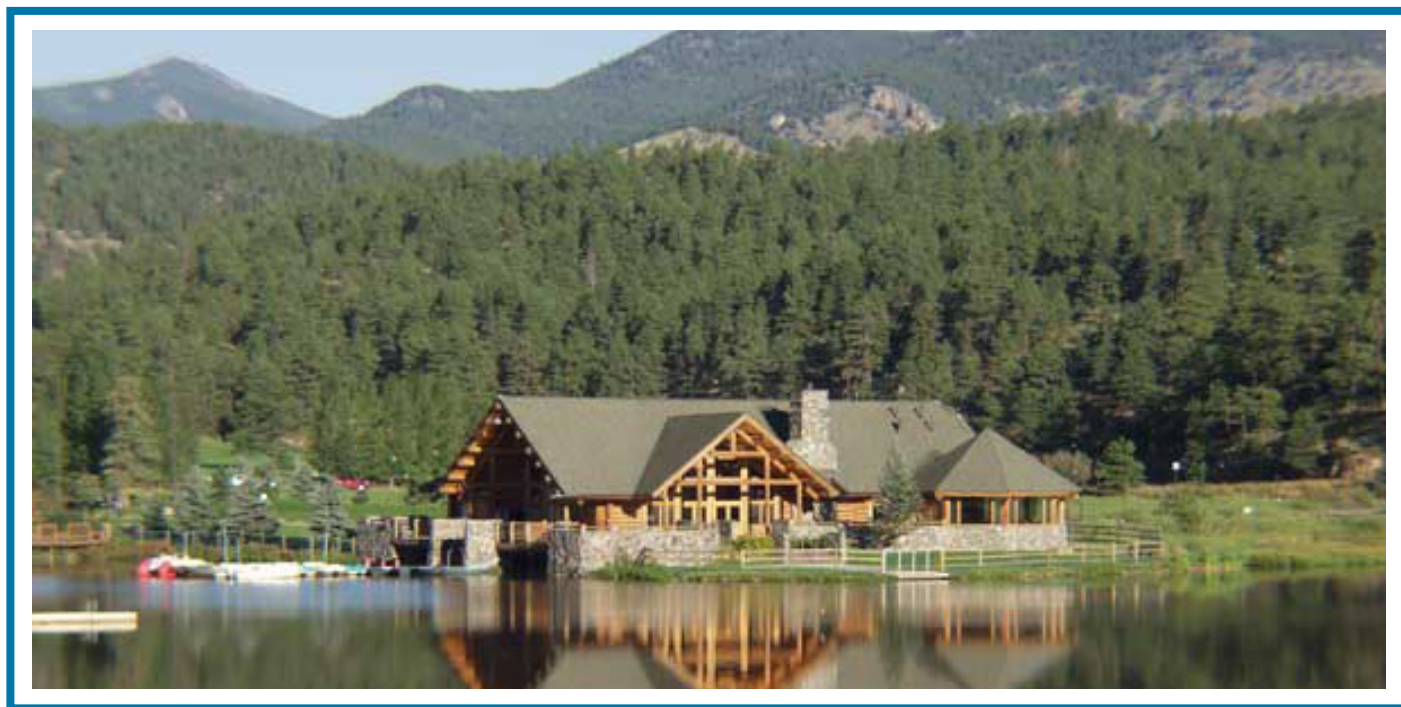


Jefferson County Assessor's Office

Project Profile State: Colorado



Jefferson County, Colorado Assessor's Office (JCAO), was looking to modernize their GIS and CAMA systems. To accomplish this, they wanted to do away with their integration and mapping software. The services Jefferson County needed to implement this process in its entirety are as follows: GIS mapping services, parcel administrator services, integration services, and support.

