USDA
National Agriculture Imagery Program (NAIP) Update

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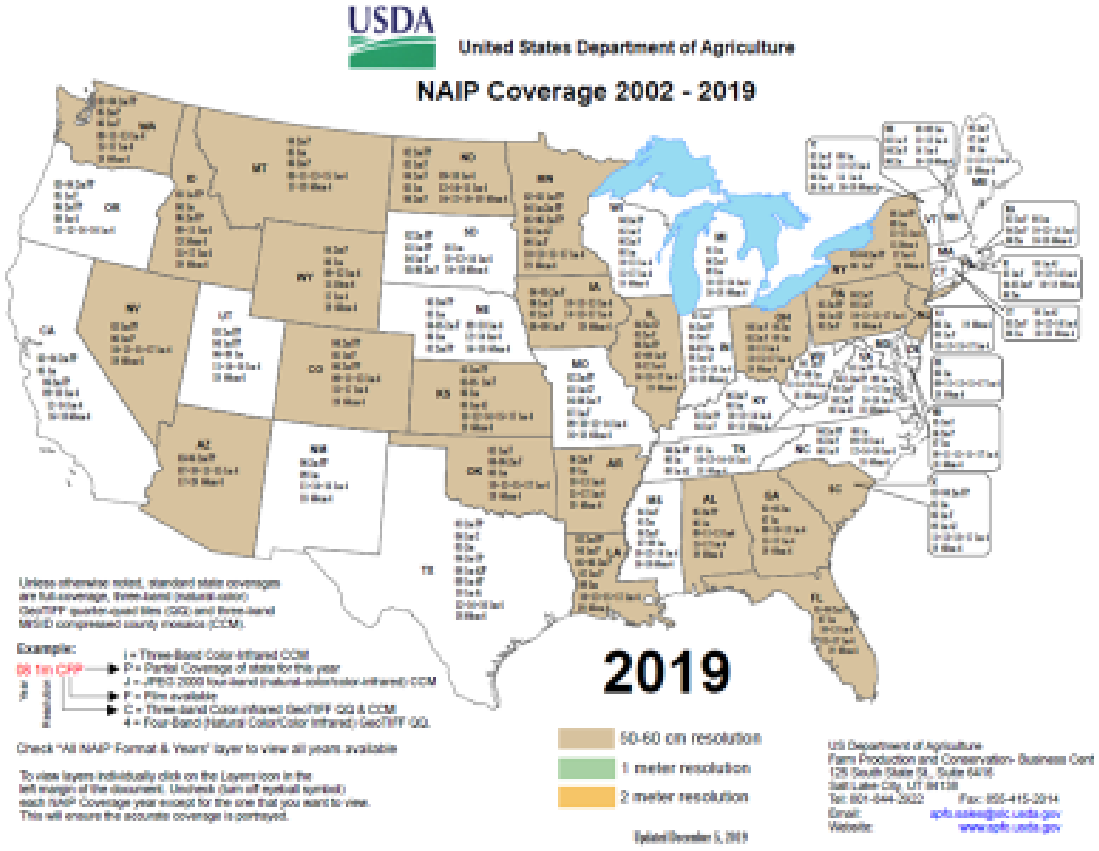
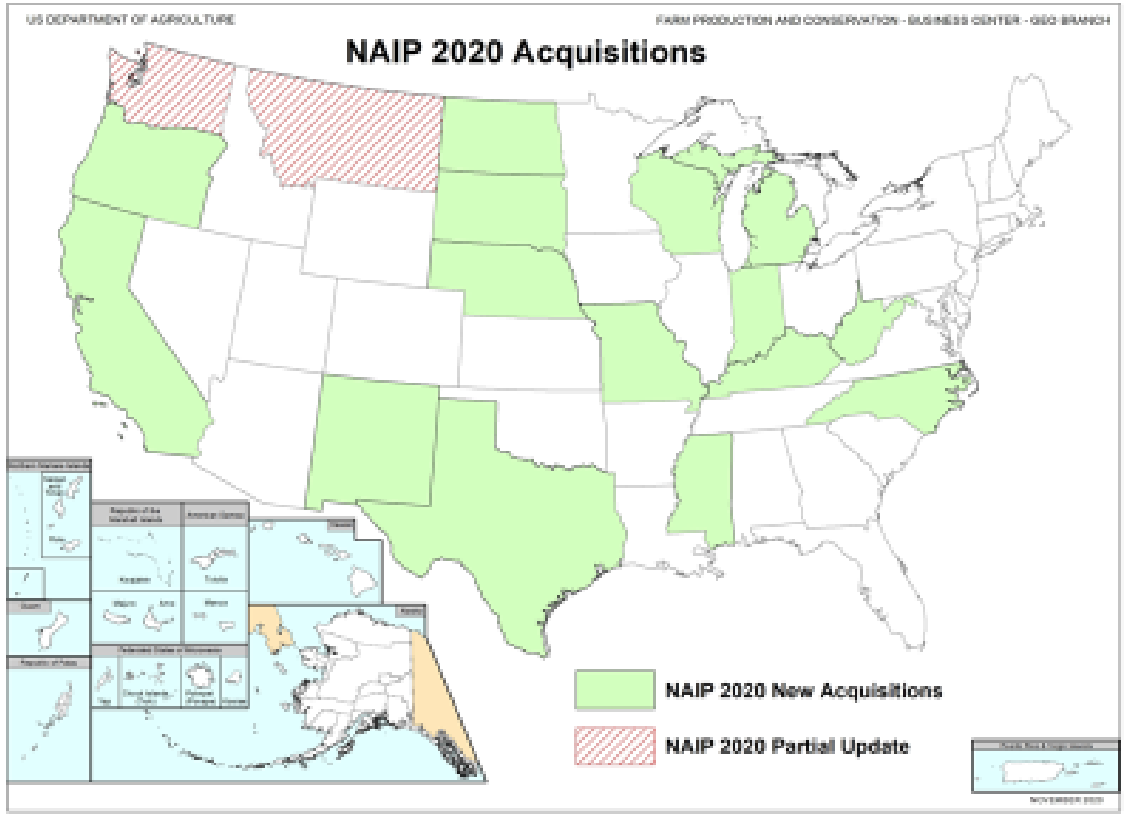
USDA Imagery Topics

