

Benthic Invertebrate Data Notes

Disclaimer:

This Benthic invertebrate dataset has been made available as soon as possible after results were received from the laboratory and reviewed. All data have been validated according to Environment and Climate Change Canada's procedures; however, further quality assurance and quality control procedures may result in minor differences between what is available at present and what is recorded in the authoritative record in Environment and Climate Change Canada's databases.

Relevant Study Notes:

The Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring (Environment Canada and Alberta Environment 2012) included the initiation of new biomonitoring sites on the Lower Athabasca River mainstem, its major tributaries and in deltaic wetlands following the study designs proposed in the Integrated Monitoring Plan for the Oil Sands (Phase 2) (Environment Canada and Alberta Environment 2011).

In Deltaic Wetlands in the Expanded Geographic Area, during the initial 2011 reconnaissance year, biomonitoring samples were collected from a total of 16 sampling sites. Invertebrate samples were collected using a 2 minute traveling sweep sample with a 400 µm mesh kick net. Samples were sorted according to CABIN laboratory protocols (Environment Canada 2012) and subsampled using a Marchant box (Marchant 1989). Where possible, the sorted benthic macroinvertebrates were identified to a taxonomic level of Family, and the total number of organisms for each taxon per 2 minutes sample is provided.

In addition to collecting benthic invertebrate samples supporting water chemistry samples were taken on the same date. These water quality samples were collected as per the Phase 1 parameter lists and submitted to CALA accredited analytical laboratories.

References:

Environment Canada and Alberta Environment. 2012. Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring. Government of Canada. Pp. 27.

Environment Canada and Alberta Environment. 2011. Integrated Monitoring Plan for the Oil Sands Expanded Geographic Extent for Water Quality and Quantity, Aquatic Biodiversity and Effects, and Acid Sensitive Lake Component. Government of Canada. Pp. 102.

Environment Canada. 2012. Canadian Aquatic Biomonitoring Network Laboratory Methods, Processing, Taxonomy, and Quality Control of Benthic Macroinvertebrate Samples. April 2012. Pp. 30.

Marchant, R. 1989. A subsampler for samples of benthic invertebrates. Bull. Aust. Soc. Limnol. Vol 12. Pp. 49-52.