

FLATS29 - CORNET BAY

- **CORNET BAY RELATIVELY STABLE**
- **DAMAGE FROM BOATING ACTIVITY**
- **CONSTRUCTION HAD LITTLE IMPACT**
- **CONTINUE MONITORING TREND**

SWH0888 MONROE LANDING



2014

8/10/14

7/16/14

Z_m BA 5.6 ± 2.0

- NONE
- Z_M
- Z_J
- $Z_M + Z_J$
- X
- $Z_M \text{ OR } Z_J$



2010

6/12/10

7/17/10

Z_m BA 8.0 ± 1.6

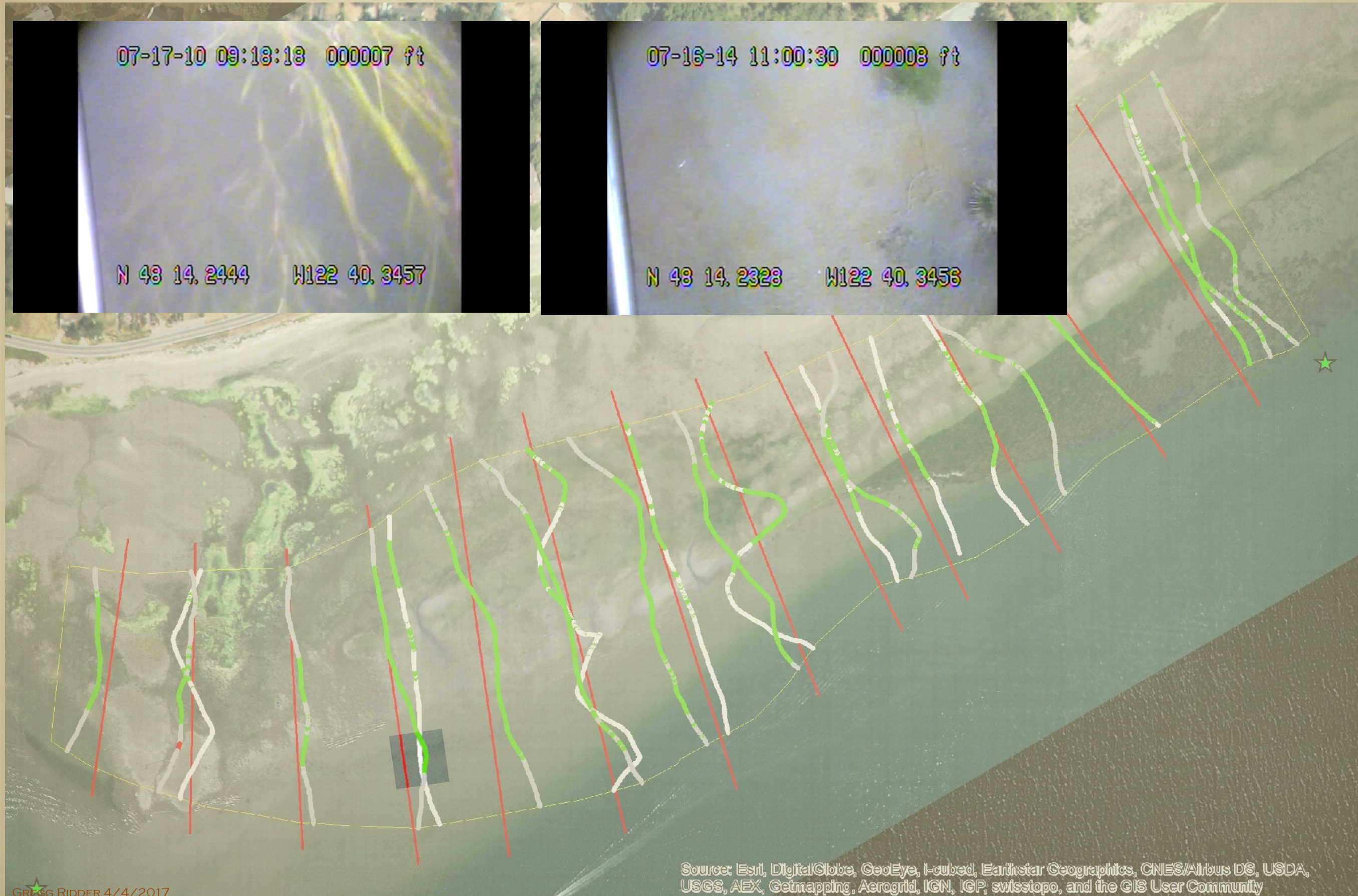
SWH0888 UNDERWATER VIDEO

07-17-10 09:18:18 000007 ft

N 48 14. 2444 W122 40. 3457

07-16-14 11:00:30 000008 ft

N 48 14. 2328 W122 40. 3456



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**SWH0888
MONROE
LANDING**





**SWH0888
MONROE
LANDING**

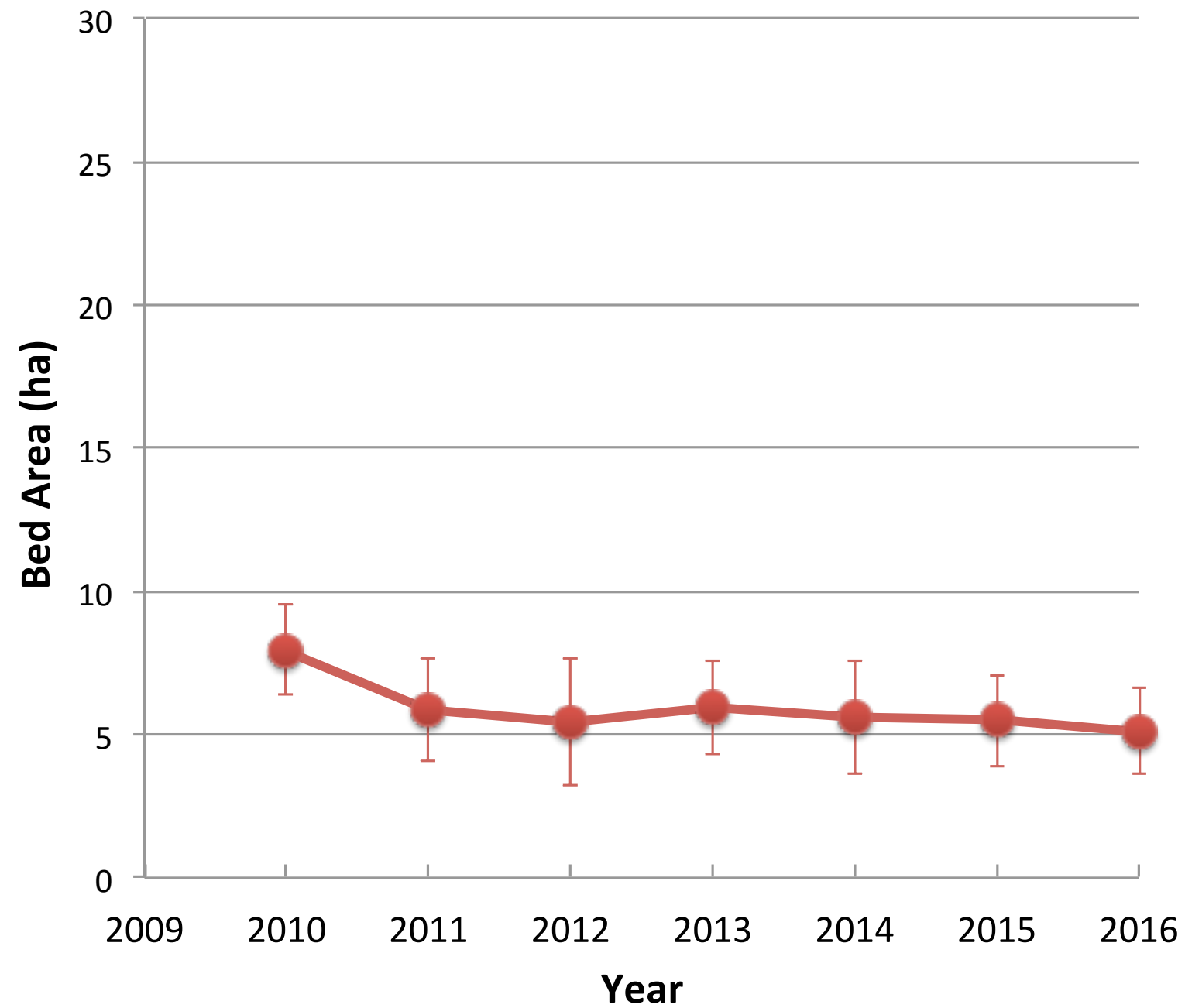


2015

Zm BA 5.5 ±

Monroe Landing (swh0888)