- NAIP 2023-24
- LCAT

National Agriculture Imagery Program

- National Agriculture Imagery Program (NAIP) is a multi-agency funded, state-based collection program that acquires high-resolution, orthorectified imagery during peak agricultural growing seasons.
- National Agriculture Imagery Program (NAIP) is the largest Federal Civilian Imagery program in the Federal Government and used by most agencies as a base GIS layer.
- Goal for NAIP is to provides current information of agricultural conditions in support of USDA farm programs, provide an updated orthoimagery base, maintain agriculture boundaries, land use planning and is often used as the most current disaster pre-event imagery.
- Over 325 Million in funding has been allocated for the National Agriculture Imagery Program (NAIP) 2003-2021
- Partnerships include USDA (FSA, NRCS, USFS), Department of Interior and Census.
- Requirement is for higher resolution (60 cm +) and multi-spectral imagery.





- USDA has Service Centers in all US 50 states and affiliated territories such Puerto Rico, US Virgin Islands, Guam, Commonwealth of the Northern Mariana Islands, Palau, American Samoa, Federated States of Micronesia and consultation visits to the Marshall Islands.
- Depending on funding availability, NAIP acquisition goal is for 2-3 years cycle (40-50%) of the continental United States, Puerto Rico, US Virgin Islands and the Hawaiian Islands.

NAIP 2023

Status of Early Access Web Services, CONUS Prime and NAIP CCM's

EAWS Available

Alabama-Provisional layer
Arizona-Provisional layer
Florida-Production layer
Idaho-Provisional layer
Kansas-Provisional layer
Louisiana-Provisional layer
Maryland-Provisional
Montana-Provisional layer
North Dakota-Provisional layer
Ohio-Provisional
Oklahoma S1-Provisional
South Carolina-Production layer
South Dakota-Provisional
Tennessee-Provisional
Virginia-Provisional
Washington-Provisional

Please Note

New version of EAWS currently in work (10/13/23):

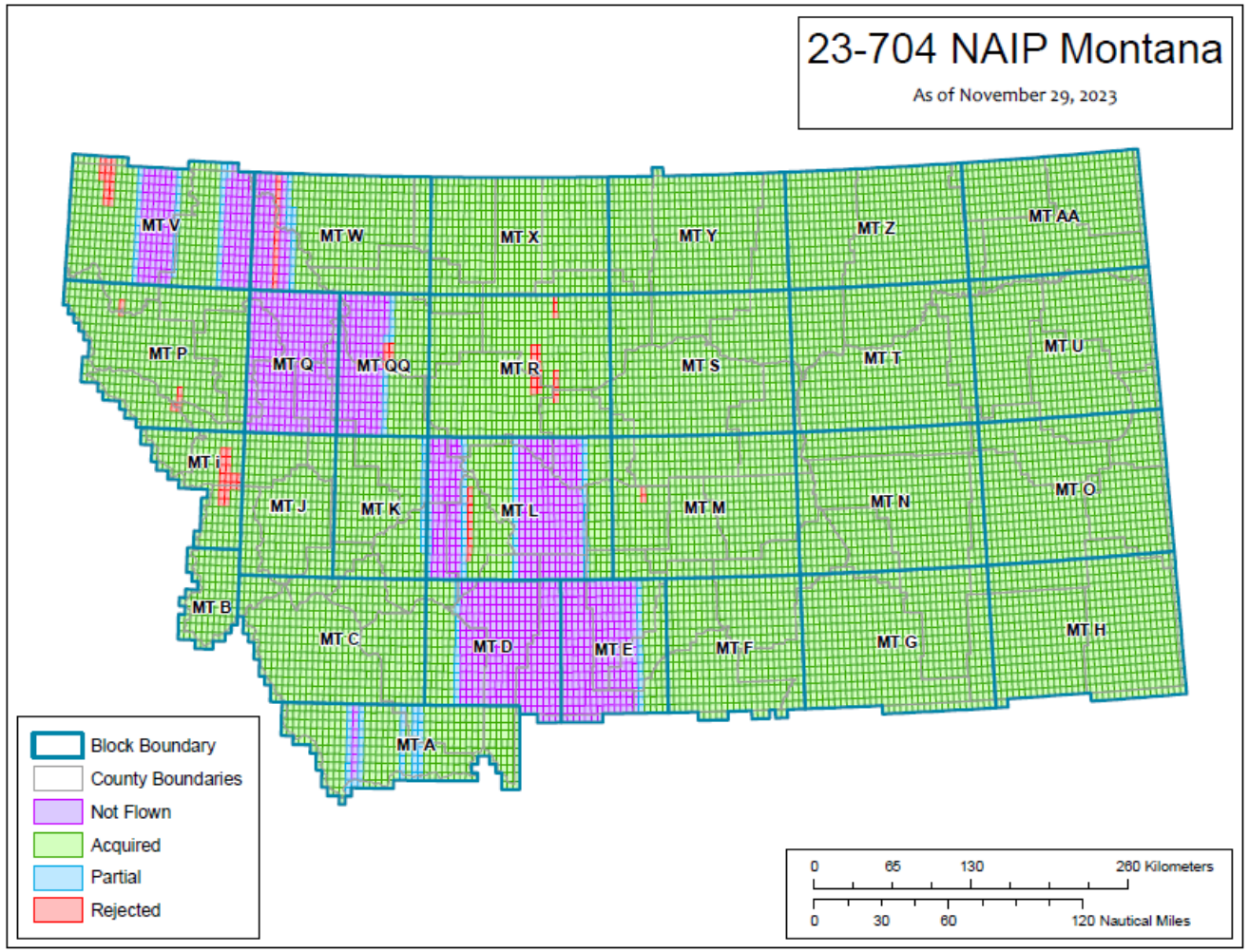
- Minnesota
- Vermont
- New Hampshire
- Massachusetts
- Connecticut
- Rhode Island