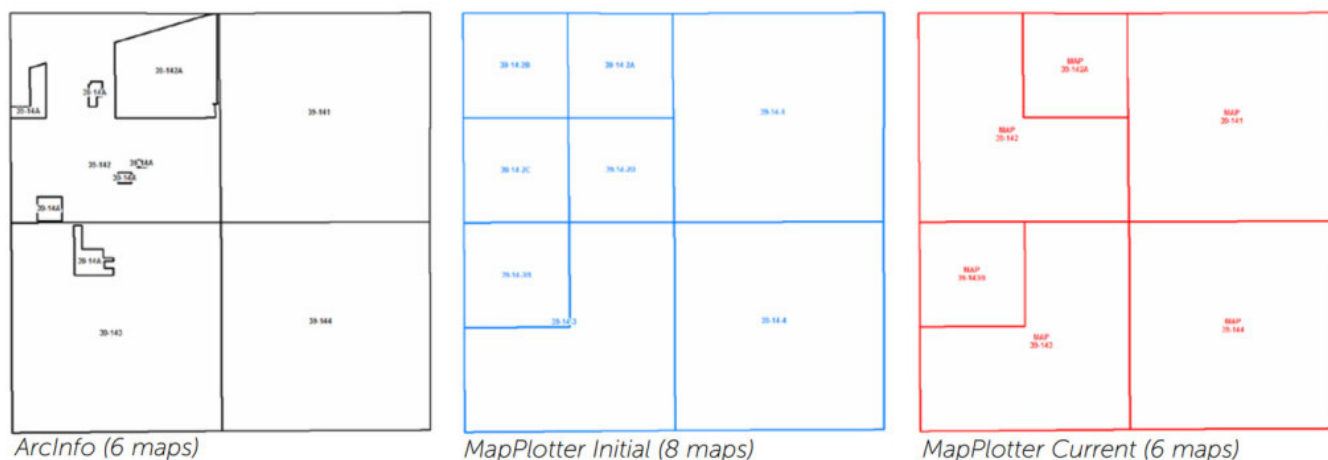
To start, Sidwell provided assessment services to perform a gap analysis in order to move forward. The next step was to build a parcel admin database. After this there was a testing phase to make sure everything was working smoothly. This was done in collaboration with their CAMA company to create an API in their system. When all services were implemented, Sidwell also provided the staff with training to use this new system.



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Assessment

Sidwell and the JCAO worked together in order to replicate and enhance the current offerings in the new Esri environment. One of the biggest obstacles in migrating to Map Plotter was reconfiguring the subdivision-based parcel maps, which were all different shapes and scales, into a PLSS-based grid. Another was the fact that many of the existing maps consisted of multiple PLSS subdivisions (for example, three quarter sections, or one section and one adjacent quarter section). Sidwell and the JCAO staff knew this would be a challenge based upon the intricacies of the existing setup and map page details. While Map Plotter was certainly going to help improve workflows and the maintenance of the map pages in this new environment, it would require creativity on the parts of both JCAO and Sidwell personnel to complete the transition.

Most of the subdivision maps were 1:600 scale, as are the quarter-quarter section maps in ArcGIS; so, at first, all of the areas that were on subdivision maps were replaced with quarter-quarter maps. However, this produced 1,660 maps, an increase of over 300. Over time, the ability to put virtually any combination of PLSS subdivision on a single map was replicated, and the total number of maps was reduced to 1,440. Looking at one section of maps (39-14) clearly shows this migration. In ArcInfo, this section required three subdivision and four quarter section maps. Upon conversion, there were six quarter-quarter section and three quarter section maps. Over time, as the ability to combine PLSS subdivisions was developed, that number was reduced to two quarter-quarter and four quarter section maps. Using Map Plotter Links (both polygon and text), attributes in the PageIndex feature class drive most of the marginalia elements, including the map title and indices.



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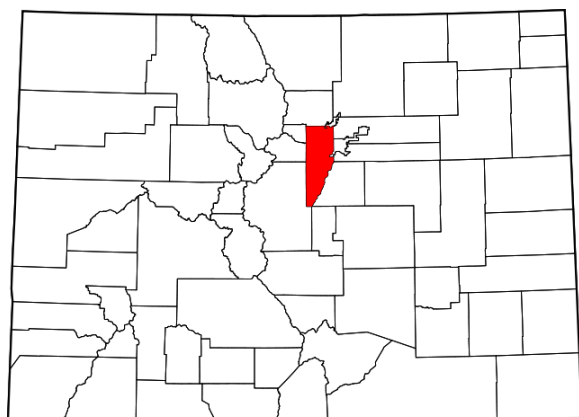
Solution

The JCAO has developed a workflow to ensure they are getting the most out of their investment in technology. Producing and maintaining 1,440 high-quality parcel maps in a timely manner requires synchronizing many moving parts. Here is a snapshot of the behind-the-scenes processes that occur. As part of the QA/QC process, when a newly updated set of parcels are checked, PageIndex polygons covering those updated parcels are selected and their attributes are updated. As the updated parcels are published, the updated attributes in PageIndex are used to identify which maps to update using MapPlotter.

Additionally, Parcel Builder Workflow is heavily utilized as part of the QA/QC process, including steps for:

1. Updating the extent of the PageIndex polygons, if necessary...
2. Selecting the PageIndex polygons to be flagged for updating in MapPlotter...
3. Attributing those selected polygons using a ModelBuilder model.

