Sediment-Contaminant Database:

Data Dictionary

## Introduction:

The Sediment-Contaminant Database for the Upper Mississippi River System contains reliable sediment-contaminant data of known quality in a readily accessible format. The database was compiled to facilitate the assessment of riverine contamination, to increase the availability of historic sediment-contaminant data, to facilitate responses to contaminant issues in the Upper Mississippi River System, and to focus management and scientific efforts pertaining to contaminated-sediment.

Forty four (44) data sets on sediment-associated contaminants in the Upper Mississippi River, the Illinois River, and selected tributaries have been entered into version 2 of the database, which contains information from a total of 3950 analyzed sediment samples collected from 1974 through 2000. This total includes 2697 samples from the Upper Mississippi River, 440 from the Illinois River and 813 from selected tributary streams. Groups of contaminants represented in the database include metals, metalloids, nutrients, poly-nuclear aromatic hydrocarbons, insecticides, herbicides, fungicides, industrial compounds, sterols, petroleum-related compounds, and polychlorinated biphenyls.

Considerable care was taken to ensure the reliability of contaminant data entered into the database. The relative completeness of quality-assurance documentation for each discreet data set entered was characterized by a quality-assurance index. To facilitate the interpretation of the contaminant data, the database provides information on sampling locations, methods of sediment collection, physical characteristics of the analyzed sediments, and other ancillary variables for each sediment sample represented.

# Table 1: Source.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| **Data-Source Variables** | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATA SET NAME | 2 | Y | 99 | 1-99 |
| INSTITUTION PROVIDING DATA | 2 | Y | 99 | 1-99 |
| DATA CONTACT | 2 | Y | 99 | 1-99 |
| BIBLIOGRAPHIC REFERENCE(S) | 2 | Y | 99 | 1-99 |
| SAMPLING PURPOSE |  | Y | 99 | 1-99 |
| QUALITY-ASSURANCE INDEX |  | Y | 9 | 1-5 |
| NUMBER OF OBSERVATIONS IN DATA SET | 4 |  | 9999 | 1-9999 |
| DATE OF ENTRY INTO DATABASE | 10 |  | MM/DD/YYYY | 06/30/1999-Current Date |
| DISCLAIMER | 4 |  | c(4) | USGS |

# Table 2. Sample.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Database Sample Variables | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| ORIGINAL SAMPLE NUMBER | 20 |  | c(20) | - |
| Site-Characteristics Variables | | | | |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| STATE | 1 | Y | 9 | 1-7 |
| COUNTY | 50 |  | c(50) | - |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SITE COMMON NAME | 2 | Y | 99 | 1-99 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| WATER DEPTH | 4,1 |  | 99.9 | 0-99.9 |
| WATER DEPTH UNITS | 1 | Y | 9 | 9 |
| Methods Variables | | | | |
| DATE OF COLLECTION | 10 |  | MM/DD/YYYY | 01/01/1950-Current Date |
| SAMPLING DURATION | 3 |  | 999 | 0-999 |
| SAMPLING DURATION UNITS | 2 | Y | 99 | 12 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| COLLECTION APPARATUS | 2 | Y | 99 | 1-20 |
| UPPER DEPTH OF SAMPLE IN SEDIMENT PROFILE | 3 |  | 999 | 0-999 |
| UPPER DEPTH OF SAMPLE IN SEDIMENT PROFILE UNITS | 1 | Y | 9 | 8 |
| LOWER DEPTH OF SAMPLE IN SEDIMENT PROFILE | 3 |  | 999 | 0-999 |
| LOWER DEPTH OF SAMPLE IN SEDIMENT PROFILE UNITS | 1 | Y | 9 | 8 |
| DIGESTION METHOD FOR INORGANIC CONTAMINANTS | 1 | Y | 9 | 1-9 |
| Sediment Toxicity Variables |  |  |  |  |
| SEDIMENT CODE | 1 | Y | 9 | 1-9 |
| TEST ORGANISM | 2 | Y | 99 | 1-20 |
| DURATION OF EXPOSURE | 3 |  | 999 | 0-999 |
| DURATION OF EXPOSURE UNITS | 2 | Y | 99 | 12 |
| BIOLOGICAL RESPONSE | 2 | Y | 99 | 1-20 |
| BIOLOGICAL RESPONSE DQ | 1 | Y | 9 | 1-9 |
| Sediment-Characteristics Variables | | | | |
| VOLATILE MATTER CONTENT | 5,2 |  | 99.99 | 0-99.99 |
| VOLATILE MATTER CONTENT UNITS | 1 | Y | 9 | 1 |
| VOLATILE MATTER CONTENT DQ | 1 | Y | 9 | 1-9 |
| TOTAL CARBON | 5,2 |  | 99.99 | 0-99.99 |
| TOTAL CARBON UNITS | 1 | Y | 9 | 1 |
| ORGANIC CARBON | 5,2 |  | 99.99 | 0-99.99 |
| ORGANIC CARBON UNITS | 1 | Y | 9 | 1 |
| CARBONATE CARBON | 5,2 |  | 99.99 | 0-99.99 |
| CARBONATE CARBON UNITS | 1 | Y | 9 | 1 |
| TOTAL NITROGEN | 5,2 |  | 99.99 | 0-99.99 |
| TOTAL NITROGEN UNITS | 1 | Y | 9 | 1 |
| ACID-VOLATILE SULFIDE | 5,1 |  | 999.9 | 0-999.9 |
| ACID-VOLATILE SULFIDE UNITS | 1 | Y | 9 | 6 |
| GRAVEL CONTENT | 2 |  | 99 | 0-99 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| GRAVEL CONTENT UNITS | 1 | Y | 9 | 1 |
| SAND CONTENT | 2 |  | 99 | 0-99 |
| SAND CONTENT UNITS | 1 | Y | 9 | 1 |
| SILT CONTENT | 2 |  | 99 | 0-99 |
| SILT CONTENT UNITS | 1 | Y | 9 | 1 |
| CLAY CONTENT | 2 |  | 99 | 0-99 |
| CLAY CONTENT UNITS | 1 | Y | 9 | 1 |
| SILT + CLAY CONTENT | 2 |  | 99 | 0-99 |
| SILT + CLAY CONTENT UNITS | 1 | Y | 9 | 1 |
| WATER CONTENT | 2 |  | 99 | 0-99 |
| WATER CONTENT UNITS | 1 | Y | 9 | 1 |
| DENSITY | 4,2 |  | 9.99 | 0-9.99 |
| DENSITY UNITS | 1 | Y | 9 | 2 |
| SIZE-FRACTION ANALYZED, INORGANIC CONTAMINANTS | 5,3 |  | 9.999 | 0-9.999 |
| SIZE-FRACTION ANALYZED, INORGANIC CONTAMINANTS UNITS | 1 | Y | 9 | 7 |
| SIZE-FRACTION ANALYZED, ORGANIC CONTAMINANTS | 5,3 |  | 9.999 | 0-9.999 |
| SIZE-FRACTION ANALYZED, ORGANIC CONTAMINANTS UNITS | 1 | Y | 9 | 7 |
| APPROXIMATE YEAR OF DEPOSITION | 4 |  | 9999 (or YYYY) | 1700-2050 |
| APPROXIMATE YEAR OF DEPOSITION UNITS | 2 | Y | 99 | 11 |
| TOTAL KJELDAHL NITROGEN | 5,2 |  | 99.99 | 0-99.99 |
| TOTAL KJELDAHL NITROGEN UNITS | 1 | Y | 9 | 3 |
| LIPID CONTENT | 3,1 |  | 9.9 | 0-9.9 |
| LIPID CONTENT UNITS | 1 | Y | 9 | 1 |

