

For the Nation Initiatives



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National States Geographic Information Council

<http://www.nsgic.org>



- Began as a NSGIC initiative
- Proposed to FGDC
- Remanded to the National Digital Orthophoto Program (NDOP) Committee
- NDOP now has “ownership” of initiative



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What is Imagery for the Nation?

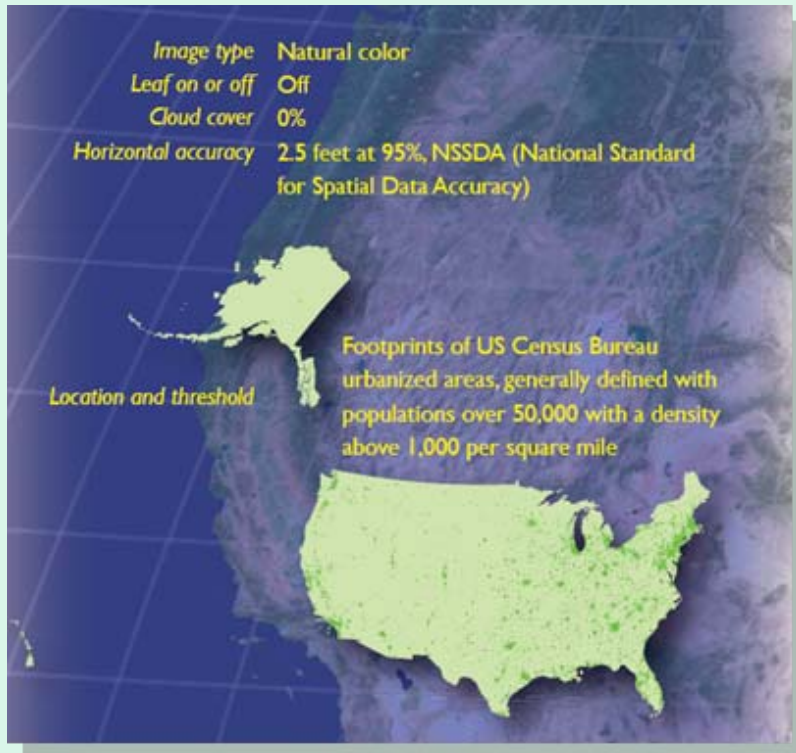
- Organized effort to acquire imagery over the entire US
- Multi-Resolution (6", 1', 1-meter)
- Repeat cycles of 1 to 5 years depending on location and resolution
- Imagery stays in public domain
- Consistent national standards (image type, quality, format & security concerns)
- States can manage hi-resolution program through development of business plans
- Federal government funds basic program
- Users fund buy-up options



Imagery for the Nation

meets the majority of local, state and Federal needs

Six Inch GSD



50% cost share in Urbanized Areas with populations >50,000 and more than 1,000 people per square mile



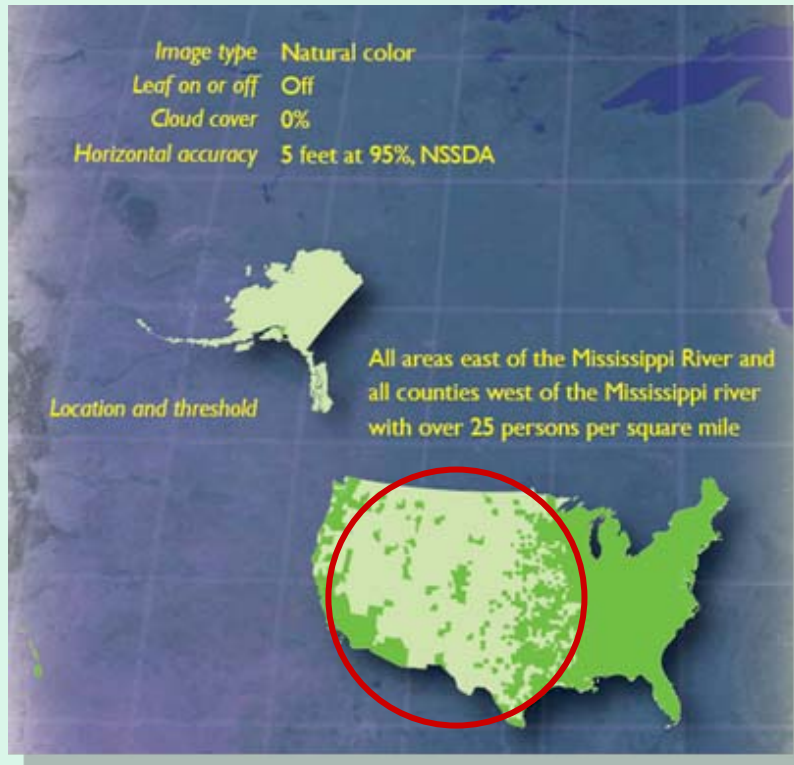
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Imagery for the Nation

