



Overview of *Surveyor's Office* Portfolio

Presented September 24, 2019

INTRODUCTION

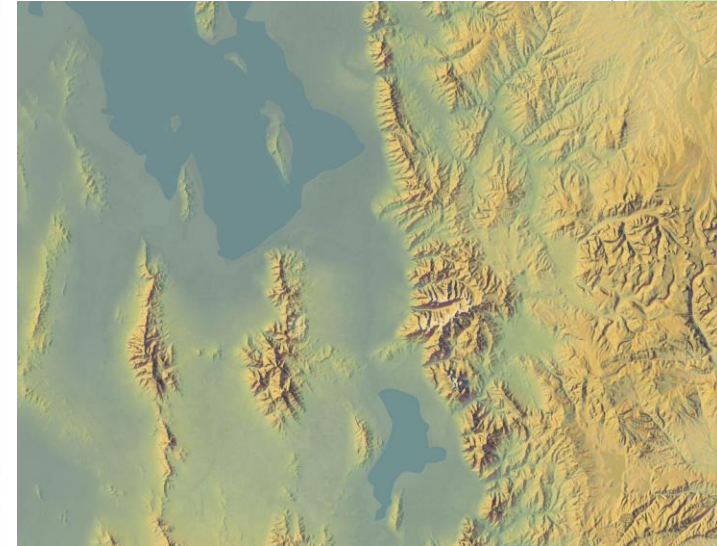
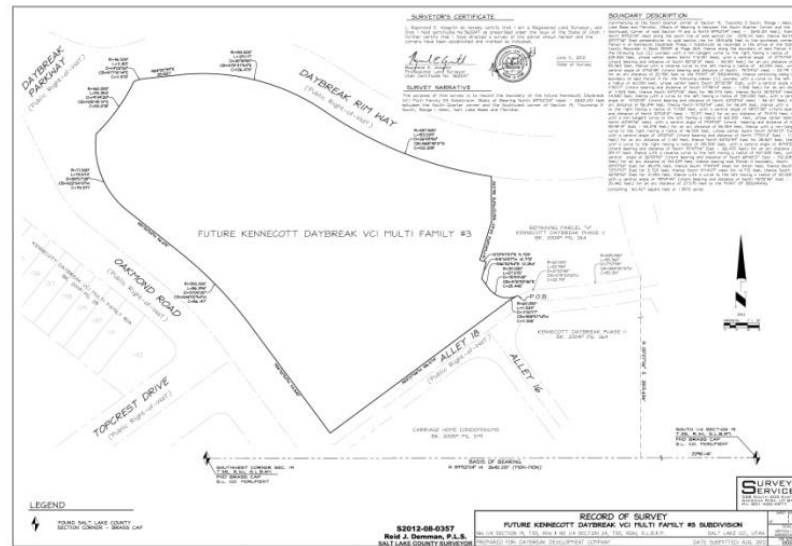
Salt Lake County Surveyor's Office provides numerous statutory and professional services to the County and public. Additionally, a priority is placed on promoting efficient use of the office as a Countywide resource. The Surveyor's Office utilizes specialized technological infrastructure and a number of shared Countywide IT resources to provide services.

Surveyor's budget is funded by both the Tax and General Fund, 18% and 82% respectively.

- ▶ Categorical breakdown of the Surveyor's budget is:
 - ▶ 84.5% Personnel
 - ▶ 8.6% Operations
 - ▶ 6.9% Indirect Costs

