



Environmental Health Policy and Procedure No. 00-1

Date: January 11, 2000
To: Environmental Health Staff
From: Jonathan J. Krug, Director of Environmental Health
Subject: Ocean Water Sampling Program Procedures

COPY

Effective Date: This Policy and Procedure is now effective and shall remain in effect until cancelled or superseded.

PURPOSE:

The purpose of this standard procedure is to establish protocol to be followed by Environmental Health staff in the sampling of ocean water, review of sampling data, notification and reports.

I. PREPARATION PRIOR TO SAMPLING

A. Documentation

1. The Ocean Water Lab Slip (Attachment 1) is to be used for the ocean water sampling program. Clear and positive identification of the samples should include: date and time collected, specific sample location and any number or letter designation specific for that site that will aid both the sampler and the lab in identifying the sample, and sample collector's name. This basic information should be on the sample bottle as well as the lab slips.
2. Prepare all sample bottle labels in advance.

B. Notification of the lab and other interested parties

1. Do not conduct any sampling without prior knowledge and approval of the Lab Supervisor or Director.
2. For routine sampling events, notify the lab at least 24 hours in advance by identifying number of samples and sampling date.
3. In the event that it is necessary to resample or take an emergency sample, call the lab first to forewarn them of this and give them sufficient time to set up.

C. When to sample:

1. Routine sampling on Monday (or Tuesday, if Monday is a holiday).

2. Resampling of beaches shall be performed when a single beach sample exceeds standards, or when the mean of the logarithms of the results of at least five weekly samples during any 30-day sampling period exceeds standards. Resampling or emergency sampling on any day as necessary. However, keep in mind that the Sonoma County Public Health Lab uses the Colilert and Enterolert and therefore needs to read the sample results at 18 and 24 hours. Thus, it is preferable that samples be taken and delivered to the lab no later than Thursday at 3 p.m.

D. Where to sample:

Since the goal is to warn the public of any potential pollution hazard, try to collect a sample that is representative of the worst-case scenario. See the attached list of the beaches to be sampled and maps of these beaches (Attachment 2).

II. EQUIPMENT LIST

- ♦ Cooler of sufficient size and thermal capabilities to ensure proper temperature control of samples
- ♦ Safety vest
- ♦ Hat
- ♦ Camera
- ♦ Binoculars
- ♦ Tide chart
- ♦ Sunscreen
- ♦ Slip-resistant footwear
- ♦ Maps of the area
- ♦ Rubber gloves
- ♦ First-aid kit
- ♦ Cell phone
- ♦ Administrative supplies, including a list of sites, pens, pencils, marking pens, paper, etc.
- ♦ Clipboard
- ♦ Parking pass for Sea Ranch access
- ♦ Thermometer to check cooler temperature

III. SAMPLE COLLECTION

A. Collection of sample:

1. Clamp bottle to sampling stick.
2. Remove lid just before sampling.

3. Sample approximately 4–24 inches below the water surface.
4. Scoop across incoming wave and replace lid. Make sure as little sand as possible enters the bottle. Leave ample air space in bottle to facilitate mixing by shaking, before examination.
5. Do not contaminate bottle or lid by touching inside of bottle or lid. If bottle or lid is dropped while opened, discard and use a new one.
6. Decant sample to 100-ml mark.
7. Make sure lid is secured to prevent leakage.
8. Information that could be noted by the sampler at the time of collection includes: air temperature, wind direction and intensity, wave size, current direction, water temperature, evidence of sewage, evidence of kelp or algae, number of spectators, birds and other animals in the vicinity. Complete this information on the Ocean Water Lab Slip (Attachment 1).
9. Return to the vehicle immediately and place the bottle in a clean ice chest for transport to the laboratory. An ice chest with sufficient blue ice bags should be used routinely to maintain temperature below 10° C (50° F).
10. Transport to the laboratory. Samples held for longer periods should be kept below 10° C (50° F). Check cooler temperature periodically to be sure samples stay below 10° C (50° F).

B. Safety

1. Although safety may not seem to be a big issue when collecting water samples, anyone who has participated in a sampling program, whether urban or rural, can attest to the risks involved and the importance of exercising caution and awareness when out in the field. In all cases, personal safety comes first and should never be jeopardized for the sake of a sample. If a situation appears too risky, call your supervisor for advice or leave and return when conditions have improved.
2. All individuals collecting samples should be educated about the importance of personal safety issues, which include: appropriate clothing, skin protection, communication and personal protection when in isolated or remote areas, and vehicle safety.
3. It is highly recommended that all samplers be competent swimmers.
4. It is recommended that all samplers have some basic knowledge of first aid.
5. All individuals should receive some instruction about local conditions that could potentially put them at risk:
 - a. Identification of poison oak and stinging nettle.
 - b. Native wild animals (e.g., ticks, rattlesnakes).

- c. Ocean and stream factors (pollution contaminants, including chemical and biological pathogens, underwater obstacles, waves, currents, undertows and tides).
 - d. Terrain considerations (rocks in and out of the surf zone or along stream beds, slippery banks during wet weather conditions, debris on beaches, potential landslides, etc.).
6. Each sampler should notify the Program supervisor of his or her daily plans for sampling and insure that someone in the office is aware of his or her schedule.
 7. Each sampler, when out in the field, should carry some means of two-way communication, preferably a cellular phone or a pager.

C. Lab

Submit samples and Ocean Water Lab Slip to the Public Health Laboratory before 3 p.m.

IV. Results, Notification and Reports

A. Review Data

Check the data to ensure that the numbers shown in the results from the laboratory do not look unusual or contrary to the norm. Resampling may be necessary in these cases.

B. Data Entry

Enter the results in the Environmental Health Beach Testing database (see Attachment 3).

C. Filing

Return ocean water lab slips to the Program Clerk for filing.

D. Notify Government Agencies, Other Interested Parties, and News Media

1. See attached list of government agencies and interested parties to be notified when a beach is to be posted or closed (Attachment 4).
2. See attached sample News Release (Attachment 5) to be used when appropriate to notify the public of postings/closures. The Executive Secretary of the Department's Administrative Section will send out the news release.
3. Ensure that a supervisor or other staff member carefully proofreads the data prior to dissemination.

E. Hotline Recording

Change the hotline recording, if necessary, at phone number 565-6552. See Attachment 6 for examples of information to include in the hotline recording.

V. Posting and Closures

A. Posting

Post a beach with a warning sign when a bacteriological standard is exceeded. Posting with a warning sign alerts the public that there may be an increased risk of illness associated with water contact (see Attachment 7 flow chart for beach posting and closure).

B. Closure

Post a beach with a closure sign where there has been a sewage spill or repeated incidence of exceeding bacteriological standards from an unknown source (see Attachment 8 for examples of warning and closure signs).

VI. Law and Regulations

Attachment 9 is a copy of Assembly Bill 411. Attachment 10 is a copy of the regulations for implementing Assembly Bill 411.