

Utah and the PLSS

Public Lands Survey System

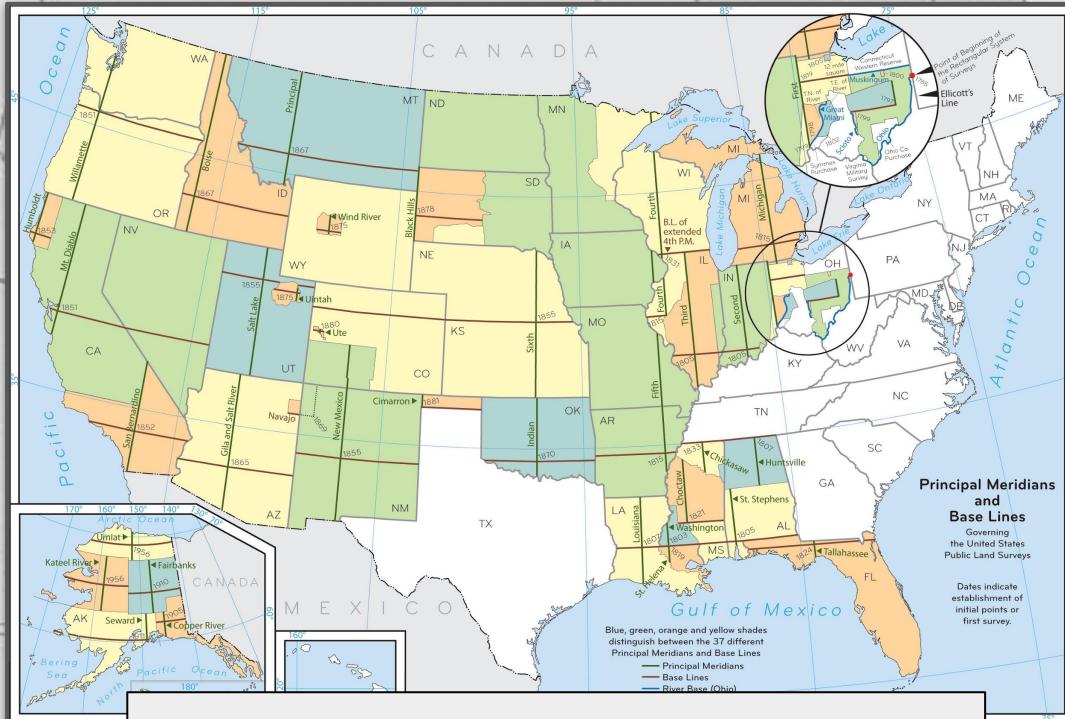
UAC 2022 Legislative Management Conference

Sean Fernandez and Greg Bunce (UGRC)



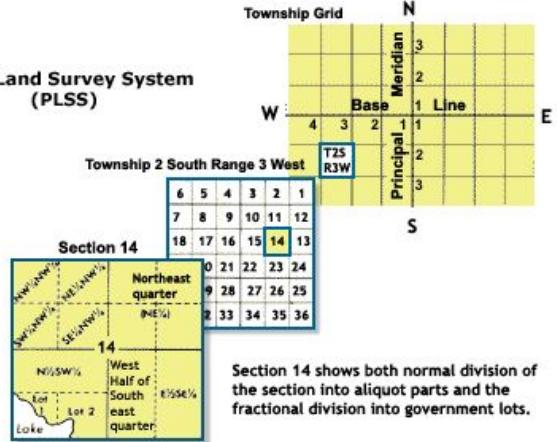
What is the PLSS?

Public Lands Survey System



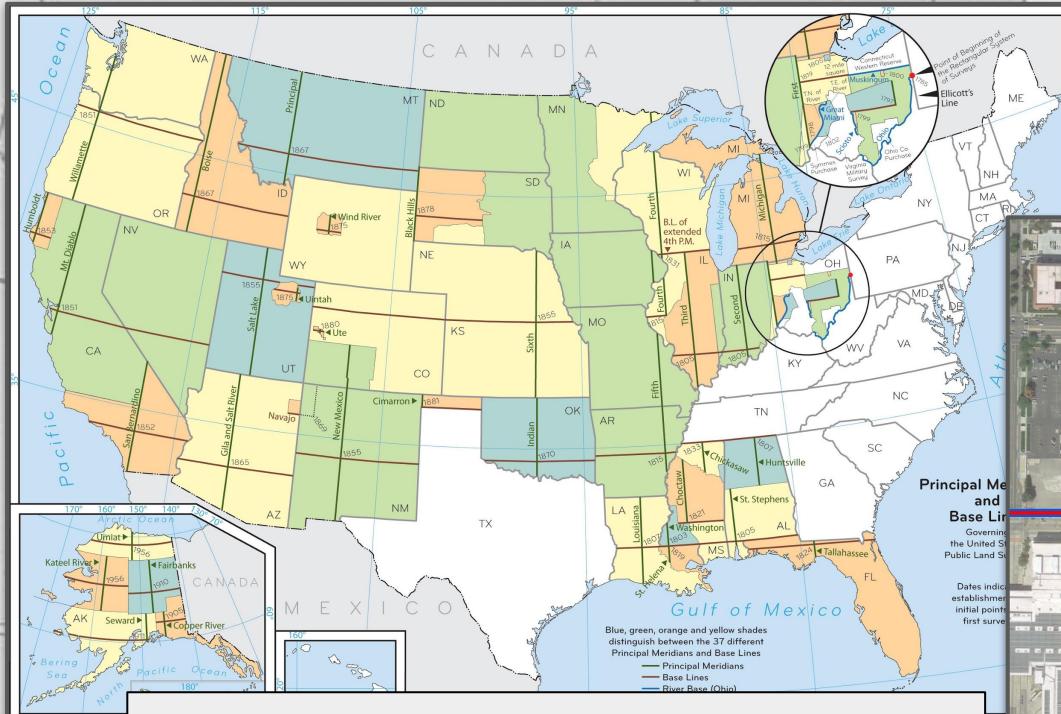
Read more: <https://gis.utah.gov/the-western-grid/>

Public Land Survey System (PLSS)



What is the PLSS?

Public Lands Survey System



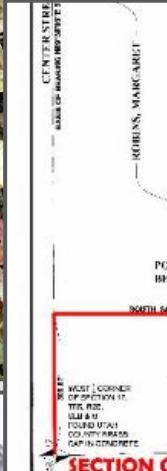
Read more: <https://gis.utah.gov/the-western-grid/>