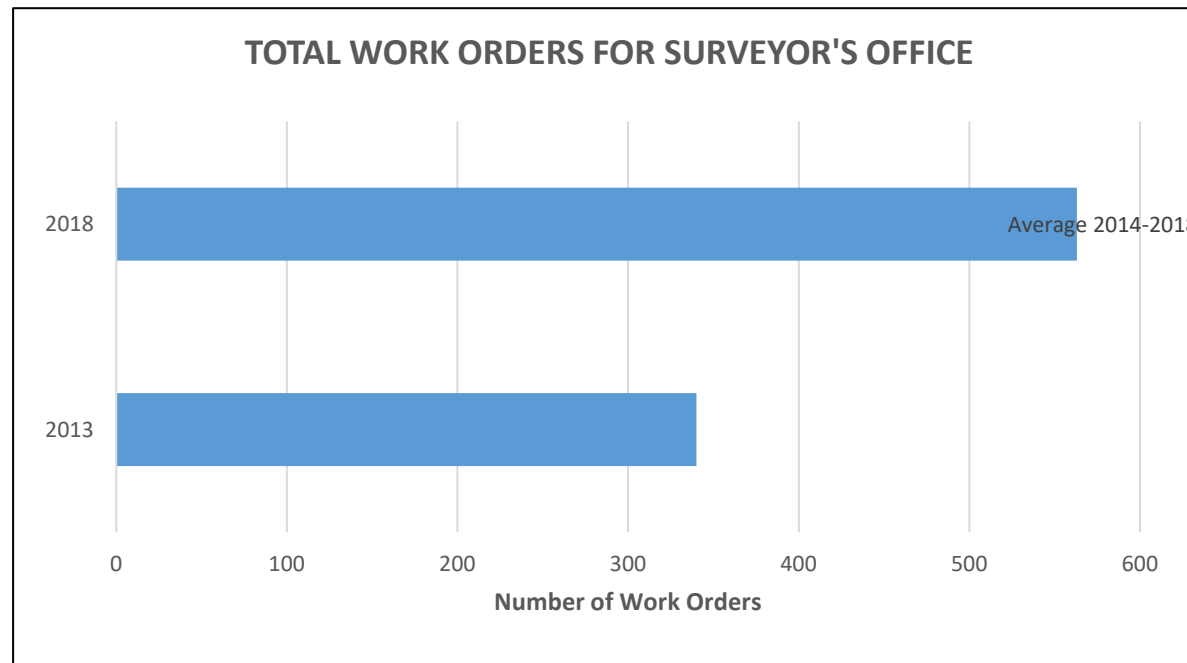
PRIMARY STATUTORY FUNCTIONS

- ▶ Maintain Public Land Survey System (PLSS)
- ▶ Perform or arrange for all survey work for the County
- ▶ Review, maintain and make available to the public all private survey records
- ▶ Provide maps to County offices



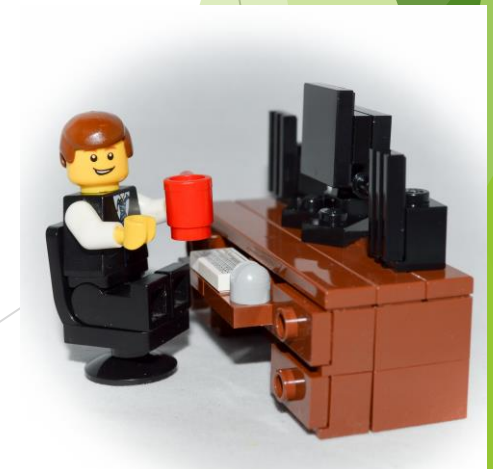
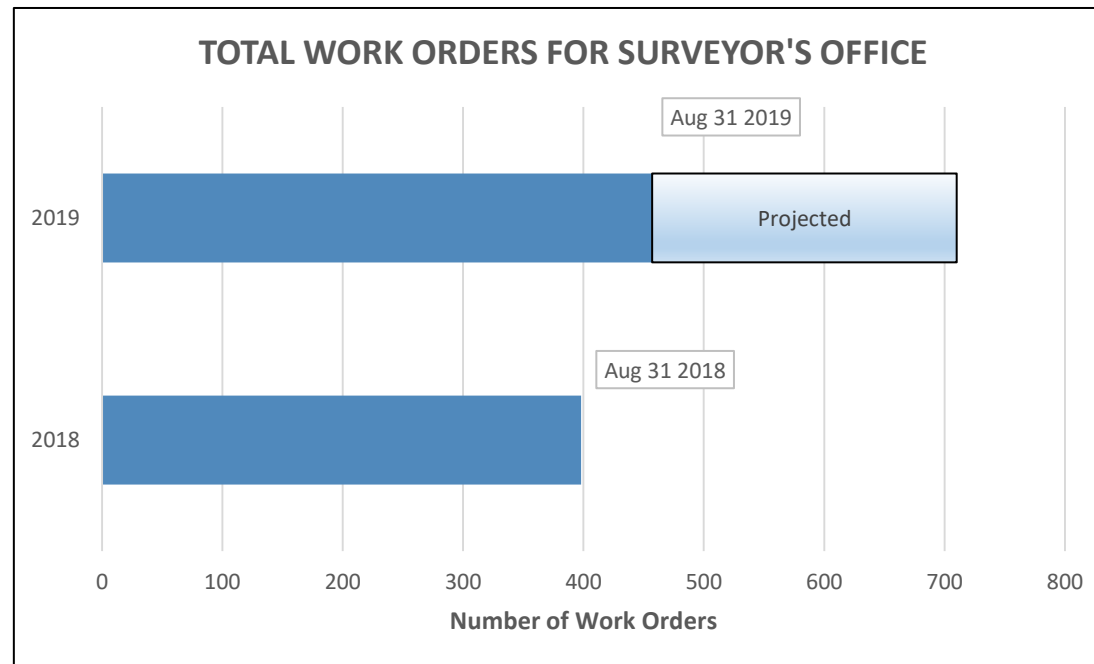
PERFORMANCE MEASUREMENT 2013-2018

- A key performance measure is the number of work order requests from both the public and government entities. Since year ending 2013 through 2018, the Surveyor's Office has averaged 563 work order requests per year, which represents an increase of 65%.