0888
NROE
DING



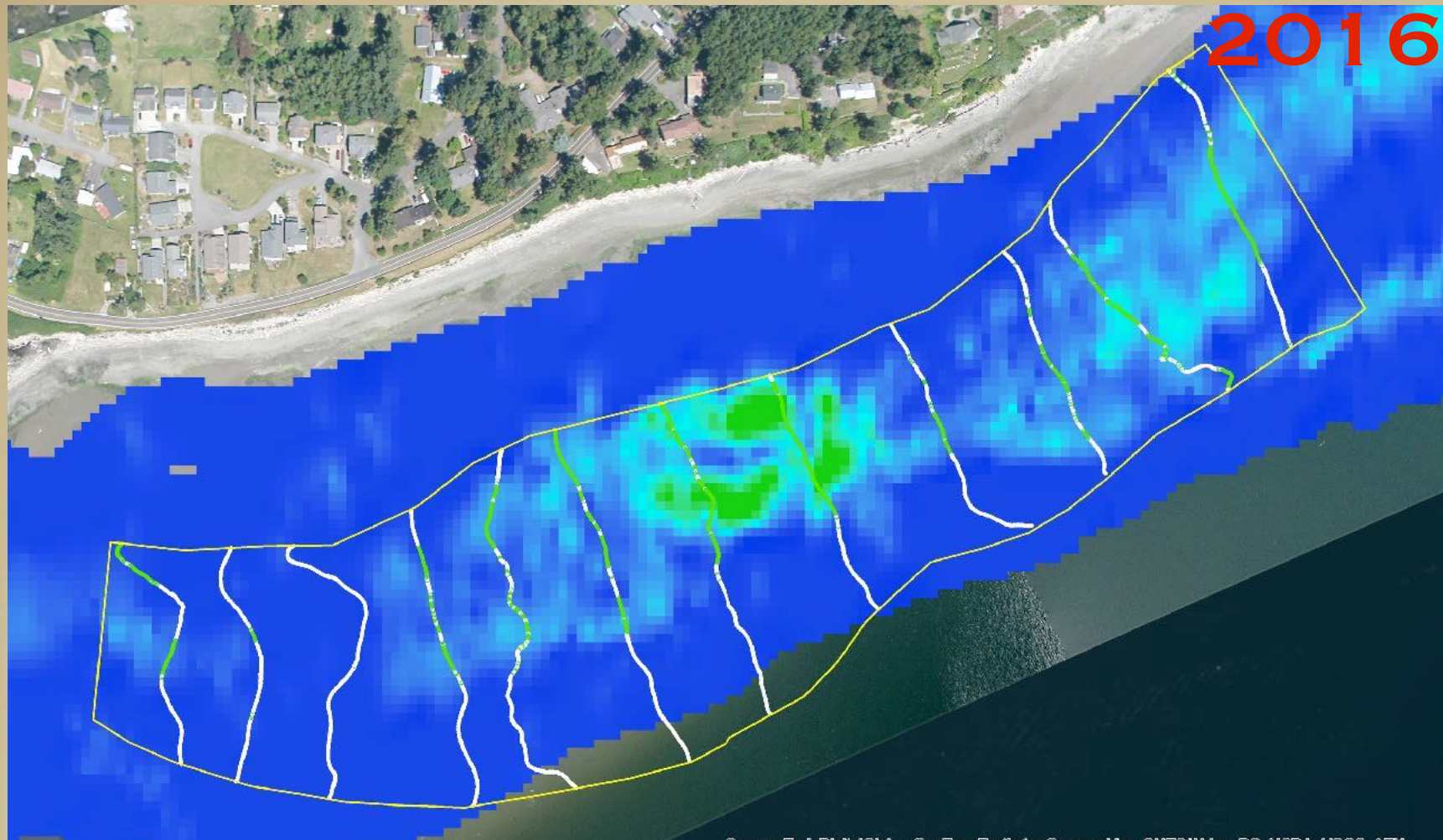
2016

8/10/14

7/16/14

2016

SWH0888 MONROE LANDING



2016

Zm BA 5.1 ± 1.5



6/5/16

7/9/16

2016

Zm BA 5.8

SWH0888 MONROE LANDING

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX

2016

Zm BA 5.1 ± 1.5

6/5/16

7/9/16

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geotrapping, Aero

SWH0898 - COUPEVILLE



2016★



Z_m BA 0.8 ± 0.4

6/25/16

6/5/16

- NONE
- Z_M
- Z_J
- $Z_M + Z_J$
- X
- Z_M OR Z_J

2013★

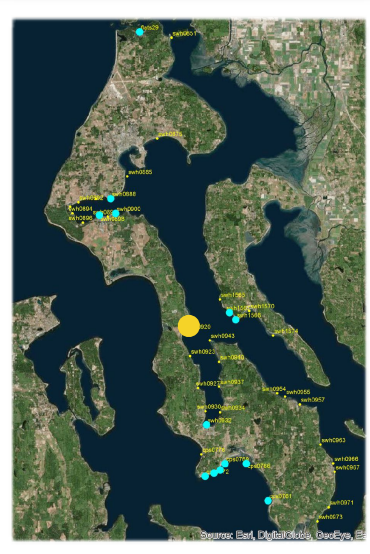


Z_m BA 1.2 ± 0.7

7/13/13

5/28/13

SWH0898 - COUPEVILLE



2016★

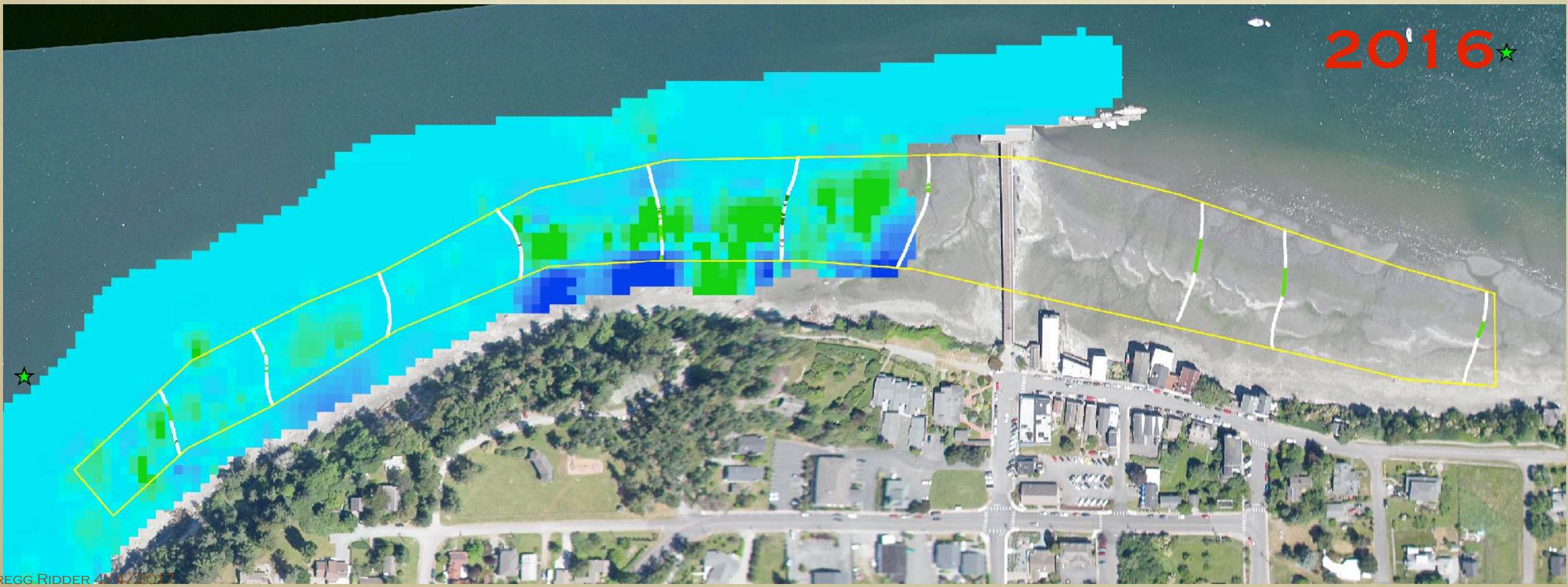


Z_m BA 0.8 ± 0.4

6/25/16

6/5/16

2016★

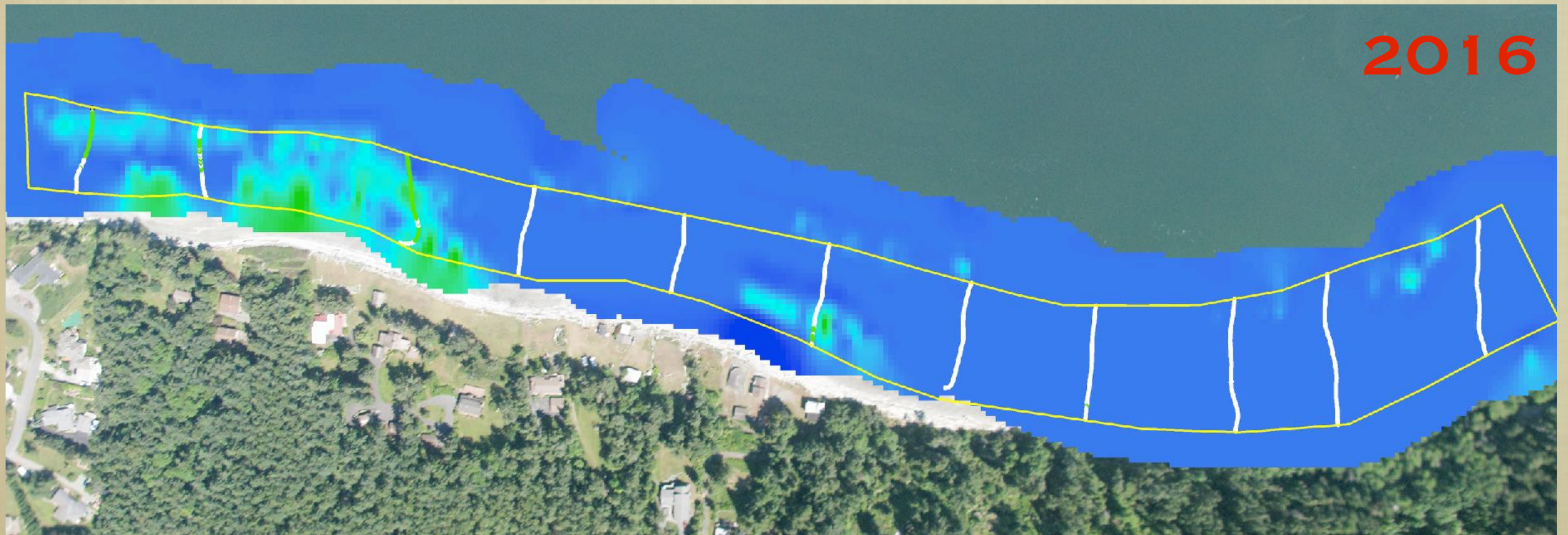




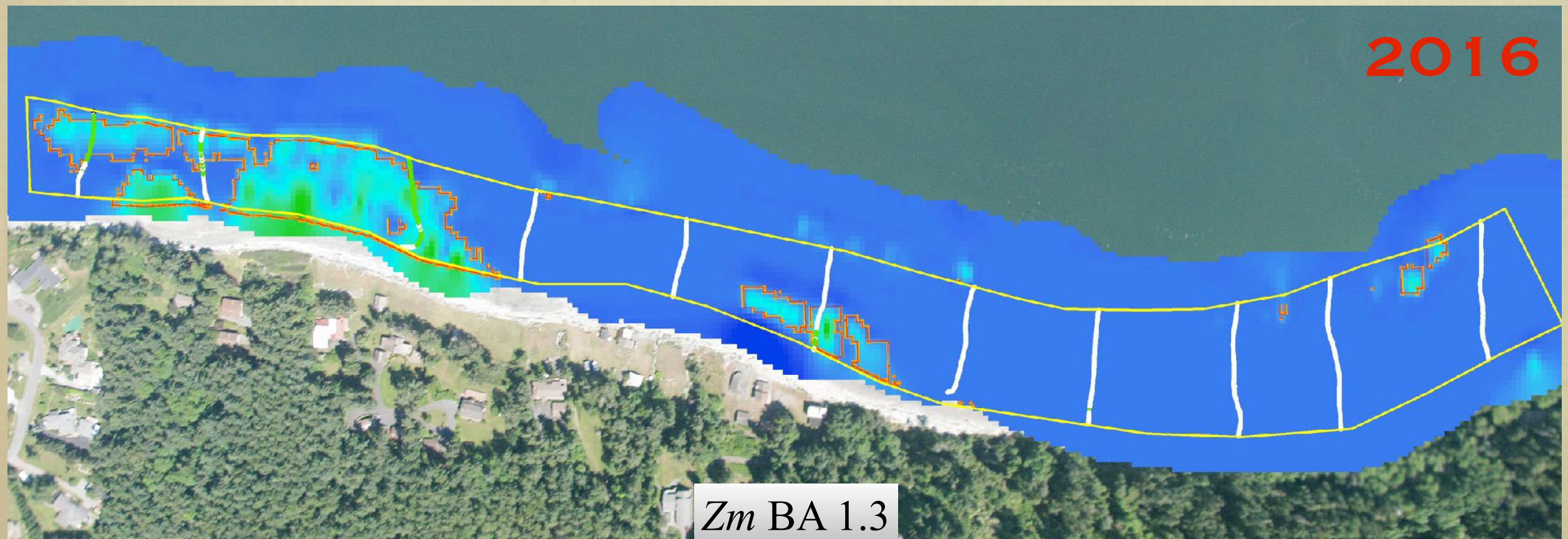
SWH0900 - MINERAL SPRINGS



SWH0900 - MINERAL SPRINGS



SWH0900 - MINERAL SPRINGS



SWH0920 - S OF PRATT'S BLUFF



7/25/16

6/5/16

Zm BA 5.4 ± 1.1

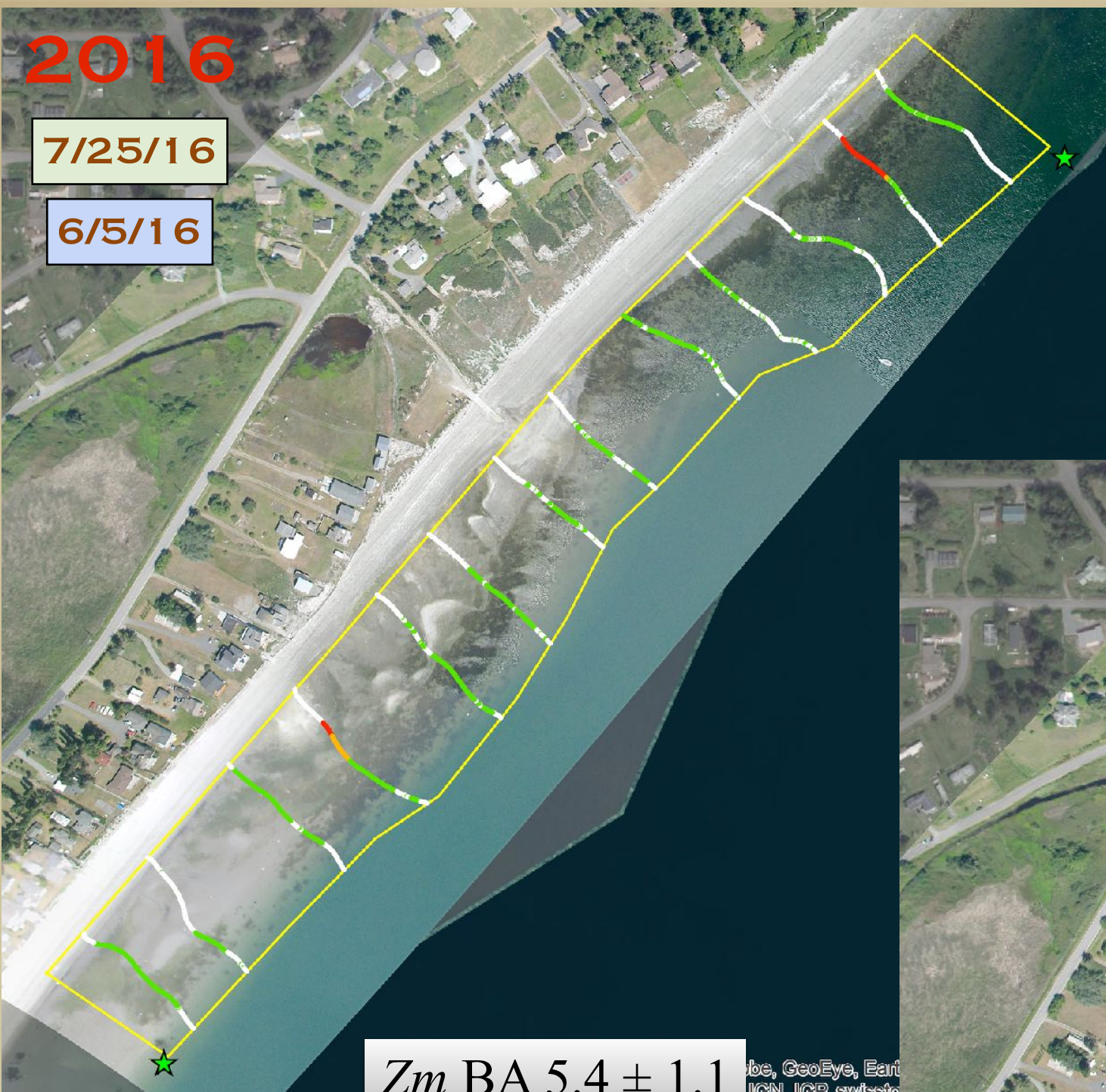
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, IGN, IGP, swisstopo, and the GIS User Community

