



Montana Imagery Working Group

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**Clark Canyon Reservoir (2019)
and the Historic Town of Armstead (1954)**

Why is imagery essential in GIS?

Imagery is the bottom of the “sandwich,” the base – Many geographic features, including those that are part of the Montana Spatial Data Infrastructure (MSDI), are interpreted from imagery.

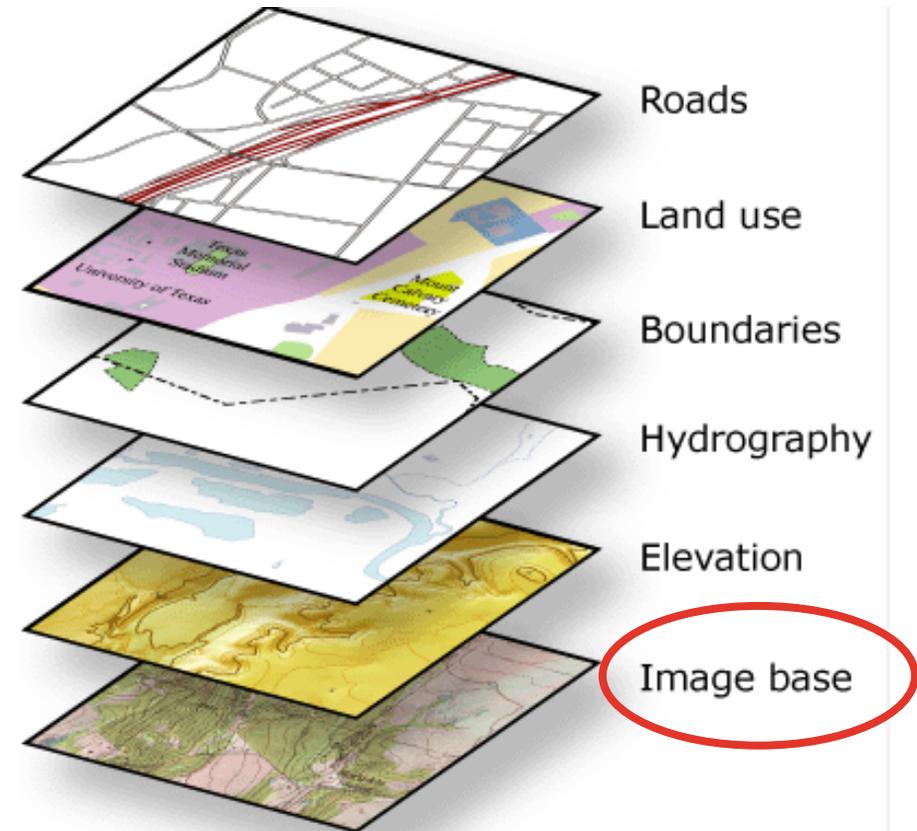


Illustration from ESRI online documentation for ArcGIS

Montana Spatial Data Infrastructure: Imagery

The screenshot displays the Montana Air Photo Browser interface. The main map shows the state of Montana with county boundaries highlighted in pink. Major cities and towns are labeled, including Lincoln, Flathead, Glacier, Toole, Liberty, Hill, Blaine, Daniels, Sheridan, Sanders, Lake, Teton, Chouteau, Phillips, Valley, Roosevelt, Mineral, Missoula, Lewis and Clark, Judith Basin, Petroleum, Garfield, McCone, Richland, Powell, Meagher, Wheatland, Fergus, Dawson, Prairie, Wibaux, Granite, Ravalli, Deer Lodge, Jefferson, Broadwater, Musselshell, Rosebud, Custer, Fallon, Beaverhead, Madison, Gallatin Park, Sweet Grass, Stillwater, Yellowstone, Big Horn, Carbon, and Powder River. The map also shows major highways (Interstates 90, 15, 200, 2, 12, 101, 16, 40) and various national parks and forests (Grasslands National Park, Coeur d'Alene National Forest, St. Joe National Forest, Clearwater National Forest, Nez Perce National Historical Park, Absaroka Range, Bighorn). A search bar at the top left contains the text "Address, Parcel, & Quad St". A layer list on the right side of the map shows the following layers:

- NAIP_2021
- NAIP 2021 Infrared
- NAIP_2019
- NAIP 2019 Infrared
- NAIP_2017
- NAIP 2017 Infrared
- NAIP 2015
- NAIP 2015 Infrared
- NAIP_2013
- NAIP_2013 Infrared
- NAIP_2011
- NAIP_2011 Infrared
- NAIP_2009
- NAIP 2009 Infrared
- NAIP_2005
- NAIP 2005 Infrared
- DOQQ_1990s
- Historic Imagery (Mid20th Century)

Agenda

- Meet working group participants
- Overview of working group tasks to date
 - Past meetings
 - Imagery needs
 - Existing imagery inventory
 - Imagery repository planning
- Discussion – your thoughts and feedback!