# Table 3. Metals.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Inorganics: Metals, Metalloids, Nutrients, and Others | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| AMMONIA-NITROGEN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AMMONIA-NITROGEN UNITS | 1 | Y | 9 | 3 |
| AMMONIA-NITROGEN DQ | 2 | Y | 99 | 1-20 |
| UN-IONIZED AMMONIA-NITROGEN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| UN-IONIZED AMMONIA-NITROGEN UNITS | 2 | Y | 99 | 16 |
| UN-IONIZED AMMONIA-NITROGEN DQ | 2 | Y | 99 | 1-20 |
| TOTAL AMMONIA-NITROGEN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOTAL AMMONIA-NITROGEN UNITS | 1 | Y | 9 | 4 |
| TOTAL AMMONIA-NITROGEN DQ | 2 | Y | 99 | 1-20 |
| SILVER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| SILVER UNITS | 1 | Y | 9 | 3 |
| SILVER DQ | 2 | Y | 99 | 1-20 |
| ALUMINUM | 8,3 |  | 99999.999 | 0 - 99999.999 |
| ALUMINUM UNITS | 1 | Y | 9 | 3 |
| ALUMINUM DQ | 2 | Y | 99 | 1-20 |
| ARSENIC | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ARSENIC UNITS | 1 | Y | 9 | 3 |
| ARSENIC DQ | 2 | Y | 99 | 1-20 |
| BARIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BARIUM UNITS | 1 | Y | 9 | 3 |
| BARIUM DQ | 2 | Y | 99 | 1-20 |
| BERYLLIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BERYLLIUM UNITS | 1 | Y | 9 | 3 |
| BERYLLIUM DQ | 2 | Y | 99 | 1-20 |
| CADMIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CADMIUM UNITS | 1 | Y | 9 | 3 |
| CADMIUM DQ | 2 | Y | 99 | 1-20 |
| CHROMIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHROMIUM UNITS | 1 | Y | 9 | 3 |
| CHROMIUM DQ | 2 | Y | 99 | 1-20 |
| COPPER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| COPPER UNITS | 1 | Y | 9 | 3 |
| COPPER DQ | 2 | Y | 99 | 1-20 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IRON | 8,3 |  | 99999.999 | 0 - 99999.999 |
| IRON UNITS | 1 | Y | 9 | 3 |
| IRON DQ | 2 | Y | 99 | 1-20 |
| MERCURY | 8,3 |  | 9999.999 | 0 - 9999.999 |
| MERCURY UNITS | 1 | Y | 9 | 3 |
| MERCURY DQ | 2 | Y | 99 | 1-20 |
| METHYLMERCURY | 8,3 |  | 9999.999 | 0 - 9999.999 |
| METHYLMERCURY UNITS | 1 | Y | 9 | 3 |
| METHYLMERCURY DQ | 2 | Y | 99 | 1-20 |
| MOLYBDENUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| MOLYBDENUM UNITS | 1 | Y | 9 | 3 |
| MOLYBDENUM DQ | 2 | Y | 99 | 1-20 |
| NICKEL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NICKEL UNITS | 1 | Y | 9 | 3 |
| NICKEL DQ | 2 | Y | 99 | 1-20 |
| LEAD | 8,3 |  | 9999.999 | 0 - 9999.999 |
| LEAD UNITS | 1 | Y | 9 | 3 |
| LEAD DQ | 2 | Y | 99 | 1-20 |
| MANGANESE | 8,3 |  | 99999.999 | 0 - 99999.999 |
| MANGANESE UNITS | 1 | Y | 9 | 3 |
| MANGANESE DQ | 2 | Y | 99 | 1-20 |
| TOTAL PHOSPHORUS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOTAL PHOSPHORUS UNITS | 1 | Y | 9 | 3 |
| TOTAL PHOSPHORUS DQ | 2 | Y | 99 | 1-20 |
| SELENIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| SELENIUM UNITS | 1 | Y | 9 | 3 |
| SELENIUM DQ | 2 | Y | 99 | 1-20 |
| ANTIMONY | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ANTIMONY UNITS | 1 | Y | 9 | 3 |
| ANTIMONY DQ | 2 | Y | 99 | 1-20 |
| TIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TIN UNITS | 1 | Y | 9 | 3 |
| TIN DQ | 2 | Y | 99 | 1-20 |
| THALLIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| THALLIUM UNITS | 1 | Y | 9 | 3 |
| THALLIUM DQ | 2 | Y | 99 | 1-20 |
| VANADIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| VANADIUM UNITS | 1 | Y | 9 | 3 |
| VANADIUM DQ | 2 | Y | 99 | 1-20 |
| ZINC | 8,3 |  | 99999.999 | 0 - 99999.999 |
| ZINC UNITS | 1 | Y | 9 | 3 |
| ZINC DQ | 2 | Y | 99 | 1-20 |
| POTASSIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| POTASSIUM UNITS | 1 | Y | 9 | 3 |
| POTASSIUM DQ | 2 | Y | 99 | 1-20 |
| CALCIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CALCIUM UNITS | 1 | Y | 9 | 3 |
| CALCIUM DQ | 2 | Y | 99 | 1-20 |
| TITANIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TITANIUM UNITS | 1 | Y | 9 | 3 |
| TITANIUM DQ | 2 | Y | 99 | 1-20 |
| BROMINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BROMINE UNITS | 1 | Y | 9 | 3 |
| BROMINE DQ | 2 | Y | 99 | 1-20 |
| CYANIDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CYANIDE UNTIS | 1 | Y | 9 | 3 |
| CYANIDE DQ | 2 | Y | 99 | 1-20 |
| CYANIDE, AMENABLE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CYANIDE, AMENABLE UNITS | 1 | Y | 9 | 3 |
| CYANIDE, AMENABLE DQ | 2 | Y | 99 | 1-20 |
| BORON | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BORON UNITS | 1 | Y | 9 | 3 |
| BORON DQ | 2 | Y | 99 | 1-20 |
| MAGNESIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| MAGNESIUM UNITS | 1 | Y | 9 | 3 |
| MAGNESIUM DQ | 2 | Y | 99 | 1-20 |
| STRONTIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| STRONTIUM UNITS | 1 | Y | 9 | 3 |
| STRONTIUM DQ | 2 | Y | 99 | 1-20 |
| LANTHANUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| LANTHANUM UNITS | 1 | Y | 9 | 3 |
| LANTHANUM DQ | 2 | Y | 99 | 1-20 |
| SODIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| SODIUM UNITS | 1 | Y | 9 | 3 |
| SODIUM DQ | 2 | Y | 99 | 1-20 |
| GOLD | 8,3 |  | 9999.999 | 0 - 9999.999 |
| GOLD UNITS | 1 | Y | 9 | 3 |
| GOLD DQ | 2 | Y | 99 | 1-20 |
| BISMUTH | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BISMUTH UNITS | 1 | Y | 9 | 3 |
| BISMUTH DQ | 2 | Y | 99 | 1-20 |
| CERIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CERIUM UNITS | 1 | Y | 9 | 3 |
| CERIUM DQ | 2 | Y | 99 | 1-20 |
| COBALT | 8,3 |  | 9999.999 | 0 - 9999.999 |
| COBALT UNITS | 1 | Y | 9 | 3 |
| COBALT DQ | 2 | Y | 99 | 1-20 |
| GALLIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| GALLIUM UNITS | 1 | Y | 9 | 3 |
| GALLIUM DQ | 2 | Y | 99 | 1-20 |
| HOLMIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HOLMIUM UNITS | 1 | Y | 9 | 3 |
| HOLMIUM DQ | 2 | Y | 99 | 1-20 |
| EUROPIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| EUROPIUM UNITS | 1 | Y | 9 | 3 |
| EUROPIUM DQ | 2 | Y | 99 | 1-20 |
| LITHIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| LITHIUM UNITS | 1 | Y | 9 | 3 |
| LITHIUM DQ | 2 | Y | 99 | 1-20 |
| NIOBIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NIOBIUM UNITS | 1 | Y | 9 | 3 |
| NIOBIUM DQ | 2 | Y | 99 | 1-20 |
| NEODYMIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NEODYMIUM UNITS | 1 | Y | 9 | 3 |
| NEODYMIUM DQ | 2 | Y | 99 | 1-20 |
| SCANDIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| SCANDIUM UNITS | 1 | Y | 9 | 3 |
| SCANDIUM DQ | 2 | Y | 99 | 1-20 |
| TANTALUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TANTALUM UNITS | 1 | Y | 9 | 3 |
| TANTALUM DQ | 2 | Y | 99 | 1-20 |
| YTTRIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| YTTRIUM UNITS | 1 | Y | 9 | 3 |
| YTTRIUM DQ | 2 | Y | 99 | 1-20 |
| YTTERBIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| YTTERBIUM UNITS | 1 | Y | 9 | 3 |
| YTTERBIUM DQ | 2 | Y | 99 | 1-20 |
| URANIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| URANIUM UNITS | 1 | Y | 9 | 3 |
| URANIUM DQ | 2 | Y | 99 | 1-20 |
| THORIUM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| THORIUM UNITS | 1 | Y | 9 | 3 |
| THORIUM DQ | 2 | Y | 99 | 1-20 |
| SULFUR | 8,3 |  | 9999.999 | 0 - 9999.999 |
| SULFUR UNITS | 1 | Y | 9 | 3 |
| SULFUR DQ | 2 | Y | 99 | 1-20 |

# Table 4. Sems.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Inorganics: Simultaneously Extracted Metals (SEM) | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 2 | Y | 99 | 10 |
| RIVER MILE UNITS | 5 | Y | c(5) | miles |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| CADMIUM-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CADMIUM-SEM UNITS | 1 | Y | 9 | 6 |
| CADMIUM-SEM DQ | 2 | Y | 99 | 1-20 |
| CHROMIUM-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHROMIUM-SEM UNITS | 1 | Y | 9 | 6 |
| CHROMIUM-SEM DQ | 2 | Y | 99 | 1-20 |
| COPPER-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| COPPER-SEM UNITS | 1 | Y | 9 | 6 |
| COPPER-SEM DQ | 2 | Y | 99 | 1-20 |
| NICKEL-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NICKEL-SEM UNITS | 1 | Y | 9 | 6 |
| NICKEL-SEM DQ | 2 | Y | 99 | 1-20 |
| LEAD-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| LEAD-SEM UNITS | 1 | Y | 9 | 6 |
| LEAD-SEM DQ | 2 | Y | 99 | 1-20 |
| ZINC-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ZINC-SEM UNITS | 1 | Y | 9 | 6 |
| ZINC-SEM DQ | 2 | Y | 99 | 1-20 |
| ARSENIC-SEM | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ARSENIC-SEM UNITS | 1 | Y | 9 | 6 |
| ARSENIC-SEM DQ | 2 | Y | 99 | 1-20 |

# Table 5. Pahs.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Organics: Polynuclear Aromatic Hydrocarbons (PAHs) | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| ACENAPHTHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ACENAPHTHENE UNITS | 1 | Y | 9 | 3 |
| ACENAPHTHENE DQ | 2 | Y | 99 | 1-20 |
| ACENAPHTHYLENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ACENAPHTHYLENE UNITS | 1 | Y | 9 | 3 |
| ACENAPHTHYLENE DQ | 2 | Y | 99 | 1-20 |
| ANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ANTHRACENE UNITS | 1 | Y | 9 | 3 |
| ANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| BENZ(A)ANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZ(A)ANTHRACENE UNITS | 1 | Y | 9 | 3 |
| BENZ(A)ANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| BENZO(B)FLUORANTHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZO(B)FLUORANTHENE UNITS | 1 | Y | 9 | 3 |
| BENZO(B)FLUORANTHENE DQ | 2 | Y | 99 | 1-20 |
| BENZO(K)FLUORANTHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZO(K)FLUORANTHENE UNITS | 1 | Y | 9 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BENZO(K)FLUORANTHENE DQ | 2 | Y | 99 | 1-20 |
| BENZO(G,H,I)PERYLENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZO(G,H,I)PERYLENE UNITS | 1 | Y | 9 | 3 |
| BENZO(G,H,I)PERYLENE DQ | 2 | Y | 99 | 1-20 |
| BENZO(A)PYRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZO(A)PYRENE UNITS | 1 | Y | 9 | 3 |
| BENZO(A)PYRENE DQ | 2 | Y | 99 | 1-20 |
| BENZO(E)PYRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZO(E)PYRENE UNITS | 1 | Y | 9 | 3 |
| BENZO(E)PYRENE DQ | 2 | Y | 99 | 1-20 |
| BIPHENYL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BIPHENYL UNITS | 1 | Y | 9 | 3 |
| BIPHENYL DQ | 2 | Y | 99 | 1-20 |
| CHRYSENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHRYSENE UNITS | 1 | Y | 9 | 3 |
| CHRYSENE DQ | 2 | Y | 99 | 1-20 |
| DIBENZ(A,H)ANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIBENZ(A,H)ANTHRACENE UNITS | 1 | Y | 9 | 3 |
| DIBENZ(A,H)ANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| 2,6-DIMETHYLNAPHTHALENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,6-DIMETHYLNAPHTHALENE UNITS | 1 | Y | 9 | 3 |
| 2,6-DIMETHYLNAPHTHALENE DQ | 2 | Y | 99 | 1-20 |
| FLUORANTHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| FLUORANTHENE UNITS | 1 | Y | 9 | 3 |
| FLUORANTHENE DQ | 2 | Y | 99 | 1-20 |
| FLUORENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| FLUORENE UNITS | 1 | Y | 9 | 3 |
| FLUORENE DQ | 2 | Y | 99 | 1-20 |
| 1-METHYLPHENANTHRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1-METHYLPHENANTHRENE UNITS | 1 | Y | 9 | 3 |
| 1-METHYLPHENANTHRENE DQ | 2 | Y | 99 | 1-20 |
| NAPHTHALENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NAPHTHALENE UNITS | 1 | Y | 9 | 3 |
| NAPHTHALENE DQ | 2 | Y | 99 | 1-20 |
| PERYLENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PERYLENE UNITS | 1 | Y | 9 | 3 |
| PERYLENE DQ | 2 | Y | 99 | 1-20 |
| PHENANTHRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PHENANTHRENE UNITS | 1 | Y | 9 | 3 |
| PHENANTHRENE DQ | 2 | Y | 99 | 1-20 |
| PYRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PYRENE UNITS | 1 | Y | 9 | 3 |
| PYRENE DQ | 2 | Y | 99 | 1-20 |
| INDENO(1,2,3,-CD)PYRENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| INDENO(1,2,3,-CD)PYRENE UNITS | 1 | Y | 9 | 3 |
| INDENO(1,2,3,-CD)PYRENE DQ | 2 | Y | 99 | 1-20 |
| 1,6,7-TRIMETHYL-NAPHTHALENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,6,7-TRIMETHYL-NAPHTHALENE | 1 | Y | 9 | 3 |
| 1,6,7-TRIMETHYL-NAPHTHALENE DQ | 2 | Y | 99 | 1-20 |
| 1,2:5,6-DIBENZANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2:5,6-DIBENZANTHRACENE UNITS | 1 | Y | 9 | 3 |
| 1,2:5,6-DIBENZANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| DIBENZANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIBENZANTHRACENE UNITS | 1 | Y | 9 | 3 |
| DIBENZANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| 1,2-BENZANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2-BENZANTHRACENE UNITS | 1 | Y | 9 | 3 |
| 1,2-BENZANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| BENZANTHRACENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZANTHRACENE UNITS | 1 | Y | 9 | 3 |
| BENZANTHRACENE DQ | 2 | Y | 99 | 1-20 |
| ACRIDINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ACRIDINE UNITS | 1 | Y | 9 | 3 |
| ACRIDINE DQ | 2 | Y | 99 | 1-20 |
| 2-CHLORONAPHTHALENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2-CHLORONAPHTHALENE UNITS | 1 | Y | 9 | 3 |
| 2-CHLORONAPHTHALENE DQ | 2 | Y | 99 | 1-20 |
| TOTAL PAHS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOTAL PAHS UNITS | 1 | Y | 9 | 3 |
| TOTAL PAHS DQ | 2 | Y | 99 | 1-20 |

