

SF-Bay Benthos Data Compilation

June, 2009 (SFEI)

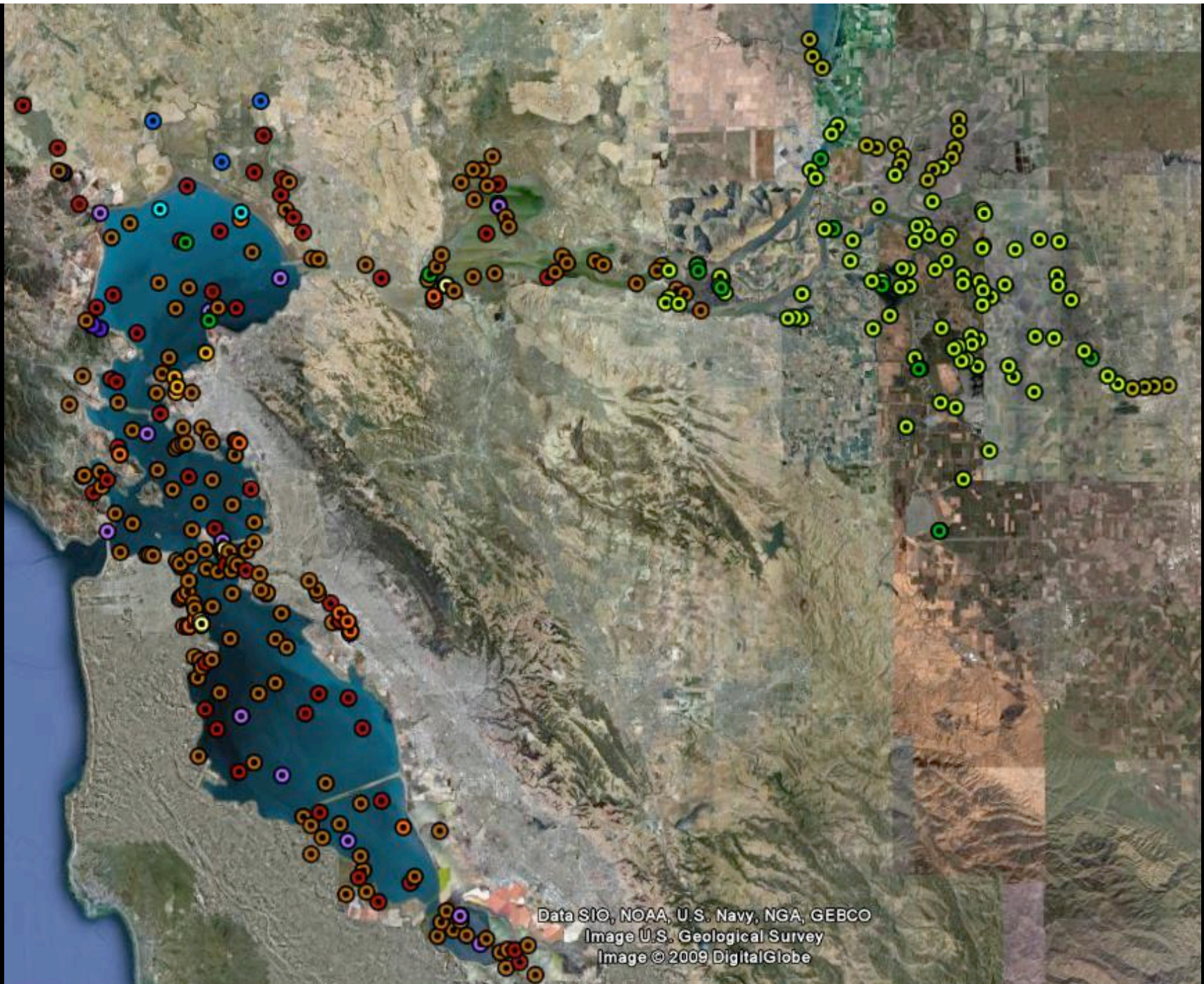
Benthos Data Sets

- 12 studies (1992 – 2008)
- ~ 0.05 m² core size
- ~ 0.5 mm sieve size

366 unique stations

2151 samples (no Reps)

BADA
BPTCP-92
BPTCP97
RefBPTCP94
CISNET
DWR (Historic)
DWR (GRTS)
SQO_07
RMP
RMP-W
WEMAP00
NOAA00_01



Studies

Study	Unique Stations	Num* Smples	Start	End	Season	Core Size	Max Reps	Final Sieve Size
BADA	9	54	Sep-94	Aug-97	W, D	0.05	3	0.5,1
BPTCP-92	4	4	May-92		R	0.054	1+2+3	0.5
BPTCP97	21	21	Apr-97	Dec-97	W, D	0.023	1+2+3	0.5
RBPTCP94	3	3	Sep-94		D	0.05	1	0.5,1
CISNET	4	12	Jan-00	Feb-01	W, D	0.05	1	0.5,1
DWR (Historic)	17	1573	Jan-94	Sep-08	Monthly	0.05	4	0.595
DWR (GRTS)	79	157	May-07	Oct-07	R, D	0.05	1	0.595
SQO_07	18	18	Oct-07		D	0.05	1	0.595
RMP	12	110	Feb-94	Aug-03	W, D	0.05	3	0.5,1
RMP-W	4	4	Feb-95	Mar-95	W	0.05	1	0.5,1
WEMAP00	13	13	Jul-00	Aug-00	D	0.05	1	0.5,1
WEMAP00	37	37	Jul-00	Aug-00	D	0.044	1	0.5
NOAA00_01	145	145	Jul-00	Sep-01	D	0.044	1	0.5
	366	2151	92	Sep-08		~0.5 m²		~0.5 mm