Before updating the parcel maps, a Python script is run, which creates a 'flattened' tag table with one row per CadastralLine. This table contains flags for all tag types, as well as a line symbol value based on the tags present for that line. By joining the flattened table back to the CadastralLine feature class, the user can spatially check for incorrect tag-combinations; look for certain types of tag dangles; and symbolize the lines as they are shown on the maps, all without having to make countywide tagged line layers. This is a big time saver, as the



Jefferson County

Area: 774 sq. miles **Parcels:** 221,993
Population: 574,613 **Density:** 752/sq. mi
*as of 2017 census



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Impact

The results of this work are beautiful, highly detailed map pages on which the user can easily locate multiple pieces of information. Below are some details of the map pages and links for viewing the product.

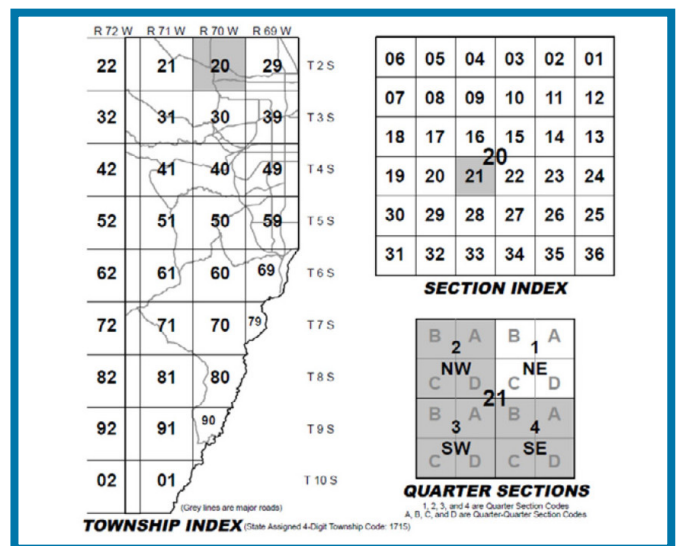
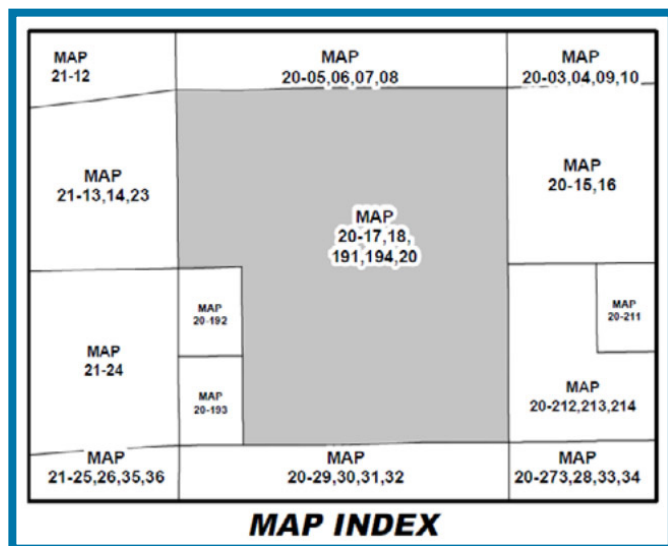
The extent of each map is dependent upon the density of the parcels shown on the map, and can consist of almost any combination of PLSS subdivision:

- *One or more quarter-quarter sections (239 maps) single multiple
- *One or more quarter sections (953 maps) single multiple
- *One or more sections (216 maps) single multiple
- *One or more townships (five maps) single multiple
- *Other unique combinations (27 maps) example
- *Except for maps of single quarter-quarter sections, areas outside of what is shown in the map title are masked out (the map extent matches exactly what the map title says).

For example, each map has two indices:

*A Map Index that shows the adjacent map pages (Left: This one is for Map 20-17, 18, 191, 194, 20).

*A full-county Township/Section/Quarter index (Right: This one is for Map 20-212, 213, 214).



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Benefit

The result of this conversion project is a streamlined process that recreates the extensive detail of the map books in this new environment. The public and internal users of this information have benefited greatly from the work that JCAO staff has put into the development of this new system. A highlight of the enhanced process is the ability to make all of the parcel maps available online in a PDF format. Additionally, a set of printed (full size) maps is maintained in the JCAO offices for public use. Rather than plot new maps whenever they are updated, a printed address label with the map title and date of last update is placed upon the existing printed copy. A new copy is plotted if/when requested (on-demand printing), or when there are too many labels. The parcel maps are updated whenever parcels are published, so they are always in sync. The County has been able to integrate their online property record search results with a link to each parcel map associated with a parcel. With the technology and tools from the Esri and Sidwell platforms, the JCAO has been able to create a highend process for building, managing, and deploying the map page across the enterprise. JCAO staff have been able to take out-of-the-box applications and configure them to meet their needs for producing a very custom end product that benefits both the staff and the public.



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