2016

7/25/16

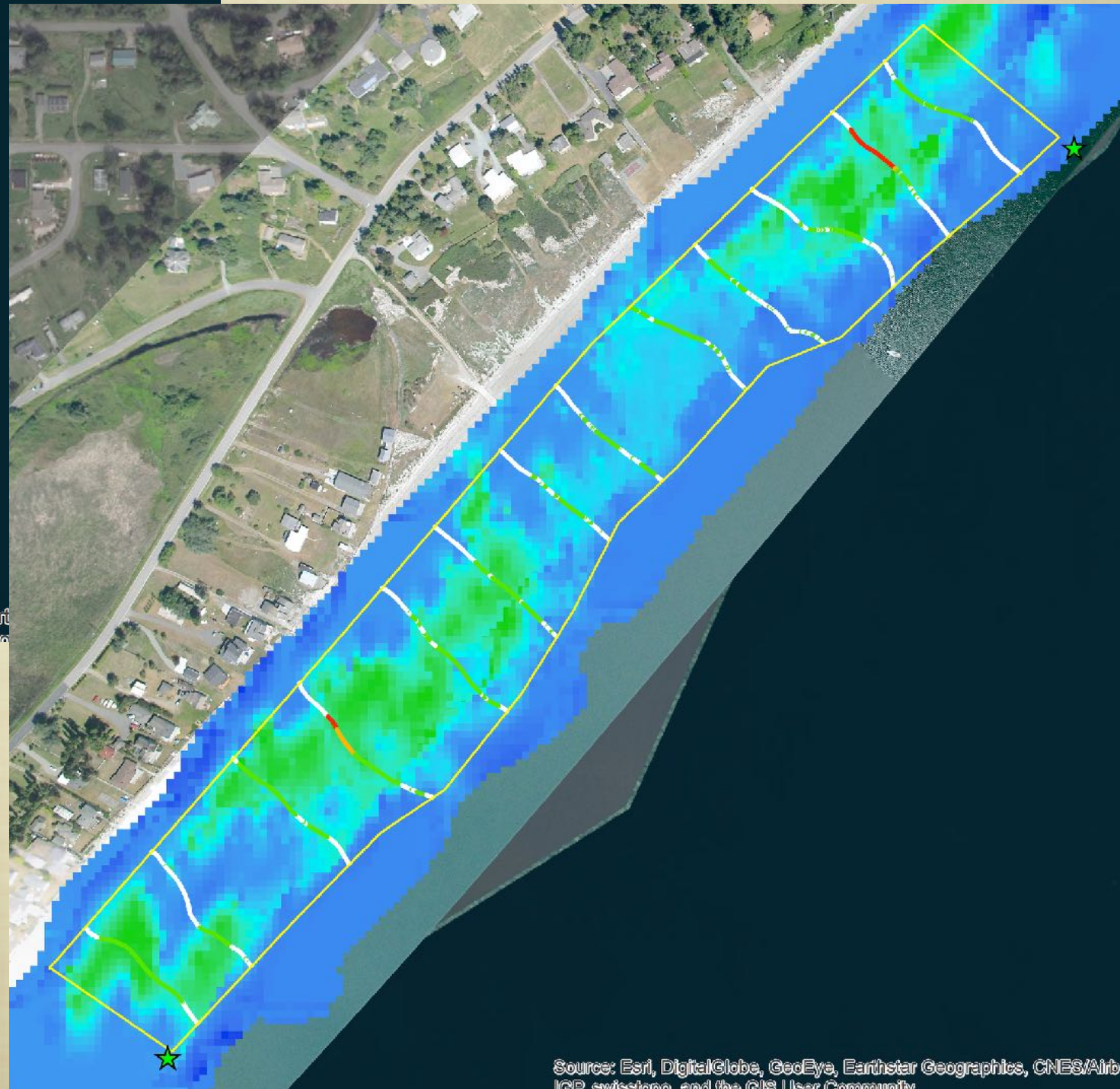
6/5/16

SWH0920 S OF PRATT'S BLUFF



Zm BA 5.4 ± 1.1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, IGP, swisstopo, and the GIS User Community



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, IGP, swisstopo, and the GIS User Community

2016

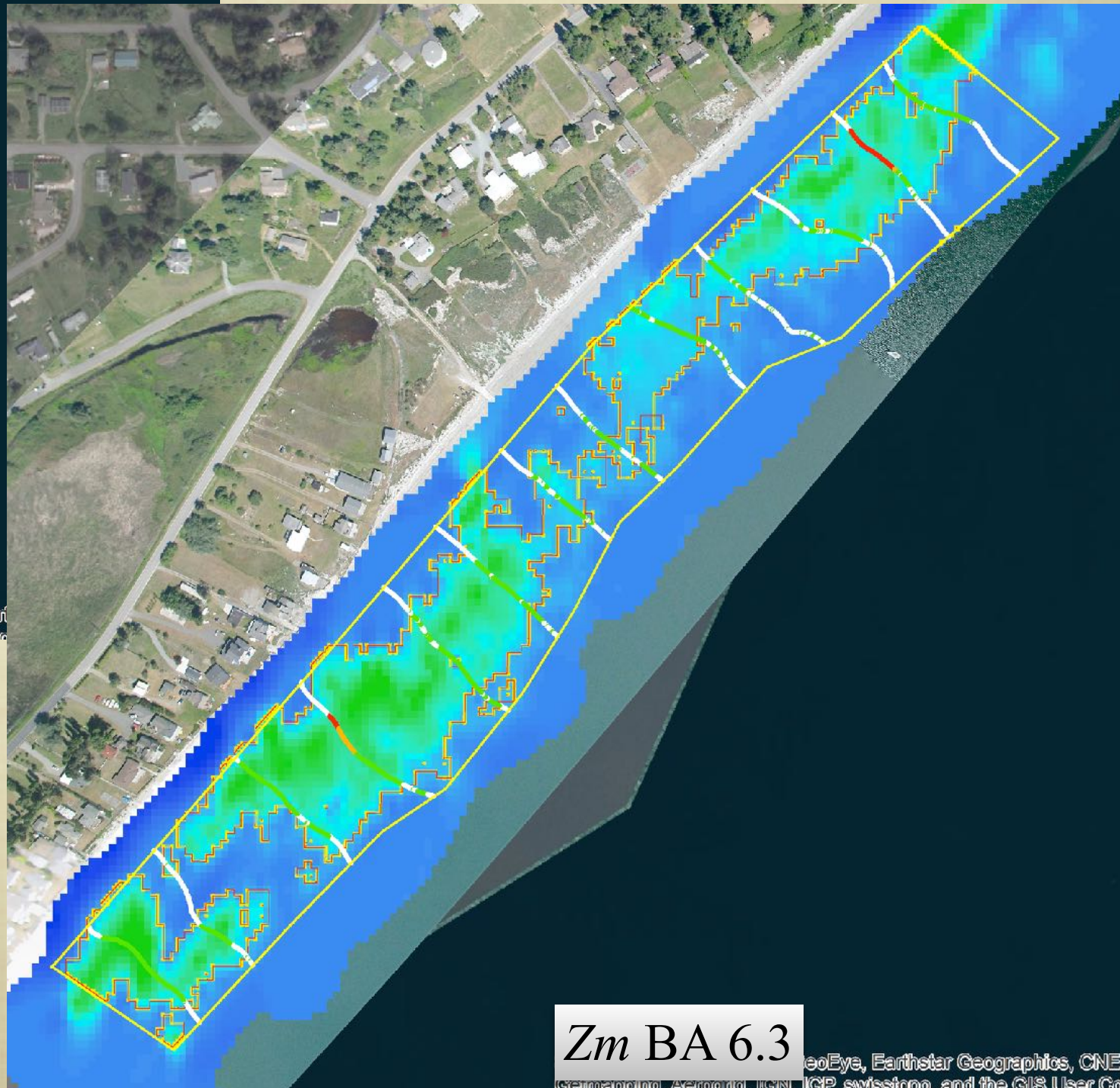
7/25/16

6/5/16

SWH0920 S OF PRATT'S BLUFF

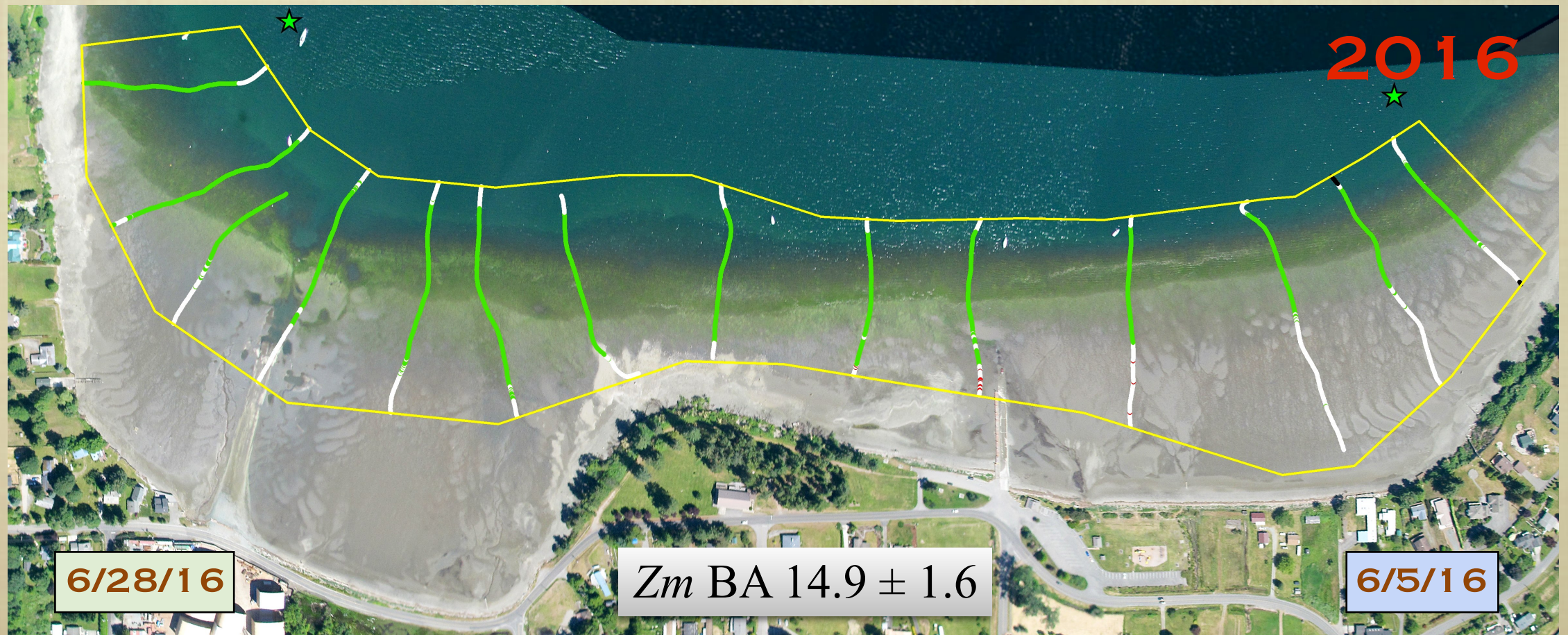
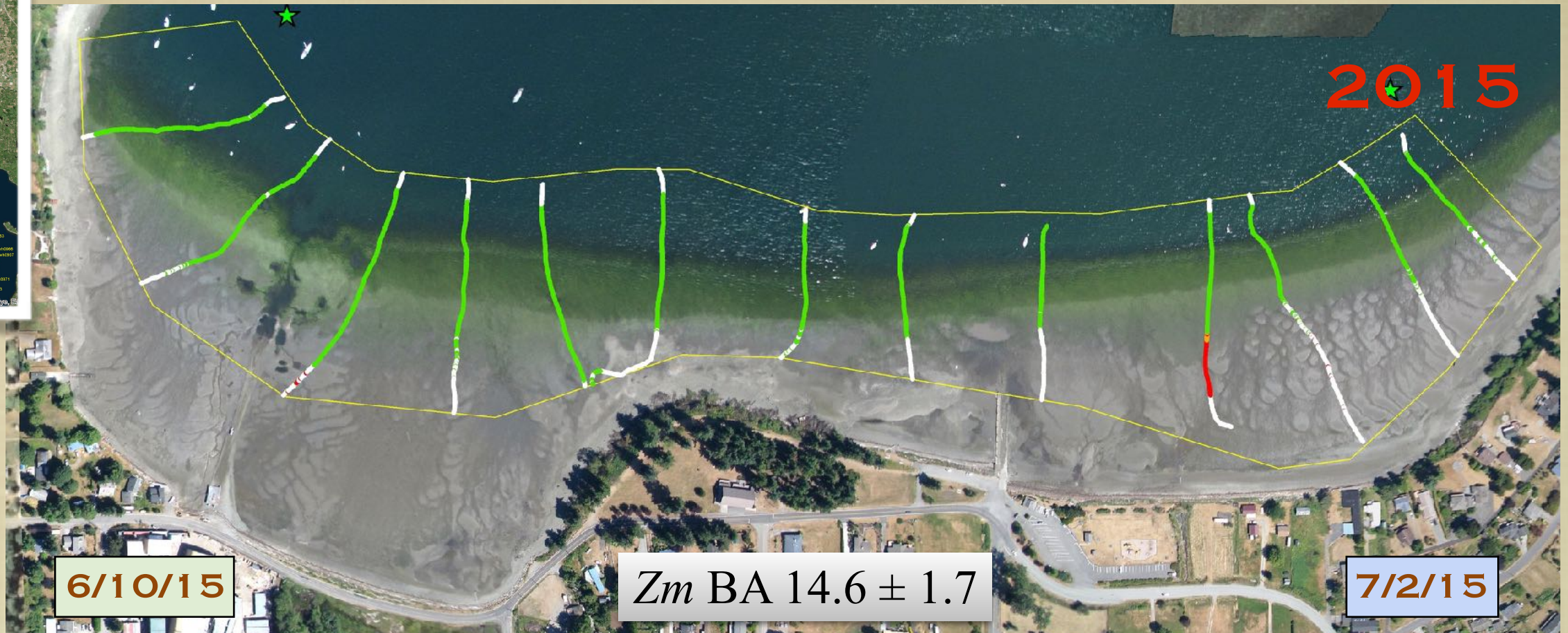