PLSS Section Corners

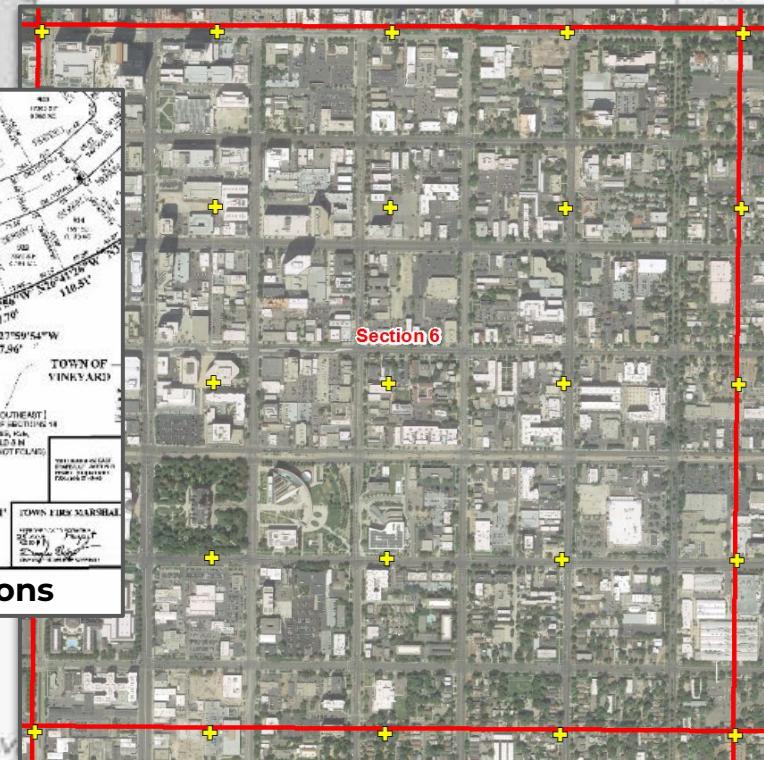
Private Property and Public Lands



Monuments

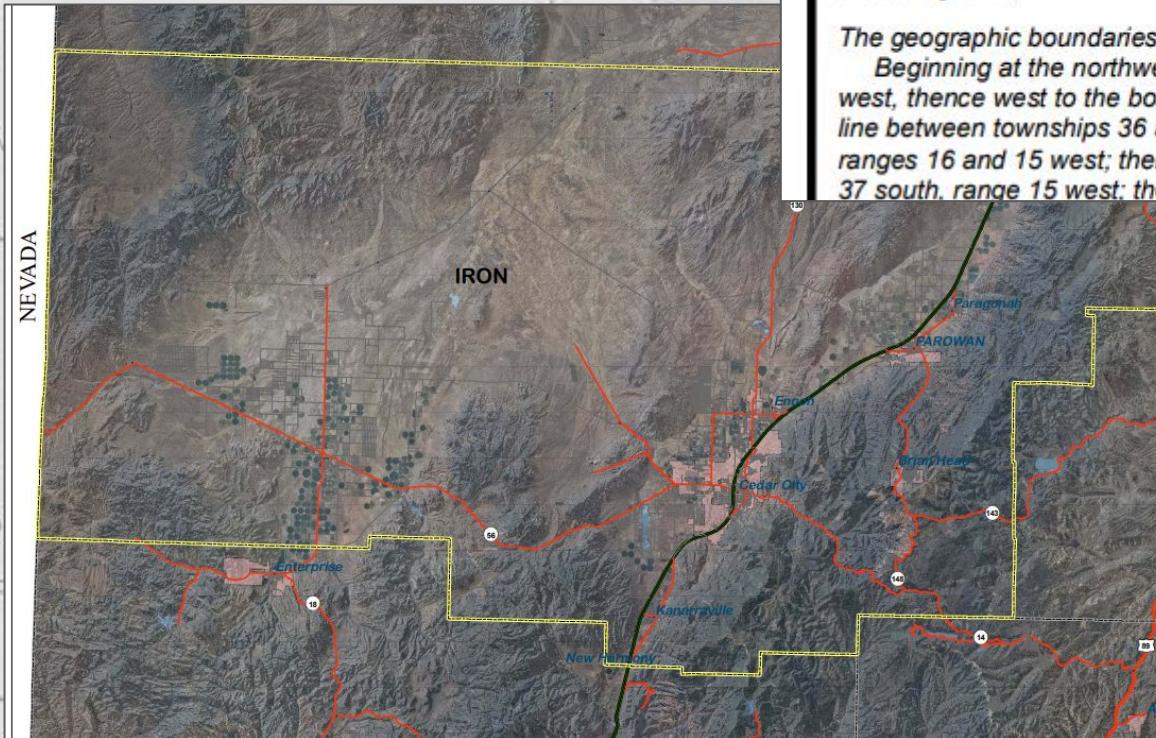


Legal Descriptions



PLSS Section Corners

Public Lands: County Boundaries



Description

The geographic boundaries of Iron County are described as follows:

Beginning at the northwest corner of township 31 south, range 5 west, thence west to the boundary of the state; thence south to the line between townships 36 and 37 south; thence east to the line between ranges 16 and 15 west; thence north to the northwest corner of township 37 south, range 15 west; thence east to the northeast corner of

or townships 10
northeast cor
thence east
between ran
southwest c
thence east
between ran
township 38
townships 3
7 west; then
line was
south; rang
34 south, ra
34 north, ra

Narrative

This map has been prepared from the boundaries made by the Surveyor General.

The counties described in this map are those of the lieutenant governor's survey.

The provisions of the official county boundaries up to

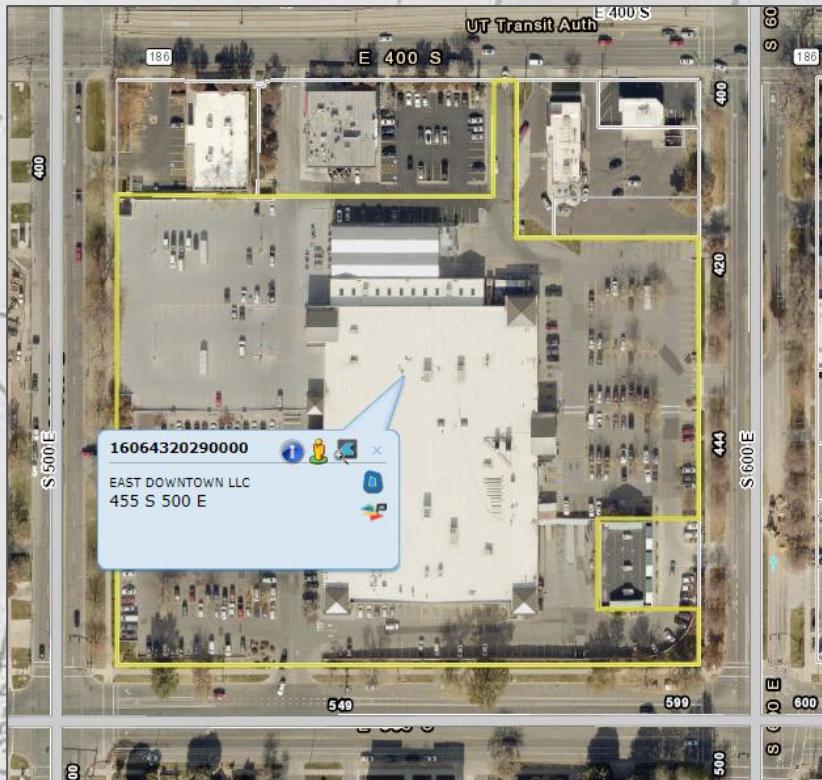
Section 67-14-1.

The county boundaries in the original county boundaries in a few cases have been changed so far from the boundaries as to affect the description and location of change. These changes without being

Mexico Principal Mer.

PLSS Section Corners

Private Lands: property boundaries



<https://slco.org/recorder/plat-maps>

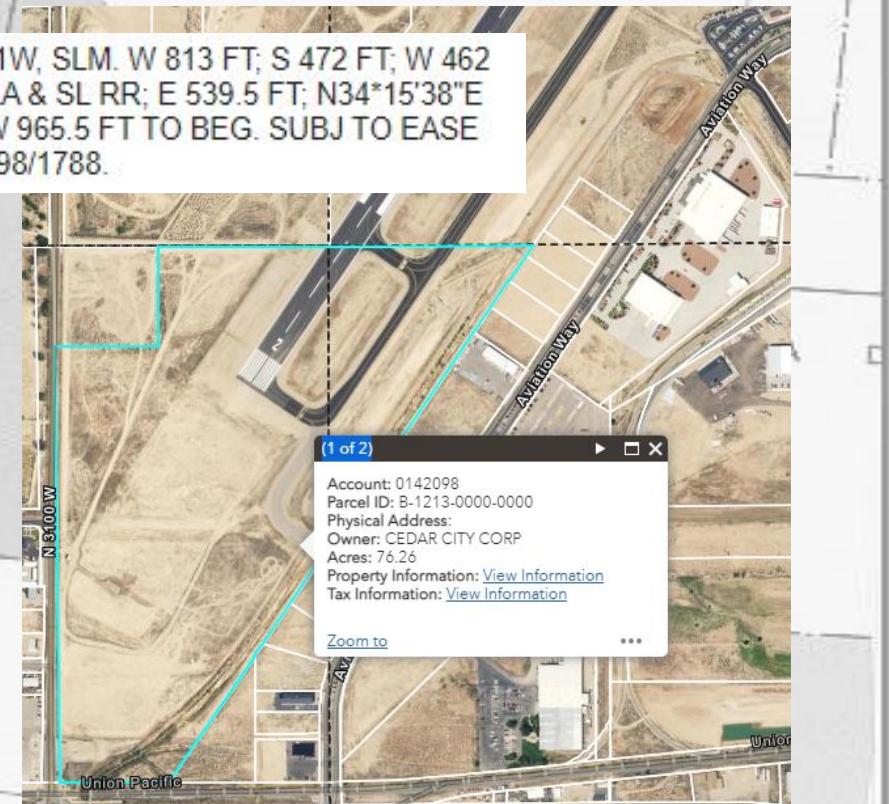
Legal Description:

BEG SE COR BLK 33, PLAT B, SLC SUR; S 89°57'56" W
660.26 FT; N 0°02' W 532.36 FT; S 88°52'54" E 159.62 FT;
N 89°57'48" E 266.77 FT; N 0°56'54" E 131.2 FT; N
89°57'48" E 25.38 FT; S 0°01'40" E 177.59 FT; N 89°57'50"
E 206.35 FT; S 0°01'31" E 317.67 FT; S 89°57'52" W
115.05 FT; S 0°01'31" E 102.2 FT; N89°57'52" E 115.05
FT; S 0°01'31" E 63.07 FT TO BEG. 7.617 AC. 8565-5788
9206-5003

PLSS Section Corners

Private Lands: property boundaries

Legal BEG AT SEC COR COMMON TO SEC 4,5,8 & 9, T36S, R11W, SLM. W 813 FT; S 472 FT; W 462 FT TO E R/W LN OF LUND HWY; S 2055 FT TO N R/W LN OF LA & SL RR; E 539.5 FT; N34°15'38"E 3060 FT M/L TO N LN OF SEC 9 AT A PT E 965.5 FT FR BEG; W 965.5 FT TO BEG. SUBJ TO EASE DESC REC BK 525/85; SUBJ TO UTIL EASE DESC REC BK 1298/1788.



PLSS Section Corners

Water Rights



Adjudication



Points of Diversion [View Map](#)

Points of Diversion - Surface

(1) S 925 feet W 1350 feet from NE corner, Sec 10 T 26S R 23E SLBM

Diverting Works: Pipeline to stock tanks

Elevation:

Stream Alteration Required:

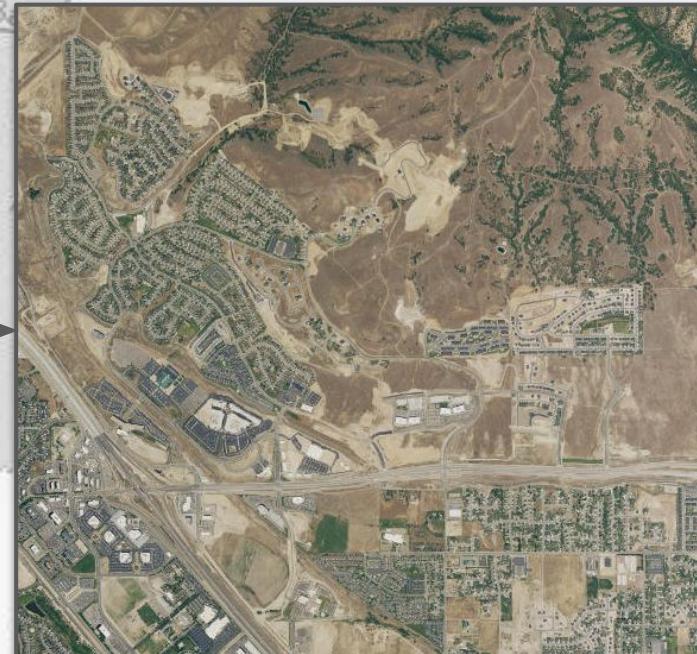
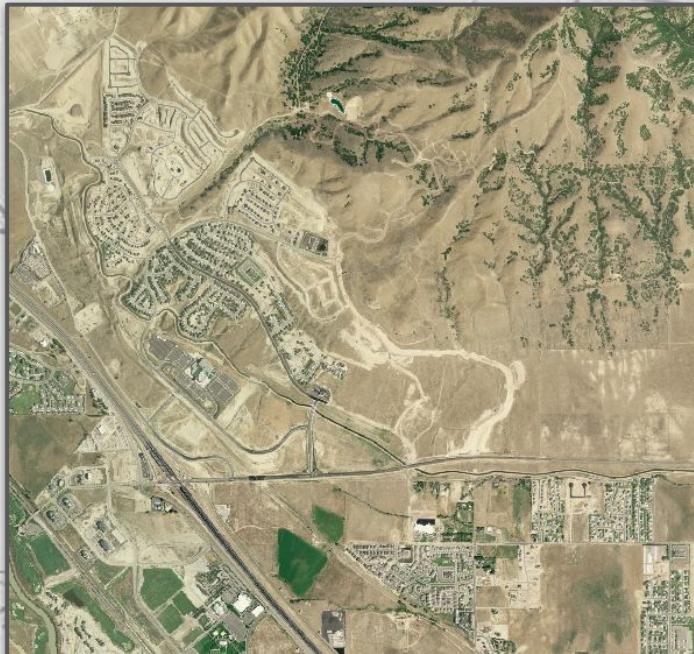
Source: Unnamed Spring

UTM: 641761.195, 4269321.276 (NAD83)

PLSS Section Corners

Urban Growth and Development

Legal descriptions can be affected in areas that have not been surveyed since the early 1900s



PLSS Section Corners

Monument Destruction

New Road Construction

Property Development

Conservation projects

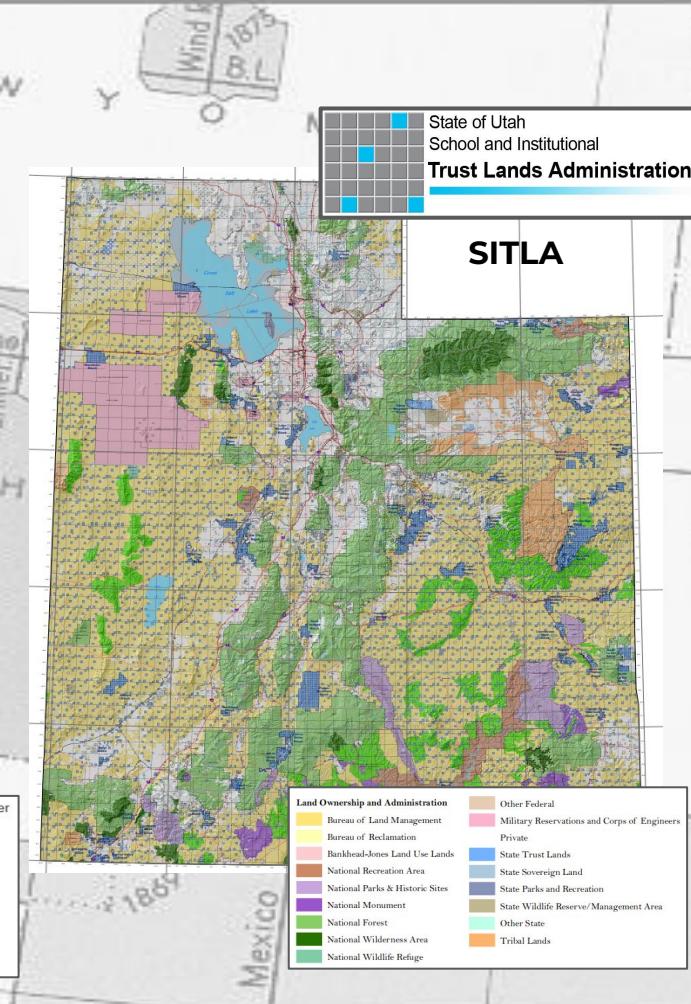
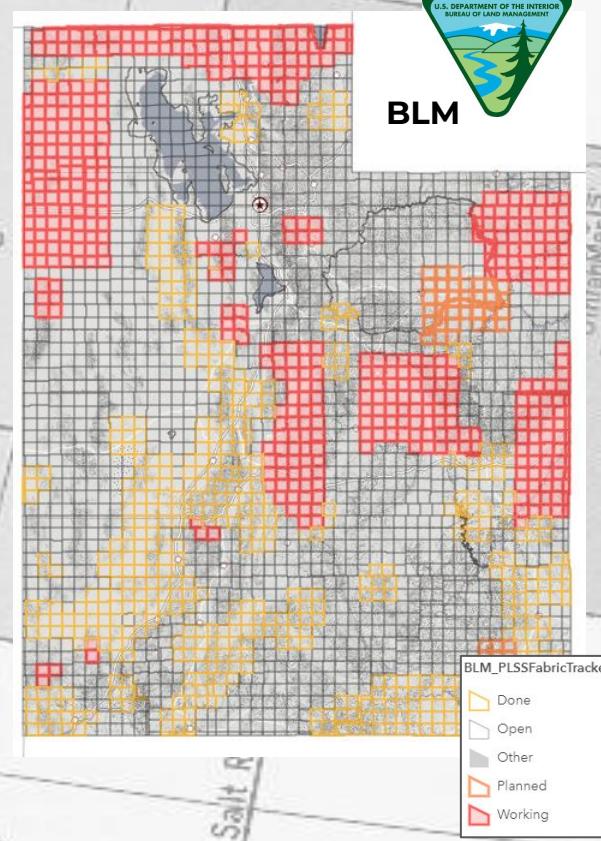
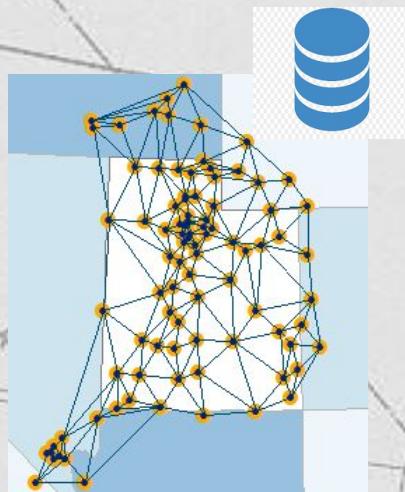
- Forest fire rehabilitation
- Habitat remodeling (restoration)