* Number of Samples (not including sample replicates)

Season: W – wet (Nov-Apr), D – dry (Jun-Oct), R – receding rainfall (May)

Taxonomy

- Local taxonomist assisted in standardizing the taxonomy across studies to the LPIL.
 - 1128 unique taxa to 927
 - 815 unique taxa in 0.5mm dataset
- Further standardization for the cluster analysis was performed collaboratively by SFEI and SCCWRP

Agency	Taxonomist
DWR	Wayne Fields
CCSF OCEANSIDE	Michael Kellogg
	Dorothy Norris
Moss Landing	Peter Slattery
SCAMIT	Larry Lovell

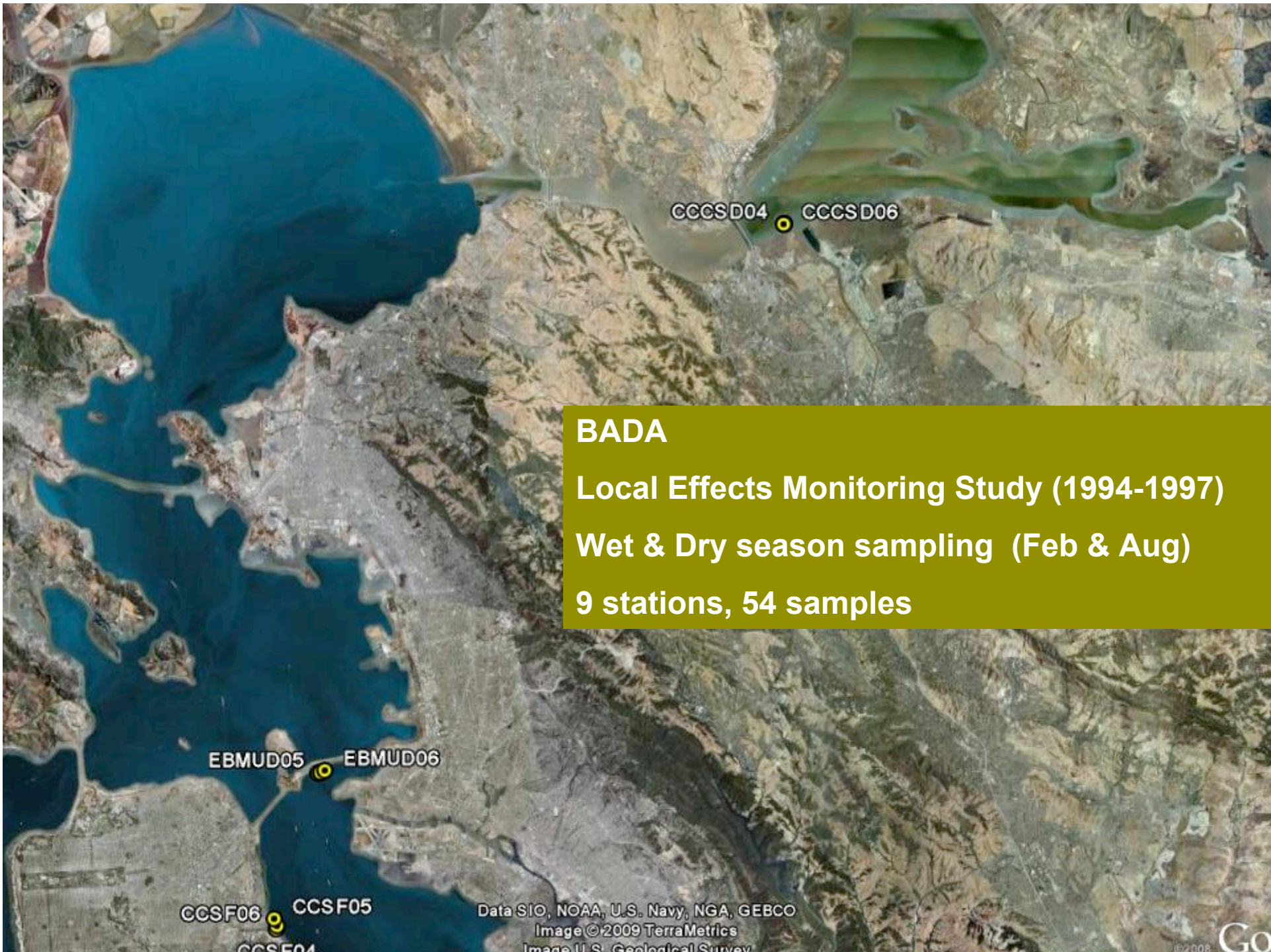
Analysis Dataset – Basic Principles

“Find a way to keep species separate if at all possible“

Analysis Dataset – Basic Principles

Specifics:

- When there were two IDs for a genus, we used the ID where the Freq. Of Occ. was dominant across studies.
- When we had several IDs to the species level within a genus, but also had genus or family level IDs, we dropped the higher taxonomic level IDs.



