

COMMON QUESTIONS REGARDING WATER CONDITIONS

Hawaii Department of Health
Clean Water Branch

CONTENTS

The Department of Health Clean Water Branch (CWB) has compiled this FAQs to provide basic information on common questions we have received regarding unusual water conditions. Often these water conditions are the result of naturally occurring processes or conditions and not the result of human pollution.

This FAQs contains:

- ▶ Pictures of common unusual water conditions and their likely cause(s);
- ▶ Some steps you can take to protect water quality; and
- ▶ Contact information for different organizations that may be of assistance for various water pollution issues/concerns.

SEA SAWDUST

ALSO KNOWN AS: TRICHODESMIUM

WHAT IS IT?: CYANOBACTERIA

CHARACTERISTICS:

OPAQUE, BROWN HUE SIMILAR TO SAW DUST
OR CHOPPED BITS OF HAY
GATHERS ON SURFACE OF WATER

SEASONAL TIME-PERIOD:

NOVEMBER - MARCH

CAUSE :

WARM WATERS, LOW NUTRIENTS, AVAILABLE LIGHT,
STATIONARY WATER/ SLOW MOVING WATER



Photo by: Department of Health Clean Water Branch Enforcement



PINK STREAM

WHAT IS IT?: HALOBACTERIA THAT THRIVES IN WATER CONTAINING HIGH SALT

CHARACTERISTICS:
PINK HUE IN SALT WATER

SEASONAL PERIOD:
LOW RAIN / DROUGHTS

CAUSE :
HIGH EVAPORATION AND LOW FRESHWATER INPUT CREATING ENVIRONMENT THAT IS TWICE THE SALINITY OF OCEAN WATER





LYNGBYA ALGAE

WHAT IS IT?: CYANOBACTERIA

CHARACTERISTICS:

BLUE-GREEN-BROWN-BLACK COLORING

CAN FORM DENSE MATS AT THE BOTTOM OF WATERBODIES



SEASONAL TIME-PERIOD:

SUMMER

CAUSE OF GROWTH:

WARM SHALLOW WATERS, HIGH NUTRIENTS, AVAILABLE LIGHT, STATIONARY WATER/ SLOW MOVING WATER

KNOWN TO BE A STUBBORN ALGAE



Photo by: Department of Health Clean Water Branch Enforcement



Photo by: Carrie Stevenson, UF IFAS Extension

IRON BACTERIA

WHAT IS IT?: IRON-LOVING BACTERIA

CHARACTERISTICS:

REDDISH BROWN SIMILAR TO RUST CAN CREATE A RAINBOW SHEEN IN WATER

SEASONAL TIME-PERIOD:

NO IDENTIFIED SEASON

CAUSE :

RICH IRON ENVIRONMENT THAT CAN OCCUR IN SOIL AND SHALLOW WATER



BOG SHEEN

WHAT IS IT?: IRON BACTERIA CREATING RAINBOW SHEEN

CHARACTERISTICS:

- RAINBOW / IRIDESCENT SHEEN SIMILAR TO OIL OR GASOLINE ON WATER
- WILL NOT SMELL LIKE PETROLEUM INSTEAD HAVE AN EARTHY SCENT
- IF THE SHEEN IS POKED WITH A STICK AND BREAKS APART IT WILL LIKELY BE A NATURAL FILM, IF IT COMES BACK TOGETHER IT MAY BE PETROL BASE

SEASONAL TIME-PERIOD:

NO IDENTIFIED SEASON

CAUSE :

IRON BACTERIA IN IRON RICH ENVIRONMENT



FOAM

WHAT IS IT?: DIE-OFF OF AQUATIC PLANTS

CHARACTERISTICS:

- WHITE OR BROWN COLOR
- PRESENCE OF DECOMPOSING PLANTS OR ORGANIC MATERIAL IN THE WATER
- IF TOUCHED, FEELS LIGHT AND NOT SLIMY



SEASONAL TIME-PERIOD:

NO IDENTIFIED SEASON

CAUSE :

DECOMPOSING ORGANIC MATERIAL



BLACK WATER

WHAT IS IT?: SLOW MOVING WATER FLOWING THROUGH FORESTS, SWAMPS OR WETLANDS

CHARACTERISTICS:

- DARKLY STAINED, RESEMBLING BLACK TEA
- TYPICALLY MORE ACIDIC
- TENDS TO HAVE HIGH LEVELS OF DISSOLVED ORGANIC CARBON



SEASONAL TIME-PERIOD:

NO IDENTIFIED SEASON

CAUSE :

RELEASE OF TANNINS FROM PLANTS



Fig. 3 Faecal pellet of a green turtle washed ashore at Kualoa Beach.

