



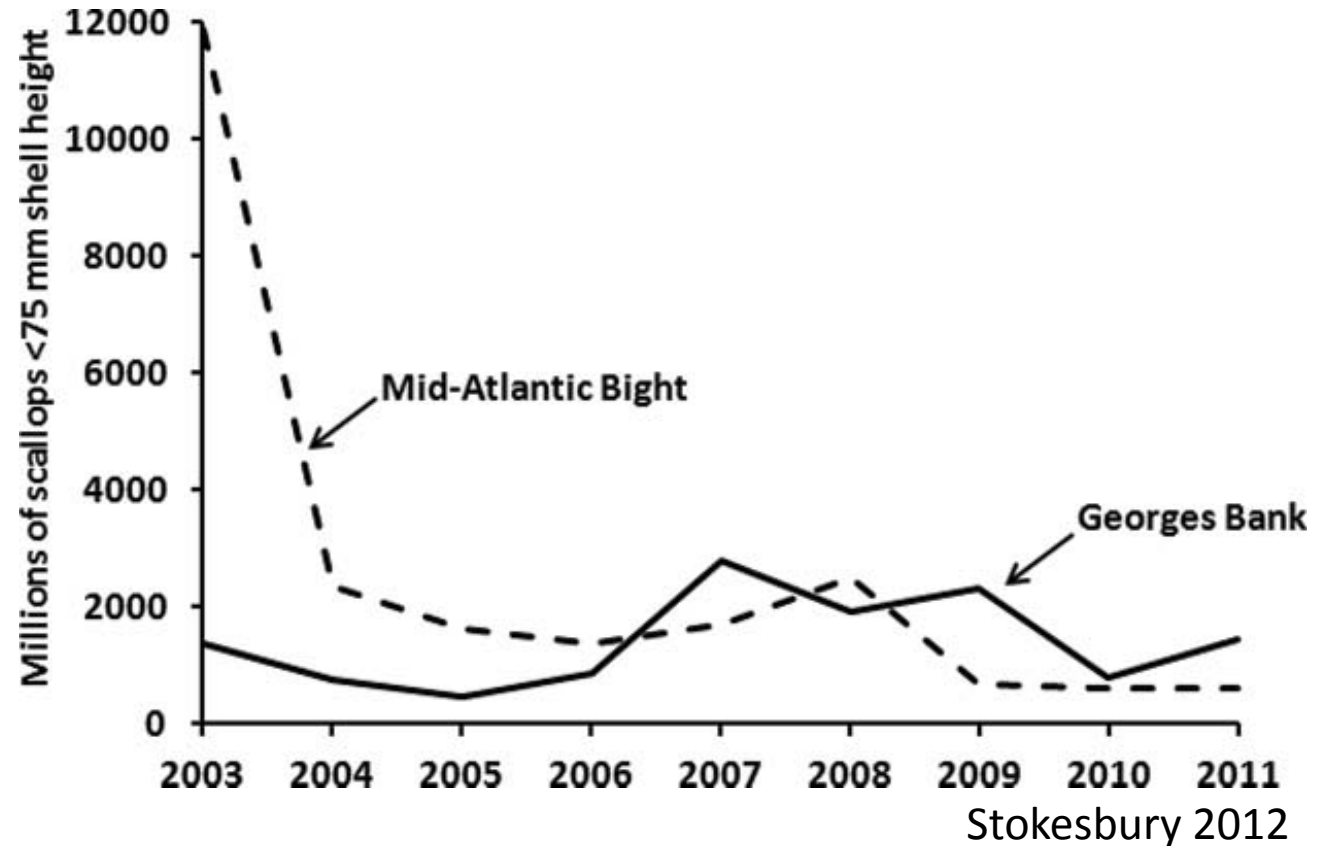
Scallop Resource Enhancement

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April 9, 2014 Scallop PDT Presentation



