



July 15, 2004

Office of Water Quality Water-Quality Information Note 2004.13

Subject: Field Methods—working in contaminated waters and submission of samples

This Note is a reminder to all individuals involved in collecting and processing water-quality samples from sewage treatment plants, sewage outfalls, urban runoff, and other places where biological hazards may be present to take appropriate precautions. It also provides instructions for submitting samples to the National Water Quality Laboratory (NWQL) from sources that are known or thought to be contaminated.

Personal protection: The following information is from Chapter 9 of the *National Field Manual for the Collection of Water-Quality Data* (Lane and Fay, 1997):

To minimize exposures to and effects from contaminated water:

- ▶ Receive required inoculations. The USGS immunization program requires inoculations for field personnel working around polluted water (WRD Memorandum 96.29). Employees receive inoculations for waterborne pathogens such as typhoid, tetanus, and hepatitis A and B at USGS expense. Contact your safety officer about receiving appropriate inoculations before you sample.
- ▶ Use personal protective equipment, including respiratory equipment [if necessary] (certification required), when working over turbulent, polluted flows, and in shelters containing evidence of excrement (see WRD Memorandums 94.30 and 95.06). Pathogens can enter your body through many openings such as your mouth, eyes, nose, cuts, scrapes, or chapped skin.
- ▶ Wear rubber boots, coveralls or aprons, gloves, and splash protection (a disposable dust mask offers splash and dust protection at a very low cost).
- ▶ Do not ingest pathogens or other contaminants. Never eat or drink while sampling or put pencils or other items in your mouth, and never store food or drink in sample coolers.
- ▶ Carry antibacterial soap [or waterless hand cleaner]; wash before leaving the site. Remember to wash again after unloading supplies.
- ▶ Disinfect all contaminated surfaces as soon as possible.
- ▶ Handle bacteria plates carefully and autoclave them before disposal. An aseptic technique for bacteria enumeration is described in Chapter A7.1 of the *National Field Manual*.

Sample handling and shipping: Communicate known or suspected contamination to all personnel who could come in contact with the sample. Without proper labeling and communication, personnel are placed at risk. This includes your immediate coworkers, the workers handling your coolers in shipment, laboratory personnel, and many others. If you are sending samples that may be hazardous to NWQL personnel, please **place a strip of yellow tape completely around the cooler**. To discuss handling of your samples by National Water Quality Laboratory (NWQL) personnel, please contact lablogin@usgs.gov or labhelp@usgs.gov (See NWQL [Rapi-Note 03-041](#)).

Questions about safety issues should be directed to your District Safety Officer and/or Regional Safety Manager [<http://1stop.usgs.gov/safety/personnel/directory.shtml>].

Reference:

Lane, S.L., and Fay, R.G., October 1997, Safety in field activities: U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chap. A9, accessed June 30, 2004 at <http://pubs.water.usgs.gov/twri9A9/>