# Table 6. Organo.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Organochlorine Insecticides | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| ALDRIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ALDRIN UNITS | 1 | Y | 9 | 5 |
| ALDRIN DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE, CIS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE, CIS UNITS | 1 | Y | 9 | 5 |
| CHLORDANE, CIS DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE, TRANS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE, TRANS UNITS | 1 | Y | 9 | 5 |
| CHLORDANE, TRANS DQ | 2 | Y | 99 | 1-20 |
| O, P’-DDD | 8,3 |  | 9999.999 | 0 - 9999.999 |
| O, P’-DDD UNITS | 1 | Y | 9 | 5 |
| O, P’-DDD DQ | 2 | Y | 99 | 1-20 |
| P, P’-DDD | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P, P’-DDD UNITS | 1 | Y | 9 | 5 |
| P, P’-DDD DQ | 2 | Y | 99 | 1-20 |
| O, P’-DDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| O, P’-DDE UNITS | 1 | Y | 9 | 5 |
| O, P’-DDE DQ | 2 | Y | 99 | 1-20 |
| P, P’-DDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P, P’-DDE UNITS | 1 | Y | 9 | 5 |
| P, P’-DDE DQ | 2 | Y | 99 | 1-20 |
| O, P’-DDT | 8,3 |  | 9999.999 | 0 - 9999.999 |
| O, P’-DDT UNITS | 1 | Y | 9 | 5 |
| O, P’-DDT DQ | 2 | Y | 99 | 1-20 |
| P, P’-DDT | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P, P’-DDT UNITS | 1 | Y | 9 | 5 |
| P, P’-DDT DQ | 2 | Y | 99 | 1-20 |
| DIELDRIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIELDRIN UNITS | 1 | Y | 9 | 5 |
| DIELDRIN DQ | 2 | Y | 99 | 1-20 |
| DIETHYLHEXYPHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIETHYLHEXYPHTHALATE UNITS | 1 | Y | 9 | 5 |
| DIETHYLHEXYPHTHALATE DQ | 2 | Y | 99 | 1-20 |
| ENDRIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ENDRIN UNITS | 1 | Y | 9 | 5 |
| ENDRIN DQ | 2 | Y | 99 | 1-20 |
| HEPTACHLOR | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEPTACHLOR UNITS | 1 | Y | 9 | 5 |
| HEPTACHLOR DQ | 2 | Y | 99 | 1-20 |
| HEPTACHLOR EPOXIDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEPTACHLOR EPOXIDE UNITS | 1 | Y | 9 | 5 |
| HEPTACHLOR EPOXIDE DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROCYCLOHEXANE, ALPHA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROCYCLOHEXANE, ALPHA UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROCYCLOHEXANE, ALPHA DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROCYCLOHEXANE, BETA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROCYCLOHEXANE, BETA UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROCYCLOHEXANE, BETA DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROCYCLOHEXANE, DELTA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROCYCLOHEXANE, DELTA UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROCYCLOHEXANE, DELTA DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROCYCLOHEXANE, GAMMA (LINDANE) | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROCYCLOHEXANE, GAMMA (LINDANE) UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROCYCLOHEXANE, GAMMA (LINDANE) DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROCYCLOPENTADIENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROCYCLOPENTADIENE UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROCYCLOPENTADIENE DQ | 2 | Y | 99 | 1-20 |
| O, P’-METHOXYCHLOR | 8,3 |  | 9999.999 | 0 - 9999.999 |
| O, P’-METHOXYCHLOR UNITS | 1 | Y | 9 | 5 |
| O, P’-METHOXYCHLOR DQ | 2 | Y | 99 | 1-20 |
| P, P’-METHOXYCHLOR | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P, P’-METHOXYCHLOR UNITS | 1 | Y | 9 | 5 |
| P, P’-METHOXYCHLOR DQ | 2 | Y | 99 | 1-20 |
| MIREX | 8,3 |  | 9999.999 | 0 - 9999.999 |
| MIREX UNITS | 1 | Y | 9 | 5 |
| MIREX DQ | 2 | Y | 99 | 1-20 |
| NONACHLOR, CIS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NONACHLOR, CIS UNITS | 1 | Y | 9 | 5 |
| NONACHLOR, CIS DQ | 2 | Y | 99 | 1-20 |
| NONACHLOR, TRANS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NONACHLOR, TRANS UNITS | 1 | Y | 9 | 5 |
| NONACHLOR, TRANS DQ | 2 | Y | 99 | 1-20 |
| OXYCHLORDANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| OXYCHLORDANE UNITS | 1 | Y | 9 | 5 |
| OXYCHLORDANE DQ | 2 | Y | 99 | 1-20 |
| PENTACHLOROANISOLE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PENTACHLOROANISOLE UNITS | 1 | Y | 9 | 5 |
| PENTACHLOROANISOLE DQ | 2 | Y | 99 | 1-20 |
| PERTHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PERTHANE UNITS | 1 | Y | 9 | 5 |
| PERTHANE DQ | 2 | Y | 99 | 1-20 |
| TOXAPHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOXAPHENE UNITS | 1 | Y | 9 | 5 |
| TOXAPHENE DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE UNITS | 1 | Y | 9 | 5 |
| CHLORDANE DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE, TECHNICAL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE, TECHNICAL UNITS | 1 | Y | 9 | 5 |
| CHLORDANE, TECHNICAL DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE, ALPHA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE, ALPHA UNITS | 1 | Y | 9 | 5 |
| CHLORDANE, ALPHA DQ | 2 | Y | 99 | 1-20 |
| CHLORDANE, GAMMA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORDANE, GAMMA UNITS | 1 | Y | 9 | 5 |
| CHLORDANE, GAMMA DQ | 2 | Y | 99 | 1-20 |
| ISODRIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ISODRIN UNITS | 1 | Y | 9 | 5 |
| ISODRIN DQ | 2 | Y | 99 | 1-20 |
| ENDRIN ALDEHYDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ENDRIN ALDEHYDE UNITS | 1 | Y | 9 | 5 |
| ENDRIN ALDEHYDE DQ | 2 | Y | 99 | 1-20 |
| ENDOSULFAN I | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ENDOSULFAN I UNITS | 1 | Y | 9 | 5 |
| ENDOSULFAN I DQ | 2 | Y | 99 | 1-20 |
| ENDOSULFAN II | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ENDOSULFAN II UNITS | 1 | Y | 9 | 5 |
| ENDOSULFAN II DQ | 2 | Y | 99 | 1-20 |
| ENDOSULFAN SULFATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ENDOSULFAN SULFATE UNITS | 1 | Y | 9 | 5 |
| ENDOSULFAN SULFATE DQ | 2 | Y | 99 | 1-20 |

# Table 7. Insect.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Insecticides | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| PERMETHRIN, CIS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PERMETHRIN, CIS UNITS | 1 | Y | 9 | 5 |
| PERMETHRIN, CIS DQ | 2 | Y | 99 | 1-20 |
| PERMETHRIN, TRANS | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PERMETHRIN, TRANS UNITS | 1 | Y | 9 | 5 |
| PERMETHRIN, TRANS DQ | 2 | Y | 99 | 1-20 |
| 2,4-DINITROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,4-DINITROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2,4-DINITROPHENOL DQ | 2 | Y | 99 | 1-20 |
| ISOQUINOLINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ISOQUINOLINE UNITS | 1 | Y | 9 | 5 |
| ISOQUINOLINE DQ | 2 | Y | 99 | 1-20 |
| AZOBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AZOBENZENE UNITS | 1 | Y | 9 | 5 |
| AZOBENZENE DQ | 2 | Y | 99 | 1-20 |

# Table 8. Herb.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Herbicides | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| BUTACHLOR | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BUTACHLOR UNITS | 1 | Y | 9 | 5 |
| BUTACHLOR DQ | 2 | Y | 99 | 1-20 |
| ISOPROPALIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ISOPROPALIN UNITS | 1 | Y | 9 | 5 |
| ISOPROPALIN DQ | 2 | Y | 99 | 1-20 |
| TRIFLURALIN | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TRIFLURALIN UNITS | 1 | Y | 9 | 5 |
| TRIFLURALIN DQ | 2 | Y | 99 | 1-20 |
| ATRAZINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ATRAZINE UNITS | 1 | Y | 9 | 5 |
| ATRAZINE DQ | 2 | Y | 99 | 1-20 |
| DCPA | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DCPA UNITS | 1 | Y | 9 | 5 |
| DCPA DQ | 2 | Y | 99 | 1-20 |
| 2-METHYL-4,6-DINITROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2-METHYL-4,6-DINITROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2-METHYL-4,6-DINITROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 2,4-DICHLOROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,4-DICHLOROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2,4-DICHLOROPHENOL DQ | 2 | Y | 99 | 1-20 |

