

Alaska Mapping Executive Committee

February 9, 2016

+ Agenda

- Member Introductions, Opening Remarks – *Jennifer Gimbel, DOI; Mike Aimone, DOD*
- Alaska Mapping Status and Strategy Meeting Actions – *Kevin Gallagher, USGS*
- Alaska Geospatial Council – *Mark Myers and Ed Fogels, AK DNR*
- Alaska Hydrography 18-Month Planning – *Kacy Krieger, UAA*
- Alaska IFSAR Status and 2016 Planning – *Dave Saghy, USGS*
- GRAV-D and Shoreline Mapping – *Juliana Blackwell, NOAA*
- Actions and Closing Remarks – *Jennifer Gimbel, DOI*
- Special Announcement – *Kevin Gallagher, USGS*
- Adjourn

+ Alaska Mapping Success Stories

- This past summer's '**Sky Breaking II**' celebration brought high visibility to AMEC efforts
- 2015 ifsar contributions totaled over **\$7.6M**, including **\$2.8M** in EOY funds
- Statewide ifsar coverage increased by approximately **12%** in 2015
- The USGS FY16 appropriation included an increase of **\$1.3M** for Alaska mapping support



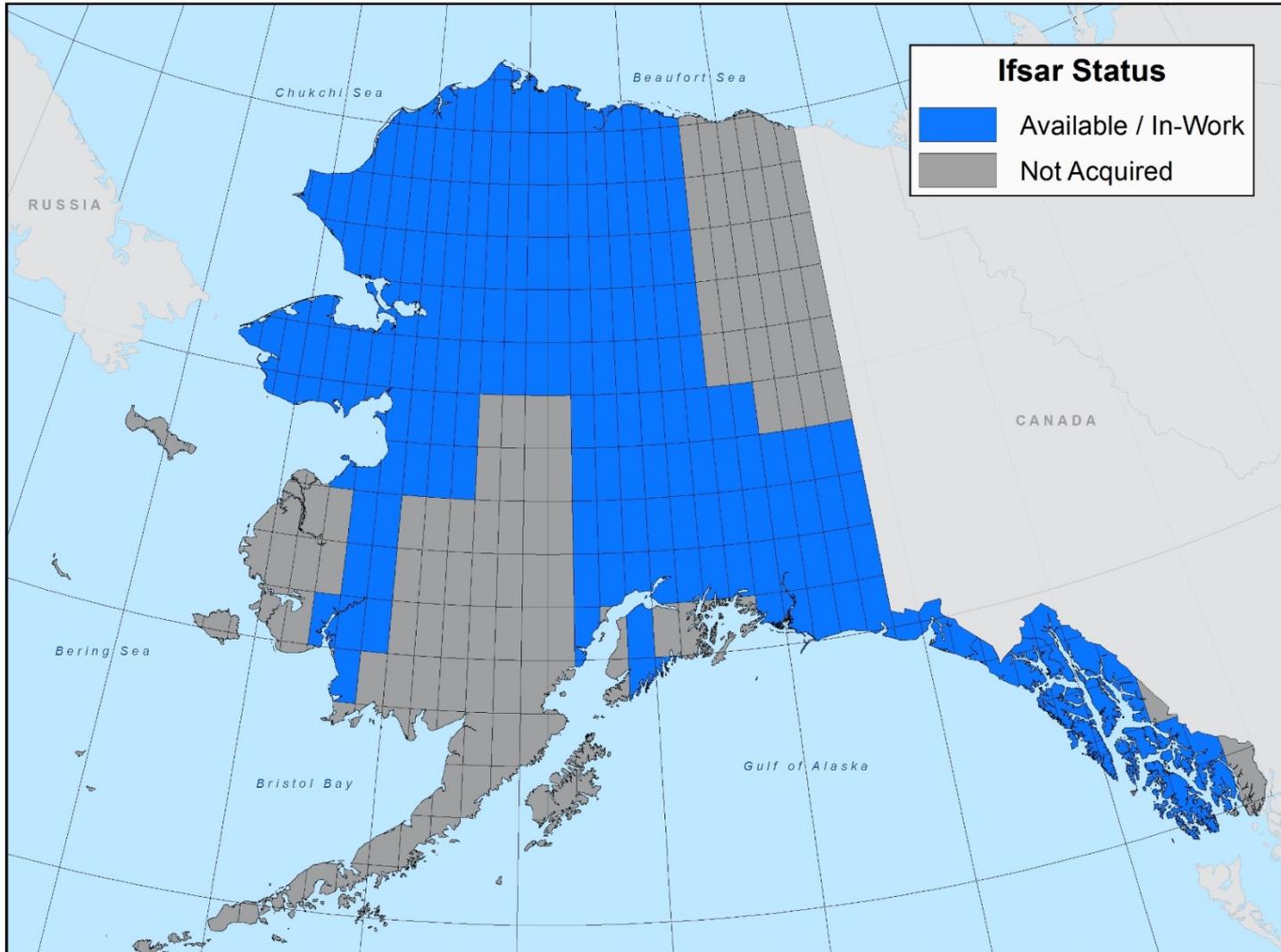
AMEC efforts are advancing Alaska mapping

+ Data Acquisition Accomplishments

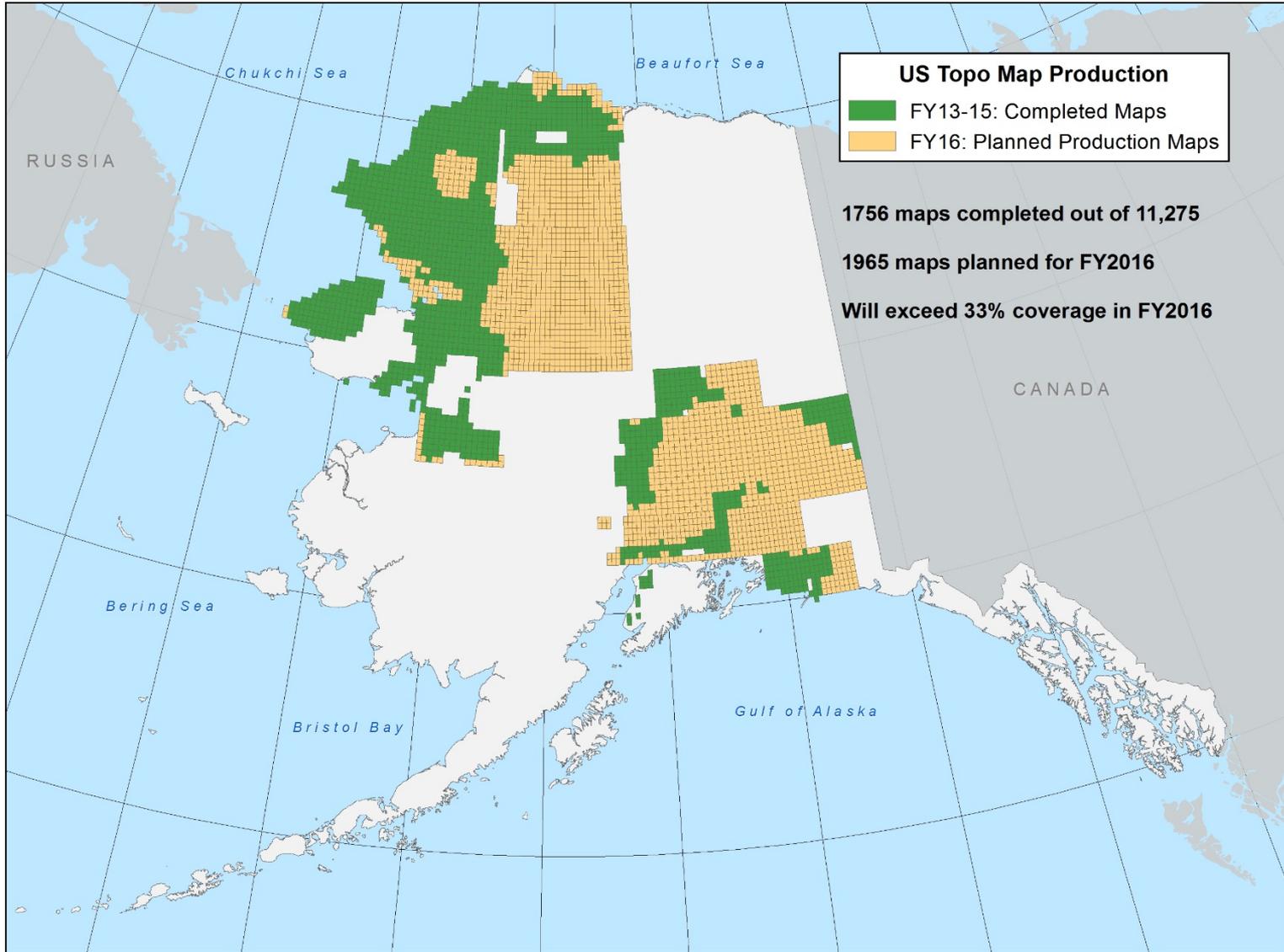
Theme	Metric	Spring 2016 Status
Elevation (Ifsar)	% IFSAR acquired	62% complete
Hydrography	% NHD updated	11% complete
Transportation	% of State complete and publicly available	Baseline road coverage 100% complete and delivered to the public by AK DOT; enhancements ongoing
GRAV-D	% GRAV-D acquired	50% complete
Coastal Mapping	% AK shoreline updated	43% complete

+ Alaska Ifsar Status

- 62% of the State is available for download or is in work



+ Alaska US TOPO Map Status



+ 2015 Strategy Meeting Outcomes

■ Actions Completed

- State's strategy meeting presentation was sent to Committee members and meeting attendees
- Alaska Mapping information paper was written and submitted to Senator Murkowski's office
- Draft 18-month tactical plan released for review

Job well done!

+ 2015 Strategy Meeting Outcomes

■ Actions in Progress

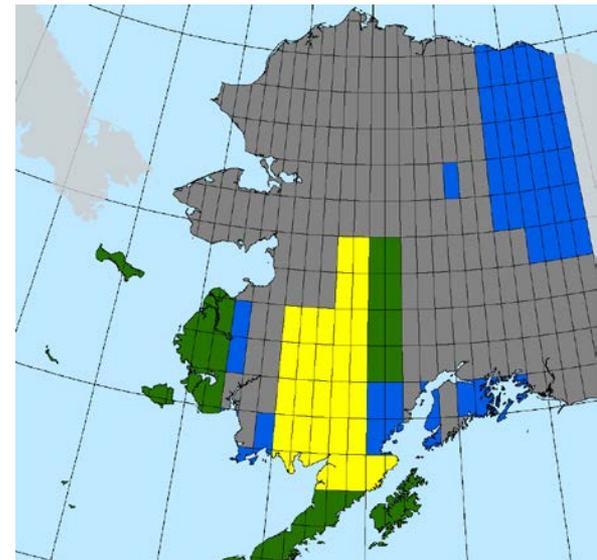
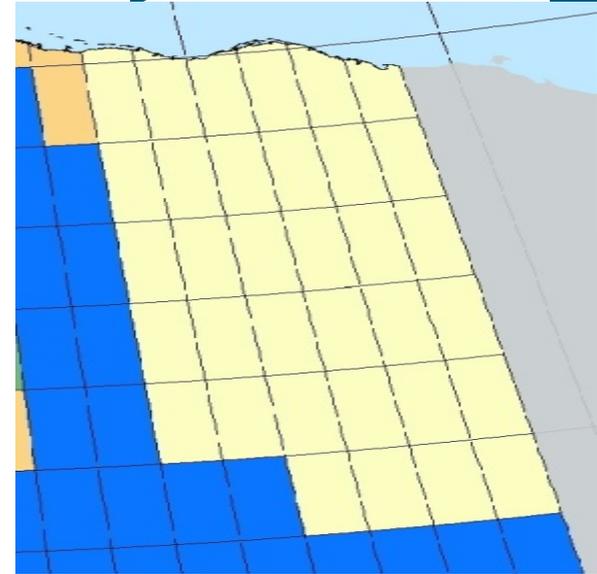
- The USGS Alaska Regional Office is considering options for standing up an Alaska Federal Mapping Coordination Group
- NGA is working with the Polar Geospatial Center at the University of Minnesota to develop an elevation solution for the Aleutians



+ 18-Month Tactical Plan Objectives

■ Accelerate IFSAR Acquisition

- Acquire as much IFSAR as possible in FY2016 over the remaining area in NE Alaska
- Surpass 70% coverage in FY2016
- Update 3-Year IFSAR Acquisition Plan and Budget Cross Cut document