BADA
Local Effects Monitoring Study (1994-1997)
Wet & Dry season sampling (Feb & Aug)
9 stations, 54 samples

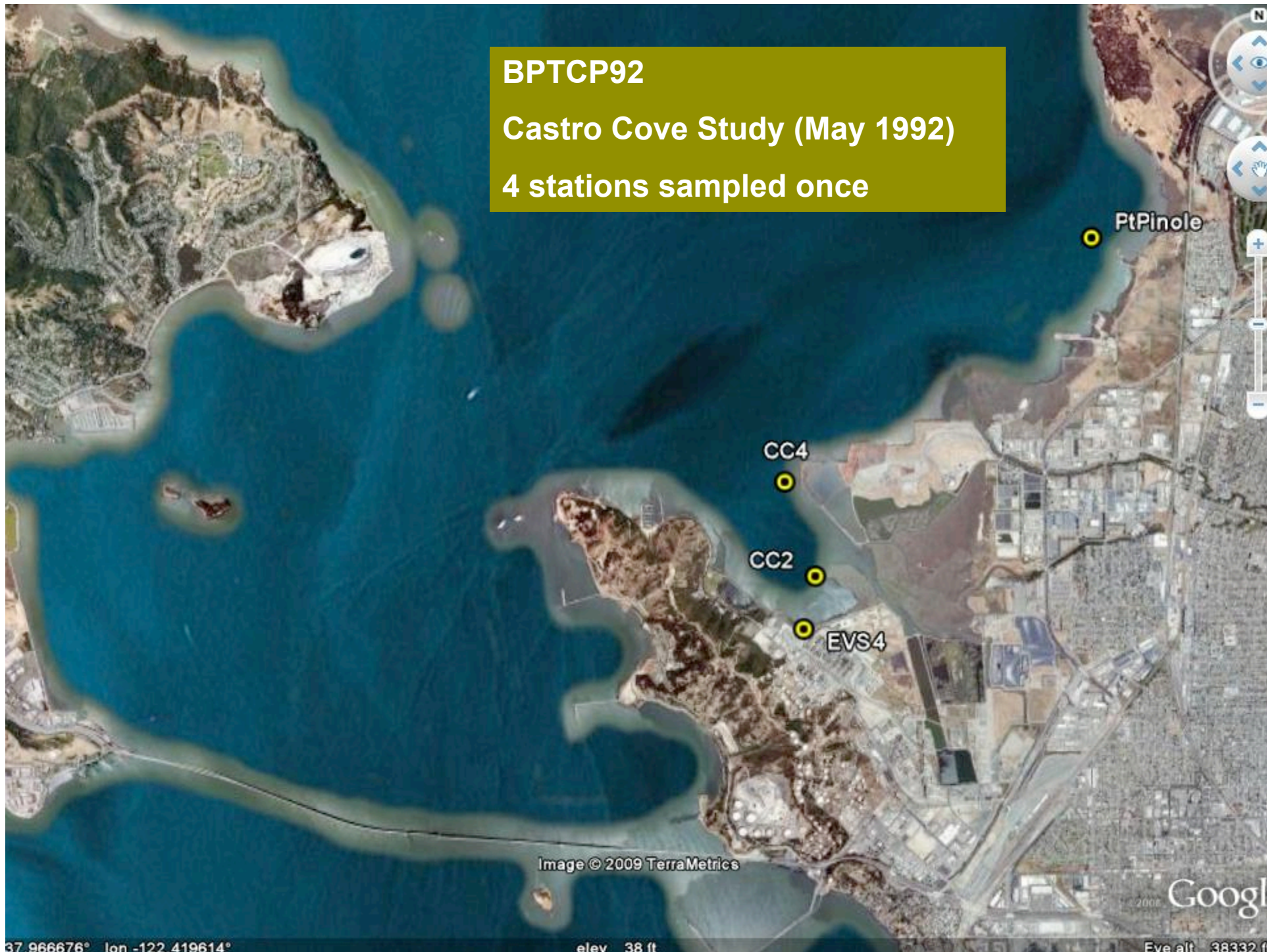
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2009 TerraMetrics
Image U.S. Geological Survey