# Table 9. Fung.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Fungicides | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| HEXACHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| PENTACHLORONITROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PENTACHLORONITROBENZENE UNITS | 1 | Y | 9 | 5 |
| PENTACHLORONITROBENZEN E DQ | 2 | Y | 99 | 1-20 |
| CHLORONEB | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLORONEB UNITS | 1 | Y | 9 | 5 |
| CHLORONEB DQ | 2 | Y | 99 | 1-20 |
| P-CRESOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P-CRESOL UNITS | 1 | Y | 9 | 5 |
| P-CRESOL DQ | 2 | Y | 99 | 1-20 |
| 2,4,6-TRICHLOROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,4,6-TRICHLOROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2,4,6-TRICHLOROPHENOL DQ | 2 | Y | 99 | 1-20 |

# Table 10. Indusmis.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Industrial and Miscellaneous Compounds | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| PENTACHLOROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PENTACHLOROPHENOL UNITS | 1 | Y | 9 | 5 |
| PENTACHLOROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 1,2,4-TRICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2,4-TRICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| 1,2,4-TRICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| 4-CHLORO-3-METHYLPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 4-CHLORO-3-METHYLPHENOL UNITS | 1 | Y | 9 | 5 |
| 4-CHLORO-3-METHYLPHENOL DQ | 2 | Y | 99 | 1-20 |
| 1,2-DICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2-DICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| 1,2-DICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| 1,3-DICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,3-DICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| 1,3-DICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| 1,4-DICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,4-DICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| 1,4-DICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| NITROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NITROBENZENE UNITS | 1 | Y | 9 | 5 |
| NITROBENZENE DQ | 2 | Y | 99 | 1-20 |
| 3,3'-DICHLOROBENZIDINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 3,3'-DICHLOROBENZIDINE UNITS | 1 | Y | 9 | 5 |
| 3,3'-DICHLOROBENZIDINE DQ | 2 | Y | 99 | 1-20 |
| BENZIDINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZIDINE UNITS | 1 | Y | 9 | 5 |
| BENZIDINE DQ | 2 | Y | 99 | 1-20 |
| QUINOLINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| QUINOLINE UNITS | 1 | Y | 9 | 5 |
| QUINOLINE DQ | 2 | Y | 99 | 1-20 |
| CARBAZOLE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CARBAZOLE UNITS | 1 | Y | 9 | 5 |
| CARBAZOLE DQ | 2 | Y | 99 | 1-20 |
| N-NITROSODIMETHYLAMINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-NITROSODIMETHYLAMINE UNITS | 1 | Y | 9 | 5 |
| N-NITROSODIMETHYLAMINE DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROETHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROETHANE UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROETHANE DQ | 2 | Y | 99 | 1-20 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2-NITROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2-NITROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2-NITROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 3-NITROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 3-NITROPHENOL UNITS | 1 | Y | 9 | 5 |
| 3-NITROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 4-NITROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 4-NITROPHENOL UNITS | 1 | Y | 9 | 5 |
| 4-NITROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 9,10-ANTHRAQUINON | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 9,10-ANTHRAQUINON UNITS | 1 | Y | 9 | 5 |
| 9,10-ANTHRAQUINON DQ | 2 | Y | 99 | 1-20 |
| PHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PHENOL UNITS | 1 | Y | 9 | 5 |
| PHENOL DQ | 2 | Y | 99 | 1-20 |
| DIETHYL PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIETHYL PHTHALATE UNITS | 1 | Y | 9 | 5 |
| DIETHYL PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| DI-N-BUTYL PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DI-N-BUTYL PHTHALATE UNITS | 1 | Y | 9 | 5 |
| DI-N-BUTYL PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| DIMETHYL PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DIMETHYL PHTHALATE UNITS | 1 | Y | 9 | 5 |
| DIMETHYL PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| BIS (2-ETHYLHEXYL) PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BIS (2-ETHYLHEXYL) PHTHALATE UNITS | 1 | Y | 9 | 5 |
| BIS (2-ETHYLHEXYL) PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| DI-N-OCTYL PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| DI-N-OCTYL PHTHALATE UNITS | 1 | Y | 9 | 5 |
| DI-N-OCTYL PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| BUTYL BENZYL PHTHALATE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BUTYL BENZYL PHTHALATE UNITS | 1 | Y | 9 | 5 |
| BUTYL BENZYL PHTHALATE DQ | 2 | Y | 99 | 1-20 |
| P-DICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| P-DICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| P-DICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| M-DICHLOROBENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| M-DICHLOROBENZENE UNITS | 1 | Y | 9 | 5 |
| M-DICHLOROBENZENE DQ | 2 | Y | 99 | 1-20 |
| BIS (2-CHLOROETHOXY) METHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BIS (2-CHLOROETHOXY) METHANE UNITS | 1 | Y | 9 | 5 |
| BIS (2-CHLOROETHOXY) METHANE DQ | 2 | Y | 99 | 1-20 |
| BIS (2-CHLOROETHYL) ETHER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BIS (2-CHLOROETHYL) ETHER UNITS | 1 | Y | 9 | 5 |
| BIS (2-CHLOROETHYL) ETHER DQ | 2 | Y | 99 | 1-20 |
| BIS (2-CHLOROISOPROPYL) ETHER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BIS (2-CHLOROISOPROPYL) ETHER UNITS | 1 | Y | 9 | 5 |
| BIS (2-CHLOROISOPROPYL) ETHER DQ | 2 | Y | 99 | 1-20 |
| 4-CHLOROPHENYL PHENYL ETHER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 4-CHLOROPHENYL PHENYL ETHER UNITS | 1 | Y | 9 | 5 |
| 4-CHLOROPHENYL PHENYL ETHER DQ | 2 | Y | 99 | 1-20 |
| 4-BROMOPHENYL PHENYL ETHER | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 4-BROMOPHENYL PHENYL ETHER UNITS | 1 | Y | 9 | 5 |
| 4-BROMOPHENYL PHENYL ETHER DQ | 2 | Y | 99 | 1-20 |
| 2,4-DINITROTOLUENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,4-DINITROTOLUENE UNITS | 1 | Y | 9 | 5 |
| 2,4-DINITROTOLUENE DQ | 2 | Y | 99 | 1-20 |
| 2,6-DINITROTOLUENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,6-DINITROTOLUENE UNITS | 1 | Y | 9 | 5 |
| 2,6-DINITROTOLUENE DQ | 2 | Y | 99 | 1-20 |
| 1,2-DIPHENYLHYDRAZINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2-DIPHENYLHYDRAZINE UNITS | 1 | Y | 9 | 5 |
| 1,2-DIPHENYLHYDRAZINE DQ | 2 | Y | 99 | 1-20 |
| HEXACHLOROBUTADIENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| HEXACHLOROBUTADIENE UNITS | 1 | Y | 9 | 5 |
| HEXACHLOROBUTADIENE DQ | 2 | Y | 99 | 1-20 |
| N– NITROSODI-N-PROPYLAMINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N– NITROSODI-N-PROPYLAMINE UNITS | 1 | Y | 9 | 5 |
| N– NITROSODI-N-PROPYLAMINE DQ | 2 | Y | 99 | 1-20 |
| N-NITROSODIPHENYLAMINE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-NITROSODIPHENYLAMINE UNITS | 1 | Y | 9 | 5 |
| N-NITROSODIPHENYLAMINE DQ | 2 | Y | 99 | 1-20 |
| ISOPHORONE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ISOPHORONE UNITS | 1 | Y | 9 | 5 |
| ISOPHORONE DQ | 2 | Y | 99 | 1-20 |
| 2-CHLOROPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2-CHLOROPHENOL UNITS | 1 | Y | 9 | 5 |
| 2-CHLOROPHENOL DQ | 2 | Y | 99 | 1-20 |
| 2,4-DIMETHYLPHENOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,4-DIMETHYLPHENOL UNITS | 1 | Y | 9 | 5 |
| 2,4-DIMETHYLPHENOL DQ | 2 | Y | 99 | 1-20 |
| 2,2'-METHYLENEBIPHENYL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2,2'-METHYLENEBIPHENYL UNITS | 1 | Y | 9 | 5 |
| 2,2'-METHYLENEBIPHENYL DQ | 2 | Y | 99 | 1-20 |
| GROSS POLYCHLORINATED NAPHTHALENES | 8,3 |  | 9999.999 | 0 - 9999.999 |
| GROSS POLYCHLORINATED NAPHTHALENES UNITS | 1 | Y | 9 | 5 |
| GROSS POLYCHLORINATED NAPHTHALENES DQ | 2 | Y | 99 | 1-20 |
| MESITOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| MESITOL UNITS | 1 | Y | 9 | 5 |
| MESITOL DQ | 2 | Y | 99 | 1-20 |
| ACETONE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| ACETONE UNITS | 1 | Y | 9 | 5 |
| ACETONE DQ | 2 | Y | 99 | 1-20 |
| BENZENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BENZENE UNITS | 1 | Y | 9 | 5 |
| BENZENE DQ | 2 | Y | 99 | 1-20 |
| BROMODICHLOROMETHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| BROMODICHLOROMETHANE UNITS | 1 | Y | 9 | 5 |
| BROMODICHLOROMETHANE DQ | 2 | Y | 99 | 1-20 |
| 2-BUTANONE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 2-BUTANONE UNITS | 1 | Y | 9 | 5 |
| 2-BUTANONE DQ | 2 | Y | 99 | 1-20 |
| CARBON DISULFIDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CARBON DISULFIDE UNITS | 1 | Y | 9 | 5 |
| CARBON DISULFIDE DQ | 2 | Y | 99 | 1-20 |
| CHLOROMETHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLOROMETHANE UNITS | 1 | Y | 9 | 5 |
| CHLOROMETHANE DQ | 2 | Y | 99 | 1-20 |
| 1,2-DICHLOROETHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,2-DICHLOROETHENE UNITS | 1 | Y | 9 | 5 |
| 1,2-DICHLOROETHENE DQ | 2 | Y | 99 | 1-20 |
| METHYL CHLORIDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| METHYL CHLORIDE UNITS | 1 | Y | 9 | 5 |
| METHYL CHLORIDE DQ | 2 | Y | 99 | 1-20 |
| TETRACHLOROETHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TETRACHLOROETHENE UNITS | 1 | Y | 9 | 5 |
| TETRACHLOROETHENE DQ | 2 | Y | 99 | 1-20 |
| TOLUENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOLUENE UNITS | 1 | Y | 9 | 5 |
| TOLUENE DQ | 2 | Y | 99 | 1-20 |
| 1,1,1-TRICHLOROETHANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| 1,1,1-TRICHLOROETHANE UNITS | 1 | Y | 9 | 5 |
| 1,1,1-TRICHLOROETHANE DQ | 2 | Y | 99 | 1-20 |
| TRICHLOROETHENE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TRICHLOROETHENE UNITS | 1 | Y | 9 | 5 |
| TRICHLOROETHENE DQ | 2 | Y | 99 | 1-20 |
| VINYL CHLORIDE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| VINYL CHLORIDE UNITS | 1 | Y | 9 | 5 |
| VINYL CHLORIDE DQ | 2 | Y | 99 | 1-20 |
| XYLENES, TOTAL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| XYLENES, TOTAL UNITS | 1 | Y | 9 | 5 |
| XYLENES, TOTAL DQ | 2 | Y | 99 | 1-20 |
| POLYDIMETHYLSILOXANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| POLYDIMETHYLSILOXANE UNITS | 1 | Y | 9 | 5 |
| POLYDIMETHYLSILOXANE DQ | 2 | Y | 99 | 1-20 |

