

FEDERAL GEOGRAPHIC DATA COMMITTEE

STEERING COMMITTEE



Donald Buhler
Surveyor General
Bureau of Land Management
Washington DC

FGDC CADASTRAL SUBCOMMITTEE ACTIVITIES

1. Public Land Survey System update
2. BLM Cadastral Related Activities
Land Buy-Back Program for Tribal Nations

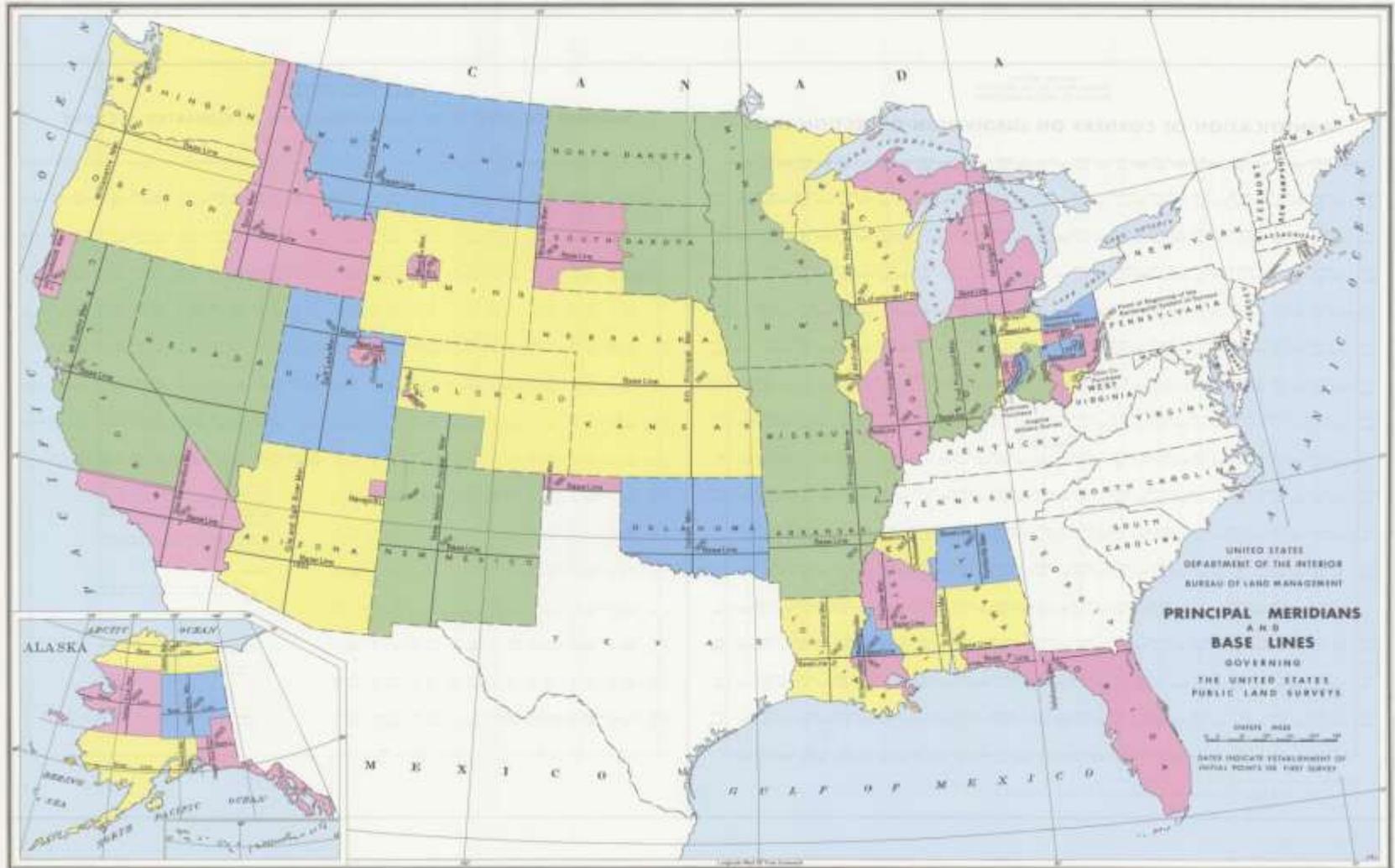
PUBLIC LAND SURVEY SYSTEM

- Cadastral Subcommittee and BLMs role for PLSS
 - BLM is the authoritative source for the PLSS data
 - Subcommittee/BLM facilitation and coordination efforts within limited funding sources
- PLSS data publication through nationalcad.org
 - Other documents
 - Maintenance and updates

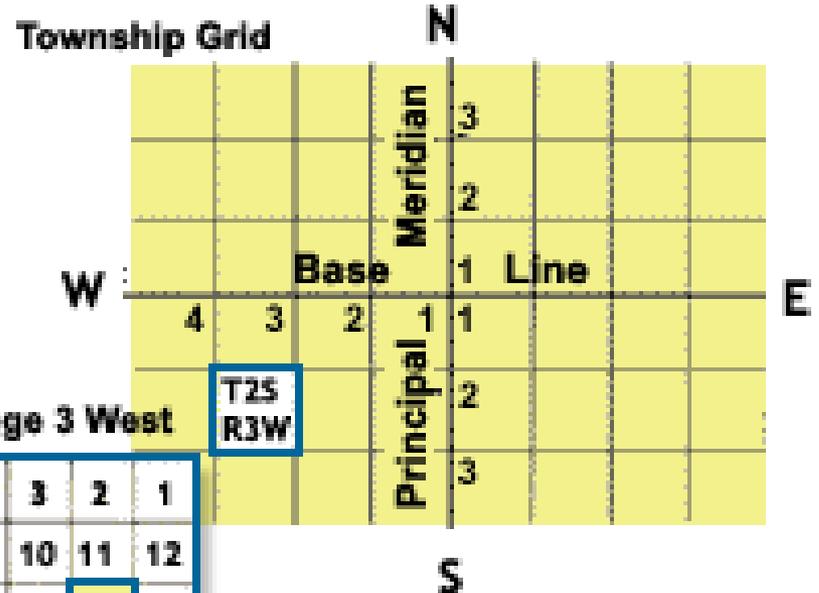
PUBLIC LAND SURVEY SYSTEM

- GIS Version including both rectangular and non-rectangular survey data
 - rectangular survey data are a reference system for land tenure based upon meridian, township/range, section, section subdivision and government lots
 - non-rectangular survey data represent surveys that were largely performed to protect and/or convey title on specific parcels of land such as minerals surveys and tracts
- Standardized PLSS data for the 30 Public Domain states. represent about 40 million parcels that provide the basis for parcel mapping, land governance decisions, and navigation of cadastral data in Public Domain states
 - <http://nationalcad.org/download/PLSS-CadNSDI-Data-Set-Availability.pdf>