San Bernardino M
1852
Base Line

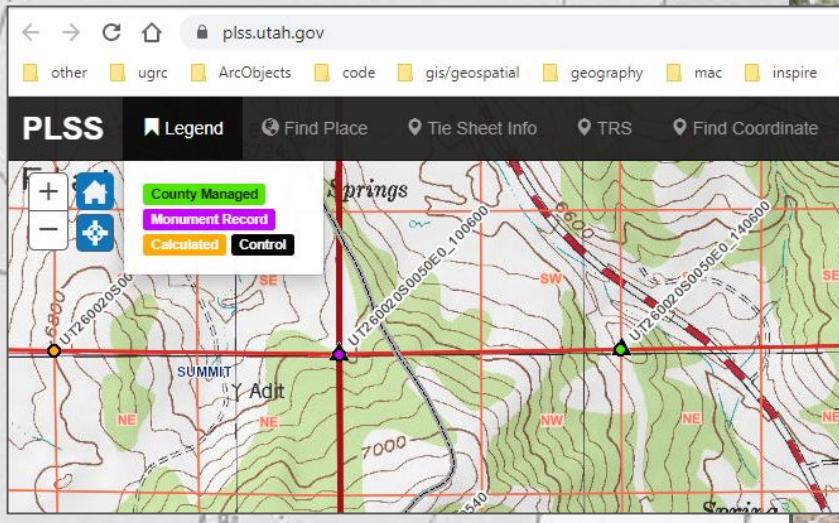
PLSS Coordination

Federal and State
2015 MOU



PLSS Coordination

Surveyors and GPS Enthusiasts



PLSS Corner Management App

www.plss.utah.gov



UGRC's VRS (Virtual Reference Station)

TURN GPS (The Utah Reference Network)