Zm BA 5.4 ± 1.1

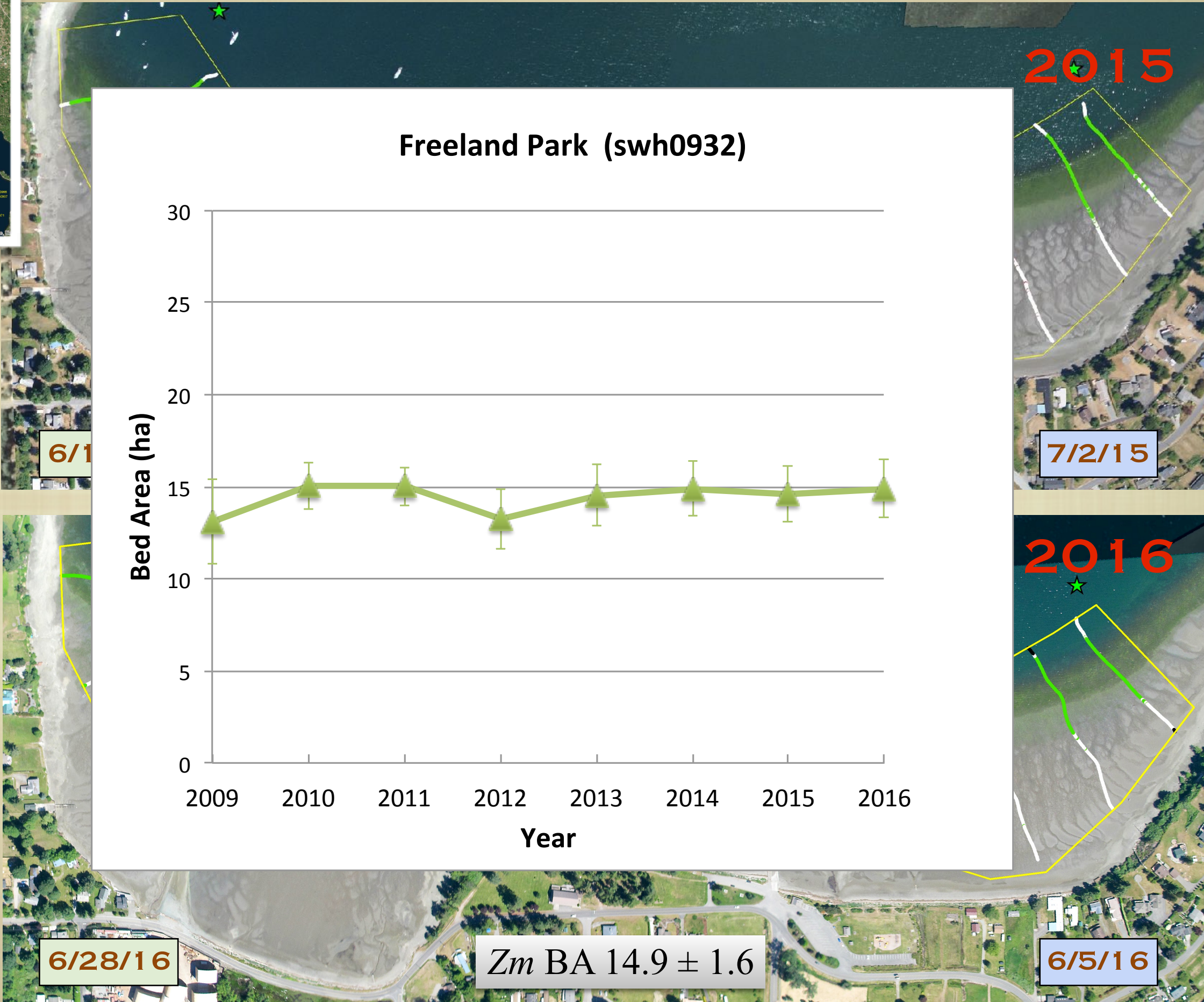
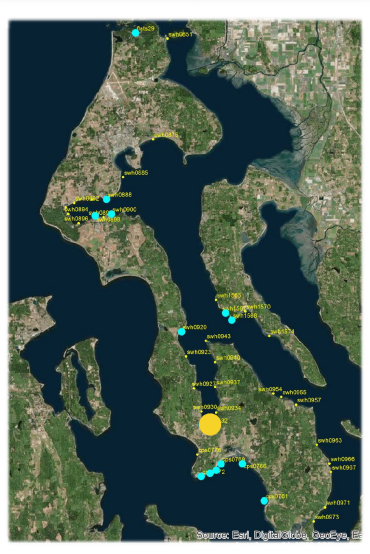


Zm BA 6.3

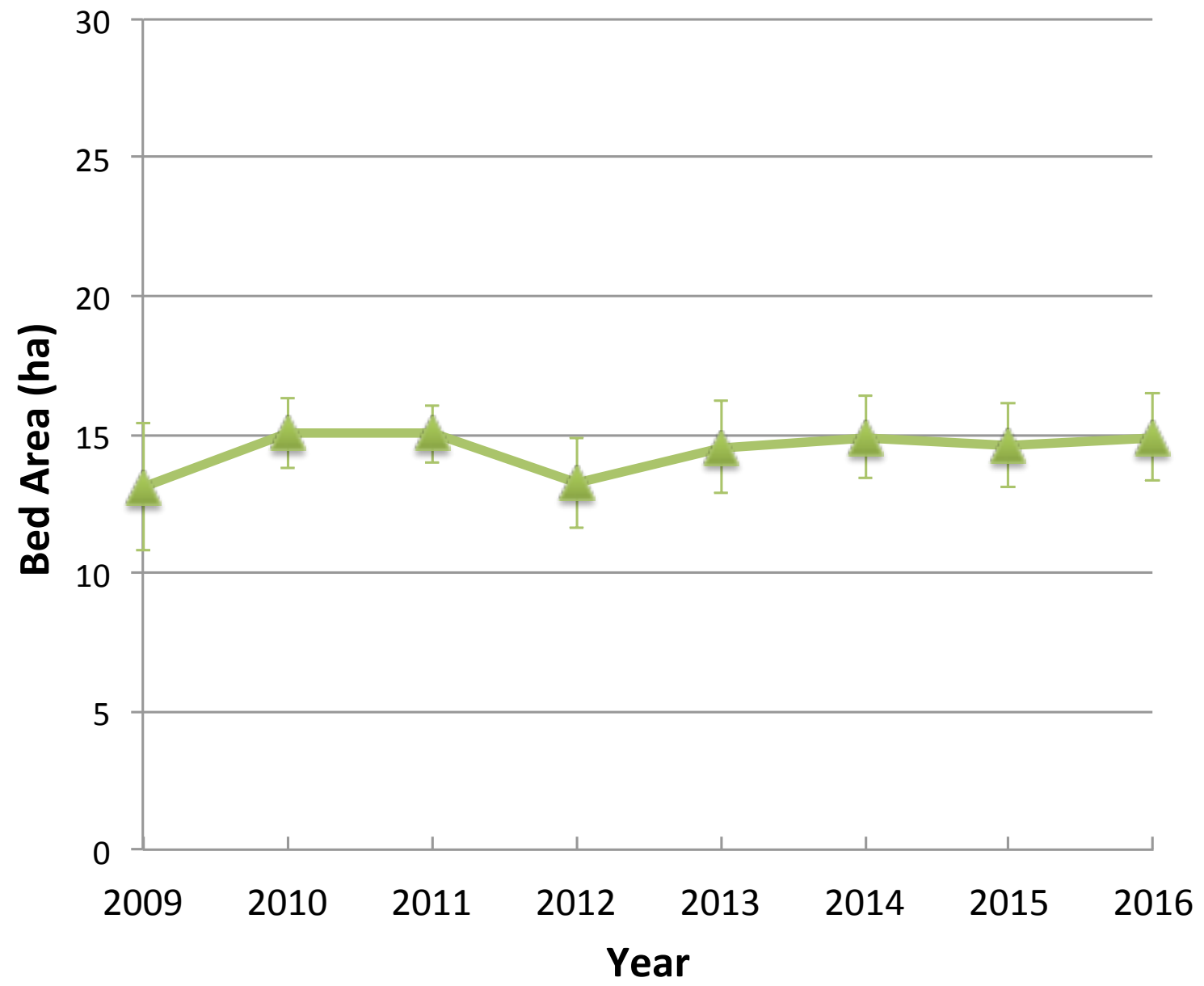
SWH0932 - FREELAND PARK



SWH0932 - FREELAND PARK

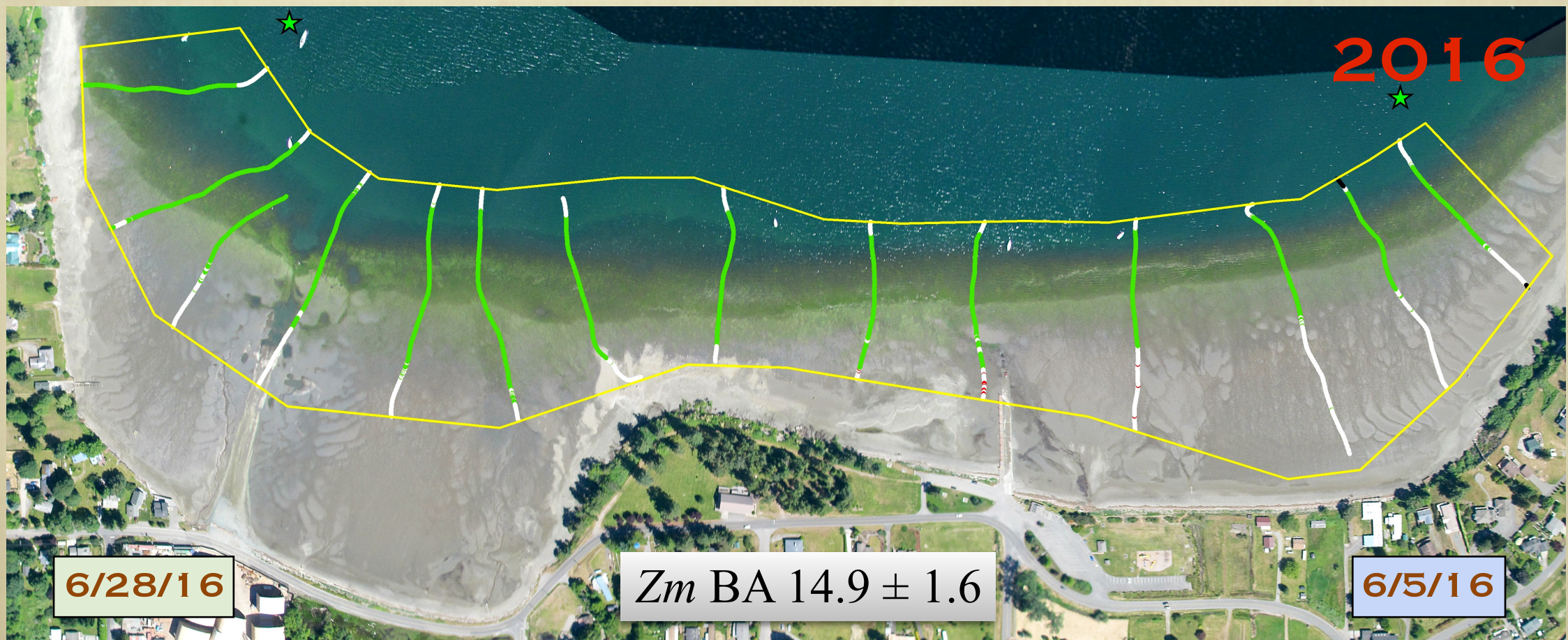
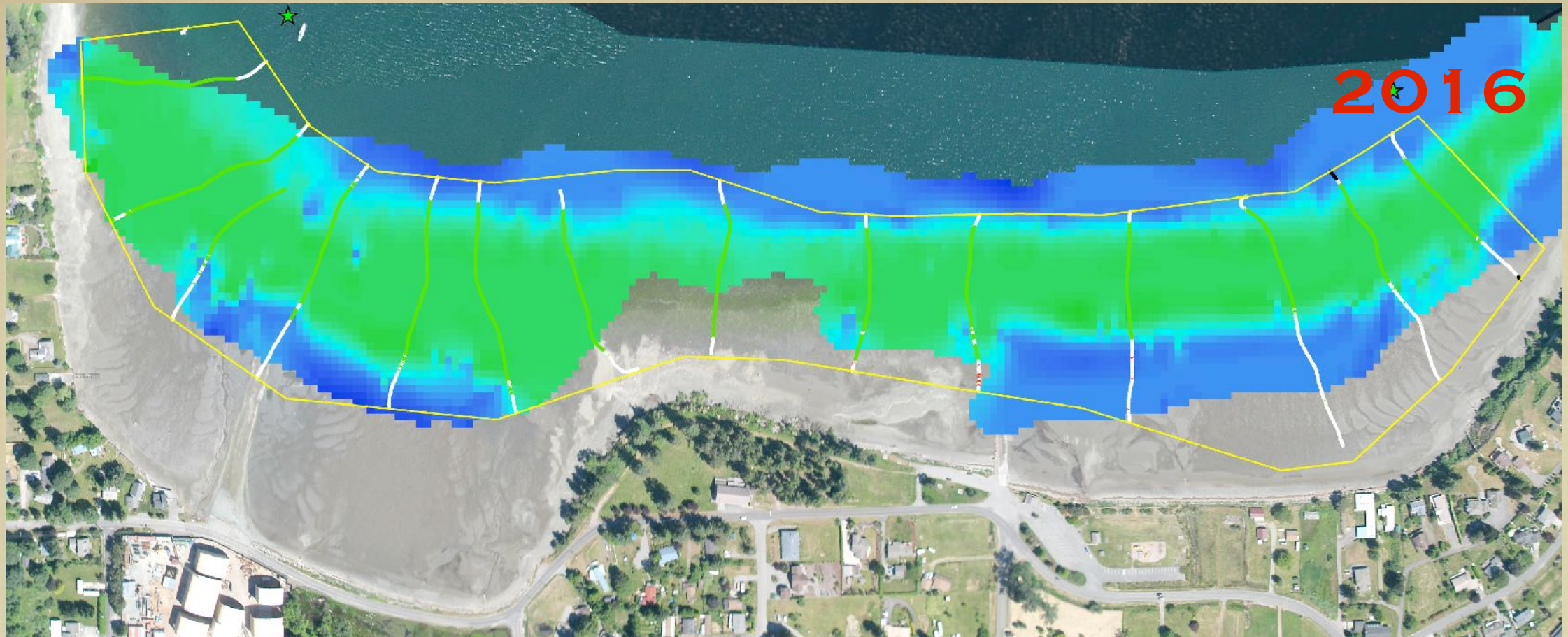