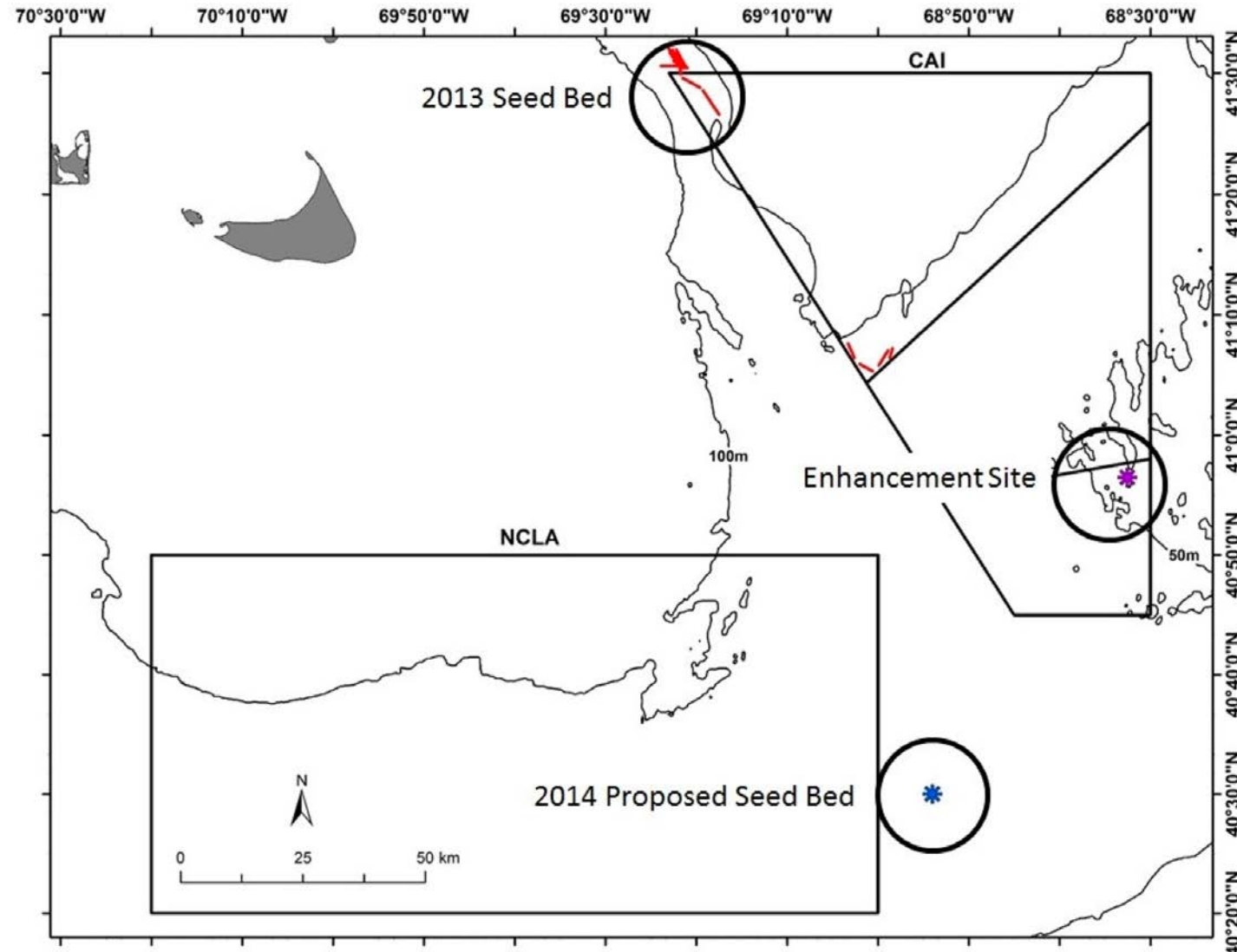
Recruitment Enhancement

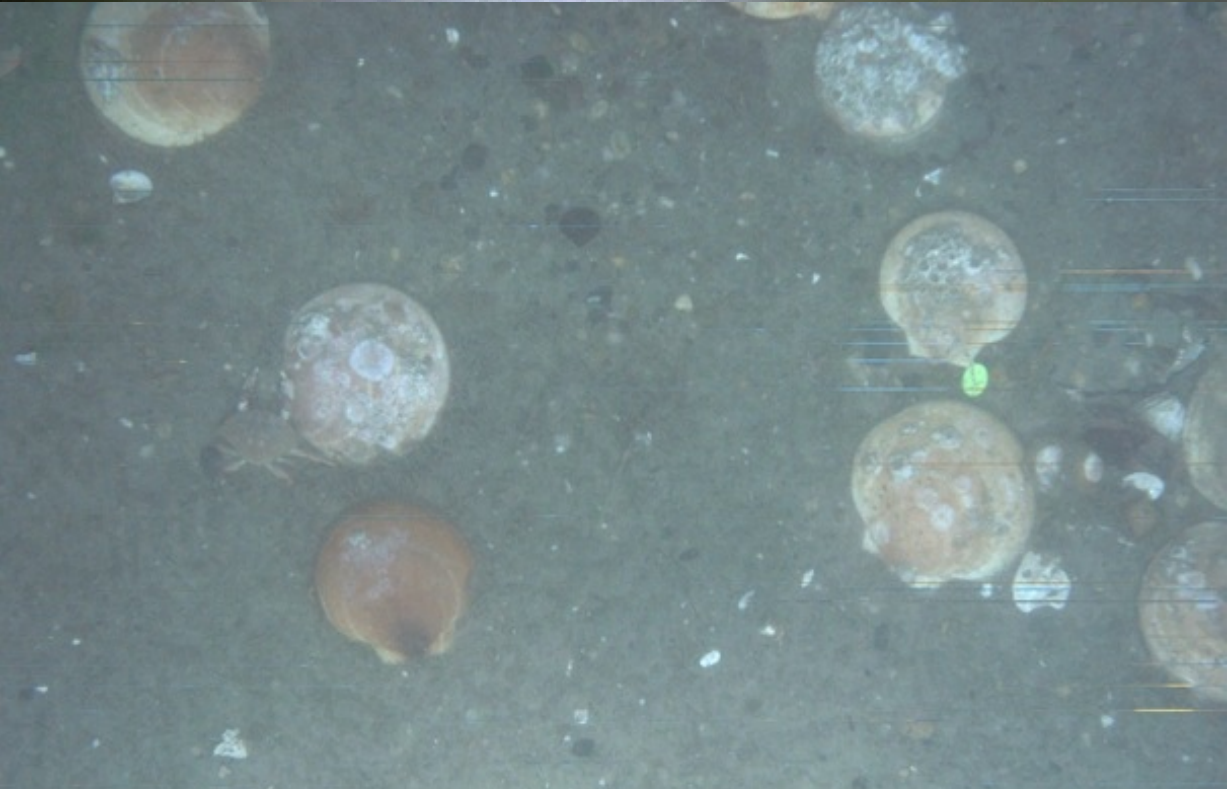
- Successful enhancement of wild scallop recruitment in Mutsu Bay, Japan (Aoyama 1989)
- Sea scallop recruitment low from 2009-2011 (Stokesbury 2012)
- Recruitment highly variable on GB
- Seeding efforts could decrease fishery susceptibility to recruitment failure



2013 Seeding Project

- Enhancement site surveyed prior to seeding (May 22, 2013)
- Site seeded (June 6, 2013)
- SMAST video surveys conducted immediately, 10 days, 3 weeks, and 3 months after seeding event

