

The letters 'UC' in a bold, sans-serif font, colored in a light orange hue, positioned in the upper left corner of the slide. The background of the slide is a textured orange gradient with a stylized map overlay on the right side, featuring topographic contour lines and a grid pattern in shades of blue and purple.

UC

Moving to the Web: Transition to a Web- Based Data Authoring System

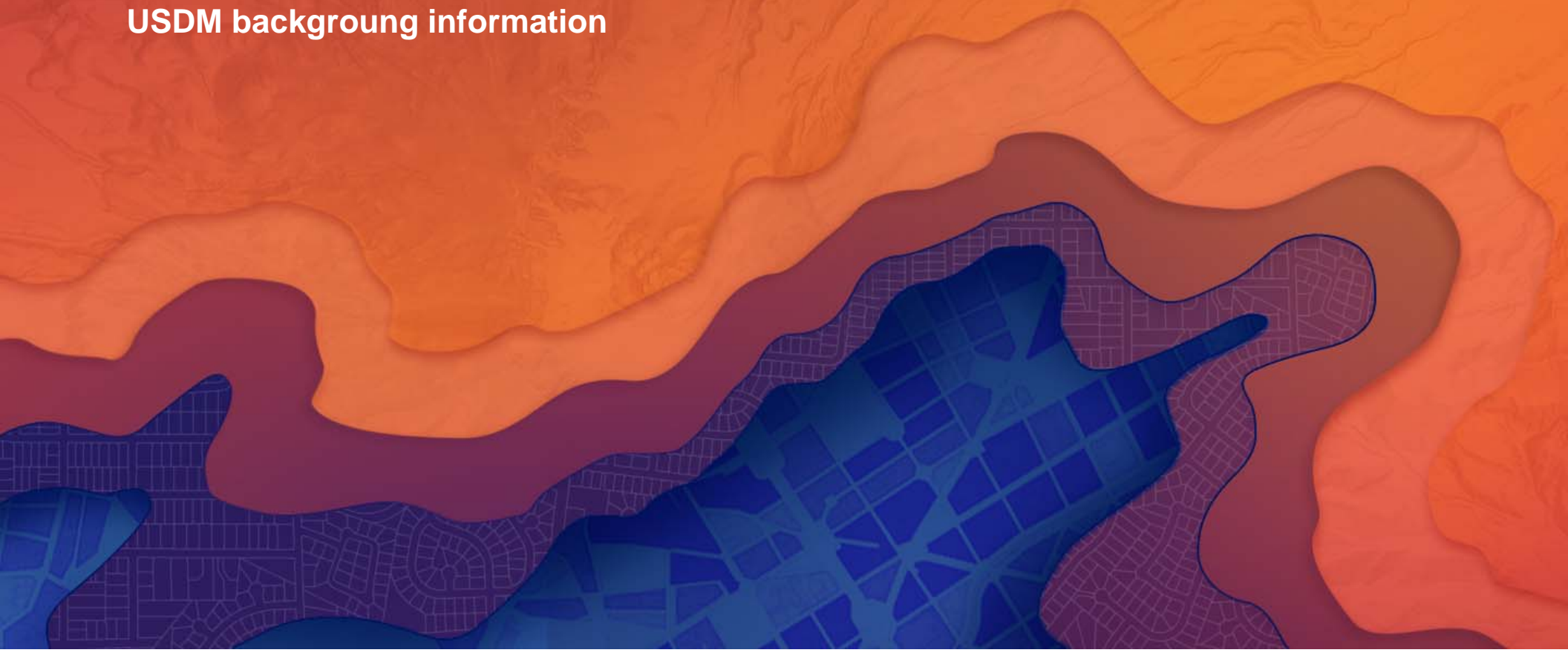
Calvin Poulsen – GIS Manager National Drought Mitigation Center UNL

