National Pollutant Discharge Elimination System
Whole Effluent Toxicity Spreadsheet

Spreadsheet Description

In 2012, the U.S. EPA's Water Permits Division/Office of Wastewater Management first released a National Pollutant Discharge Elimination System (NPDES) Whole Effluent Toxicity (WET) statistical spreadsheet to EPA Regions, their States, and others for analyzing valid WET test data. In 2017 EPA enhanced the spreadsheet in response to requests for additional statistical functions and other minor edits received from EPA Regions. The NPDES WET Spreadsheet is a statistical spreadsheet (using Microsoft Excel®). The spreadsheet calculates acute and chronic WET effects (e.g., survival, reproduction, biomass, fertilization) identified in EPA's WET test methods under the NPDES permits program, including EPA WET test methods at 40 CFR Part 136 (USEPA 2002a, 2002b, 2002c) and the West Coast marine species methods (USEPA 1995). The spreadsheet calculates various WET endpoints recommended in EPA's Technical Support Document (TSD) (e.g., LC_{50}, NOAEC, NOEC, LOEC, IC_{25}; see Chapter 1, Section 1.3 of the TSD) based on the statistical flowcharts provided in EPA's test methods, as well as results using EPA's NPDES WET Test of Significant Toxicity (TST) document (EPA 833-R-10-003, June 2010).

Why is U.S. EPA making this spreadsheet available to States and Regions?

EPA developed the NPDES WET spreadsheet in response to numerous requests from EPA Regions and States for a free and easy to use tool that could be used to independently analyze and evaluate valid WET test data submitted by NPDES permittees (i.e., monitoring data used for determining WET reasonable potential or compliance monitoring for WET NPDES limits). Regions and States have been successfully using it since 2012.

Features of the NPDES WET Spreadsheet
➢ Uses Microsoft Excel®, which is readily available on most computers
➢ Easy data entry & WET reference tabs
➢ Drop down menus for entering different types of WET tests & endpoints
➢ Runs all WET endpoint analyses using EPA WET test method flow charts (TSD analyses) as well as EPA's TST
➢ One-click output of data
➢ Graphical & tabular display of results
➢ Ability to easily print or save analysis results
➢ Runs Reasonable Potential (RP) analyses using either TSD or TST

What can the NPDES WET spreadsheet be used for?

➢ **Determining reasonable potential.** Point estimates using EPA's Technical Support Document approaches, as well as TST can be used for determining Reasonable Potential (RP).

➢ **Compliance determinations.** NOEC/LOEC and point estimates, as well as TST results can be used to determine permit compliance.

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