

# DIGITAL MAPPING TECHNIQUES 2021

The following was presented at DMT'21  
(June 7 - 10, 2021 - A Virtual Event)

The contents of this document are provisional

See Presentations and Proceedings  
from the DMT Meetings (1997-2021)

<http://ngmdb.usgs.gov/info/dmt/>

# The NCGMP's U.S. GeoFramework Initiative: History, Implementation, and Looking to 2030

Jenna Shelton, Program Officer  
U.S. GeoFramework Initiative, NCGMP

# Definitional Statement

*The US GeoFramework Initiative will build on the National Geologic Map Database Phase 3 concept to construct a multi-resolution, seamless, national 2D/3D geologic framework by leveraging existing and new geologic mapping by the USGS NCGMP and state geological surveys to provide new syntheses and enhanced databases to support scientific discovery and informed decision-making.*

# “NGMDB Phase Three Concept” as defined in 2000

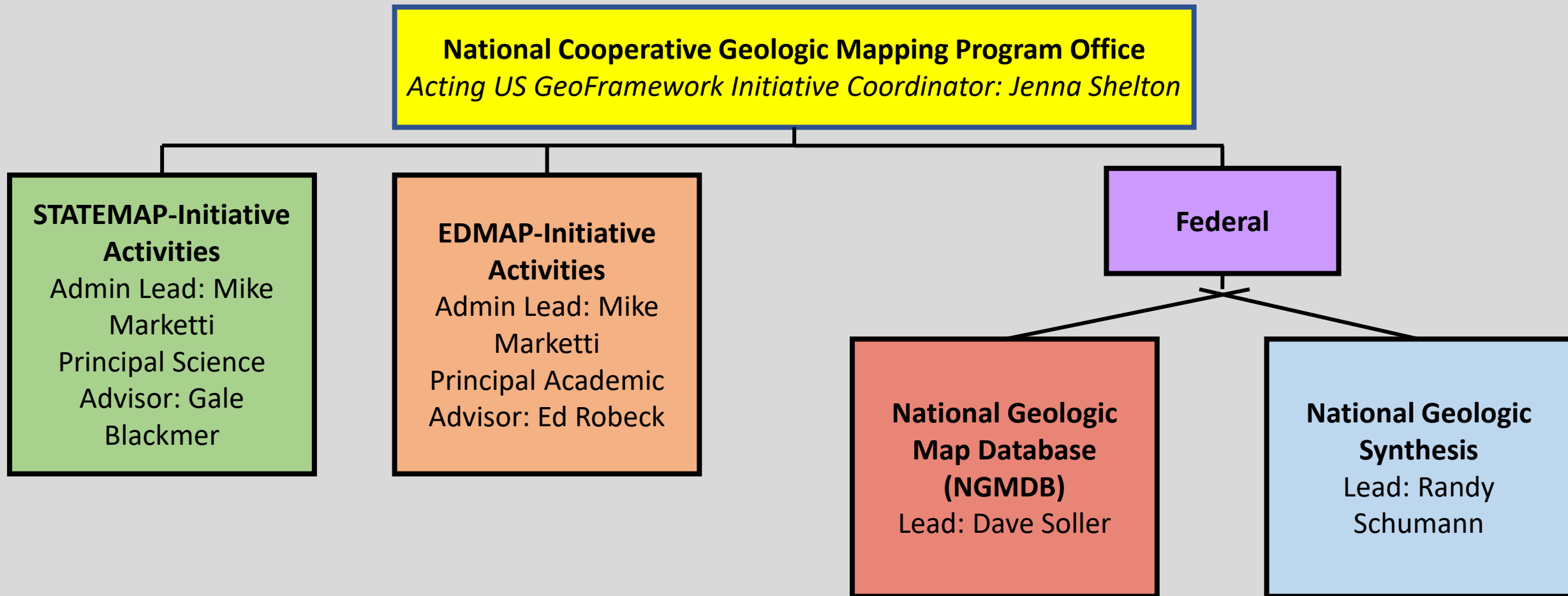
- Built from edge-matched geologic maps at various scales,
- Managed and accessed as a coherent body of map information, not just as a set of discrete map products,
- Updated by mappers and/or a committee, "on the fly" when new information becomes available,
- Standardized, adhering to a standard data model and with standard scientific terminology, and
- Available to users via Internet browsers and common GIS tools (e.g., ArcExplorer).

