

Alaska Highlights of the National Enhanced Elevation Assessment (NEEA)

Alaska SDMI DC Roundtable
June 28, 2012

David F. Maune, Ph.D., PSM, PS, GS, SP, CP, CFM

Dewberry

8401 Arlington Blvd.

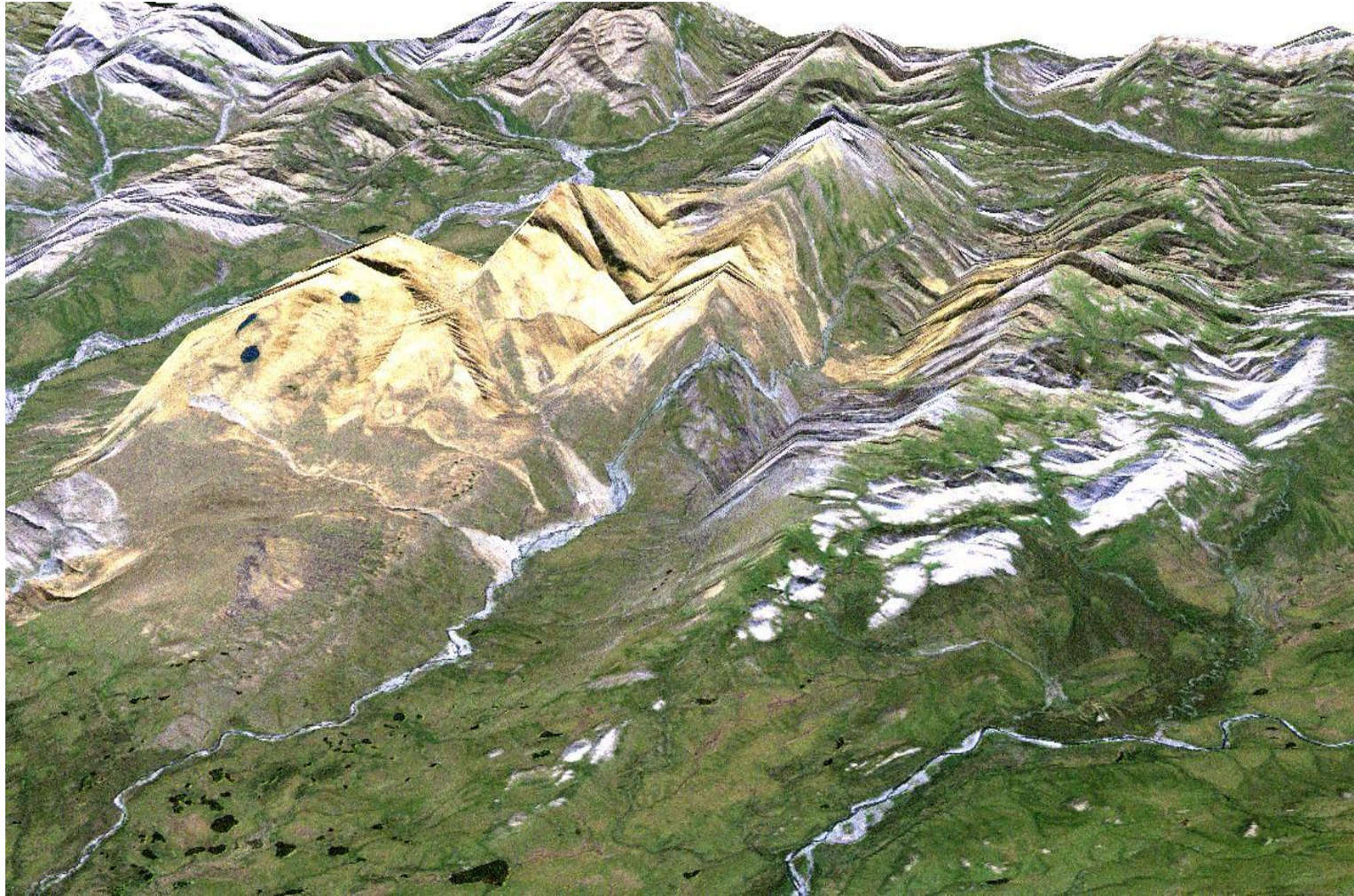
Fairfax, VA 22031

Tel: (703) 849-0396

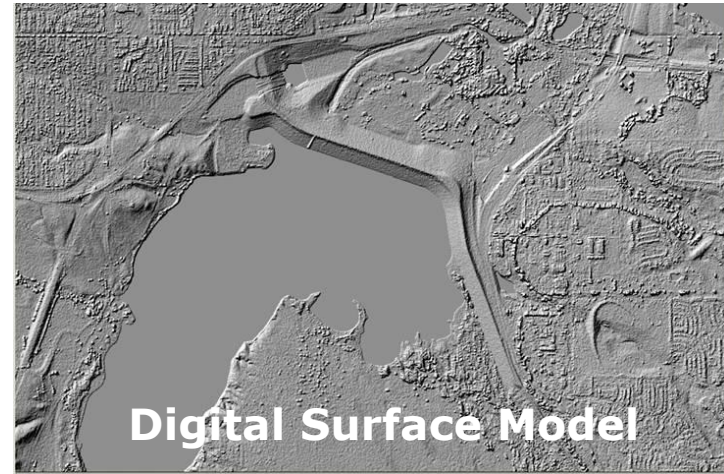
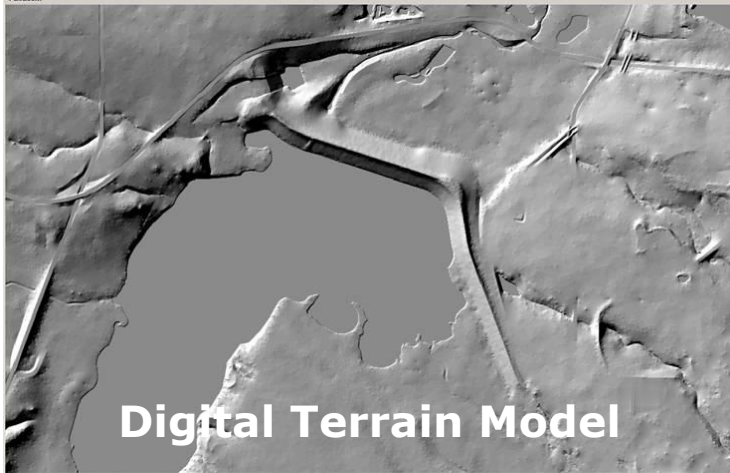
