Marine Routine Sanitary Survey for Recreational Waters

EPA 820-F-23-005
April 2023

INTRO: BASIC LOCATION INFORMATION

Name of beach:	Date(s) of survey:
Beach ID:	Time(s) of survey:
Name of waterbody:	Name(s) of surveyor(s):
Sampling station(s)/ID:	Surveyor affiliation:
WQX organizational ID:	
Sampling location Latitude:	Longitude:
Dates of swim season Start:	End:

QUALITY ASSURANCE

Will the data collected use an approved Quality Assurance Project Plan (QAPP)? yes no

PART 1: WEATHER AND GENERAL BEACH CONDITIONS

Weather Conditions

Survey the weather using the method of your choice. You may use the National Weather Service as your source.

Air temperature: _____ °C or °F	Method for air temperature: (check one) □ Liquid-in-glass therm. □ Electronic thermometer □ Weather app □ Weather report: from airport or weather station? □ Other: _____
Dewpoint temperature: _____ °C or °F	Method for air temperature: (check one) □ Weather app □ Weather report: from airport or weather station? □ Other: _____
Relative Humidity (%): _____ °C or °F	Method for relative humidity: (check one) □ Weather app □ Weather report: from airport or weather station? □ Other: _____
Barometric Pressure: _____ units: _____ Wind speed: _____ units: _____	Method for temperature: (check one) □ Weather app □ Weather report: from airport or weather station? □ Other: _____
Wind gust speed: _____ units: _____ Wind direction: _____ Is the wind: (circle one) Onshore or Offshore	Method for wind speed: (check all that apply) □ Wind vane for direction □ Weather app □ Wind sock for direction/speed □ Anemometer for wind speed □ Beaufort scale for wind speed □ Aerovane for wind direction/speed □ Weather report: from airport or weather station? □ Other (specify): _____

If you collected wind speed from a local weather station, how far were you from the station: _____ mi or km

How recent was the last rain event: (check one) □ 0-24 hrs □ 24-48 hrs □ 48-72 hrs □ 72+ hrs	Rain intensity: (check one) □ Misting □ Light rain □ Moderate rain □ Heavy rain □ Other:_____
Total measured rainfall: _____ in or cm	Distance to the gauge/station when recording rainfall amount: _____ mi or km

Method for rainfall: (check one) □ Rain gauge □ Weather report □ Weather app □ Other (specify): _____

Sky condition/amount of cloud cover: (circle one)	Sunny/ No clouds	Mostly sunny/ 1/8 to 2/8	Partly sunny/ 3/8 to 1/2	Mostly cloudy/ 5/8 to 7/8	Cloudy/ Total coverage

Method for weather conditions: (check one) □ Visual observations □ Weather app □ Other (specify): _____

Beach Conditions

What are the waves like right now: (estimated, check one)

□ Calm (no waves) □ Normal (1-2 ft high, estimated) □ Rough (>2 ft high, estimated)

How tall are the waves: _____ ft or m	Is the wave height measured or estimated? (check one) □ Measured □ Estimated

Method for measuring wave height: (check one) □ Visual examination of wave height □ Graduated stick and ranging pole
□ Other:_____

Tidal Phase: (check all that apply)

□ High Tide - the highest level of the tide (high water)

□ Low Tide - the lowest level of the tide (trough)

□ Spring Tide - observed high tides are higher and low tides are lower than average (occurs when moon is at new phase and full phase)

□ Neap Tide- observed high tides are a little lower and low tides a little higher than average (occurs during the 1st and 3rd quarter moon, when the moon appears "half full")

Tidal Currents: (check one) □ Ebb current (an outgoing tide) □ Flood current (an incoming tide) □ Other:_____

Describe the reference point (e.g., time [hours] since last high tide): _____ Orientation of tide to the beach:_____

Current longshore speed: (see user manual on how to estimate longshore speed) _____ units: _____ Longshore direction: _____

Method for longshore speed: (check one) □ Stick with fishing reel with water balloon on end □ Ball and tether □ Other (specify): ___

Are there rip currents present: yes no If yes, describe:

Additional comments or observations

PART 2: WATER QUALITY

Bacteria

List bacteria samples collected at the beach. Potential pollution sources, if applicable, can be recorded in Part 4.

