GREATER SALT LAKE MUNICIPAL SERVICES DISTRICT

GEOGRAPHIC INFORMATION SYSTEM
POLICY STANDARDS

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Purpose

This document ("Policy") provides standards for the creation and maintenance of geospatial data for the use of the Greater Salt Lake Municipal Services District (MSD) to create a high quality, well- documented Geographic Information System (GIS) that integrates across Salt Lake Valley data sources.

Scope & Compliance

This Policy applies to all MSD users, contributors, and contractors to GIS. All MSD employees are encouraged to work collaboratively to maximize GIS resources and for the good of the MSD.

1. New GIS users will participate in an orientation and training explaining the MSD GIS policies and best practices.
2. All GIS users will participate in Technology meetings or GIS special training.

Policy

1. Dataset Types.

A GIS database consists of geographic datasets that are made up of points, lines, polygons, tables, and imagery. MSD uses data created by vendors under the direction of MSD as well as various internal and external entities.

1.1 Base Dataset - MSD uses, as a base reference layer, the survey control that is maintain by the Salt Lake County Surveyor's Office. This base layer includes, but is not limited to, the sections laid out by the original Public Land Survey System (PLSS) survey.
1.2 Primary Source Datasets - Created by MSD that have a direct or indirect tie to the base dataset.
1.3 Derived Datasets - Created from existing datasets to create a new dataset. These datasets can be created from internal or external datasets.
1.4 External Datasets - MSD may be required by law to use datasets created by outside agencies, such as US Census Bureau data and US Congressional Districts. MSD may not meet the specific requirements of an external data creator except where required by law.
1.5 Imagery - Aerial Imagery used for building MSD-wide GIS data shall be the rectified imagery.

2. Data Security.

2.1 Some GIS data may contain information that is sensitive or confidential in nature. This data must be identified by the data creator as being sensitive or confidential. Access to sensitive and confidential data must be limited to those who have a legitimate business reason for access. Procedures for ensuring limited access to sensitive and secure data are necessary.
2.2 Access to GIS data that is created by an office or department will, by default, be available only to the creating entity, but the data creator may request that others be given access to the data.
2.3 Changes to GIS authoritative data must be vetted and approved through the MSD's GIS/IT team to assess the impact on other agencies. Once approved, the employee/team that created the data may make the approved modification.

3. Data Sharing.

No MSD team shall distribute data that is created by another agency. This is not intended to prohibit the production of maps that use data created by another internal agency but is intended to allow the creating agency to maintain control over the distribution of geographic and attribute data created by that agency.

3.1 Internal: The data in the shared repository will be "read-only" and changes will only be accepted from the creating team.
3.2 External: MSD will comply with the Government Records Access and Management Act (GRAMA) and the Health Insurance Portability and Accountability Act (HIPAA) when distributing data outside of MSD.
    3.2.1 Subject to GRAMA and HIPPA, the team that creates GIS data is responsible for setting the conditions under which the data may be distributed.
    3.2.2 If an outside party that is contracted by MSD to perform geographic work requires access to MSD data, that data is subject to distribution restrictions. The contract must include provisions that restrict the contractor from using or sharing the data for any purpose outside of the scope and duration of the contract.
    3.2.3 MSD may share data with municipalities and other public entities by agreement or contract. Such data sharing does not remove the requirement that the creating entity retains final authority over data distribution.
    3.2.4 In the case of data acquired from some outside vendor or agency, any redistribution requests will be referred to the third-party creator.

3.2.5 When MSD contracts with a vendor or consultant, or establishes an agreement with another public entity, the agreement or contract must require adherence to the standards set forth in this Policy.

4. Data Standards.

Best practice is to document methods used when creating data.

4.1 Projection and Coordinate System - When changing between projection and coordinate systems, confirm that shifting does not occur.

All data created by MSD will use the following:

Desktop Applications:
Datum: NAD83
Projection: State Plane
Zone: Utah Central Linear
Unit: US Foot

Cached layers:
Datum: D- WGS 1984
Projection: Mercator Auxillary Sphere
Linear Unit: Meter

Dynamic layers (same as Desktop Applications):
Datum: NAD83
Projection: State Plane
Zone: Utah Central Linear
Unit: US Foot

4.2 When creating hard-copy maps or map products, the data creator, publisher, and date of publication must be identified and acknowledged with the following statement:

Map created by the Greater Salt Lake Municipal Services District in conjunction with Salt Lake County, the State of Utah and/or other local agencies on [insert date].

4.3 Geographic Feature Requirements - Geographic data, that is more than temporary, requires properly named attributes that describe the feature. All geographic features must be created from and referenced to the most accurate source data. Intended use of the data must be included in the metadata.

4.3.1 Points should represent a single feature or location.
4.3.2 Lines must not overlap except where there is a specific need for accurate data representation. Lines represent a network, and at intersections the lines must be snapped to a node. Lines must be created with the minimum number of vertices. Vertices should not be stacked.
4.3.3 Polygons, when applicable, must not have gaps and/or overlaps if the features represent contiguous areas.
4.3.4 Attributes:
4.3.4.1 Each geographic feature must have a unique ID and name. Other attributes will be added to meet the requirements of the feature set.
4.3.4.2 Attribute field names must meet established standards. Attribute field names must have descriptive names that may help interpret the purpose of the field. When possible, domains shall be used for attributes that have a definable set of values.
4.3.5 Metadata - must be maintained for every dataset created by the MSD. The minimum requirements are:

Data creator: GSLMSD
Date of creation:
Dates of modification:
Description of dataset:
Method of creation, including source and reference:
Current projection and coordinate system:
Original projection and coordinate system, if different from current:

Additional metadata requirements may be added as needed. GIS data contributors are encouraged to maintain more than the minimum metadata.

4.3.6 Web-based GIS Technologies and Services

4.3.6.1 Maps and layers to the assorted web-based (cloud) GIS technologies must meet the same data standards and sharing requirements as outlined in Sections 3 and 4 of this Policy. Currently the technologies are ArcGIS Online (AGOL) and Portal.

4.3.6.2 AGOL and Portal authoritative items must have MSD standard thumbnail, description, and informative tags.

4.3.6.3 Prior to the creation of any new dataset or new web service, it must be confirmed that the dataset or web service has not previously been created and cannot be utilized by views or queries from the original dataset.

5. Data Archiving Requirements.

5.1 MSD recognizes the long-term value of geospatial data and the need to establish retention and disposition standards, guidelines and procedures for storage, management and access. GIS resources and capabilities must be addressed in identifying what data must be preserved, how readily available it is, and how it will be managed over time.

5.2 MSD may establish criteria to determine which datasets, maps, projects, imagery and/or outputs should be archived and how frequently they must be archived; identify industry standards that must be followed regarding metadata; establish retention and disposition procedures; ensure ongoing training in archival requirements; and promote the use of the MSD's geospatial resources.

5.3 The GIS archiving procedures should identify data accessing information, including data authenticity; establish file naming conventions; disclose security issues; and identify hardware and software considerations. The procedures should include a retention schedule that identifies the datasets to be preserved, including retention periods and any access restrictions. Data custody issues should address metadata documentation, media migration and data conversion, preservation copies, disaster planning, vital records identification, and off-site storage issues.

6. Exceptions and Proposed Policy Changes

6.1 Exceptions and proposed changes to this Policy must be presented for consideration by management prior to going before the MSD Board of Trustees.