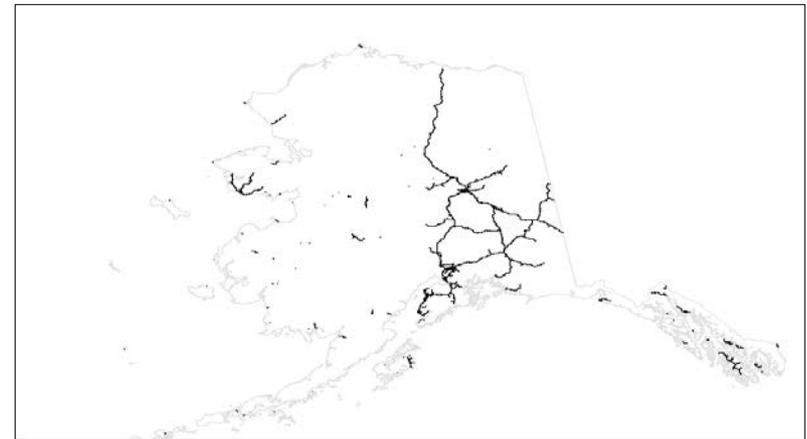
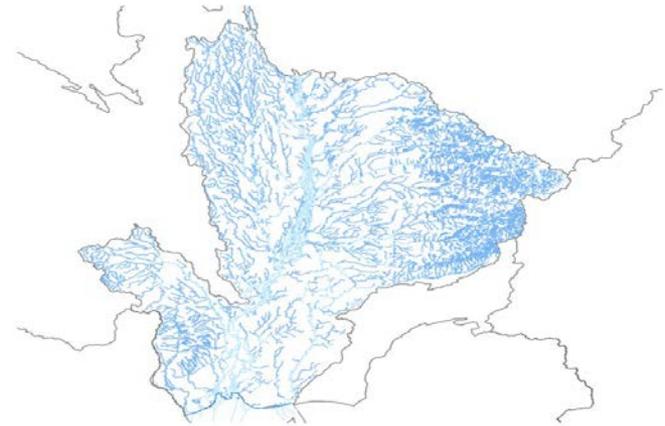
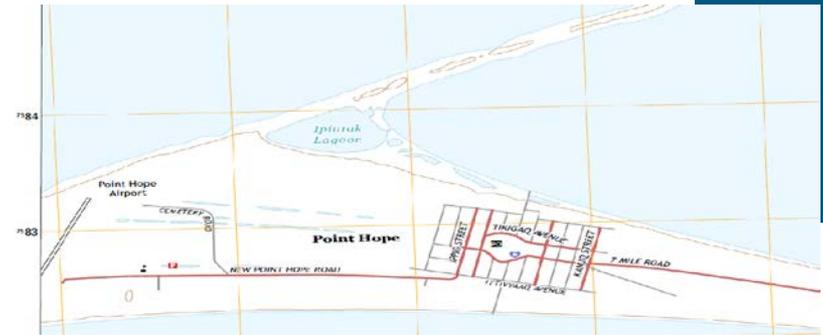


+ 18-Month Tactical Plan Objectives

10

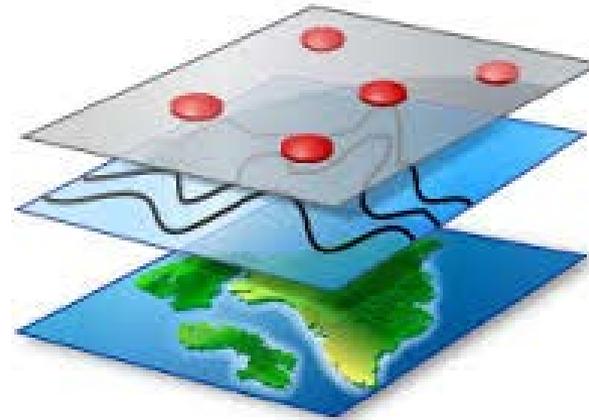
■ Accelerate Base Mapping

- Increase US Topo map production to 1900+ quads per year
- Support hydrography data improvements
- Continue enhancement of statewide Alaska DOT roads dataset



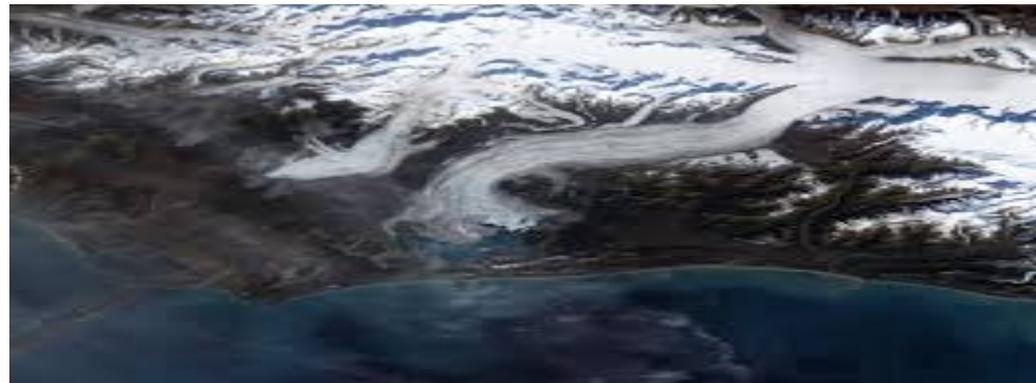
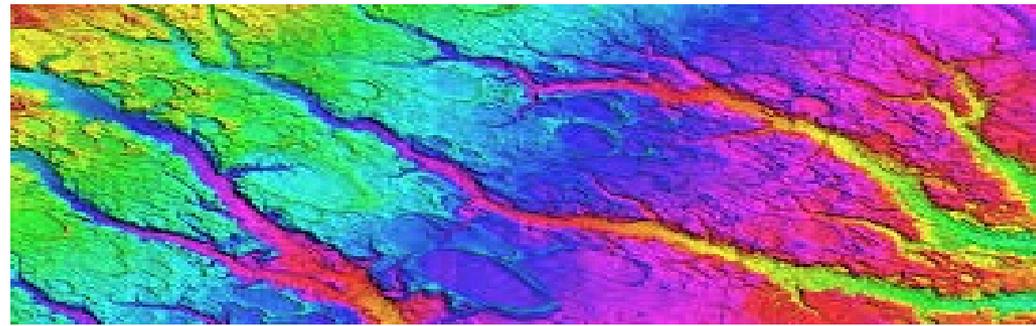
+ 18-Month Tactical Plan Objectives

- Organize priority thematic AGC Working Groups
- Implement an appropriate coordination mechanism between Alaska Federal Executives and AMEC



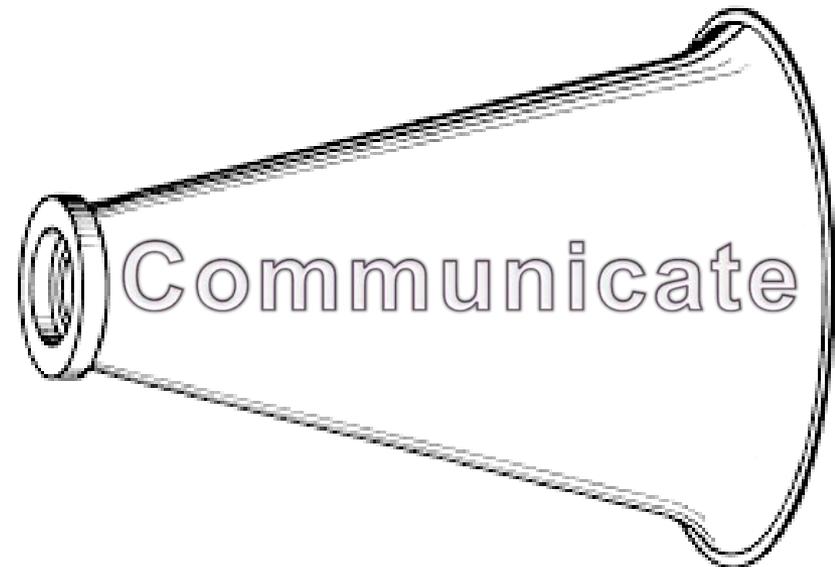
+ 18-Month Tactical Plan Objectives

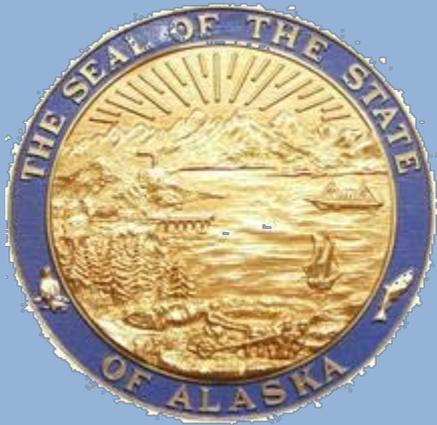
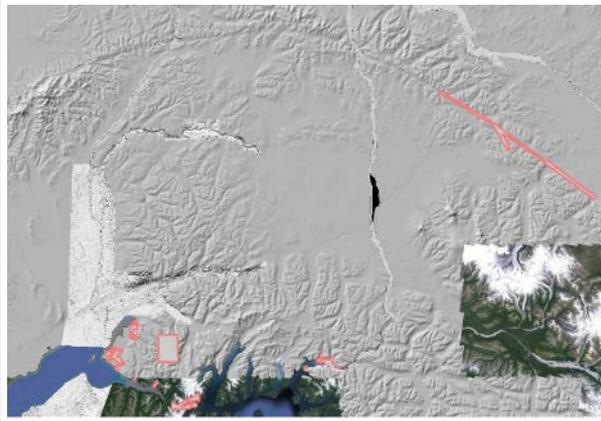
- Evaluate and report options for Aleutian elevation coverage
- Establish a State lidar priority plan
- Evaluate and report options for next-generation Alaska statewide imagery coverage



+ 18-Month Tactical Plan Objectives

- Communicate 'Pan-Arctic Digital Elevation Map' activities across AMEC, the Arctic Council, and the Arctic Spatial Data Infrastructure
- Prepare materials for future Alaska Mapping outreach activities

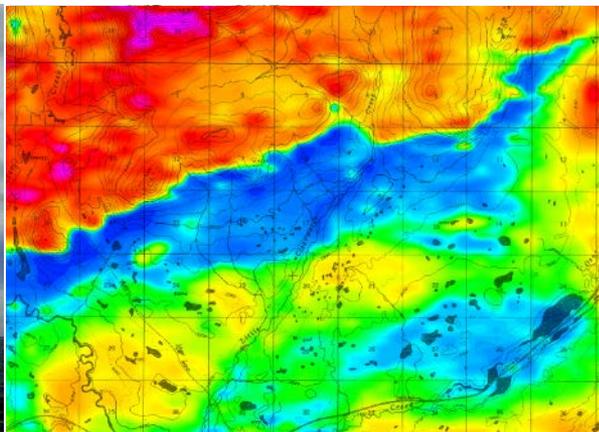




Alaska Geospatial Council

Commissioner Mark Myers, Chair

An update for the Alaska Mapping Executive Committee · Feb. 9, 2016



Alaska Geospatial Council

DNR Comm. Mark Myers, chair

State Memorandum of Agreement

Natural
Resources

Environmental
Conservation

Fish &
Game

University
of Alaska

Transportation
& Public
Facilities

Military &
Veterans
Affairs

Commerce,
Community &
Economic
Development

Members to be annexed

3 Federal
agencies,
inc. USGS

eral
ncy

eral
ncy

Alaska
Native
Corporation

Local
Gov't

Alaska Geospatial Council



Alaska Geospatial Council Updates

Alaska Geospatial Council New Members:

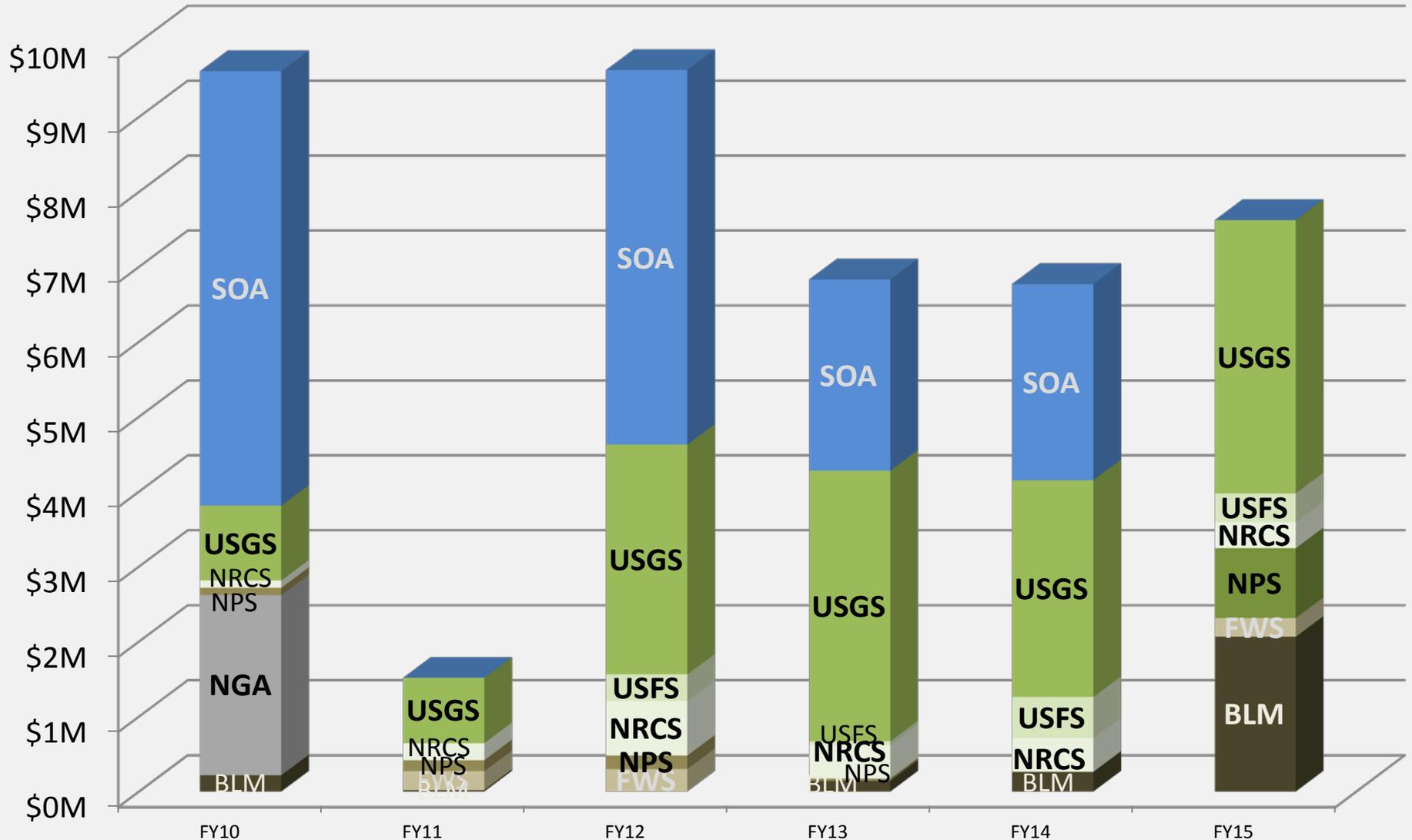
- **NOAA, DOI, Alaska Native Board of Executives**
-