Sample Point	Sample Number	Location (lat/long)	Date & Time	Parameter (enterococci, E. coli, etc.)	Comments

General Water Quality

Water temperature: _____ °C or °F | Water color: (circle one) Clear Blue Brown Green Red Other:_____

Method for water temperature: (check one) □ Multiprobe □ Electronic meter □ Graduated thermometer
□ Report from local radio station □ Report from NOAA weather band radio □ Other (specify): _____

Has the water color changed since the last visit? yes no don't know If yes, describe:

Select the best description of the water smell: (circle one) None Septic Algae Sulfur Other: _____

pH: _____ | Method for measuring pH: (check one) □ Handheld electronic meters (specify)_____
□ pH strips □ Field test kits □ Other:_____

Oxidation Reduction Potential(ORP): _____units:_____ | Method for ORP(specify): _____

Total Dissolved Solids(TDS): _____ units:_____ | Method for TDS(specify): _____

How did you measure turbidity? (check one) □ Observed: (check one) □ Clear □ Slightly Turbid □ Opaque
□ Measured: NTU value: _____ Secchi disc depth: _____

What method was used to measure the turbidity of the water: (check one) □ Simple visual observation □ Visual test kit
□ Titrimetric test kit □ Nephelometer/Turbidimeter □ Other (specify):_____

Salinity: (check one) □ 0-5 ppt □ 5-15 ppt □ 15-40 ppt | Conductivity: _____ units:_____

Total Suspended Solids(TSS): _____ units:_____ | Method of TSS(specify):_____

Dissolved Oxygen(DO): _____ units: _____ | Method of DO(specify):_____

Dissolved Organic Carbon(DOC):_____ units: _____ | Method of DO(specify):_____

Describe other measurements taken and report values:

Document water quality with photographs and detailed descriptions

Additional water quality observations

PART 3: PEOPLE (NUMBER OF BEACH USERS)

Are there bathers or recreators (swimmers, boaters, waders, etc.) present at the beach or waterbody? yes no

Total people in water: _____ + Total people out of water: _____ = Total people at the beach: _____

Total number of boats: _____

Report activities observed on the beach and in the water. Take photographs, if possible.

Activity (swimming, fishing, etc.)						
Approximate # of people participating						

Add any comments and observations about the activities above

Describe notable bather activities that could affect water quality (Example: babies in disposable diapers in the water):

Method for numbers of people participating in various activities: (check one) □ Counting by surveyor
□ Counting by lifeguard □ Photos □ Turnstiles □ Other:_____

PART 4: POTENTIAL POLLUTION SOURCES

Identify visible sources of pollutants up to 500 feet from the beach or waterbody boundary. Quantify sources and take photos if possible.

Type of Source	Discharge Source Name	Discharge Source Amount (H, M, L)	Discharge Flow Rate	Discharge Volume	Discharge Source Characteristics
River					
Wetland drainage					
Pond					
Outfall/Pipe (e.g., stormwater)					
Septic (e.g., leaking pit latrine)					
Runoff (impervious surfaces)					
Homeless encampments					
Other (specify):_____					

Did you collect samples and complete the Bacteria Samples section in Part 2? yes no If no, describe why not:

How did you identify the source of discharge? (check one) □ Visual observation □ WWTP Notification/Report
□ Other (specify):_____

How did you measure flow/velocity or volume? (check one) □ Mechanical flow meter □ Electric flow meter
□ USGS gauging station □ WWTP notification/report □ Orange (float) and stopwatch □ Other:_____

Are tidal pools present? yes no If yes, how many: _____ What is their average size: _____ units: _____

Floatables and Debris

Are floatables present in the water? yes no If yes, select all types of floatables found: (check all that apply)

□ Street litter (e.g., cigarette filters)
□ Food-related litter (e.g., packaging/containers)
□ Medical items (e.g., syringes)
□ Sewage-related (e.g., tampons, condoms)
□ Building materials (e.g., wood/siding)
□ Fishing-related (e.g., fishing line, nets, lures)
□ Household waste (e.g., household trash, plastic bags)
□ Other: _____

