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National Report for Canada

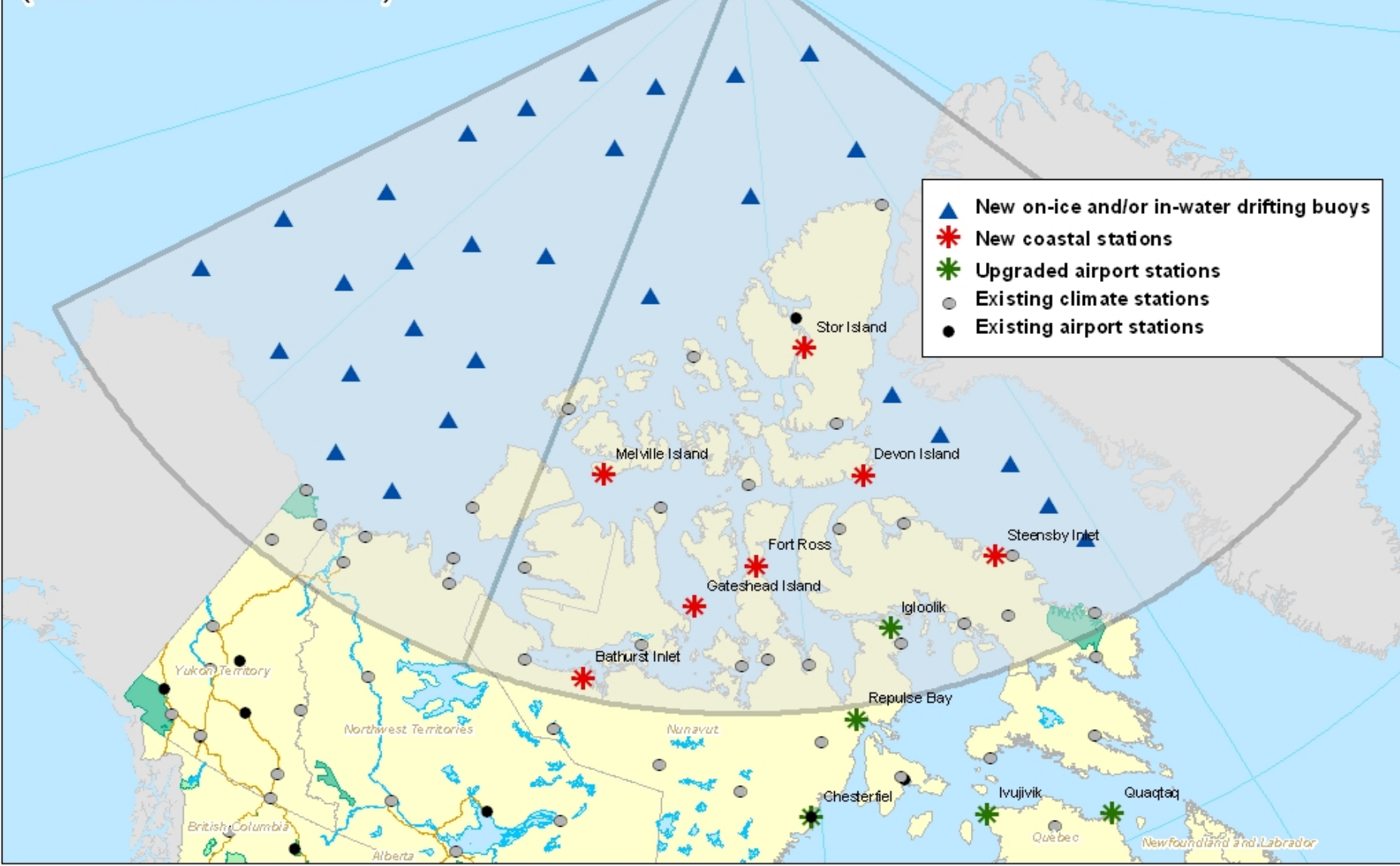
26th Session of the DBCP – Oban, Scotland

September 27-30th, 2010

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Environment Canada – Meteorological Service of Canada



PROPOSED METEOROLOGICAL MONITORING INFRASTRUCTURE (MET/NAV AREAS)



- ▲ New on-ice and/or in-water drifting buoys
- ✱ New coastal stations
- ✱ Upgraded airport stations
- Existing climate stations
- Existing airport stations