meets the majority of local, state and Federal needs

One Foot GSD



Western States believe entire country should be collected at 1' GSD



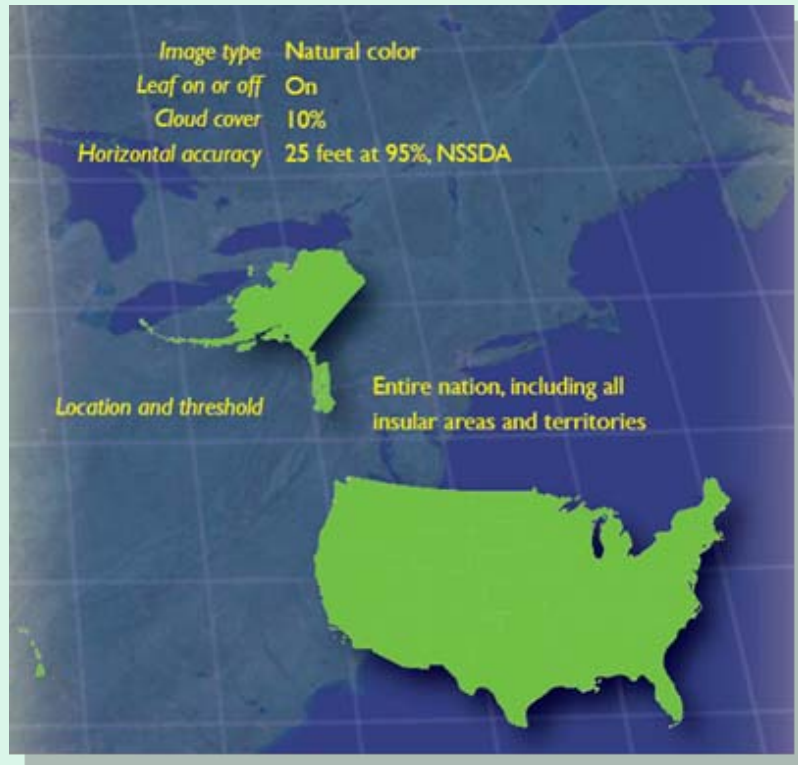
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Imagery for the Nation

meets the majority of local, state and Federal needs

One Meter GSD



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Most Locals Actually Want 3" GSD

Just Can't Afford It



Some day we actually will map the Nation at 1:1



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Buy-Up Options

- **Vary according to product type**
 - Color Infrared
 - Increased Frequency
 - Increased Footprint
 - Increased Horizontal Accuracy
 - Sampling to Lower Resolutions
 - Increased Resolution (6" to 3" and 1' to 6")
 - Improved Elevation Data Products
 - Remove Building Lean ("True Ortho")
 - **Stereo Imagery**



Want More Information?

This document will be updated after any major modifications to the program are agreed to.

- http://www.nsgic.org/hottopics/imagery_forthe_nation.pdf

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Cost Benefit Analysis (CBA)

- Conducted by Perot Systems
- Funded by USDA and USGS
- Managed by a USDA/USGS Steering Committee with NSGIC participation
- Follows the Performance Reference Model guidelines, developed by the Office of Management & Budget
- Due at the end of June 2007