# Table 11. Sterols.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Sterols |  |  |  |  |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| COPROSTANOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| COPROSTANOL UNITS | 1 | Y | 9 | 3 |
| COPROSTANOL DQ | 2 | Y | 99 | 1-20 |
| CHOLESTROL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHOLESTROL UNITS | 1 | Y | 9 | 3 |
| CHOLESTROL DQ | 2 | Y | 99 | 1-20 |
| CHLOESTANOL | 8,3 |  | 9999.999 | 0 - 9999.999 |
| CHLOESTANOL UNITS | 1 | Y | 9 | 3 |
| CHLOESTANOL DQ | 2 | Y | 99 | 1-20 |

# Table 12. Petrocmp.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Petroleum-Related Compounds | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| OIL AND GREASE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| OIL AND GREASE UNITS | 1 | Y | 9 | 3 |
| OIL AND GREASE DQ | 2 | Y | 99 | 1-20 |
| N-DODECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-DODECANE UNITS | 1 | Y | 9 | 3 |
| N-DODECANE DQ | 2 | Y | 99 | 1-20 |
| N-TRIDECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-TRIDECANE UNITS | 1 | Y | 9 | 3 |
| N-TRIDECANE DQ | 2 | Y | 99 | 1-20 |
| N-TETRADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-TETRADECANE UNITS | 1 | Y | 9 | 3 |
| N-TETRADECANE DQ | 2 | Y | 99 | 1-20 |
| OCTYLCYCLOHEXANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| OCTYLCYCLOHEXANE UNITS | 1 | Y | 9 | 3 |
| OCTYLCYCLOHEXANE DQ | 2 | Y | 99 | 1-20 |
| N-PENTADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-PENTADECANE UNITS | 1 | Y | 9 | 3 |
| N-PENTADECANE DQ | 2 | Y | 99 | 1-20 |
| NONYLCYCLOHEXANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| NONYLCYCLOHEXANE UNITS | 1 | Y | 9 | 3 |
| NONYLCYCLOHEXANE DQ | 2 | Y | 99 | 1-20 |
| N-HEXADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-HEXADECANE UNITS | 1 | Y | 9 | 3 |
| N-HEXADECANE DQ | 2 | Y | 99 | 1-20 |
| N-HEPTADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-HEPTADECANE UNITS | 1 | Y | 9 | 3 |
| N-HEPTADECANE DQ | 2 | Y | 99 | 1-20 |
| PRISTANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PRISTANE UNITS | 1 | Y | 9 | 3 |
| PRISTANE DQ | 2 | Y | 99 | 1-20 |
| N-OCTADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-OCTADECANE UNITS | 1 | Y | 9 | 3 |
| N-OCTADECANE DQ | 2 | Y | 99 | 1-20 |
| PHYTANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| PHYTANE UNITS | 1 | Y | 9 | 3 |
| PHYTANE DQ | 2 | Y | 99 | 1-20 |
| N-NONADECANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-NONADECANE UNITS | 1 | Y | 9 | 3 |
| N-NONADECANE DQ | 2 | Y | 99 | 1-20 |
| N-EICOSANE | 8,3 |  | 9999.999 | 0 - 9999.999 |
| N-EICOSANE UNITS | 1 | Y | 9 | 3 |
| N-EICOSANE DQ | 2 | Y | 99 | 1-20 |

# Table 13. Pcbs.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Organics: Polychlorinated Biphenyls (PCB) | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 5,1 |  | 999.9 | 0-900.0 |
| RIVER MILE UNITS | 2 | Y | 99 | 10 |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| TOTAL PCB | 8,3 |  | 9999.999 | 0 - 9999.999 |
| TOTAL PCB UNITS | 1 | Y | 9 | 5 |
| TOTAL PCB DQ | 2 | Y | 99 | 1-20 |
| NUMBER OF PCB CONGENERS | 3 |  | 999 | 1-150 |
| AROCHLOR 1242 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1242 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1242 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1248 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1248 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1248 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1254 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1254 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1254 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1260 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1260 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1260 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1016 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1016 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1016 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1221 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1221 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1221 DQ | 2 | Y | 99 | 1-20 |
| AROCHLOR 1232 | 8,3 |  | 9999.999 | 0 - 9999.999 |
| AROCHLOR 1232 UNITS | 1 | Y | 9 | 5 |
| AROCHLOR 1232 DQ | 2 | Y | 99 | 1-20 |

# Table 14. Toxicity.csv

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Field  Size | Look-up Table | Format | Value Range/Default |
| Sediment Toxicity Variables | | | | |
| DATA SET NUMBER | 2 |  | 99 | 1-99 |
| DATABASE SAMPLE NUMBER | 3 |  | 999 | 1-999 |
| RIVER | 2 | Y | 99 | 1-99 |
| NAVIGATION POOL | 2 | Y | 99 | 1-99 |
| RIVER MILE | 2 | Y | 99 | 10 |
| RIVER MILE UNITS | 5 | Y | c(5) | miles |
| SAMPLE COORDINATES NORTHING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES NORTHING UNITS | 2 | Y | 99 | 15 |
| SAMPLE COORDINATES EASTING | 7 |  | 9999999 | 0-9999999 |
| SAMPLE COORDINATES EASTING UNITS | 2 | Y | 99 | 15 |
| SAMPLE TYPE | 2 | Y | 99 | 1-20 |
| SEDIMENT CODE | 1 | Y | 9 | 1-9 |
| TEST ORGANISM | 2 | Y | 99 | 1-20 |
| DURATION OF EXPOSURE | 3 |  | 999 | 0-999 |
| DURATION OF EXPOSURE UNITS | 2 | Y | 99 | 12 |
| BIOLOGICAL RESPONSE | 2 | Y | 99 | 1-20 |
| BIOLOGICAL RESPONSE DQ | 1 | Y | 9 | 1-9 |

1. Variable Descriptions and Definitions

Below are the definitions of the fields within each of the tables

* 1. Data-source variables

DATA SET NUMBER

This is a number given to each distinct data set where the data were obtained. The format for the variable is a look‑up table where the valid codes are as follows.

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5

6 = 6

7 = 7

8 = 8

9 = 9

10 = 10

11 = 11

12 = 12

13 = 13

14 = 14

15 = 15

16 = 16

17 = 17

18 = 18

19 = 19

20 = 20

21 = 21

22 = 22

23 = 23

24 = 24

25 = 25

26 = 26

27 = 27

28 = 28

29 = 29

30 = 30

31 = 31

32 = 32

33 = Other

DATA SET NAME

This is the designation given to each distinct data set where the data were obtained. The format for the variable is a look‑up table where the valid codes are as follows.

1 = FWS00001

2 = MPCA0001

3 = FWS00002

4 = USGS0001

5 = FWS00003

6 = FWS00004

7 = FWS00005

8 = FWS00006

9 = UWL00001

10 = UWL00002

11 = UWL00003

12 = ILEPA002

13 = Unknown

14 = ILEPA003

15 = MCES0001

16 = IADNR001

17 = ILEPA001

18 = ISU00001

19 = ISU00002

20 = Unknown

21 = ACOE0001

22 = WIDNR001

23 = FWS00007

24 = USGS0005

25 = USGS0006

26 = USGS0007

27 = ILEPA004

28 = ILEPA005

29 = SMU00001

30 = ACOE0002

31 = USGS0002

32 = USGS0004

33 = Other

INSTITUTION PROVIDING DATA

This is the primary governmental, public, or private institution that provided the data. The format for the variable is a look‑up table where the valid codes are as follows.

1 = Illinois Environmental Protection Agency

2 = Iowa Department of Natural Resources

3 = Iowa State University

4 = Minnesota Pollution Control Agency

5 = Saint Mary's University (Winona, MN)

6 = Metropolitan Council Environmental Services (Twin Cities, MN)

7 = U.S. Army Corps of Engineers

8 = U.S. Fish and Wildlife Service

9 = U.S. Geological Survey

10 = University of Wisconsin-La Crosse

11 = Wisconsin Department of Natural Resources

12 = Other

Name of Contact Person--This is the name of the primary contact person from the institution that provided the data. This variable also includes the address, phone number, fax number, and e‑mail address of contact person. The format for the variable is a look‑up table where the valid codes are as follows.

1 = Matthew B. Short

Division of Water Pollution, 4500 South Sixth Street Road

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PHONE: 217‑786‑6892

FAX PHONE: 217‑786‑6357

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2 = John R. Olson

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FAX PHONE: 515‑281‑8895

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3 = Patricia E. King

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4 = John F. Sullivan

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5 = Jody G. Millar

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7 = John A. Moody

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Denver CO 80225‑0046

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8 = James G. Wiener

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9 = Clint A. Beckert

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10 = Bradley E. Frazier

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11 = Gary J. Atchison

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Ames IA 50011

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12 = D. Kent Johnson

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PHONE: 612‑602‑8117

FAX PHONE: 612‑602‑8179

EMAIL ADDRESS: kent.johnson@metc.state.mn.us

13 = Mark T. Steingraeber

La Crosse Fishery Resources Office, 555 Lester Avenue

Onalaska WI 54650

PHONE: 608‑783‑8436

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SAMPLING PURPOSE

This is a brief statement describing the sampling purpose or main objective of the study that produced the data set. The format for the variable is a look‑up table where the valid codes are as follows.

1 = More directed sampling to further define contaminant problem areas found during a 1985 study and other areas of concern (barge and chemical terminals) within the Upper Mississippi River National Wildlife and Fish Refuge.

2 = To assess the effects of the 1993 flood on the vertical distribution of sediment contaminants by comparison to pre‑flood data.

3 = To assess the toxicity of sediments and the spatial and vertical distribution of contaminants in sediments from the Illinois River (river mile 326 in downtown Chicago to river mile 5 near Grafton, Illinois).

4 = To examine the bioaccumulation and biological response of sediment‑associated contaminants to fish from sediments collected from areas of the Upper Mississippi River reported to contain high concentrations of metals.

5 = To establish baseline sediment quality criteria by determining concentrations of organic and inorganic contaminants at locations on or near the Upper Mississippi River National Wildlife and Fish Refuge. Samples were collected between river miles 504 and 758.6 from backwater or off‑channel depositional areas containing high percentages of fine sediments.