Method for determining floatables presence: (check one) □ Visual observation □Cleanup event results □ Other: _____

Is there debris or litter present on the beach? yes no

Select the amount (%) of beach debris on the beach: (check one)
□ None □ Low (1% - 20%) □ Moderate (21%- 50%) □ High (>50%)

Select the types of debris found: (check all that apply)

- □ Street litter (e.g., cigarette filters)
- □ Food-related litter (e.g., packaging/containers)
- □ Medical items (e.g., syringes)
- □ Sewage-related (e.g., tampons, condoms)
- □ Natural debris (e.g., driftwood, algae)
- □ Building materials (e.g., wood/siding)
- □ Fishing-related (e.g., fishing line, nets, lures)
- □ Household waste (e.g., household trash, plastic bags)
- □ Tar/Oil (e.g., tar balls)
- □ Oil/Grease (e.g., oil slick)
- □ Other: _____

Method for determining debris presence: (check one) □ Visual observation □ Cleanup event results □ Other: _____

Algae

Is algae present in the nearshore water and/or beach? yes no don't know

Select the amount (%) of algae in nearshore water: (check one)

□ None □ Low (1%–20%) □ Moderate (21%–50%) □ High (> 50%)

Select the amount (%) of algae on the beach: (check one)

□ None □ Low (1%–20%) □ Moderate (21%–50%) □ High (> 50%)

Method for determining amount and color of algae in nearshore water and beach: (check one)

□ Visual observation □ Other: _____

Circle the types of algae found: (check all that apply) □ Periphyton (attached to rocks, stringy) □ Globular (blobs of floating material)

□ Free floating (no obvious mass of materials) □ Other: _____

Algae colors: (check all that apply) □ Light green □ Bright green □ Dark green □ Yellow □ Brown □ Other:_____

Is the nearshore water discolored? yes no don't know

If yes, specify the color: (check all that apply) □ Clear □ Green □ Dark Red □ Brown □ Yellowish □Other:_____

Harmful Algae Blooms

Is there presence of harmful algal blooms? yes no If yes, photograph and describe:

Method for identifying harmful algal blooms in nearshore water and beach: (check one)

□ Field guide or internet site for taxonomic identification □ Other:_____

Are there mats or scum in nearshore waters? (check all that apply) □ Mats-floating □ Foam □ Scum □ None

Are there dead fish or other dead wildlife present with bloom? yes no

Have any illnesses (e.g., itchy throat, cough, gastrointestinal) been reported by local or state health departments? yes no

If yes, describe:

Is algal toxin monitoring conducted? yes no don't know If yes, have algal toxins been detected? _____

Have algal species been identified? yes no don't know If yes, specify the species: _____

Presence of Wildlife and Domestic Animals

Are wildlife and domestic animals present? yes no If yes, document presence with photographs.

Type	in Air	in Water	at Beach	Type	in Water	at Beach
Geese				Dogs		
Gulls				Horses		
Shorebirds				Iguanas		
Ducks				Mongooses		
Pigeons				Rodents(specify):_____ __		
Other:_____				Turtles		
Other:_____				Other:_____		
Other:_____				Other:_____		

Method for determining presence of wildlife and domestic animals: (check one)

□ Counting using hand-held counter and if necessary, binoculars □ Other:_____

Are dead birds found on the beach? yes no If yes, specify the number and species of dead birds

Type	Common loon	Herring gulls	Ring-billed gulls	Double crested cormorants	Long-tailed ducks	White-winged scoter	Horned grebes	Red-necked grebes	Other: _____
Number Dead									

Method for determining the number of dead birds: (check one)

□ Counting using hand-held counter and if necessary, binoculars □ Other:_____

Method for identifying dead birds: (check one) □ Field guide or internet site for taxonomic identification □ Other:_____

Are dead fish found in the waterbody or at the beach? yes no

If yes, document with photographs and specify the number of dead fish found on the beach or in/at the waterbody

Method for determining the number of dead fish: (check one): □ Visual observation □ Other:_____

Additional comments or observations on pollution sources, algae, or animals. Describe any photos taken.