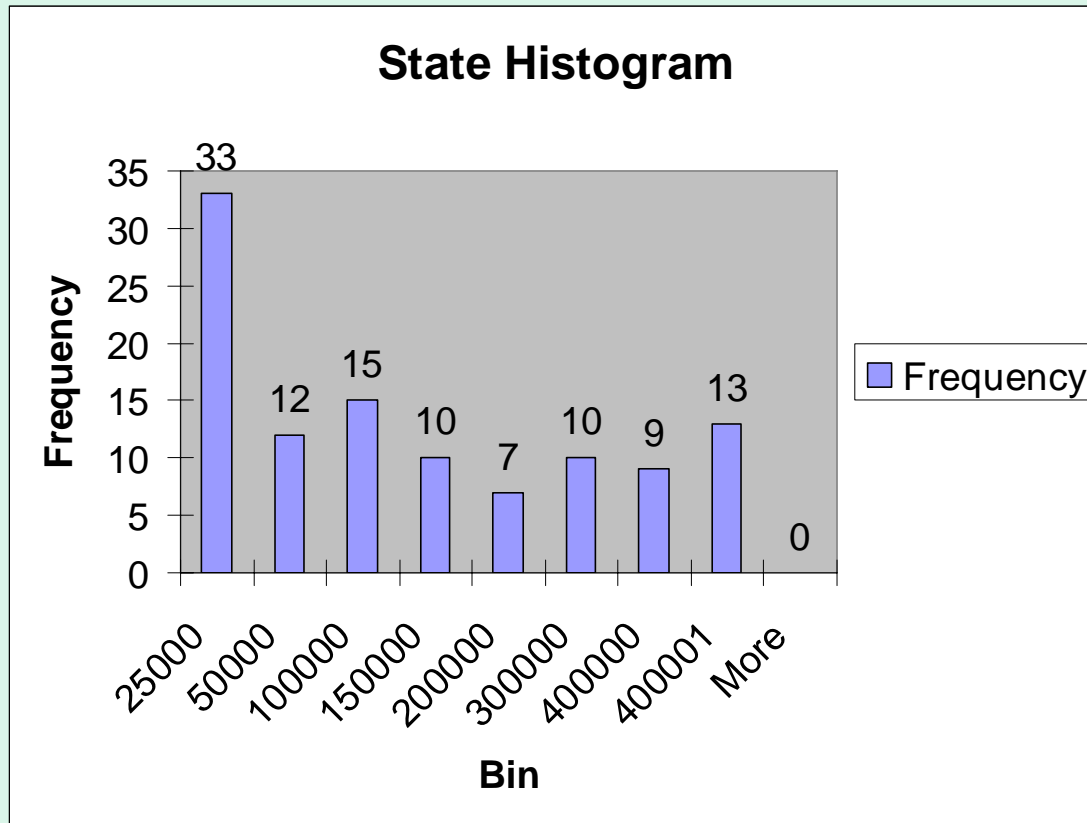


Inputs for the CBA

- In-person interviews and surveys of Federal, state, local and private sector
- Program costs from USDA and USGS to meet future needs
- NSGIC's 2006 Imagery for the Nation Survey – helped validate and increase sample population



Adding the NSGIC Survey



NSGIC Survey

This is an example of the State histogram which allowed the IFTN CBA Team to look at the distribution of responses across each cost category. Subsequent histograms include Federal and Local stakeholder groups.



Adding the NSGIC Survey

State Statistics	
Mean	161697.367
Standard Error	13903.81625
Median	100000
Mode	25000
Standard Deviation	145160.1033
Sample Variance	21071455602
Kurtosis	-1.140105288
Skewness	0.678468609
Range	375001
Minimum	25000
Maximum	400001
Sum	17625013
Count	109
Largest(1)	400001
Smallest(1)	25000
Confidence Level(95.0%)	27559.77508

NSGIC Survey

Upon completion of the histogram, the IFTN CBA Team applied Descriptive Statistics to the analysis. This provided greater metrics in determining the baseline costs for State programs. This analysis was further extended to the Federal and Local stakeholder groups.