CONUS Prime Available (11/13/23)

- Florida, South Carolina, Delaware

CONUS NAIP (Higher Resolution NAIP WMS, 11/13/23)

- Florida, South Carolina



Montana

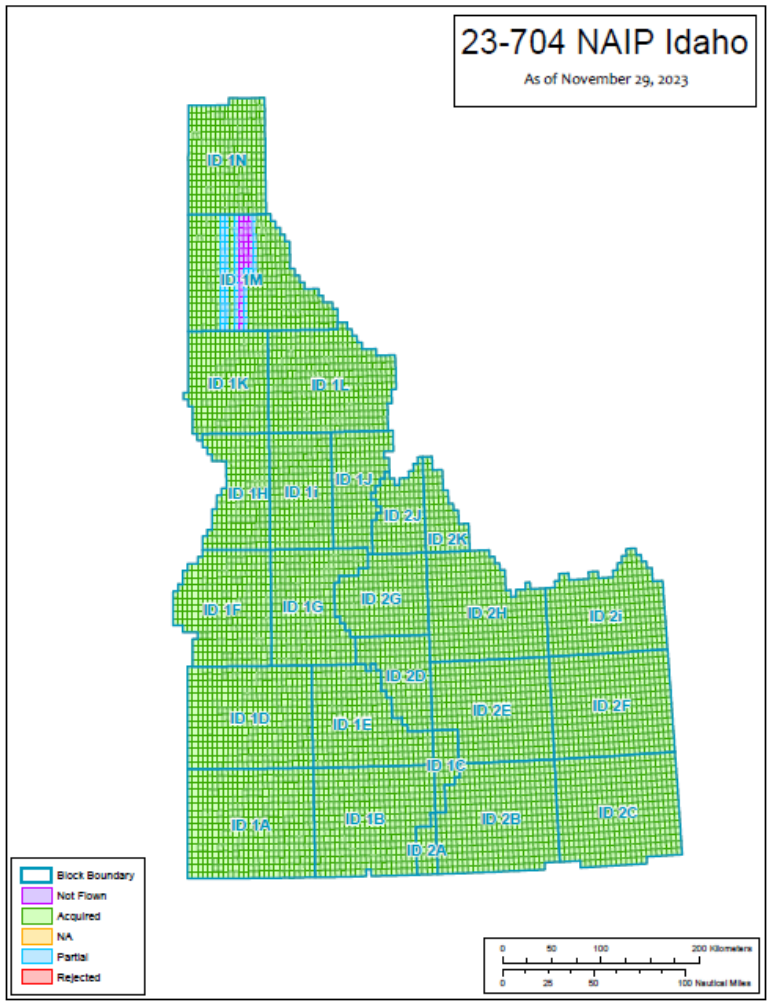
Acquired – 10,043

Partial – 231

Rejected - 89

Not Acquired – 1,413

Total – 11,776 DOQQ's



