

BIG DATA BIGGER DECISIONS



Presentation by: Tim Bohn, C.P., PMP



AGENDA

2

- 📌 Introduction
- 📌 Large Imagery Programs
- 📌 Considerations for Your Spec
- 📌 Inspection Tools
- 📌 Common Imagery Flaws

PARTICIPATION PRIZES



~~Python Scripting~~

HELLO!

3

Tim Bohn, CP PMP

Vice President, Business Development

- » 23+ years of experience
- » Production
- » Project Management
- » Estimating



Looking for data in
the cloud or clouds
in the data?

I love to give presentations, to find out more info about Surdex go to: www.surdex.com

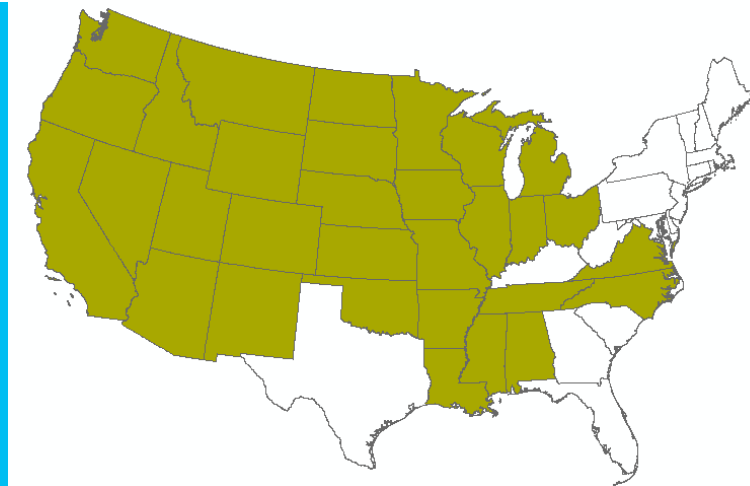
★ Prime Contractor on very successful Program since 2002

4

NAIP

National Agriculture Imagery Program

- » 6.4m mi² covered
- » 91 state project areas
- » 950k nautical line miles
- » 455k DOQQ delivered
 - est ~100+ TB delivered



Evolution of delivery



TEXAS STATEWIDE

5

AWARDED

Fall of 2014
“leaf-off” collection

4 FLIGHT SEASONS



SQUARE MILES

275k square miles,
0.5m GSD w/ various
6”/12’ buy-ups
(15k sq mi)



FLIGHT LINES

1700+ flight lines
85k nautical line mi
1100 flight hours
7 aircraft
Leica ADS100

PARTNERS

Four State Partners
Five Buy-up Partners

STORAGE IMPACT

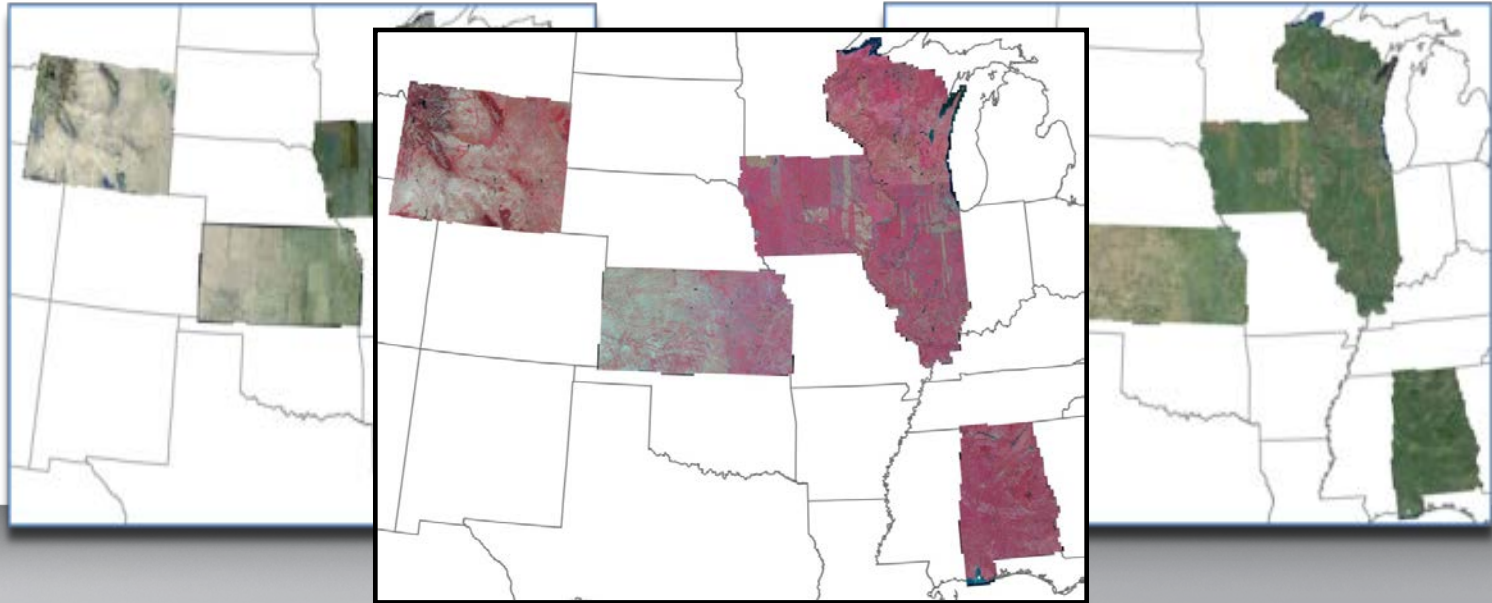
20 TB of data
Uncompressed, 4-band
DOQQ tiles;
Compressed county 4-
band .jpg; Metadata

For Data Access: tnris.org

EARLY ACCESS / FINAL PRODUCT

6

Recent requirement for dual (raw/final) Image Services to USDA.
Initial service due 5 days after each flight.



