

Guidance Document for Outfall Collection Procedure

A. GPS Field Collection Guidance Notes

1. Collection Information

Locate an outfall. Stand as close and safely as possible to the end of the pipe in the outfall when clicking GPS location. Type your name in as the data collector. Assign consecutive numbers in the outfall id # field (these may be re-generated during post-processing.) Asset types are “c” for county and “m” for municipal, based on road designation. Leave blank if unknown. Choose from the drop down list for the time since last rain and the quantity of rain during the previous 48 hours if you feel confident about it – otherwise, this will be filled out during post-processing based on info from <http://www.instaweather.com/wcau/>. Other fields are generated automatically.

2. Pipe Information

- a. **Pipe height:** This is the pipe size in inches from top to bottom.
- b. **Pipe width:** This is the pipe size in inches from left to right.
- c. **Pipe shape:** This is the shape of the pipe. Based on what you see and the measurements from the previous two fields choose a shape from the list.
- d. **Pipe material:** This is what the pipe is made of. Choose from the list.
- e. **Structural condition:** This is how the pipe looks. Choose from the list.
Good = it needs no work
Fair = it is starting to crack or rust
Poor = it is rusted through or collapsed
Unknown
- f. **Pipe suspended:** Is the pipe suspended at least one foot above the discharge area?
- g. **Distance suspended:** How far is the pipe suspended above the ground or water, in feet?

3. Outfall Information

- a. **Outfall cover:** This is a structure protecting the entrance of the pipe.
Steel grate = this is steel mesh laid directly over the pipe
Cage = this is a metal cage around the end of the pipe but not up against the opening

Other = some other type of protection

None = no protection

- b. **Near bridge:** Can you see a bridge from where you are standing? Fill out appropriately.
- c. **Outfall protection:** This is a structure preventing erosion around the pipe.
Rip-rap = a foundation or sustaining wall of stones thrown together without order
Concrete = flared wings off of a headwall
Gabion basket = rectangular steel wire mesh basket filled with stones
Other = something not on the list, note in comments
None = there is no protection
- d. **Outfall erosion:** Does the area within about 5 ft of the pipe appear to be eroding from the flow? Use your judgment to choose from the list, based on the photo examples.
None = photo with no erosion
Minimal Erosion = photo with some erosion
Moderate Erosion = photo with moderate erosion
Heavy Erosion = photo with very severe erosion
Silted = instead of being eroded there is an accumulation of sediment
- e. **Erosion source:** Always fill out with UNKNOWN – will be filled out during post-processing from land use review
- f. **Headwall condition:** This is the condition of the headwall. Choose from the list.
No Headwall = does not have a headwall
Good = it needs no work
Fair = it is starting to crack or rot
Poor = headwall is starting to crumble or collapse
- g. **Picture IDs:** This is the name of the digital picture file(s) of the outfall. Usually done during post processing.
- h. **Comments:** Is there anything that should be noted about the area, outfall, etc?

4. Flow Information

- a. **Discharge area:** This is where the water flows. Using your judgment, choose from the list.
- b. **Pipe flow:** Is there water coming out?
Yes = you see water flowing

No = the area is dry

Intermittent = flow starts then stops then starts again while you are observing (often seen in tidal areas)

Stagnant = there is no flow but there is water at the end of the pipe or in the pipe

c. **Flow depth:** This is the amount of water in the pipe in inches. Measure from the inside bottom of the pipe to the top of the water.

d. **Flow odor:** How does the area smell?

Normal = no smell

Sewage = trash/waste smell

Petroleum = gas/oily smell

Chemical = any odd smell that smells unnatural

Anaerobic = rotten egg smell

Other = smells but unsure like what

e. **Flow appearance:** This is the look or appearance of the water.

Clear = can see to bottom

Turbid = clouded from silt

Oily = has a sheen on top

Foamy = soap-like bubbles on top

Colored = reddish-brown from cedar, orange from iron deposits, or any other odd color

f. **Floatables:** Is there trash in the water?