The Concrete West: Engineering Society, Culture and Environments in the Arid West, 1900–1980
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When Glen Canyon Dam was built on the Colorado River near the Utah/Arizona border in the 1960s, it generated more than hydroelectric power—it also sparked an environmental crisis and stimulated the growth of a modern environmental movement. Today, the 710 foot high dam, which used over five million cubic yards of concrete in its construction, supplies energy to homes and businesses in Utah, Arizona, Colorado, New Mexico, and Wyoming and regulates the water flow that feeds Nevada's Lake Mead and Hoover Dam. Yet its construction also destroyed ancient cliff dwellings, endangered fragile wildlife habitats, stopped the free-flowing nature of the river, and contributed significant CO_2 and concrete dust to the atmosphere. In order to understand the environmental history of the arid US West, we need to understand the consequences surrounding the development and deployment of the massive quantities of concrete used to build projects like Glen Canyon Dam, as well as the roads, aqueducts, housing developments, and airports that transformed the region.

My project examines three seemingly unrelated engineering projects: Los Angeles's first freeway, now called Highway 110, Glen Canyon Dam, and the sprawling Los Angeles International Airport (LAX). These projects were connected by a cohort of engineers, who designed and developed the material necessary for their completion, and by a set of intersecting political, cultural, and economic ideas that nurtured them into existence. By reconstructing the engineering genealogy that connects these different projects, my book will reveal the contours and dynamics of the social, political, economic, and environmental development that characterizes the modern US West. My study integrates the histories of the evolving public policies that fostered twentieth century Western development with the rich social histories of Navajos, Mormons, Hispanic farmers, laborers, engineers, environmentalists, and a myriad of others, in order to explain how the modern West was built. Exploring the region's development through the history of concrete helps us see the changing philosophies underlying the profession of engineering and shifts the ways we think about the confluence of resource management, urban and suburban development, environmental studies, and the history of social relations in the region.

While concrete and its uses are at the center of this project, my study also adds complexity and nuance to the story of the transformation of the arid West by examining changing social relationships and adding a new dimension to our understanding of the region as a whole. Social and political historians have charted the growth of Los Angeles as an influential transportation hub. Environmental historians have chronicled the emergence of radical environmentalism after Glen Canyon Dam was built. Water and dam historians have shown how the course of the Colorado River was diverted and the ecology of the riverscape was transformed in the process. Yet little attention has been paid to the civil engineers whose vision transformed local environments, nor has there been much analysis of the rising political and economic influence of the concrete industry in—and beyond—the region. In addition, most environmental histories of both Los Angeles and Glen Canyon ignore the Mexican-American and Native American communities most affected by massive infrastructure projects. Moreover, the Mormons who worked to have Glen Canyon built appear in literature as important figures in Utah history, but rarely elsewhere. Finally, no attention has been paid to the way that US policies of Termination of the federal government's trust responsibilities toward Native Americans and the water reclamation projects of the 1950s were actually conjoined federal policies influenced by Mormon religious ideology. In these ways, *The Concrete West* makes important interventions in many fields in American history.