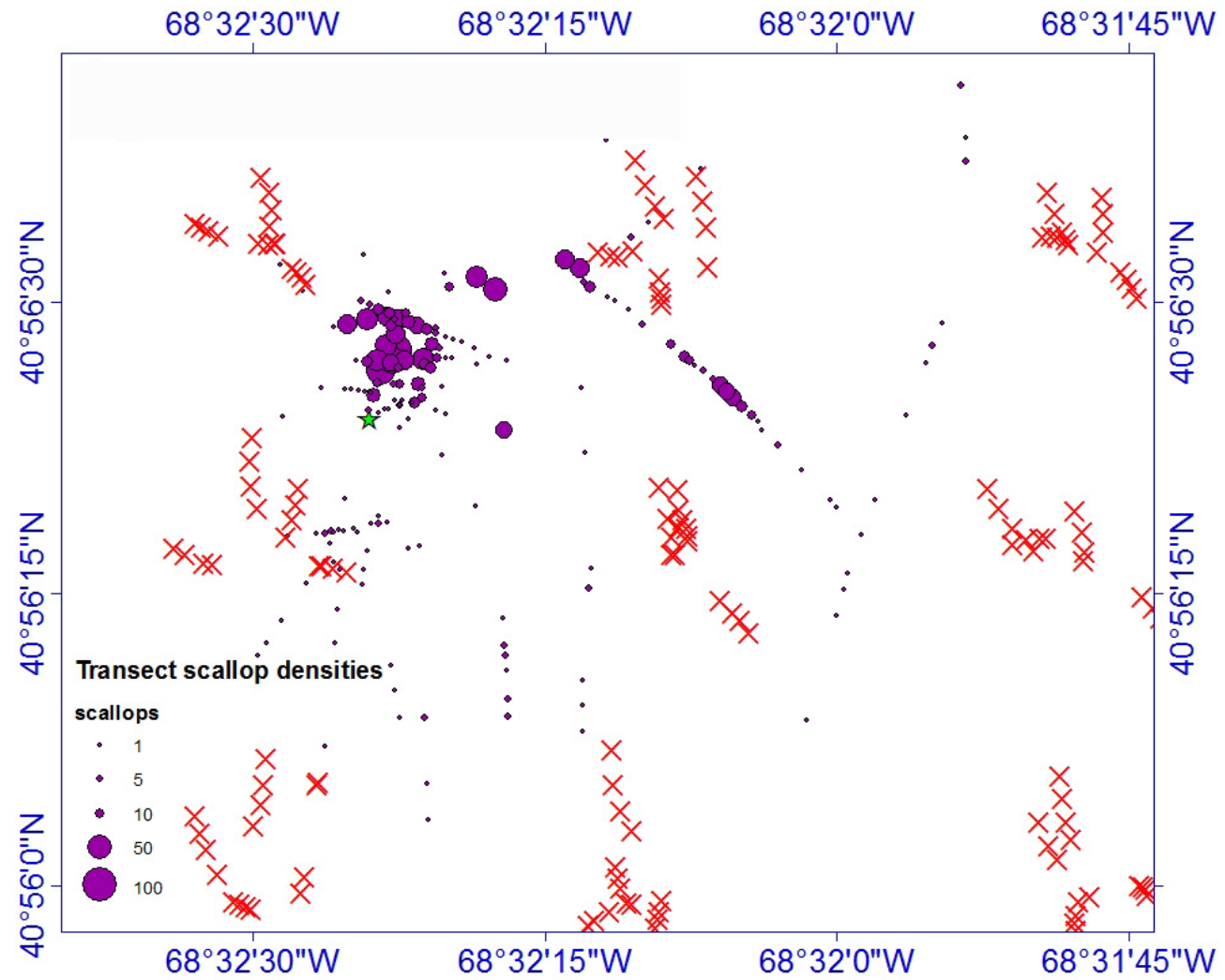






Scallop Densities

- Broadscale grid survey provided baseline info on scallop densities and habitat
- Transect survey detected high densities of scallops at drop site