6 = To identify potential contaminants originating from several critical point sources along the Illinois River. Primary suspected sources of contaminants to the river ecosystem included sewage outfalls and industrial outfalls in metropolitan areas.

7 = Sediment samples were collected in the vicinity of twenty regulated discharge points within Pools 4 through 10 of the Upper Mississippi River National Wildlife and Fish Refuge. Point source discharge sites that may be of biological concern were ranked based on the results of chemical and toxicological analyses.

8 = To investigate contaminants in sediments near selected industrial sites, within and adjacent to the Mark Twain National Wildlife Refuge (NWR) and the Clarence Cannon NWR, and at other areas important to migratory waterfowl on the Upper Mississippi River.

9 = To assess temporal changes in un‑ionized (NH3‑N) concentrations in pore water to determine if NH3‑N in sediments approach concentrations shown to have adverse effects on fingernail clams in experimental studies. Specific objectives were (1) to examine the temporal and vertical distribution of total ammonia nitrogen (TAN) and NH3‑N in pore water; (2) to compare the temporal patterns of TAN and NH3‑N concentrations in overlying surface water with those in pore water; and (3) to examine the influence of sediment characteristics on TAN concentrations.

10 = To examine the stratigraphy of contaminants and chronology of pollution downstream of the Twin Cities metropolitan area through detailed analysis of sediment cores.

11 = To characterize the sediments of various Upper Mississippi River locations in terms of particle size, organic content, and concentrations of cadmium, chromium, copper, nickel, lead, and zinc.

12 = To examine sediment contaminants near the vicinity of the 3M discharge near Cordova, Illinois.

13 =

14 = Samples for this study were collected before 1980 and were part of a background monitoring effort. Sediment samples were generally collected with fish tissue contaminant data to establish stations for the program.

15 = This study was conducted by the Metropolitan Council of Environmental Services (MCES; formerly Metropolitan Waste Control Commission). The sediment contaminant data are part of a larger monitoring effort by the MCES to obtain information on priority pollutants in surface waters of the Twin Cities MN area.

16 = The Aluminum Company of America (Alcoa) facility is near Davenport, Iowa, adjacent to Mississippi River Pool 15 (MRP15). In July 1990, Alcoa entered into an Administrative Order of Consent (AOC) with the United States Environmental Protection Agency (USEPA). The AOC covers a sediment/soil investigation in onsite drainageways and wetlands and within critical areas of MRP15. This report covers Phase III, which was conducted to quantify the vertical and horizontal extent of contamination within specific MRP15 study areas.

17 = To assess changes in water quality after the 1993 flood at selected locations in Illinois along the Upper Mississippi River and the lower Illinois River. Parameters measured in sediments were compared with historical values prior to the flood.

18 = Longitudinal patterns in the cadmium and mercury content of burrowing mayflies (Hexagenia) and surrounding sediment were examined along a 572‑km reach of the Upper Mississippi River (pools 2 through 16).

19 = To assess the responses of bluegills to cadmium‑contaminated, surficial sediments from the Upper Mississippi, Illinois, and Des Plaines rivers. The chief objectives were (1) to assess the bioaccumulation of cadmium in fish exposed to suspended river sediments and (2) to evaluate whole‑body cadmium, hepatic metal‑binding proteins, and hepatic nonthionein cytosolic cadmium in bluegills as indicators of exposure to sediment‑associated cadmium.

20 = Unknown

21 = The U.S. Army Corps of Engineers (Rock Island District) was required by a certification or variance of the Illinois Environmental Protection Agency or other governing body to collect water and sediment samples at sites in the Illinois River that had been dredged quite frequently. These samples were collected before dredging and analyzed for contaminants to assess possible problems associated with the dredging process and the placement of dredged material.

22 = Glass sediment traps were deployed in the Upper Mississippi River to collect composite samples of suspended sediment for contaminant analysis between 1987 and 1994. The objectives were (1) to assess the contaminant concentrations of suspended sediment, (2) to evaluate factors influencing contaminant concentrations, and (3) to assess temporal trends and compare contaminant concentrations in suspended sediments to recent contaminant investigations on the river.

23 = To assess sediment quality at backwater areas in the Mark Twain National Wildlife Refuge. The Sediment Quality Triad approach was attempted to evaluate heavy metal and nutrient contamination.

24 = To evaluate the longitudinal distribution of six potentially toxic elements in fishes and bed sediments in a 500‑km stretch of the Upper Mississippi River. The objectives were (1) to obtain baseline data on the longitudinal distribution of selected trace elements in the river, (2) to identify potentially toxic elements that may be adversely affecting biota in the stretch of river studied, and (3) to assess relations between contaminant concentrations in bed sediments and fish.

25 = Surficial bed‑sediment samples were collected from 25 navigation pools on the Upper Mississippi River to assess the longitudinal distribution of inorganic and organic compounds in the surficial sediments.

26 = Surficial bed‑sediment samples were collected from pools 1 through 26 in the Upper Mississippi River after the flood of 1993. The purpose was to assess the longitudinal distribution of inorganic and organic compounds in the surficial sediments.

27 = Special survey sampling conducted during 1989 and 1990 by the Illinois Environmental Protection Agency at selected sites along the Illinois River.

28 = CORE program sampling conducted during 1980 to 1990 by the Illinois Environmental Protection Agency at selected sites along the Illinois River and Upper Mississippi River. The CORE program was a 37-station subset of the Agency's ambient stations where sediment and macroinvertebrate samples were collected on a 3‑year rotational basis.

29 = The objectives of this study were (1) to obtain baseline information on total Cd, Cr, Cu, and Zn concentrations in four species of aquatic macrophytes and associated bed sediments from a large backwater area of the Upper Mississippi River; (2) to characterize the sediment metal levels; and (3) to elucidate the potential impact of aquatic angiosperms in mobilizing sediment‑bound metals.

30 = Sediment samples in this data set were collected and analyzed by the U.S. Army Corps of Engineers (Rock Island District) for the Environmental Management Program (EMP). Shallow core samples were taken at locations representative of areas impacted by the EMP projects. The sample sites were typically located in backwater areas with fine‑grained sediment.

31 = The report describes concentrations of major and trace elements in three components (water, sediment, and biota) of the aquatic environment in streams of the upper Illinois River Basin. The report describes the relations between trace‑element concentrations in water, sediment, and biota so that the effects and fates of trace elements throughout the food chain can be more completely understood.

32 = This report presents geochemical data for streambeds in the upper Illinois River basin. These data can be selected from the report tables by latitude and longitude, by map reference number, or by remark code indicating purpose for collecting sample. The scope of the report includes a presentation of the investigative design, methodology, summary statistics, and raw‑data results of the geochemical survey of streambed sediment in the basin.

32 = Other

QUALITY-ASSURANCE INDEX

This is the quality-assurance index for analysis of all contaminants within a specific data set entered into the database. The quality assurance index value for each data set was based on an examination of the quality-assurance documentation. The most comprehensive quality-assurance procedure is one that examined (1) the precision of analyses with replicate samples, (2) the bias (recovery of spiked samples and analysis of standard and/or internal reference materials), and (3) the detection limits for the contaminants that were quantified. The scale of the quality assurance index reflects the relative completeness of quality assurance documentation, with “1” indicating the most comprehensive documentation and “5” indicating the minimum level required for inclusion of a data set into the database.

Definitions

The following definitions were derived largely from Sections 1010, 1020, and 1030 in Standard Methods (American Public Health Association, American Water Works Association, and Water Environment Federation. 1992. Standard methods for the examination of water and wastewater, 18th ed. American Public Health Association, Washington, D.C.), which can be consulted for more detailed information.

Accuracy--A combination of bias and precision of an analytical procedure, which reflects the closeness of a measured value to a true value.

Bias--A consistent deviation of measured values from the true value, caused by systematic errors in a procedure. Bias is assessed by measuring the recovery of known additions (spiked samples) and the recovery of internal standards and laboratory control standards.

Detection limits--The common term that encompasses various analytical detection limits. Some of the common detection limits (in increasing order of concentration detected) include the instrument detection limit (IDL), the lower limit of detection (LLD), the method detection limit (MDL), and the limit of quantitation (LOQ). The LLD, for example, is the contaminant concentration that produces a signal sufficiently large that 99% of the trials with that amount will produce a detectable signal. The MDL differs from the LLD in that samples containing the contaminant of interest are processed through the complete analytical method. The relation among these limits is about IDL:LLD:MDL:LOQ = 1:2:4:10. Most of the studies in this database reported one or more of the detection limits. For purposes of assigning a quality-assurance index value for a specific data set, any of these detection limits was considered acceptable.

Internal standard--A pure compound added to a sample extract just before instrumental analysis to permit correction for inefficiencies.

Laboratory control standard--A standard, usually certified by an outside agency, used to measure the bias in a procedure. Examples include the National Institute of Standards and Technology (NIST) Standard Reference Materials and the National Research Council of Canada (NRCC) reference materials.

Precision--A measure of the degree of agreement among replicate analyses of a sample (e.g., standard deviation, percent difference, or percent relative standard deviation).

Replicate--A repeated operation occurring within an analytical procedure. Two or more analyses for the same constituent in an extract of a single sample constitute replicate extract analyses.

Spiked samples--Also termed the recovery of known additions, a pure compound added to a sample in the laboratory so that the overall efficiency of a method can be determined. Spiked samples are used to assess the bias and verify the absence of matrix effects.

The format for the variable is a look-up table where the valid codes are as follows.

1 = The accuracy of analyses were characterized with estimates of precision (replicate samples) and bias (both spiked samples and reference materials). The detection limits were provided for all or most contaminants that were quantified.

2 = The accuracy of analyses were characterized with an estimate of precision (replicate samples) and bias (either spiked samples or reference materials). The detection limits were provided for some contaminants that were quantified.

3 = The accuracy of analyses were characterized with an estimate of precision (replicate samples) and bias (either spiked samples or reference materials). The detection limits were not available for any contaminants that were quantified.

4 = The reliability of analyses were characterized with an estimate of bias (either spiked samples or reference materials). The detection limits were not available for any contaminants that were quantified.

5 = The reliability of analyses were characterized with an estimate of precision (replicate samples).

The five levels of quality assurance documentation are tabulated below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Quality assurance index value | Spiked samples | Internal standard or laboratory control standards | Detection limits | Precision |
| 1 | X | X | X | X |
| 2 | X |  | X | X |
| 2 |  | X | X | X |
| 3 | X |  |  | X |
| 3 |  | X |  | X |
| 4 | X |  |  |  |
| 4 |  | X |  |  |
| 5 |  |  |  | X |

NUMBER OF OBSERVATIONS IN THE DATA SET

The total number of independent sediment samples represented in the specific data set.

