

# Population Data Vignette

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## Population data

This vignette explains and gives examples for the population Data for Wisconsin's Wastewater treatment plants(WWTP). **Madison only data** has two entries for each site one with the total Madison population and the other with the specific population for that WWTP.

The first column (site) is the WWTP site and the second (pop) is the population of that site:

| regions      | county   | site     | lab_submitter | pop   |
|--------------|----------|----------|---------------|-------|
| Northeastern | Algoma   | Algoma   | SLH           | 3171  |
| Northeastern | Appleton | Appleton | SLH           | 74832 |
| Northern     | Ashland  | Ashland  | SLH           | 8000  |
| Southern     | Baraboo  | Baraboo  | SLH           | 14000 |
| Southern     | Beloit   | Beloit   | SLH           | 35000 |
| Northeastern | Berlin   | Berlin   | SLH           | 6000  |

Sometimes we split sites by population size into 3 groups:

- Small(below 10,000)
- Medium(between 10,000 and 100,000)
- Large(Over 100,000)

| regions      | county   | site     | lab_submitter | pop   | popgroup |
|--------------|----------|----------|---------------|-------|----------|
| Northeastern | Algoma   | Algoma   | SLH           | 3171  | Small    |
| Northeastern | Appleton | Appleton | SLH           | 74832 | Medium   |
| Northern     | Ashland  | Ashland  | SLH           | 8000  | Small    |
| Southern     | Baraboo  | Baraboo  | SLH           | 14000 | Medium   |
| Southern     | Beloit   | Beloit   | SLH           | 35000 | Medium   |
| Northeastern | Berlin   | Berlin   | SLH           | 6000  | Small    |

To combine cities that have multiple WWTPs, you can use code similar to this:

| regions  | county   | site     | lab_submitter | pop    |
|----------|----------|----------|---------------|--------|
| Southern | MMSD-P11 | MMSD-P11 | SLH           | 106791 |
| Southern | MMSD-P18 | MMSD-P18 | SLH           | 89139  |
| Southern | MMSD-P2  | MMSD-P2  | SLH           | 83127  |
| Southern | MMSD-P7  | MMSD-P7  | SLH           | 42734  |

| regions  | county  | site    | lab_submitter | pop    |
|----------|---------|---------|---------------|--------|
| Southern | MMSD-P8 | MMSD-P8 | SLH           | 70024  |
| Southern | Madison | Madison | SLH           | 380000 |