

NOAA Semi-Oblique Aerial Image Products in Alaska



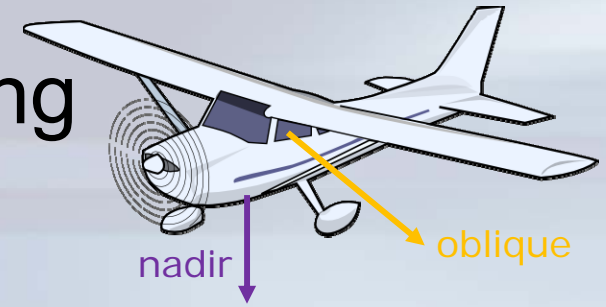
*South Naknek,
May 26 2016*

NOAA NOS



National Oceanic and Atmospheric Administration

The many angles of coastal imaging



Nadir

- Down-looking
- Like a map (if properly tied to control)



Hooper Bay Airport, 2015
Alaska Division of Geological & Geophysical Surveys

<http://dggs.alaska.gov/pubs/id/29548>

Oblique

- Angled viewpoint
- Vertical surfaces/features are more visible



Hooper Bay Airport, September 15 2015
Alaska ShoreZone

via NOAA Fisheries at
<https://alaskafisheries.noaa.gov/mapping/szflex/>

or via Alaska Ocean Observing System (AOOS)
<http://www.aos.org/new-shorezone-imagery-now-available-through-aos/>



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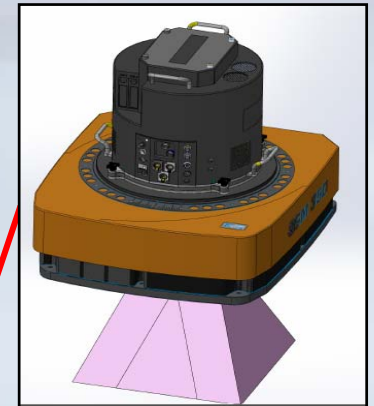
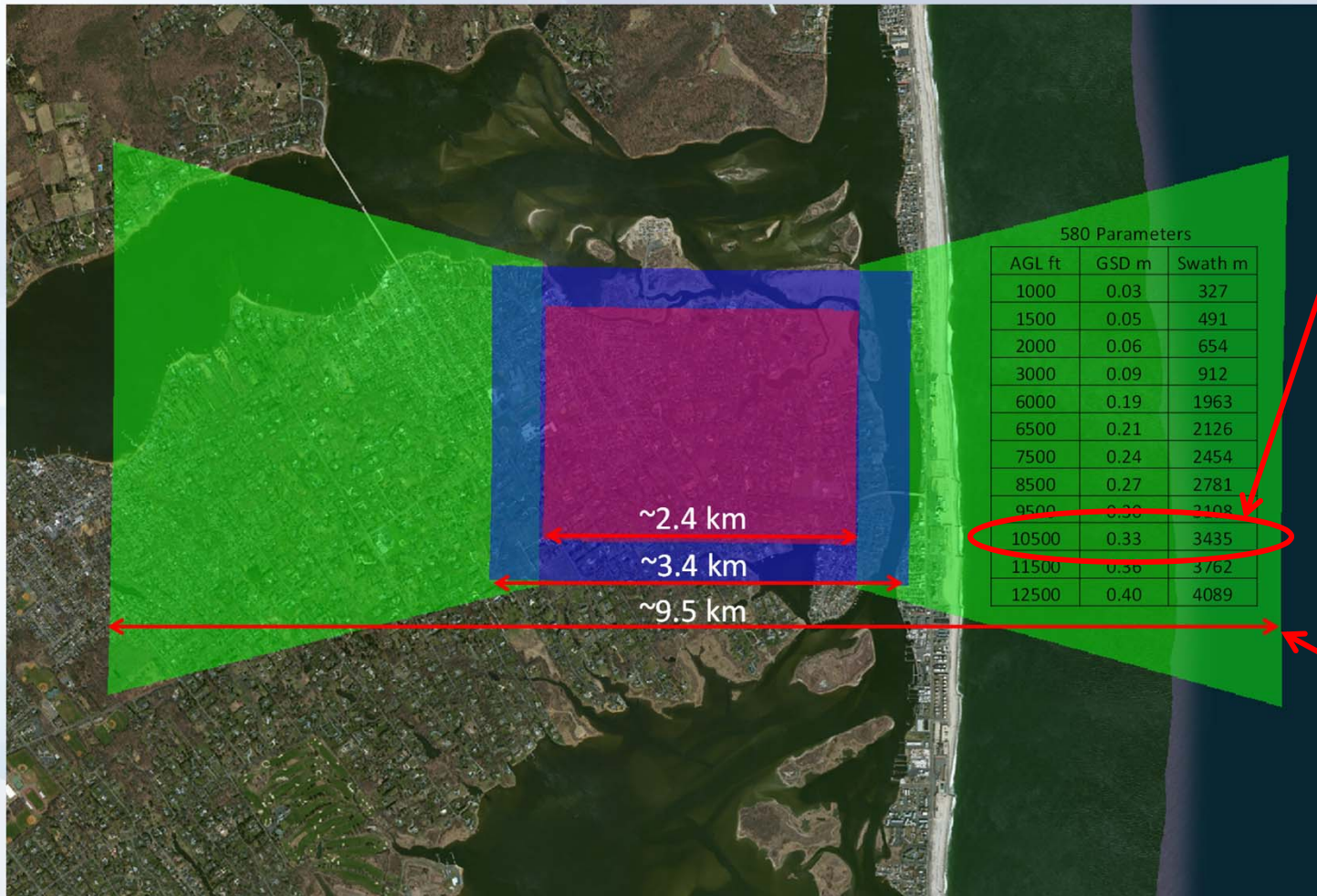
Semi-Oblique (a hybrid)