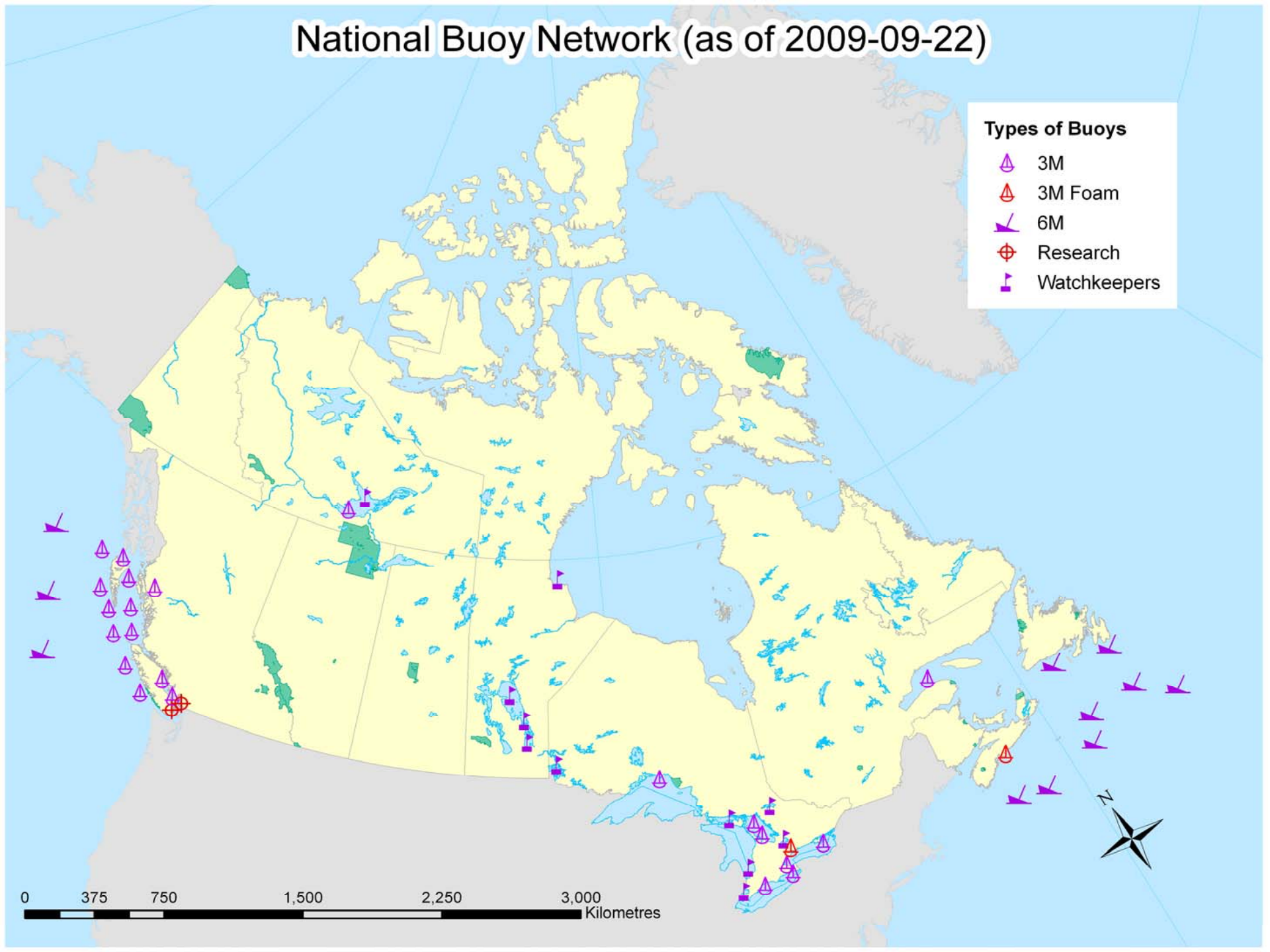


National Buoy Network (as of 2009-09-22)