PERFORMANCE MEASUREMENT COMPARING 2018 to 2019

- ▶ Comparing work requests through August 2018 to August 2019, currently shows an increase of 14.8% above last year. Assuming this trend continues, we are projecting an increase of 22.2% by the end of the year.



BUDGETING

Update on 2019 Budget

- ▶ Current 2019 Expenses (operating & labor) are in alignment with approved budget.
- ▶ No foreseeable 2019 budget adjustments that will impact the general or tax fund.



BUDGETING

2020 Projected Budgeting Consideration

- ▶ New Proposed Budget Requests include:
 - ▶ Increase in temporary/intern employee funding
 - ▶ Plotter for mapping and recordation
 - ▶ Standing desk for employees
 - ▶ Total request amount \$14K, which will be self-funded through increased revenue



2019 PROJECTS OF INTEREST

- ▶ LUCA/2020 Census
- ▶ Bee Inspector application
- ▶ Live Vote Center application
- ▶ Vista voting address verification
- ▶ Aerial photography partnership with Assessor's Office
- ▶ South Mountain Golf Course, Magna Regional Park and Creekside Park Encroachments
- ▶ Millcreek GIS and surveying support
- ▶ Point in Time (PIT) homeless count app
- ▶ VECC centerline updates
- ▶ Election map updates
- ▶ Recycling web map
- ▶ Noxious Weeds web map
- ▶ County Public Asset Identification
- ▶ Building Footprints
- ▶ Surplus Canal Deficiency Rehabilitation project
- ▶ Magna, Kearns, Copperton and Emigration storm drain projects
- ▶ UAS Drone projects
- ▶ FCOZ mapping
- ▶ County Boundary adjustments
- ▶ Camp Kearns project

2019/2020 CHALLENGES

Maintenance on Public Land Survey System (PLSS)

There are 21,000 existing PLSS monuments that we currently maintain. Approximately, 4,000 of which are on a 5 year rotation for maintenance. The remaining 17,000 are on a 7 year rotation. Maintenance of the system has fallen behind due to difficulties related to retention, recruitment, and the market.

- ▶ 2019 goal was to perform maintenance on 2,000 PLSS corners.
- ▶ To date, we have completed approximately 50% of the 2019 goal.
- ▶ 2020 goal is to perform maintenance on 4,000 PLSS corners.

At current staffing levels, these numbers reflect it will take us approximately 7 years to bring our PLSS maintenance back on schedule.

2019/2020 CHALLENGES

Implementation and Effects of S.B. 104

This bill imposes certain requirements on any work that would disturb established survey monuments.

Allows the County to pass a local ordinance that applies in all jurisdictions.

Requires a permit to disturb monuments

- ▶ Increases the fees for permits
- ▶ Requires monuments to be shown on all construction plans
- ▶ Allows the County to establish certain civil penalties for violations
- ▶ Prohibits performing certain construction work within 30 feet of an established survey monument without a permit

2019/2020 CHALLENGES

NGS/USGS Project 2022 Datum Update

The Federal Government is implementing a complete replacement of the existing horizontal and vertical datums known as NAD 83 and NAVD 88 with the North American-Pacific Geopotential Datum of 2022 (NAPGD2022). This replacement has been deemed necessary by the Federal Government to adjust and account for unchecked physical movement in the Earth's surface, geoid undulations, and gravitational anomalies in conjunction with Global Positioning Systems (GPS).

- ▶ All federal civilian agencies are required to update to NAPGD2022.
- ▶ The State of Utah is planning to follow suit in updating to NAPGD2022.
- ▶ There will be legislative action to update the definition of the Utah Coordinate System (UC 57-10-6) to conform with NAPGD2022.
- ▶ As a result, the County will be required to migrate to the new system.
- ▶ Effects on mapping and property boundaries are significant.



WHAT IS INVOLVED WITH MIGRATING TO NAPGD2022 ?

Adjustments have to be made to the existing coordinates of the PLSS

- ▶ The adjustments are not uniform and vary from zone to zone and sometimes point to point.
- ▶ These adjustments will be labor intensive.
- ▶ Will likely require additional field observation.
- ▶ Coordination with state and federal government is necessary.

WE HAVE TO GET IT RIGHT!



QUESTIONS

1-How will the implementation of a new tax administration system impact your office?

2-Attracting and retaining qualified employees remains a county-wide problem. What's your situation? How has your intern program worked out? Do you have any suggestions that would help your recruitment and retention efforts?