Email: dmaune@dewberry.com



Alaska's Problem



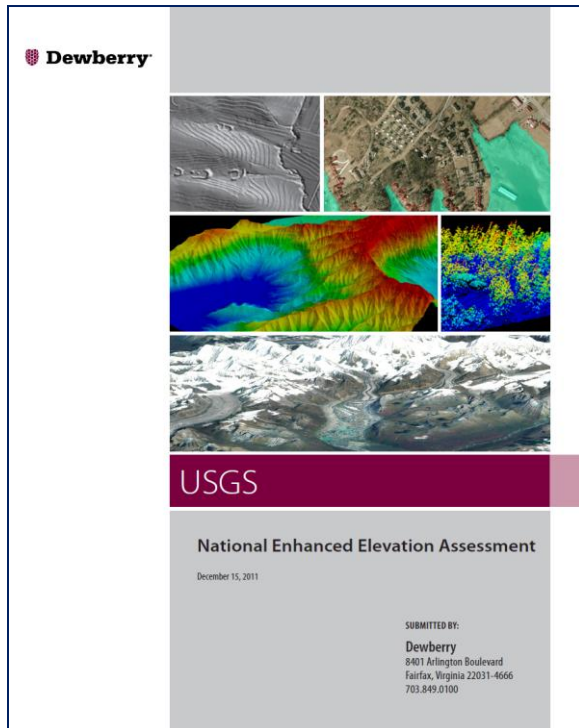
Alaska's Solution (per Statewide Digital Mapping Initiative 2008 whitepaper)



Stakeholder Agreement:
Interferometric Synthetic Aperture Radar (IFSAR) is most cost-effective for Alaska – ideal for planning at all levels of federal, state, regional, local and tribal governments.



