Wessex Water Marketplace
Dataset descriptor – Water Recycling Centre Influent and Effluent sample results 2010-2017 datasets

Introduction

This document explains what some of the data types mean in the data extract 'WRCs Effluent/Influent sample data'. We have not explained all of the columns and data types as several are relatively self explanatory (time, date) but have briefly explained some of the less obvious or columns with internal codes.

Water recycling centres (WRCs) are sites where sewerage is treated and discharged. This can be a mixture of domestic and trade sewerage as well as surface water run-off in some instances.

This data is formed of the regulatory samples taken on site. They are taken by Wessex Water staff, returned to our laboratories where the tests are completed, then entered onto our scientific systems. This data set is then an extract from that system.

It will be updated annually.

Column descriptions

SampleSiteId – A unique 8 digit number assigned to a sampling location e.g. "Stogursey Final". *NB: When viewing the file in Excel, SampleSiteIDs beginning with a 0 may instead appear as 7 digits with the initial 0 not displayed. It can be assumed to be in the first position i.e. 0xxxxxxx.*

Batch – this column has a code of two possible items – SOM and C3M.

C3M means it is a composite sample (C) taken over a 12-24 hour period (3) that has been taken by Wessex Water. A composite sample is a collection of individual samples obtained at regular intervals, usually every one or two hours during a 24-hour time span. Each individual sample is combined with the others in proportion to the rate of flow when the sample was collected.

SOM means it is a spot sample (S) taken at a single point in time (0), again by Wessex Water.

SampleArcLabNo – A unique value assigned to the water sample submitted, i.e. a sample from x sample point at y date and time.

The following terms are then used in the column **Determinand Name**

BOD atu – Biological oxygen demand (allyl thiourea method) - mg O /L
A measure of the amount of oxygen being used by biological process in the sample in mg O_2/L. The allyl thiourea method prevents further nitrification of the sample by bacteria which would consume more oxygen.

Susp Solids - Suspended solids – mg /L
This is a test to measure the dry weight of all particles that will not pass through a 1.2 µm glass fibre filter paper and is measured in mg/L

Nitrite – nitrite – mg N /L
A measure of all the NO_2^- ions in the sample as the Mass of N. Nitrite is the primary oxidized form of nitrogen produced from Ammonia by the nitrification process at a WRC

Nitrate – nitrate – mg N /L
A measure of all the NO_3^- ions in the sample as the Mass of N. Nitrate is the secondary oxidized form of nitrite produced by the nitrification process at a WRC

Nitrogen Kjeldahl - Kjeldahl nitrogen – mg N /L
A measure of the amount of nitrogen in the sample using the Kjeldahl method. It is representative of all unoxidized nitrogen in the sample i.e. excluding nitrate and nitrite but is inclusive of ammoniacal nitrogen and organic nitrogen. When combined with nitrate and nitrite concentration it is equivalent to total nitrogen.

Nitrogen total – total nitrogen – mg N /L
A measure of all of the species of nitrogen present in the sample.

Orthophos – Orthophosphate – mg P /L
A measure of the PO_4^{2-} ions in the sample that are either dissolved or bound to very small particles, as the mass of P.

Phosphorus, total – total phosphorus – mg P /L
A measure of all of the phosphorus in the sample, including that which is bound to large particles that would not be considered to be dissolved.

pH – pH – no units
A measure of how acidic or alkaline the sample is – this is measured on a scale of 0-14, where a pH of 7 is neutral, a pH below this is deemed acidic, and a pH above this is deemed alkaline.

Aluminium – Aluminium – mg /L
Iron – Iron – mg /L
Copper – Copper – mg /L
Lead – Lead – mg /L

The concentration of all the above metals as representative of the concentration of all species, as determined by inductively coupled plasma optical emission spectroscopy.

Determinand sign – indicates if the value is below the lower limit of detection of the analytical method used (<) or above the upper range of the analytical method used (>).

Determinand value – the result of the test carried out

Units – the corresponding units to the value returned by the test