\$1.3M for IfSAR acquisition and processing approved at Jan. 11 meeting (from 2014 State appropriation)

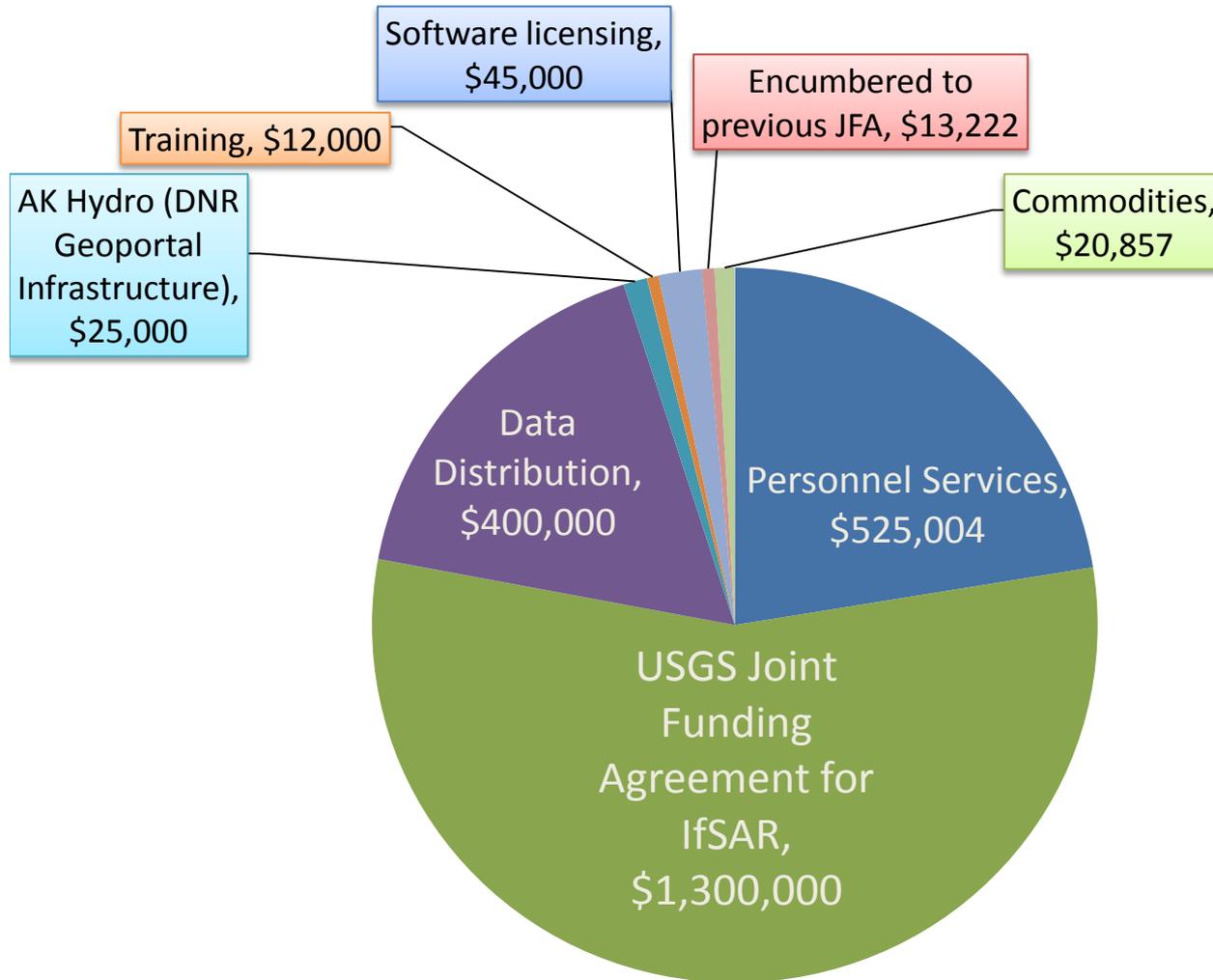
\$525k for imagery refresh from Coastal Impact Assistance Program

Alaska Geospatial Spending to Date

(Total \$42M: \$16M State, \$26M Federal)



Proposed State Budget, FY16-FY18



<http://arcg.is/1Ua2N40>

February 2016

FRAMEWORK DATA STATUS

+ Statewide Orthoimagery

Alaska Statewide Ortho-Imagery

The Statewide Digital Mapping Initiative (SDMI) satellite imagery map is the first consistent, high-resolution, high-accuracy digital basemap of Alaska. The project was funded and managed in partnership between Department of Natural Resources, Fish & Wildlife Coastal Impact Assessment Program CIAP, and the Geographic Information Network of Alaska (GINA) with help from multiple state and federal partners. The satellite imagery map establishes an imagery baseline for Alaska which will be maintained and updated under the direction of the Alaska Geospatial Council, the successor to the SDMI.

The Alaska Geospatial Council manages statewide framework datasets required for mapping, including imagery. To stay current and also to monitor changes in the landscape, imagery should be recollected every 3-5 years under the direction of the Alaska Geospatial Council.

The satellite imagery provides complete multispectral coverage of the state at 2.5-meter spatial resolution. This basemap has been licensed for use by State, Federal, Local Government, Tribal Non-Profit, and Academic use. The SPOT 5 satellite imagery used to create the ortho product is copyright (© CNES 2013, Distribution Spot Image S.A., France, SICORP, USA, all rights reserved) and includes scenes from 2009-2013.



Geographic Information
Network of Alaska
www.gina.alaska.edu



<http://agc.dnr.alaska.gov>

<http://www.alaskamapped.org>

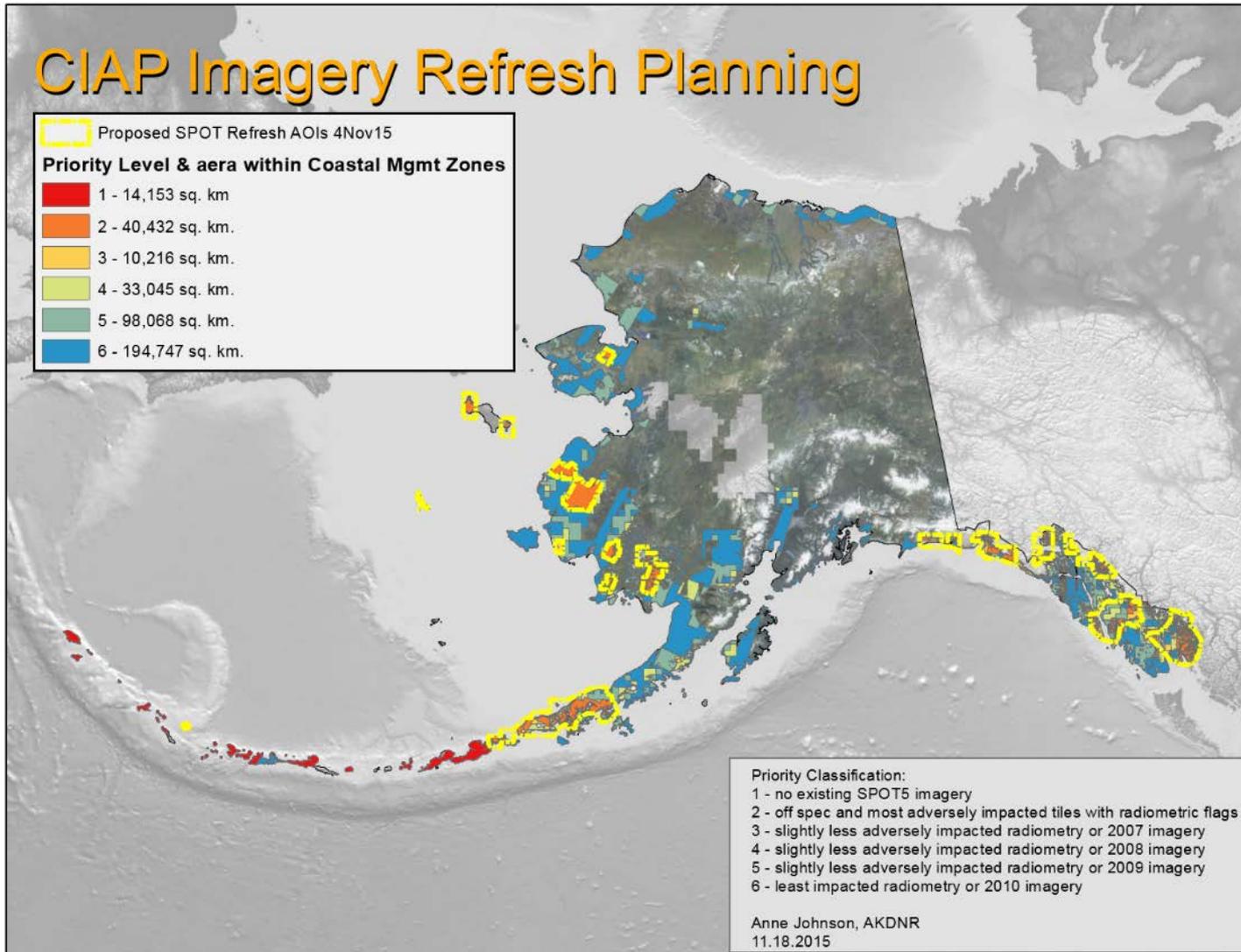


Example of the Alaska Statewide Ortho-Imagery products of the Deadhorse Airport on the North Slope of Alaska. The three image products, natural color, color-infrared, and panchromatic, shown above at 1:24,000 scale, clearly show infrastructure, roads, trails, vegetation, and hydrology.



Imagery Refresh Areas (100,000 sq. km)

