

# Outfall Key



# PREPARATION

1. Confirm no rain event 72 hours prior to inspection.
2. Bring fully charged work phone, charging cord, business cards, tape measure, paper maps (if appropriate), and resident letter.
3. Wear safety vest and waterproof boots.

**Outfall from an MS4** means a point source at the point where a municipal separate storm sewer discharges to surface waters of the state. It does not include open conveyances, pipes, tunnels, or other conveyances connecting two municipal separate storm sewers or connecting segments of the same stream used to convey to waters of the state.



# PIPE MATERIAL



Corrugated Metal



Reinforced Concrete

*Don't use Concrete (Non-Reinforced)*

# PIPE MATERIAL



High-Density Polyethylene



Polyvinyl Chloride

# SUBMERGED IN WATER



Partially  
(Bottom is  $<50\%$  below water)



Fully  
(Outfall hidden; can't see it)

# SUBMERGED IN SEDIMENT



Partially  
( $<50\%$  full)



Fully  
( $>50\%$  full)

# FLOW AMOUNT



Trickle  
(Narrow stream of water)



Moderate  
(Steady stream but shallow depth)

# FLOW AMOUNT



Substantial (Steady)



Full (Fills bottom of pipe)



# ODOR

Odor	Causes
<b>Rotten eggs/hydrogen sulfide</b>	Raw sewage, decomposing organic matter, lack of oxygen
<b>Sharp, pungent odor</b>	Chemicals or pesticides
<b>Gasoline, petroleum</b>	Industrial discharge, illegal dumping of wastes, waste water

# DISCOLORED – COLOR INTENSITY



Faint



Dark

# DISCOLORED – COLOR INTENSITY



Very Dark

# TURBIDITY INTENSITY

**Turbidity** is the cloudiness of a fluid caused by large numbers of particles, similar to smoke in air.



Very Dark



Dark



Faint

# FLOATABLE DESCRIPTION



Sewage



Suds (aka, bubbles from soap,  
not natural foaming)

# FLOATABLE DESCRIPTION



Petroleum (oil sheen, not biological sheen; perform poke test)



Scum

# FLOATABLE DESCRIPTION



Foam (any non-soap bubbles; if natural form, indicate “Unlikely potential illicit discharge”)



Garbage

# FLOATABLE DESCRIPTION



Algae



# FLOATABLE SEVERITY



Few/Slight  
(E.g., suds do not appear to  
travel; very thin foam layer)



Moderate

# FLOATABLE SEVERITY



Heavy

# OUTFALL DAMAGE



Spalling

(Fragments of a material are  
broken off a larger solid body)



Cracking/Chipping

# OUTFALL DAMAGE



Peeling Paint



Corrosion

# OUTFALL DAMAGE



Pipe Collapse



Erosion

# DEPOSITS/STAINS



Sediment



Oily

# DEPOSITS/STAINS



Paint



Flow Line

# DEPOSITS/STAINS



White Residue



# ABNORMAL VEGETATION



## BENTHIC GROWTH

Benthic growth may be observed in pipes, outfalls, and streams. It may appear as an orange, brown, red, yellow or grayish gelatinous slime. It can also appear as stains or as a “feathery” filamentous growth. A rainbow sheen may also be present. This growth is from iron bacteria that are naturally occurring in the soil and oxidize dissolved iron or manganese.

# BENTHIC GROWTH

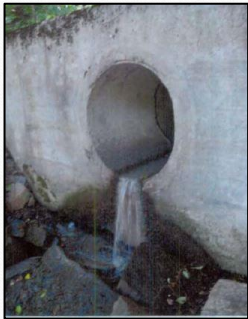


Black



Brown

# BENTHIC GROWTH



Gray



Green

# BENTHIC GROWTH



Orange



Red

# BENTHIC GROWTH



White



Yellow

# PIPE CONDITION



Good



Fair



# PIPE CONDITION



Poor



Critical