



Key Characteristics of a Proposed Wisconsin Aerial Imagery Program

This document summarizes the key characteristics of an aerial imagery program proposed in a [discussion paper](#)¹ published by the State Cartographer's Office (SCO) in June 2014.

Progress and change begins with a proposal, and in that spirit, this document (and the full discussion paper) seeks to spur further discussion within the Wisconsin geospatial community.

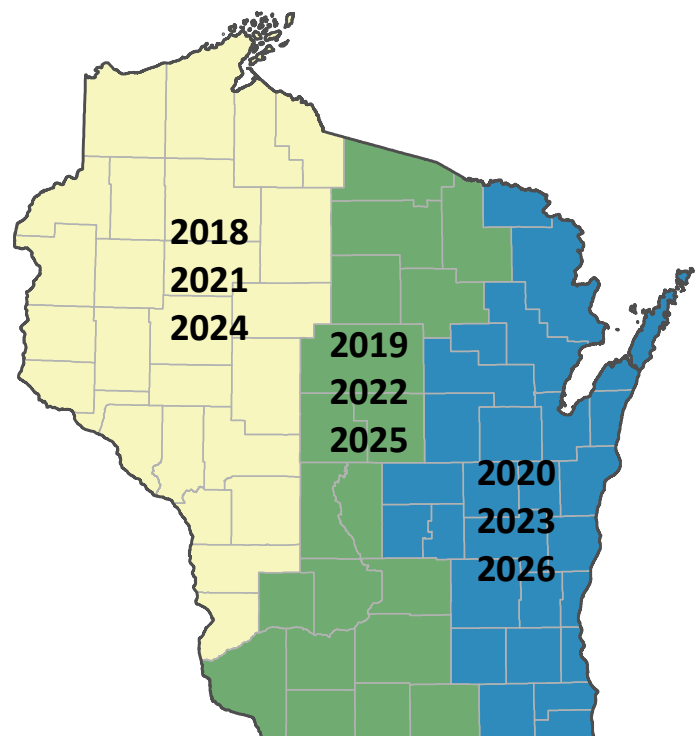
Send your feedback on the concepts presented in this summary document, or the full discussion paper, to Jim Lacy at Lacy@wisc.edu, or call (608) 262-6850.

Major Conclusions

- Wisconsin should take steps to implement a "hybrid" imagery program model that is based on the past successes of the [Wisconsin Regional Orthophotography Consortium \(WROC\)](#)². This includes providing 100% funding to counties to acquire a 1-foot resolution imagery base product every three years.
- Wisconsin should establish a standardized three-year collection schedule beginning in 2018, and divide the state into three north-south regions that follow regional planning commission (RPC) boundaries. (See map at right)
- After a three-year trial period, the program should be evaluated. If judged to be ineffective based on pre-defined criteria, the program should be discontinued.
- Currently, no single agency or organization in Wisconsin has the authority or mission to implement a statewide imagery program. Until this governance issue is resolved, it will be difficult if not impossible to implement a statewide imagery program.

Technical Specifications and Logistics

- The base product should be a 1-foot resolution, 4-band, ASPRS Class II accuracy (or better) digital image.



Collection regions and years proposed in the Wisconsin Aerial Imagery Program discussion paper. Regions (West, Central, East) would follow regional planning commission boundaries.

- Other technical specifications should follow existing WROC standards, modified as needed through a participatory process.
- The state should be divided into three north-south acquisition regions that follow RPC boundaries. Boundaries are adjusted as needed to avoid splitting municipalities located along region boundaries.
- Imagery should be acquired at a rate of one region per year.
- Counties would be responsible for all imagery quality assurance, which is the best practice currently followed in the WROC model.



- Data would be delivered to counties in the desired local coordinate system, with the statewide 1-foot product delivered as Wisconsin Transverse Mercator.

Funding

- All counties should receive full funding every three years to acquire the 1-foot resolution base product. Specifically, each county would receive funding equal to a contracted unit price times the total square miles of the county. (E.g., \$55/sq. mile x 1000 sq. miles = \$55,000)
- Approximately \$1 million is needed per year to acquire 1/3 of the state at a 1-foot spatial resolution.
- Funding for the base product could come from a combination of the Wisconsin Land Information Program and other state, federal, and private funding sources.

Contracting

- The Wisconsin Department of Administration should lead the development and negotiation of a master imagery contract every three years. Service providers should be hired for a three year period using a quality-based selection process.
- Service providers should be evaluated and then chosen using a participatory process modeled after WROC.
- Two different service providers should acquire imagery each year. For example, contractor "A" acquires imagery over the north half of the region, while contractor "B" acquires imagery over south half. This is done to give contractors incentive to perform at their highest levels.
- Service provider performance would be evaluated annually. Evaluation criteria would include ability to meet

accuracy specs, delivery timeframes, and other quality standards.

- Service providers that fail to meet contractual expectations should be replaced.
- Counties would contract and work directly with the selected service provider, arrange their own buy-ups as funding allows, and communicate needs directly to their service provider. There is no "middleman" involved.

Controversial Issues to Resolve

- Funding would only be available to counties that acquire imagery during their assigned cycle. For example, if their region is scheduled for 2019 but a county wants to acquire imagery in 2018, they would not be eligible for program funding. This policy is necessary so the service providers receive the entire geographic territory promised during the contracting phase.
- What happens if a county can't acquire imagery "on cycle" due to a lack of interest, staffing, or for other reasons? Who would step in and implement the project for that area? OPTION: Counties can opt to skip a cycle if they desire (e.g., six years between flights.)
- All 1-foot imagery would be considered public domain. Higher-resolution imagery (3", 6") acquired through buy-ups could be sold by counties if desired.
- The hybrid model is focused on counties. Cities, towns, and villages would be required to coordinate with their respective counties to receive the benefits of reduced pricing through buy-ups.
- Some organizations require imagery to coincide with decennial census years (i.e., 2020, 2030, etc.) In a three-year rotation model, this could not be guaranteed. However, with a three-year rotation, imagery would never vary more than +/- one year from the decennial census.

Recommended Next Steps?

- WLIA should establish an imagery task force to work with the SCO and further refine the concepts presented in the discussion paper.
- The WLIA task force in cooperation with the SCO should seek feedback on the specific aspects of proposed imagery program from stakeholders during 2014-2015.

References

1. Lacy, J. "Wisconsin Aerial Imagery: A Blueprint for Moving The State Forward." State Cartographer's Office, University of Wisconsin-Madison, June 2014. See: <http://go.wisc.edu/8p65v9>
2. For more information on the Wisconsin Regional Orthophotography Consortium see: <http://www.ncwrpc.org/WROC2015/>