National Enhanced Elevation Assessment (NEEA)



- Sponsored by the National Digital Elevation Program – 12 Federal agencies plus National States Geographic Information Council
- Most comprehensive Benefit/Cost Analysis ever performed for any layer of The National Map
- Documented 602 *mission-critical* uses from 34 Federal agencies, 50 states and a sampling of local, tribal and private sector representatives
- Conservative Benefit/Cost Ratio: 4.7:1
- Estimate that \$1 billion - \$13 billion of benefits would accrue annually from implementing a national program

20 Business Uses for IfSAR in Alaska

- Natural resources conservation
- Water supply and quality
- River and stream resource management
- Coastal zone management
- Forest resources management
- Wildlife and habitat management
- Geologic resource assessment and hazard mitigation
- Oil and gas resources
- Flood risk management
- Sea level rise and subsidence
- Wildfire management, planning, response
- Homeland security, law enforcement, disaster response
- Land navigation and safety
- Aviation navigation and safety
- Infrastructure and construction management
- Urban and regional planning
- Health and human services
- Education K-12 and beyond
- Recreation
- Telecommunications

Alaska IFSAR Requirements/Annual Benefits

Functional Activity	Update Frequency	Annual \$ Benefits
NOAA Hydrologic Prediction Service	4-5 years	\$2,652,779
NRCS Conservation Engineering	6-10 years	\$995,230
USFS Forest Inventory & Assessment	4-5 years	\$993,310
USGS Geologic Mapping	6-10 years	\$989,559
NRCS Specialized Applications, Soils Mapping	6-10 years	\$812,807
USFS Infrastructure Management	4-5 years	\$475,736
EPA Environmental Protection	4-5 years	\$474,966
NOAA Coastal Mapping & Modeling	4-5 years	\$276,164
USFS Wildfire Management	>10 years	\$99,331
EPA Broad Area Air & Water Quality	6-10 years	\$45,210
USFS Soils and Geology Inventory	> 10 years	\$38,059
USFS Watershed Analysis	6-10 years	\$34,772
USFS Wetlands Mapping	6-10 years	\$476