PLSS Achievements

Data Improvements



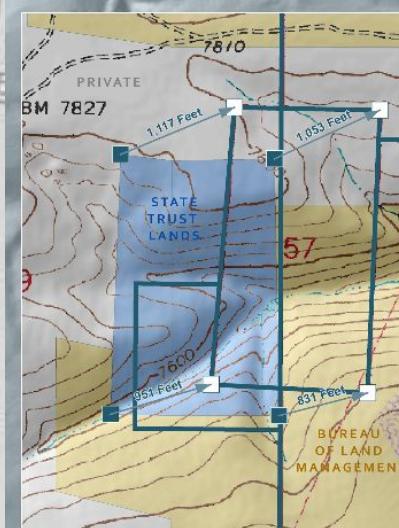
County
Parcels

Before

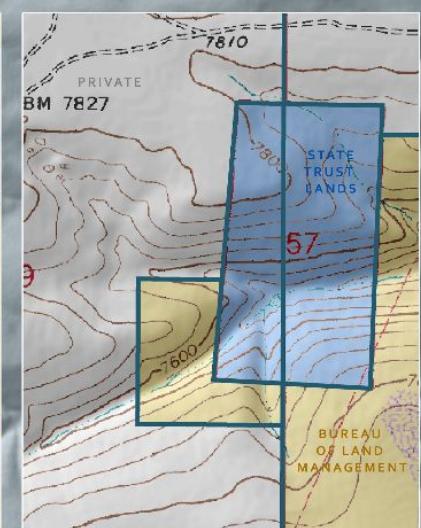


After

SITLA Land Ownership



BEFORE



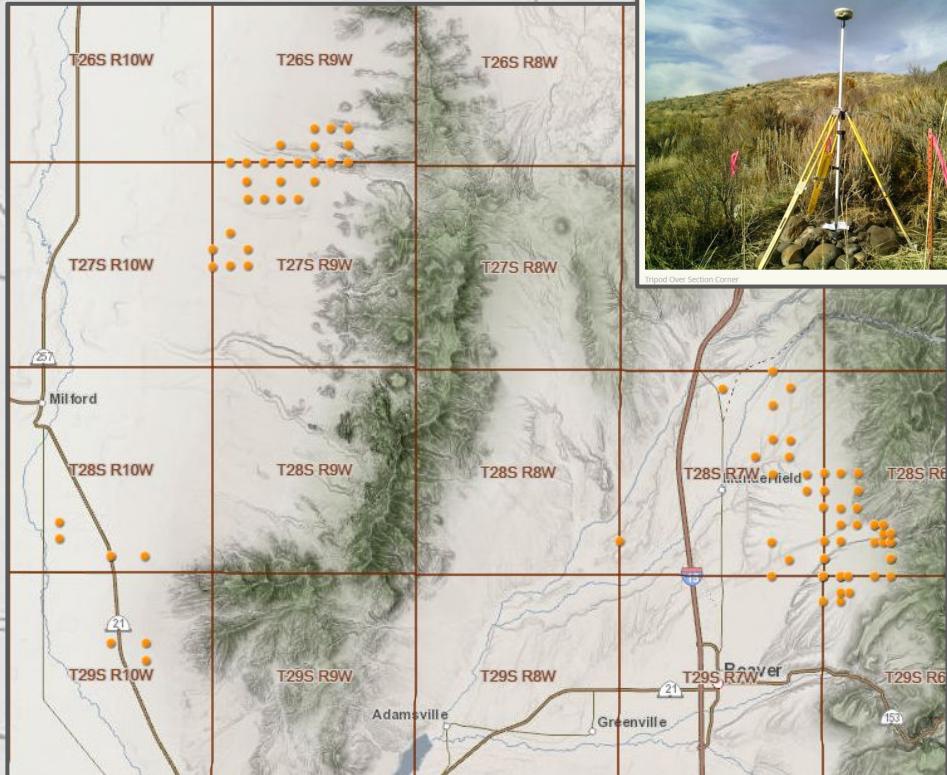
AFTER

Before

After

PLSS Coordination

State and Local: Utah Monument Preservation Program



STATE OF UTAH MONUMENT RECORD SHEET			
BLM Point Name UT2601405020W_2B0100	Contact Name Douglas Greenlaw	License Number 124457	Date 7/26/2016
Corner Of Section SW			
Township Range Section T28S R7W Sec 2D			
Road and Monolith			
Salt Lake			
State Utah	County Garfield		
Geographic Coordinates			
Latitude (DDMM) 37°49'55.1" N			
Longitude (DDMM) 113°2'23.2" W			
Ellipsoid Height: 2235.802			
Grid Coordinates			
Northing: 3128853.203			
Easting: 462503.579			
Horizontal Units: meters			
Ortho Elevation: 2355.218			
Coordinate System: Zone NAD83			
NAD83 North America Vertical Datum: NGS Adjustment NAD 2011			
Vertical Units: meters			
Vertical Datum: NAVD88			
Monument Status: Obsolete			
Disclaimer:			
<p>The state of Utah makes no guarantees, representations, or warranties of any kind, expressed or implied, as to the content, accuracy, timeliness, or completeness of any of the data. Unless otherwise noted all images are oriented north and are not to scale. The data is provided on an "as is, where is" basis. The State assumes no obligation or liability for its use by any persons.</p>			
Additional Notes Survey Grade +/- 0.08m			

Monument Replacement and Restoration Committee

Enrolled Copy S.B. 264 2015 GENERAL SESSION

SURVEY MONUMENTS REPLACEMENT

There is created the Monument Replacement and Restoration Committee composed of the following seven members:

five members appointed by an organization or association that represents Utah counties that have knowledge and understanding of the Public Land Survey System; and who each represents a different county; and two members, appointed by the center, who have a knowledge and understanding of the Public Land Survey System.



MRRC Committee

Jerry Allred (Vice Chair) - Duchesne County
Scott Bartlett (Secretary) - State Trust Lands
Jim Kaiserman - Wasatch County
Riley Lindsay - State DOT
Jason Monroe - Sevier County
Brock Slaugh (Chair) - Uintah County
Ron Whitehead - Washington County

Request for County PLSS Grant Proposal Each Fiscal Year

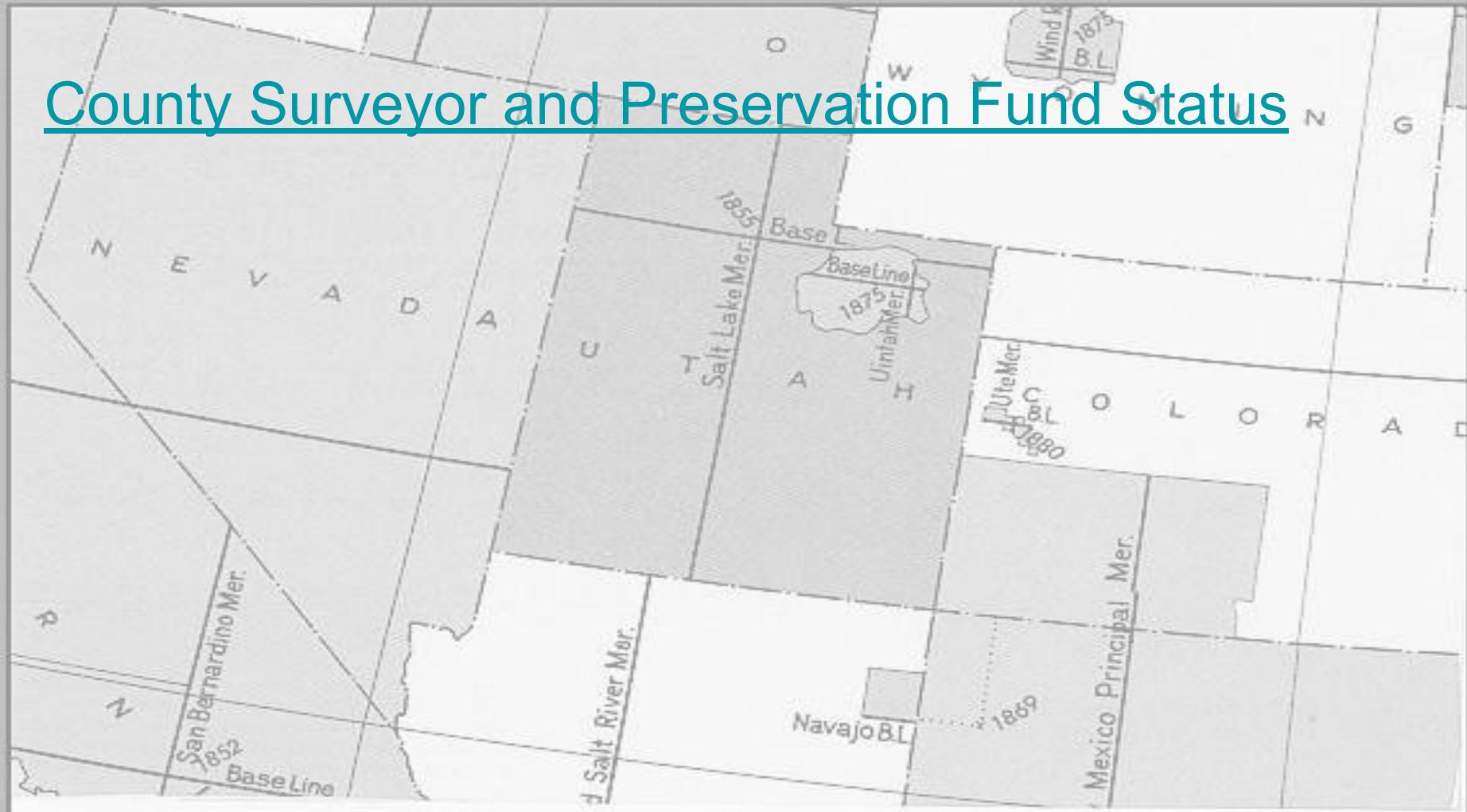
From the email:

A county wishing to participate in the program may apply for a grant by:

1. Having in place a Monument Preservation Fund.
2. Specifying one or more monuments in the county that are in need of identification, protection, replacement, or rehabilitation.
3. Establish a plan that is consistent with federal law or rule to protect, recover, or rehabilitate each monument.
4. Request a specific amount of grant funding to complete the plan.

Grants will be awarded by the committee based on the evaluation criteria provided in the attached documents.