Freeland Park (swh0932)

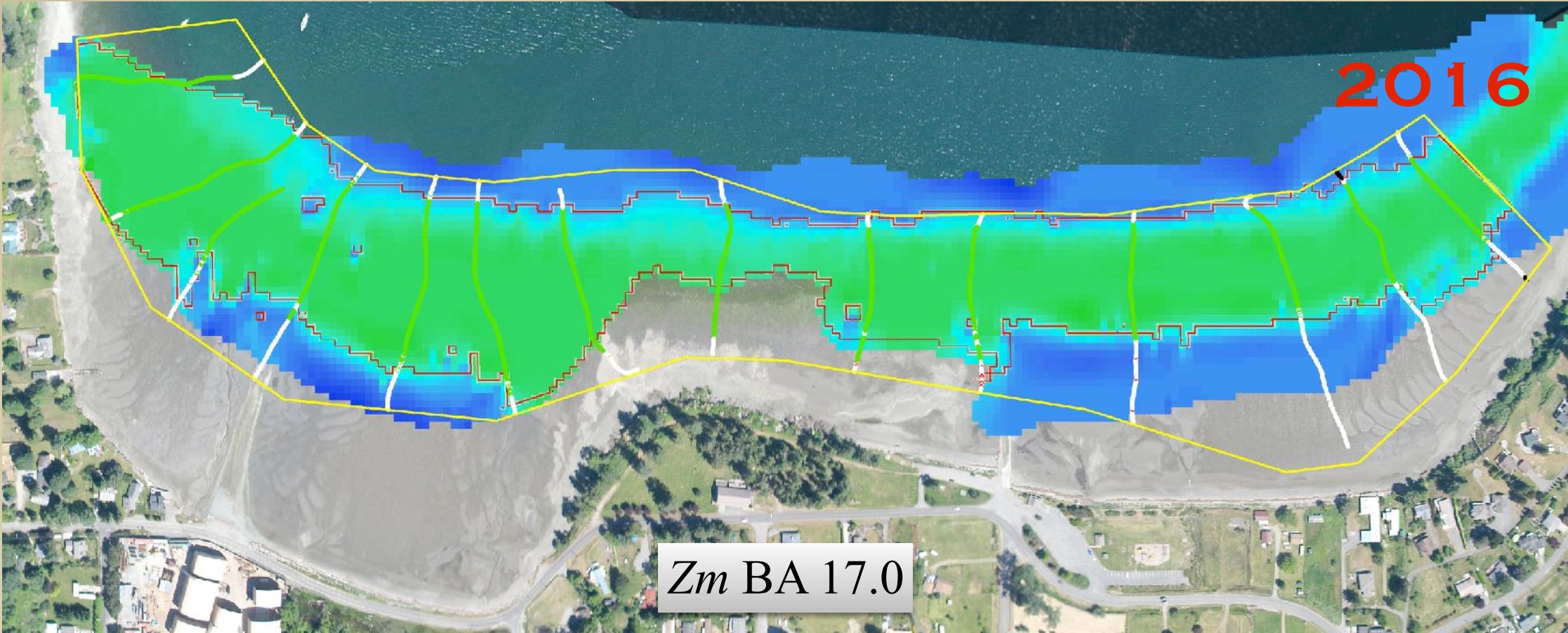


Zm BA 14.9 ± 1.6

SWH0932 - FREELAND PARK

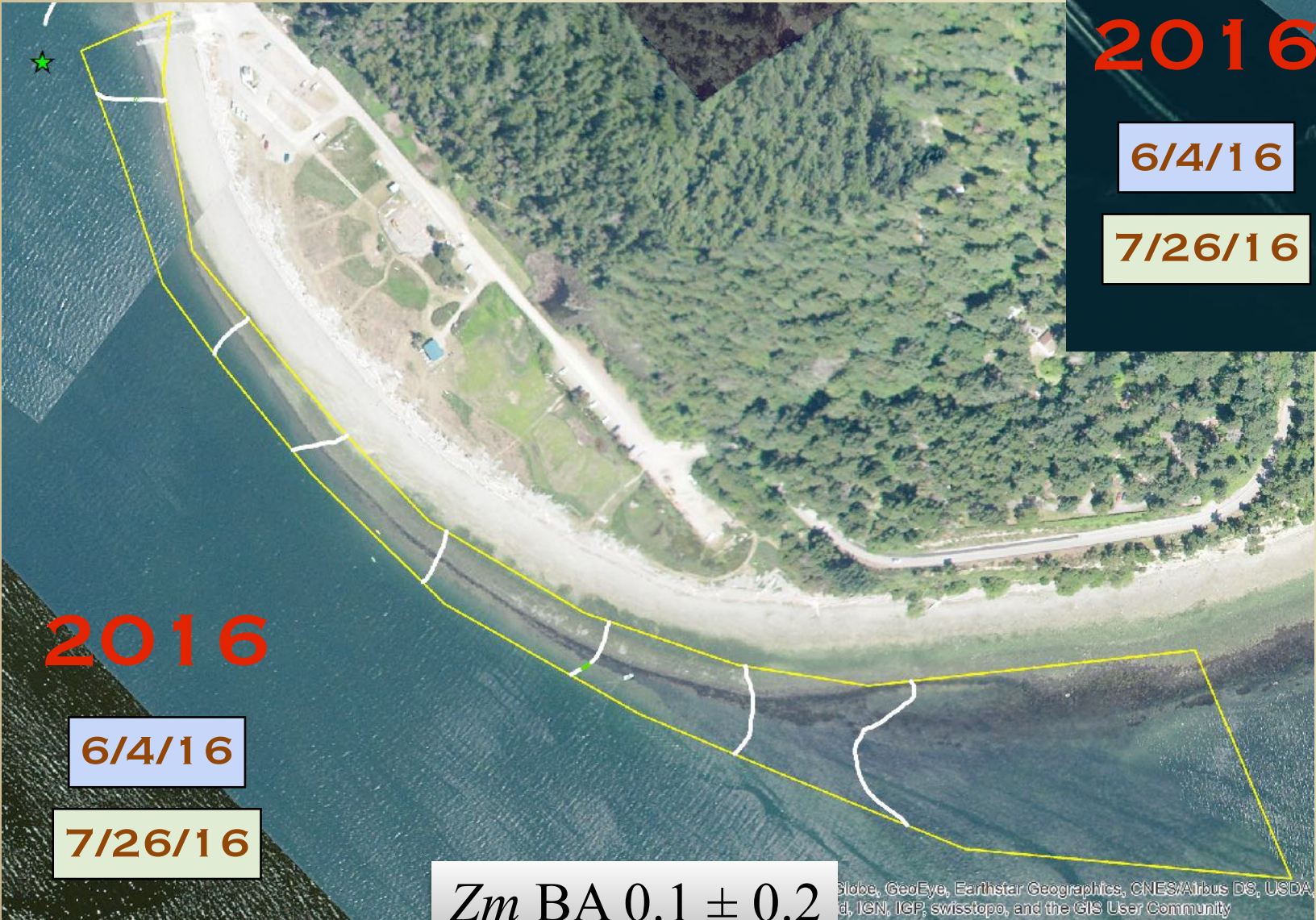
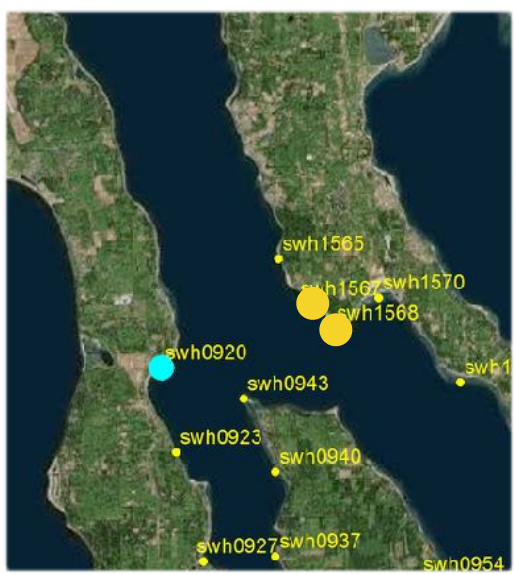


