Allegan County GIS Services

Tax Map Production

Contents

0.0.1 Tax Map Production

Problem and Analysis

Background

Equalization department (EQ) has an annual responsibility to produce a printed version of maps that show all of the tax parcels in the county for every tax year. The GIS Services Department(GIS) has traditionally provided this as a service to Equalization.

Statement of Problem

Annually, after March Board of Review, a tool is needed to create updated parcel maps for printing by Equalization and the local units.

Analysis

Tax Map Production Workflow will facilitate: Creation of new tax maps for each new tax year.

People Involved in the Workflow

➤ GIS Analyst

➤ EQ Mapper

Stages of the Workflow

➤ Data Updates

➤ Map Production Testing

➤ Map Style Refinement

➤ Map Production

Tax Map Production Summary

The Four Stages of the workflow:

1. Data Updates Tax Roll Rollover:

   ➤ Update ACParcelsPublishing FDS from ACParcelsEditing FDS

   ➤ Prepare ACParcelsEditing FDS for the next year of use

   ➤ Add or delete quarter section index frames

2. Map Production Testing:

   ➤ Execute Tax Map Builder ArcPy Script on test units

   ➤ QA QC to verify updates

3. Map Refinement

   ➤ Symbols

   ➤ Labels

   ➤ Layer Order

4. Map Production:

   ➤ Execute Tax Map Builder ArcPy Script on all units

   ➤ QA QC results

Technologies Used in The Tax Map Workflow

ArcGIS Enterprise

SQL Server Source Data:

➤ ACPro.SDE

ArcGIS Desktop

ArcPy tools produce map pages using Data Driven Pages (DDP) functionality

Production Data

➤ ACCadastral.gdb   (File GDB Created From ACPro.SDE)

Python

A Python interpreter to tune the TaxMap-Tool.py script

Adobe Acrobat

Combine pdf pages into books by unit

DATA UDPATE PROCEDURE

Updates to AC_Pro.sde

Datasets involved:

➤ ParcelEditing

➤ ParcelPublishing

➤ TaxMapIndexFrames

➤ TaxMapLayers

➤ TaxMapUnitBounds

Update Procedure

Parcel Editing and Parcel Publishing

Annually, the ParcelEditing feature dataset (FDS) is used to update the ParcelPublishing FDS. For each FC in ParcelPublishing:

➤ Delete all features

➤ Load all features from corresponding FCs

Data Update Relation	
FC in ParcelEditing	FC in ParcelPublishing
AC_COGO_LnEdits	AC_COGO_Ln
AC_DimensionsEdits	AC_Dimensions
AC_PointsEdits	AC_Points
AC_Splits	AC_Parcels
AC_SubBlocksEdits	AC_SubBlocks
AC_SubdivisionsEdits	AC_Subdivisions
AC_SublotsEdits	AC_Sublots
AC_TiebarsEdits	AC_Tiebars

TaxMapIndexFrames

As this is the index layer for the DDP, Quarter Quarter Section frames must be added or removed to account for added or removed subdivision features.

TaxMapLayers

Layers that are derived from other fcs for cartography purposes

- ➤ AC_M_Rd_Lbl is a subset of AC_Roads used only for less busy labeling

- ➤ AC_MapID_RR is a subset of AC_Parcels used only for Railroad Labeling

- ➤ AC_Road_ROWs_Tax is an aggregation of AC_Road_ROWs by unit

TaxMapUnitBounds

Layers extracted from AC_Units for bounding polygons in the locator Data Frame

Workspace Folder Setup

Inside of J: $\Longrightarrow$ Apps $\Longrightarrow$ Python $\Longrightarrow$ TaxMaps:

Copy the folder: **TaxMapsWorkspaceTemplate**

Into the years folder and rename to: **YYYY**

Production Data Creation

In the source folder, create a new file GDB named AC_Cadastral. Import the following FDSs from AC_Pro.sde:

- AdministrativeArea

- CadastralReference

- Hydrology

- ParcelPublishing

- Roads

- TaxMapIndexFrames

- TaxMapLayers

- TaxMapUnitBounds

Map Production Setup

In the new workspace folder:

ArcGIS Desktop

Use ArcMap Catalog to navigate to:

workspace folder $\Longrightarrow$ processing $\Longrightarrow$ Toolbox $\Longrightarrow$ TaxMapTools.tbx

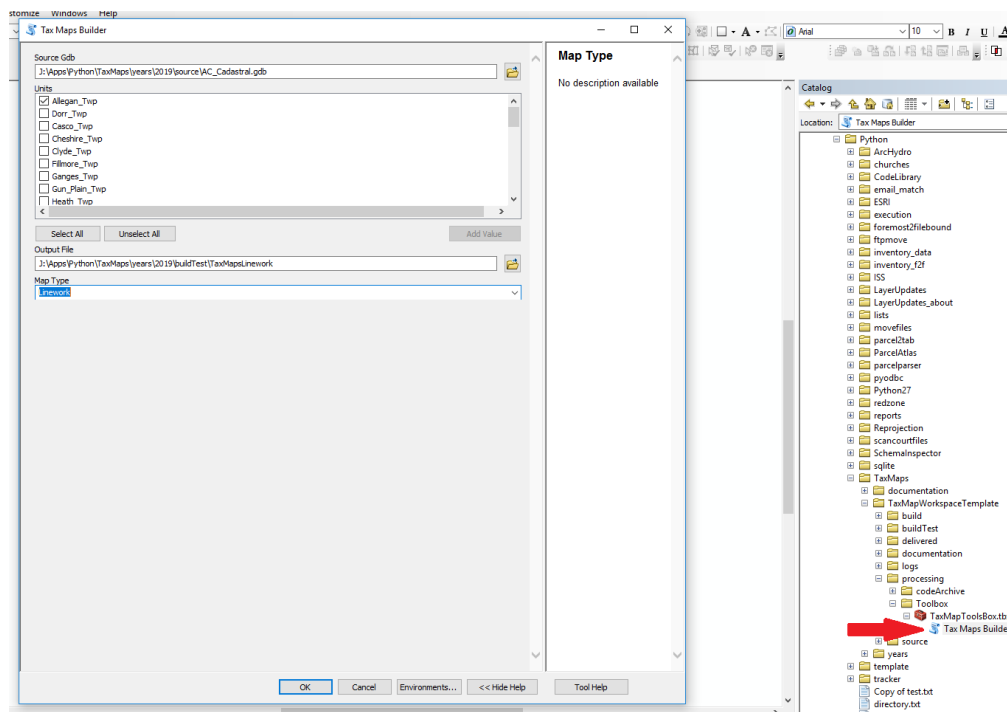Double click on the **TaxMapBuilder** script

