

Considerations When Submitting Spatial Data to SGMA Program

Various standards and guidance documents exist for collecting data, please see the Best Management Practices documents developed by the Department of Water Resources. for additional details on monitoring and data collection protocols. The requirements and recommendations identified below are not meant as a substitute for practicing geology, engineering, or land surveying. Please see the California Business and Professions Code §7800 -§7887 (Geologist and Geophysicist Act), §6700 -§6799 (Professional Engineers Act), and §8700 -§8805 (Professional Land Surveyors Act), for specific provisions that may be applicable.

The following items are required when submitting Spatial Data¹ (otherwise known as GIS Data):

- 1) **Vector Data Submission format (i.e., point, line, and polygon features):** Data must be submitted as zipped shapefiles, unless the data happens to exist in a geodatabase as feature classes, where a zipped Esri File Geodatabase would be the preferred format.
- 2) **Spatial Reference:** The required horizontal datum is NAD 83, or another national standard that is convertible to NAD 83. The required vertical datum (when used) is NAVD 88, or another national standard that is convertible to NAVD 88.
- 3) **Documentation/Metadata (applies to all formats):** Please include detailed information about all datasets used to digitize or otherwise support the creation of this geospatial data. Please be prepared to provide these documented reference datasets to DWR if requested.

To provide a consistent statewide geospatial dataset, please consider the following recommendations:

- 1) **Shapefile Attribute Table:** Shapefiles downloaded from the SGMA websites provided as upload templates and reporting standards contain the required attribute fields. Please do not modify or delete the attribute fields.
- 2) **Shapefile Spatial Reference:** The recommended spatial reference (datum and projection combination) is NAD 83 California Teale Albers (Meters). Please do not use the 2011 version of the projections.
- 3) **Digitizing/Editing Recommendations:** The following guidelines are provided for vertex spacing when digitizing new lines or polygons:
 - a. *Absolute spacing*
 - i. The distance between vertices, as measured in the real world, will represent no more than 1,000 feet horizontal distance.
 - ii. Exceptions will be allowed for boundaries that are represented as straight lines on the map and in the real world.
 - b. *Scale dependent spacing*

¹ 23 California Code of Regulations § 352.4

- i. Vertices should be no more than 1/8-inch apart when viewing the map in its designated scale. For example:
 - In a 1:24,000 scale map, 1-inch on the map equals 2,000 feet on the ground. Vertices spaced 1/8 inch apart represent points on the ground that are 250 feet apart.
 - In a 1:100,000 scale map, 1/8-inch on the map represents points on the ground that are 1,042 feet apart.
 - In a 1:250,000 scale map, 1/8-inch on the map represents points on the ground that are 2,604 feet apart.
 - ii. Basemaps with scales smaller than 1:250,000 will not be accepted (i.e. 1:500,000 scale map is a smaller scale than 1:250,000).
 - iii. Exceptions will be allowed for boundaries that are represented as straight lines on the map and in the real world.
- c. *Spacing based on line curvature*
- i. The obtuse angle created by any vertex and its connecting lines shall be greater than 135 degrees.
 - ii. Some exceptions will be allowed.