PLSS STATES



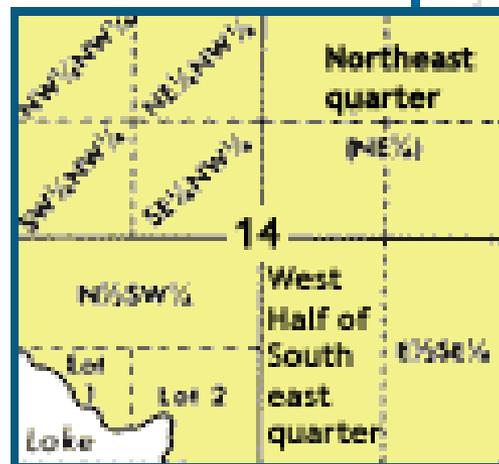
Public Land Survey System (PLSS)



Township 2 South Range 3 West

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
10	21	22	23	24	
9	28	27	26	25	
2	33	34	35	36	

Section 14



Section 14 shows both normal division of the section into aliquot parts and the fractional division into government lots.



Federal Geographic Data Committee

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Dataset Extent



Map data CC-BY-SA by OpenStreetMap
Tiles by MapQuest

PLSS_CadNSDI_V2 Standardized PLSS Data Catalog National Geospatial Data Asset (NGDA) Public Land Survey System (PLSS) Dataset Catalog

This catalog is a listing of the location of available standardized PLSS data sets which are hosted by BLM and states. The document referenced in the online linkage is updated regularly and will provide linkages for accessing state and BLM hosted sites. The PLSS Data are standardized for publication and are in compliance with the FGDC the Cadastral Publication Data Standard for the National Spatial Data Infrastructure or CadNSDI Version 2.0. This standard publication guideline for cadastral data and is intended to provide a common format, structure and content of the information and allow it to be readily used across jurisdictional boundaries. This data represents the GIS Version of the Public Land Survey System including both rectangular and non-rectangular survey data. The rectangular survey data are a reference system for land tenure based upon meridian, township/range, section, section subdivision and government lots. The non-rectangular survey data represent surveys that were largely performed to protect and/or convey title on specific parcels of land such as minerals surveys and tracts. The data are largely complete in reference to the rectangular survey data at the level of first division. However, the data varies in terms of granularity of its spatial representation as well as its content below the first division. Therefore, depending upon the data source and steward, accurate subdivision of the rectangular data may not be available below the first division and the non-rectangular minerals surveys may not be present. At times, the complexity of surveys rendered the collection of data cost prohibitive such as in areas characterized by numerous, overlapping mineral surveys. In these situations, the data were often not abstracted or were only partially abstracted and incorporated into the data set. These PLSS data were compiled from a broad spectrum of sources including federal, county, and private survey records such as field notes and plats as well as map sources such as USGS 7 1/2 minute quadrangles. The metadata in each data set describes the production methods for the data content. This data is optimized for data publication and sharing rather than for specific "production" or operation and maintenance. A complete PLSS data set includes the following: PLSS Fully Intersected (all of the PLSS feature at the atomic or smallest polygon level), PLSS Townships, First Divisions and Second Divisions (the hierarchical break down of the PLSS Rectangular surveys) PLSS Special surveys (non rectangular components of the PLSS) Meandered Water, Corners and Conflicted Areas (known areas of gaps or overlaps between Townships or state boundaries). The Entity-Attribute section of this metadata describes these components in greater detail.

Data And Resources

PDF File
PLSS-CadNSDI-Data-Set-Availability.pdf

Download

PDF File
PLSS-CadNSDI-Data-Set-Availability.pdf

Download

Metadata Source

ISO-19139 Metadata
Download Metadata - View Full Metadata

Original FGDC Metadata
Download Original Metadata - View Original Full Metadata

Harvested from FGDC WAF (Hosted by DOI for Geoplatform.gov)

MORE INFORMATION

FGDC Cadastral Subcommittee

Coordinating national cadastral and land records information



Welcome to the FGDC Cadastral Subcommittee outreach web site.

This site contains reports and standards from the Subcommittee as well as many local, state, and national cadastral topics and related standards.

The [About Us Page](#) includes links to the charter and annual reports, committee members, and recent meeting notes and agendas.

The [Subcommittee Standards and Guidelines](#) has the FGDC Cadastral Data Content Standard and the implementation standards, guidelines, and handbooks.

The Subcommittee Projects are business or applications areas where the Subcommittee has partnered with various organizations to define the needs and uses for cadastral data. These are arranged by topic area and include a project focused on state practices and business plans for state hosted parcel and PLSS data.

The [reference documents](#) and archives contain related documents that were not developed by the Subcommittee but may have been used as reference or are of interest to the cadastral community. This section also contains glossaries and inventories and archived reports that are no longer related to an active project or workgroup.

Check out the [What's New Page](#) for any recent or breaking news.

The [national parcel blog](#) has topics related to cadastral implementation. Please use the contact us link if you have any questions or suggestions.

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Contact Us

[Bob Ader](#) - Co-chair
303-239-3817

[Don Buhler](#) - Co-chair
202-452-7781

[Nancy von Meyer](#) -
Support/Secretary
884-646-2755

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FGDC CADASTRAL SUBCOMMITTEE ACTIVITIES

- Updates nationalcad.org
 - Outreach site redesigned for responsive viewing (mobile viewing)
 - Updated documents including adding a permanent link for documents.
 - Added documentation of standard domains of values for PLSS CadNSDI data sets.
 - Updated project reports.