Meet Working Group Participants



Erin Fashoway

State GIS Coordinator

MSDI Imagery Theme Lead, co-lead working group

Troy Blandford

GIS Water Information Lead

Co-lead working group, imagery technical lead

Meghan Burns

GIS Programmer/Analyst

Matt Trebesch

Statewide GIS Analyst

Pat Jackson

GIS Technician

Garret Weichel

GIS Technician

Other working group participants in the room, say Hi!

The Montana Imagery Working Group
is open to anyone interested

Recap of working group tasks to date



Montana Imagery Summit, Dec. 12th-13th, 2023

Key Takeaways



Multiple organizations have imagery. It can be challenging to find and obtain. There is a need for a **repository and inventory of existing imagery**.



Need for productive **collaborations and coordination across agencies** that collect or use imagery. Value increases with more use.



Current statewide imagery (NAIP) **does not meet Montana needs**, such as resolution and leaf-off.



Need to identify **funding opportunities** and strategies for outreach. Strong desire for one point, one payment contract and ability to readily buyup.



Desire for **technical sessions**, such as raster analysis and imagery management.

Additional meetings held in February and March

Initial Tasks

1. Charter and list of active participants and roles
 2. Assessment of imagery business use and critical activities (needs)
 3. Inventory of existing imagery
 4. Planning and development of a business case for an imagery repository
- ❖ The documents above will become key sections of a **Montana Imagery Plan**

Charter and Participants

Purpose - meets regularly to communicate, plan, and execute initiatives aimed at **improving efficiencies and standardizing procedures related to the collection, maintenance, and dissemination of imagery** within Montana.

Authority - The Working Group is authorized by the Montana Geographic Information Advisory Council (MGIAC) to ensure imagery meets the current and future needs of the participating agencies and allows for full participation and representation of those agencies.

Meeting frequency – Currently meeting monthly through at least June. May transition to quarterly.

Resources – volunteered time of its members

Membership and Roles – All meetings are open to anyone who has an interest. “Active” participants and “recipients”

Leadership Structure: Chair, Erin Fashoway. Co-Chair, Troy Blandford

Participant Roles

- Writing and reviewing best practices or a Montana Imagery Plan
- Reporting or providing expert testimony to Council, Commission, MAGIP, Legislature, and other Stakeholders
- Testing technical imagery workflow
- Writing and developing policies or standards
- Represent your organization and imagery at stakeholder events
- Supply graphics for visualization of various image solutions

Imagery Business Use and Critical Activities

- Imagery needs assessment survey
 - *Primary imagery use*
 - *Current needs met by MSDI imagery (NAIP) yes/no*
 - *Desired accuracy/resolution*
 - *Desired geographic area*
 - *Desired ground conditions, leaf-on or leaf-off and other considerations*
 - *Potential benefits/cost savings of an imagery repository*
 - *Potential benefits/cost savings of an imagery program*
 - *Refresh cycle*
 - *Geographic area of interest (statewide, regional, local)*

Functional Need	Statute & Rules	Relevance of imagery	Notable dates
Historic Use of Navigable Riverbeds	77-1-1112	"aerial photographs demonstrating the use to which the application for authorization applies"	Prior to October 1, 2011
Application for Easement	77-2-102	"aerial photographs or images by an agency of the United States government dated prior to October 1, 1997, that depict the county road"	prior to October 1, 1997

Inventory of existing imagery

Who has what?

- *Organization, Primary Contact*
- *Description of imagery*
- *Geographic extent*
- *Publicly available? Yes, no*
- *Means of dissemination (self serve or by request)*
- *Would a central repository be preferred? Benefits?*
- *Storage size*
- *Feature class/shapefile of AOI or tile index available? Yes, no*

Imagery Repository Business Case

Current Status →	Desired Alternative
Imagery collection is minimally coordinated, increasing the risk of duplication (cost and effort)	Imagery collections are coordinated through Imagery Working Group. Shared resources and improved awareness of imagery efforts.
Challenging to know where to direct imagery requests. Must check multiple places. Other agencies spend time filling requests, which takes away from their programs and missions.	An imagery repository is maintained at MSL and includes standards and metadata. Imagery requests can be directed to a single place. There is a clear reference for citizens about where to get imagery.
Limited serving of imagery means limited use and value.	New imagery collections are published by the MSL, made publicly available, and broadly used, thus, increasing value.

Future Meetings

- **May 15, 2024** – 9:00-11:00 a – *tentative* hybrid in Helena, [Zoom registration](#)
 - Imagery repository or imagery program examples from other states
- Find working group meeting presentations, notes, and other information at: <https://msl.mt.gov/geoinfo/msdi/orthoimagery/>
- Stay informed about Imagery Working Group meetings and other happenings by subscribing to the Montana State Library through GovDelivery: <https://public.govdelivery.com/accounts/MTLIBRARY/subscriber/new>

Discussion

Your Thoughts and Feedback



- What imagery does your organization have, and is it available?
- What are your imagery needs?
- What are your challenges with discovering, managing, or using orthoimagery?

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