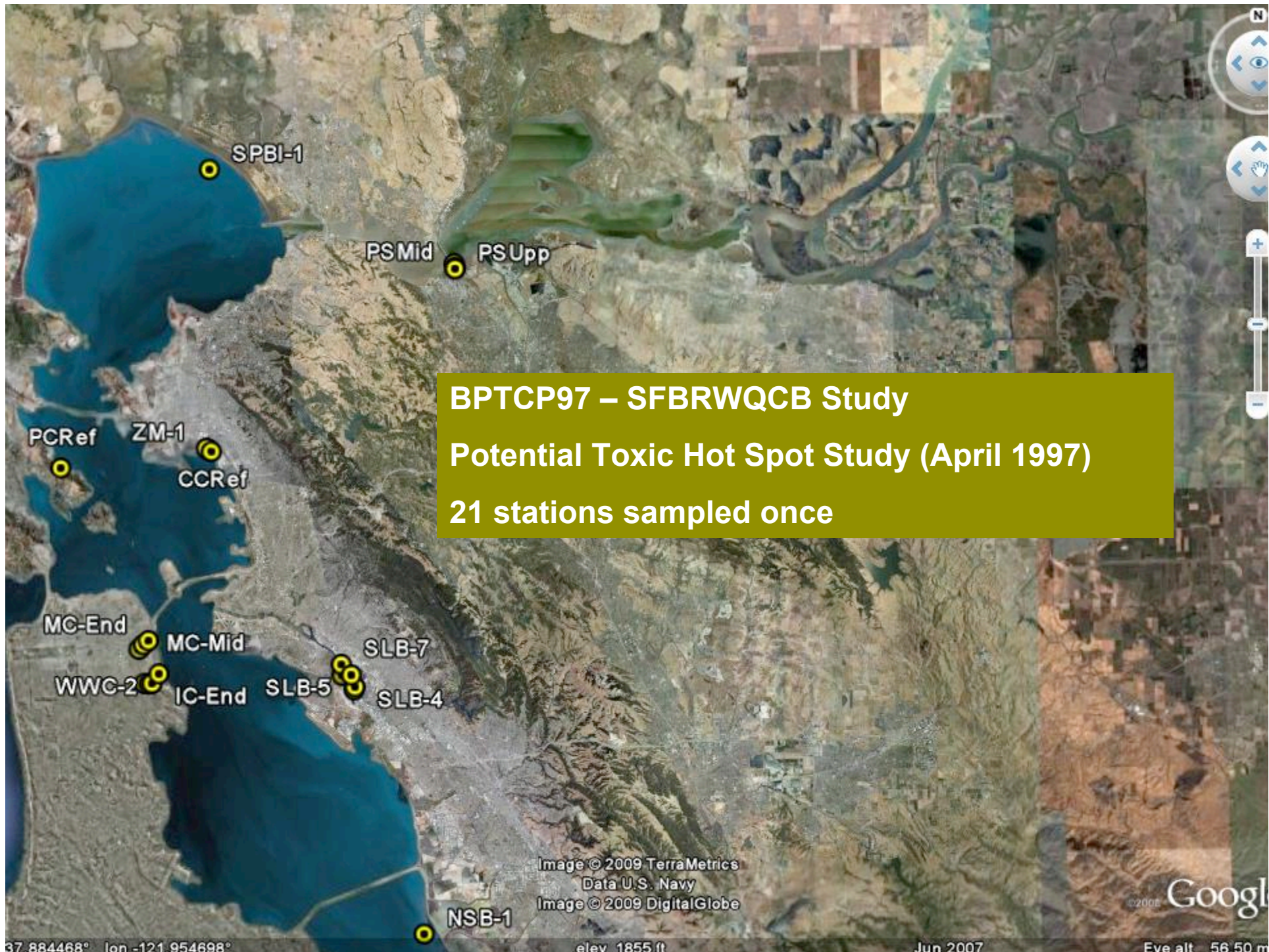
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BPTCP92

Castro Cove Study (May 1992)

4 stations sampled once





BPTCP97 – SFBRWQCB Study
Potential Toxic Hot Spot Study (April 1997)
21 stations sampled once

37.884468° lon -121.954698°

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Data U.S. Navy
Image © 2009 DigitalGlobe

