

SECTION SEVEN



Climate Change



Maine Historical Society

Three workers pose with thick blocks of ice on Sebago Lake circa 1920.

Introduction

Climate is always changing, a fact that is hard for anyone living in the glaciated landscape of Maine to forget. Eighteen thousand years ago, the Casco Bay watershed lay below a mile or more of ice. Ten thousand years ago, most of it was under hundreds of feet of water. But current information suggests that recent climate change is more rapid, and more consistent – more directional – than anything seen in human history (*e.g.*, Solomon *et al.* 2007)

Human societies are adaptable, but there will be costs related to adapting to a novel climate. The tendency of people to organize their lives and economic activities around climate means that a shifting climate is likely to generate more costs than benefits. For many in Maine, the idea of warmer winters may sound like a blessing. Yet warmer winters would reduce the viability of the ski industry, allow northward migration of forest pests, and produce major changes in marine life found in coastal waters. (Indeed, many of those effects are already occurring in response to changes in climate during the 20th and early

21st centuries.) Mainers will adapt over time, but the costs of that adaptation may be significant. Work done now can reduce those costs.

A recent CBEP report (Wake *et al.* 2009) shows that climate in the Casco Bay region is warmer and wetter than it was a century ago. Projections suggest those trends are likely to continue for decades, even if human societies sharply curtail greenhouse gas emissions. Both drought and flooding are likely to be more common than in the past. Sea level in Casco Bay will increase more rapidly than it has in millennia. Changes are even likely in the chemistry of our coastal waters.

CBEP, with support through EPA's Climate Ready Estuaries Program, has been working to both gather information on climate change in the Casco Bay region, and to make that information available to regional communities. The goal is to help Mainers better understand past, present, and future climate, so that residents, businesses, local organizations, and municipal governments can consider climate information in their decisions.