Photo by: Water Resource Research Center, University of Hawaii at Manoa



Photo by: Department of Health Clean Water Branch Enforcement

TURTLE POOP

WHAT IS IT?: FECAL MATTER CREATED BY SEA TURTLES FOUND ON BEACH OR FLOATING IN OCEAN

CHARACTERISTICS:

BROWN OR BLACK IN COLOR
SMALL TO MEDIUM SIZE CYLINDRICAL PELLETS
SIMILAR TO PIG OR HUMAN FECES

SEASONAL TIME-PERIOD:

NO IDENTIFIED SEASON

CAUSE :

SEA TURTLES



Photo by: Department of Health Clean Water Branch Enforcement

SOAPY BUBBLES ON RAINY DAYS

WHAT IS IT?: WHITE BUBBLES CAUSED BY TREES IN THE SAPINDACEAE FAMILY

CHARACTERISTICS:

SMALL/MEDIUM WHITE BUBBLES FOUND ALONG ROADWAYS OR NEAR TREES IN THE SAPINDACEAE FAMILY AFTER RAIN

SEASONAL TIME-PERIOD:

AFTER RAIN EVENT

CAUSE :

CRUSHED "SOAP" BERRIES OR SAPPY SAPINDACEAE TREES MIXING WITH RAIN WATER

Source:	Natural	Man-made
Colour:	white, light tan or yellow to brown	white
Smell:	earthy, organic	fragrant or perfumey
Accumulation Pattern:	many locations along banks, eddies, pools	near the source
Persistence:	increases after rainfall and can cover large area	detergents are biodegradable so usually disappears quickly

Table by: Water Resources Management Division

HOW CAN YOU HELP PROTECT WATER?

Do:

- Limit the amount of pesticides or fertilizers used and always follow the label directions
- Properly maintain your septic system
- Dispose of medications properly
- Pick up after your pet
- Sweep driveway instead of rinsing with water

Don't:

- Pour hazardous waste down the drain, on the ground, or into storm sewers
- Use non-biodegradable soaps to wash cars
- Use soap at beach shower

WHO TO CALL

ANY POLLUTANT DISCHARGE TO A STATE WATER (I.E. STORM DRAIN, RIVER, LAKE, STREAM, OCEAN)

MUST BE ABLE TO PROVIDE LOCATION OF DISCHARGE, POLLUTANT DESCRIPTION,
IF IT ENTERED A STATE WATER, AND A RESPONSIBLE PARTY FOR THE DISCHARGE

CALL THE DEPARTMENT OF HEALTH CLEAN WATER BRANCH: (808)-586-4309

COASTAL ERROSION, SEA WALLS, FISH KILLS

CALL THE DEPARTMENT OF LAND AND NATURAL RESOURCES: (808)-587-0377

HOMELESS SOLID WASTE ISSUES, HUMAN WASTE, SOCIAL AND ECONOMIC ISSUES

**CALL THE CITY AND COUNTY OF HONOLULU PARTNERS IN CARE (for Oahu): (808)-380-9444
OR ALOHA UNITED WAY: 211**

REFERENCES

- <https://dlnr.hawaii.gov/ais/files/2022/10/Kaiona-Beach-Algae-Bloom-Report-Final.pdf>
- <https://earthobservatory.nasa.gov/images/85073/sea-sawdust-in-the-southwest-pacific-ocean>
- <https://swfsc-publications.fisheries.noaa.gov/publications/CR/1993/9308.PDF>
- <https://www.gov.nl.ca/ecc/files/waterres-outreach-weird-weird-stuff-in-water.pdf>
- <https://www.hawaiiactivities.com/travelguide/how-to-arrange-a-burial-at-sea-on-oahu/#:~:text=According%20to%20the%20US%20Environmental,biodegradable%20to%20protect%20marine%20wildlife.>