PointSourceData.txt

This file contains points source concentrations and discharges. HYPE allows to separate three types of point sources, e.g. wastewater treatment plants, industries, and urban stormwater. Conceptually, all three are treated the same by HYPE (see here), but HYPE will separate them in the annual load result files if these are requested in output options of info.txt. Point source loads are added to main rivers as a constant flux. The point sources file can also be used for water abstraction sinks, if point source discharges volume are set to values < 0.

PointSourceData.txt is a tab-separated file located in the modeldir folder. Point sources are listed row-wise, multiple point sources for each sub-basin are allowed. The first row contains a column header with variable names. Variable names are not case-sensitive (max. 10 characters, no spaces). Columns with headings unknown to HYPE are skipped while reading the file, but must not longer than ten characters. Columns containing character strings, e.g. descriptive meta-data, must not exceed a length of 100 characters. The columns may be in any order. A value must exist for every column and row, i.e. empty cells are not allowed.

The table below describes all PointSourceData.txt columns read by HYPE.

Variable ID	Unit	Description
subid	-	id number for subbasin in which point source is located, integer $< 10^8$
ps_type	-	point source type, integer between 1 and 3, default is 1 (irrelevant if water abstraction)
ps_vol	m^3/d	point source discharge or, if negative, abstracted water volume
ps_tpconc	mg/l	concentration of Tot-P in point source (irrelevant if water abstraction)
ps_tnconc	mg/l	concentration of Tot-N in point source (irrelevant if water abstraction)
ps_spfrac	-	fraction of Tot-P in point source that is in soluble form (irrelevant if water abstraction)
ps_infrac	-	fraction of Tot-N in point source that is in inorganic form (irrelevant if water abstraction)
ps_t1	-	concentration of tracer T1 in point source (irrelevant if water abstraction)'
ps_t2	-	temperature of point source water (used for T2 simulation) (irrelevant if water abstraction)
fromdate	date-time	Gives the start date for the point source. Format: yyyy-mm-dd [HH:MM]. Set to 0 if the source is from before the simulation start. (optional, default is 0, i.e. constant source for the simulation period)
todate	date-time	Gives the end date for the point source. Format: yyyy-mm-dd [HH:MM]. Set to 0 if the source is continuing after the simulation end. (optional, default is 0, i.e. constant source for the simulation period)
ps_source	-	integer code for abstraction from main river (1) or outlet lake (2), default is 1 (irrelevant if point source)

Examples of use of PointSourceData.txt and of the file structure:

First example: first row: a constant point source of waste water with nutrients; second row: a larger constant point source of industrial effluents; third row: abstraction of water from outlet lake.

```
subid ps_type ps_vol ps_tpconc ps_tnconc ps_spfrac ps_infraq ps_source
456   1       10     0.5       40        0.3       0.9       1
```

| 765 | 2 | 2301 | 2 | 100 | 0.3 | 0.9 | 1 |
| 4050 | 3 | -100 | 0 | 0 | 0 | 0 | 2 |

Second example: A constant point source of nutrients and T2 increased 10-fold from March 21 2004.

```
subid ps_type ps_vol ps_tpconc ps_tnconc ps_spfrac ps_infraq ps_t2 fromdate
todate
456   1       10     0.5        40         0.3        0.9       4
1990-01-01 2004-03-20
456   1       100    0.5        40         0.3        0.9       4
2004-03-21 0
```