2016 Coastal Impact Assessment Program funds

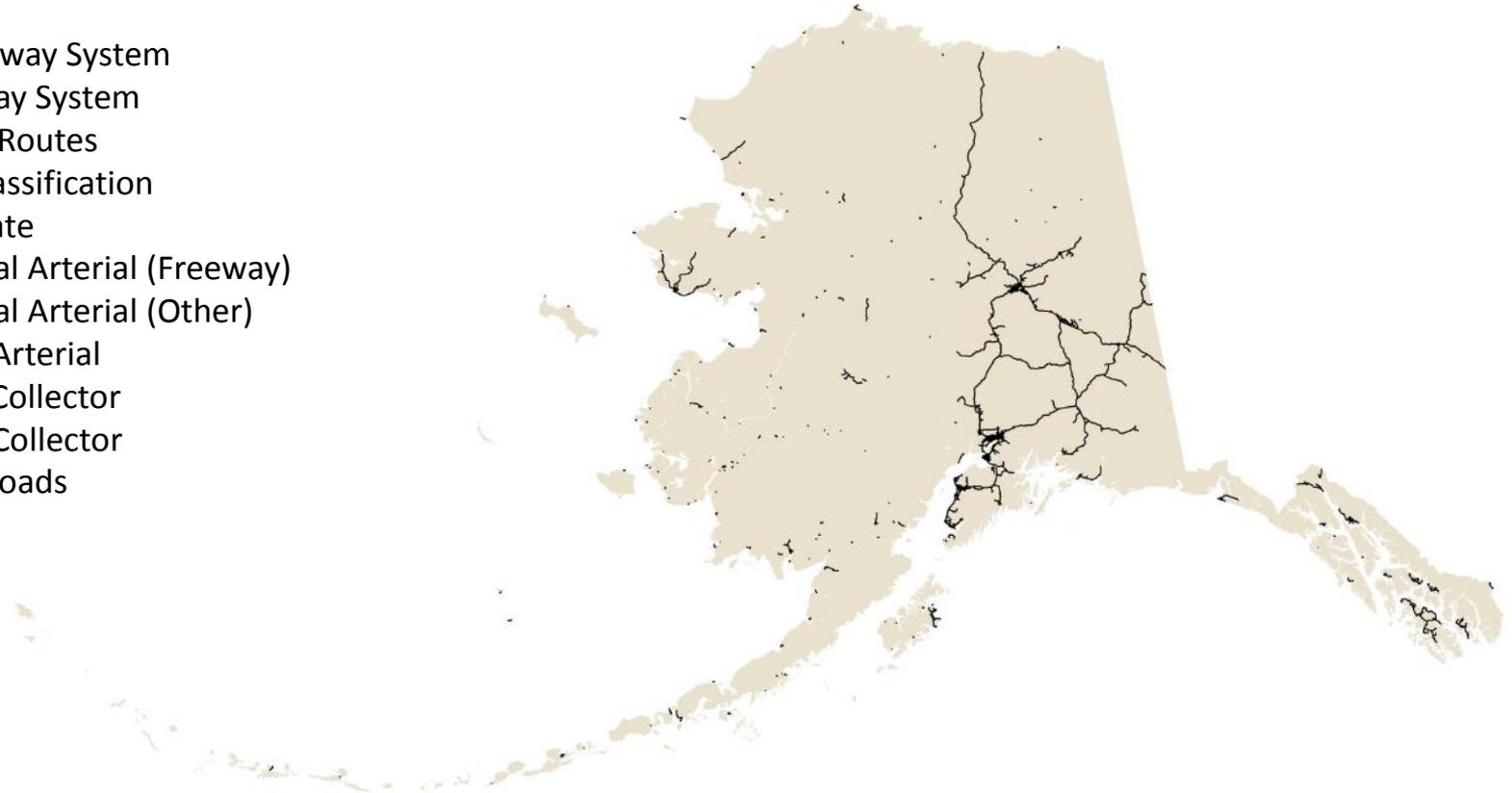


+ Transportation: Roads

Primary Network

2,876 Routes

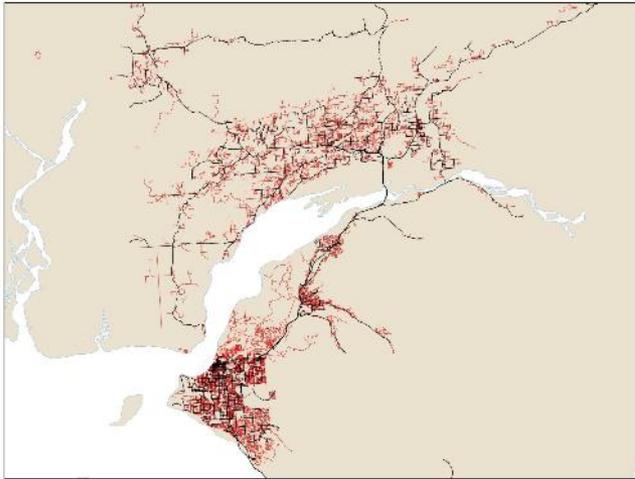
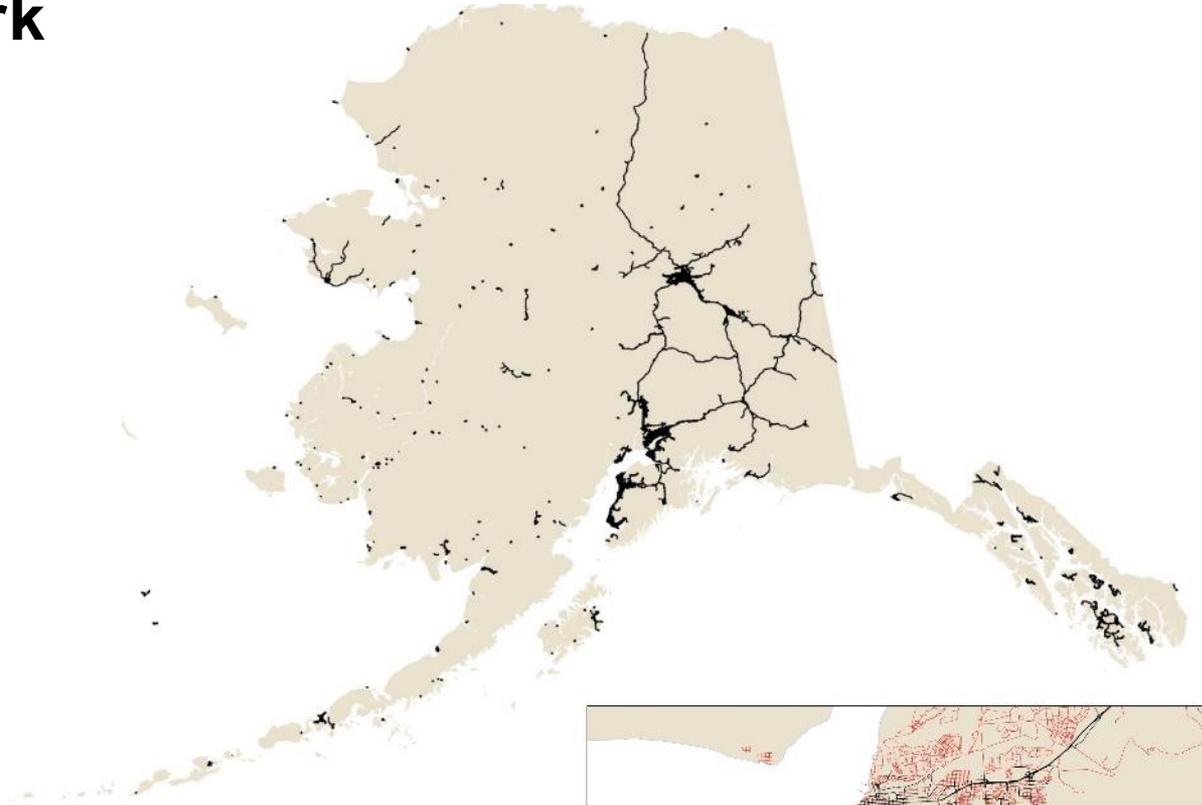
- ✓ National Highway System
- ✓ Alaska Highway System
- ✓ State Owned Routes
- ✓ Functional Classification
 - Interstate
 - Principal Arterial (Freeway)
 - Principal Arterial (Other)
 - Minor Arterial
 - Major Collector
 - Minor Collector
- ✓ Select Local Roads



Secondary Network

21,903 Routes

- ✓ All Local Roads



FHWA Expanded Requirements

- Memorandum from Office of Highway Policy Information & Office of Planning - expanded requirements
- Expand Primary Network to Include and submit all public roads in their LRS network
- DOT's as the Primary Authority over all public non-federal roadways
- All Roads Network Of Linear-referenced Data (ARNOLD)
 - Expand network to include all roads (Secondary Network)
 - ARNOLD Plan (federal)
 - Secondary Network Plan (state)

Federal & Alaska DOT&PF Business Needs

- Highway Performance Monitoring System (HPMS)
- Certified Public Road Miles (CPRM)
- Fiscal Management Information System (FMIS)
- Safety data on all public roads
- National Bridge Inventory on all public bridges
- Transportation for the Nation
- State Planning and Research

Current Tasks

- Restructuring route ID model
- Implementing ESRI Roads & Highway (route/LRS management)
- Transitioning to new enterprise GIS infrastructure and GDB environments
- Further Secondary Network clean up



Geodetic Control

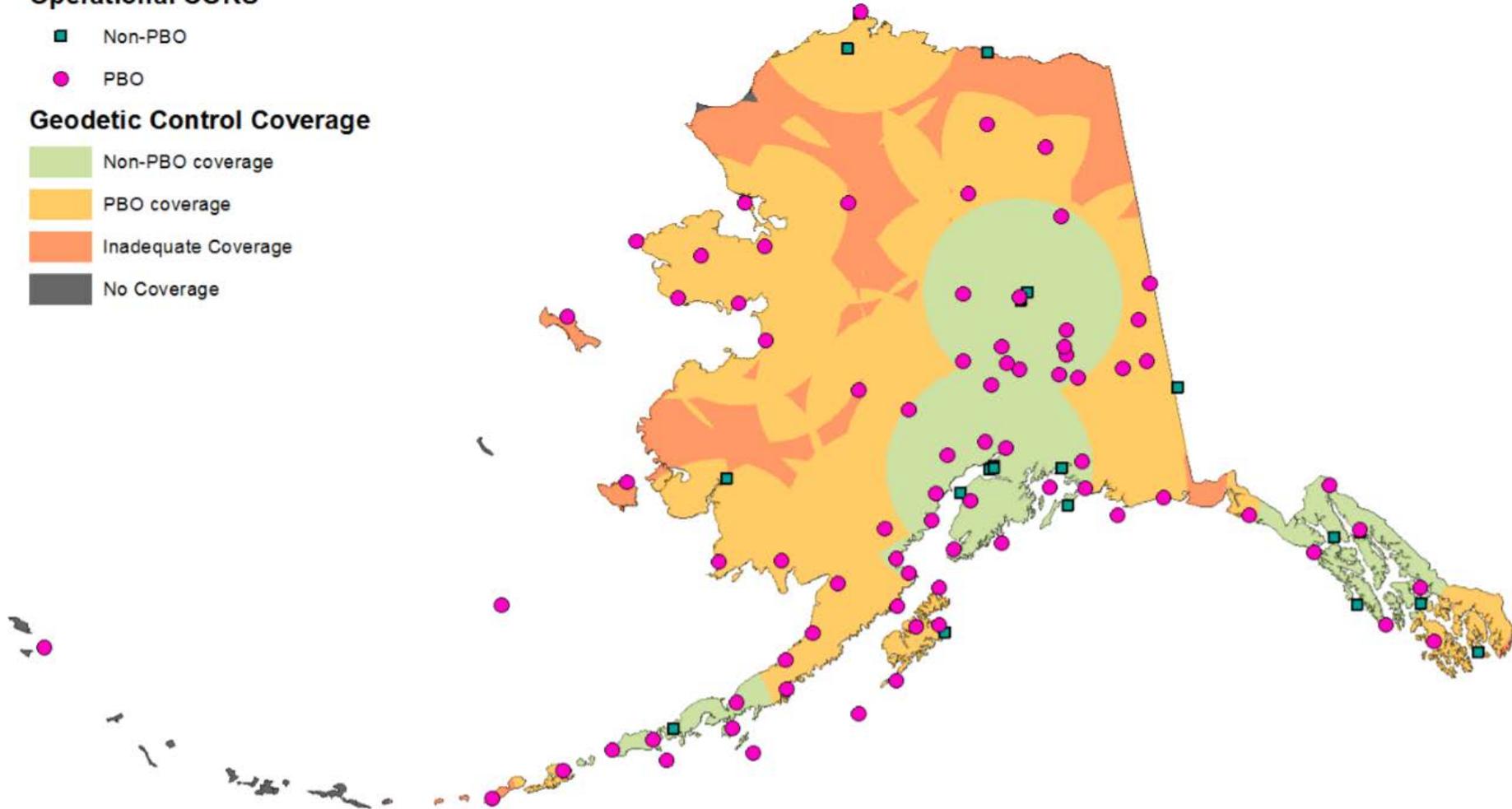


Operational CORS

- Non-PBO
- PBO

Geodetic Control Coverage

- Non-PBO coverage
- PBO coverage
- Inadequate Coverage
- No Coverage



USCG CORS Decommissioning:

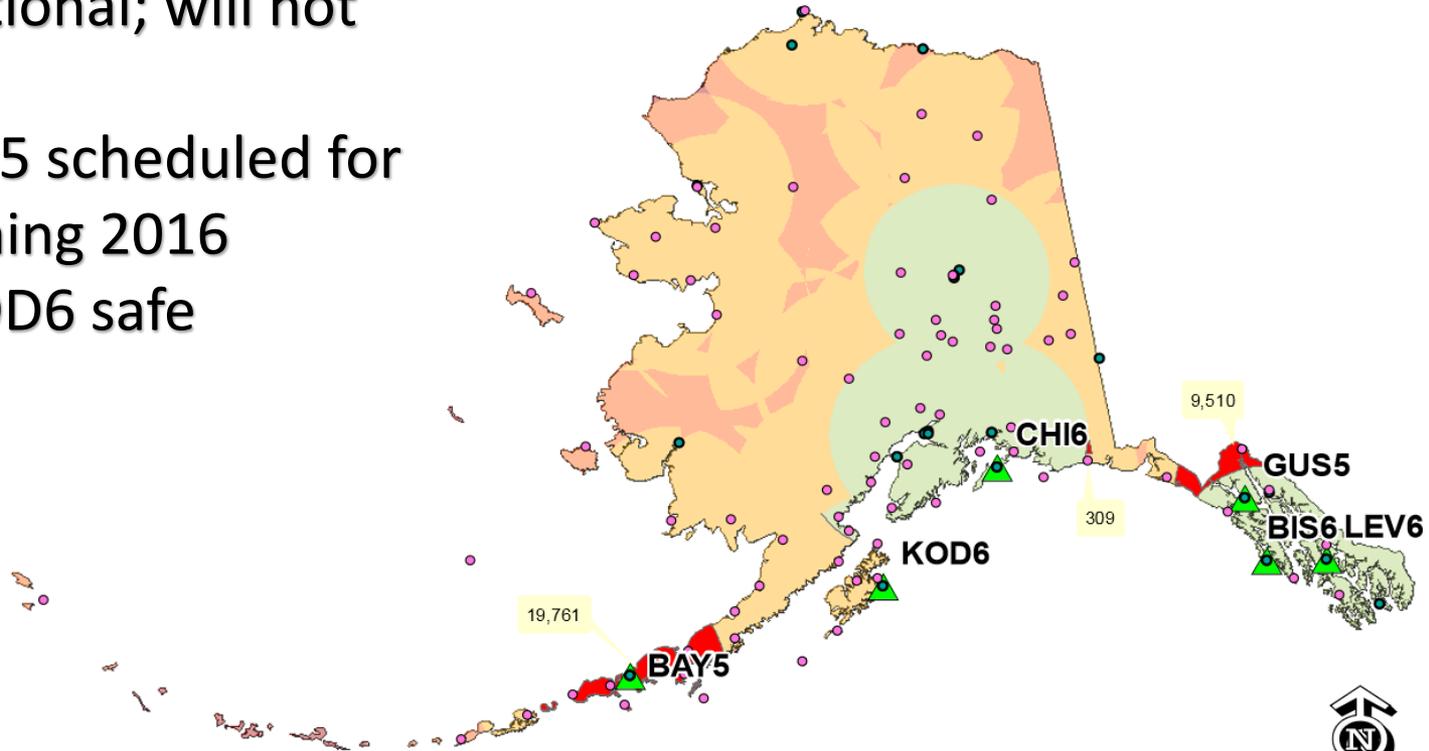
- CHI6 nonfunctional; will not be reinstated.
- BAY5 and GUS5 scheduled for decommissioning 2016
- BIS6, LEV6, KOD6 safe

Loss of coverage due to USCG CORS decommissioning if plate boundary observatory stations are also shut down.