What We Found ☺

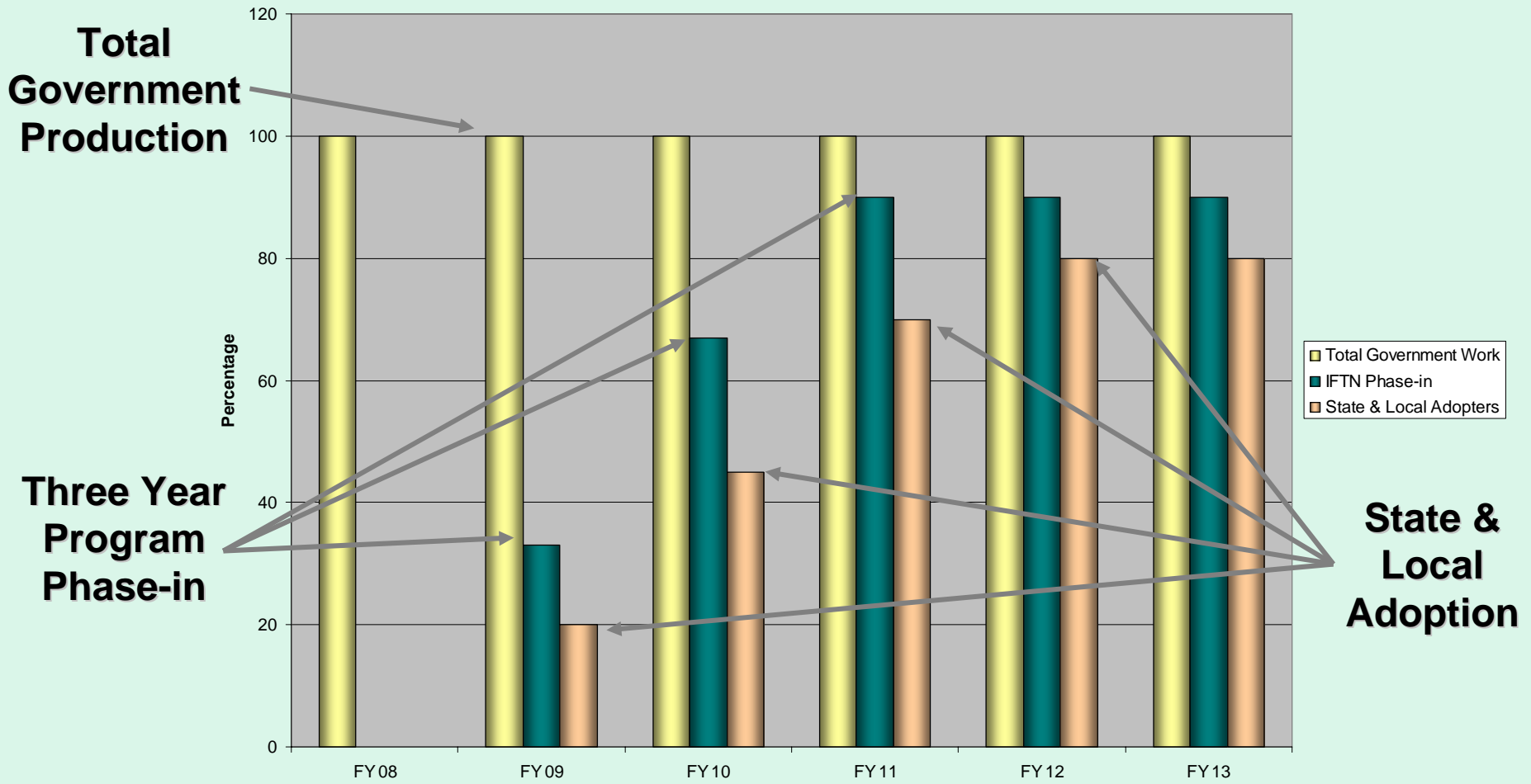
- Individuals who were interviewed in-person *and* responded to the NSGIC Survey provided consistent information
- The NSGIC survey results and in-person interviews provided consistent price ranges for groupings of local, state, and federal agencies
- Able to increase the sample population by combining the results

Being VERY Conservative

- Ensured duplicate survey information was scrubbed
- Only using ACTUAL results from surveys - not attempting to extrapolate across the country
- Including a realistic phase-in and program adoption rate in financial calculations
- Striving to be “bullet proof”



Example of Phase-in & Adoption



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Adding Alternatives to Deal with Western States Equity Concerns

- **Option 1** – 1' program is 50/50 cost share across the entire nation
- **Option 2** – 1' program is 50% coverage every three years, paid by federal program, and directed by statewide business plans



Refining Business Plan

- Initial plan developed in early 2006
- Three subcommittees being chartered by NDOP
- Will “flesh out” the remaining detail based, in part, on the Cost Benefit Analysis



