



## Data Collection Worksheet

**Please Note:** The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

The relative vulnerability of the population in each U.S. Census tract can be determined using the Social Vulnerability Index. The SVI ranks the tracts on 15 social factors, including unemployment, minority status, and disability, and groups them into four related themes: socioeconomic, household composition and disability, minority status and language, and housing and transportation. Each tract receives a ranking for each census variable and for each of four themes, and also an overall ranking.

### Ranking

Census tracts within each state and the District of Columbia are ranked to enable mapping and analysis of relative vulnerability in individual states. Tracts for the entire United States are also ranked against one another, for mapping and analysis of relative vulnerability in multiple states, or across the U.S. as a whole. Tract rankings are based on percentiles. Percentile ranking values range from 0 to 1, with higher values indicating greater vulnerability.

For each tract, we generated its percentile rank among all tracts for 1) the fifteen individual variables, 2) the four themes, and 3) its overall position.

### Flags

The data can also be analyzed using flags as an alternative approach to rankings. Tracts in the top 10%, i.e., at the 90th percentile of values, are given a value of 1 to indicate high vulnerability. Tracts below the 90th percentile are given a value of 0.

For a theme, the flag value is the number of flags for variables comprising the theme. The overall flag value for each tract is the number of all variable flags.

To access the SVI data, visit <https://svi.cdc.gov/data-and-tools-download.html> and select "Data" for download type in the Data section of the form. SVI data from 2000, 2010, 2014, and 2016 are available for download in shapefile or .csv format. The accompanying documentation should also be downloaded with the data. This

can be done by selecting “Documentation” for download type in the Data section of the form. The documentation contains further details on the data, including variable definitions.

Protocol source: <https://www.phenxtoolkit.org/protocols/view/290701>