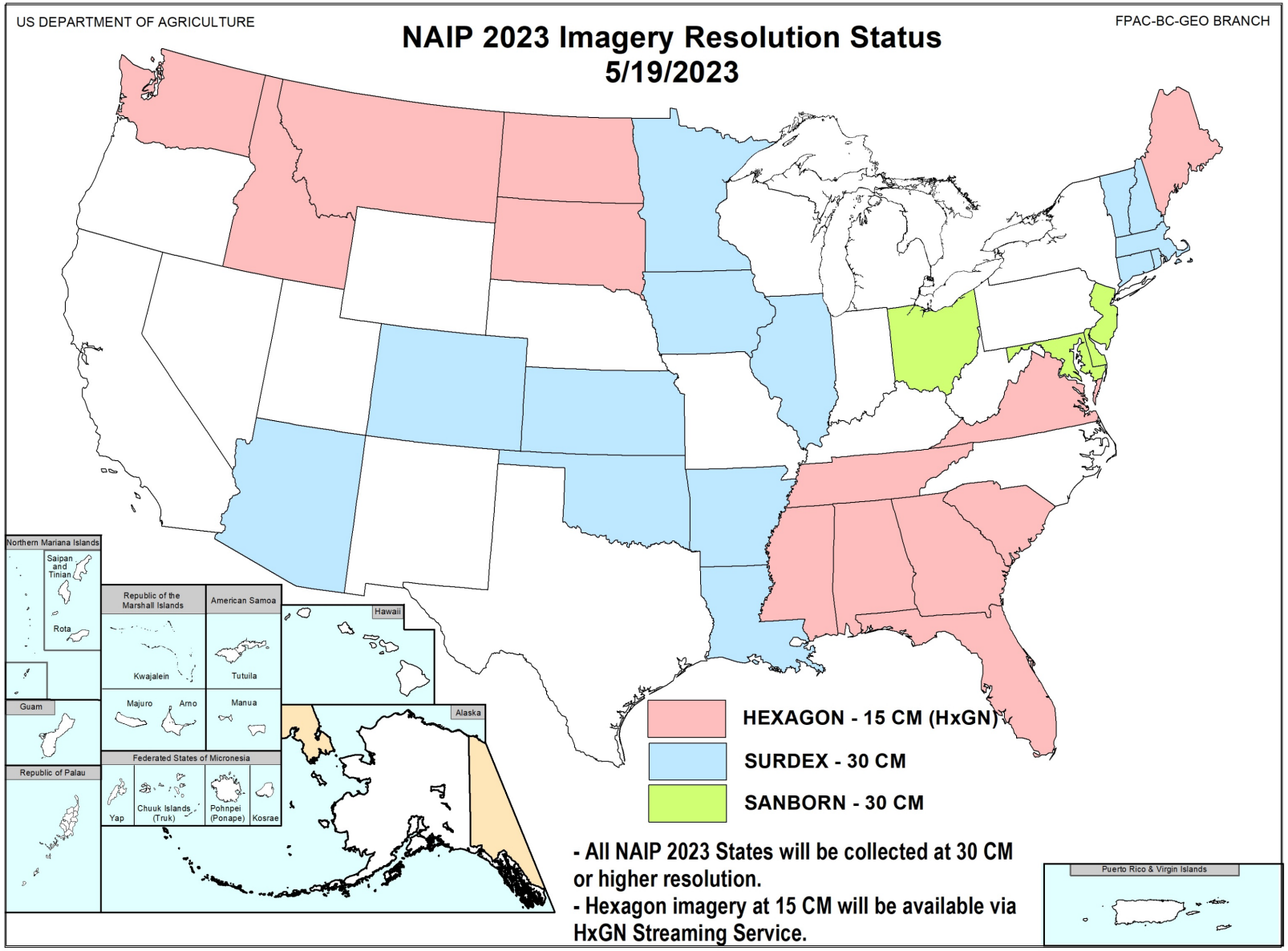
Idaho

Acquired – 6,451

Partial – 70

Not Acquired – 33

Total – 6,554 DOQQ's



NAIP 2023 Status 11/27/2023

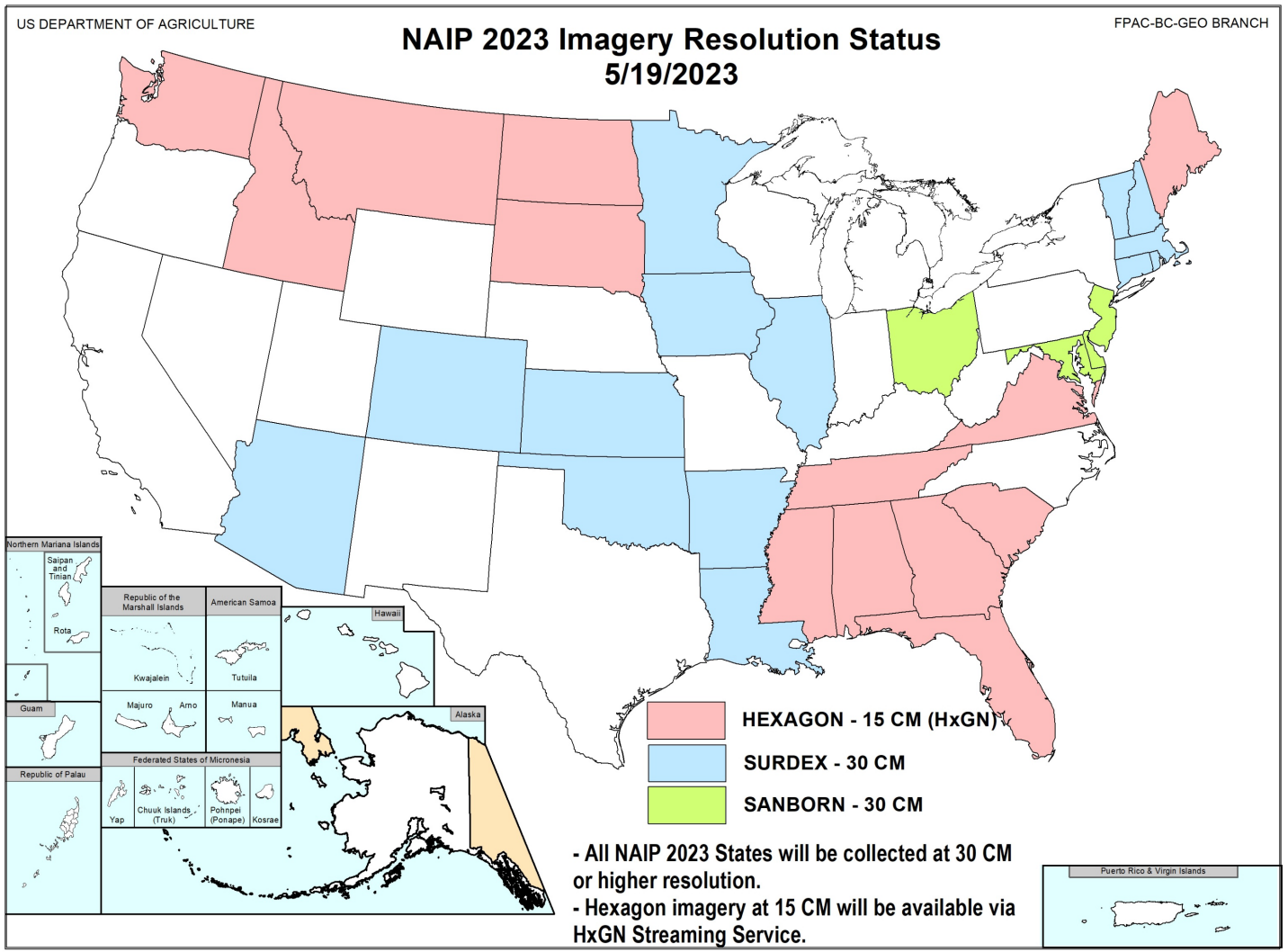
- Hexagon (Red States):

- Most states successfully acquired at 15-30cm resolution.