NORTH CAROLINA

7

AWARDED

Participation since
2010

4 YEAR CYCLE

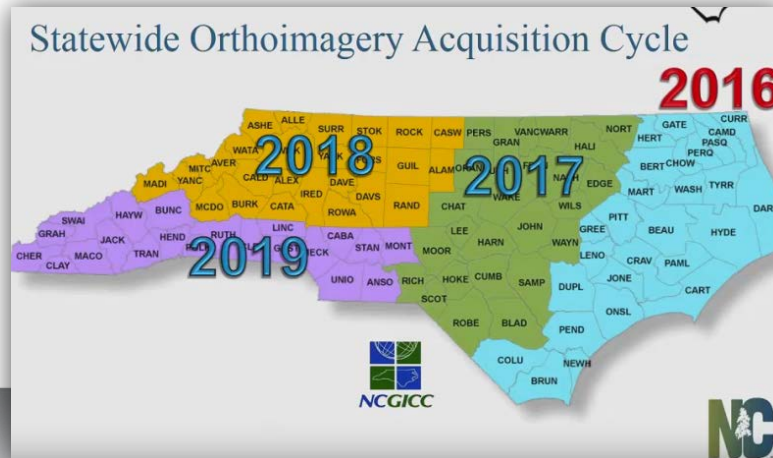
6" GSD currently
working on third
cycle

ONLINE DATA

Heavy usage of
online data
distribution for QC

STORAGE

20 TB raw data
each year, multiple
shipments



Graphics courtesy of NC one map website.

MISSISSIPPI

AWARDED

2014 – 2018

Mix of 6"/12"
resolutions

STORAGE IMPACT

25-28TB source data
online NOW

Independent QC Firm

COVERAGE

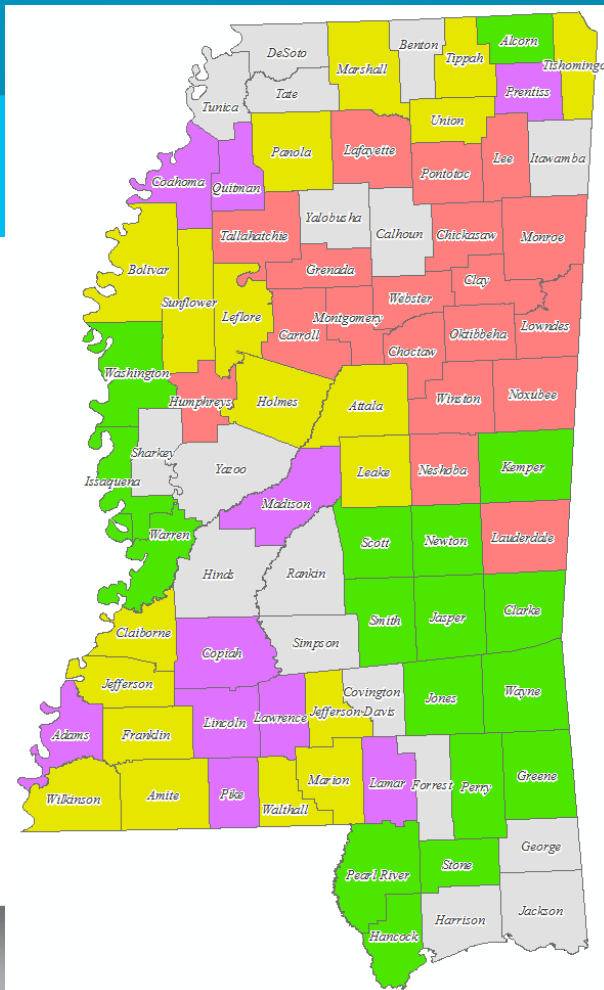
65/82 counties
covered

Local Surveyor

SQUARE MILES

38,000 mi²

CHALLENGES: Flooding • New users/Edit call validity



SMITH COUNTY/EAST TEXAS

AWARDED

2017

6" resolution

STORAGE

21TB data online

(finalizing now)