DATE OF ENTRY INTO DATABASE

The date of entry of sample information into the database. In MM/DD/YYYY format; example, “June 30, 1999" is represented as 06/30/1999.

DISCLAIMER

USGS = The data in this database were contributed by a number of federal, state, academic, and other institutions. These data were compiled by scientists at the USGS Upper Midwest Environmental Sciences Center and the University of Wisconsin-La Crosse and are maintained on a computer system at the Upper Midwest Environmental Sciences Center. No warranty, expressed or implied, is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution of the database constitute any such warranty. The correction of errors is a continuing process, and scientists at the Upper Midwest Environmental Sciences Center will correct or delete data, as appropriate, if errors are discovered. The file date is referred to as the most current version of the database and should be mentioned in all references to the sediment data provided herewith. These data have been provided as a unit package to ensure that the user receives a valid data set collected in a technically acceptable manner. Accordingly, these data should not be combined with data from other sources unless the user understands the procedures and purposes used to create each set of data and can verify that data from different sources are comparable.

* 1. Database Sample ID Variables

DATABASE SAMPLE NUMBER

Alphanumeric field for the unique database ID number used in this database.

ORIGINAL SAMPLE NUMBER

Alphanumeric field identifying the sample ID number used in a specific data set. If more than one convention was used for the same sample (e.g., the data were used for more than one publication such as a thesis and journal publication), the most descriptive sample ID available was entered here.

UNITS OF MEASURE

These are the units of measure for the database variables. The format for the unit of measure is a look-up table where valid codes are as follows.

1 = %

2 = g/cm3

3 = µg/g dry wt.

4 = mg/L

5 = ng/g dry wt.

6 = µmol/g dry wt.

7 = mm

8 = cm

9 = m

10 = miles

11 = year

12 = days

13 = minutes

14 = seconds

15 = UTM

16 = µg/L

17 = Other

* 1. Site-Characteristics Variables

RIVER

This is the river or tributary name where the sample was obtained. The format for the variable is a look‑up table where the valid codes are as follows.

1 = Mississippi Headwaters

2 = Upper Mississippi River

3 = Illinois River

4 = Minnesota River

5 = St. Croix River

6 = Des Plaines River

7 = Kankakee River

8 = Kaskaskia River

9 = Rock River

10 = Black River

11 = Wisconsin River

12 = Chippewa River

13 = Turkey River

14 = Maquoketa River

15 = Wapsipinicon River

16 = Iowa River

17 = Skunk River

18 = Des Moines River

19 = Salt River

20 = Chicago River

21 = Chicago River, North Branch

22 = Chicago River, South Branch

23 = Little Calumet River

24 = Calumet River

25 = Grand Calumet River

26 = Calumet Sag Channel

27 = Chicago Sanitary and Ship Canal

28 = Fox River

29 = Missouri River

30 = Vermillion River

31 = Skokie River

32 = Salt Creek

33 = North Shore Channel

34 = East Branch Du Page River

35 = West Branch Du Page River

36 = Du Page River

37 = Other

NAVIGATION POOL

This is the Navigation Pool of the Mississippi River or Illinois River in which the sample was obtained. The format for the variable is a look-up table where the valid codes are as follows.

1 = Pool 1

2 = Pool 2

3 = Pool 3

4 = Pool 4

5 = Pool 5

6 = Pool 6

7 = Pool 7

8 = Pool 8

9 = Pool 9

10 = Pool 10

11 = Pool 11

12 = Pool 12

13 = Pool 13

14 = Pool 14

15 = Pool 15

16 = Pool 16

17 = Pool 17

18 = Pool 18

19 = Pool 19

20 = Pool 20

21 = Pool 21

22 = Pool 22

23 = Pool 5A

24 = Pool 24

25 = Pool 25

26 = Pool 26

27 = Pool 27

28 = Dresden Island Pool

29 = Marseilles Pool

30 = Starved Rock Pool

31 = Peoria Pool

32 = La Grange Pool

33 = Alton Pool

34 = Brandon Road Pool

35 = Lockport Pool

36 = UMR Open River

37 = Other

STATE

This is the state in which the sample was obtained. The format for the variable is a look‑up table where the valid codes are as follows.

1 = IA

2 = IL

3 = IN

4 = MN

5 = MO

6 = SD

7 = WI

COUNTY

This is the county in which the sample was obtained. No county was entered for a sample if that sample was a composite from two counties (e.g., from one side of the river to the other).

RIVER MILE

Numeric field for the approximate river mile (if applicable) near where the sample was obtained, expressed as miles.

SITE COMMON NAME

This is the common name of the site where the sample was obtained. The format for the variable is a look-up table where the valid codes are as follows.

1 = Andalusia Slough

2 = Babbs Slough

3 = Baldwin Lake

4 = Beaver Slough

5 = Belvidere Slough

6 = Big Lake

7 = Big Meadow Slough

8 = Big Timber Refuge

9 = Blacksmith Slough

10 = Brown's Lake

11 = Fountain City Bay

12 = Harpers Slough

13 = Lake Chautauqua

14 = Lake Onalaska

15 = Lake Pepin

16 = Lower Lake

17 = McCartney Lake

18 = North Lake

19 = Peoria Lake

20 = Pig Eye Lake

21 = Robinson Lake

22 = Spring Lake

23 = Steamboat Bay

24 = Sturgeon Lake

25 = Swan Slough

26 = Twin Lakes

27 = Upper Lake

28 = Weaver Bottoms

29 = Wise Lake

30 = Frentress Lake Slough

31 = Betsy Slough

32 = Bluff Slough

33 = Lawrence Lake

34 = Methodist Lake

35 = Duck Lake

36 = Ackerman's Cut

37 = Cassville Slough

38 = Hurricane Chute

39 = Mud Lake

40 = Lake Peosta Channel

41 = Switzer Lake

42 = Molo Slough

43 = Ninemile Island Slough

44 = Casey Slough

45 = Lainsville Slough

46 = Beaver Slough Lake

47 = Joyce Lake

48 = Blue Lake

49 = West Channel

50 = North Shore Channel

51 = Swan Lake

52 = Big Denny Pond

53 = Little Denny Pond

54 = Round Pond

55 = Fox Pond

56 = Goose Pond

57 = Prairie Pocket

58 = Swarms Pond

59 = Grey Chute

60 = Willow Lake

61 = Nelson Lake (Silver Lake)

62 = Turner Lake

63 = Miller's Slough

64 = Pigs Eye Slough

65 = Lake St. Croix

66 = Skunk Slough

67 = Coolegar Slough

68 = White Chute

69 = Little Mossy Lake

70 = Big Pond

71 = Bryants Creek

72 = Prairie Pond

73 = Black Lake

74 = Watson Lake

75 = Waumandee Creek

76 = Upper Indian Creek

77 = Indian Creek

78 = Goose Lake

79 = Bertom Lake

80 = Liverpool Ditch

81 = Meyers Ditch

82 = Smallpox Creek Slough

83 = Smoots Chute

84 = Long Island Lake

85 = Other

SAMPLE COORDINATES NORTHING

This is the approximate Universal Transverse Mercator (UTM) northing coordinate (in meters) for the site where the sediment sample was obtained.

Samples that were located with available maps and site descriptions with ArcView software are tabulated below.

|  |  |
| --- | --- |
| Date set number | Database sample numbers |
| 3 | 1-13 |
| 5 | 1-12, 30-49, 66-68 |
| 8 | 1-37, 39-57, 59-70 |
| 11 | 1-45, 80-313 |
| 16 | 1-7, 9-167, 174-182 |
| 21 | 1-200 |
| 24 | 2-40 |
| 29 | 1-15 |
| 30 | 1-30 |

SAMPLE COORDINATES NORTHING UNITS

This is the units for the sample coordinates northing in UTMs.

SAMPLE COORDINATES EASTING

This is the approximate Universal Transverse Mercator (UTM) easting coordinate (in meters) for the site where the sediment sample was obtained.

WATER DEPTH

This is the depth of water at the sediment sampling site, expressed in meters.

* 1. Methods Variables

DATE OF COLLECTION

This is the date of collection of the sediment sample. For samples collected over time, such as sediment‑trap samples, this is the date on which the sample was collected. In MM/DD/YYYY format; example, “August 6, 1997" is represented as 08/06/1997.

SAMPLING DURATION

This is the sampling duration for samples collected over a time interval, such as samples from integrated samplers and sediment traps, expressed in days.

SAMPLE TYPE

This is the type of sediment sample collected. The format for the variable is a look-up table where the valid codes are as follows.

1 = Single grab sample (one sample per site)

2 = Composite grab sample (>1 samples from more than 1 site grouped)

3 = Sediment core

4 = Sediment pore water (interstitial water)

5 = Sediment-trap sample

6 = Suspended sediment in water column

7 = Grab by hand

8 = Composite core sample (>1 samples from the same depth grouped)

9 = Composite core or composite grab sample (>1 samples from more than 1 site grouped)

10 = Composite core sample (>1 samples from more than 1 site grouped)

11 = Other

COLLECTION APPARATUS

This is the apparatus used for the collection of the sediment sample. The format for the variable is a look-up table where the valid codes are as follows.

1 = Ekman dredge

2 = Petersen dredge

3 = Ponar dredge

4 = Van Veen bottom grab

5 = Diver-operated corer

6 = Gravity corer

7 = Piston corer

8 = Sediment trap

9 = Integrated water (suspended-sediment) sampler

10 = Stainless steel scoop, Ekman dredge, or Ponar dredge

11 = Gravity corer and modified van Veen bottom grab

12 = Pipe dredge

13 = Push corer

14 = Sieve, spoon, Ekman dredge, or Ponar dredge

15 = Shovel

16 = Push corer or Ponar dredge

17 = Plastic scoop, Ekman dredge, or Ponar dredge

18 = Other

UPPER DEPTH OF SAMPLE IN SEDIMENT PROFILE

This is the numerical value for the upper sediment depth from a core sample, expressed in centimeters. The top of the uppermost stratum (sediment‑water interface) will have a value of zero (0).

LOWER DEPTH OF SAMPLE IN SEDIMENT PROFILE

This is the numerical value for the lower sediment depth from a core sample, expressed in centimeters.

DIGESTION METHOD FOR INORGANIC CONTAMINANTS

This is a brief description of the sediment digestion method used before analyses for inorganic contaminants. The format for the variable is a look-up table where the valid codes are as follows.

1 = Sediment digested in strong acid (> 1 N)

2 = Sediment digested in weak acid (< 1 N)

3 = Sediment/water elutriate analysis

4 = Other

* 1. Sediment Toxicity Variables

SEDIMENT CODE

This is the code for the type or fraction of sediment used for toxicological testing. The format for the variable is a look-up table where the valid codes are as follows.

1 = Bed sediment

2 = Suspended sediment

3 = Pore water

4 = Sediment elutriate tests

5 = Suspended sediment and bed sediment

6 = Other

TEST ORGANISM

This is the test organism exposed to sediments and associated contaminants in sediment toxicity tests. The format for the variable is a look-up table where the valid codes are as follows.