elev. 1855 ft

Jun 2007

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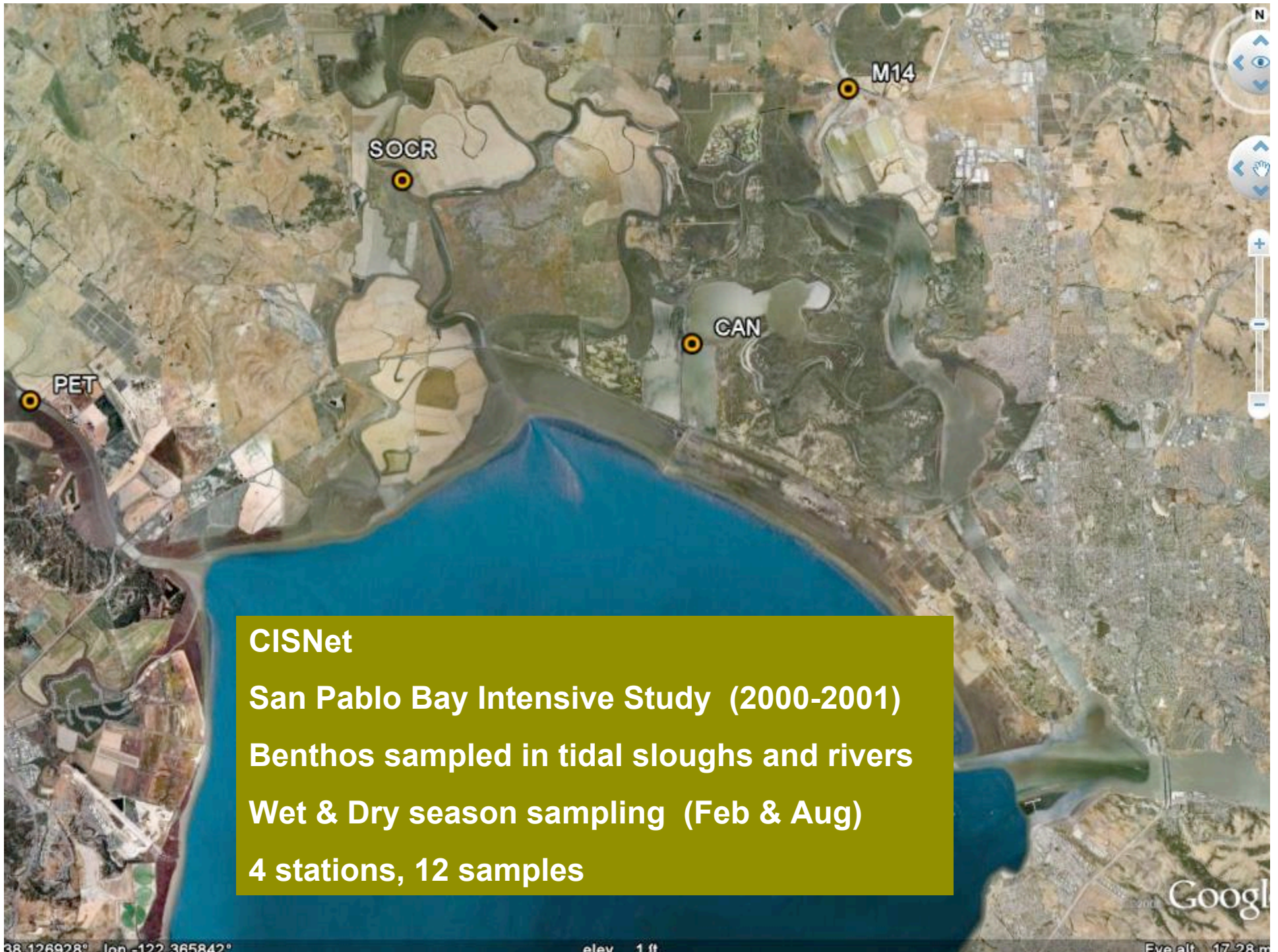
Eye alt. 56.50 m