EFFECTS OF THE NEW TAX ADMINISTRATION SYSTEM

Implementation of the new tax administration system will have no adverse impact on the day to day operations of the Surveyor's Office.

- ▶ The most prominent advantage of a new tax system is it moves the County from the Mainframe to a modern system.
- ▶ The Surveyor's Office is impacted more by the systems utilized in the Recorder's Office.
- ▶ The new Recorder's system (Tyler) will allow better collaboration between the Surveyor and Recorder and improve efficiencies and accuracy.



ATTRACTING AND RETAINING EMPLOYEES

- ▶ The Surveyor's Office struggled with the issues of attracting and retaining employees until recently. With the most recent market adjustments and salary compression efforts, our field crews are almost fully staffed for the first time in three years. The last position we have been unable to fill is the Assistant Field Operations Manager.
- ▶ We worked in partnership with HR to revise the descriptions and requirements to facilitate the increase of applicant pools.
- ▶ The apprentice program has been a success. The most recent apprentice (who was hired with *no* surveying experience), has passed the Level 1 Certified Survey Technician (CST) exam which earned an increase in his base pay and will be pushed to a higher grade position when he completes his second year of experience. This appears to be a good course for our office to take.

SUGGESTIONS FOR RECRUITMENT AND RETENTION

- ▶ Review hiring practices with HR frequently.
- ▶ Research and purchase up to date market data from different sources on a regular basis.
- ▶ Take advantage of job advertisement opportunities afforded through the internet.
- ▶ Realize and support the costs associated with recruiting and retention.
- ▶ Develop, fund, and maintain apprentice/intern programs.





STATE OF COUNTY GIS

GIS Summary

Utilization of Geographic Information Systems (GIS) is exploding at Salt Lake County. GIS is no longer a behind-the-scenes, esoteric technology, rather it is an essential data visualization tool that provides opportunities for enhanced data analysis. Salt Lake County is utilizing GIS to gain insights into everything from homelessness, economic development opportunities, managing elections, to public safety, land recordation, etc.

Successes

- Data Sharing Initiative
- STWG
- Increased outreach (new website)
- Policy Update - 1013
- Map Competition

Challenges

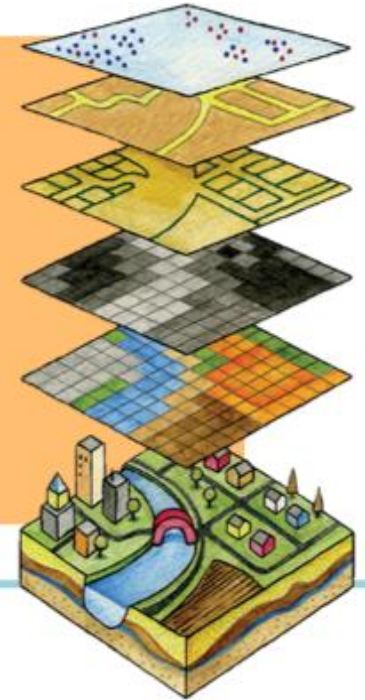
- ESRI Licensing
- Data Management
- Policy Development
- Increased Utilization

Recent GIS Spotlights

- Spatial Analysis of Voter Data
- Water Quality Collection App
- Homelessness - Point in Time Count
- On the River's Edge - Ideas Competition
- CountyStat

Map Competition Participants

Addressing Services / Clerk's Office / Health Department
Information Technology / Municipal Services District / Parks & Recreation
Regional Development / Surveyor's Office



Salt Lake County GIS Steering Committee

Mission Statement: "The purpose of the GIS Steering Committee is to facilitate cooperation and efficiency within the Salt Lake County government by promoting the development, acquisition and dissemination of GIS infrastructure, data and services."

[Charter](#) | [Ordinance](#) | [Policy](#) | [Agendas & Minutes](#) | [Committee Members](#)

[GIS Solutions and Technology Working Group](#)

[GIS Change Request](#) | [Bylaws](#) | [EEAP Dashboard](#) | [License Usage Dashboard](#)



GIS Spotlight Presentations

Eri User Conference 2019 Steering

Rosie McSwain and Alex Radowski presented highlights from the 2019 ESRI User Conference.

[View](#)

Water Quality GIS

The Watershed Planning and Restoration program has completely overhauled their sampling initiative by leveraging GIS.

[View](#)

Salt Lake County

Joseph Bergione and Dina Blau presented on Salt Lake County's "On the River's Edge" Literacy Competition.

[View](#)

Point in Time Count Using Survey123

Rachel Marko, Salt Lake County Surveyor's Office

The Surveyor's Office partnered with the Mayor's Office to create an application to assist in the yearly Horntown Point in Time count.

[View](#)