Types of Buoys

- 3M
- 3M Foam
- 6M
- Research
- Watchkeepers

0 375 750 1,500 2,250 3,000 Kilometres



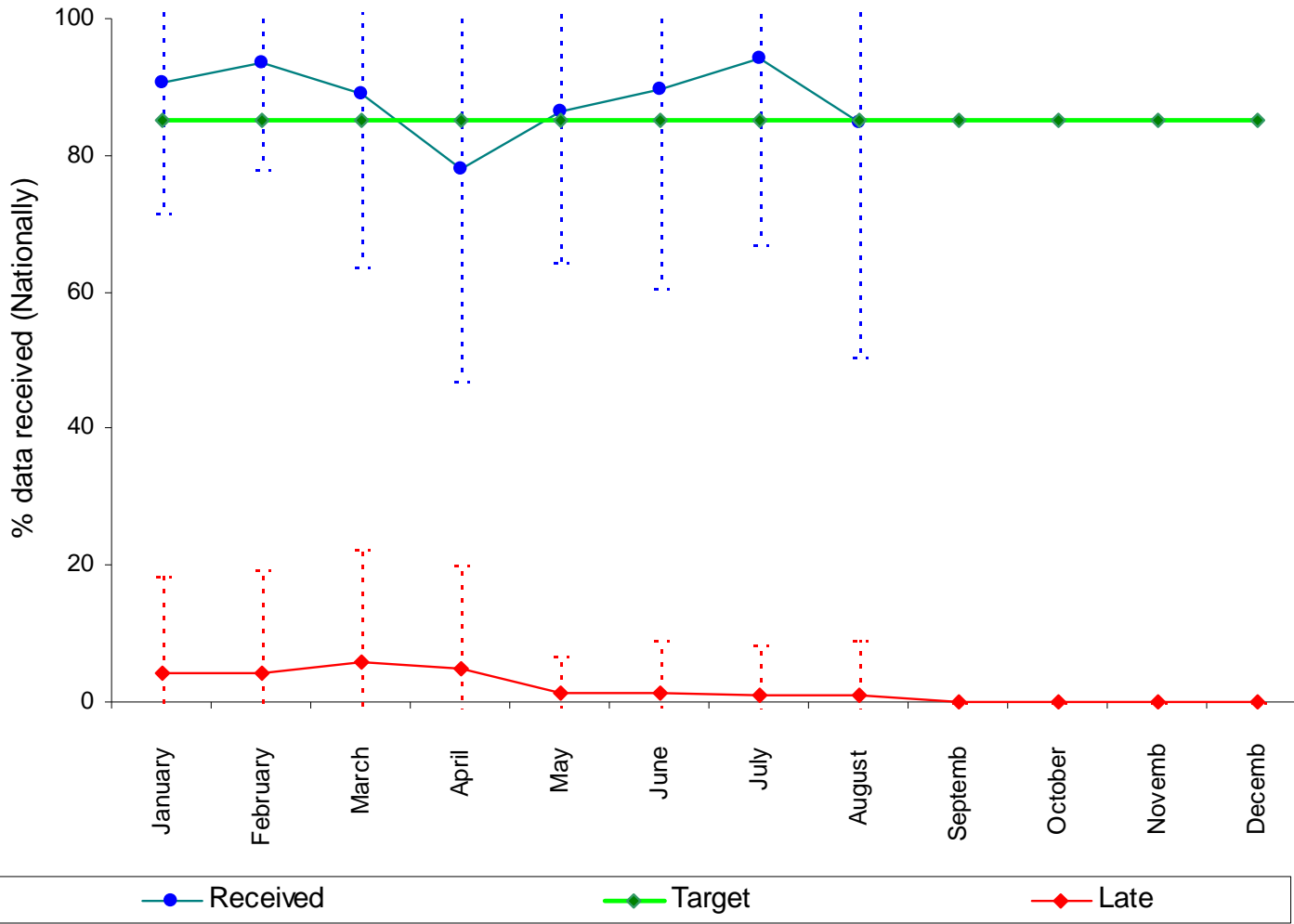


2009/10 Moored Buoy Distribution

	NE Pacific	Inland Waters (Seasonal)	NW Atlantic & Gulf of St. Lawrence
Moored Operational	16	20	10 (1 seasonal)
Moored Research/ Test	2		



Archived Real Time Buoy Data Availability Statistics (2010)



Composite statistic for network of 47 buoys, reduction in spring attributed to outages following winter storm season, prior to maintenance voyages.