Station ID	Area (sq. km.)
BAY5	19,761
GUS5	9,510
CHI6	309
BIS6	0
LEV6	0
KOD6	0

Legend

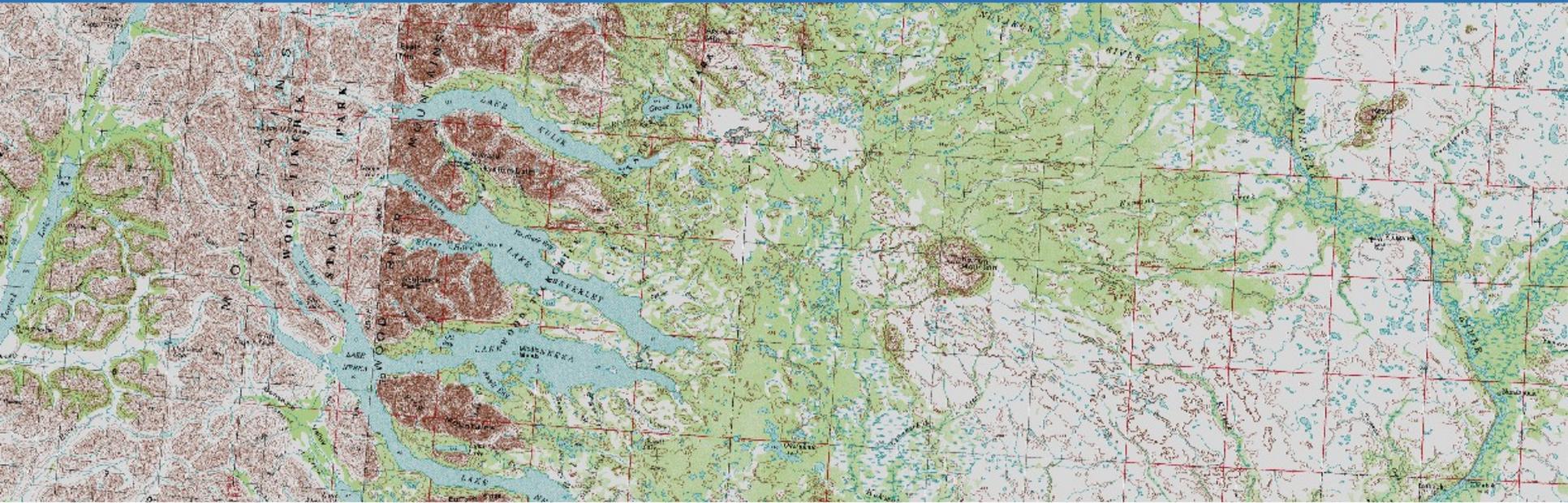
- Non-UNAVCO
- UNAVCO
- ▲ USCG proposed decommission
- USCG impacted coverage
- non-plate boundary coverage
- Plate Boundary Observatory coverage
- Inadequate Coverage
- No Coverage



1:20,000,000

MAPPING ALASKA'S WATER

THE ALASKA HYDROGRAPHY DATABASE



February 9, 2016

Alaska Mapping Executive Committee

Kacy Krieger

kekrieger2@uaa.alaska.edu

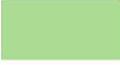
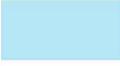
AK Hydrography Coordinator

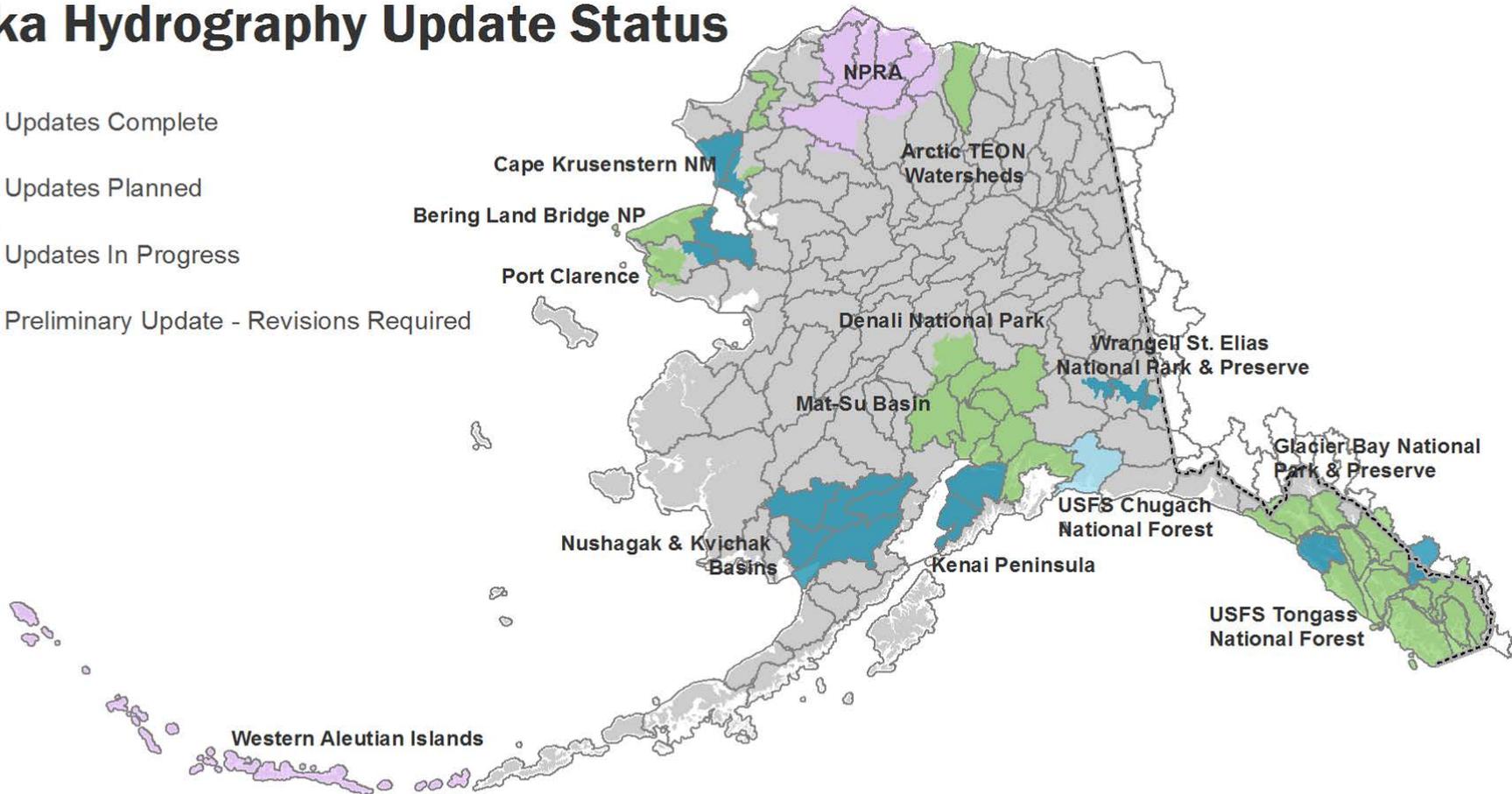
AHTWG Co-Chair

ACCOMPLISHMENTS

project status

Alaska Hydrography Update Status

-  Updates Complete
-  Updates Planned
-  Updates In Progress
-  Preliminary Update - Revisions Required

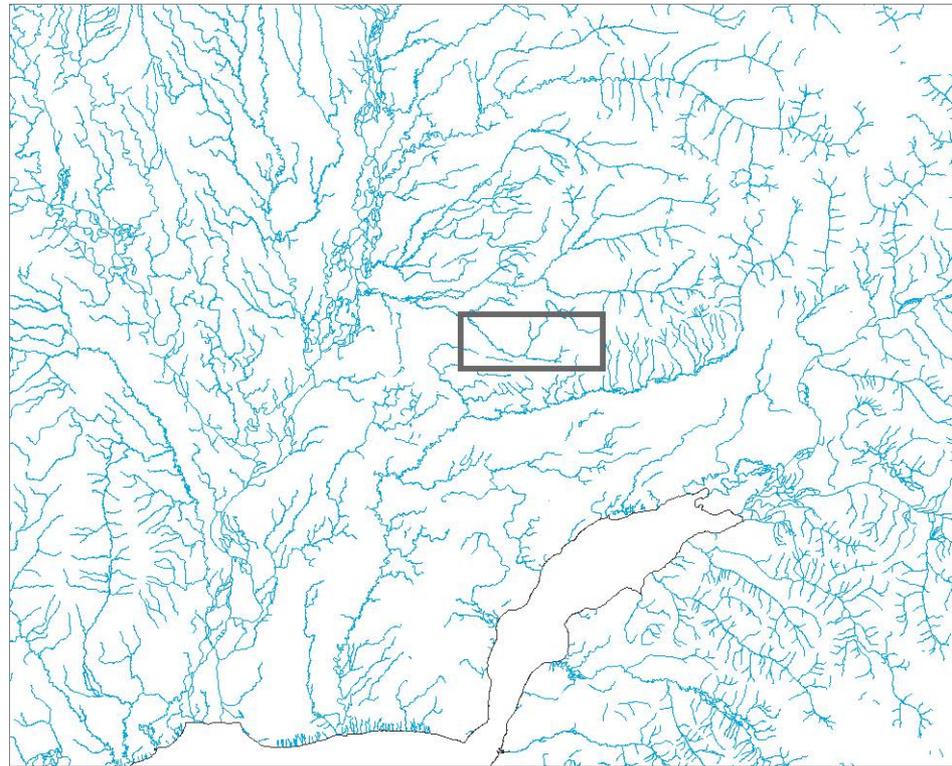


* Update status current as of January 19, 2016. Does not include ongoing maintenance by USGS NHD Program.
For more information, contact Kacy Krieger, Alaska Hydrography Coordinator, (907) 786-7749, kekrieger2@uaa.alaska.edu

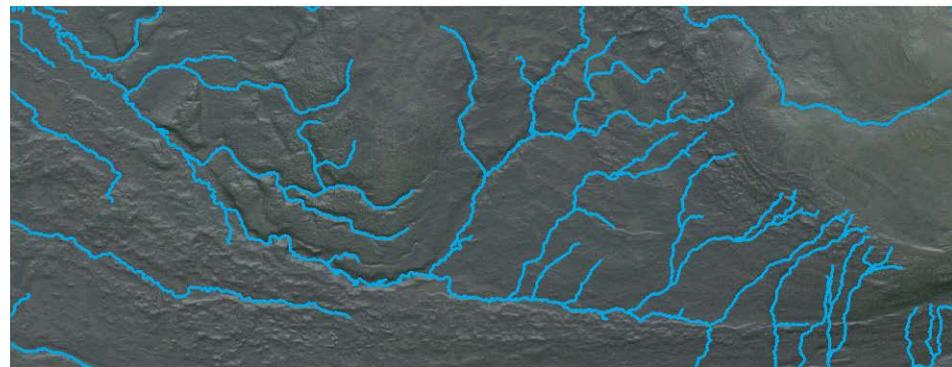
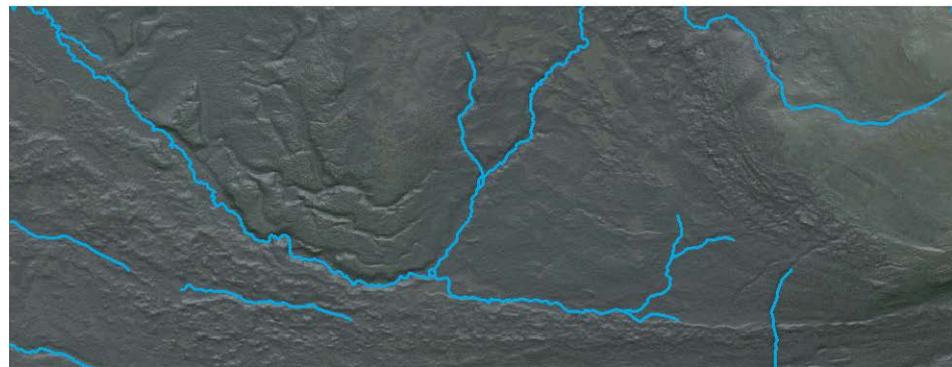
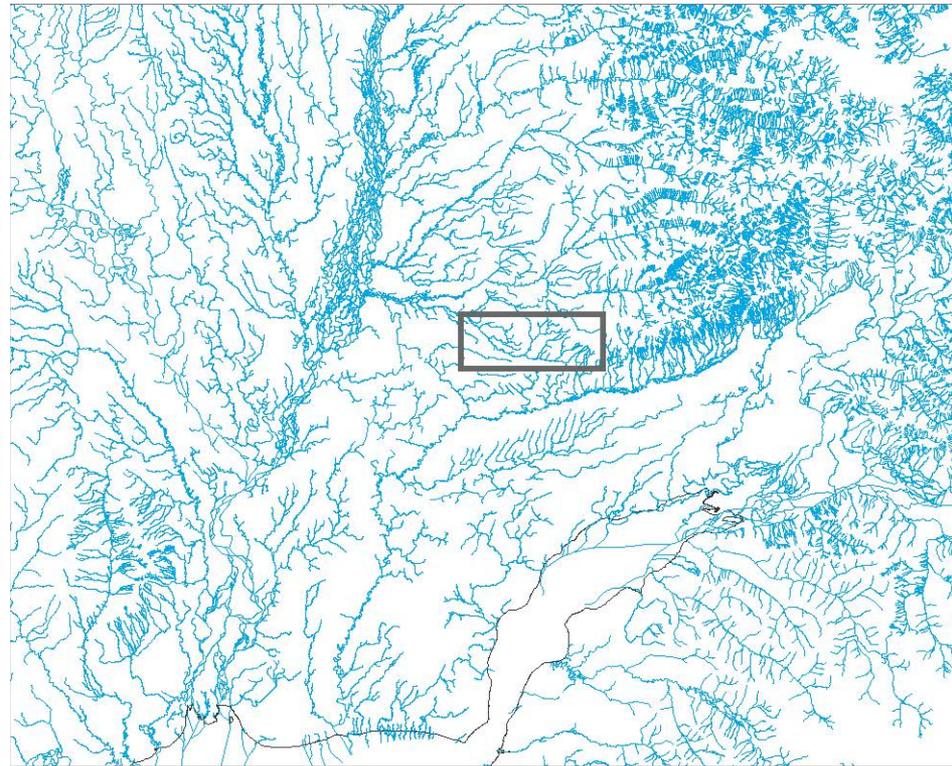