Alaska IF SAR Requirements/Annual Benefits

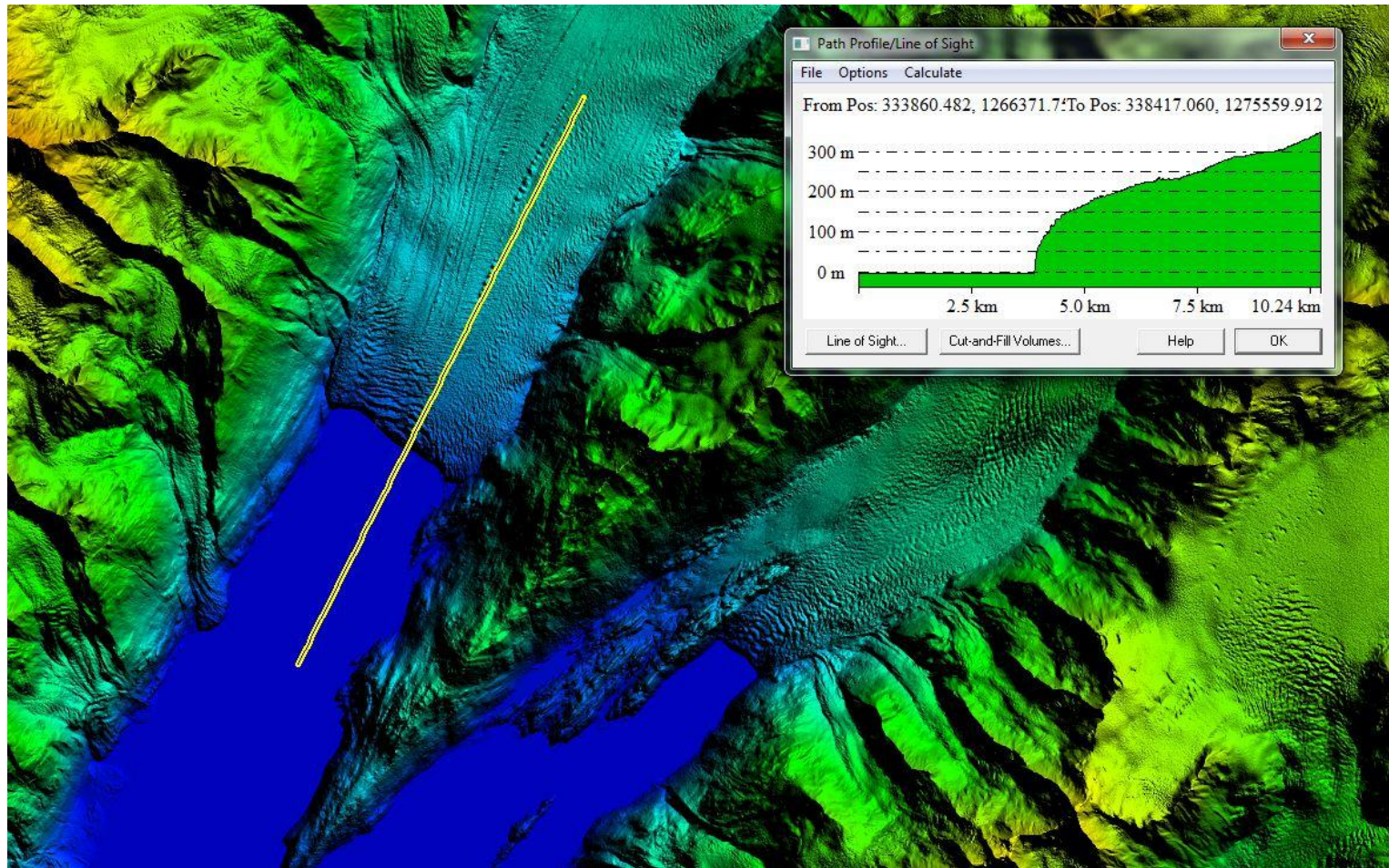
Functional Activity	Update Frequency	Annual \$ Benefits
FWS (Endangered Species/Fisheries & Habitat; Migratory Birds; National Wildlife Refuge System)	6-10 years	Unknown
NPS Preserve & Protect Natural & Cultural Resources	6-10 years	Unknown
BLM Multi-Use Land Management in Alaska	>10 years	Unknown
FEMA Flood Risk Analysis	6-10 years	Unknown
FAA Enroute Instrument Procedures	4-5 years	Unknown
FCC Spectrum Management, Frequency Coordination	>10 years	Unknown
FERC Pipeline Routing/Flood Risk Management	6-10 years	Unknown
NASA Advanced Earth Science Mission Support	4-5 years	Unknown
CDC Human, Animal & Environmental Health	6-10 years	Unknown
Alaska State Aviation Safety/Ports & Harbors; Synthetic Vision for Terrain Navigation	>10 years	\$6,811,009

Alaska IFSAR Requirements/Annual Benefits

Functional Activity	Update Frequency	Annual \$ Benefits
E-Terra Alaska Aviation Safety Project	>10 years	\$2,999,785
Anonymous Oil and Gas Operations	6-10 years	\$1,588,165
Tom Tom Location and Navigation Services	4-5 years	Big Future
TOTAL FEDERAL BENEFITS		\$7,888,398
TOTAL STATE BENEFITS		\$6,811,009
TOTAL NON-GOVERNMENTAL BENEFITS		<u>\$4,587,950</u>
TOTAL COMBINED ANNUAL IFSAR BENEFITS		\$19,287,357

**Benefits exceed costs for
statewide IFSAR within 3 years**

Profile of glacier in cell 38



Mapping *America's Last Frontier*