U.S. Drought Monitor Authoring

- What is the U.S. Drought Monitor
- What is the current U.S. Drought Monitor authoring process
 - Process setup
 - Non author input
 - Feedback process on author edits
 - Processing of finalized data
 - Dissemination of products
- How is this process being changed
 - Authoring architecture
 - USDM specific input datasets
 - Indicator data for weekly authoring
 - USDM datasets for product production and dissemination
 - Author and collaborator AGS Applications
 - 'Acetate' layers from collaborators
 - Constant awareness of author progress
 - Instant feedback

What is the U.S. Drought Monitor

USDM background information



USDM history

- The U.S. Drought Monitor was developed in 1998 and 1999.
- The first experimental map was produced in May of 1999.
 - The first maps were produced in Corel Draw. In fact they continued to be created this way until mid way through 2004.
- After a very positive White House briefing in August of 1999 the Drought Monitor was made Operational
- The map depicts a range of increasingly extreme ranging from Abnormally Dry to Exceptional Drought.
 - The levels are based on indicator data
 - The levels are meant to depict probabilities based in a percentile system

U.S. Drought Monitor Classification

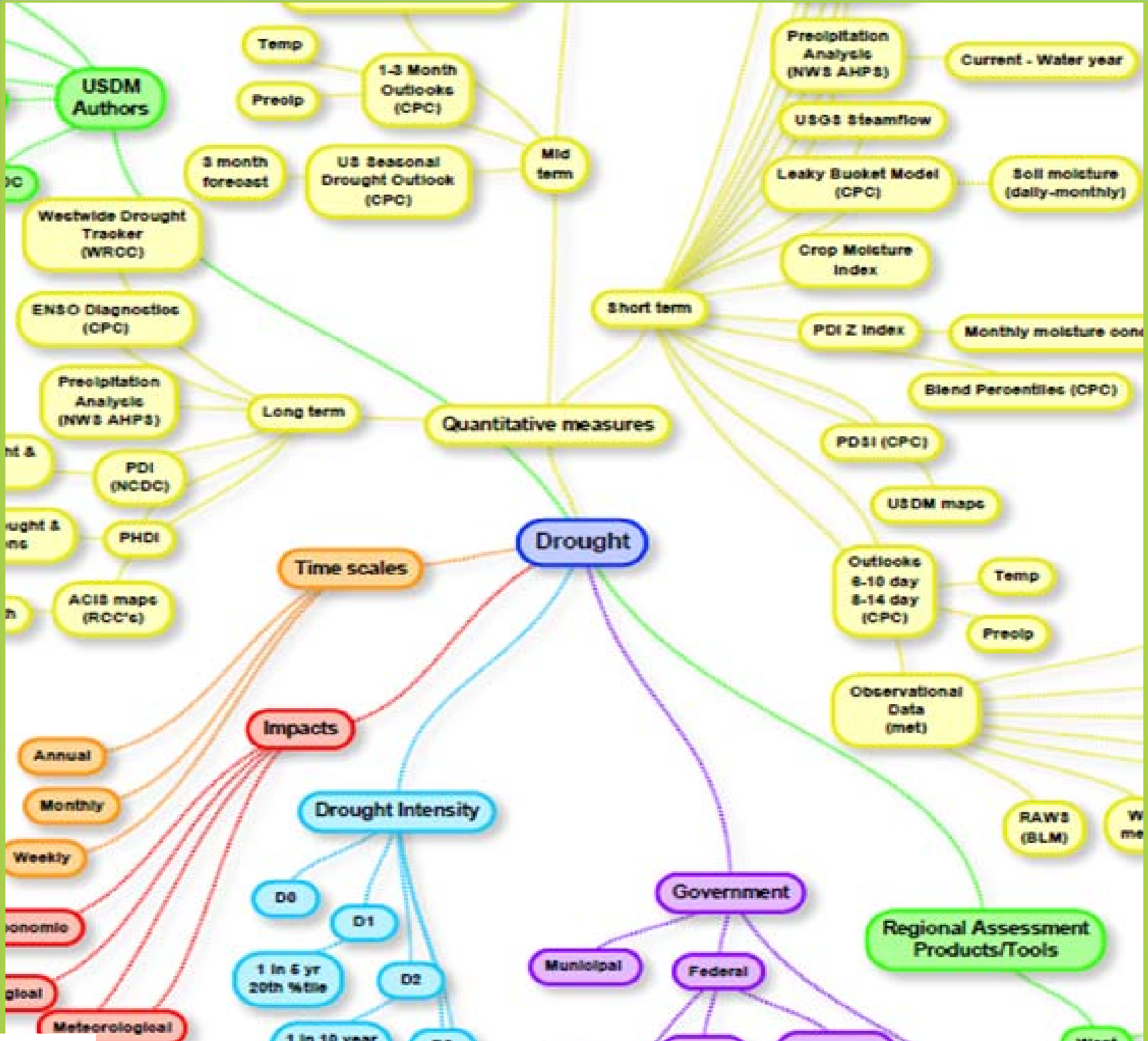
Drought Severity Classification

Category	Description	Possible Impacts	Ranges				