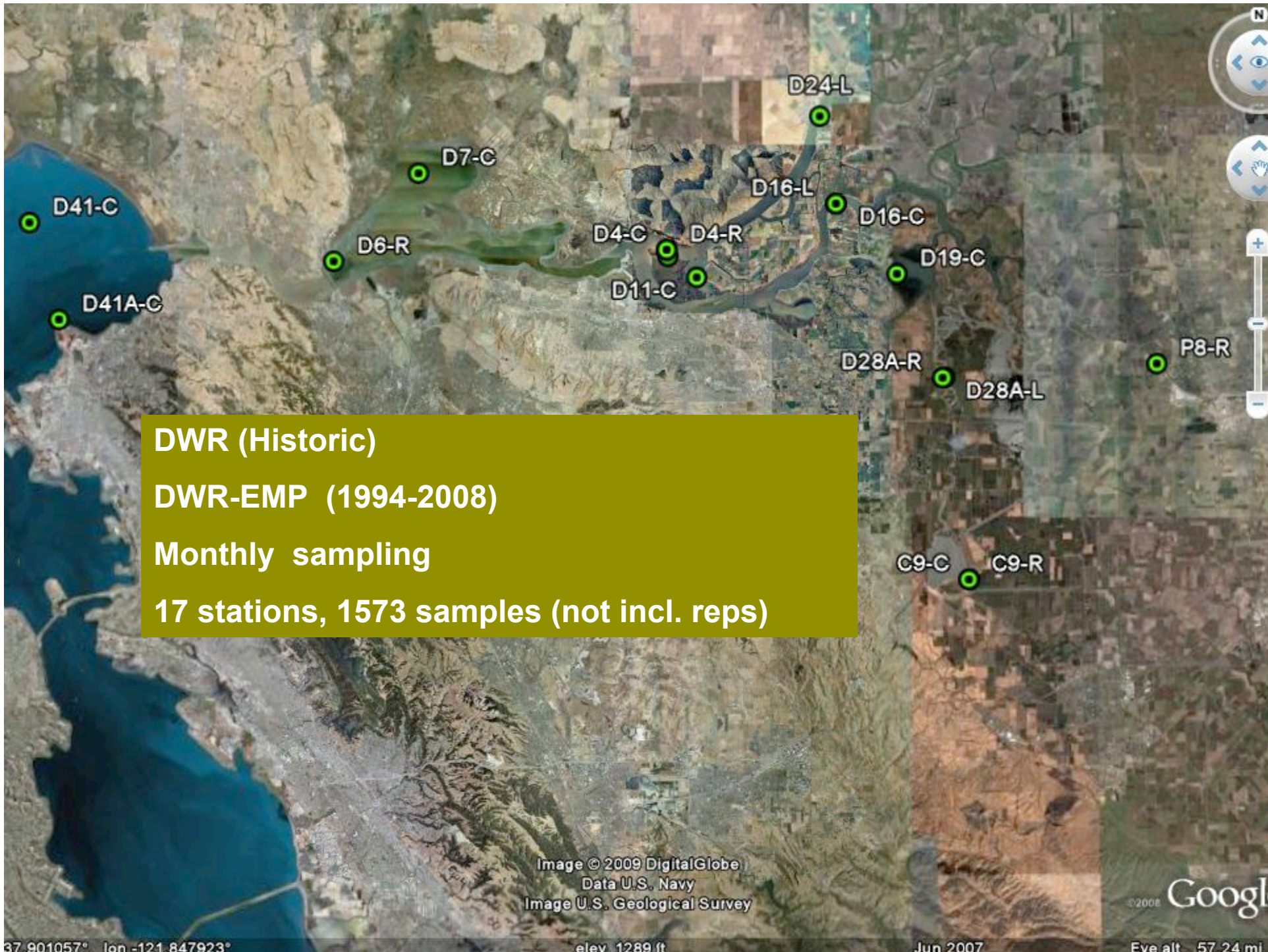
RBPTCP94

Potential Reference Sites (Sept. 1994)

3 stations sampled once



CISNet
San Pablo Bay Intensive Study (2000-2001)
Benthos sampled in tidal sloughs and rivers
Wet & Dry season sampling (Feb & Aug)
4 stations, 12 samples



DWR (Historic)

DWR-EMP (1994-2008)

Monthly sampling

17 stations, 1573 samples (not incl. reps)

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Data U.S. Navy
Image U.S. Geological Survey

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37.901057° lon -121.847923°

elev. 1289 ft

Jun 2007

Eve alt. 57.24 mi

DWR-EMP (GRTS)

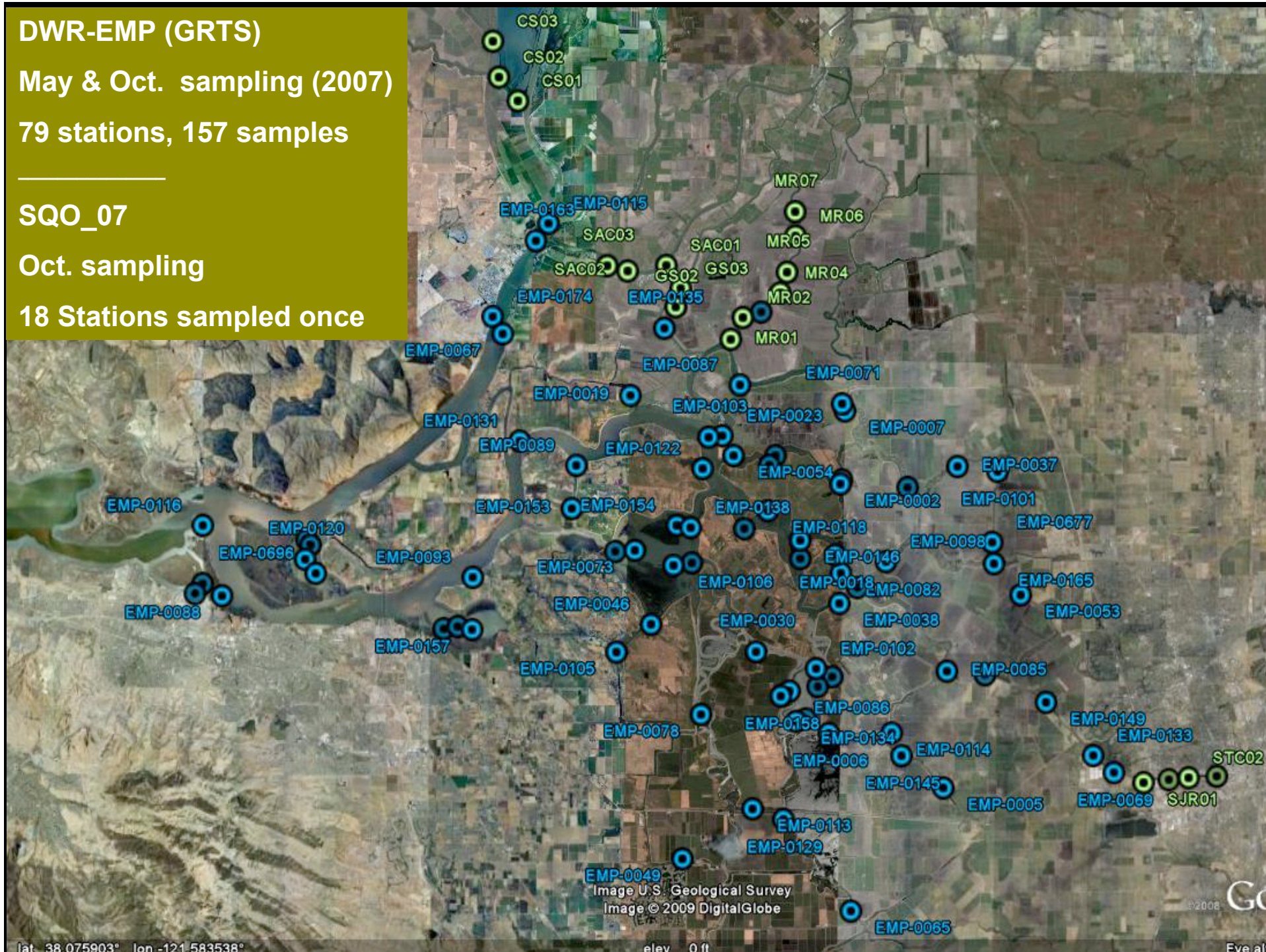
May & Oct. sampling (2007)