Hooper Bay Airport, May 27 2016
NOAA NGS Remote Sensing Division

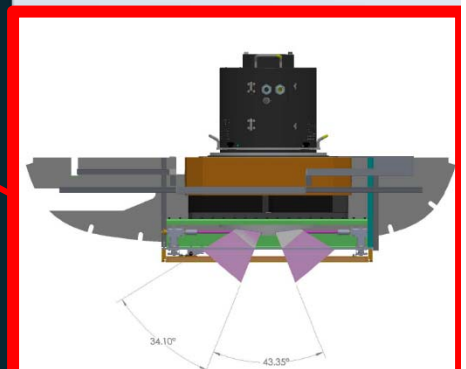
via NOAA Coastal Imagery Viewer
http://geodesy.noaa.gov/storm_archive/coastal/viewer/index.html



Camera Resolution and GSD



King Air typical nadir flying height
Camera: 80MP RGB, 60MP NIR



Oblique cameras (2) are 39MP and are centered 37.5° off nadir

Coverage at 10,500 ft for 439 (Old System) (Red), 580 (Blue) and 539 Oblique (Green)

Online semi-oblique image browsing/selection

Coastal Imagery Viewer [About](#) [Contact](#) [Download](#) [Tools](#)

2015 Imagery 2016 Imagery

ALASKA YUKON

Nome Fairbanks Anchorage Whitehorse Juneau Sitka

Acquired: May 29 2016
Image ID: S15070925
[Link to full resolution image](#)
[Link to .vrt for image](#)

NATIONAL GEODETIC SURVEY

NOAA Remote Sensing Division
Spring 2016 semi-oblique image collection shown in grey

Lon: -159.968669
Lat: 58.817712
USNG: 4V DL 44055 20159

© Mapbox © OpenStreetMap Improve this map

Leaflet | NOAA Imagery

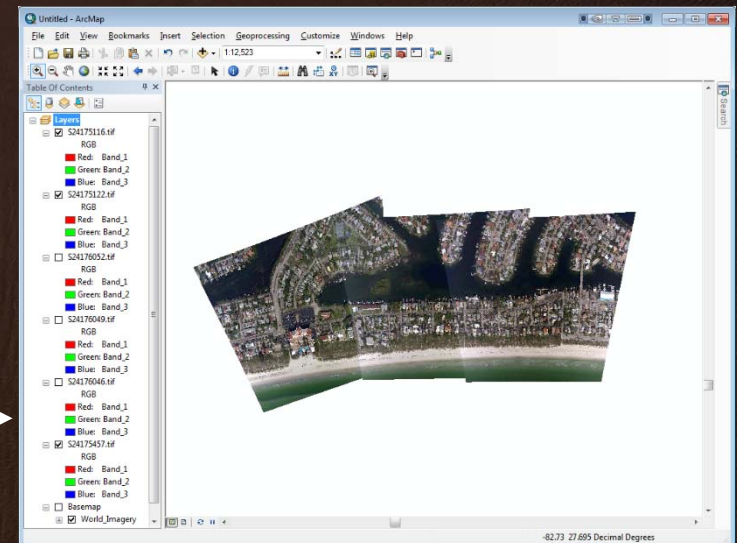
Coastal Imagery Viewer

in-browser coordinate display (lat/long & USNG)

NOAA Semi-oblique Image Information



- Rapid collection (~20% of Alaska in <2 weeks)
- Pre-event oblique imagery for Arctic coastlines
- Specifications:
 - NOAA King Air flying altitude = 3,500' to 5,500' AGL
 - 60 mm camera lens, at 37.5° off-nadir, 39 Megapixel images = Average Ground Sample Distance of 15 to 25 cm
- Geo-referenced, GIS-ready
 - JPEG compression, pre-built pyramids, and GeoTiff
 - Drag & drop into GIS OR in-browser coordinate display
- Multiple perspectives provided by flight lines
- Complimentary to other oblique and nadir image collection projects





Unalakleet, June 1 2016
NOAA NGS Remote Sensing Division



Kwigillingok outer coast, May 27 2016
NOAA NGS Remote Sensing Division



Meshik site, Port Heiden, May 26 2016
NOAA NGS Remote Sensing Division

Hold for slide on semi-oblique image
addition to ShoreZone flex site
<https://alaskafisheries.noaa.gov/mapping/szflex/>

In progress, by:
Steve Lewis (Alaska NMFS)

w/ support from:
Jon Sellers
Jason Woolard



National Oceanic and Atmospheric Administration

Halibut Cove, May 22 2016
NOAA NGS Remote Sensing Division



National Oceanic and Atmospheric Administration

**Please check out the new 2016 imagery
and provide feedback to improve
possible 2017 efforts of this type.**

For more information contact...

General Questions:



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Technical Questions on NOAA Semi-Obliques:



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ShoreZone Program (complimentary oblique imaging):



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