			Palmer Drought Severity Index (PDSI)	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	<p>Going into drought:</p> <ul style="list-style-type: none"> short-term dryness slowing planting, growth of crops or pastures <p>Coming out of drought:</p> <ul style="list-style-type: none"> some lingering water deficits pastures or crops not fully recovered 	-1.0 to -1.9	21 to 30	21 to 30	-0.5 to -0.7	21 to 30
D1	Moderate Drought	<ul style="list-style-type: none"> Some damage to crops, pastures Streams, reservoirs, or wells low, some water shortages developing or imminent Voluntary water-use restrictions requested 	-2.0 to -2.9	11 to 20	11 to 20	-0.8 to -1.2	11 to 20
D2	Severe Drought	<ul style="list-style-type: none"> Crop or pasture losses likely Water shortages common Water restrictions imposed 	-3.0 to -3.9	6 to 10	6 to 10	-1.3 to -1.5	6 to 10
D3	Extreme Drought	<ul style="list-style-type: none"> Major crop/pasture losses Widespread water shortages or restrictions 	-4.0 to -4.9	3 to 5	3 to 5	-1.6 to -1.9	3 to 5
D4	Exceptional Drought	<ul style="list-style-type: none"> Exceptional and widespread crop/pasture losses Shortages of water in reservoirs, streams, and wells creating water emergencies 	-5.0 or less	0 to 2	0 to 2	-2.0 or less	0 to 2

Current Authoring Process

The background features a vertical gradient from dark red at the top to bright orange at the bottom. In the lower half, there are several overlapping, wavy-edged shapes in shades of blue and purple. These shapes contain a faint, light-colored grid pattern, resembling a technical drawing or a map.

