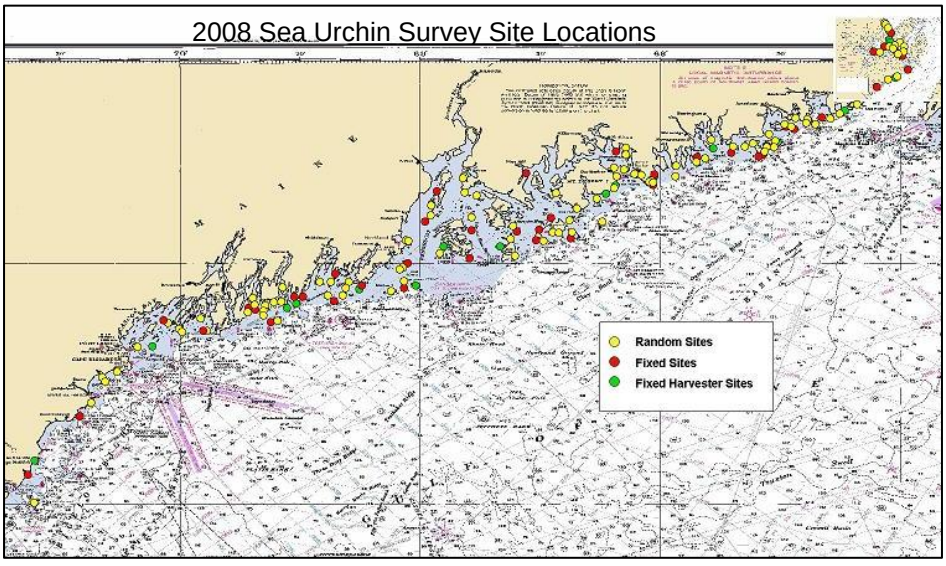
Maine's Sea Urchin Survey

Every year since 2001, DMR has conducted an annual spring sea urchin dive survey, funded by the industry's license surcharge, with the cooperation of industry, the Sea Urchin Zone Council, and scientists and students at the University of Maine. It is probably the most thorough urchin survey in the world.

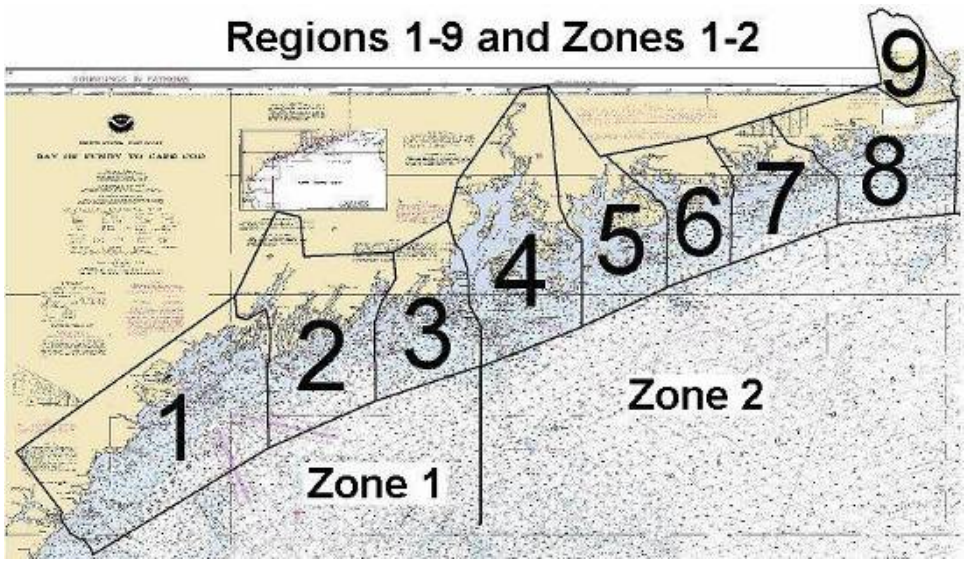
The state's coast was divided into nine regions, and 18 sites are visited in each region each year. Sixty quadrats (m^2) are evaluated at each site.

In 2008, DMR and industry divers counted and measured urchins at 162 shallow sites, working from industry vessels. Crabs, starfish, and algal (seaweed) cover were also evaluated. 45 of the sites visited in 2001 were recommended by industry to be revisited each year (fixed sites, red dots below). 18 new fixed sites, also recommended by harvesters, were added in 2005 (green dots below). The other 99 sites (yellow dots) are picked randomly from suitable bottom types and depths, and new random sites are picked each year.

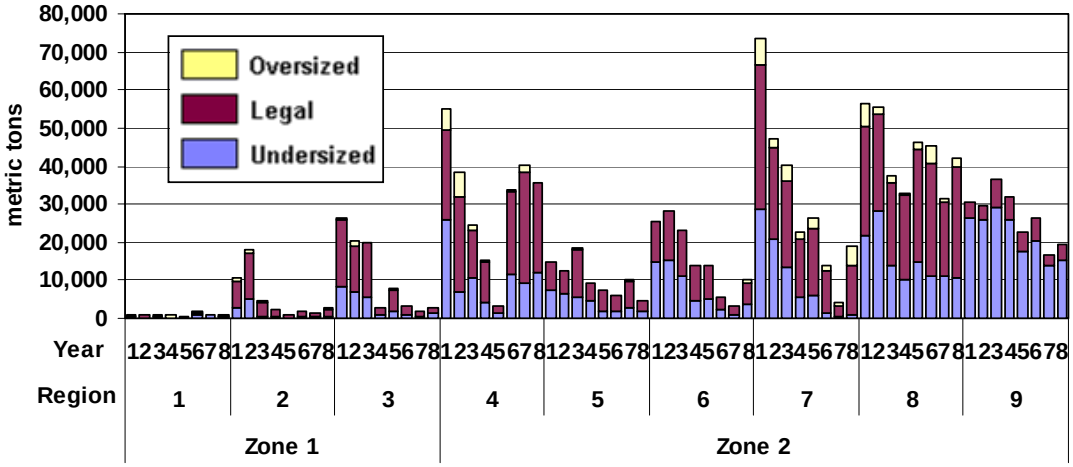
Half of the fieldwork and urchin census-taking is conducted by an industry diver, working side-by-side with an experienced DMR diver from industry vessels. About $45,000 is returned to the industry annually from the urchin research license surcharges to pay the urchin diver, vessels, and crews for the 9 weeks of the survey.



Results are presented in the graphs on the next page. They show declines in the sea urchin stock biomass in 8 out of 9 regions since 2001. Zone 2 continues to have higher sea urchin abundances than Zone 1. In 2007, both Zones had their lowest urchin biomass index since the survey began, with some improvement in 2008.



Estimated Total Biomass (mt) by Region, Year, and Size



Mean Sea Urchin Biomass by Zone and Year