- Montana, Idaho and Maine were not completed in 2023. More info on next slide on status of MT-ID-ME.

- Hexagon did require flight season extensions for several states to successfully complete NAIP 2023.

- Hexagon was affected by Canadian wildfires, weather and other issues.



NAIP 2023 Status
11/27/2023
Other Products/Services

Digital Surface Models:

- Funded and ordered at 30cm resolution for AZ, MN, VT, NH, MA, CT, RI (Surdex) and ME (Hexagon).

Early Access Web Services:

- Available to NAIP funding partners for all NAIP 2023 states.

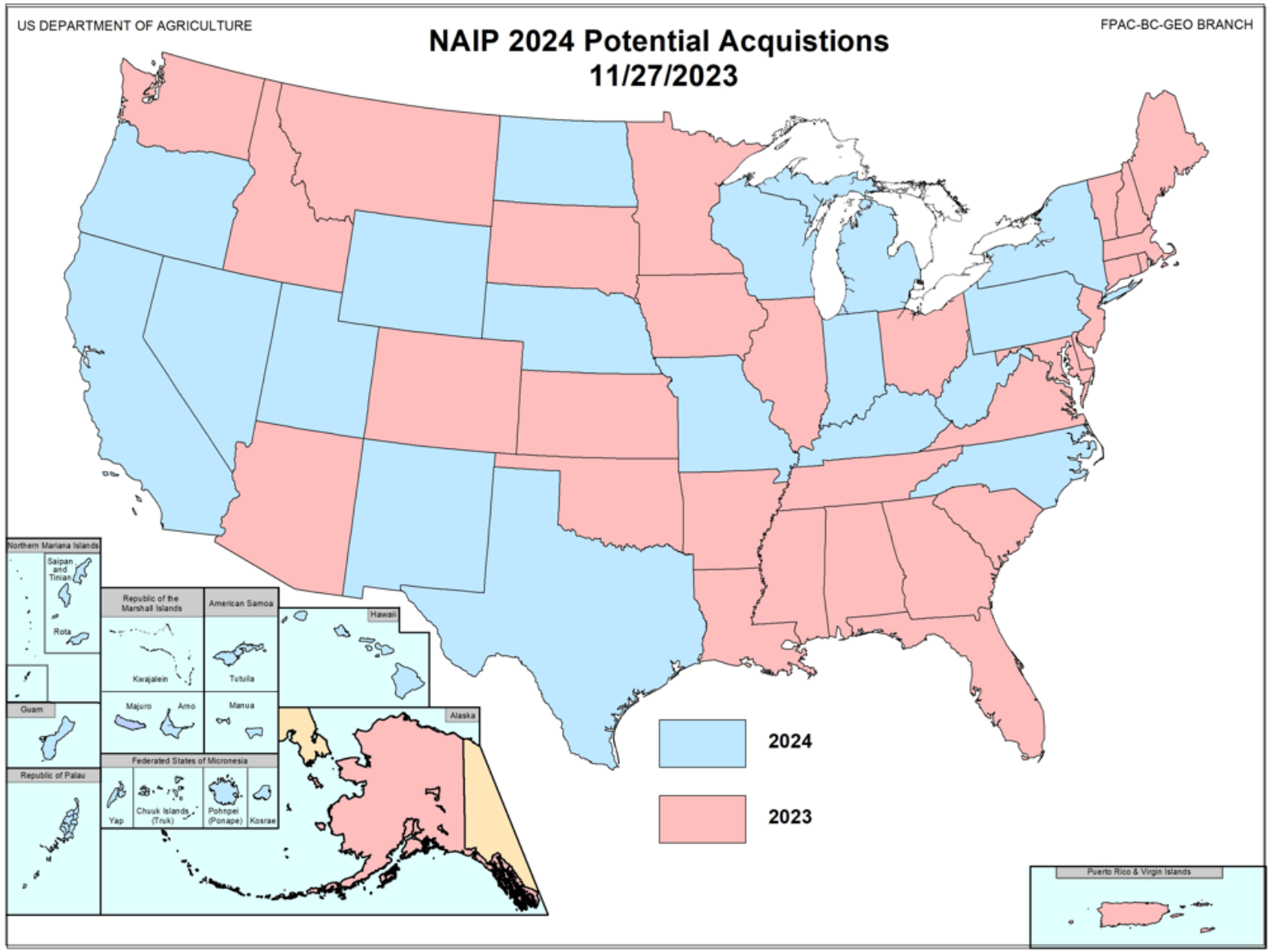
CONUS Prime:

USDA Only, Public Deployment Later: OH, RI, FL, SC.

Compressed County Mosaics (Public):

Posted on USDA Gateway: AL, DE, FL, MD, ND, NJ, OH, PR and SC.