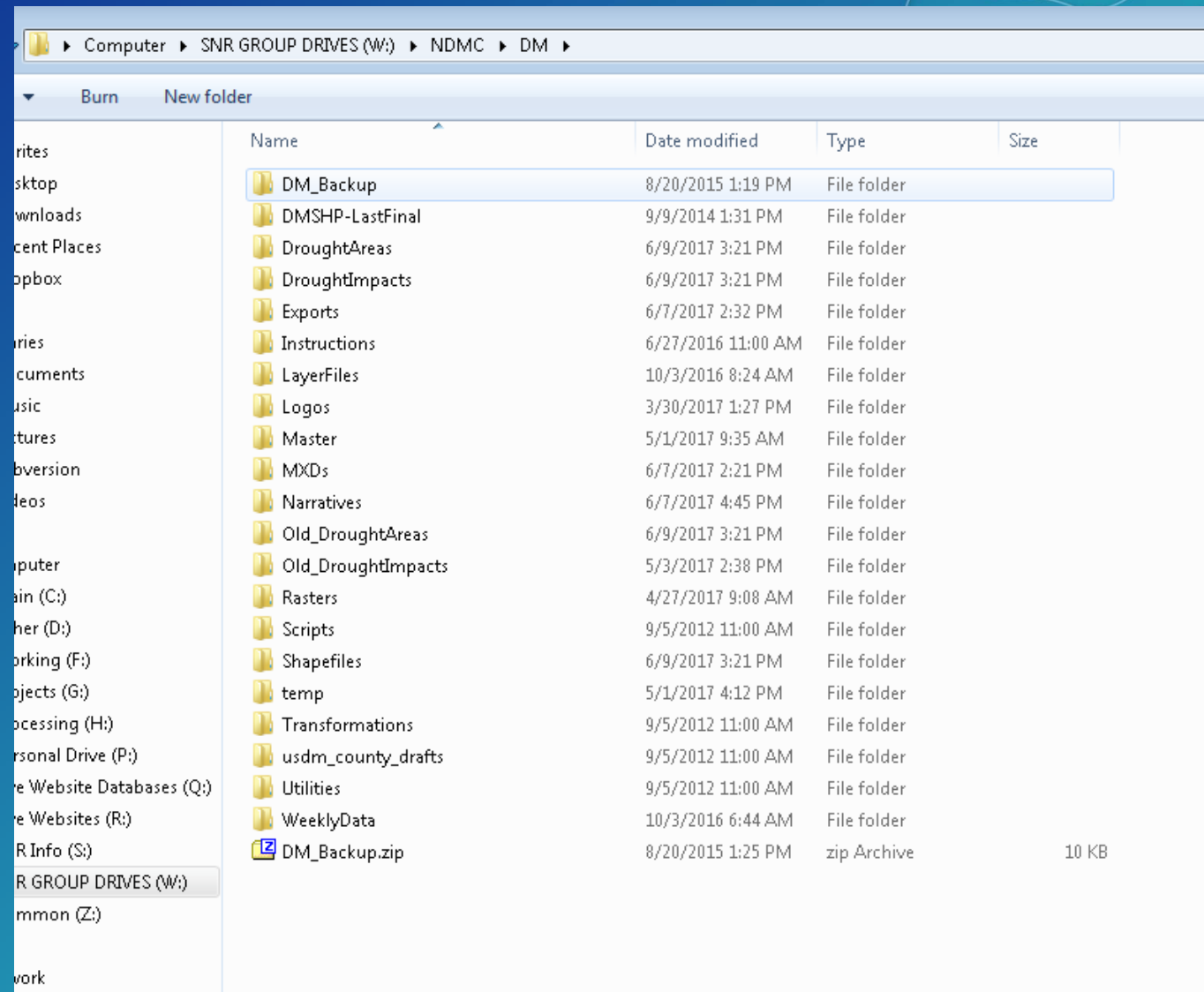
Drought Monitor Author Mind Map!