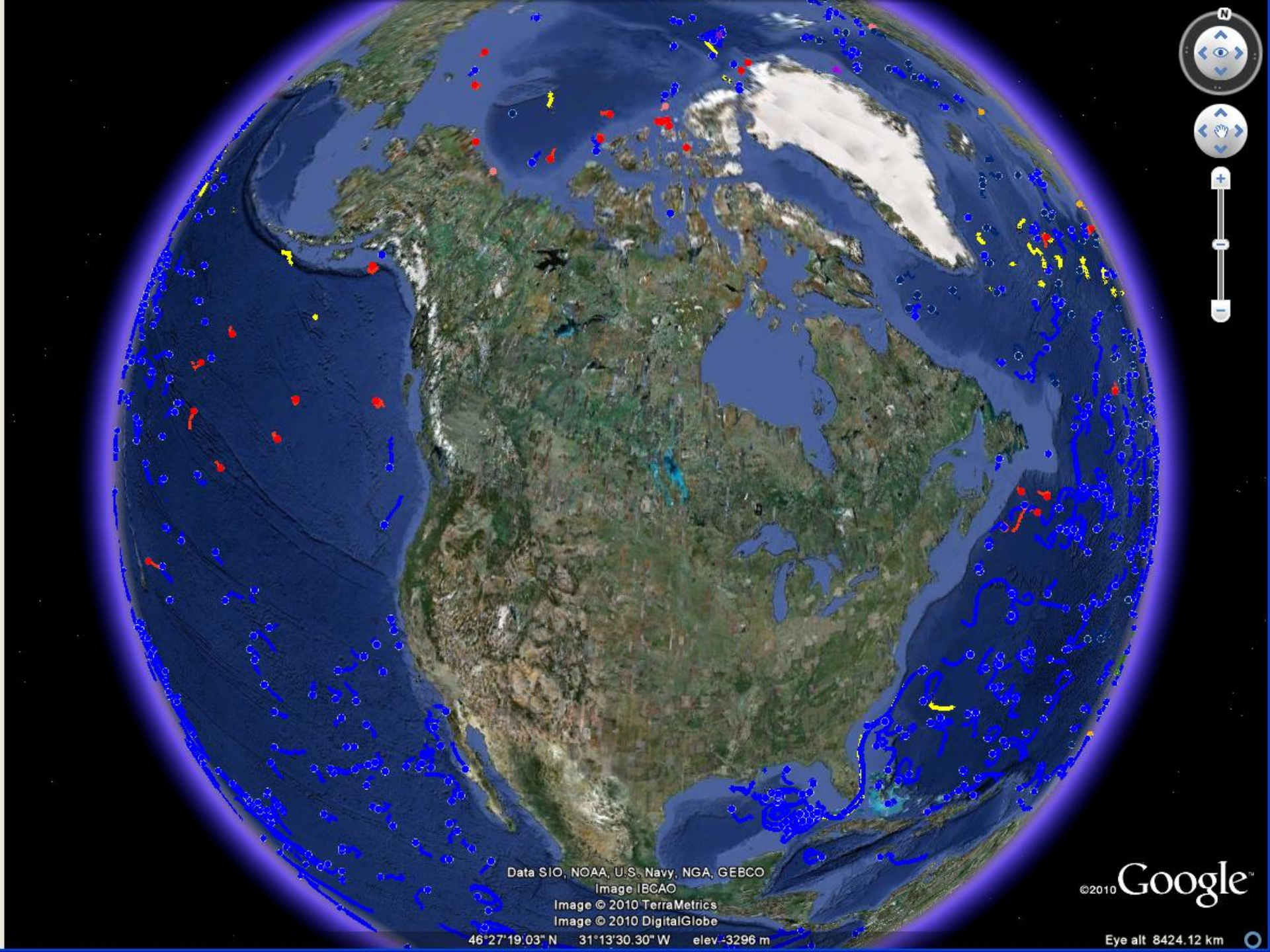


2009/10 Drifter Buoy Distribution

	NE Pacific	NW Atlantic	Arctic Ice Beacons (IABP)	Ice Services
Deployed	8	4	2	3
Operational August 31st	16	7	10	5
Barometer Upgrades (GDP)	6			

→ All MSC deployed drifters are equipped with barometers.