CADASTRAL/BLM RECENT ACTIVITIES PLSS DATA SETS

- Adopted Esri's Parcel Fabric for the PLSS data set maintenance platform
 - In area's of BLM authority – migrating to parcel fabric and establishing stewardship partnership (e.g. states and federal agencies)
 - Partners are importing to the Fabric
 - Maintenance within parcel fabric
 - Developed web based training – You Tube CadNSDI Channel
 - Consistent procedures for updates across organizations

PLSS DATA MAINTENANCE TUTORIALS

YouTube

CadNSDI

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23:12

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by Cad NSDI
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Various Least Squares Adjustment methods of Polygons in the Parcel Fabric

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COMPILING MINERAL SURVEYS

Compiling Mineral Surveys: Lesson 1



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

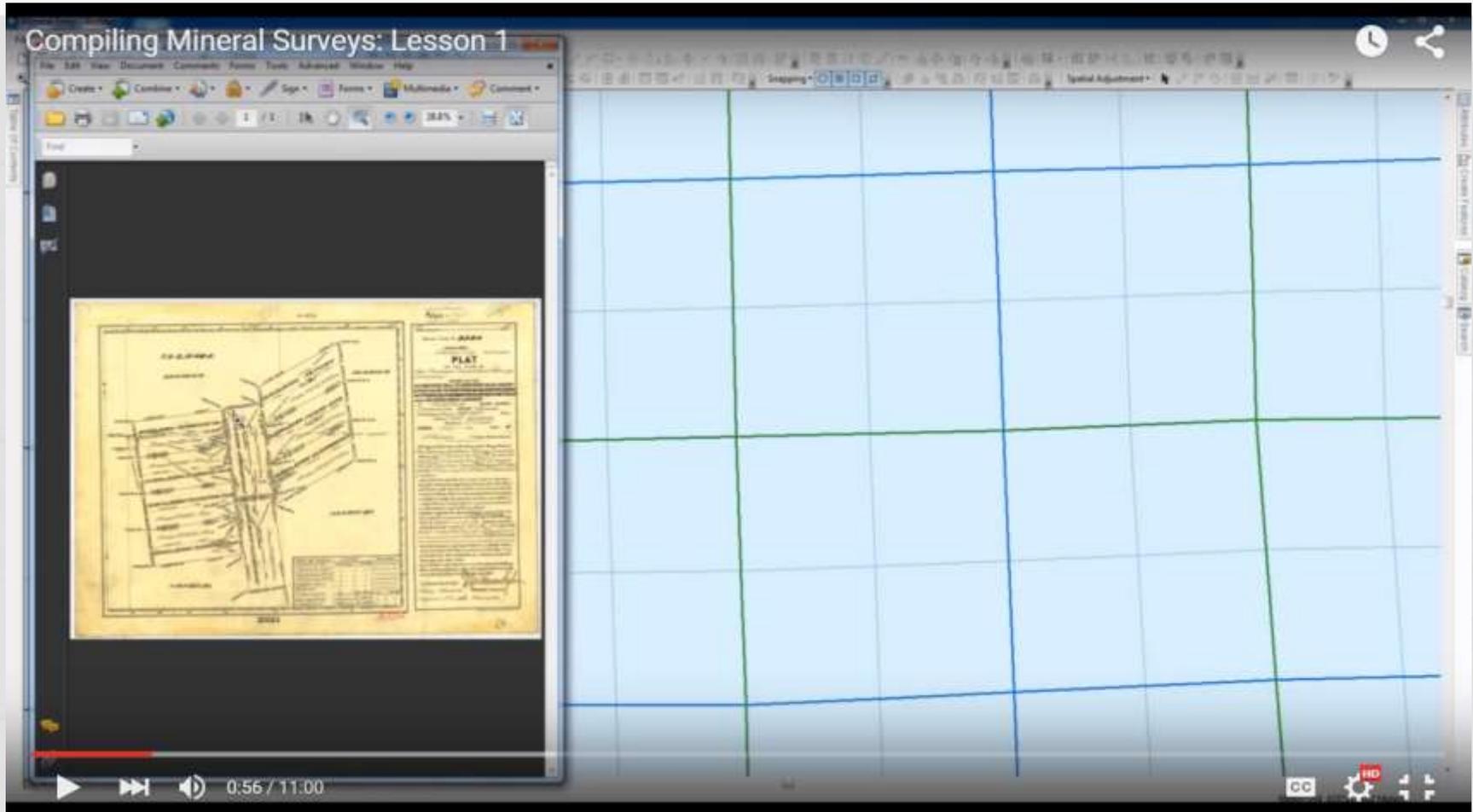
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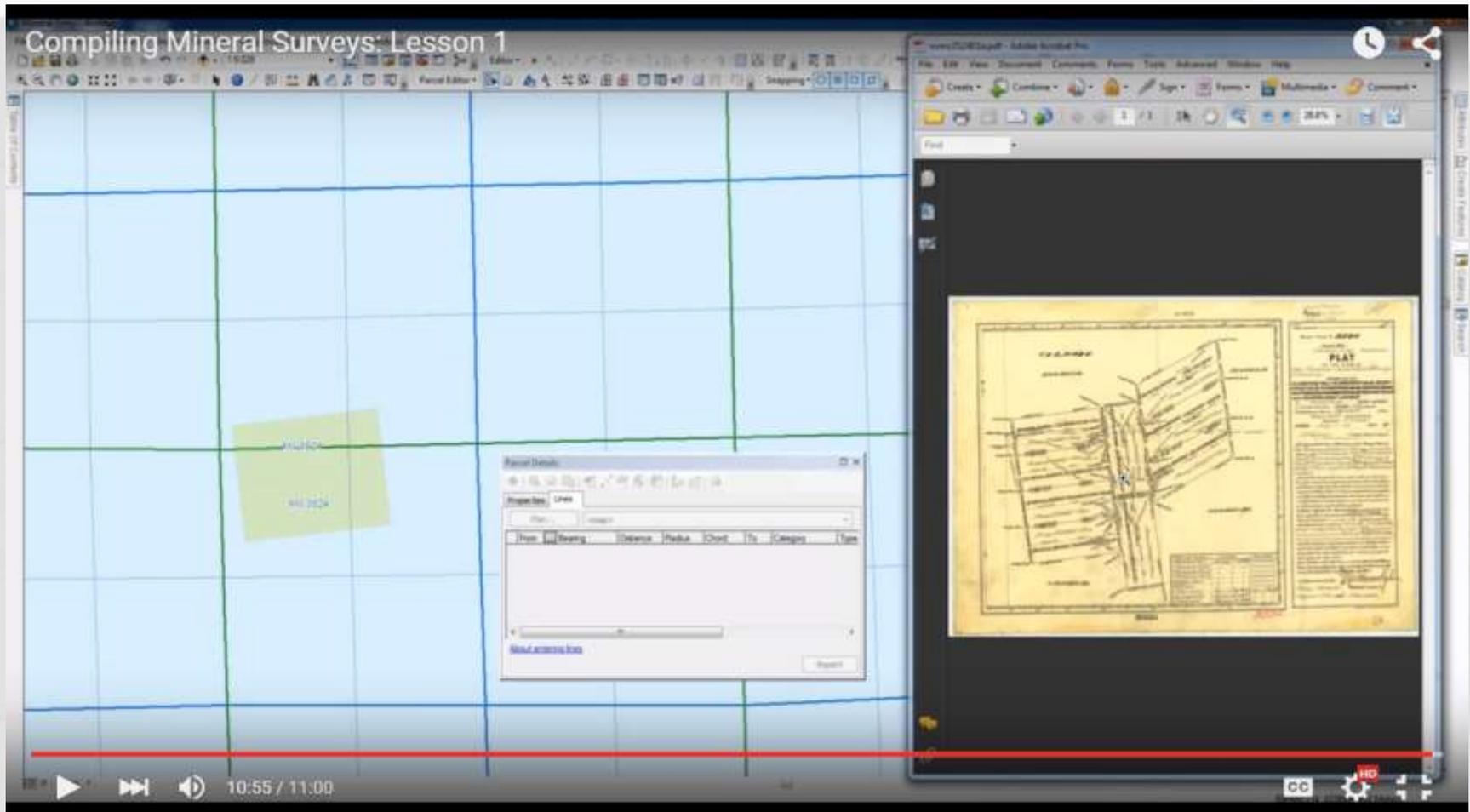
CC BY

