Working with Water-Quality Data

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July 15, 2015

These examples demonstrate some of the functions and statistical methods for importing, managing, and manipulating water-quality data that are available in the `smwrQW` package.

```
> # Load the smwrQW package
> library(smwrQW)
```

1 Class ”qw”

The class ”qw” provides a mechanism for storing water-quality data that facilitates manging and anlyzing those data.

2 Importing Water-Quality Data

Easy from NWISweb.

Data needs from other sources.

3 Artimetic Operations

Addition and multiplication methods.

4 Comparison Operations

Typical and specialized comparions.

5 Mathematical Transformations

A few monotonic math functions are supported.

6 Miscellaneous Manipulations

Things like qwCoalesce.

7 Conversions for Analysis

Conversion to class "lcens" or "mcens."

References

[1] Helsel, D.R. 2012, Statistics for Censored Environmental Data Using Minitab and R: New York, Wiley, 324 p.

[2] Helsel, D.R., and Hirsch, R.M., 2002, Statistical methods in water resources: U.S. Geological Survey Techniques of Water-Resources Investigations, book 4, chap. A3, 522 p.

[3] Lorenz, D.L., 2016, smwrQW–an R package for managing and analyzing water-quality data, version 1.0.0: U.S. Geological Survey Open File Report 2016-XXXX.