

**DRAFT LANGUAGE FOR CLARIFYING
MARSH SAMPLING REQUIREMENTS IN MONITORING PLAN**

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The sample should be representative of the bulk water concentration, including both dissolved and suspended solid forms of the constituent. The sample should include plankton, and other suspended materials that are moving with the undisturbed bulk water. Disturbance is defined as any re-suspension of sediment or detritus, or dislodging of periphyton into the water column by the actions of the helicopter, movement of the samplers, or process of sample collection. Samples should not include floating materials that move under the influence of wind, nor settled materials that are not suspended under the influence of the undisturbed bulk water. The sampling personnel must be cognizant that his/her approach, presence, and movement can cause disturbance of the detrital material.

Visually inspect the sampling location to ensure that such disturbance has not occurred, as evidenced by a cloud of resuspended solids, for example. Continue to closely observe the location to make sure that detritus has not been dislodged from the vegetation, or sediment has not become disturbed by your approach or sampling activity. If the location appears turbid or disturbed, or anomalous materials, such as sediment, periphyton or flocculent materials are noticeable in the collected sample, the sampler must make a determination if this was caused by disturbance. Re-collect samples if the sampling crew determines that the particulates were due to sampling activity disturbance. If the water 2-5 meters away from where the sampler stands is clear, then the site might have been disturbed. To re-collect, move to the new location, re-rinse the bottle, and re-sample. Make sure that the rinsing removes all macro detritus, duckweed, and algae from the bottle.

If, after several attempts, the sample collector is unable to collect a sample without disturbing sediment or detrital material, then the other collector should collect the sample. Document the collector's name in the notes.

Note the visual observation of the amount of particulates in the sample collected immediately after collection and before partitioning into individual sample bottles. If foreign contaminants including plants or animals are in the processing bucket, avoid pouring them into the sample bottles and note what was seen in the sample bucket in the field notes.

References:

Nick Aumen, TOC Meeting, May 23, 2006

Re-collect samples **only** if the sampling crew determines that the particulates were due to sampling activity disturbance.

On-site demo/training, September 26, 2005

If sample collected or water to be collected is turbid or particulates present, look approximately 5m ahead of you, if water appears clear, then discard sample and move to another spot to recollect. (Russ Frydenborg).

Sampling Workshop, September 26, 2005

If turbidity appears lower approximately 2 m away from the sampler, the turbidity is likely due to disturbance from the sampling activity.

Sampling Workshop, February 9, 2006

Particles that would normally settle out of the bulk water, therefore, should be avoided in the marsh samples.

Marsh Sampling Protocol, 1996

It follows that the sample should be representative of the bulk water concentration, including both dissolved and suspended solid forms of the constituent. The sample should include plankton, and other suspended materials that are moving with the undisturbed bulk water. It should not include floating materials that move under the influence of wind, nor settled materials that are not suspended under the influence of the undisturbed bulk water.

Visually inspect the sampling location to ensure that such disturbance has not occurred, as evidenced by a cloud of resuspended solids, for example. Continue to closely observe the location to make sure that detritus has not been dislodged from the vegetation or sediment has not become disturbed by your approach. If the site is disturbed, move to a new site and start over.

Make sure that no macro detritus, duckweed or algae remain in the bottle.

Remove the bottle from the water and inspect the contents for anomalous materials, such as sediment, periphyton or flocculent materials. If contaminated, re-rinse the bottle and repeat the sampling.

Monitoring Plan, Draft, 2/2006

If the sample collector is unable to collect sample without disturbing detrital material after several attempts, then the other collector should collect the sample; document the collector in the notes.

If foreign contaminants including plants or animals are in the processing bucket, avoid pouring them into the sample bottles and note what was seen in the sample bucket in the field notes. Note the visual observation of the amount of particulates in the sample collected immediately after collection and before partitioning into individual sample bottles.