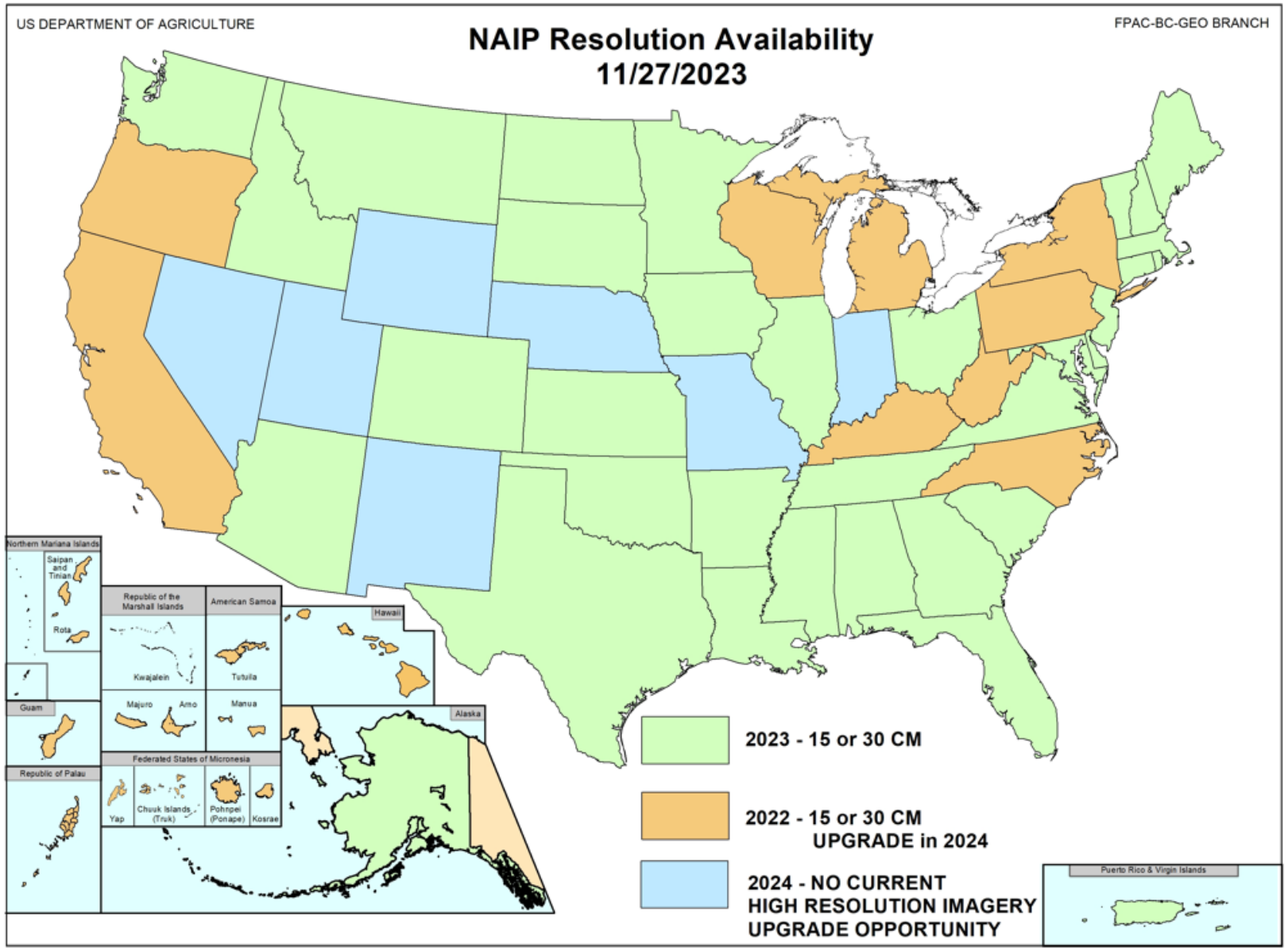
NAIP 2024



NAIP 2023-2024

Revised October 16th, 2023

- **The next proposed cycle is similar too NAIP 2021-2022.**
- **This two-year cycle is somewhat balanced in terms of the number of NAIP DOQQ's that will be acquired, and potential funding required.**
- **GEO has had interest from various states to upgrade NAIP 2023-2024 to 30/15 cm.**
- **GEO is working with FSA and NRCS on technical changes to the NAIP program:**
  - **Acquisition Time Period**
  - **Pixel buffer**



NAIP High Resolution Imagery

11/27/2023

- NRCS upgraded many NAIP 2023 states as part of the Urban Agriculture Initiative.

- If states in blue are upgraded to 30cm for NAIP 2024, then there will be at least one version of higher resolution imagery from 2022-2024.

- Some states in orange and blue may be upgraded by NAIP contractor(s) for higher resolution. (i.e. Hexagon HxGN)

NAIP 2024 Partner Buy-Ups

- Cost-share partner funds to annually acquire 60cm base aerial imagery during agricultural growing seasons from the continental United States.
- Potential NAIP buy-ups include higher resolution imagery (15-30cm), DSM's and Stereo.
- Remaining funds can be used, per partner discretion, to purchase buy-up options within the terms of the PINE BPA.
- Every funding partner benefits from the buy-ups.
- GEO has NAIP Funding Partners meetings on a regular basis.

Imagery Data Distribution

FINAL USDA DEPLOYMENT LINKS for *PUBLIC SITES*!

https://nrcsgeoservices.sc.egov.usda.gov/arcgis/rest/services/ortho_imagery

FINAL USDA DEPLOYMENT TO USDA

Image Service:

https://gis.sc.egov.usda.gov/image/rest/services/ortho_imagery

Metadata Service:

https://gis.sc.egov.usda.gov/data/rest/services/ortho_imagery

- **All above are build using ESRI ImageServer technology. The base layer is uncompressed, original imagery converted into Cloud Optimized GeoTIFF files.**
- **You should be able to run analysis from ArcPro-Imagery Tab-Raster Functions tab since the original data is part of the dataset.**
- **The original Maxar datasets cannot be downloaded since they licensed, however you can do analysis and save it to your computer.**
- **The imagery is available as a backdrop. USDA-GEO obtained the highest-level End User License Agreement available.**

