Imagery TWG Meeting Notes
Idaho Water Center
July 2, 2008

Attendees

Nathan Bentley, Ada County	Keith Weber, ISU	Mike McGuire, Ascent GIS
Bill Kramber, IDWR	Jim Szpara, DEQ	Scott Van Hoff, USGS
Margie Wilkins, IDWR	Gail Ewart, DoA/IGO	Jerry Korol, NRCS
Ross Dodge, COMPASS	Toni Williams, FSA	Frank Mynar, Idaho Power
Bruce Godfrey, UofI Library	Ellen Uray-Macomb, BOR	Chris Clay, IDL
Levi Larson, RTI	*Don Patterson, USFS Region1	*Dawn Leatham, Bonneville Co.

*via telephone

Gail reported that IGC (meeting on June 19) approved the Imagery TWG's recommendation of partnering with FSA to purchase the 2009 NAIP imagery data. Gail will present the recommendation to ITRMC at the August 27th meeting.

Mike McGuire, (Ascent GIS, Inc) volunteered at the last Imagery TWG meeting to research absolute control as it pertains to the NAIP program. He presented his findings via a PowerPoint presentation. (see the "Absolute vs. Relative Accuracy - A PowerPoint presentation by Mike McGuire of Ascent GIS, Inc." link on the IGO Framework website). The presentation is included below in outline form. Mike also highly recommended a USDA/FSA white paper on Utah's 2006 NAIP Absolute Accuracy Pilot Project. You can find the report here: http://www.fsa.usda.gov/Internet/FSA_File/naip06_ut_pilot_summ_rep.pdf

Absolute vs. Relative Accuracy Presentation
Text Slides for the TWG meeting June 1, 2008

NAIP Accuracy History
- Relative Accuracy 2003 – 2008
- Ref to Baseline Imagery (90% Confidence)
  - 2M ± 10M
  - 1M ± 5M
- Moves to Absolute Accuracy
  - Utah in 2006
  - Arizona in 2007
  - (IN, MN, NH, NC, TX, UT, VT, VA) in 2008
  - More in future – for IFTN

Business Case
- GIS + NAIP
- Reference Layer/Base Layer
- Year to Year Consistency
- Additional Partner $s

Absolute Accuracy vs. Relative (NAIP)
- Now standard 1-meter product (no more 2m)
- NAIP accuracy standards (2008):
  - Relative: 90% against control imagery: ± 5m
  - Absolute: 95% of true ground: ± 6m
- By comparison
  - Typical USGS (95% confidence): ± 3m

- Census (MTAIP, 95% confidence): ± 7m

Absolute Accuracy

- Control established by contractor
  - Paneled or photo-identifiable – not specified
  - Aerotriangulation or ABGPS+IMU – not specified
- Control obtained by USDA and/or partners
  - Preferably at least 20 points/county (NSSDA testing guidelines)
  - Photo-identifiable or paneled
  - Not shared with contractor

Important Points

- ABGPS is good to ~±2-3m
- Control points ensure ~±2-3m absolute
- The USGS NED (baseline elevation model)
  - Major contributor to the final product accuracy
  - The limiting factor in final product accuracy
  - Rugged areas will produce lowest accuracy
  - May not be sufficient density and/or accuracy to ensure meeting absolute accuracy requirement

Why is Absolute Accuracy a "Buy-Up"

- Additional cost
  - Ground survey: $300-$1,000 per point ($20,000 per point in AK)
  - Identify and measure points
  - USDA research and verification
- Contractors have a liability
  - Increases cost of effort
  - May have to fix/update the NED

There was question-and-answer time following Mike's presentation. Some of the questions/concerns about adding an absolute accuracy upgrade to the Idaho 2009 NAIP data acquisition project:

1. If height modernization project gets started sometime in the near future as expected, will this process need to be repeated again?
2. Are controls already available?
3. Is there a "domino theory" in effect if absolute control is not done for 2009, i.e. errors that are inherent in the baseline data keep getting repeated and increase in magnitude?
4. There was a question on the "value" of absolute control.
5. Concern over the estimated cost:
   using an average estimated cost of $500 (see "Absolute Accuracy slide)
   20 points per county; 44 counties = 880 points (see "Why is Absolute Accuracy a Buy-Up?" slide)
   estimated cost = $440,000 for statewide control !!!!

After discussion, a vote was taken – Those in favor of pursuing absolute control for 2009 NAIP?

YES 0
NO 18

The Group agreed that further research and discussion for this option in 2012 is needed and should be brought to the table again for the next cycle and as the height modernization project proceeds.

Moving on to other topics...

Gail mentioned that the six Strategic Planning Sessions held throughout the state in June were VERY successful.

Gail provide some information on costs that are incurred above and beyond the direct cost of the imagery data:

- partner outreach – contacting potential contributors
  - reduce expenses by asking for volunteers to take on this task
  - Keith Weber, Frank Mynar, Mike McGuire, Scott Van Hoff, and Gail Ewart volunteered for this task
  - Margie has pulled together a preliminary list of contacts to consider
- partnership agreements with vendors (IGO will provide this service as in-kind contribution)
- Quality Control (QC)
  - process has improved at APFO, so this shouldn't be as big an issue
  - experience of 2 surrounding states:
    - Oregon QC'd before the final product was delivered – this delayed final delivery
    - Washington QC'd finished product and had a certain amount of time to report problems
  - The consortium will use the Washington model
- repackaging of the data – ideas and needs:
  - DIY computer based in IGO's Boise office. Partners come in, do the copy themselves
  - an image portal such as Oregon's
  - an improved image service - InsideIdaho already has one available for other imagery
  - federal, state, and local representatives distribute to others in their category via a mailing chain

Discussion on Color Infrared Band

- CIR buy-up will add $210,335 to the consortium's cost-share.
- CIR capture increases chances of digital collection.
- CIR buy-up may not need Dec. 31st commitment $$, thereby giving the consortium more time to secure funding.
- Don Patterson (USFS) noted the value of color infrared band and sent the following link for reference: http://www.nature.org/wherewework/northamerica/states/ohio/science/art18748.html

The group set the following priorities:
Priority 1: secure funding for basic product – True-color, 1-meter, statewide coverage
Priority 2: secure funding for CIR buy-up

Action Item:
Distribute Potential Contacts List to those who volunteered.

The next Imagery TWG meeting is scheduled for Wednesday, August 6th 10-noon IWC