Microplastics Sampling SOP

Materials:

Sampling net: line & flow meter
Zip ties
Small crescent wrench
Phillip's-head screwdriver
Syringe
Labeling tape
Sharpie
Sample log
Pencil
Sharpener
Clipboard
Sieves (5 mm and .330 mm)
Squirt bottle
Electrical tape
Duct tape

Pre-sampling:

_____ ensure cod end is secure

_____ check for holes in net

_____ check for missing zip-ties, replace missing ones

_____ tighten bridle connections with crescent wrench

_____ check flow meter is secure

_____ check line is secure and free of knots

_____ label 3 sample jars, label more if intending on sampling more

The labeling standard is: 3-letter sampler code_date(yearmonthday)_number

ie:

uwt_20120427_1
uwt_20120427_2
uwt_20120427_3

_____ fill out sample log with date, location, and group

_____ clean sieves

_____ fill squirt bottles

_____ assemble sample jars, sieves, and squirt bottles in plastic tub

Preparation of Net:

- Have short-side of bridle towards boat so net is out of prop wash
- Use either the davit or tie to cleat on boat
- Ensure the line is not tangled before deploying

Sampling:

- Before deploying net, write down the flow meter data
- Drop net into water
- When net is in water, record latitude, longitude, time, etc.
- Record the speed. There may be adjustments. Note speed changes and try to get an average speed
- Do a drag for 15 minutes, watching the net at all times
- Go as fast or slow as you feel is best. Usually 2-4 knots. Watch for bow-wake. Slow down, if one develops
- Stop tow early, if the net is clogged
- At approximately 13-14 minutes, start bringing in the net
- Record the flow meter data, latitude, longitude, time when the net is pulled out of the water
- Have one person hold the net, codpiece down, while another person rinses the net from the top down into the codpiece
- When the net is rinsed, remove the codpiece and empty the contents into the sieves. Make sure to thoroughly rinse the contents of the codpiece into the sieve
- Sieve the sample through the 5mm sieve into the .25mm sieve
- Carefully rinse the material in the .25mm sieve into your labeled sample jar.
- Give sample jar to Caitlin for processing in the lab at Urban Waters.