The image shows a video player interface. At the top left, the text "Compiling Mineral Surveys: Lesson 1" is displayed. The main content area features the official logo of the Bureau of Land Management, which is a triangular shield shape. The logo contains a stylized landscape with a blue sky, a white-capped mountain, green rolling hills, a blue winding river, and a dark green coniferous tree. Above the landscape, the text "U.S. DEPARTMENT OF THE INTERIOR" and "BUREAU OF LAND MANAGEMENT" is written in a bold, sans-serif font. Below the logo, the text "Prepared by" is visible. At the bottom of the video player, there is a progress bar showing "0:13 / 11:00" and various control icons including play, next, volume, and a Creative Commons license icon (CC BY).

COMPILING MINERAL SURVEYS



COMPILING MINERAL SURVEYS



HISTORICAL RESEARCH

- BLM General Land Office Records
 - Genealogy
 - Natural Resource baseline
- United States Land Patents, 1788-2012
 - <https://www.youtube.com/watch?v=Uo0UPWhGYG0&authuser=0>

UNITED STATES LAND PATENTS, 1788-2012

United States Land Patents, 1788-2012



Real estate creation was central to North American colonization, and no title-granting authority transferred more titles, to more land, more quickly than the United States operating through the General Land Office.

Since the Land Ordinance of 1785, federal authorities have issued millions of land patents across thirty states covered by the public land survey system. This burst of activity accelerated after 1815 and subsided by 1930, but never stopped.

This visualization follows the spread of patents across over 2.2 million square miles of the contiguous United States.

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United States Land Patents, 1788-2012

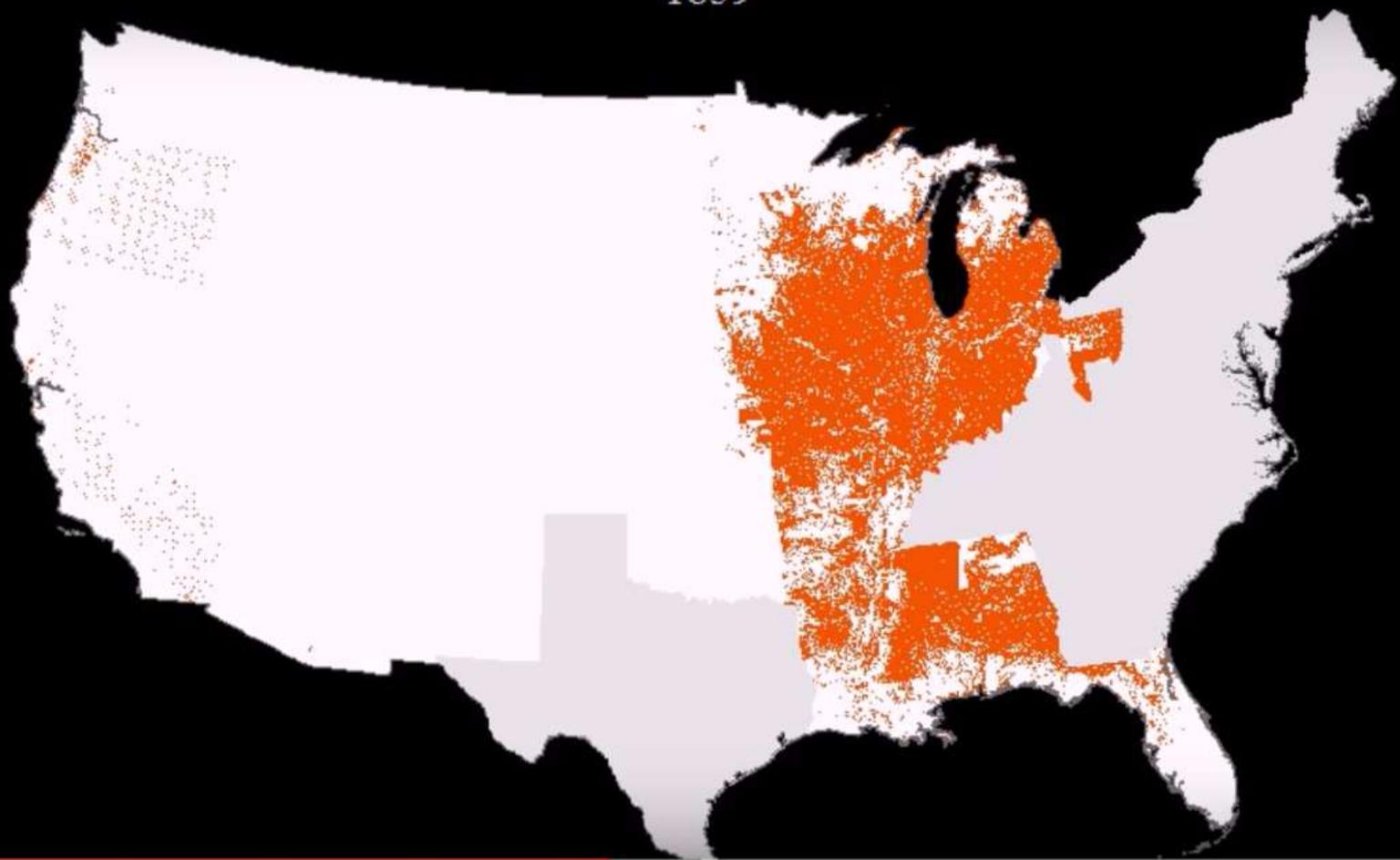
US Public Domain Sections with General Land Office Patents
1794