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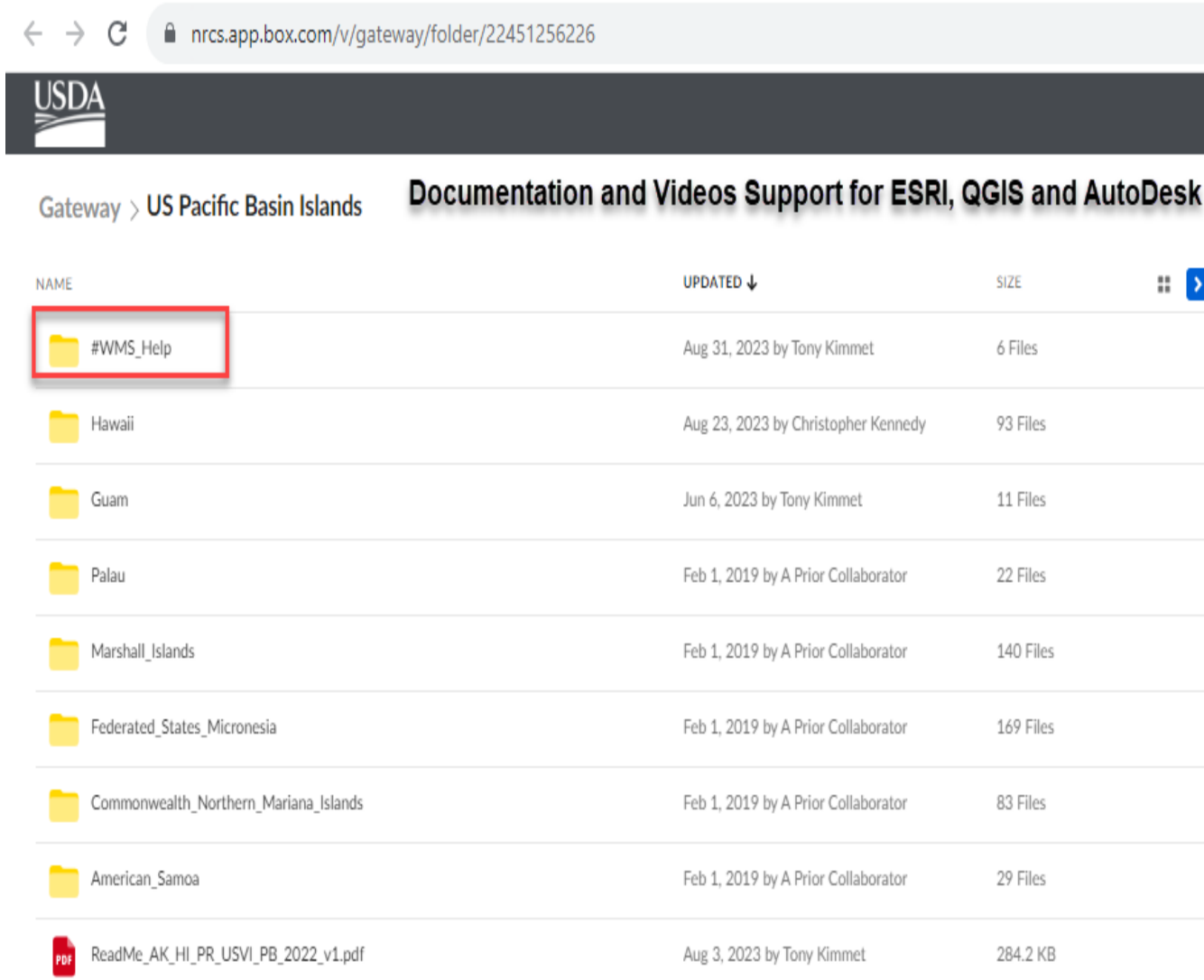
USDA GIS-Imagery Data Availability Links

Mosaics of the Hawaiian Islands and Pacific Basin Datasets are available at the USDA Gateway. The US pacific Basin Mosaics are from 2007-2019. Hawaii link has new NAIP imagery (2021-2022):
https://nrcs.app.box.com/v/gateway/folder/22451256226

Future NAIP WMS for Hawaii:
https://gis.apfo.usda.gov/arcgis/rest/services

Web Map Service Assistance (Documentation, Videos for QGIS, Autodesk/AutoCAD, ESRI Multi-Layers)in "#WMS_Help" folder.
https://nrcs.app.box.com/v/gateway/folder/154646807634



GEO Points of Contact for NAIP

EAWS, CONUS Prime and CONUS NAIP:

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NAIP Compressed County Mosaics (CCM)

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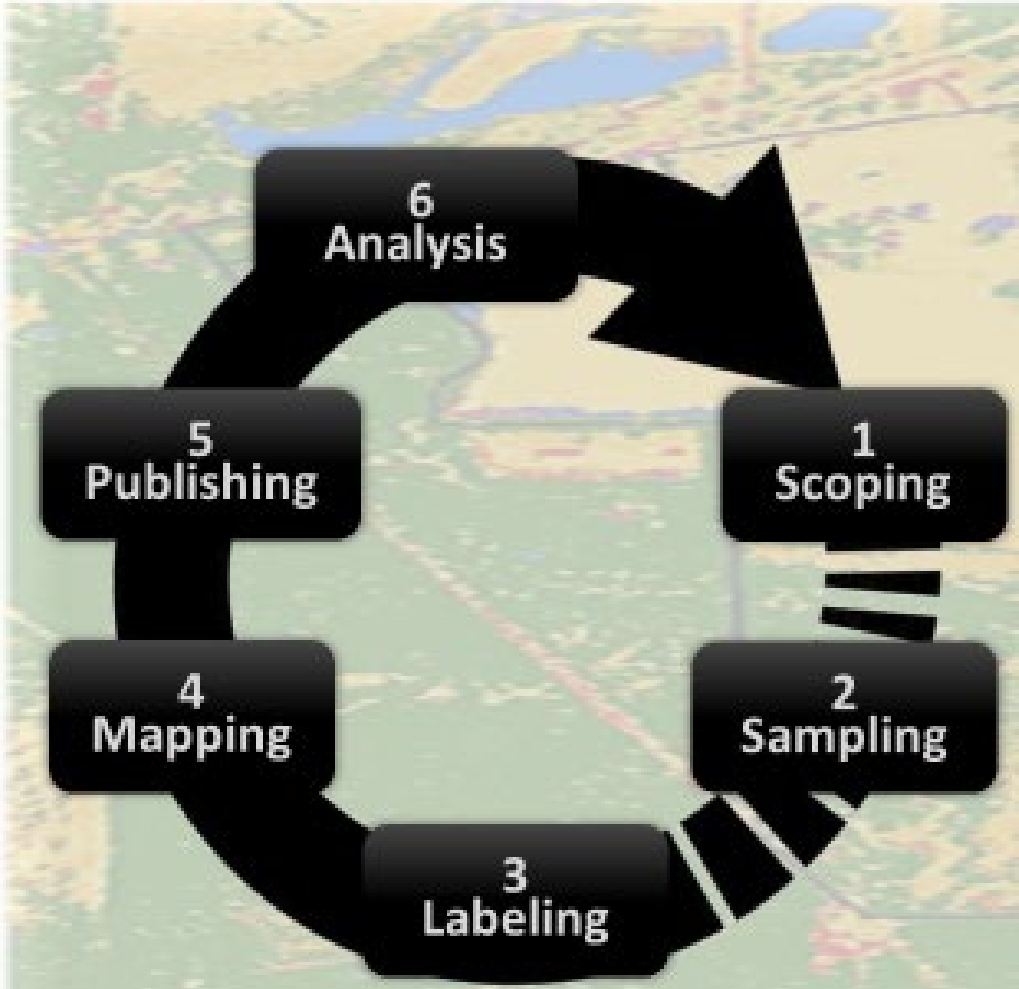
LCAT Process



