SCHOOL & INSTITUTIONAL TRUST LANDS ADMINISTRATION

GIS Data Deliverable Standards Policy

I. Purpose

GIS professionals at the State of Utah School & Institutional Trust Lands Administration (SITLA) are tasked with maintaining a spatial database (GIS) with representations of all boundaries of lands and contracts administered by the agency for the purpose of communicating this statewide information at any scale and for many different purposes and audiences. The legal descriptions used for this process, as well as to be used on Official Agency Records (sometimes referred to as an "OAR") of SITLA, are provided to the agency in many different formats. In an attempt to make this process more efficient and less error prone, the following policy ("GIS Data Deliverable Standards Policy") is hereby established regarding GIS Data Deliverables that are used on any OAR of SITLA.

II. GIS Data Deliverable Standards

All consultants, engineers, contractors and/or land surveyors are asked to submit legal descriptions in a digital format to be used in an OAR. The digital data are required to adhere to the GIS Data Deliverable Standards Policy. The GIS Data Deliverable Standards Policy was initiated by GIS professionals at SITLA to reduce the amount of time and errors in legal description reviews for the OAR. These standards save time and preserve the separation of responsibilities between land surveyors and GIS professionals. Digital data is required to be delivered in the following formats:

1. **ESRI shapefile or geodatabase:** A shapefile is a simple vector (feature types of points, lines or polygons) data format that can be used in ESRI software to store and view spatial data and attribute information associated with that spatial data. An ESRI shapefile consists of several files:
   a) .shp file – this is the main file that stores the feature geometry
   b) .shx file – this is the index file that stores the index of the feature geometry
   c) .dbf file – this is the table that stores the attribute information
   d) .xml file – this is the file that stores the metadata
   e) .prj file – this is the file that stores the coordinate information
   f) .sbn file – this is the file that stores the spatial index
   g) .sbx file – this is the file that stores the spatial index

   A geodatabase is a collection of files in a folder that stores, queries and manages spatial data that contains many tables.

   To successfully prepare a shapefile or geodatabase for delivery and use, save the shapefile files or geodatabase to an individual folder and then zip up the folder to compress it.

   Use the links below for guidance on how to convert from Autodesk dwg objects to an ESRI shapefile:
   - Create topology to export polygons: https://knowledge.autodesk.com/support/autocad-map-3d/learn-explore/caas/CloudHelp/cloudhelp/2019/ENU/MAP3D-Use/files/GUID-500863A3-3E7E-443D-B7CE-07E20BD87C47-htm.html
   - Export to a shapefile: https://knowledge.autodesk.com/support/autocad-map-3d/learn-explore/caas/CloudHelp/cloudhelp/2019/ENU/MAP3D-Use/files/GUID-55FE7920-51ED-42AB-B52C-0AC25C198E46-htm.html

2. **Two tie points to the PLSS:** Two tie points (measured with a device) to the Public Lands Survey System (PLSS) are required. All legal descriptions must have a locational reference to the Salt Lake Base and Meridian (SLB&M) or the Uinta Special Base and Meridian (USB&M).

3. **Coordinate information:** Coordinate information should be identified and defined in order for GIS professionals to view the data in ESRI software programs. It is **essential** that the .prj file be included when

providing a shapefile for delivery. The .prj file contains the projection, unit of measurement, datum, spheroid and prime meridian.

4. **Datum information:** Datum information for all legal descriptions is also required. Datum information should be in the last published "current official datum" as shown by the National Geodetic Survey (NGS). Please use this link as a reference. https://www.ngs.noaa.gov/datums/index.shtml

III. Waive Requirements

In addition to those waivers already expressly stated herein, SITLA may waive any other requirements set forth in this Legal Descriptions and GIS Data Deliverables Standards Policy, with the Director's approval, if it is determined that such waiver is in the best interest of its beneficiaries.

IV. Signature of Approval

School and Institutional Trust Lands Administration

X _David Ure_

Dave Ure
Director

X 10/22/19

Date