0:23 / 1:37

United States Land Patents, 1788-2012

U.S. Public Domain Sections with General Land Office Patents
1859

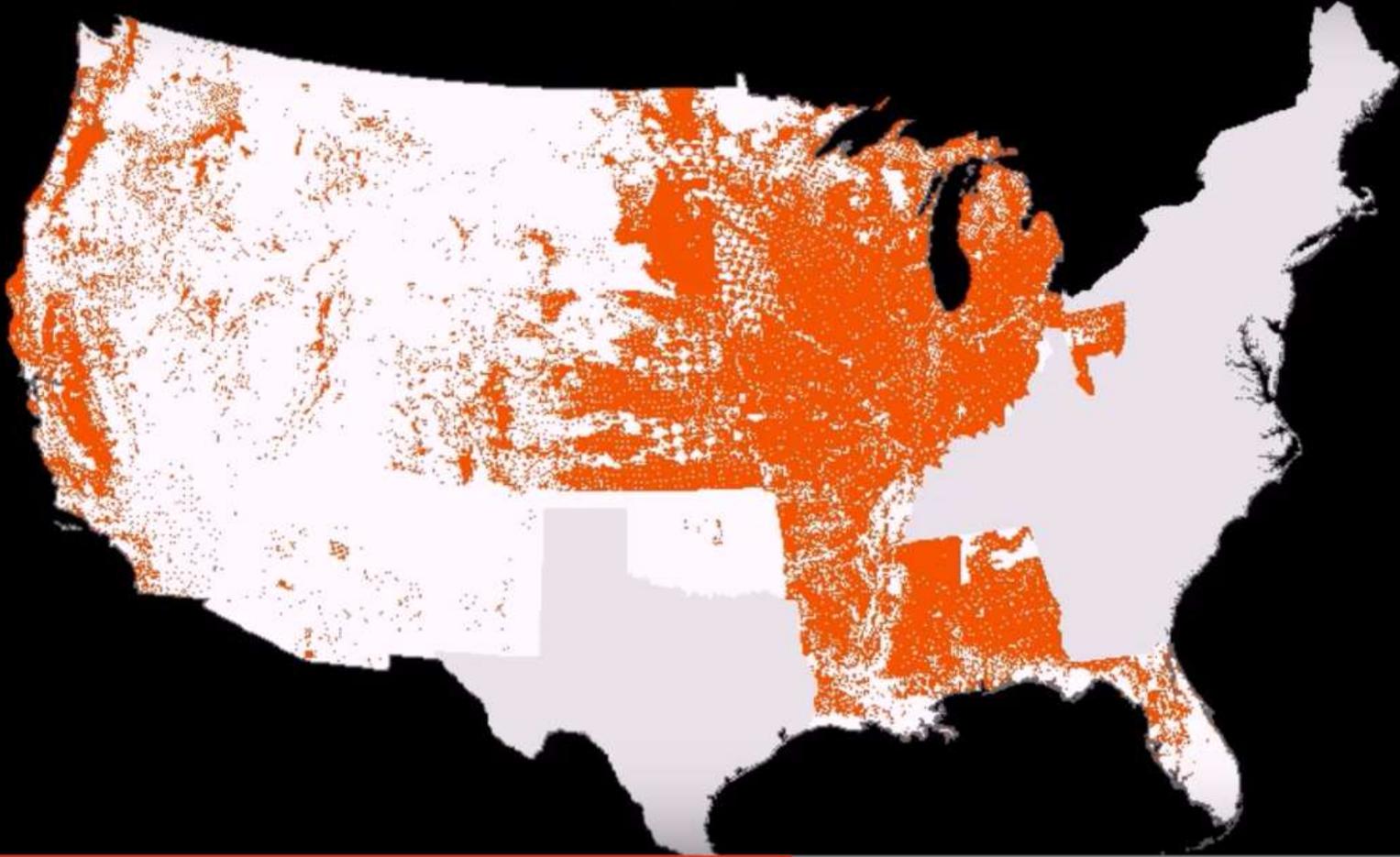


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United States Land Patents, 1788-2012