SWH0932 - FREELAND PARK



CAMANO ISLAND STATE PARK

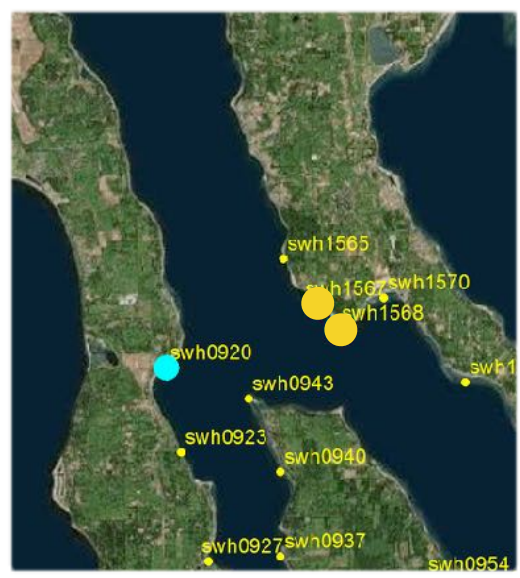
SWH 1567 STATE PARK



SWH 1568 LOWELL POINT

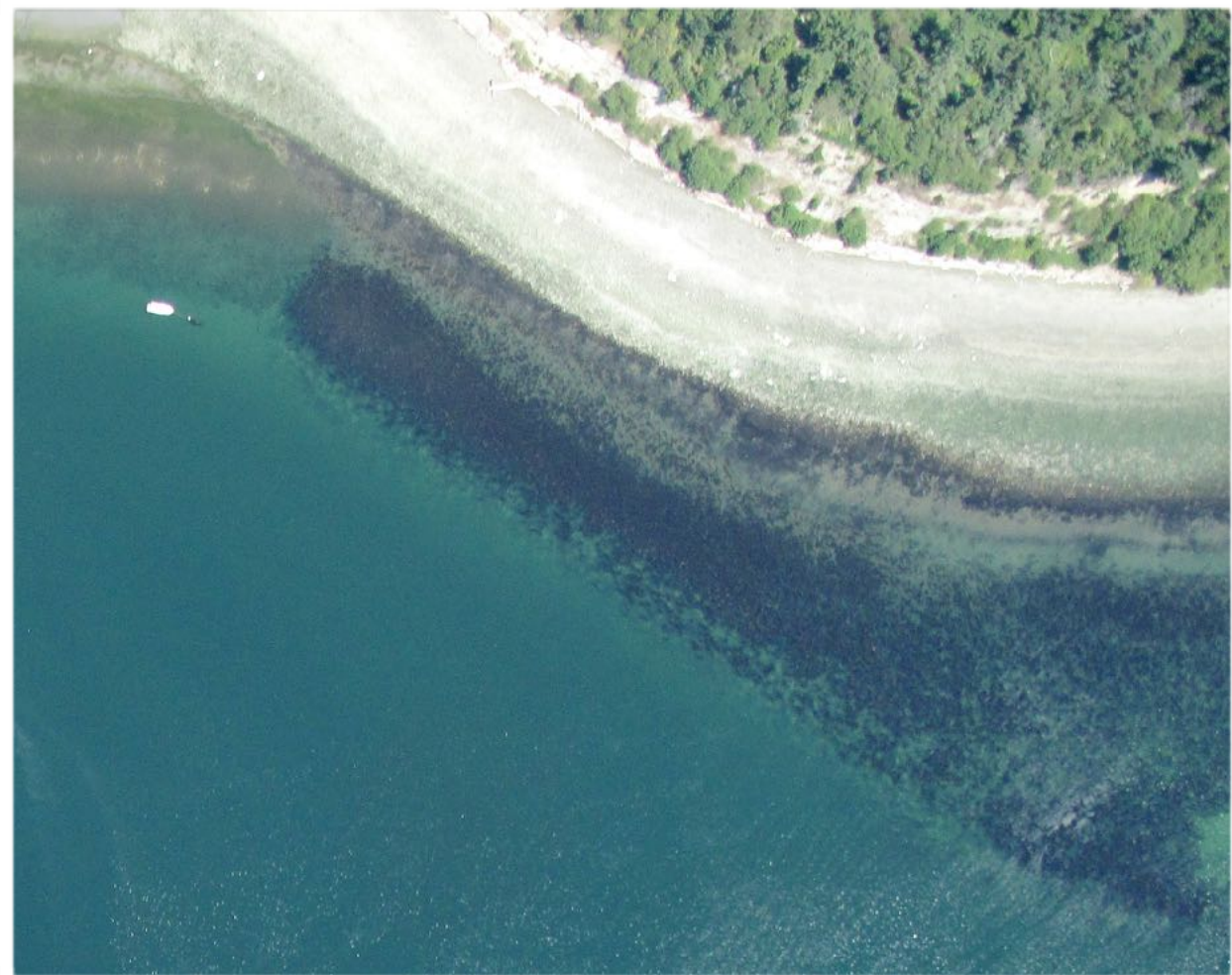
CAMANO ISLAND

SWH 1567 STATE PARK



Z_m BA 1.3 ± 1.0

Earthstar Geographics, CNES/Airbus DS, swisstopo, and the GIS User Community

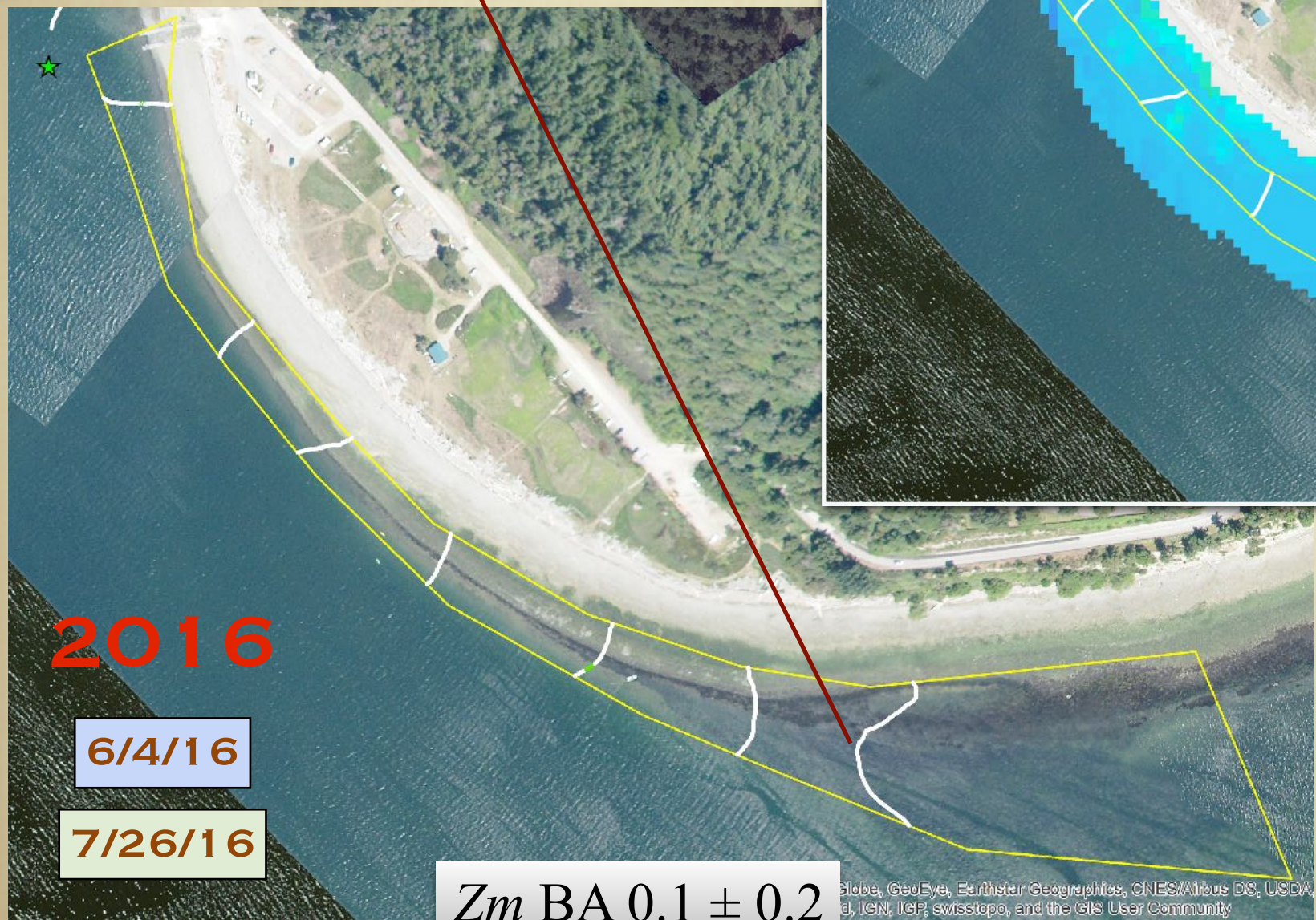
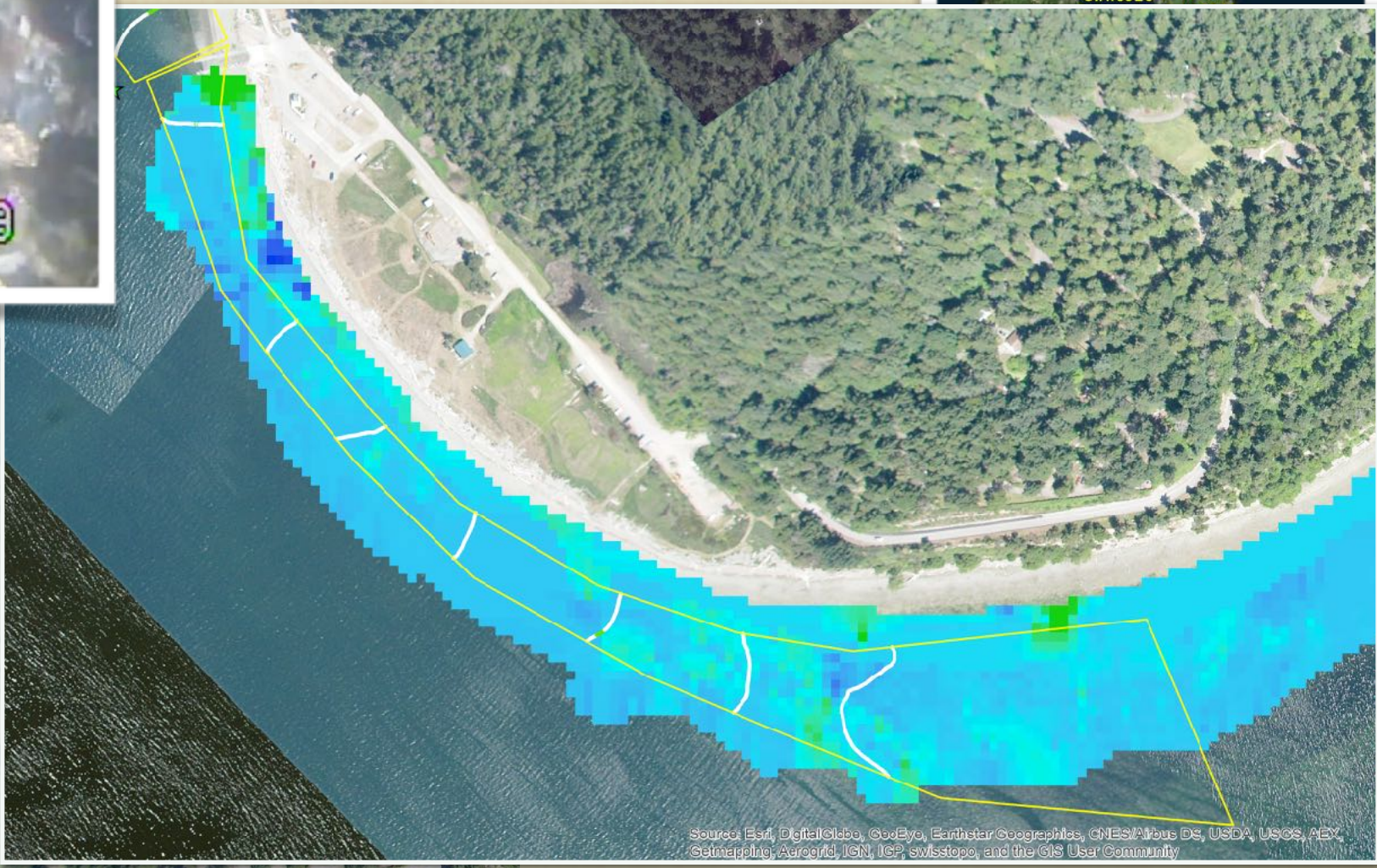
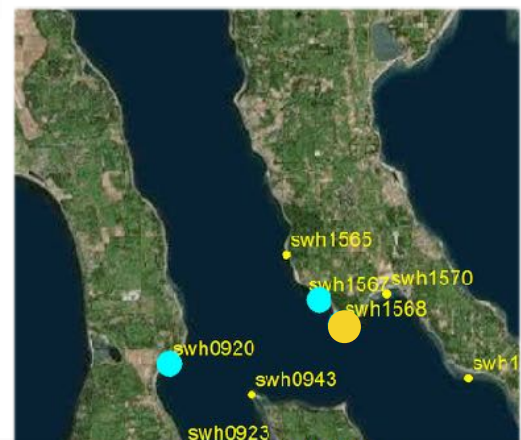


Z_m BA 0.1 ± 0.2

Earthstar Geographics, CNES/Airbus DS, USDA, IGN, IGP, swisstopo, and the GIS User Community