→ 3 Technocean buoys have lifetimes of **37** months



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

Image © 2010 TerraMetrics
Image © 2010 DigitalGlobe

46°27'19.03" N 31°13'30.30" W elev.-3296 m

©2010 Google™

Eye alt 8424.12 km



2010 Planned Buoy Deployments

	NE Pacific	NW Atlantic	Arctic Ice (IAPB)	Ice Services
Drifter	12	4	5	5
Barometer Upgrades	20 (via GDP)			
Iridium	2	2		
Moored	1	1		

Note: This table does not include the annual seasonal spring deployments of our operational moored buoys in the Great Lakes and Inland waters



New Initiatives

- Agreement with JouBeh Technologies and Scotia Weather Services for routing of 3rd party drifting buoy observations to GTS.
- Deployed 2 Datawell MarkIII waverider buoys as contribution to PP-WET. Buoys collocated with NE Burgeo Bank NOMAD (44255) and South Hecate Strait 3MD (46185). Plan to deploy Datawell buoys at different locations following 12+ months at present sites.
- Continue work on specifications/requirements for next generation buoy “payload” (system) solution). Requirement include 2 way communication capability enhancing ability for remote corrective actions.
- Playing catch-up regarding requirements to meet **BUFR** message encoding requirements for moored and drifting buoy network, as well as SHIP observations.
- Moored buoy network will be equipped with SUTRON SatLink2 40W GOES transmitter. Expected to roll out to entire network over the next 2-3 years.



New Initiatives

- Collaborating with NDBC on options to improve existing omnidirectional GOES antenna.
- Will be working with MetOcean on evaluation of SVP-B equipped with sonic anemometer. Interest for both in-water, and on-ice applications.
- MSC is implementing a new system (**SSMS** – station/sensor management system) which will improve ability to track network assets (serial numbers of sensors) as well as maintenance costs (via work-orders)

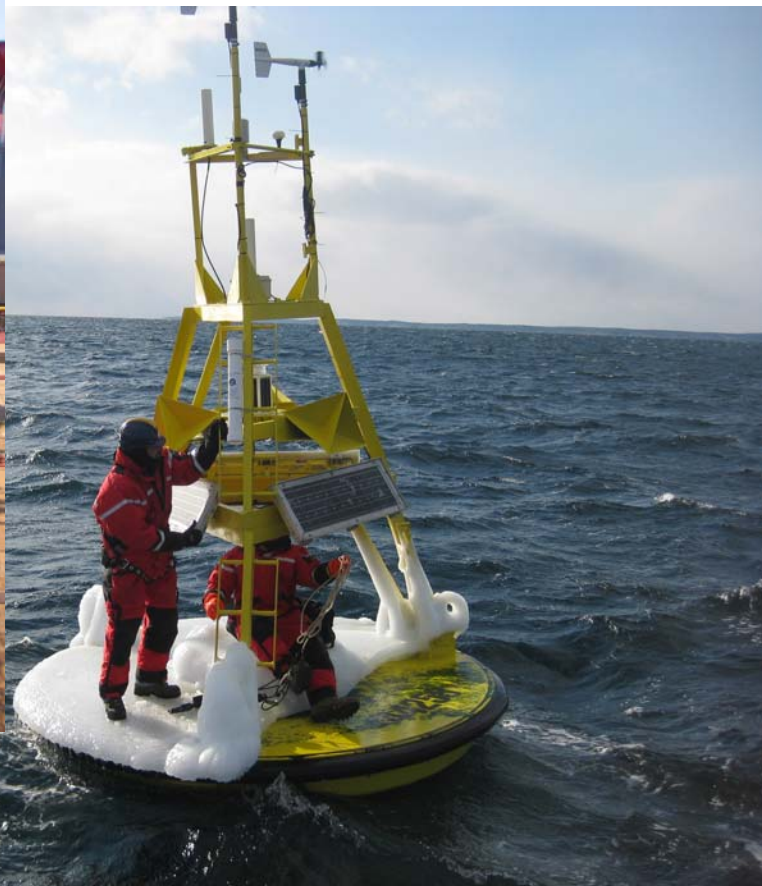


Issues / Summary

- Continued deployment & recovery of moored buoys by Canadian Coast Guard – **critical partnership** – ship time at no cost to EC.
- Would like to thank NDBC for their continued support – includes technical knowledge exchange, and sharing of expertise.
- Excellent support from AXYS Technologies
- Training/retention of qualified meteorological buoy technicians will be a challenge in next 2-3 years.
- Logistical challenges with drifter deployments in NE Pacific and Arctic.



A day at the office...





South Hecate Buoy – missing
superstructure (fall 2009)



Halifax Harbour Buoy – following
Hurricane Earl

Thank-you / Merci!

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