US Public Domain Sections with General Land Office Patents
1891

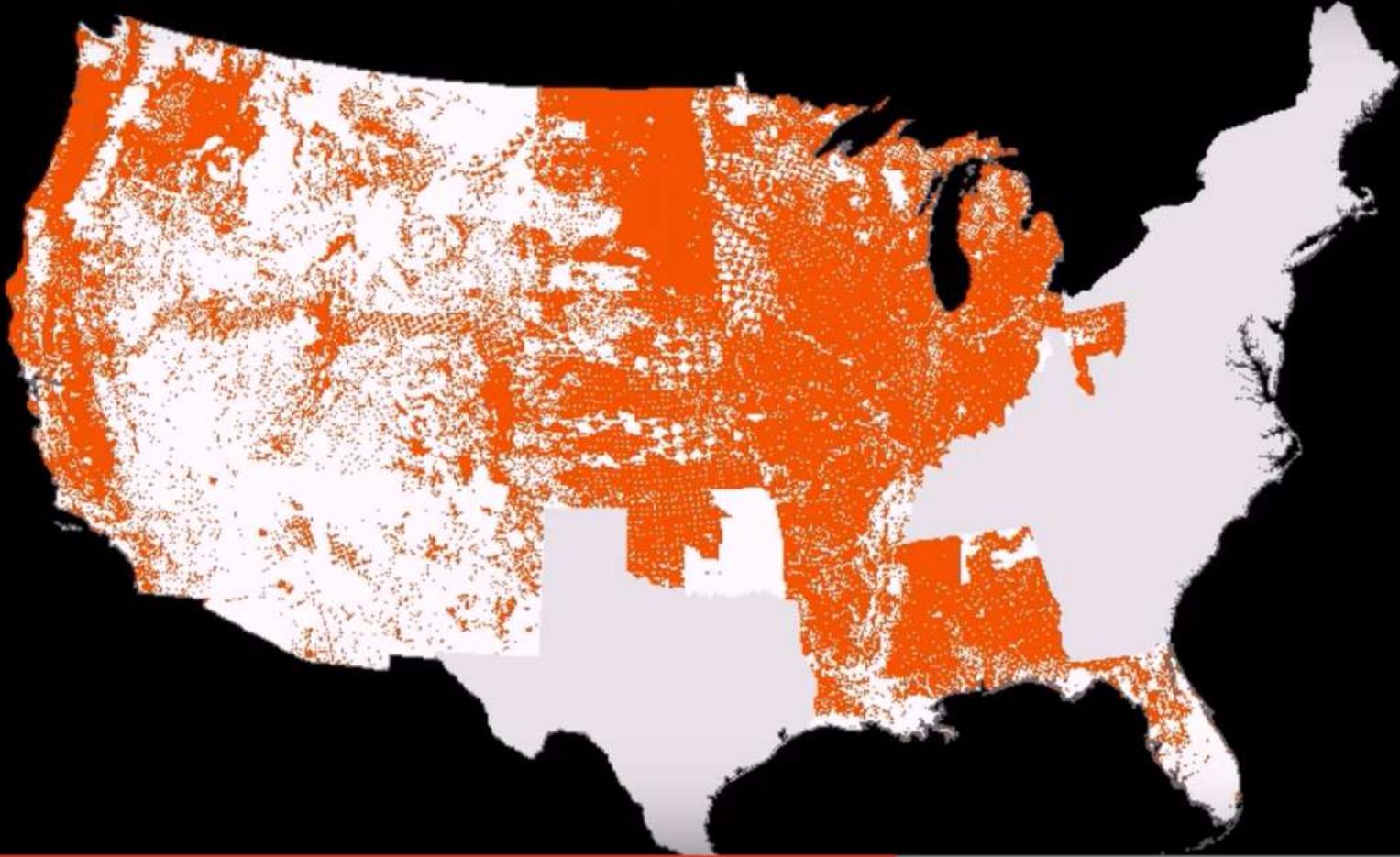


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United States Land Patents, 1788-2012

US Public Domain Sections with General Land Office Patents
1909

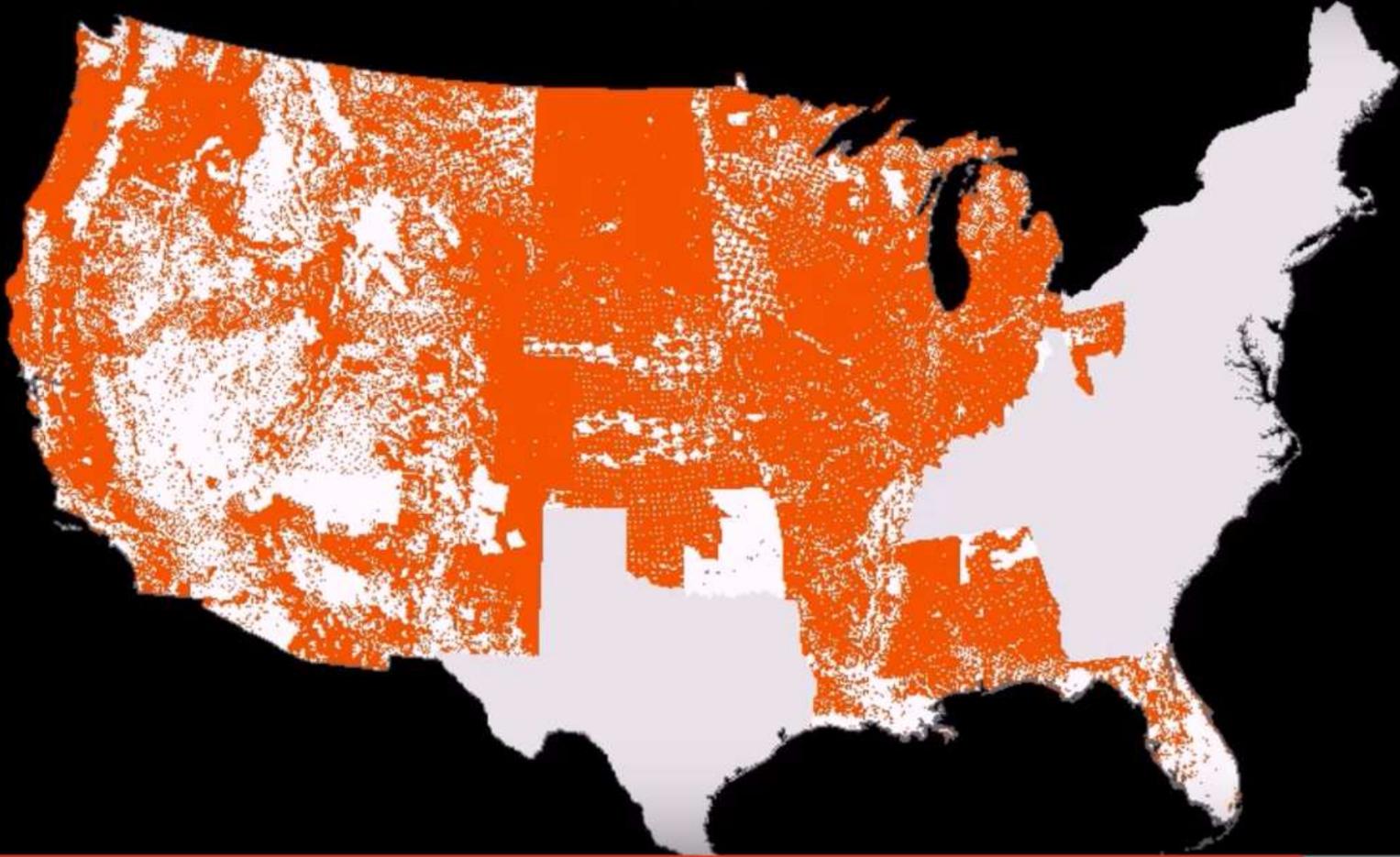


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United States Land Patents, 1788-2012