Digital Mapping Techniques '00 – Workshop Proceedings –  
*Developing the National Geologic Map Database, Phase 3 –*  
*An Online, "Living" Database of Map Information (Soller, Berg & Wahl, 2000)*

# Origins of the Initiative

- There was a \$10M increase in the NCMGP allocation in FY2020 to support the US GeoFramework Initiative:
  - **“National Cooperative Geologic Mapping is funded at \$34,397,000 which provides funding for Phase Three of the National Geologic Map Database as outlined in House Report 116-100.”**
- House Report 116-100 stated:
  - **“This increase provides an additional \$10,000,000 to support launch of Phase Three of the National Geologic Map Database that will bring together detailed national and continental-resolution 2D and 3D information produced throughout the Survey and by federal and state partners.”**
- House Report 116-448 (FY2021) language describing this NCGMP allocation increase that is cited above is listed below:
  - ***The recommendation does not accept any of the proposed program reductions and includes \$40,685,000 for the National Geologic Mapping Program, \$6,288,000 above the enacted level. This increase includes fixed costs and provides \$6,000,000 above the enacted level to accelerate new mapping and sustain Phase Three of the National Geologic Map Database***

# State, Academic, and Federal Activities: the U.S. GeoFramework Initiative

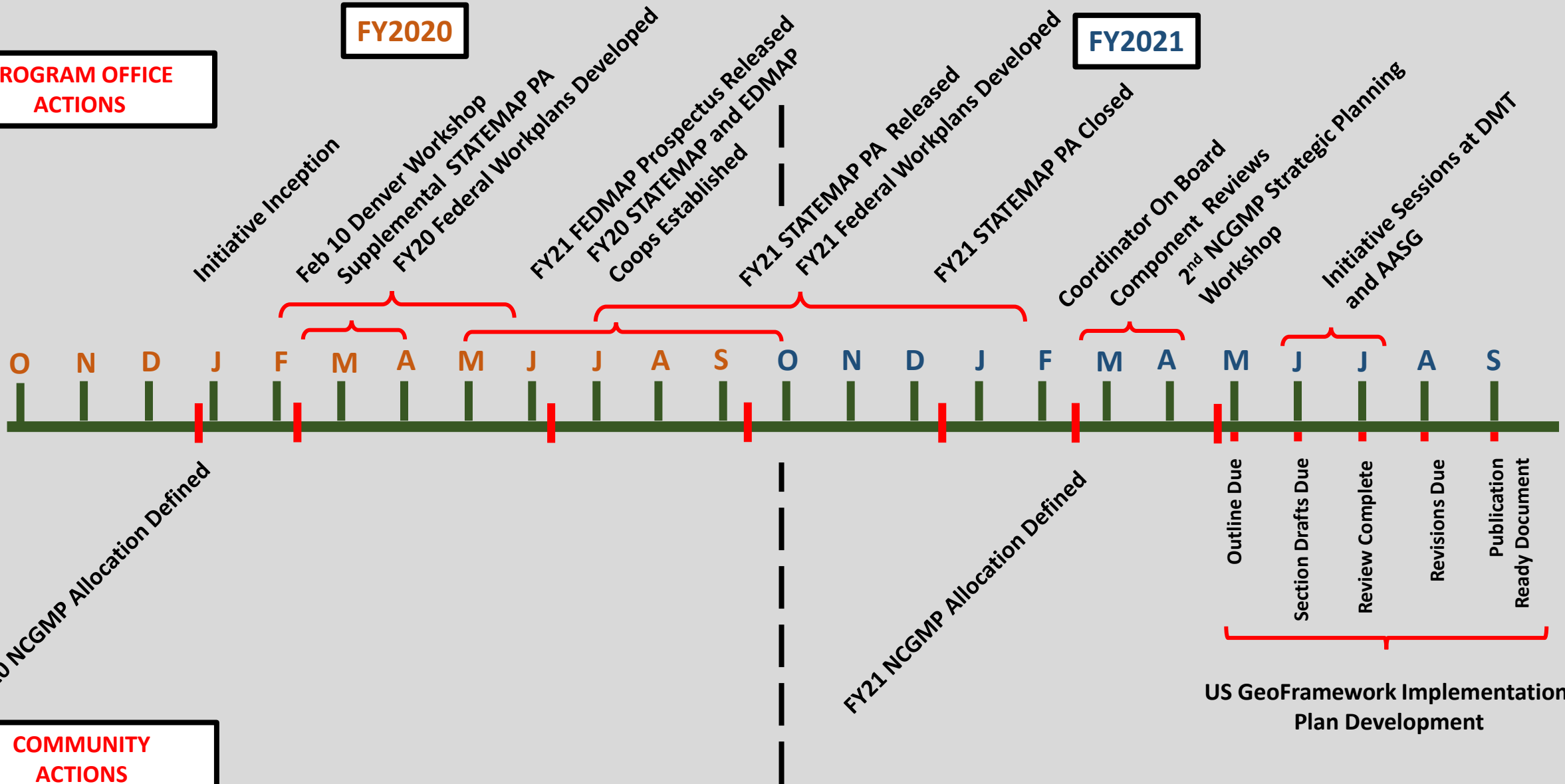


# US GeoFramework Initiative FY2020 – FY2021 Timeline

**FY2020**

**FY2021**

**PROGRAM OFFICE  
ACTIONS**

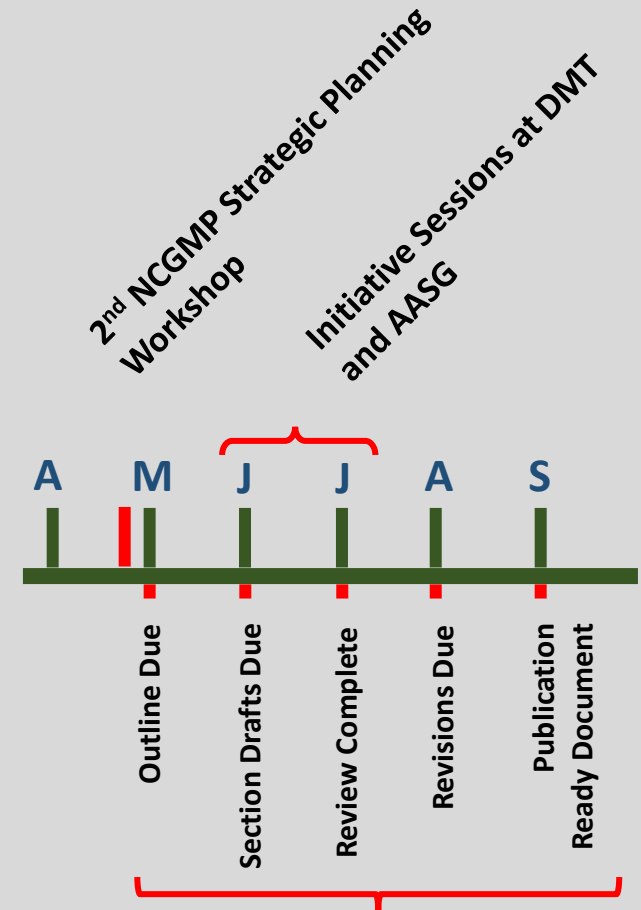


**COMMUNITY  
ACTIONS**

**US GeoFramework Implementation  
Plan Development**

