

# ScienceBase Geospatial Services

ScienceBase provides a number of ways to interface with the geospatial information contained in either the metadata of ScienceBase Items from the ScienceBase Catalog or actual geospatial data from the ScienceBase Repository. Geospatial services from ScienceBase provide capability for users to interact with the information using various types of geospatial information systems and mapping clients. Most of these services rely on established OGC specifications for web services, such as web map services (WMS) and web feature services (WFS).

## Geospatial Discovery Services

ScienceBase includes capabilities to search and discover items in ScienceBase from their geospatial footprint information. Currently, this capacity is limited to a bounding box search using only the representational point aspect of item footprints based on the need for a rapid search and retrieval mechanism. Future work includes extending the capability for more complex geospatial searches using full item footprints and additional service interfaces such as OGC-CSW.

## Item Core Services

ScienceBase Geospatial Services provide core GIS services for items in three parts: 1) the item footprint for items that have one, 2) collection of geospatially referenced child items from the ScienceBase item hierarchy, and 3) appropriate data services from the ScienceBase Repository for items with geospatial data in the repository. Any item with a geospatial footprint will have simple map services in WMS and KML showing available parts of the footprint - point, bounding box, complex geometry.