Courtesy of Dave Simeral: WRCC

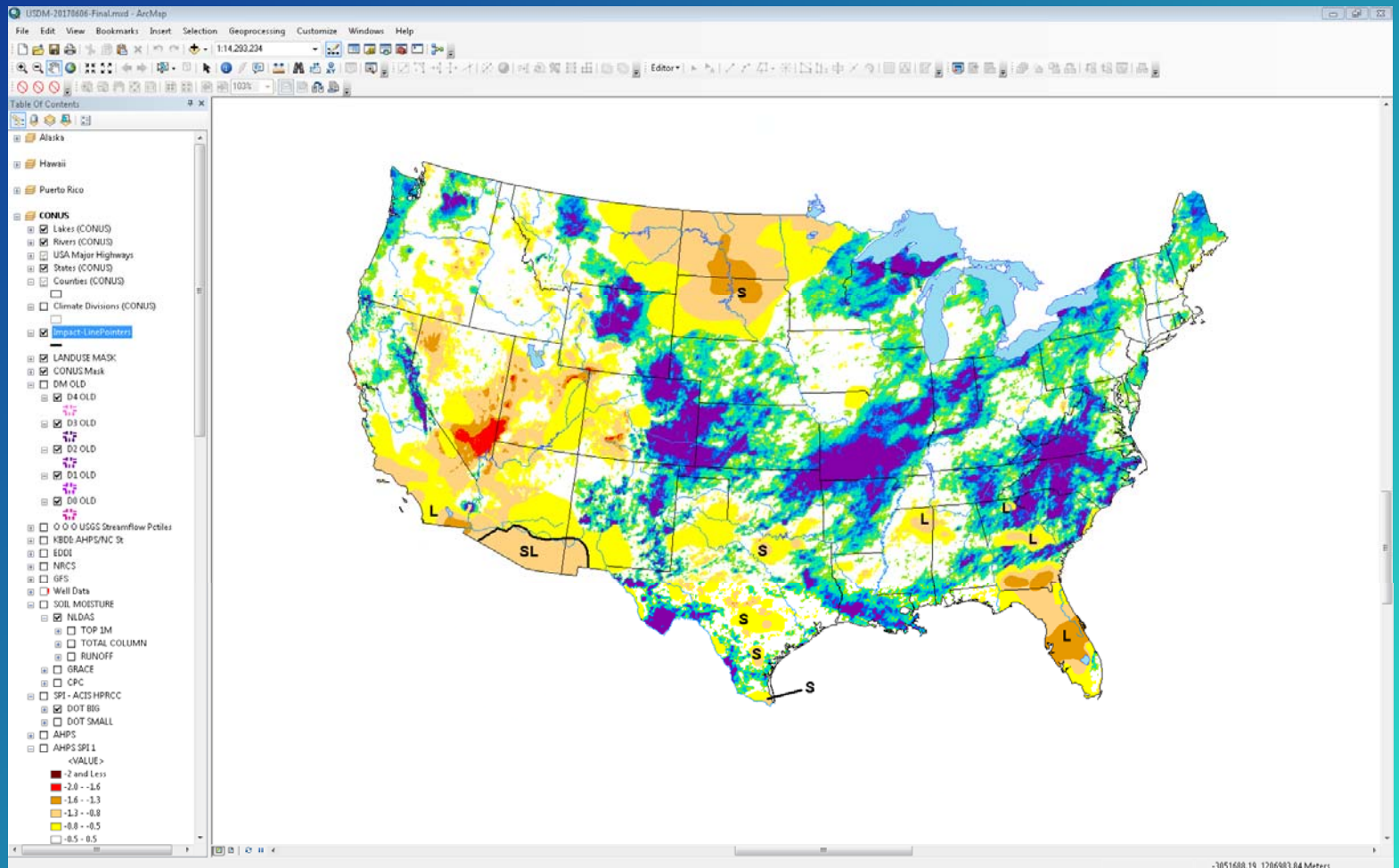
Authoring is desktop based

Installation Directory



Current Editing

Typical USDM Project

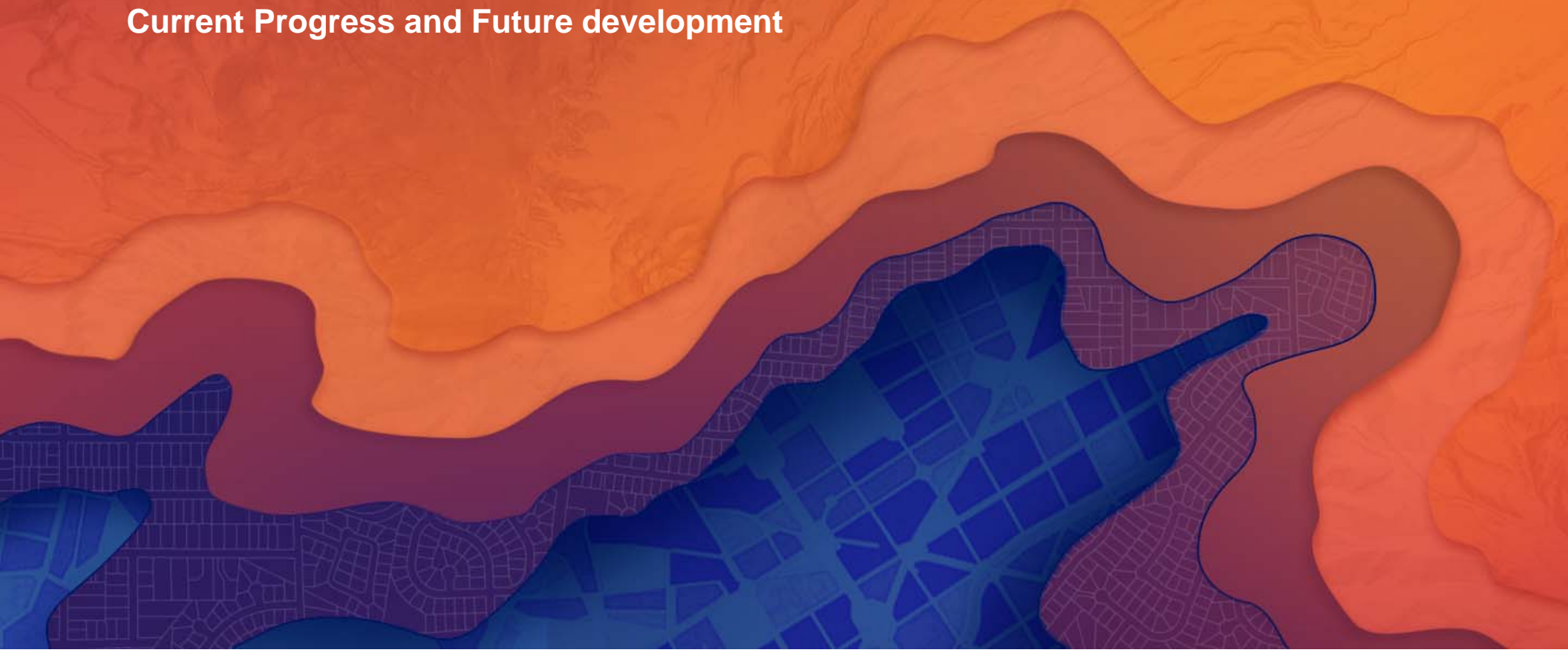


Issues with current authoring process

- The current process is tied to individual data files processed separately by each author or their support staff
- The main data files are still distributed via shapefile and reside on each authors system
 - Not portable
 - Not resilient incase of emergencies
 - The indicator data can differ widely from author to author
 - The projects are subject to version issues as authors are spread out spatial as well as across agencies.

Web Authoring

Current Progress and Future development



Web Authoring Application Progress

- Development of multiple Enterprise Geodatabase
 - EGDB holding base data to support all operational projects.
 - EGDB holding USDM authoring specific datasets.
 - EGDB holding USDM processing work products and all operational data products.
- Development of a collaborator application
 - Add line features to a live 'acetate' layer to assist the authors edit.
 - Tracks the user
 - Allows the user to upload documentation (pdf, png, doc and many others)
 - Allows the user to annotate each of the edits if they choose
 - All edits are instantly available to Author and can be traced
 - All of this is archived if there are questions later on.