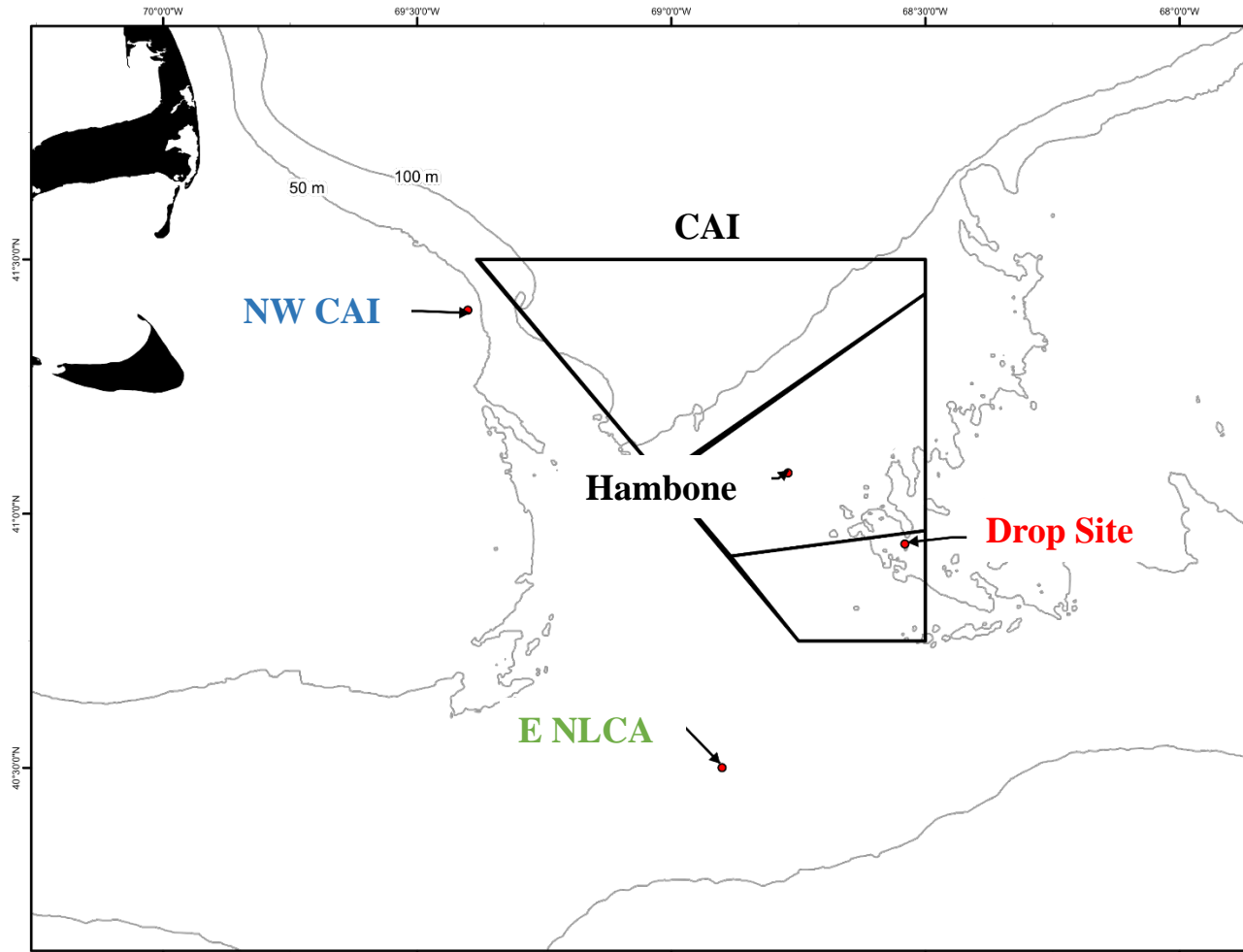


Transect Survey Results

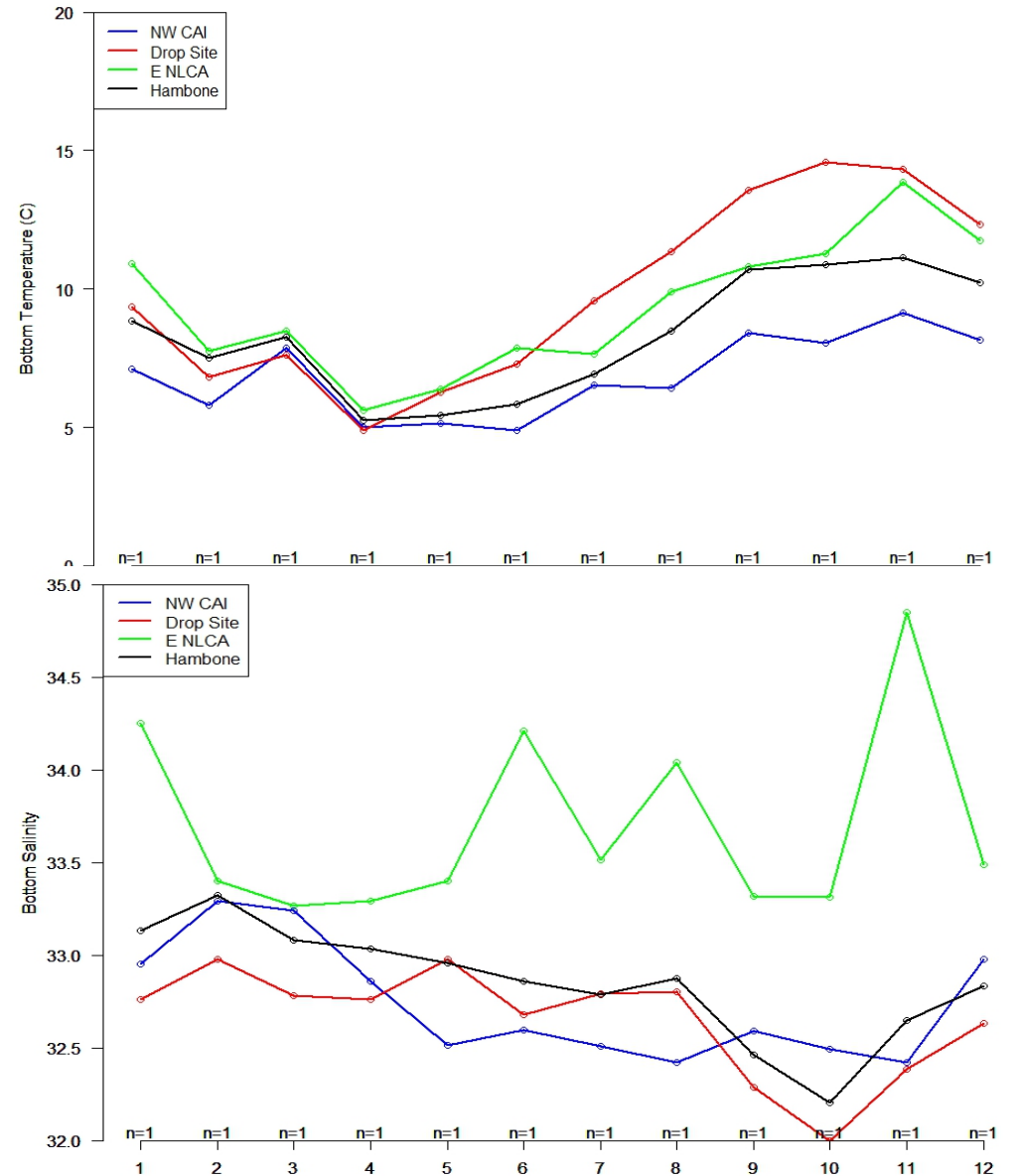
	Trip Date	Days after Reseed	Camera Drops	Scallops	Seastars	Skates	Crabs
Trip 1	6/6/13	0	112	2.29 (0.57)	0.26 (0.06)	0.16 (0.04)	0.06 (0.03)
Trip 2	6/15/13	10	123	2.19 (0.77)	0.16 (0.03)	0.41 (0.06)	0.26 (0.09)
Trip 3	6/27/13	21	247	1.52 (0.41)	0.04 (0.01)	0.21 (0.03)	0.57 (0.10)
Trip 4	9/8/13	92	248	1.88 (0.51)	0.21 (0.04)	0.13 (0.02)	0.08 (0.02)

Average # animals per video pyramid quadrat (3.2 m²) with SE

Oceanographic Site Comparison



Mean monthly estimates (2003-2012) from FVCOM (Chen et al. 2006)





