

## **Explorations beneath the Surface: Linking Fresh and Salt Water History**

*David Stradling and Simone Müller*

Given the fluidity of water and the obvious ecological and social connections between rivers, lakes, and oceans, the historiographies of these bodies of water have remained surprisingly distinct. Simone Müller and I will coauthor an article that assesses the development of fresh and salt water historiographies, drawing them together through the narration of the anti-dumping movement of the late 1960s and early 1970s. Our preliminary research—mine on dredge spoil disposal in the Great Lakes, and hers on the disposal of chemical weapons in the Atlantic Ocean—suggests that these stories should be told together. In the process of linking them, we will assess the methods and theories that have developed in these two areas of water history.

The study of rivers has exploded in recent years, encouraged in part by the Rachel Carson Center. The body of work on industrializing rivers has developed along certain themes, especially around the production and regulation of pollution and efforts to control water flow through channelization and damming. Some river historians have theorized waterways as part of a city-making machine, while others have emphasized the agency of rivers, which themselves drive historical action through flooding and erosion.

The expansion of environmental history has also encouraged greater attention to the history of oceans. Here the historiography has focused on fisheries and the exploration of the unknown. Unsurprisingly, the nature of oceans themselves—their scale, the modest relevance of national boundaries and state action in their histories, and the limited knowledge that people have accumulated about them—has ensured that ocean historians have taken up a different set of problems than have river historians. Simone and I hope our collaboration will suggest new routes for both river and ocean historians that emphasize the commonalities shared in all water history.

My most recent work has focused on the growing public concern about the ecological effects of open-lake dumping of dredge spoils from harbors and river mouths in the Great Lakes. In the mid-1960s, public pressure forced the governments of the United States and Canada to step up research and develop new policies. The public demanded to know just how polluted dredge spoils actually were and how pollutants behaved in the water. Before these fundamental questions had been answered, the Army Corps of Engineers—which in the United States conducted much of the dredging and issued permits for the rest—created a policy of containment, in which the dredge spoils were stored behind dikes constructed in the lakes. Although each of the containment areas is permanent, the solution was temporary.

Simone's work begins with the US Army's CHASE program, which disposed of chemical weapons by submerging them in the ocean. In the late 1960s, the American public and policy makers began to pay increasing attention to oceans, and scientists conducted more research on what was going on beneath the water's surface. In 1969, public controversy surrounding the program forced the US Army to respond for the first time and, in 1972, the Ocean Dumping Act was passed—the same year that the United Nations established the London Dumping Convention.

The commonalities in these stories make our collaboration particularly useful. Most obviously, our work concerns the same chronology, at a moment when people around the global industrial north paid increasing attention to ecological concerns. The age of ecology was also the era of the Cold War, which appears in our work through the emphasis on containment and on the antiwar sentiment that influenced the debate about weapons disposal. Moreover, our narratives both describe an emphasis on scientific research. Finally, both of our stories led to significant regulation through national legislation and international agreement.

These commonalities will allow us to explore the connections between fresh and salt-water histories around several themes: 1) The issue of scale, both physical and political, that has been so important to the creation of distinct fresh and salt-water historiographies; 2) The role of limited knowledge, the unseen/unknown depths. What is beneath the surface? This question is as important for understanding shallow-water dredging and spoils dumping, as it is for understanding the consequences of deep-water waste disposal; 3) The fluidity of water itself—the ecological connections across aquatic space, which were as real and relevant before the age of ecology as they were during the years of our stories; 4) The problem of sources. How can we create deeper histories, both physically and chronologically, of these relatively unknown places?