HYDROGRAPHY UPDATES

2009: Pre-Updates

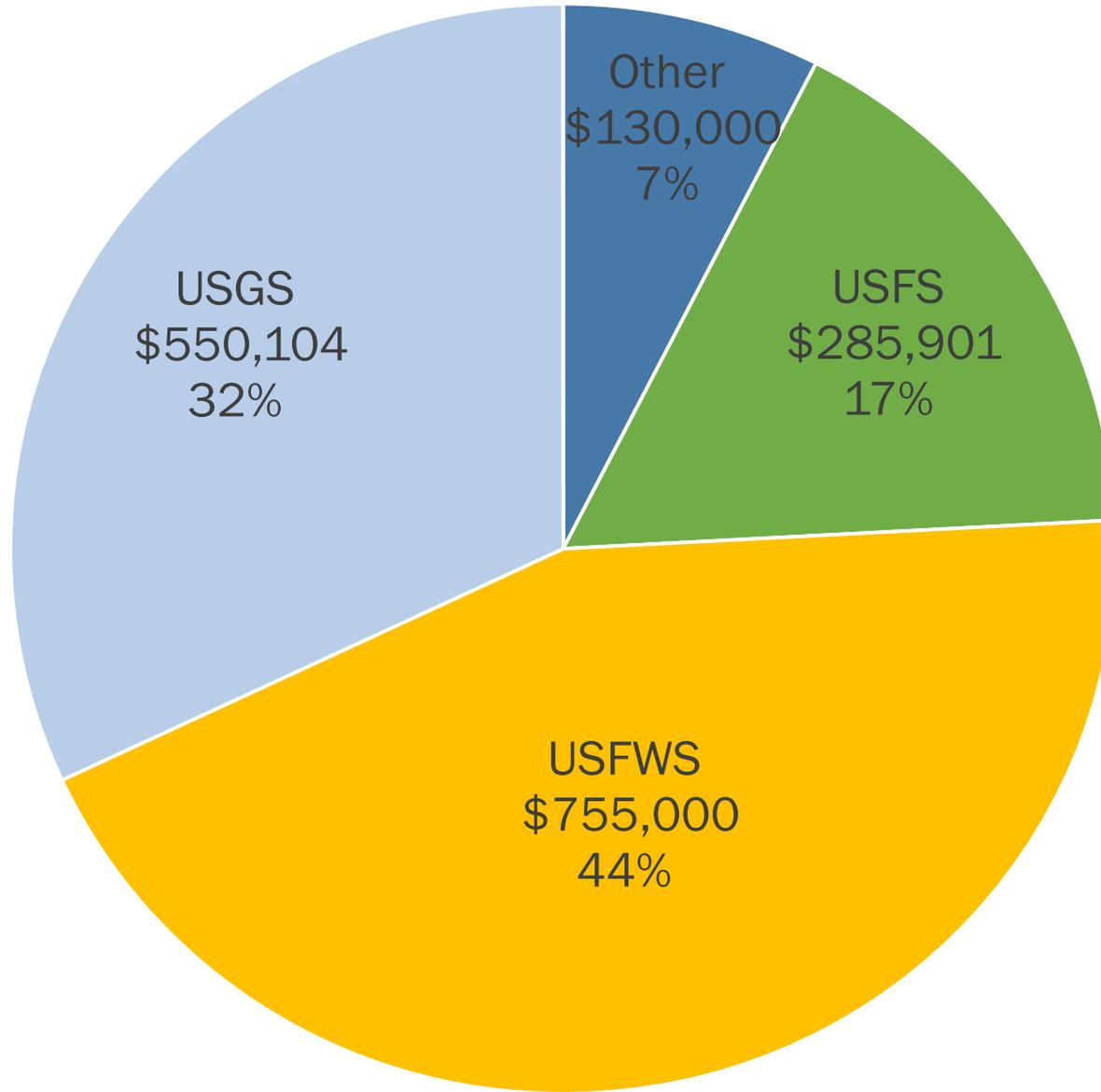


2015: Post-Updates



ALASKA HYDRO FUNDING SOURCES 2010-2016*

Total: \$1,611,005



* Totals do not include in-kind contributions, agency edits/updates or other work completed outside of AK Hydro.

ALASKA HYDROGRAPHY SUPPORT

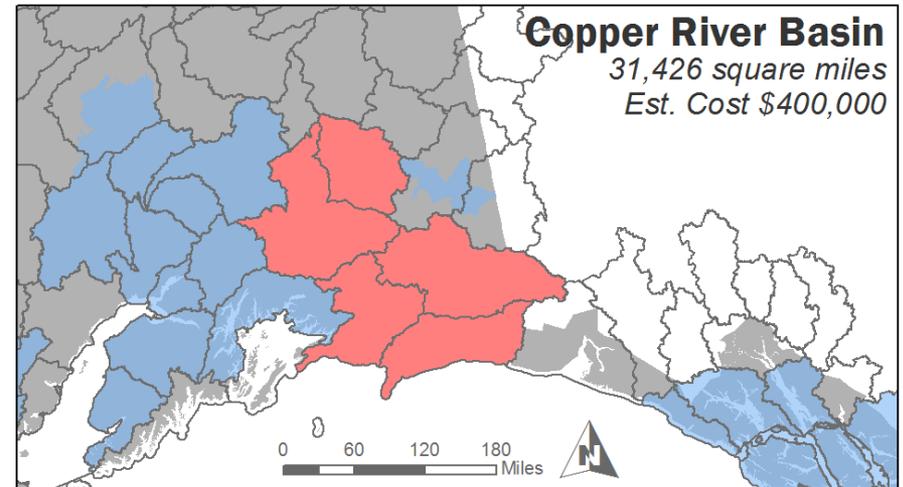
FY 2017

Alaska Hydrography Baseline Support

Category	Amount
Personnel	\$400,000
Data Model Support	\$15,000
IT Infrastructure	\$25,000
Baseline Requirements	\$440,000/year

Priority Region Updates

Project Updates \$400,000



FY 2017 ALASKA HYDROGRAPHY REQUIREMENT

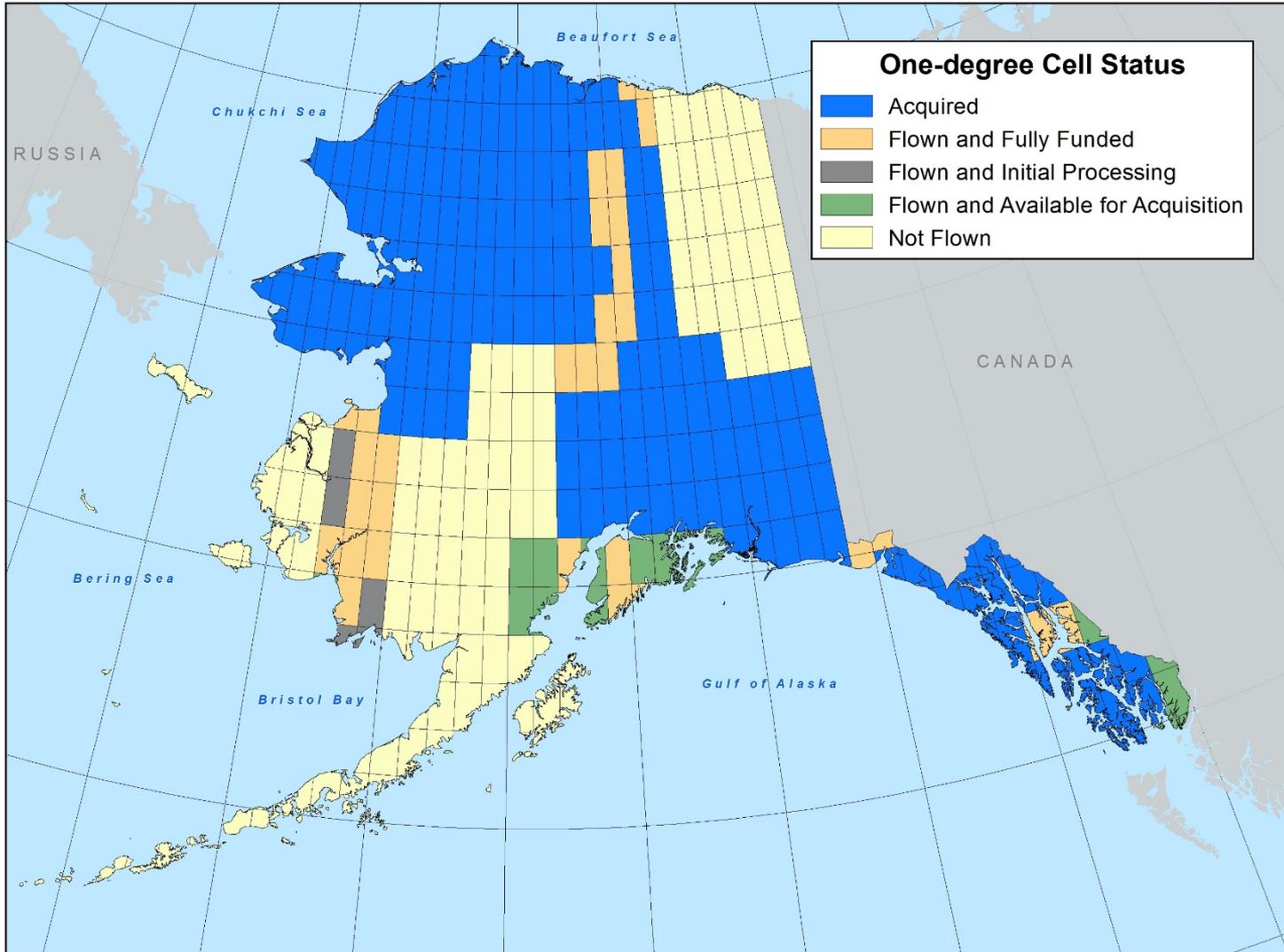
\$440,000/year to continue baseline hydrography work in Alaska

\$400,000 to complete hydrography updates in priority regions

- **Consider funding opportunities within your agency to support hydrography updates in Alaska.**
- **Come to the summer meeting with any ideas from your agency.**

+ Alaska IFSAR Acquisition Status

- 62% Statewide coverage is available or in work



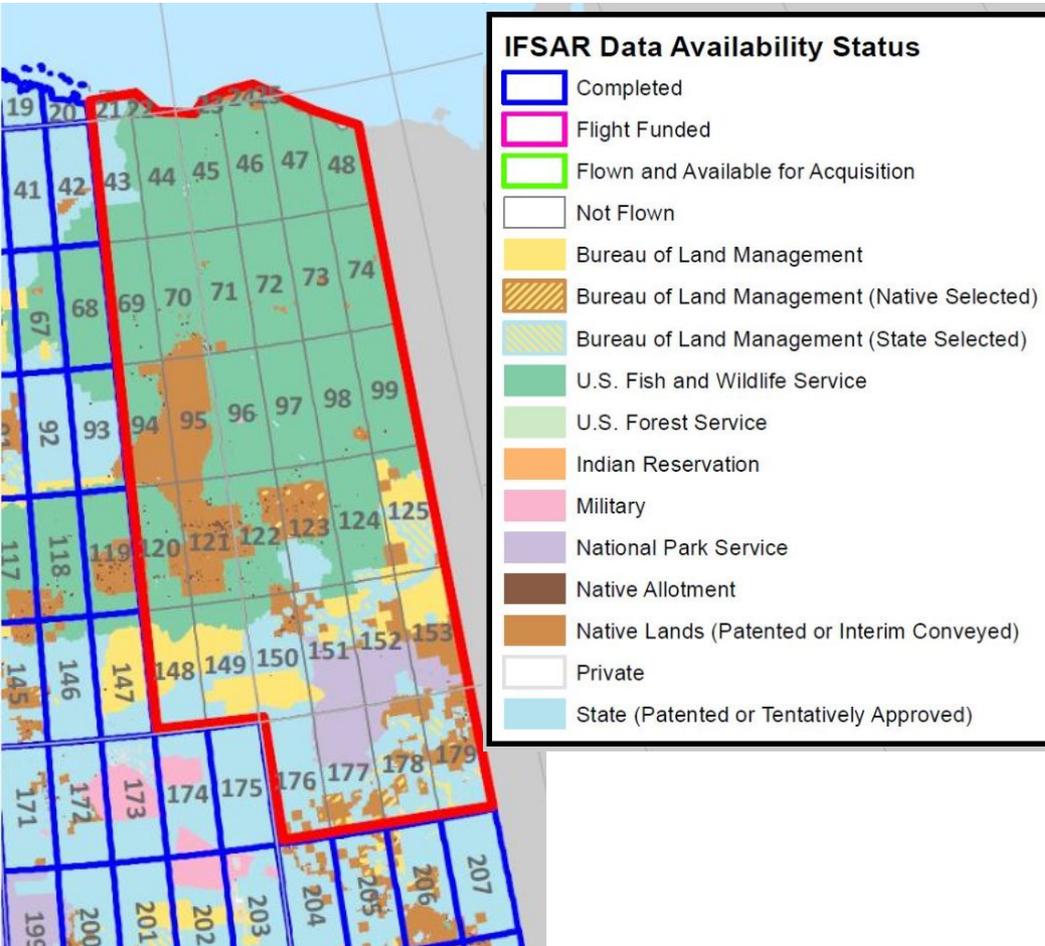
+ FY2015 Ifsar Contributions

Approximately \$2.8M came from EOY funds

Contributor	Amount
BLM	\$2,062,149
FWS	\$250,000
NPS	\$931,581
NRCS	\$350,000
USFS	\$383,127
USGS	\$3,646,683
TOTAL	\$7,623,540