# 2<sup>nd</sup> Strategic Planning Workshop: Implementing the US GeoFramework Initiative

- 150 USGS, AASG members in attendance
- Discussed the history of the Initiative, connecting the Initiative to societal needs, and the four major components of the Initiative
- Day three devoted to Implementation Plan



US GeoFramework Implementation  
Plan Development



# Implementation Plan for the Initiative

Four Major Components:

**The 2D Component of US GeoFramework: Strategy for compiling national surface and near-surface geologic map databases**

**The 3D Component of the US GeoFramework: Strategy for develop and serving detailed, regional, national, or continental-resolution 3D geologic information produced throughout the USGS and by federal and state partners**

2020-2030 National Cooperative Geologic Mapping Program

**Implementation Plan for the National Cooperative Geologic Mapping Program's U.S. GeoFramework Initiative: Constructing a 2D/3D National Framework Model by 2030.**

By Jenna Shelton, John Brock, William Andrews, Richard Berg, Joseph Colgan, Michael Marketti, Richard Ort, Randall Schumann, David Soller<sup>1</sup>, Donald Sweetkind, Gale Blackmer, Christopher Bernhardt, Jessica Czajkowski, Daniel Doctor, Lara Douglas, John Dunham, Amy Gilmer, Russell Graymer, Katie McDonald, Geoffrey Phelps, Carma San Juan, David Spears, John Stucker, Ren Thompson, Harvey Thorleifson, Kenzie Turner, John Yellich, and Kristine Zellman

# Implementation Plan for the Initiative

Four Major Components:

**The NGMDB Component of US GeoFramework: mechanisms for delivering vector and raster geologic map data for display, analysis, and download**