US Public Domain Sections with General Land Office Patents
1980

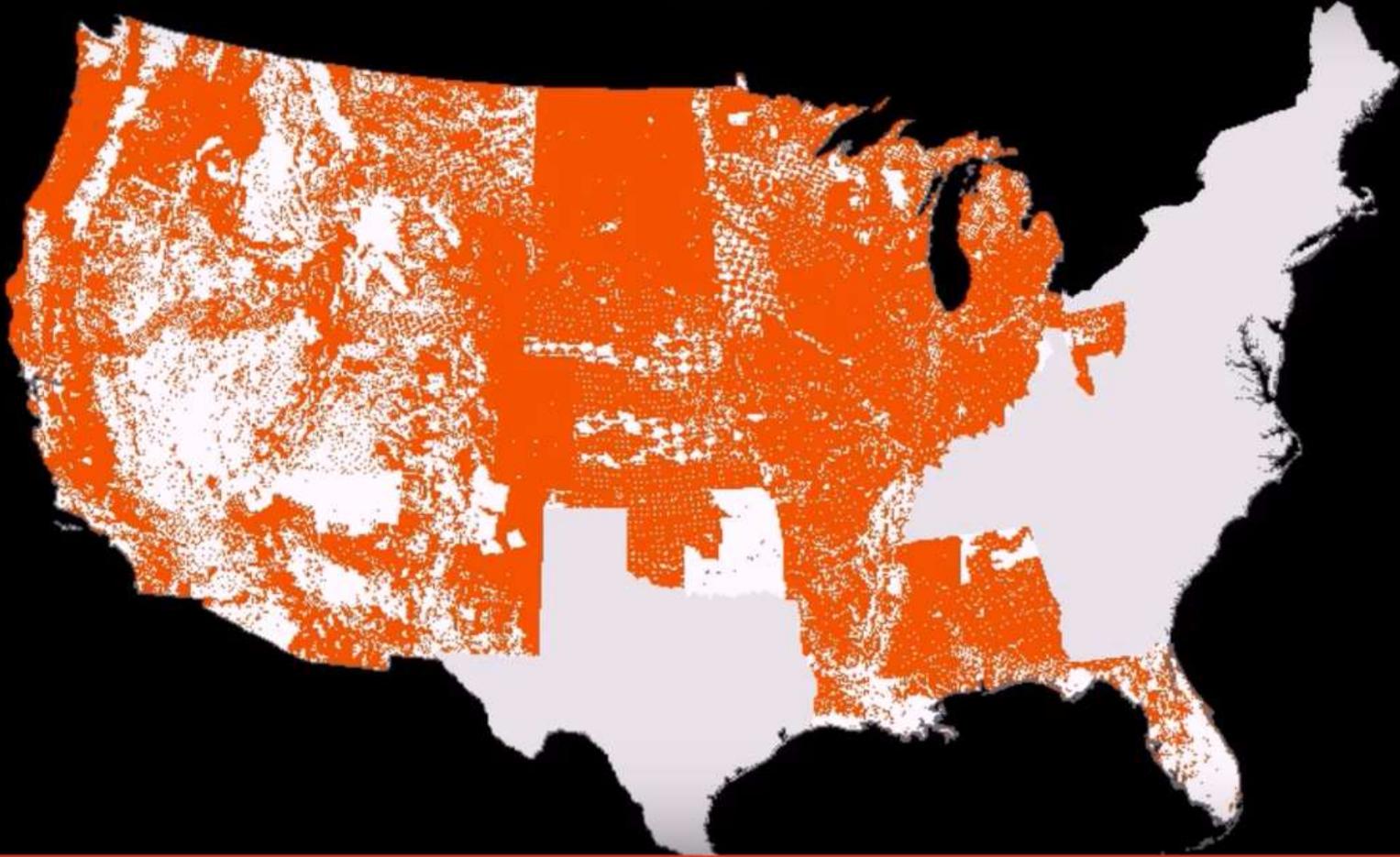


▶ ⏪ 🔊 1:20 / 1:37



United States Land Patents, 1788-2012

US Public Domain Sections with General Land Office Patents
2012



▶ ⏪ 🔊 1:30 / 1:37



Data analysis and cartography by Robert Lee

Sources:

BLM, Eastern States Office, www.glorerecords.blm.gov

BLM, GeoCommunicator, www.geocommunicator.gov

USGS, The National Map, www.nationalmap.gov

US History Maps, poezn.github.io/us-history-maps/



U.S. Department of the Interior



Land Buy-Back Program for Tribal Nations

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LAND BUY-BACK PROGRAM for TRIBAL NATIONS

- *Cobell Settlement*
 - Implements the land consolidation
 - Provided \$1.9 billion to purchase fractional interests in trust or restricted land from willing sellers at fair market value
 - Consolidated interests are immediately restored to tribal trust ownership for uses benefiting the reservation community and tribal members
 - Approximately 245,000 owners of nearly three million fractional interests across Indian Country who are eligible to participate in the Buy-Back Program.

BLM CADASTRAL RELATED ACTIVITIES LAND BUY-BACK PROGRAM FOR TRIBAL NATIONS

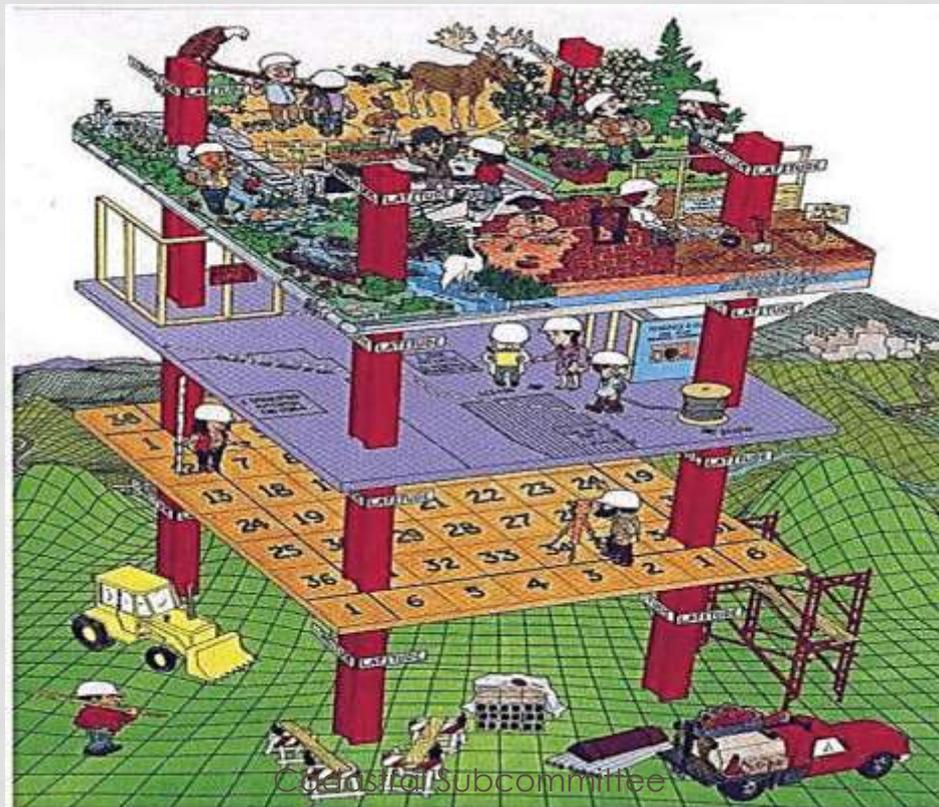
- Completing records analysis, boundary updates and reports for Trust Asset and Accounting Management System (TAAMS) updates
 - This is an outcome from the Cobell law suit settlement.
 - The buy back is a process to consolidate fractionated interests.
 - There are over 300 land based Indian reservations in the US.
 - In FY 2015 over 80 buy back reservations will be mapped for records improvement, land descriptions, location and appraisals.
 - BY FY 2016 over 153 buy back reservations will be completed.
 - Purchase of 1.48 million acres for \$725 million (11/27/2015)