County Surveyor and Preservation Fund Status



Proposal Example

Uintah County FY23 Proposal



History of the MRRC Grant Program

History of MRRC Grant Funding

Last edit was 9 minutes ago

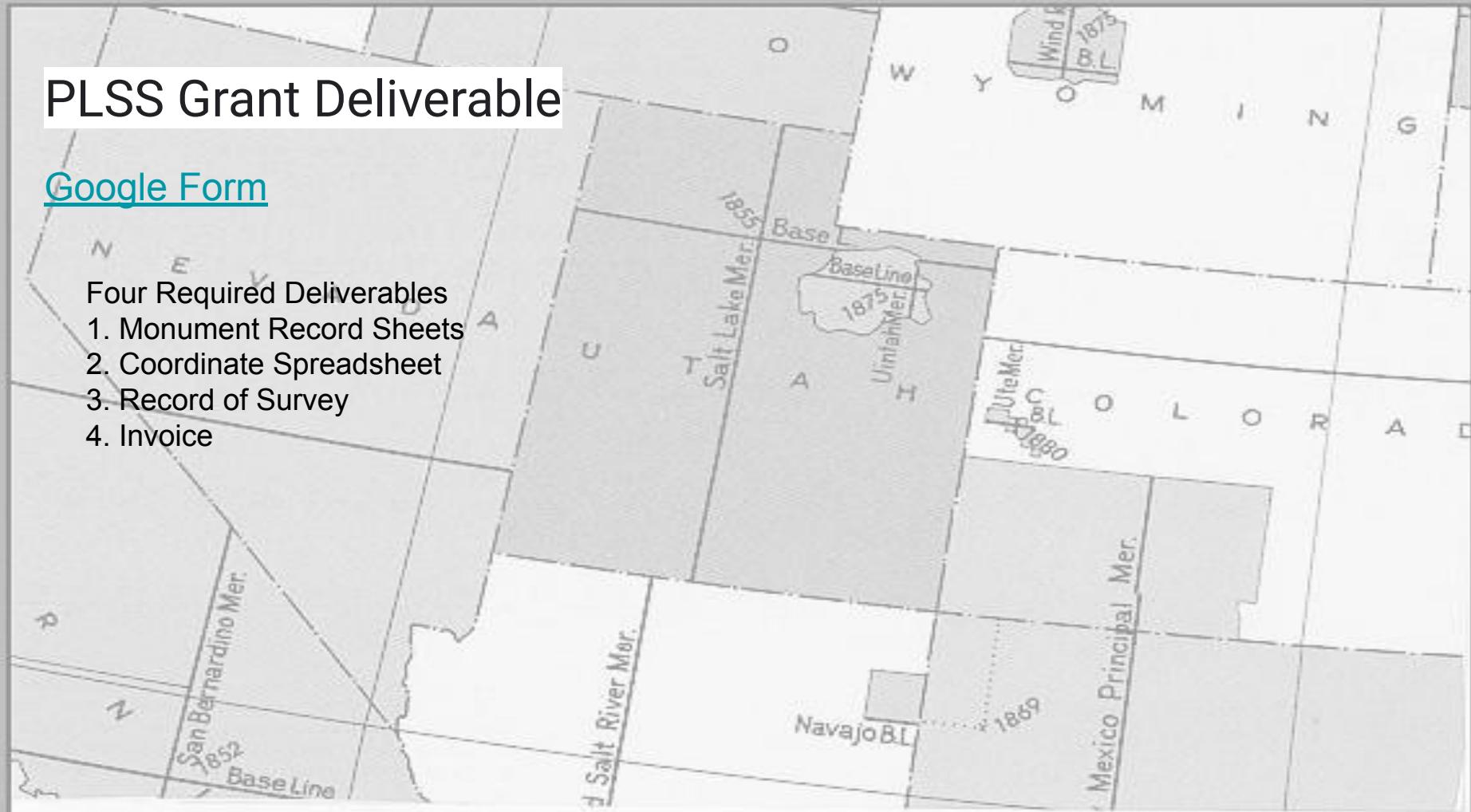
File Edit View Insert Format Data Tools Extensions Help

County	2016-2017		2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		2022-2023		Total							
	Amount Requested	Amount Received	Number of Corners Surveyed	Amount Requested	Amount Received	Number of Corners Surveyed	Amount Requested	Amount Received	Number of Proposed Corners	Amount Requested	Amount Received	Number of Corners Surveyed	Amount Requested	Amount Received	Number of Corners Surveyed	Amount Requested	Amount Received	Number of Corners Surveyed				
Beaver	\$ 7,700.00	\$ 7,700.00	88	\$ 6,922.00	\$ 6,922.00	25	\$ 8,500.00	\$ 8,500.00	13	\$ 9,500.00	\$ 9,500.00	20	\$ 8,500.00	\$ 8,500.00	9	\$ 20,000.00	\$ 20,000.00	24	\$ 61,122.00	\$ 61,122.00	179	
Box Elder										\$ 20,000.00	\$ 19,000.00	17	\$ 12,500.00						\$ 32,500.00	\$ 19,000.00	17	
Cache	\$ 12,000.00	\$ -		\$ 8,000.00	\$ 8,000.00	20	\$ 7,000.00	\$ 7,000.00	18	\$ 7,000.00	\$ 7,000.00	15	\$ 7,000.00	\$ 7,000.00	11	\$ 9,000.00	\$ 8,000.00	11	\$ 31,000.00	\$ 31,000.00	28	
Carbon										\$ 15,000.00	\$ 15,000.00	14	\$ 14,000.00	\$ 9,035.71	18				\$ 21,500.00	\$ 21,500.00	45	
Daggett	\$ 8,000.00	\$ -														\$ 20,000.00	\$ 20,000.00	24	\$ 57,000.00	\$ 44,935.71	56	
Davis	\$ 100,000.00	\$ -																	\$ 100,000.00	\$ -	0	
Duchesne	\$ 8,000.00	\$ -		\$ 8,000.00	\$ 8,000.00	45	\$ 20,000.00	\$ 20,000.00	37	\$ 27,300.00	\$ 19,000.00	43	\$ 22,400.00	\$ 9,035.71	15	\$ 17,000.00	\$ 13,668.41	33	\$ 30,100.00	\$ 30,100.00	69	
Emery				\$ 15,000.00	\$ 15,000.00	43	\$ 18,400.00	\$ 8,125.00	9	\$ 30,083.00	\$ 19,000.00	29	\$ 38,083.00	\$ 9,035.71	17	\$ 33,325.00	\$ 13,668.41	31	\$ 35,000.00	\$ 35,000.00	50	
Garfield	\$ 15,000.00	\$ 8,460.00	37																\$ 15,000.00	\$ 8,460.00	37	
Grand																		\$ -	\$ -	0		
Iron	\$ 10,000.00	\$ -		\$ 10,000.00	\$ 10,000.00	68												\$ 52,400.00	\$ 52,400.00	67		
Juab																		\$ 72,400.00	\$ 62,400.00	135		
Kane	\$ 10,000.00	\$ -		\$ 12,000.00	\$ 12,000.00	78				\$ 13,000.00	\$ 13,000.00	61	\$ 31,800.00	\$ 9,035.71	34				\$ 20,000.00	\$ 20,000.00	51	
Millard										\$ 20,000.00	\$ 19,000.00	47						\$ 20,000.00	\$ 25,000.00	73		
Morgan	\$ 50,000.00	\$ 15,000.00	16	\$ 40,000.00	\$ -		\$ 40,000.00	\$ 20,000.00	8	\$ 40,000.00	\$ 19,000.00	51	\$ 55,000.00	\$ 9,037.71	5	\$ 40,000.00	\$ 40,000.00	31	\$ 305,000.00	\$ 116,738.12	131	
Platte	\$ 20,800.00	\$ 6,460.00	6	\$ 13,800.00	\$ 13,800.00	32				\$ 68,800.00	\$ 19,000.00	36	\$ 40,000.00	\$ 9,035.71	24	\$ 32,000.00	\$ 13,668.41	40		\$ 157,200.00	\$ 61,794.12	137
Rich	\$ 6,000.00	\$ 6,000.00	13	\$ 8,000.00	\$ 8,000.00	9	\$ 9,000.00	\$ 9,000.00	15	\$ 11,000.00	\$ 11,000.00	16	\$ 8,000.00	\$ 8,000.00	11	\$ 8,000.00	\$ 8,000.00	11	\$ 10,000.00	\$ 10,000.00	0	
Salt Lake																		\$ 60,000.00	\$ 60,000.00	75		
San Juan	\$ 16,200.00	\$ -																\$ -	\$ -	0		
Sanpete				\$ 13,100.00	\$ 13,100.00	34	\$ 34,200.00	\$ 8,125.00	11	\$ 28,100.00	\$ 17,525.00	13	\$ 17,000.00	\$ 9,035.71	24			\$ 40,000.00	\$ 40,000.00	85		
Sevier	\$ 41,400.00	\$ 6,460.00	18	\$ 24,425.00	\$ 21,478.00	29	\$ 30,525.00	\$ 8,125.00	28	\$ 28,125.00	\$ 18,975.00	31	\$ 39,600.00	\$ 9,035.71	28	\$ 35,000.00	\$ 13,668.41	70	\$ 70,800.00	\$ 45,031.25	69	
Summit	\$ 13,200.00	\$ 6,460.00	10	\$ 9,800.00	\$ 9,800.00	16	\$ 13,000.00	\$ 8,125.00	10	\$ 18,000.00	\$ 18,000.00	17	\$ 25,000.00	\$ 9,035.00	11	\$ 15,000.00	\$ 13,668.41	14	\$ 75,000.00	\$ 75,000.00	61	
Tooele	\$ 30,000.00	\$ 30,000.00	34	\$ 30,422.50	\$ -		\$ 52,100.00	\$ 20,000.00	45	\$ 91,249.00	\$ 19,000.00	49	\$ 68,650.00	\$ 9,035.71	122	\$ 82,960.84	\$ 13,668.41	109	\$ 107,868.75	\$ 107,868.75	225	
Uintah	\$ 10,597.00	\$ -		\$ 10,800.00	\$ 10,800.00	17	\$ 13,000.00	\$ 13,000.00	32	\$ 38,200.00	\$ 19,000.00	32	\$ 14,200.00	\$ 9,035.71	27	\$ 9,750.00	\$ 9,750.00	15	\$ 45,100.00	\$ 45,100.00	58	
Utah																		\$ -	\$ -	0		
Weasatch	\$ 9,000.00	\$ 9,000.00	11							\$ 25,000.00	\$ 19,000.00	50	\$ 12,700.00	\$ 9,035.71	16	\$ 9,000.00	\$ 9,000.00	13	\$ 12,000.00	\$ 12,000.00	12	
Washington																		\$ 67,700.00	\$ 58,035.71	102		
Wayne	\$ 13,000.00	\$ 6,460.00	14	\$ 15,500.00	\$ 15,500.00	23	\$ 20,150.00	\$ 20,000.00	23	\$ 37,600.00	\$ 19,000.00	50	\$ 23,100.00	\$ 9,035.71	17	\$ 18,500.00	\$ 13,668.41	59	\$ 20,000.00	\$ 20,000.00	60	
Weber																		\$ 147,850.00	\$ 103,694.12	248		
Total	\$ 380,897.00	\$ 100,000.00	247	\$ 223,399.50	\$ 150,000.00	438	\$ 263,875.00	\$ 150,000.00	247	\$ 518,957.00	\$ 300,000.00	590	\$ 437,533.00	\$ 140,965.52	388	\$ 329,635.84	\$ 150,035.69	497	\$ 675,768.75	\$ 650,000.00	987	
Note: Number of Corners Surveyed is approximate, data used is conflicting																		\$ 2,329,635.00	\$ 1,650,001.21	3406		