79 stations, 157 samples

SQO_07

Oct. sampling

18 Stations sampled once





RMP
Benthic Pilot Study + (1994 – 2003)
Wet & Dry sampling (Feb & Aug)
12 stations, 110 samples

RMP_Wetlands Study
Wet season sampling (Feb-March 1995)
2 sites, 4 stations sampled once

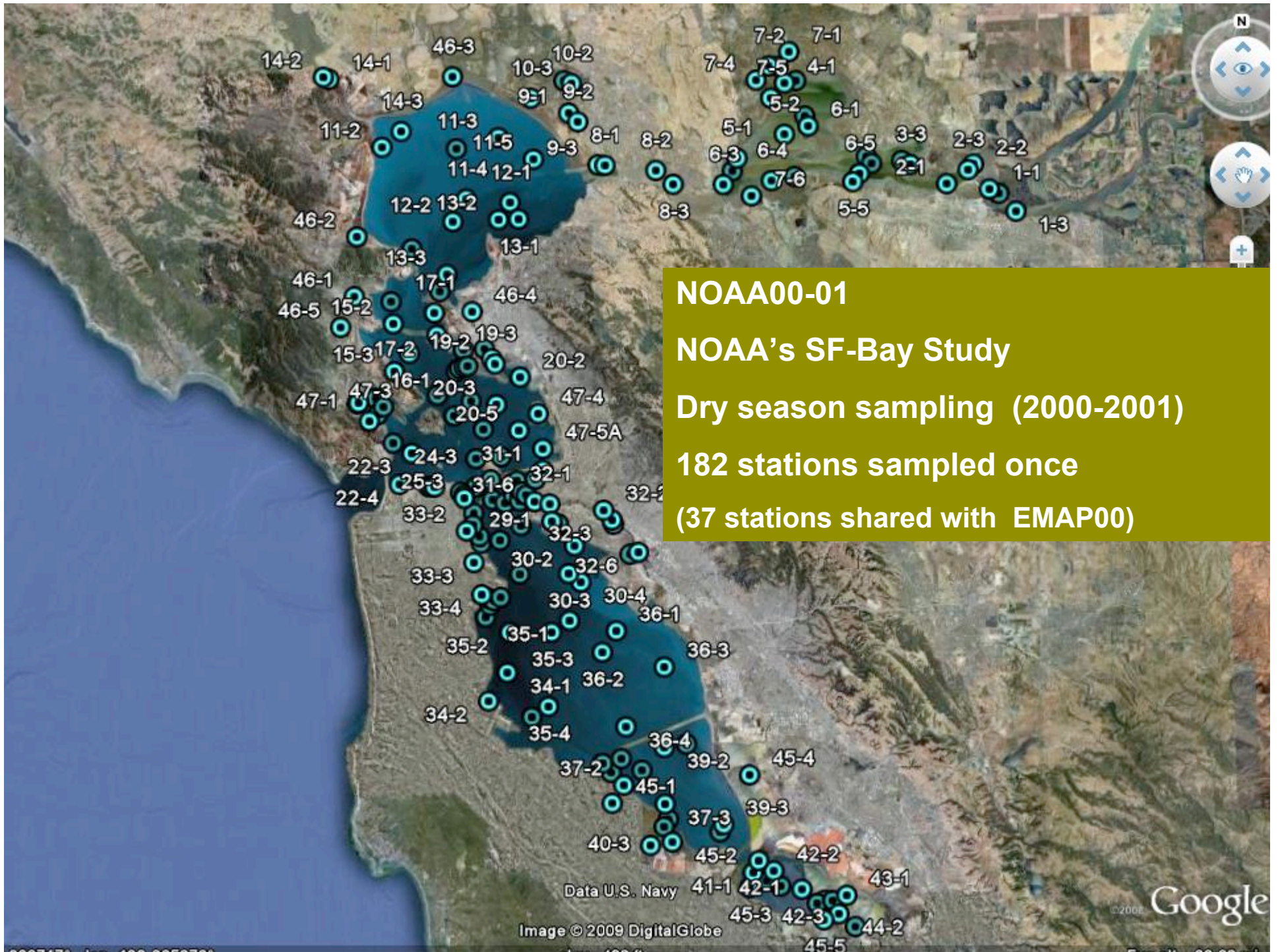
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