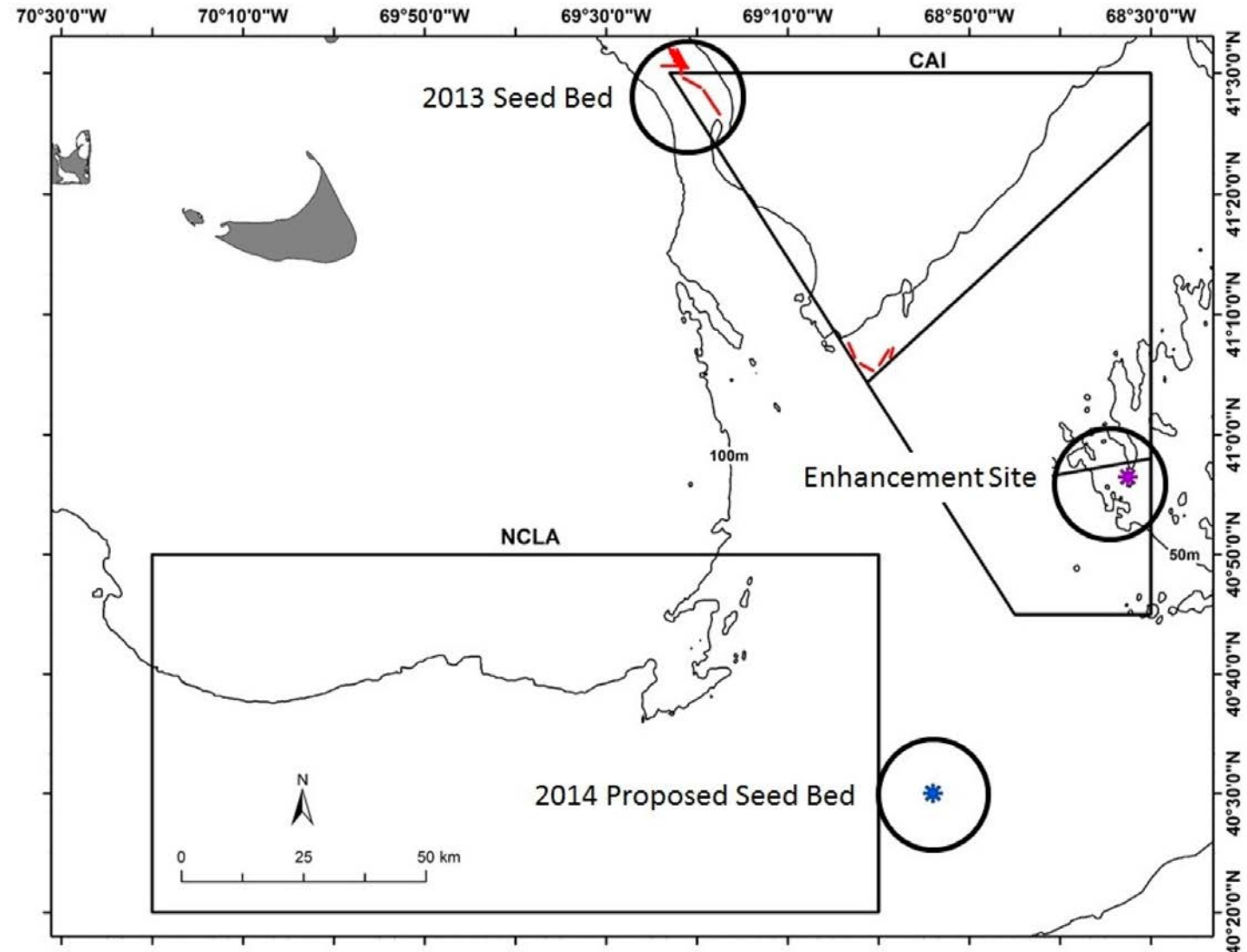
Spat Collectors

- Lobster traps filled with spat bags
- Spat bags at surface
- Problems with flotation
- More will be deployed in 2014 and monitored regularly



2014 Project

- April 2014 Trip to monitor site 1 year after seeding
- Reseed same area in May 2014
- Seed sourced from different location: E of NLCA
- More seed, earlier transplant



2014 Project: Further Developments

- Install helical anchor at 2014 Drop Site
- Deploy oceanographic sensors for continuous monitoring (temp, salinity, pH, dissolved O₂)
- Possibly utilize WHOI's Remote Environmental Monitoring Units (REMUS) to explore the drop site