PLSS Grant Deliverable

Google Form

- Four Required Deliverables
1. Monument Record Sheets
 2. Coordinate Spreadsheet
 3. Record of Survey
 4. Invoice



Existing PLSS Corner Management App.



PLSS Legend Find Place Tie Sheet Info TRS Find Coordinate Logout Settings



New PLSS Corner Management App.



← → C https://test.mapserv.utah.gov/plss/#

25 Calendar

UtahID Slack | general | UG...

Citrix Workspace

Car Rental - Utah Di...

Trimble Pivot Web ...

NevadaGPS Cloud Trimble Pivot...

My Homepage | Ser...

LDS Tools

FamilySearch

ESS - Employee Self...

Amazon.com : SBU...

Utah Learning Porta...

...



Nevada

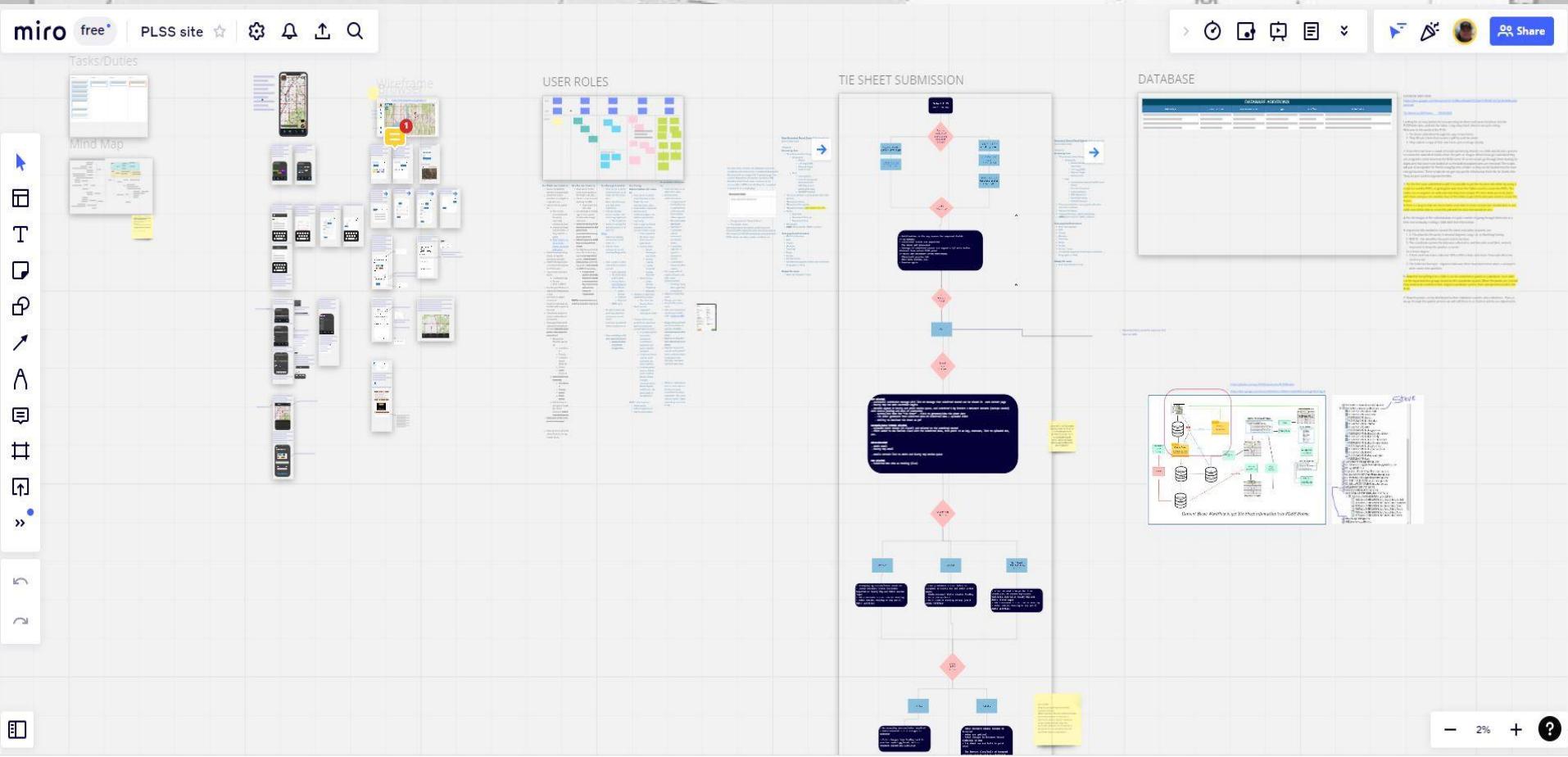
Colorado

California

Wyoming



MIRO New PLSS App Layout



New PLSS App Layout

Mobile

Map Layers

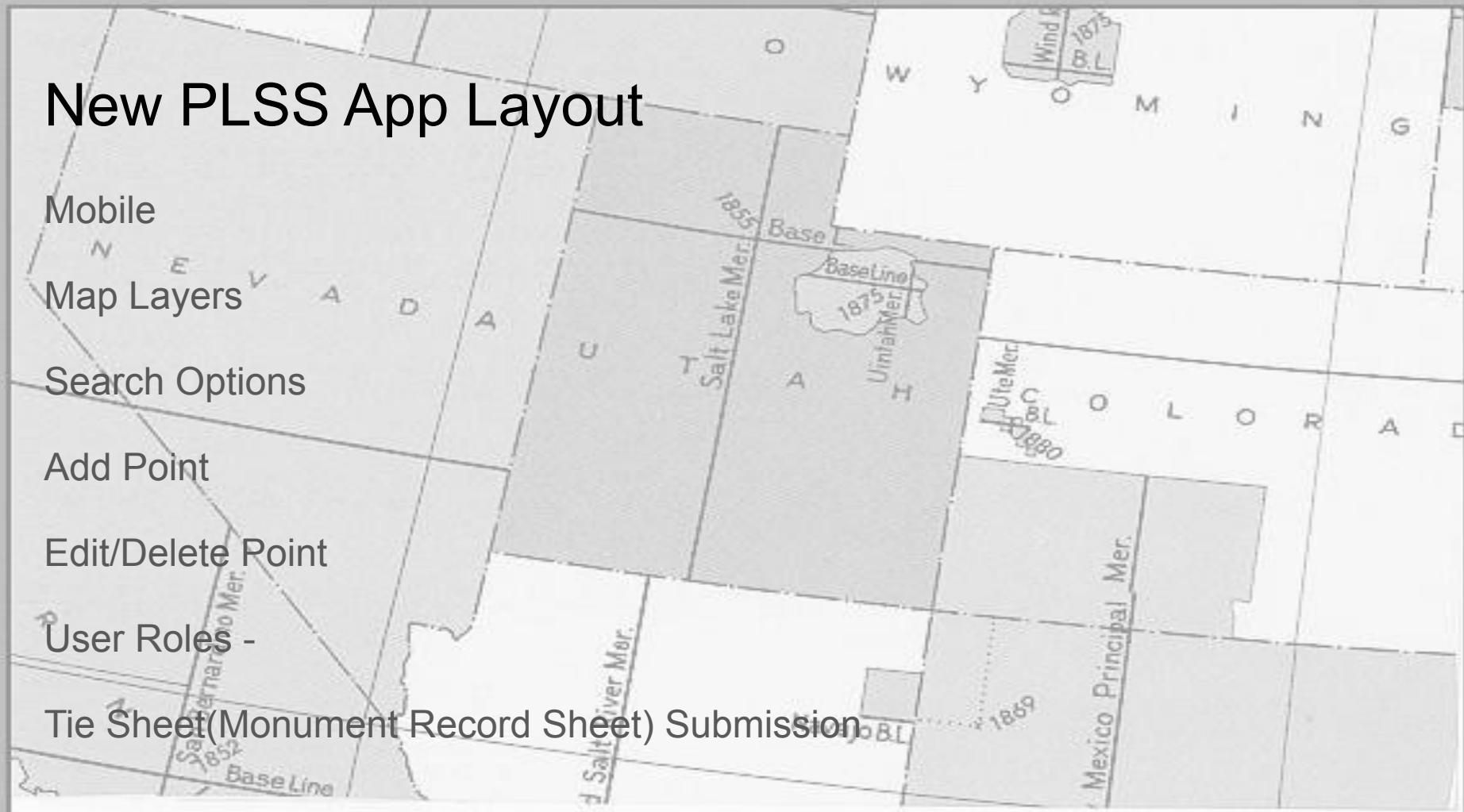
Search Options

Add Point

Edit/Delete Point

User Roles -

Tie Sheet(Monument Record Sheet) Submission



Monument Record Sheet Upload (Trying to simplify by auto populating several fields)

Entered by User:

- *Coordinates (either Geographic or Grid)
- Geographic
- Datum (default NAD83, with other selections)
- Lat/Long (DMS)