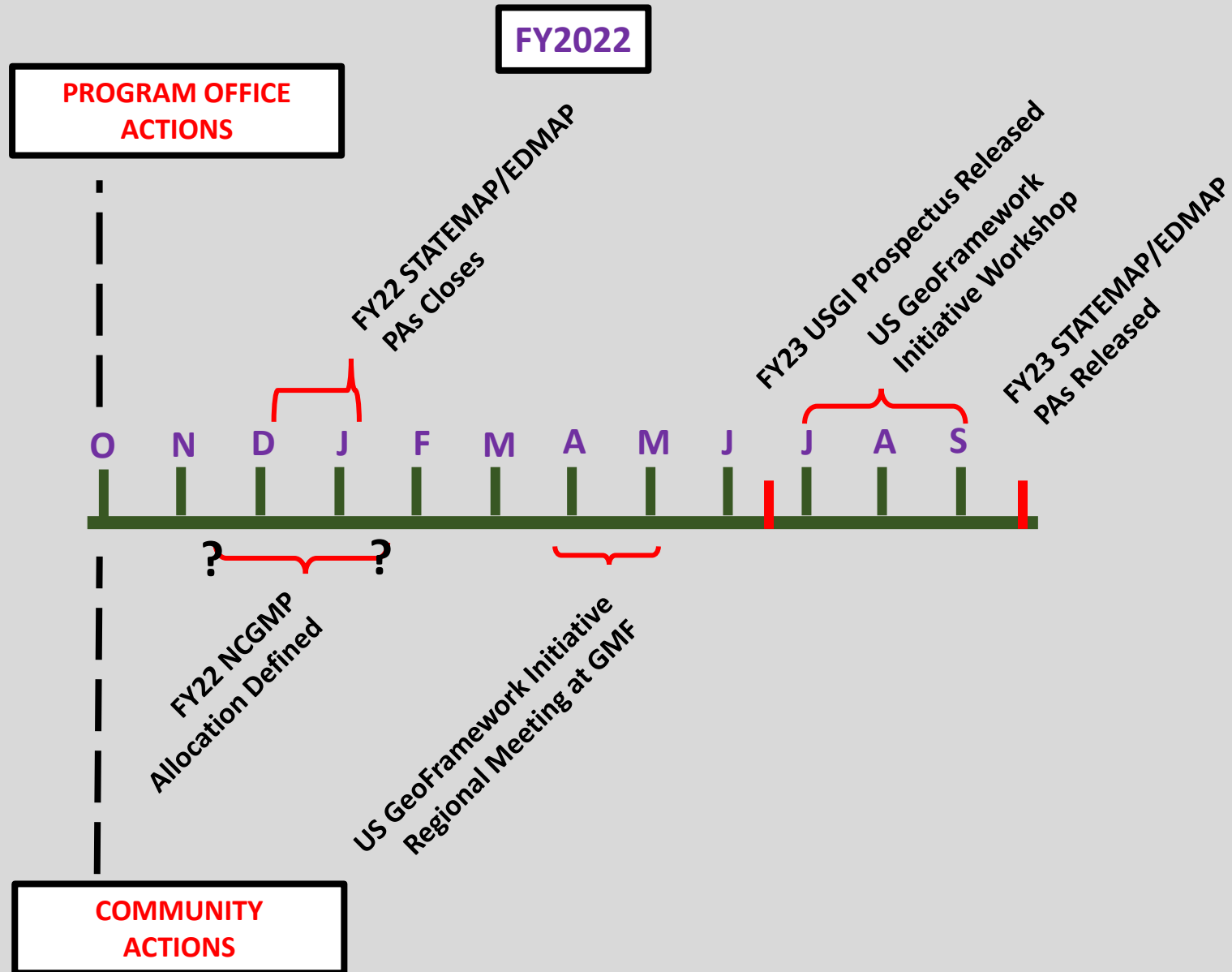
**The STATEMAP and NCGMP Component of the US GeoFramework: Facilitate Coordination to Implement and Accomplish US GeoFramework Initiative**

**2020-2030 National Cooperative Geologic Mapping Program**

**Implementation Plan for the National Cooperative Geologic Mapping Program's U.S. GeoFramework Initiative: Constructing a 2D/3D National Framework Model by 2030.**

By Jenna Shelton, John Brock, William Andrews, Richard Berg, Joseph Colgan, Michael Marketti, Richard Ort, Randall Schumann, David Soller<sup>1</sup>, Donald Sweetkind, Gale Blackmer, Christopher Bernhardt, Jessica Czajkowski, Daniel Doctor, Lara Douglas, John Dunham, Amy Gilmer, Russell Graymer, Katie McDonald, Geoffrey Phelps, Carma San Juan, David Spears, John Stucker, Ren Thompson, Harvey Thorleifson, Kenzie Turner, John Yellich, and Kristine Zellman

# US GeoFramework Initiative FY2022 Timeline



# Beyond FY22

- Bi-annual workshops, sessions at conferences and workshops
- Changes to STATEMAP and EDMAP PAs
- Diversity, Equity, and Inclusion (DEI) Pilot, tracking success via EDMAP proposals



Thank you!