**“If we can’t do Imagery for the
Nation, there is no NSDI.”**

Yours Truly to the FGDC Steering Committee



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Transportation for the Nation Work Group

- Focus is on the GIS representation of the nation's transportation networks - first on the street network (all roads) since it is the single most used, attributed GIS layer in the nation
- Result will be an attributed street network for cartography, online mapping, address geocoding, and routing for more informed decision making and better investments.
- Co-Chairs - Frank Winters (NY) and Dan Widner (Va)



TFTN Work Group Purpose

- Engage and enable Transportation Stakeholders to create local, regional, statewide, inter-state, and national transportation databases, feeding up from municipal and county governments with the best available infrastructure data.
- Provide a grounding in transportation business language and state transportation programs for state geospatial coordinators.
- Develop a nationwide plan to support each state's Spatial Data Infrastructure (SDI) and the National Spatial Data Infrastructure (NSDI).



TFTN Work Group Activities

- Identify and engage necessary stakeholders to move a national strategy for transportation forward - not set standards for transportation or roads information
- Engage qualified external stakeholders and invite participation.
- Hold individual discussions with potential stakeholders including, but not limited to:
FHWA, USDOT, Census, TRB, AASHTO,
NACo, URISA, GITA, GIS-T



TFTN Work Group Activities

- Host or schedule meetings and conference calls with stakeholders
- Survey states to understand the range of options for developing and maintaining statewide transportation databases.
- Draft a plan for review by stakeholders.



NSGIC's "take" on For the Nation Initiatives - DRAFT

- For NSGIC member's use in creating national spatial data infrastructure (NSDI) initiatives that are intended to be termed "*For the Nation.*"
- Based on experience with the Imagery for the Nation program
- Offers a solid foundation on which to build similar initiatives.
- For internal use by NSGIC to evaluate new "*For the Nation*" projects initiated by other organizations or agencies requesting NSGIC support.



For the Nation

Concept Stage - DRAFT

- Identify a lead organization and stakeholder organizations for participation.
- A custodial organization and key individuals must be clearly identified to serve as the point of contact for others seeking information on the initiative.
- The proposed development of a data layer, service, or application must be clearly defined, including a vision statement that articulates the goal of the initiative.
- The initiative must ensure national coverage at full implementation. Differences in the design due to geographic, urban v. rural, demographic, or other considerations should be clearly articulated with stakeholder consensus.



For the Nation

Concept Stage - DRAFT

- The initiative should be designed to meet the multiple business needs of all levels of government. If there are reasons that multiple business needs can not be met, they should be clearly articulated with stakeholder consensus.
- Stakeholder communities affected by the initiative must be involved in development of the concept.
- A Strategic Plan must be developed in concert with all stakeholder communities.



For the Nation

Development Stage - DRAFT

- Each component of the initiative must be clearly defined.
- The effort must include “buy-up” options to increase flexibility for the entire community where applicable.
- Technical specifications must be designed to meet the highest accuracy or functional requirements of the broadest community possible.



For the Nation

Development Stage - DRAFT

- Technical specifications must allow for multiple technological solutions and the ability to take advantage of future technologies. (Performance driven instead of technology driven).
- A maintenance plan and process must be defined as part of the effort.
- Dedicated, capable, and willing long term custodians or data stewards must be identified.
- Data distribution and archive mechanism must be identified where appropriate.



For the Nation

Development Stage - DRAFT

- A full Cost Benefit Analysis should be conducted to clearly demonstrate the value of the initiative, justify funding and demonstrate taxpayer savings.
- A complete Business Plan must be developed that identifies each of the implementation procedures that will be required for a successful project.
- A sustainable funding plan for the effort must be identified that allows for multiple funding sources.



For the Nation

Implementation Stage - DRAFT

- The effort must provide for governance and adjudicatory procedures that allow for reasonable variations in implementation steps and technical specifications to support changing needs, budgetary issues, geographic differences, and other considerations.
- The effort must allow for differing management options for development and maintenance that include federal, state, regional, and local approaches.



For the Nation

Implementation Stage - DRAFT

- Regular meetings of the governance and implementation groups must be conducted at least semi-annually and provide for participation by all affected stakeholder communities.
- The governance and implementation groups must conduct bi-annual reviews of their strategic and business plans to bring them up-to-date, or conduct new planning efforts as appropriate.





Questions ?

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