- Ellipsoid Height
- Vertical Units
- Grid
- Coord system (default NAD83 State Plane)
- Zone (if state plane)
- Horizontal Units
- NGS Adjustment
- Northing+Easting
- NAVD88 Elevation
- *Accuracy (default to survey grade with other selections available)
- *Monument Status
- *Upload File (must submit something)
- **(NEW)** Check box for "MRRC Contract"

Auto-populated/calculated

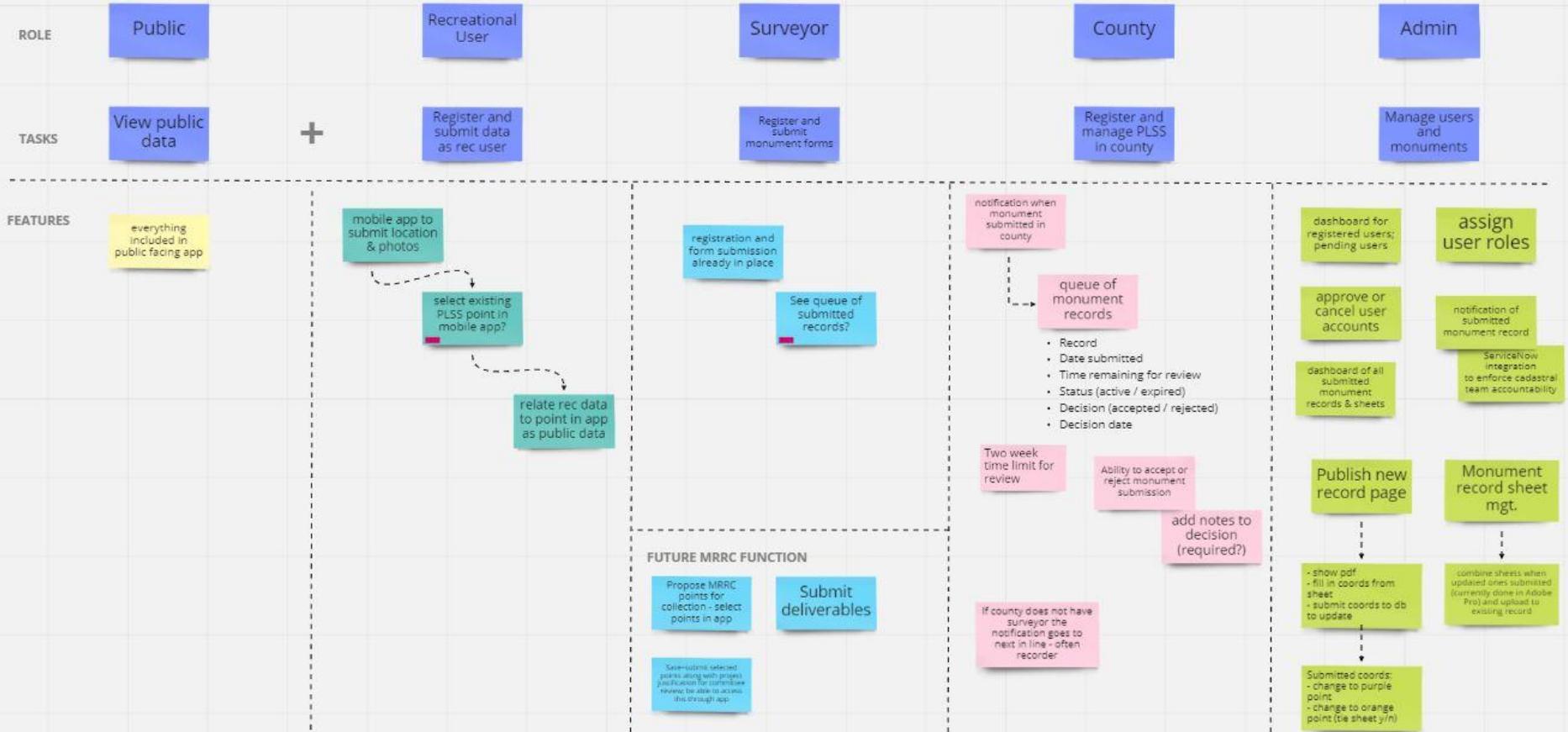
- BLM Point Number
- Date
- County
- Meridian
- Township
- Range
- Section
- Section Corner
- Coordinates (opposite of what was submitted - Geographic or Grid)

Output file name

- BLM Point Number + Date

Roles

USER ROLES



There is PLSS work needed in every County

- Please continue to request funds if you're already utilizing the grant program.
- Please submit a grant request if you never have, or if its been a while since you last submitted.
- Please use members of the MRRC for help and guidance.
- Please work with a dependable surveyor or multiple surveyors to complete the work on time.

Thank You

Sean Fernandez | sfernandez@utah.gov
Greg Bunce | gbunce@utah.gov
Utah Geospatial Resource Center