+ FY2016 Alaska IFSAR Priorities

FY2016 Goal 70% Coverage



34 one-degree cells in NEAK

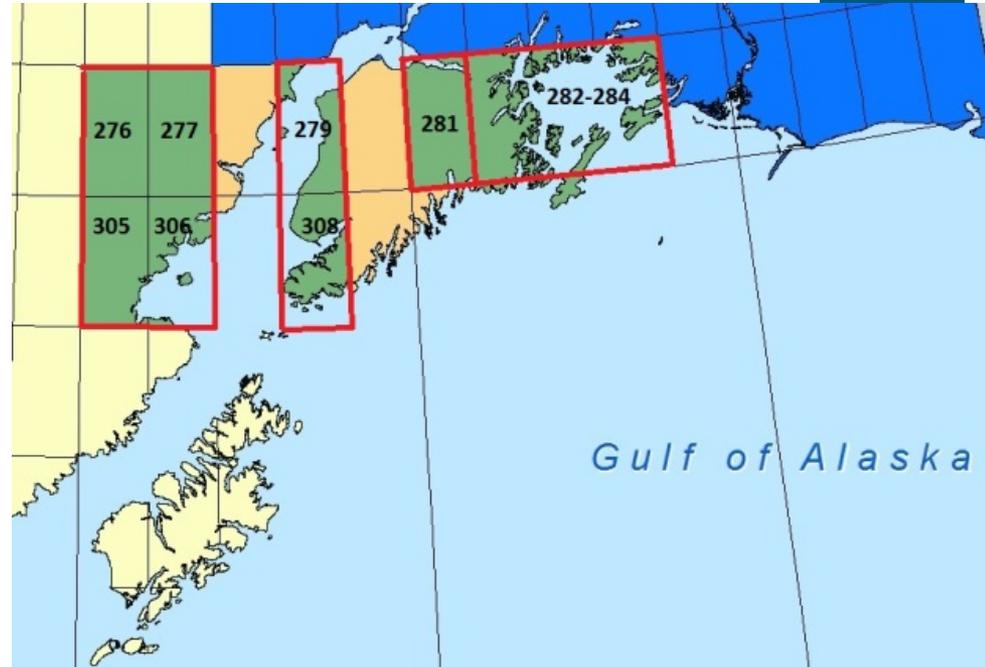
- 63,442 square miles
- \$6.7M to fully fund entire area to final processing
- \$4.6M committed to date

+ FY2016 Alaska IFSAR Priorities

FY2016 Goal 70% Coverage

10 overcollect cells on Kenai Peninsula as follows:
Peninsula as follows:

- Cells 279, 281, and 308 are priorities for multiple agencies (\$670K)
- Cells 282, 283, and 284 are USFS priorities (\$466K)
- Cells 276-277 and 305-306 are NPS priorities (\$1.2M)



+ FY2016 Alaska IFSAR Priorities

FY2016 Goal 70% Coverage

40

Fund final processing of 7 remaining 'Flight and IP' cells in SW Alaska

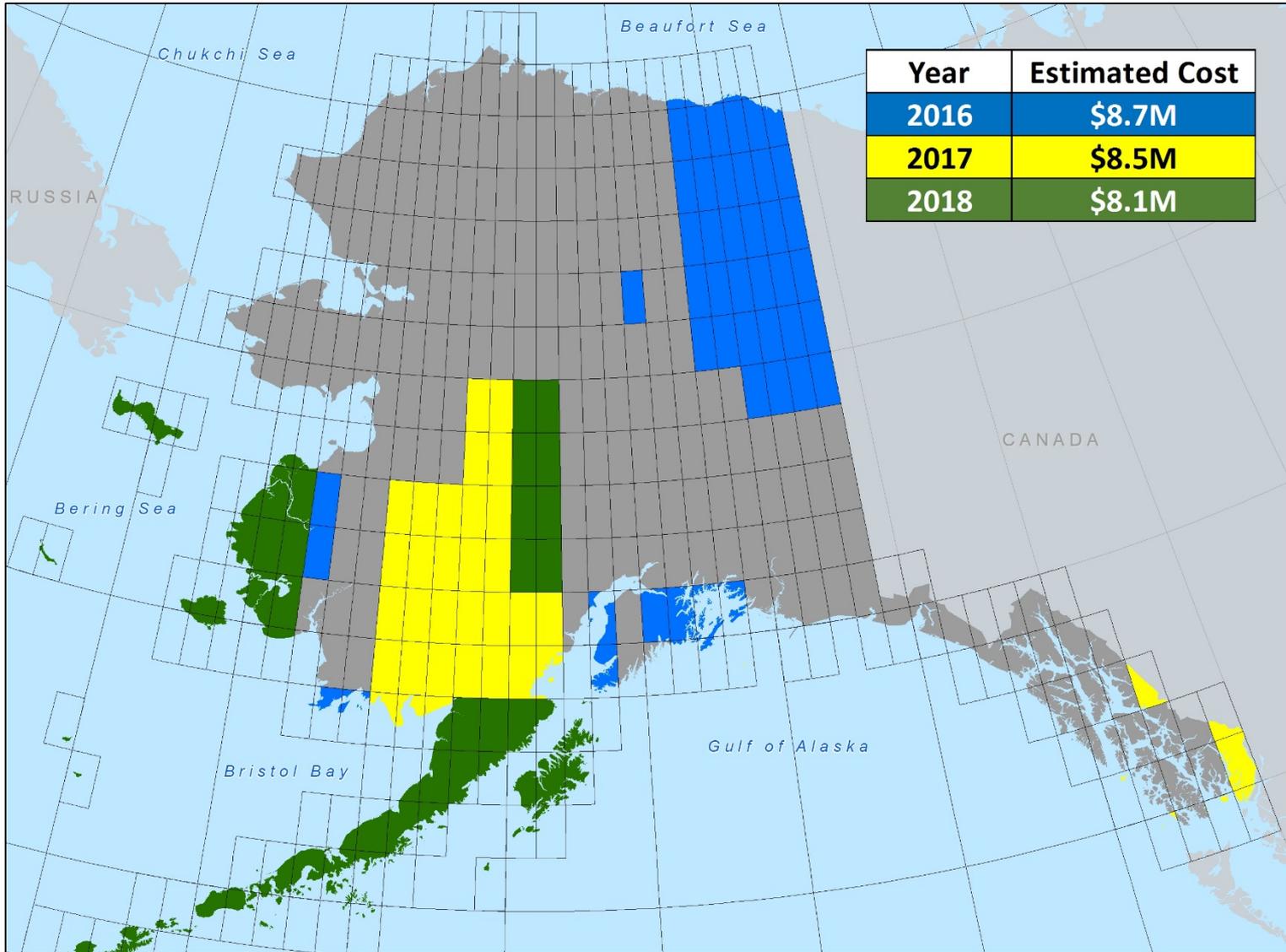
- 7971 square miles, or 1.3% of AK statewide coverage
- Cells 299 and 325 are priorities for USFWS
- \$190K to fund final processing of all 7 cells



+ 3-Year Ifsar Acquisition Plan

- 'Idealized Plan' was prepared by the Technical Subcommittee for AMEC consideration
- Plan is required to revise the Budget Cross Cut document
- Seeking Committee approval of this planning document

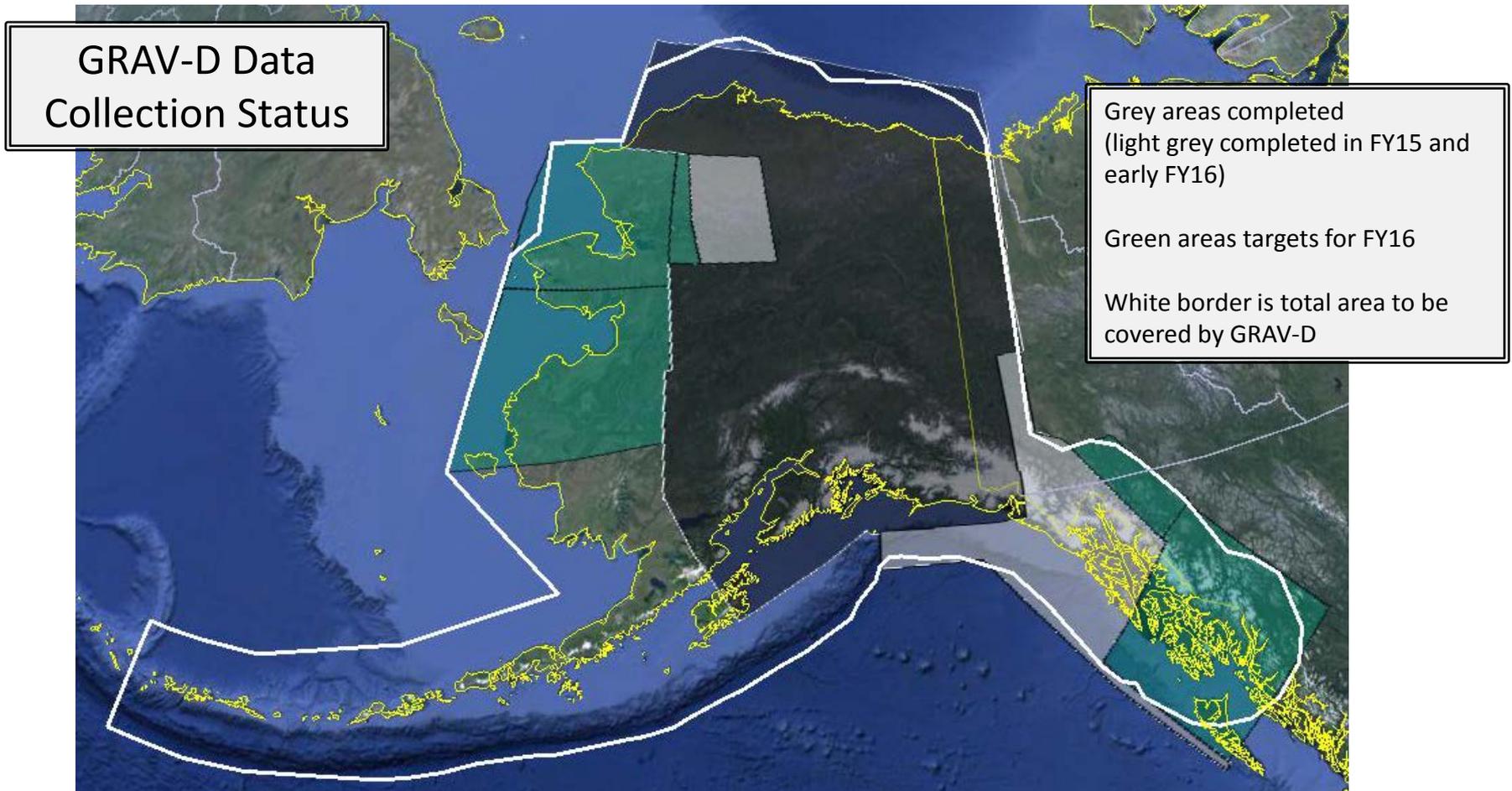
+ Idealized 3-Year Ifsar Acquisition Plan