SWH 1568 LOWELL POINT

LAND STATE PARK



2016

6/4/16

7/26/16

Zm BA 0.1 ± 0.2

**SWH 1568
LOWELL
POINT**

CPS0761 - MAXWELTON



2015

7/4/15



2010

7/24/10

MAXWELTON BEACH DYNAMICS

2010



MAXWELTON BEACH DYNAMICS

2011



2012



2013



2014



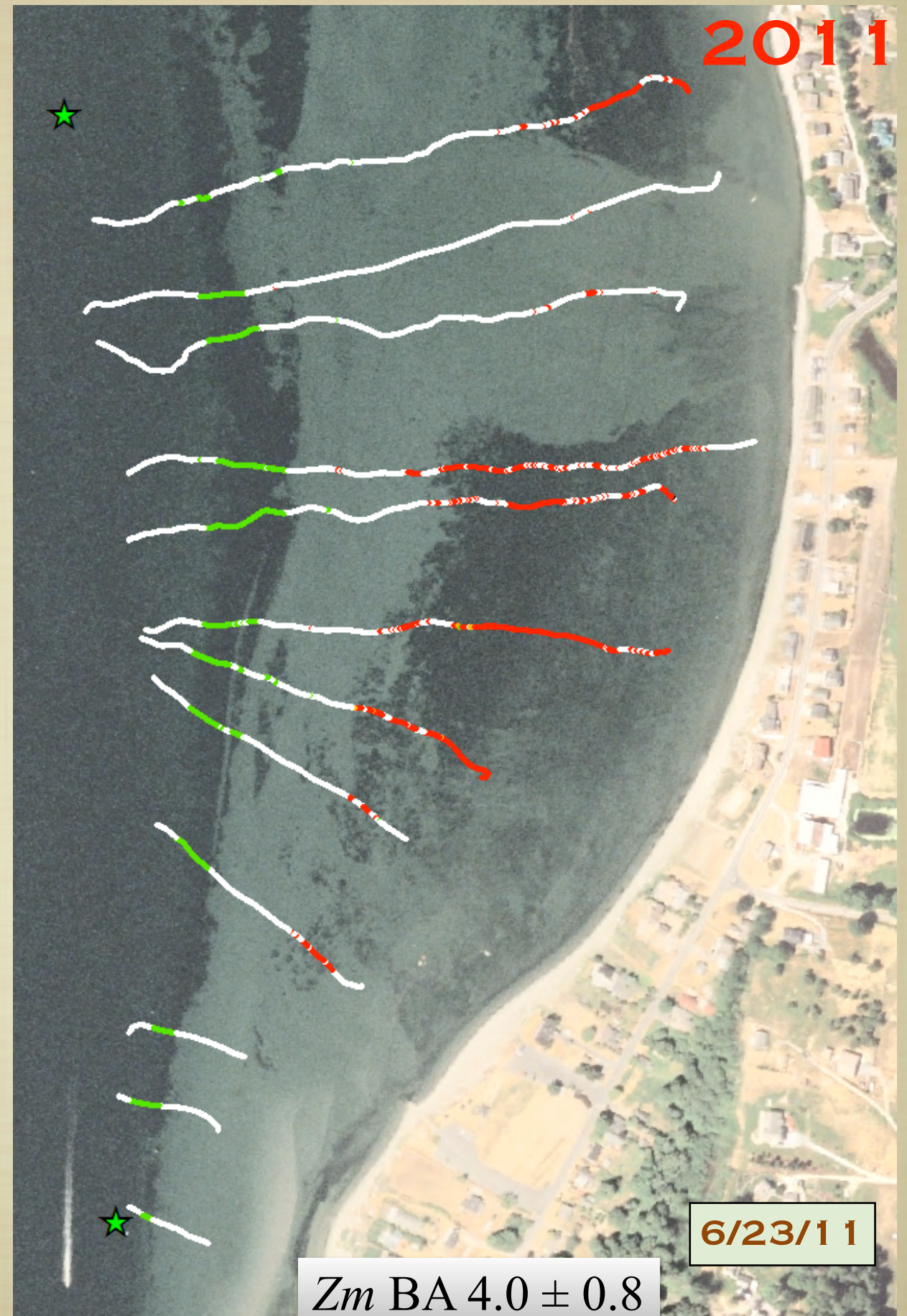
2015



2016



CPS0761 - DAVE MACKEY PARK



CPS0761 - DAVE MACKEY PARK



7/9/15

6/23/11

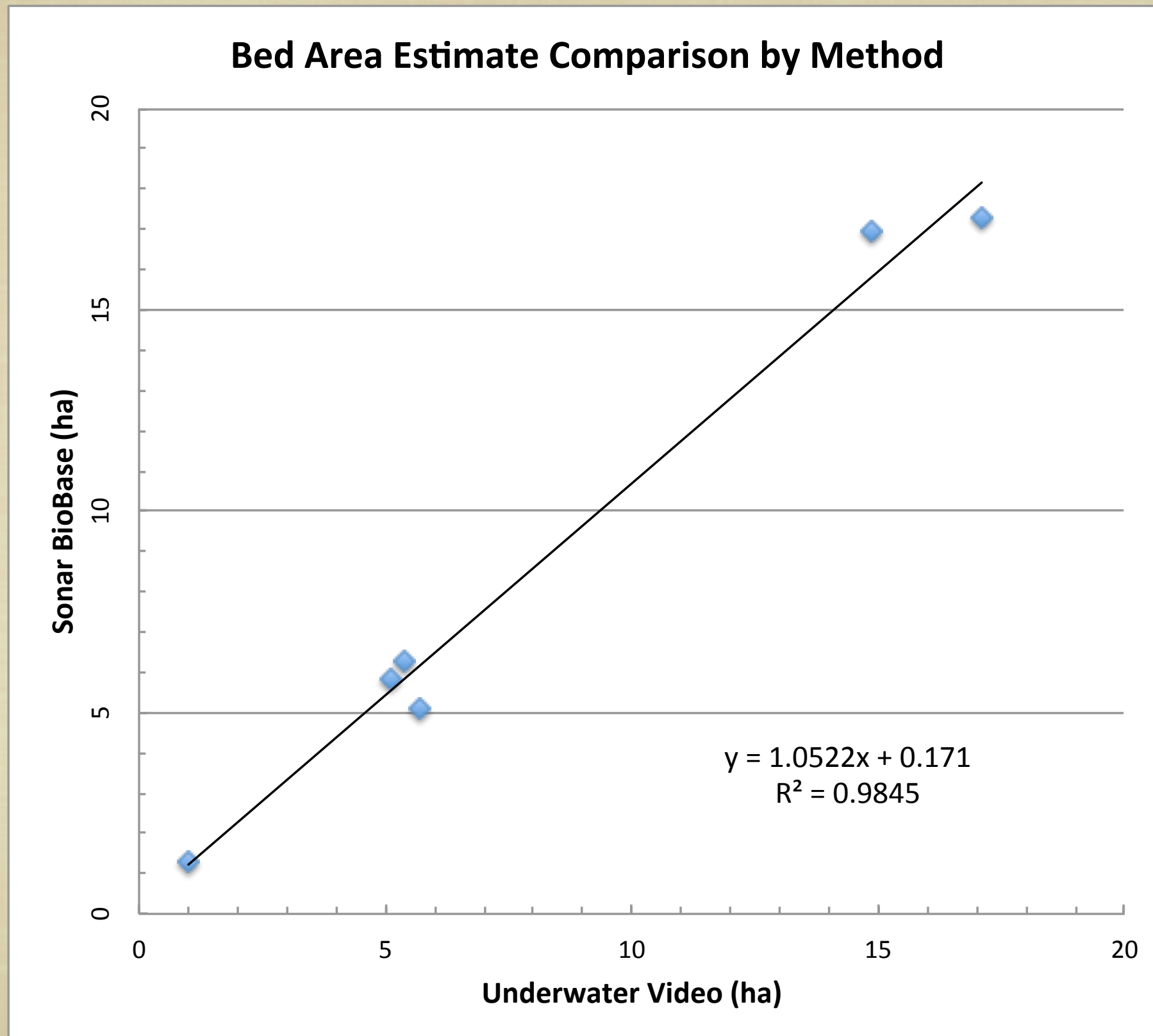
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

Zm BA 4.0 ± 0.8

CPS0761 - DAVE MACKEY PARK



COMPARISON OF VIDEO AND SONAR DATA

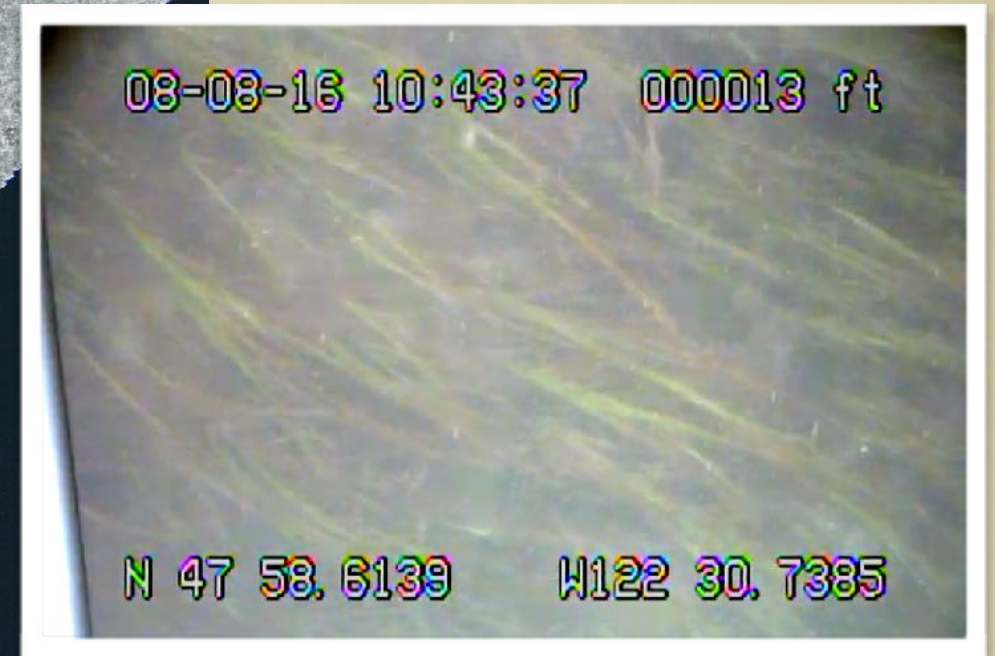
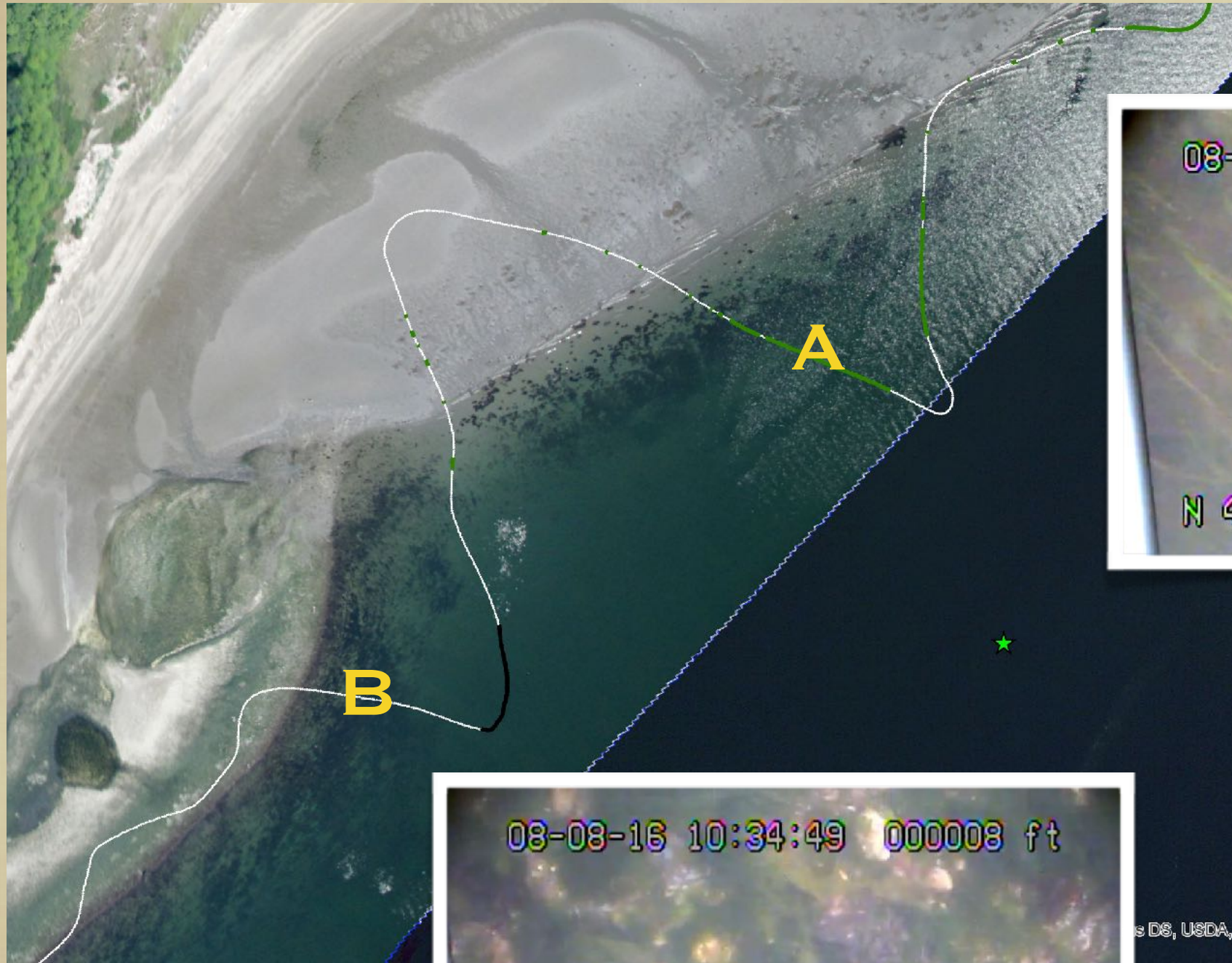