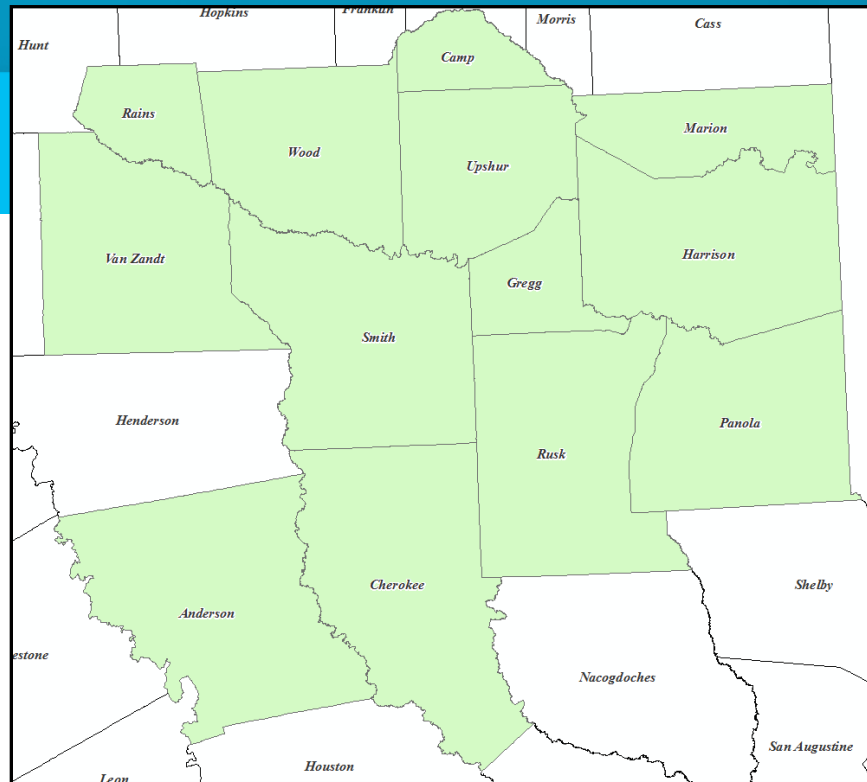
COVERAGE

13 counties covered

Exist + new survey

SQUARE MILES

9,700 mi²



CHALLENGES: Priority on Smith County Co acquisition, bldg change detection

HOUSTON-GALVESTON AC

AWARDED

2018

Mixture of 6"/12"
resolutions

STORAGE

8TB online NOW
SurCheck late April

COVERAGE

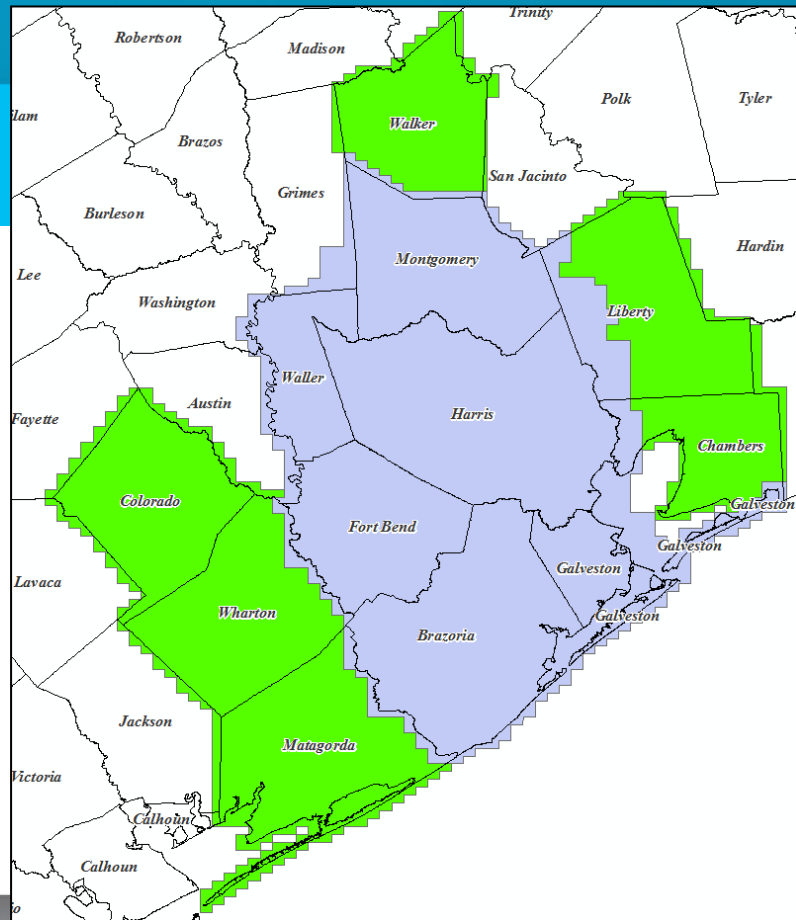
12 counties covered

New survey

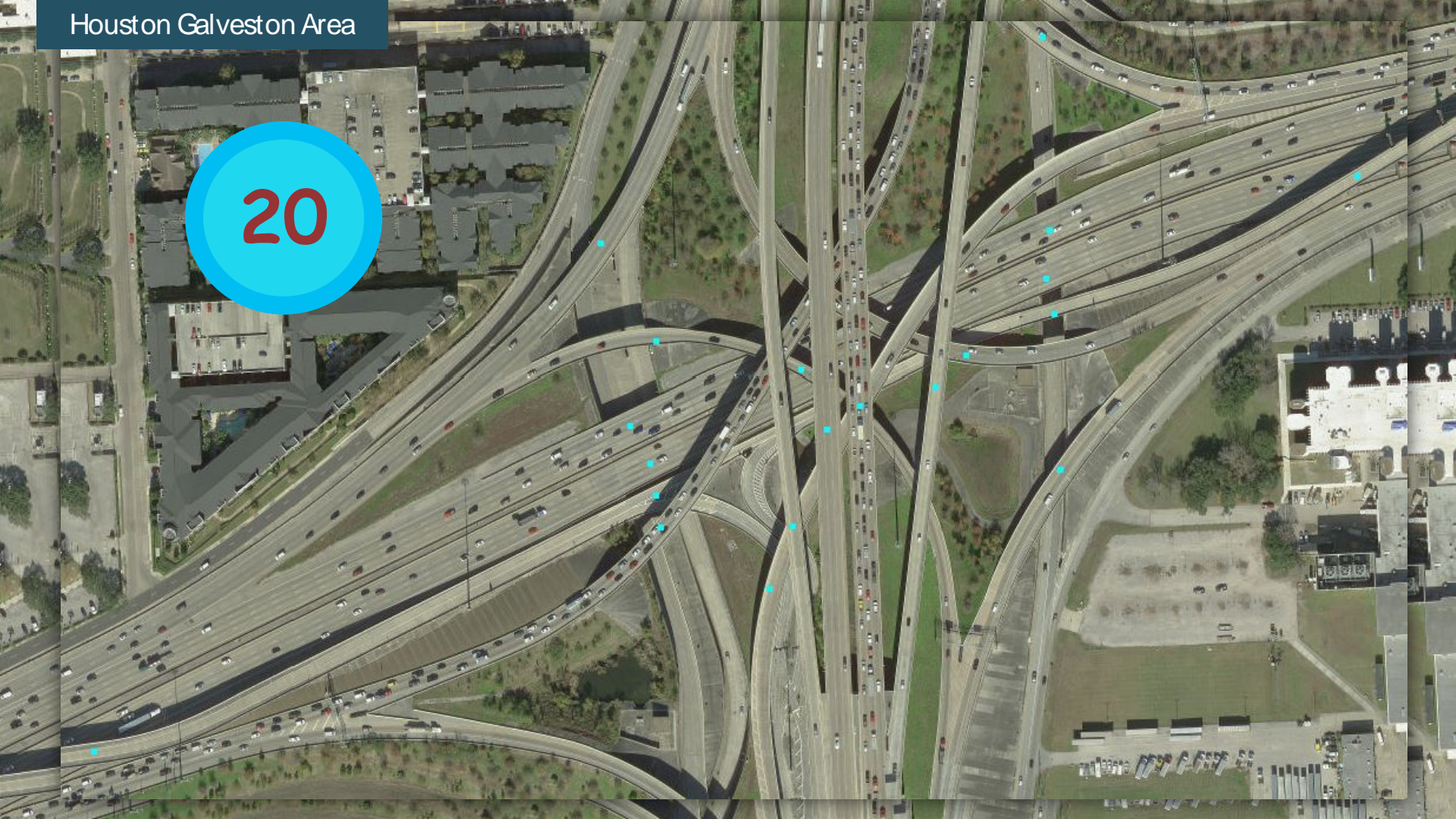
SQUARE MILES

7,400 mi²

CHALLENGES: Coastal weather • Airspace
access • Radiometry match • Quick delivery for
project size/complexity • **BRIDGES**



20



SUGGESTIONS FOR YOUR PROJECT

12

Pilot Project

Delivery Media

Data Storage

QCProcess

- » Personnel & Training
- » QCcriteria
- » Software environment
- » Progress tracking
- » Revision handling

SurCheckSM

SECURITY

- » Password protected
- » Administrator controls the distribution of credentials

SURCHECK MANAGER

Projects Users

P250010690 - 2015 EW Gateway 8

First Name:

Last Name:

Group Manager: ☐

Reviewer: ☐

----- Select CPAT User -----

----- Select CPAT User -----

- EWG
- GRW
- Jay
- Lincoln
- Sales
- StLouis
- Surdex

Add User

Update User

Delete User

User: surdex Workzone 1: 335 of 1978 tiles reviewed

17037 Active Tiles
554 Reviewed
3.25% complete

Logout

User ID: surdex

Password: •••••

Submit

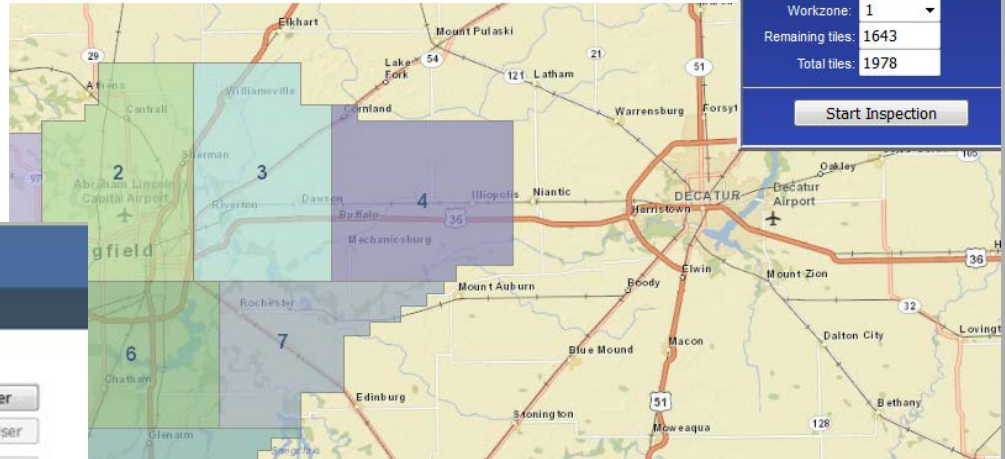
Manager Form

Workzone: 1

Remaining tiles: 1643

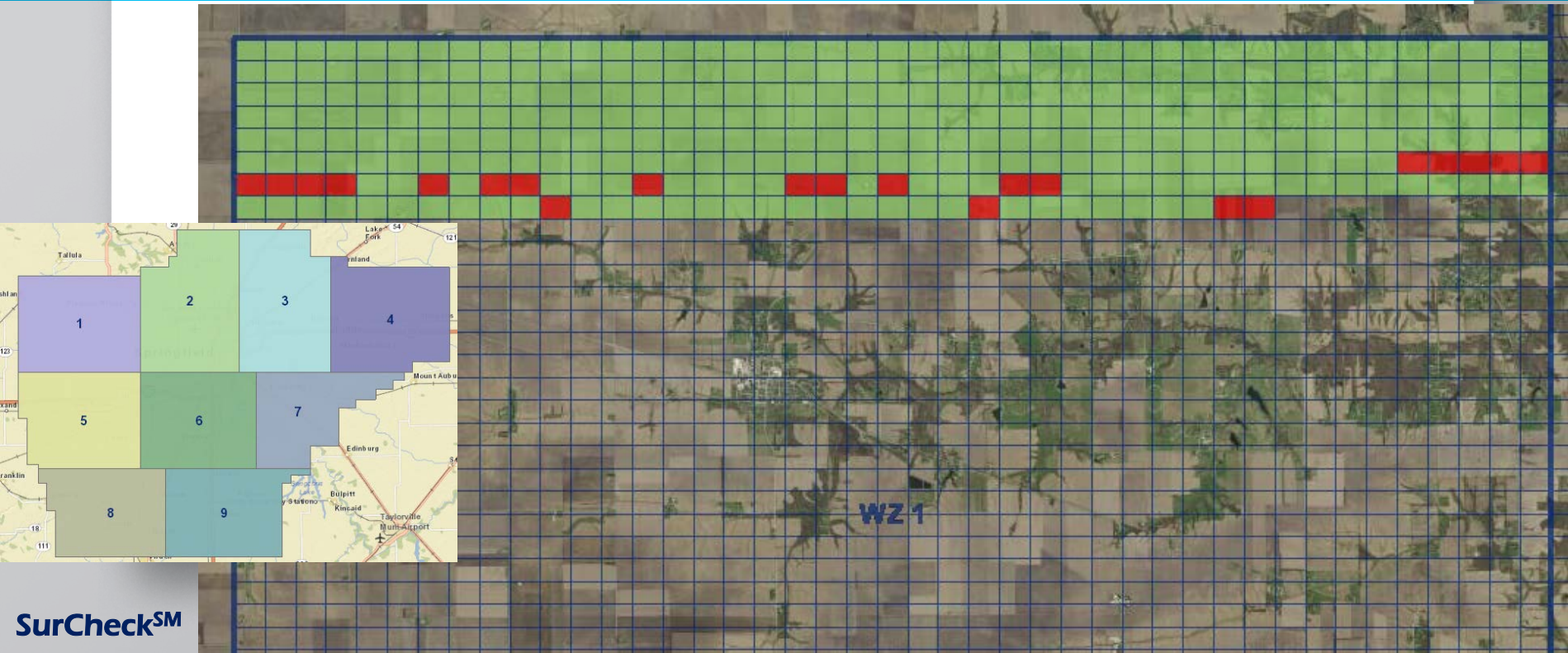
Total tiles: 1978

Start Inspection



PROGRESS TRACKING / MULTIPLE USERS

14



ACCESS OTHER DATA SETS

15

Custom Settings

Swipe Layer:

Basemap Layer:

Custom Layer 1:

Layer 1 IDs:

Custom Layer 2:

Layer 2 IDs:

Custom Layer 3:

Layer 3 IDs:

Save & Reload Web page to apply your custom layer scheme

REDLINES

16


- » Categorized by type + customization
- » Rapid review of all artifacts
- » Facilitate correction review
- » Correctable/Uncorrectable
- » Direct export for user archives

Edit Calls (42 features, 0 selected)


| RecordID | Type | Description | SdxStatus | sdxComment |
|----------|---------------------------|-------------|-----------|------------|
| 390 | Building Distortion | | 0 | |
| 392 | Building Distortion | | 0 | |
| 393 | Relief Smear | | 0 | |
| 396 | Image Distortion | | 0 | |
| 399 | Image Reflection Or Glare | | 0 | |
| 400 | Building Distortion | | 0 | |
| 391 | Image Reflection Or Glare | | 0 | |
| 394 | Image Reflection Or Glare | | 0 | |
| 395 | Image Reflection Or Glare | | 0 | |
| 397 | Image Reflection Or Glare | | 0 | |

Surdex Review

☐ Unreviewed Only

Comment:
 

Saved Comments:



☐ 1-Correctable

☐ 2-UnCorrectable

☒ 3-Natural Feature

Save And Next

Prev

Next

Clear

Close

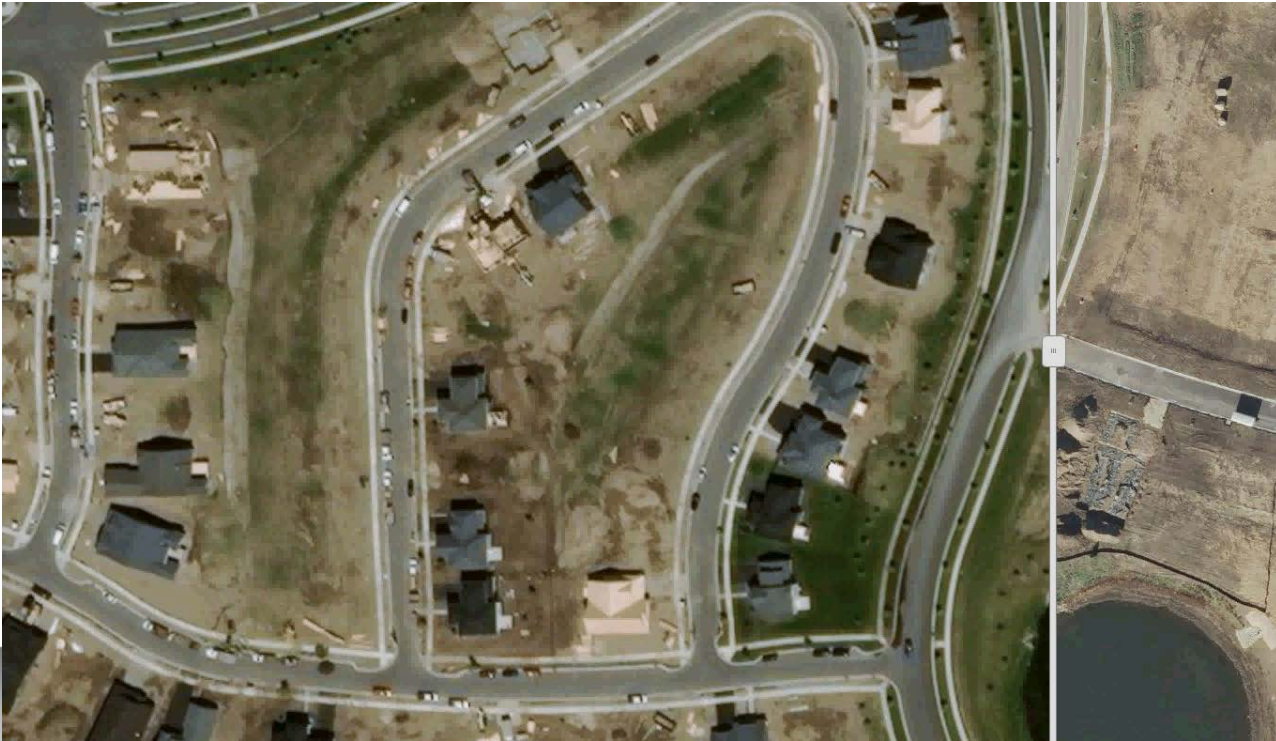


ARTIFACT IDENTIFICATION



SWIPE / CHANGE DETECTION

18



MAGNIFIER

19



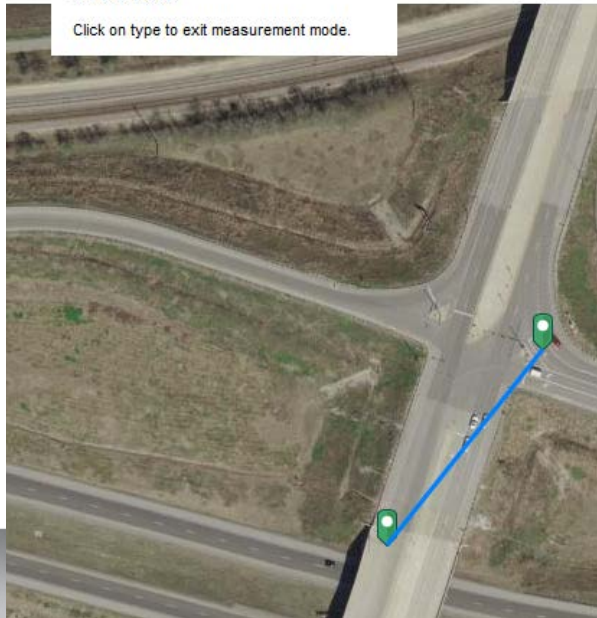
MEASURE



Measurement Result

301.5 Feet

Click on type to exit measurement mode.



Measurement Result

1.02 Acres

Click on type to exit measurement mode.



