a unit has over key issues against NPS policy or a federal/state health regulation. But these are only comparisons, or benchmarks, never to be substituted for the holistic practice of public health.

We're not regulators, our visits to the parks are not for the purpose of determining compliance. Even though we give parks feedback about compliance with health policies and laws, our broader task is to understand each system and to use that understanding to **enable** each park to better protect their visitors and staff.

The staff of the NPS Public Health Program are your consultants, highly trained and experienced public health professionals, never interested in placing blame, only to serve.

By: CAPT Chuck Higgins, Director

Temporary Food Events

Each year millions of people flock to the National Parks to attend celebrations of our natural and cultural history. These special events range in size from dozens to upwards of a million, and occur across the National Park Service system. While each event is unique there are public health aspects to consider, such as temporary food service, drinking water availability, wastewater disposal, and vector-borne diseases. A major attraction of typical celebrations is the sale of foods that are associated with the theme of event. The Public Health Program dedicates a significant amount of time to ensuring a high level of food safety through periodic evaluations of park concessions operations, and approaches temporary food service establishments in the same manner.

A temporary food establishment (TFE) is one that operates for a period of no more than 14 consecutive days in conjunction with a single event or celebration that is open to the public. TFEs present special challenges to public health personnel that have the responsibility of evaluating them. While infrastructure limitations and environmental influences create unique challenges, TFE operators are still responsible for meeting the food safety requirements outlined in the FDA Food Code.

The bulk of special events in the National Park Service occur on the National Mall in Washington, DC, as well as parks in urban areas such as Gateway and Golden Gate National Recreation Areas. However, the number of small, one-time events is increasing across the system. Due to a number of factors, including limited physical facilities and equipment, food



preparation in TFE operations can be potentially hazardous. According to five-

year summary data published by the Centers for Disease Control for the period 1988 through 1992, the most commonly reported food preparation practices that contributed to foodborne disease were: improper holding temperatures; poor personal hygiene; inadequate cooking; contaminated equipment; and food from unsafe sources. These factors may be more evident at TFEs, which may increase the risk of foodborne illness.

The Public Health Program is available for consultation on all aspects of public health at park special events. This consultation may include onsite evaluation of the operations or assistance with the review and selection of vendors and menus, which can be conducted from a distance via email or telephone. A complete vendor application can be found at the [Public Health Program](#) website. Please feel free to contact the Public Health Consultant in your region for assistance with your special events.

By: LCDR Jason Thomas, Deputy Director

West Meets West: West Nile Virus Likely to Impact West Coast this Summer

West Nile Virus (WNV) is likely to spread throughout the West this year including California and Nevada. The bulletin below describes the first WNV positive crow found in California this year.

Public Health Bulletin (taken from ProMED, a public health electronic bulletin board)

California: West Nile virus positive crow found in south of state

West Nile virus has been detected in 3 dead birds in Southern California, the state Department of Health Services has announced. The virus was found in a dead crow in the San Gabriel Valley on Thu 1 Apr 2004 and in 2 local house finches in Orange County on Wed 31 Apr 2004.

"West Nile virus has been detected earlier than expected in 2004, probably due to unseasonably warm weather," state health director Sandra Shewry said in a prepared statement. "The state's surveillance system is closely monitoring for any evidence of the virus across the state."

The virus has not yet been detected in humans in 2004. During 2003, 3 people, all from Southern California, tested positive for the virus.

California is one of the last states to be affected; in 2003 the virus was linked to 9389 illnesses and 246 deaths in 46 states.

 Humans are infected by the bite of a WNV-infected mosquito. Most human infections do not result in illness, with only 20% of infections developing into West Nile fever. Human disease is characterized by a febrile, flu-like illness with quick onset, usually 3-6 days, and moderate to high fever lasting 3-5 days. Other typical symptoms include fever, headache, and body aches, occasionally with a skin rash on the trunk of the body and swollen lymph glands. The symptoms of severe infection (West Nile encephalitis or meningitis) include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. The majority of infections are asymptomatic, with 1 in 150 resulting in severe clinical illness. The virus is not directly transmitted from person to person, but indirect transmission through transfusion of infected blood, transplantation of infected organs, and

consumption of infected breast milk has been observed.

To protect against mosquito bites and thereby reduce the chance of illness:

1. Apply insect repellent containing DEET (N, N- diethyl- meta- toluamide) when you're outdoors.
2. When possible, wear long-sleeved clothes and long pants treated with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing. Do not apply repellents containing permethrin directly to exposed skin. If you spray your clothing, there is no need to spray repellent containing DEET on the skin under your clothing.
3. Consider staying indoors at dawn, dusk, and in the early evening, which are peak mosquito biting times.
4. Limit the number of places available for mosquitoes to lay their eggs by eliminating standing water sources.

For additional information consult the NPS ZED - WNV Main Page website. http://www.nps.gov/public_health/zed/wnv/wnv.htm

By: CDR Paul Robinson,
 Regional Public Health Consultant, PWR



Backcountry: Out of Sight, but Hopefully, Not Out of Mind

Besides being eaten by hungry bears, just out of their dens, or getting lost in an endless pattern of dunes that all “look the same,” as our visitors enter the backcountry this spring, a few public health issues will be tagging along.

Probably number one is safe water to drink. On a short journey, of course, water can be carried in, but oh my how heavy that stuff can be!

Check out any bulletin board at a trailhead in the NPS system and you are extremely likely to see an instruction or warning about safe drinking water. Even so, it never hurts to review our effort, including backcountry office discussions with each group as they register.

Human waste... well now here's where working in public health has a down side... sometimes called the “poop people,” we are ever ranting about this subject. Few advances in public health can match the effectiveness of simply disconnecting our water supply from the waste disposal system. However, in recent years, more and more of our backcountry areas appear to be affected by what has become the ever present primate scat!

A little basic care and courtesy go a long way in this subject area, keeping away from water and camp areas, for example. But for some reason, when people get out of sight of civilization, even though they know better, they just can't resist the thrill of doing what they oughtn't – who knows why.



In some heavy use areas, parks are requiring a “haul it in, haul it out” rule to human waste, while in other areas, standard NPS rules apply. Whatever your policy and conditions, the reality is that a passive brochure or trailhead sign is probably not enough. Appealing to a sense of stewardship and ensuring that people understand the huge benefits to human health from careful disposal of waste, is something that can only occur with a personal conversation.



The basic National Park Service policies for food, water, and waste sanitation are stated in Directors Order 83, sections A, B, and C and are delineated in greater detail in the accompanying reference manual to each section above. However, there are numerous activities which occur in the backcountry of many National Parks that sometimes create sanitation issues that require solutions different than those for more permanent facilities. Examples of such activities include but are not limited to, white water rafting, horse packing, bicycle tours, jeep tours, snowmobile tours, trail crews, and backcountry ranger cabins.

While conditions in the backcountry are often different from developed areas, the basic principles of disease prevention are the same (e.g. the need to control the presence or growth of disease causing microorganisms by properly treating drinking water and/or by maintaining foods at proper temperature).

RM 83H is intended to provide practical guidance to help NPS concessionaires and personnel to meet the intent of DO- 83, sections A, B, and C under backcountry conditions.

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