USELESS BAY NORTH - RECONNAISSANCE



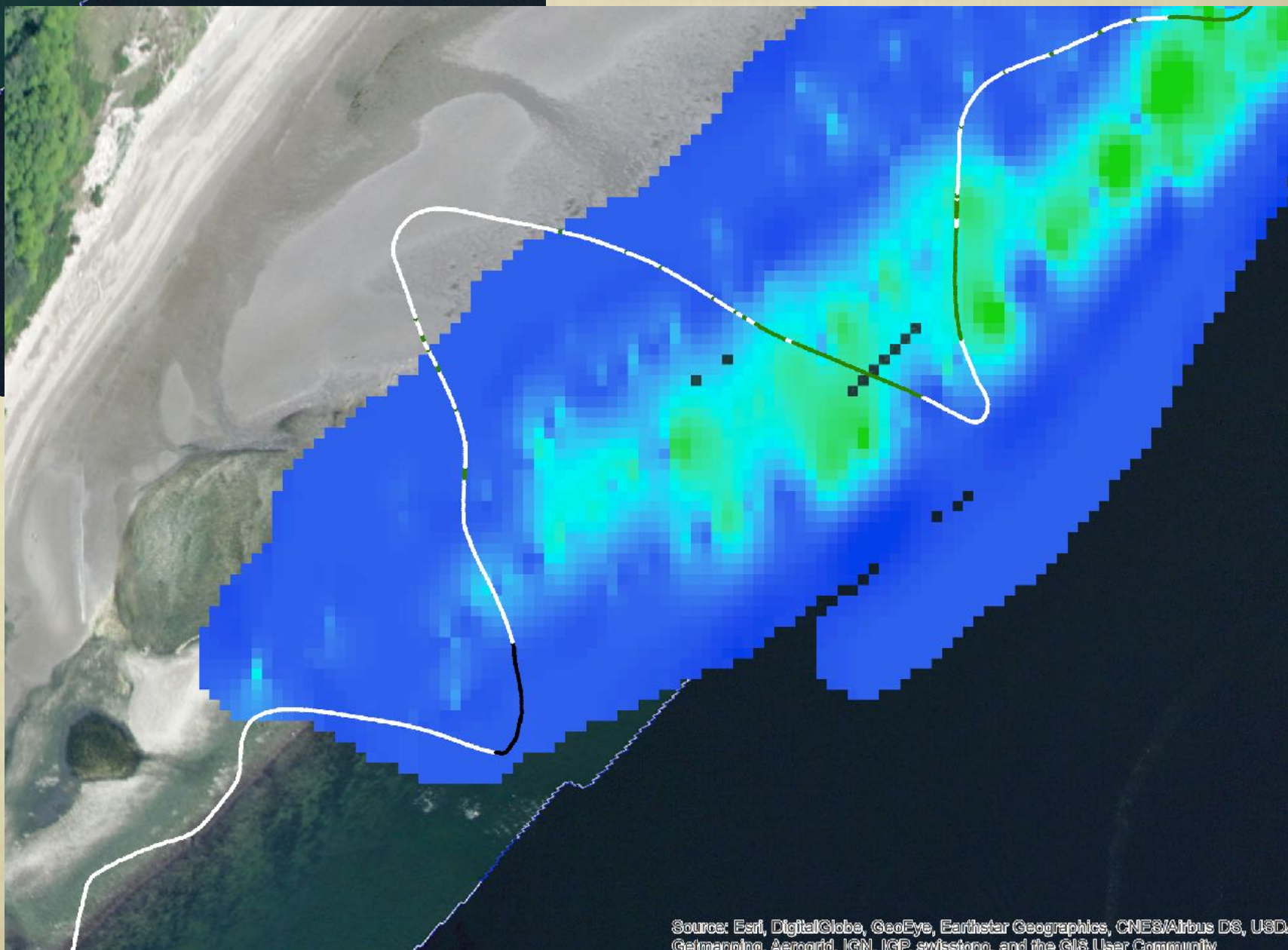
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

USELESS BAY NORTH - RECONNAISSANCE



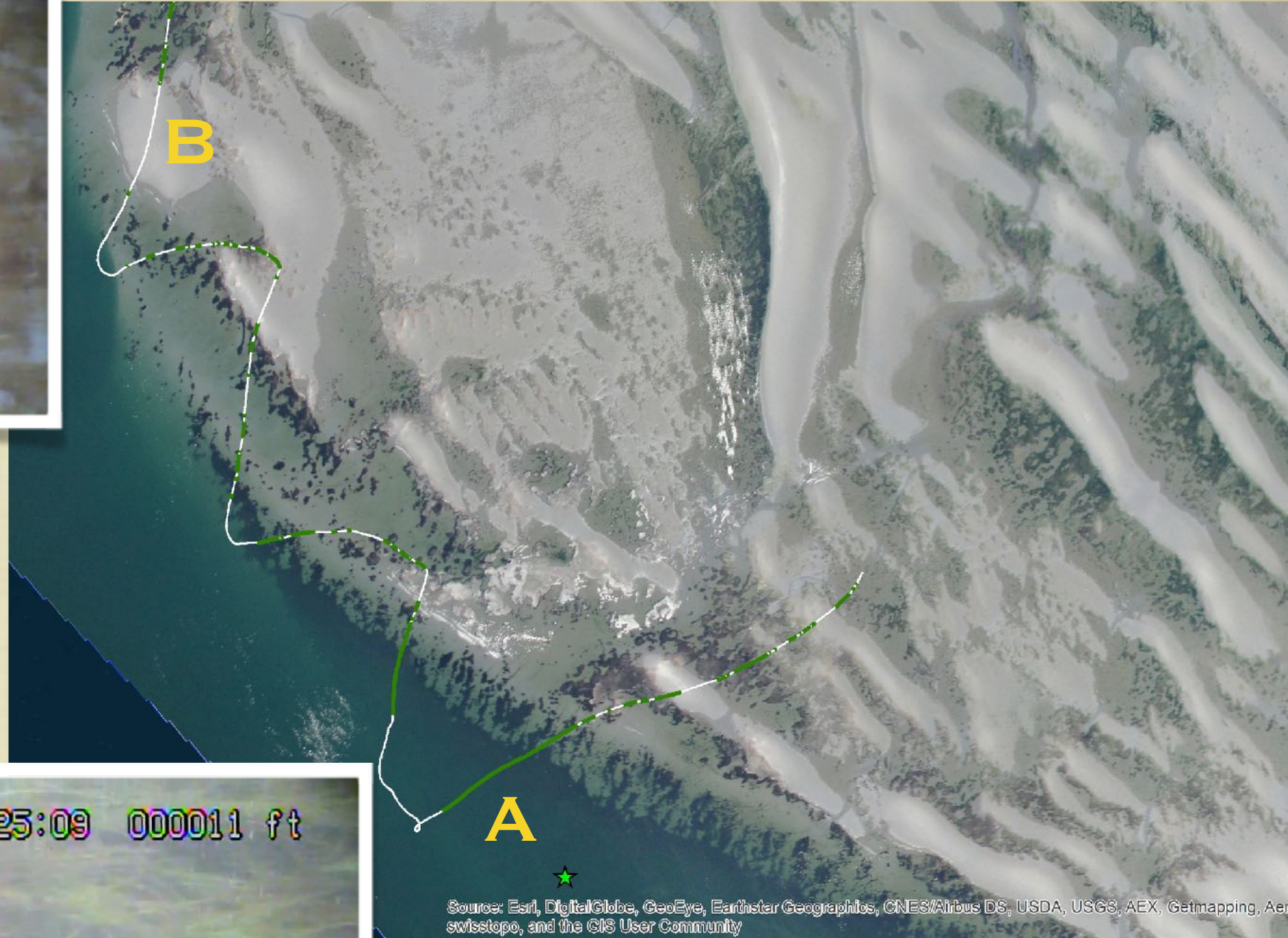
s DS, USDA, U

USELESS BAY NORTH - RECONNAISSANCE



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, Getmapping, Aerowid, IGN, IGP, swisstopo, and the GIS User Community

USELESS BAY NORTH - RECONNAISSANCE





ZOSTERA MARINA



ZOSTERA JAPONICA

PHYLLOSPADIX

SEQUENC

1

2

*EQUIPMENT CODES

Special equipment	TRANSPONDER		
	None	Non-Altitude Reporting	Altitude Reporting
None	x	T	U
DME	D	B	A
TACAN	M	N	P
RNAV	W	C	R

3

4

5

6

TIME CONVERSION
TO UTC (Z)

STD	Daylight Savings
ST 5	EDT 4
ST 6	CDT 5
ST 7	MDT 6
ST 8	PDT 7
ASKA 9	ALASKA 8
WAIL 10	HAWAII 9

110 FAHRENHEIT
CENTIGRADE

Unicom
Airports without Towers 122.700 122.725 122.800
122.975 123.000 123.050
123.075

Airports with Tower or FSS 122.950

Multicom
Activities of a temporary
seasonal or emergency nature 122.900

Forestry, Fire, Fish & Game 122.925

Air-to-air 122.750 122.850

Air-to-air (Helicopter) 123.025

Aviation Instruction,
Glider and Hot Air Balloon 123.300 123.500

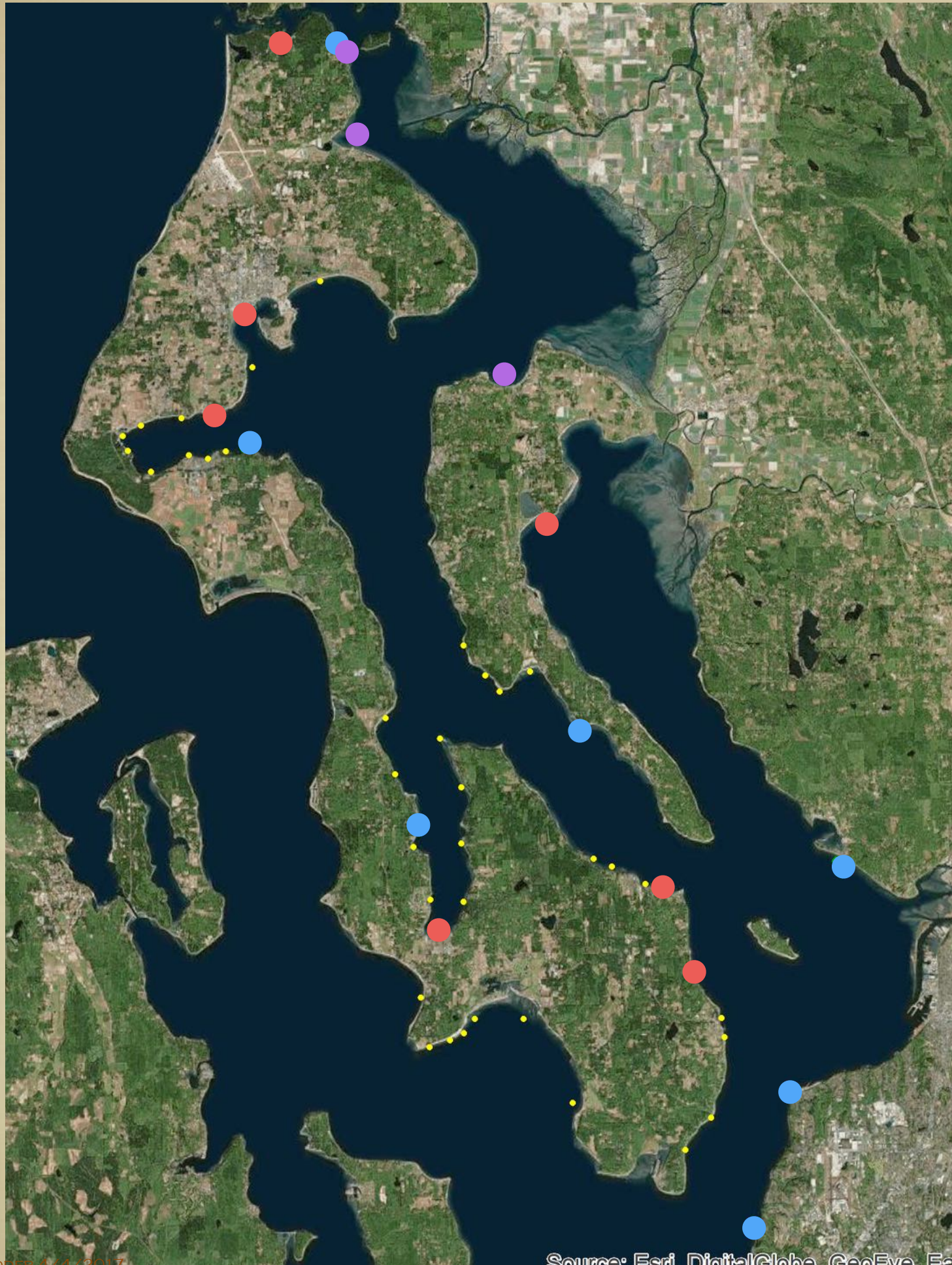
2017?

2017 SITES - DNR



Source: Esri, DigitalGlobe, GeoEye, Earthstar

2017 SITES - ICMRC



PROPOSED

- + CORNET BAY
- + MONROE LANDING
- + FREELAND PARK
- + WINDJAMMER PARK
- + BARNUM POINT
- + BARGE BEACH
- + WATERMAN
- + ALA SPIT
- + DUGUALLA BAY
- + UTSALADY BAY

SUMMARY

- COMPLETED ANALYSES FOR NINE YEARS
- IC EELGRASS BED AREAS ARE STABLE
- CORNET BAY - CONTINUED DAMAGE DUE TO BOATING - PREVENTION
- PENN COVE << OTHER REGIONS - SEA URCHINS
- SONAR SURVEY METHOD DEVELOPMENT
- SITE SELECTION - ICMRC, DNR
- 2017 DATA COLLECTION STARTS IN JUNE
- SUSTAINABILITY PLANNING AFTER 10 YEARS

END