Figure 0.1: Tax Map Builder UI

To execute the tool:

Make selections in the tool from the appropriate locations in the workspace folder.

Map Refinement

Test groups of maps should be produced.

Any style improvements that can be made should be done at this time.

Map Production

Use ArcMap Catalog to navigate to:

workspace folder $\Longrightarrow$ processing $\Longrightarrow$ Toolbox $\Longrightarrow$ TaxMapTools.tbx

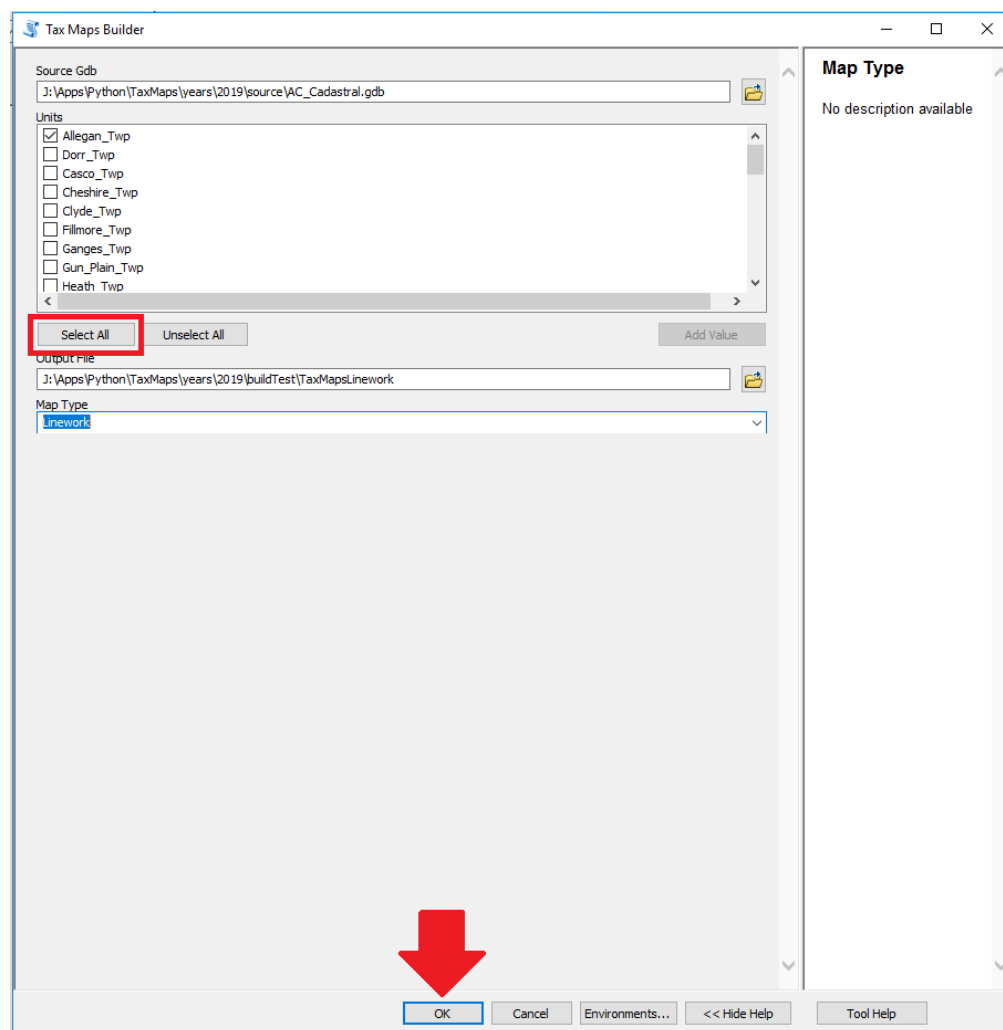Double click on the **TaxMapBuilder** script

Figure 0.2: Tax Map Builder UI

Select All Units and Press OK

Create Books from Pages

For each unit, organize the pages into the TaxMapUnitFolders.

Move the pages to the appropriate pdf folders inside the delivered folder of the workspace.

Combine all of the individual map pages into books using Adobe Acrobat and save to the PDF_Book folder.

Share the map books with Equalization

Copy the entire TaxMapUnitsFolder to:

J: $\Longrightarrow$ Departments $\Longrightarrow$ Equalization $\Longrightarrow$ TaxMaps $\Longrightarrow$ TaxMap Archive