1. Scoping
Sample Plan

2. Sampling
Point selection

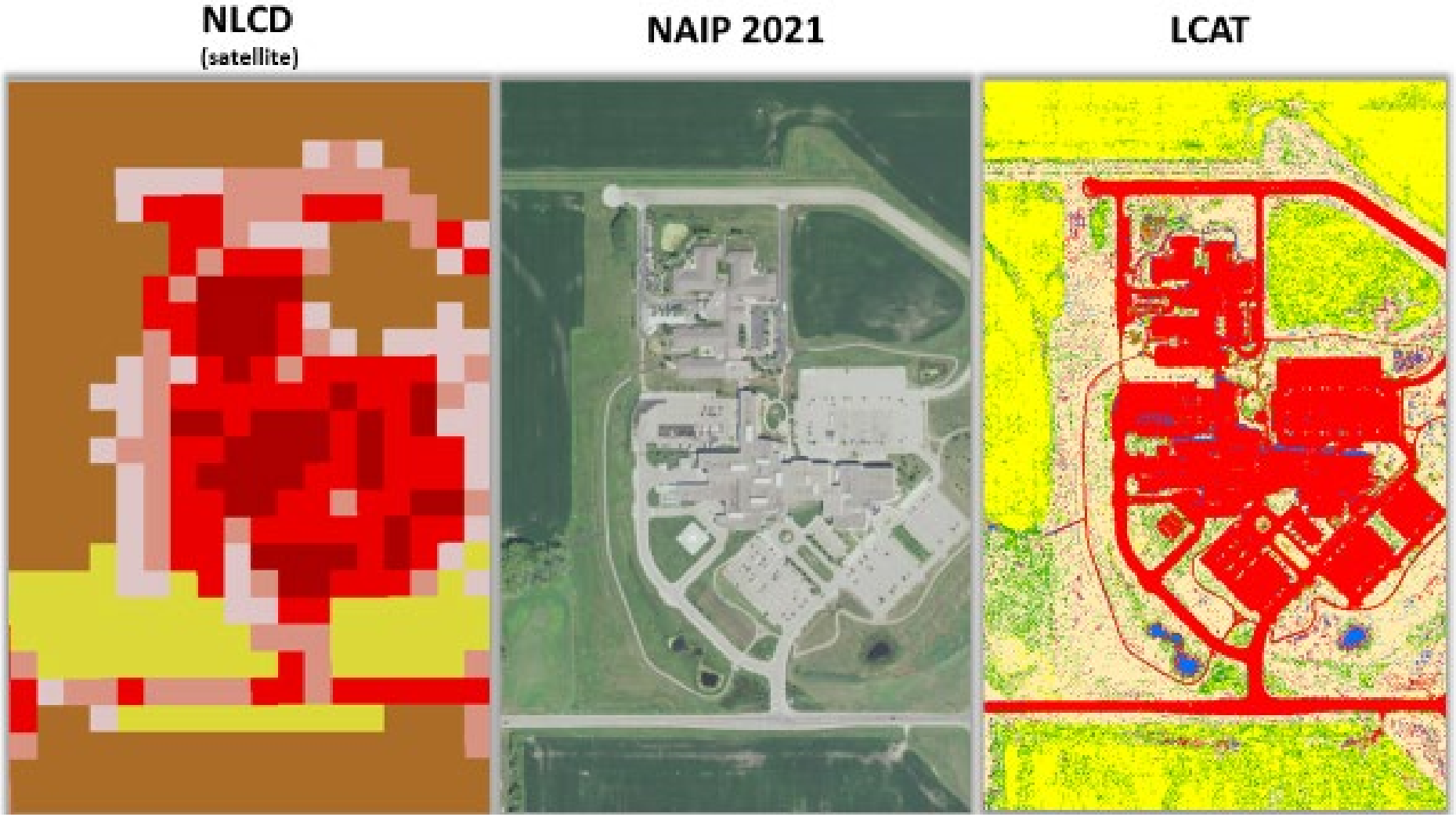
3. Labeling
Training data for modeling

4. Mapping
8 class land cover map

5. Publishing
Review maps and publish image service

6. Analysis
Develop derivative products and data

Satellite vs Aerial Image Classification



End of Presentation

Questions?

Thank you!!