1 = Mayflies (Hexagenia)

2 = Chironomids

3 = Fathead minnow (Pimephales promelas)

4 = Bluegill (Lepomis macrochirus)

5 = Green sunfish (Lepomis cyanellus)

6 = Daphnia spp.

7 = Photobacterium phosphoreum (Microtox bioassay)

8 = Amphipod (Hyalella)

9 = Oligochaete (Lumbriculus variegatus)

10 = Three ridge mussel (Amblema plicata)

11 = Pocketbook mussel (Lampsilis ovata ventricosa)

12 = Three ridge mussel (Amblema plicata) and Pocketbook mussel (Lampsilis cardium)

13 = Fathead minnow (Pimephales promelas) and Daphnia magna

14 = Bluegill (Lepomis macrochirus) and Common Carp (Cyprinus carpio)

15 = Common Carp (Cyprinus carpio)

16 = Mayfly (Hexagenia) nymphs

17 = Other

DURATION OF EXPOSURE

Numerical field for the duration of exposure of the test organism to the sediment sample, expressed in days.

BIOLOGICAL RESPONSE

This is the biological response of an organism after exposure to the sediment sample. The format for the variable is a look-up table where the valid codes are as follows.

1 = Accumulation in field-collected organisms

2 = Accumulation in experiment

3 = Behavior

4 = Biochemical

5 = Development (teratogenic effects)

6 = Growth

7 = Physiology

8 = Reproduction

9 = Survival

10 = Inhibition of Photobacterium phosphoreum bioluminescence

11 = Biochemical and accumulation in experiment

12 = Other

BIOLOGICAL RESPONSE DQ

This is the biological response data qualifier. The format for the variable is a look-up table where the valid codes are as follows.

1 = Significant effect

2 = No effect observed

3 = Not examined

4 = Other

* 1. Sediment-Characteristics Variables – NOTE: For sediment characteristics values less than the detection limit we entered “9999" as the value.

VOLATILE MATTER CONTENT

Numeric field for the volatile matter content of the sediment sample, expressed as a percentage of dry weight. Also known as volatile solids content and loss on ignition (LOI), volatile matter content is usually analyzed as a surrogate for total organic carbon and is measured gravimetrically by the loss of mass upon ignition in an oven at high temperature.

VOLATILE MATTER CONTENT DQ

Volatile matter content data qualifier code. Valid codes are as follows.

1 = Measured by the loss of mass upon ignition in an oven at 500 C (± 50).

2 = Measured by the loss of mass upon ignition in an oven at 750 C.

3 = Loss on ignition by ashing air-dried sediment at 1000 degrees C for 2 hours.

4 = Other

TOTAL CARBON

Numeric field for total carbon of the sediment sample, expressed as a percentage of dry weight.

ORGANIC CARBON

Numeric field for organic carbon of the sediment sample, expressed as a percentage of dry weight.

CARBONATE CARBON

Numeric field for carbonate carbon of the sediment sample, expressed as a percentage of dry weight.

TOTAL NITROGEN

Numeric field for total nitrogen of the sediment sample, expressed as a percentage of dry weight.

ACID-VOLATILE SULFIDE

Numeric field for acid-volatile sulfide of the sediment sample, expressed as µmol/g dry weight.

Note: all particle size data (sections 1.6.8 to 1.6.12) were entered to the nearest percentage, unless the value was <10%, in which case, data were entered to the nearest one-tenth of a percentage.

GRAVEL CONTENT

Numeric field for the gravel content (usually particles greater than 2 mm) of the sediment sample, expressed as a percentage of dry weight.

SAND CONTENT

Numeric field for the sand content of the sediment sample, expressed as a percentage of dry weight.

SILT CONTENT

Numeric field for the silt content of the sediment sample, expressed as a percentage of dry weight.

CLAY CONTENT

Numeric field for the clay content of the sediment sample, expressed as a percentage of dry weight.

SILT + CLAY CONTENT

Numeric field for the silt plus clay content of the sediment sample, expressed as a percentage of dry weight.

WATER CONTENT

Numeric field for the water content of the sediment sample, expressed as a percentage of whole wet sediment.

DENSITY

Numeric field for the density of bulk sediment, expressed as g/cm3.

SIZE FRACTION ANALYZED, INORGANIC CONTAMINANTS

Numeric field for the size fraction of sieved sediment analyzed for inorganic contaminants, measured in millimeters (mm).

SIZE FRACTION ANALYZED, ORGANIC CONTAMINANTS

Numeric field for the size fraction of sieved sediment analyzed for organic contaminants, measured in millimeters (mm).

APPROXIMATE YEAR OF DEPOSITION

Numeric field for the approximate year of deposition for strata from sediment cores that were dated (lead-210 method, cesium-137 method, etc.).

TOTAL KJELDAHL NITROGEN

Numeric field for total Kjeldahl nitrogen of the sediment sample, expressed as a percentage of dry weight.

LIPID CONTENT

Numeric field for the lipid content of the sediment sample, expressed as a percentage of dry weight.

* 1. Classes of Contaminants, Data Qualifiers, and Individual Contaminants

The individual contaminants were placed into one of two main classes of contaminants. These classes were (1) inorganic contaminants and (2) organic contaminants. Within each class, contaminants were further subdivided and placed into a subclass. The class of inorganic contaminants was divided to include (a) metals, metalloids, nutrients, and others, and (b) simultaneously extracted metals (SEMs). Organic contaminants were placed into subclasses that included (a) polynuclear aromatic hydrocarbons (PAHs), (b) organochlorine insecticides, (c) insecticides, (d) herbicides, (e) fungicides, (f) industrial and miscellaneous compounds, (g) sterols, (h) petroleum-related compounds, and (i) polychlorinated biphenyls (PCBs). To reduce redundancy, an example field description is provided for a contaminant and its associated data qualifier (DQ) for each class (or group of classes). Exceptions within each class are noted. The two major differences in the field descriptions among classes are (1) the units of measurement and (2) the valid codes for the data qualifier field for each contaminant. Classes with the same units and valid codes will have only one example.

Example for the Class Inorganics: (Note: replace redline text with each Inorganic contaminant)

AMMONIA-NITROGEN

Numeric field for ammonia-nitrogen concentration in the sediment sample, expressed as micrograms per gram dry weight.

AMMONIA-NITROGEN DQ

Ammonia-nitrogen data qualifier code. The format for the variable is a look-up table where the valid codes are as follows:

1 = Value as reported.

2 = Analyzed for, but not detected.

3 = Value reported is an estimated concentration.

4 = Analyzed for, but not detected above the method detection limit (MDL). The value reported is the MDL for the contaminant.

5 = Value reported is less than the method quantitation limit (but greater than MDL). Measured concentration reported.

6 = Value represents the mean of replicates.

7 = Value reported indicates that the constituent was not detected. One-half the detection limit is presented.

8 = Value reported but interference was present during analysis.

9 = Sum of PCB congeners.

10 = Sum of analyzed PAHs.

11 = Analyzed for, but not detected above the value reported.

12 = Other

Exceptions for the Class Inorganics: (Note: both exceptions have the same data qualifier codes, as the other Inorganics)

UN-IONIZED AMMONIA-NITROGEN

Numeric field for un-ionized ammonia-nitrogen concentration in sediment pore water for the sample, expressed in micrograms per liter.

TOTAL AMMONIA-NITROGEN

Numeric field for total ammonia-nitrogen concentration in sediment pore water for the sample, expressed in milligrams per liter.

Example for the Class SIMULTANEOUSLY EXTRACTED METALS (SEM): (Note: replace redline text with each SEM contaminant)

CADMIUM-SEM

Numeric field for cadmium simultaneously extracted metal (SEM) concentration in the sediment sample, expressed as micromol per gram dry weight.

CADMIUM-SEM DQ

Cadmium simultaneously extracted metal (SEM) data qualifier code. The format for the variable is a look-up table where the valid codes are as follows:

1 = Value as reported.

2 = Analyzed for, but not detected.

3 = Value reported is an estimated concentration.

4 = Analyzed for, but not detected above the method detection limit (MDL). The value reported is the MDL for the contaminant.

5 = Value reported is less than the method quantitation limit (but greater than MDL). Measured concentration reported.

6 = Value represents the mean of replicates.

7 = Value reported indicates that the constituent was not detected. One-half the detection limit is presented.

8 = Value reported but interference was present during analysis.

9 = Sum of PCB congeners.

10 = Sum of analyzed PAHs.

11 = Analyzed for, but not detected above the value reported.

12 = Other

Example for the Classes POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs), STEROLS, and PETROLEUM-RELATED COMPOUNDS: (Note: replace redline text with each contaminant)

ACENAPHTHENE

Numeric field for acenaphthene concentration in the sediment sample, expressed in micrograms per gram dry weight.

ACENAPHTHENE DQ

Acenaphthene data qualifier code. The format for the variable is a look-up table where the valid codes are as follows:

1 = Value as reported.

2 = Analyzed for, but not detected.

3 = Value reported is an estimated concentration.

4 = Analyzed for, but not detected above the method detection limit (MDL). The value reported is the MDL for the contaminant.

5 = Value reported is less than the method quantitation limit (but greater than MDL). Measured concentration reported.

6 = Value represents the mean of replicates.

7 = Value reported indicates that the constituent was not detected. One-half the detection limit is presented.

8 = Value reported but interference was present during analysis.

9 = Sum of PCB congeners.

10 = Sum of analyzed PAHs.

11 = Analyzed for, but not detected above the value reported.

12 = Other

Example for all of the remaining classes (ORGANOCHLORINE INSECTICIDES, INSECTICIDES, HERBICIDES, FUNGICIDES, MISCELLANEOUS INDUSTRIAL COMPOUNDS, and POLYCHLORINATED BIPHENYLS): (Note: replace redline text with each contaminant)

ALDRIN

Numeric field for aldrin concentration in the sediment sample, expressed in nanograms per gram dry weight.

ALDRIN DQ

Aldrin data qualifier code. The format for the variable is a look-up table where the valid codes are as follows:

1 = Value as reported.

2 = Analyzed for, but not detected.

3 = Value reported is an estimated concentration.

4 = Analyzed for, but not detected above the method detection limit (MDL). The value reported is the MDL for the contaminant.

5 = Value reported is less than the method quantitation limit (but greater than MDL). Measured concentration reported.

6 = Value represents the mean of replicates.

7 = Value reported indicates that the constituent was not detected. One-half the detection limit is presented.

8 = Value reported but interference was present during analysis.

9 = Sum of PCB congeners.

10 = Sum of analyzed PAHs.

11 = Analyzed for, but not detected above the value reported.

12 = Other

For the variable TOTAL PCBs, within the POLYCHLORINATED BIPHENYL subclass note:

NUMBER OF PCB CONGENERS

Numeric field for the number of individual PCB congeners that were analyzed for in the data set.