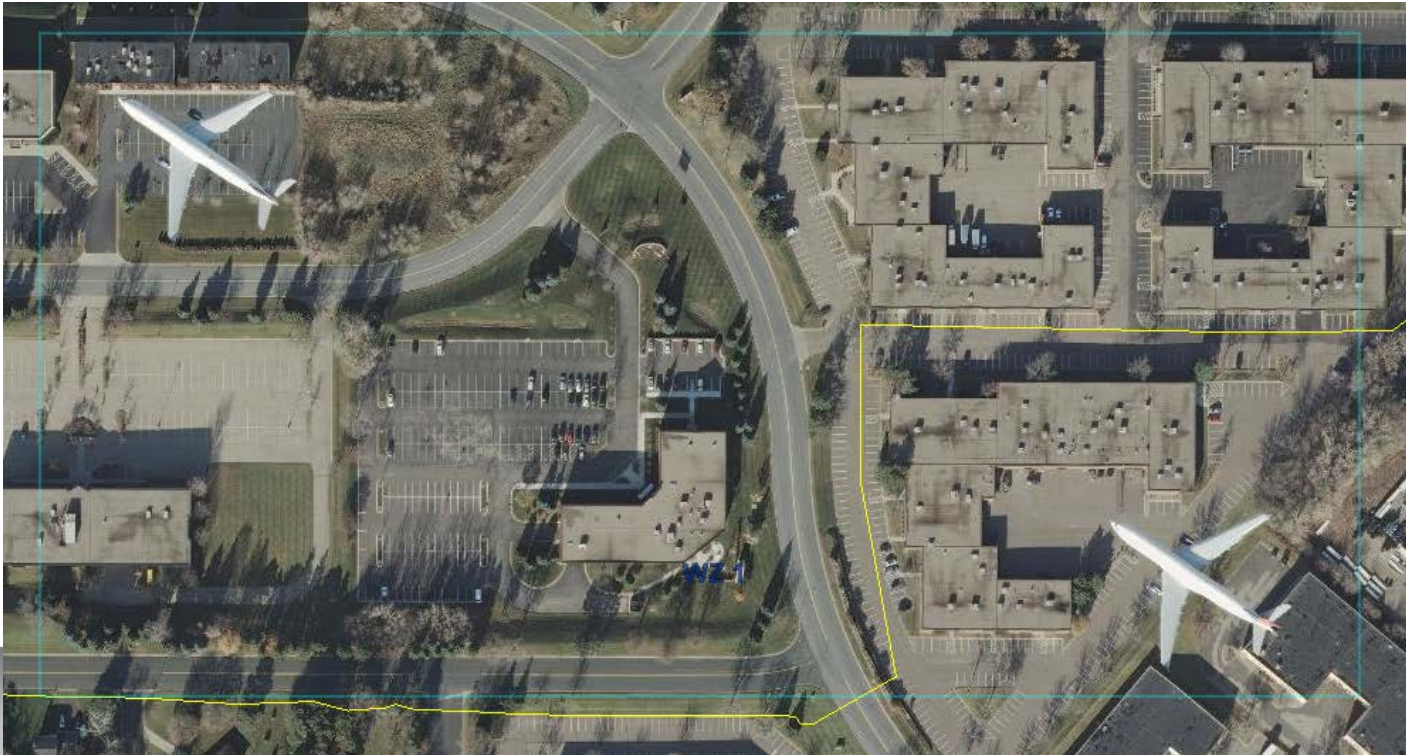
CORRECTABLE ORTHO ARTIFACTS

21



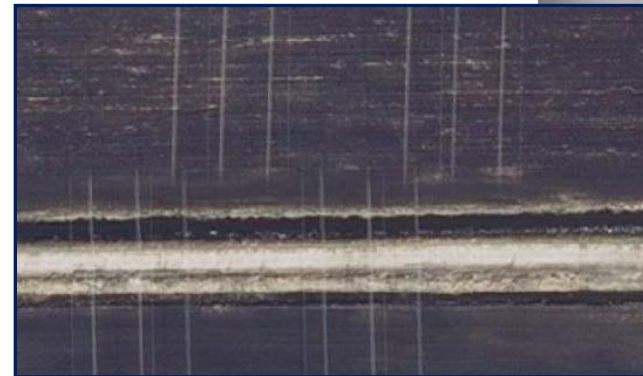
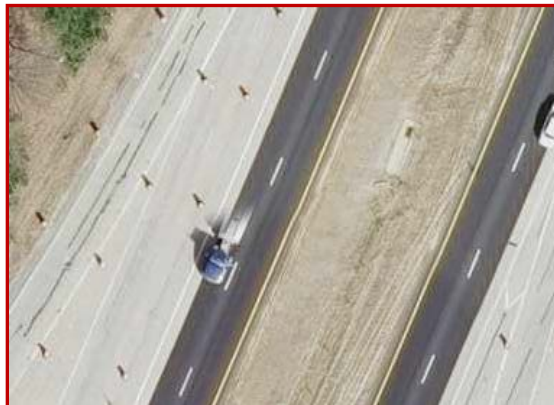
CORRECTABLE ORTHO ARTIFACTS

22



NON-CORRECTABLE ORTHO ARTIFACTS

23



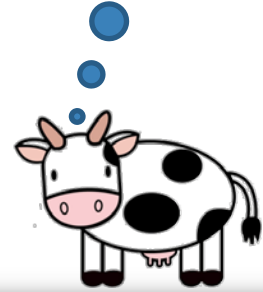
NON-CORRECTABLE ORTHO ARTIFACTS

24



NON-CORRECTABLE ORTHO ARTIFACTS

No animals were
harmed during the
creation of this
ortho!