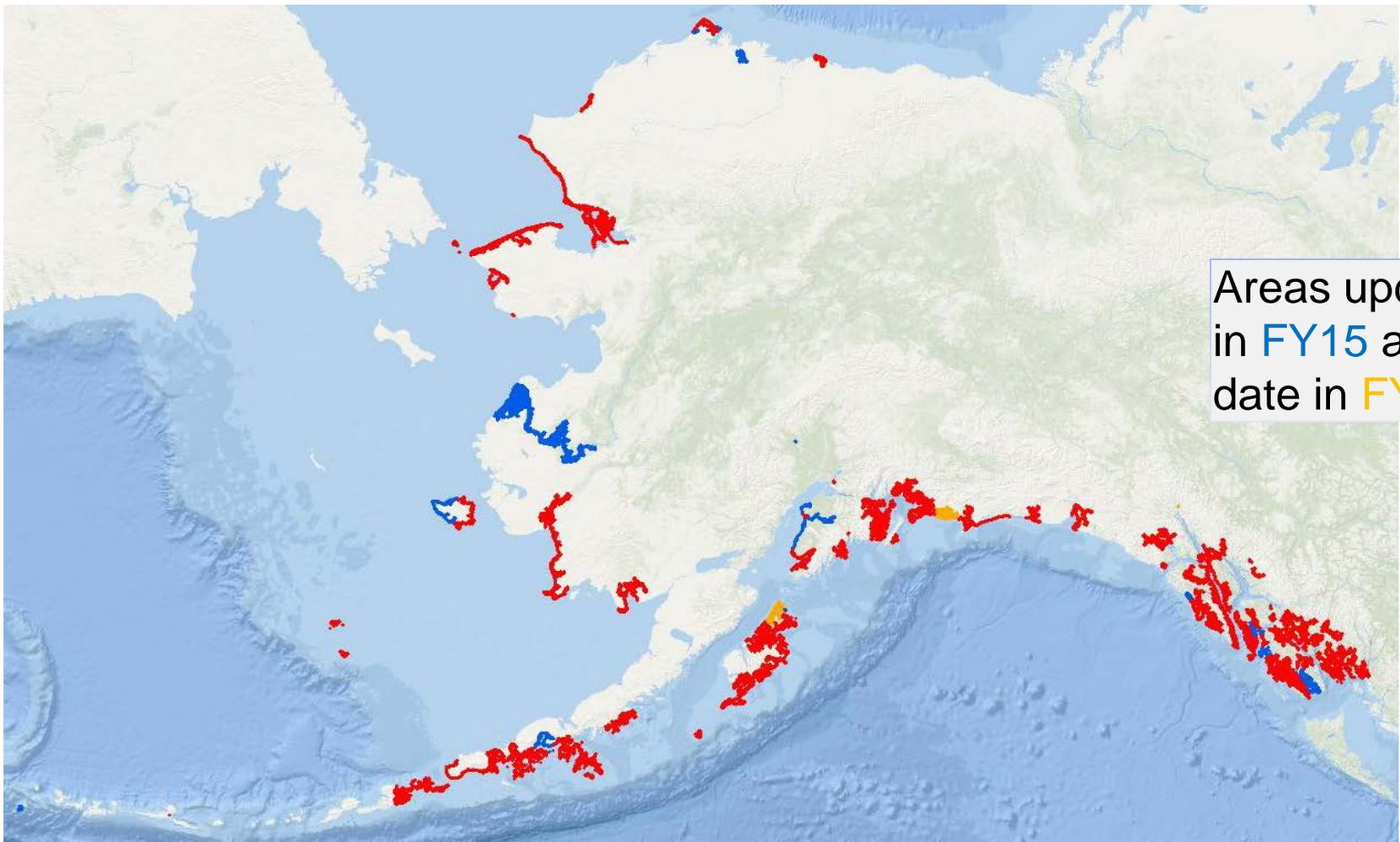


NOAA GRAV-D Update

- GRAV-D will be collecting airborne gravity data in southeast and western AK in FY16

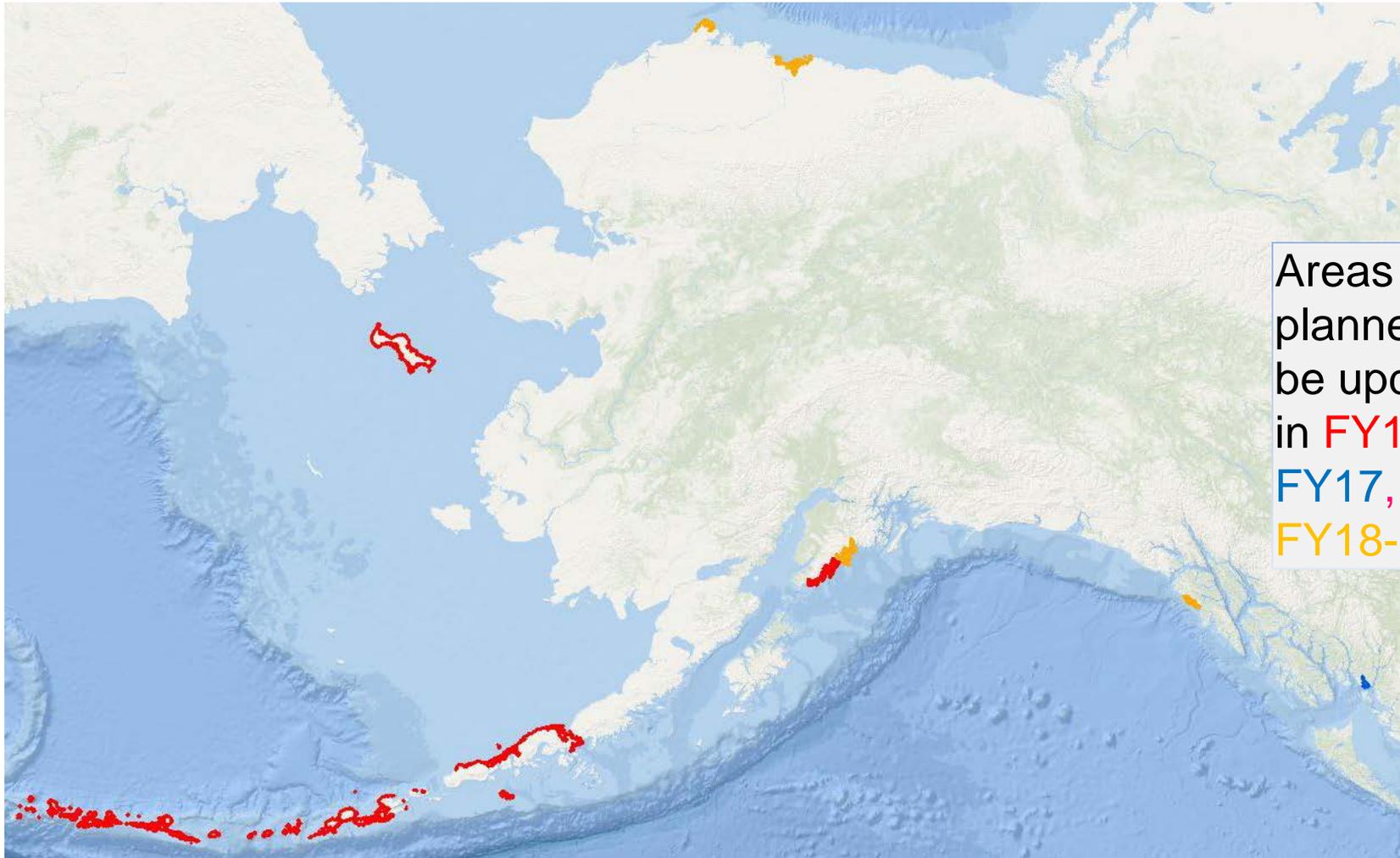


+ Current status of NOAA Shoreline



Areas updated
in **FY15** and to
date in **FY16**

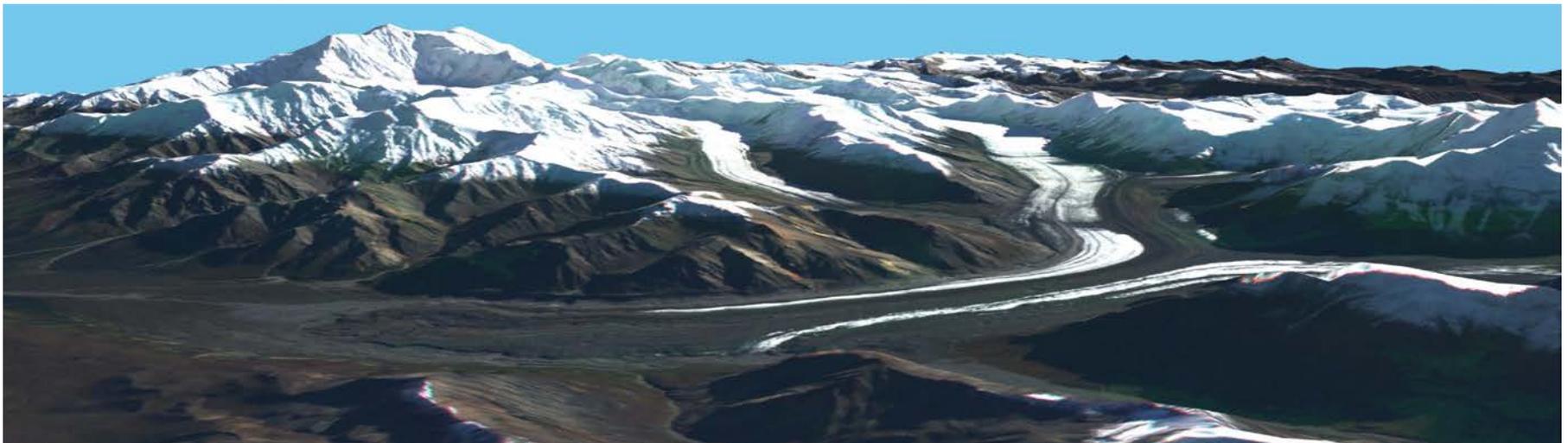
+ NOAA Planned Shoreline Updates



Areas planned to be updated in **FY16**, **FY17**, and **FY18-19**

+ Action Items to Consider

- Adopt proposed 3-Year ifsar acquisition plan
- Support a meeting to update the Budget Cross Cut
- Meet to finalize 18-month tactical plan
- Seek NHD funding opportunities and report findings at the summer 2016 AMEC meeting
- Seek funding to acquire proposed 2016 priority ifsar cells, and ensure 70% statewide coverage is surpassed in FY2016
- Consider June 21, 2016 in Anchorage for summer meeting



+ Brief Look at USGS Mapping History

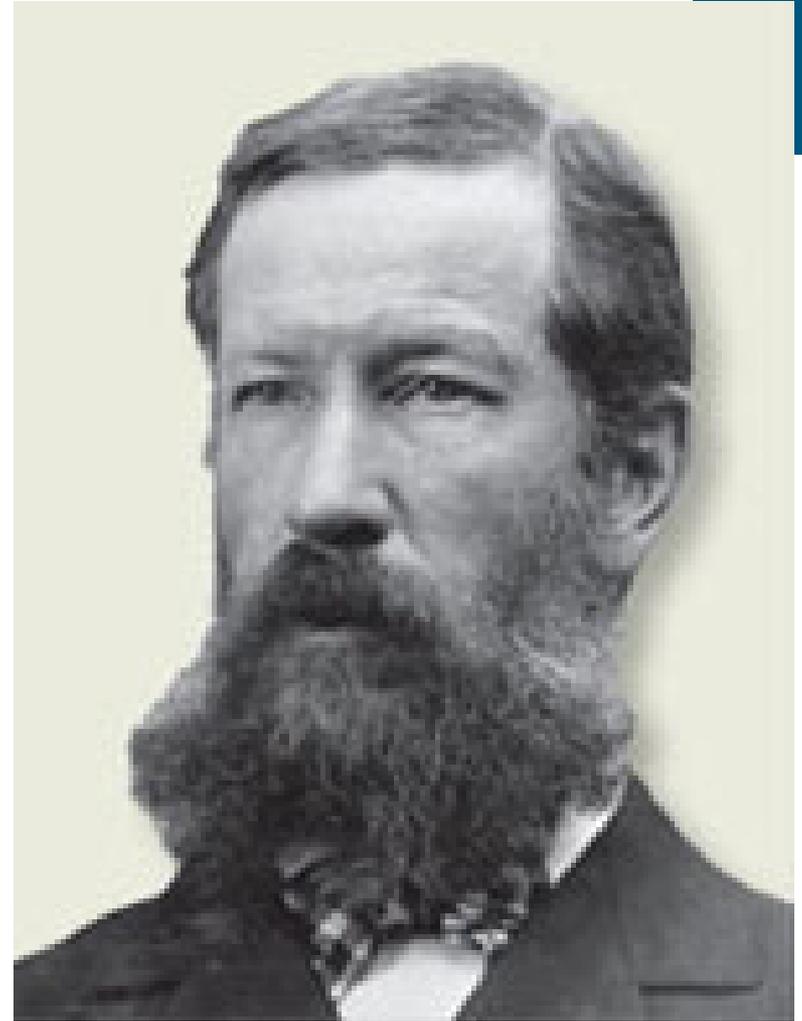
- John Wesley Powell, 2nd USGS Director, in testimony to Congress on December 5, 1884:

“A Government cannot do any scientific work of greater value to the people at large than by causing construction of proper topographic maps of the country.”



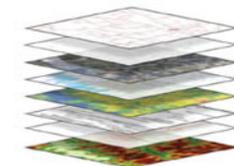
+ Brief Look at USGS Mapping History

- Henry Gannett was Chief Geographer of the USGS from 1882-1914
- Gannett is considered the father of topographic mapping in the United States
- One of six founding members of the National Geographic Society, and founder of the American Association of Geographers (AAG)
- *Authored 'A Manual of Topographic Methods'* in 1893
- Organized the Board of Geographic names with T.C. Mendenhall in 1890



+ USGS Henry Gannett Award

- Presented bi-annually by USGS to recognize distinguished contributions to the topographic mapping of the United States
- Contributions must be significant and sustained over many years
- Previous Recipients
 - 2009, Roberta Carroll, USFS
 - 2011, Keven Roth, USGS and Tommy Dewald, US EPA
 - 2013, Dr. Cynthia Brewer, Pennsylvania State University



+2015 Henry Gannett Award Selectee

50

- USGS is pleased to present the 2015 Henry Gannett award to the State of Alaska's Nick Mastrodicasa, Co-Chair of the Alaska Geospatial Council's Elevation Working Group



+ Adjourn

- Closing comments
- Adjourn until next meeting