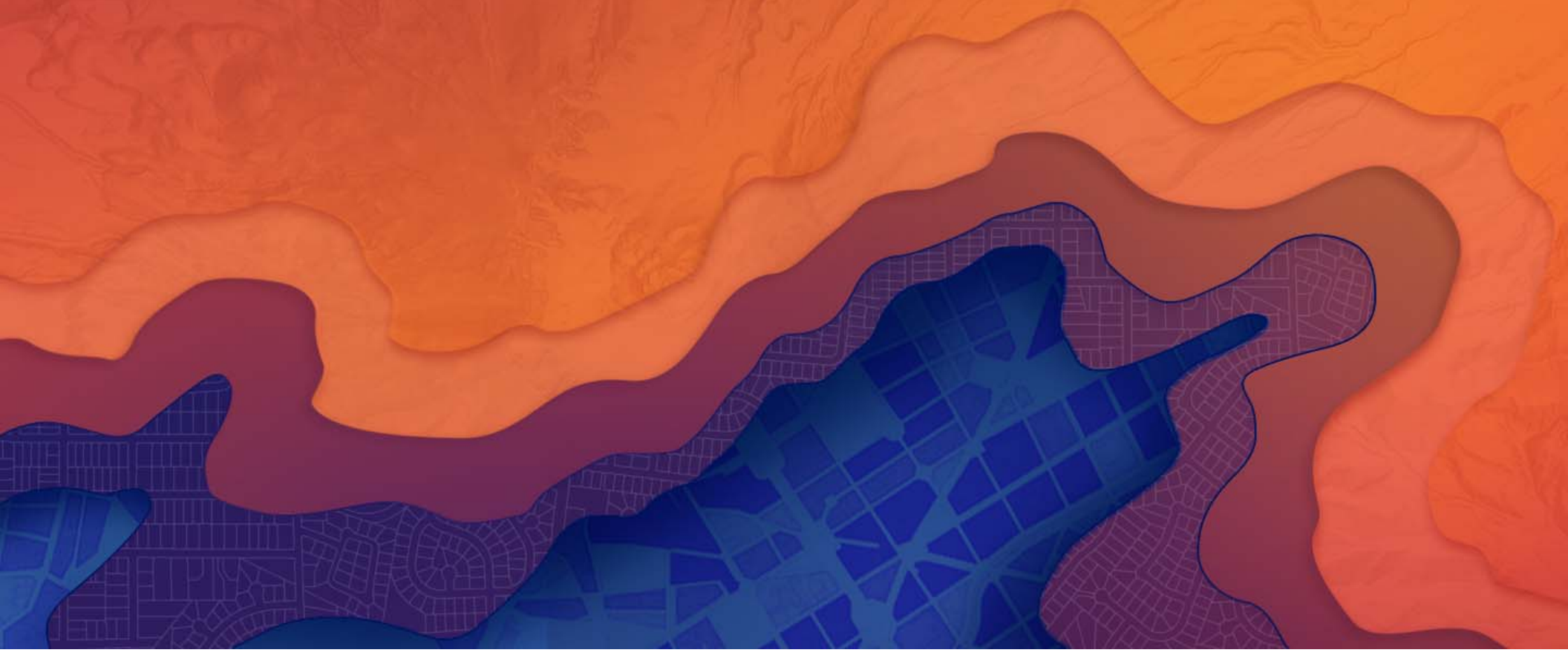
Web Authoring Application Progress cont.

- Development of a author application
 - Streamlined Interface compared to the ArcGIS Desktop application
 - Authors no longer responsible for data maintenance ONLY for editing
 - Weekly indicators will centrally processed allowing for a uniformity of data and symbology not previously possible.
 - Data editing can be annotated and will be archived allowing auditing of the process at a later date.
 - Allows for other authors to take over editing responsibilities without having to try to transfer data and knowledge
 - Eliminates the need for draft maps as the data is constantly visible in real-time.
 - Allows the support to deal with issues in real-time rather than via phone or email.
 - Facilitates much stronger data control and increased preliminary data quality.

Future Developments

- Web based narrative editor (Non GIS related)
- Additional editing tools
- Data processing interface
- Support for ArcGIS Pro editing if possible
- Automate the weekly indicator ingestion and creation related web services.
- Creation of additional custom mapping and data export interfaces.

Questions?



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