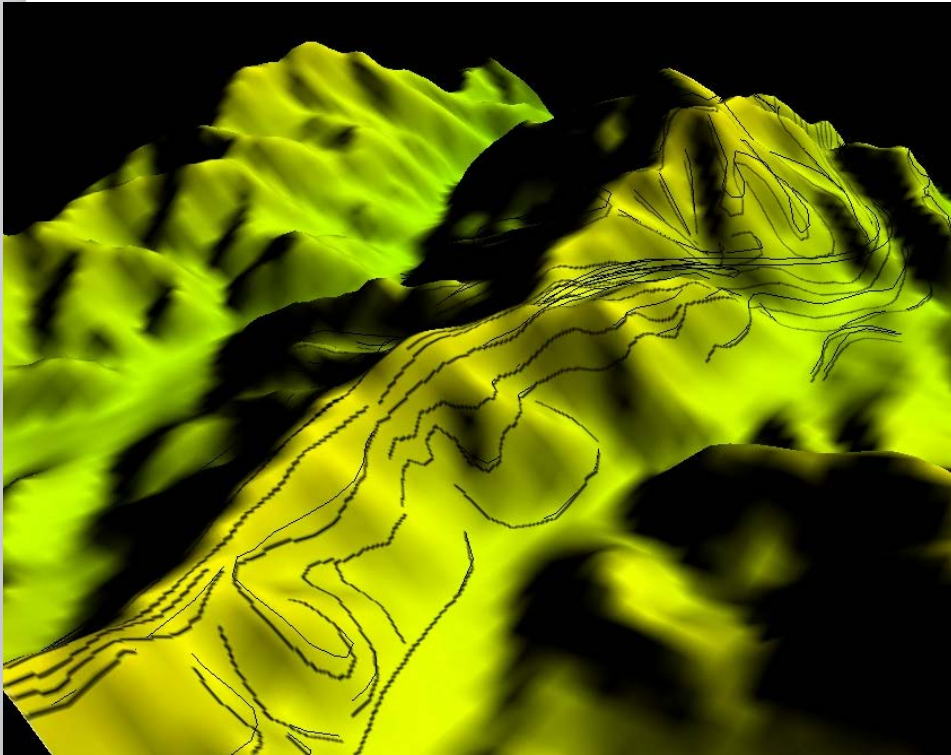
DEM PROBLEMS

26



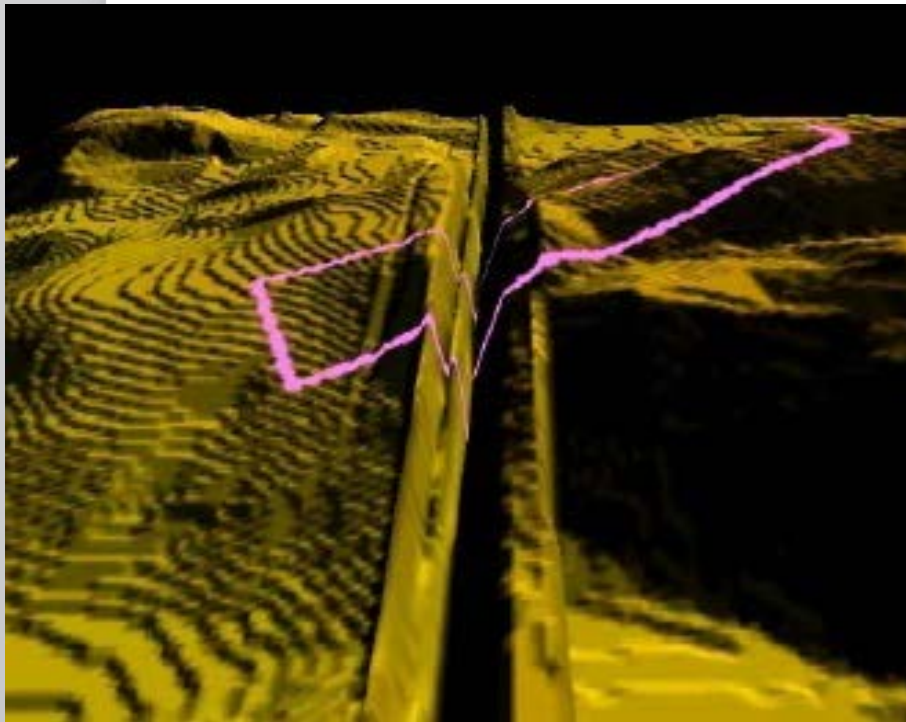
STEREO ADJUSTMENTS TO THE DEM

27

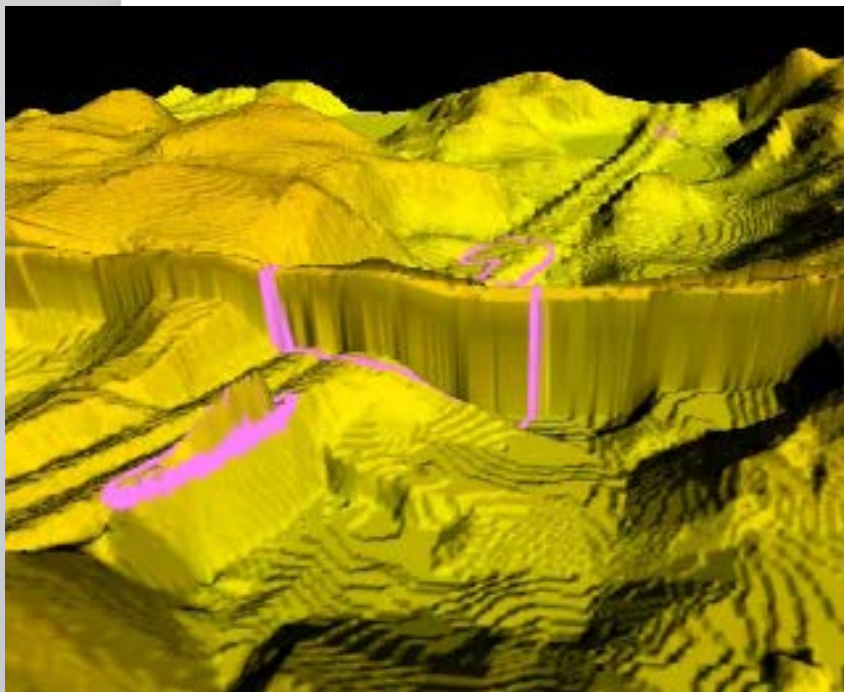


MORE – EXAMPLES - DEM ADJUSTMENTS

28



MORE – EXAMPLES



THANKS!

30

Any questions?

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- » (636) 368-4400

