

Data Review Checklist

Data releases require a minimum of one review of the data and one review of the accompanying metadata. The special focus of the data reviewer is the accuracy, completeness, and usability of a data product. The following checklist is provided for the assistance of data reviewers who are experienced in working with the particular type of data being reviewed. It is assumed that data reviewers have the expertise and tools to access and assess both the data and the metadata, and are familiar with standard practices within the relevant discipline for the formatting and presentation of data. The data reviewer may also serve as the metadata reviewer; the checklist for metadata review can be accessed here: <https://www.usgs.gov/products/data-and-tools/data-management/data-release>.

In some cases, it will be unreasonable to actually check every data value, so a spot check or a check of a carefully selected sample may need to suffice. In this case, the data review report should indicate that a spot check or selected sample was examined.

A data review should consider the following:

- Are the data what the author says they are?
- Are data values reasonable? Do they meet specifications for quality, accuracy, and completeness as identified by both the author and the approving official? This might include specific checks such as:
 - Are they in a valid range for that measurement?
 - Do they display seasonal or daily trends that are expected? Is there consistency between adjacent or otherwise related datasets, within the product?
 - Are the geographic locations given for the data reasonable? (e.g., are ocean data points actually showing in the ocean?)
 - Is the accuracy claimed for the data reasonable?
 - Are data anomalies or gaps explained in the metadata? Are “no data” values accurately defined?
 - Do analysis values add up?
- Consider any other requirements that the science center or program may have.
- Although not part of the formal data review process, the following should also be addressed prior to release of the data product:
 - Does the product as a whole, through its design or documentation, provide enough information so that the data and metadata can be easily accessed and used?
 - Is versioning information provided, if warranted?
 - If the data are released on a web page, does the page have useful discovery metadata? For example, the web page clearly identifies the contents, keywords and metadata tags are provided, and geospatial attributes are presented?

Once the review is complete, return comments and suggestions to the author for updates and improvements.