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lat. 37.795064° lon. -122.300659°

elev. 10 ft



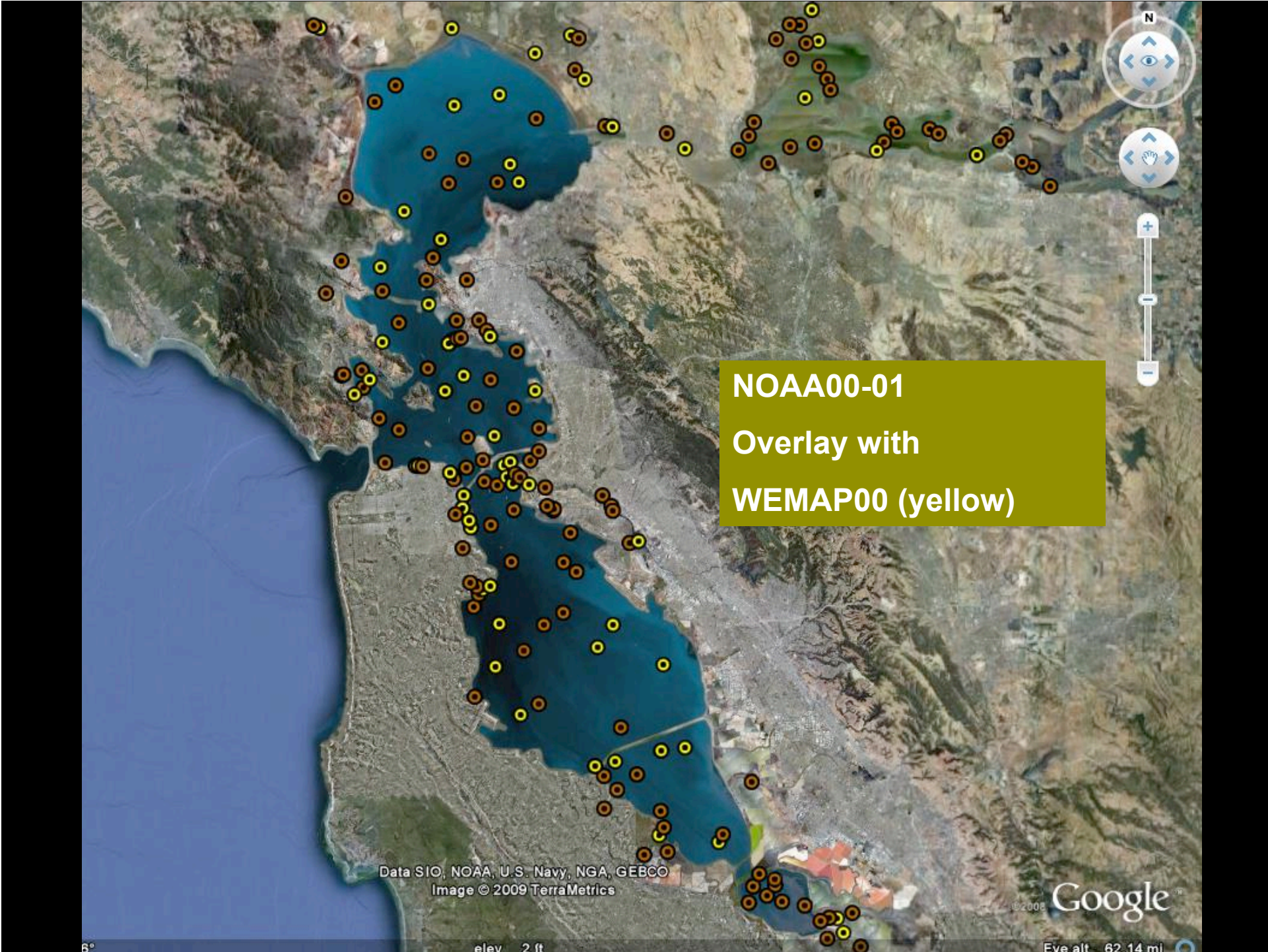


NOAA00-01
NOAA's SF-Bay Study
Dry season sampling (2000-2001)
182 stations sampled once
(37 stations shared with EMAP00)

Data U.S. Navy

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NOAA00-01
Overlay with
WEMAP00 (yellow)

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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6° elev. 2 ft Eye alt. 62.14 mi