REQUIREMENTS/GOALS

-to meet the specialized needs of federal government appraisers to accurately position assets and resources relative to parcel boundaries to determine valuations.
-using data or information contained in federal databases or other systems and which are derived from official records.
-data/information to be from an authoritative sources. (TAAMS and the CadNSDI)
-to derive the Indian tract/parcel boundaries, enabling the mapping of both the surface and mineral estate, and register them to real world coordinates using the CadNSDI/PLSS framework
-to achieve a “one to one” geospatially, congruent match between the “Ownership” of TAAMS data and the “Possessory” or CadNSDI data for all parcels.

EXPECTATIONS!

Achieve congruency between authoritative data sets in order to gain positional confidence in boundary location relative to title data and resources/assets information.



DELIVERABLES

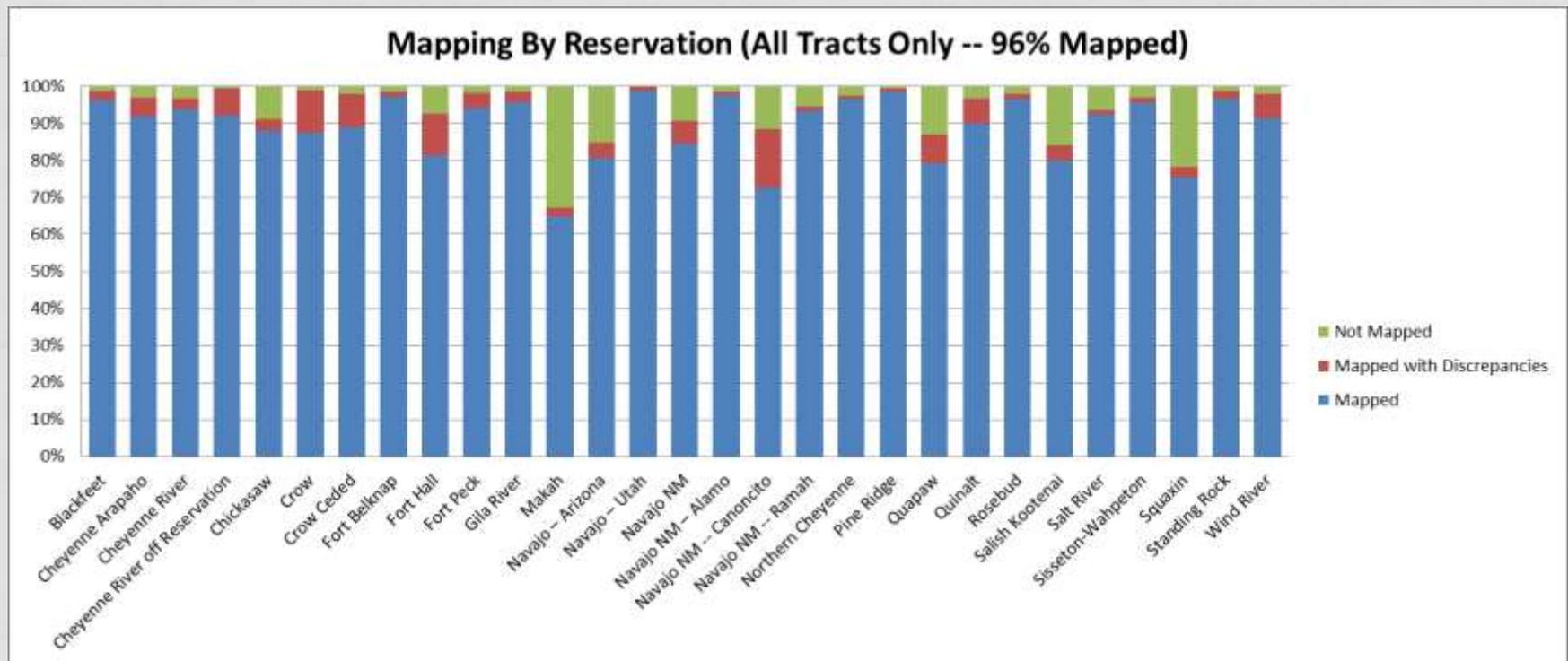
- Reservation-wide Parcel Geodatabases
- Improved PLSS corner positioning
- Improved records management of authoritative source databases
- Data verification and validation of authoritative data sets
- Specialized GIS and records training for Tribal Reps.
- Full Documentation of the “Mapping Process.”
- Land characteristics data bases, web viewer, and map services for appraisal purposes
- ...and because the Secretary said so....!

VALUE ADDED FEATURES!

- Provided a uniform mapping product for all reservations; a standard...what a concept!
- BIA has adopted the process and methodology
- All data is made available to the individual tribes
 - Instant GIS for those who have none!
- A success story in collaboration, coordination, and cooperation between disparate federal agencies i.e. Secretary of the Interior, Office of Appraisal Service, Bureau of Indian Affairs, Office of Special Trustee for American Indians, Bureau of Land Management, and Indian Tribes

SAMPLE OF MAPPING ACHIEVEMENTS

29 RESERVATIONS
(BLUE IS GOOD!)



STATISTICS/INFORMATION

- Mapping Team (led by the BLM) includes BIA, OST, OAS, DME, and OS
- Over 80 reservations serviced (mapped and remapped); target is 153
- All reservations will have been mapped at least once by September 30, 2016.
- Program in year three; expected to end in 2022
- Over 4000 townships containing over 500,000 parcels serviced to date and 46 million acres; more to come
- Purchased 1.48 million acres for \$725 million (11/27/2015)

QUESTIONS