‘NOT A DROP TO DRINK’

PROPOSAL

Fresh water is a precious resource, one frequently taken for granted in the developed world. In the United States we consume nearly 3.9 trillion gallons of water monthly from rivers, lakes and aquifers for uses ranging from farming to power plant cooling, manufacturing processes and household consumption. According to the 2014 US Geological Survey, California alone consumes an estimated 38 billion gallons of fresh water daily, the equivalent of emptying that state’s largest reservoir, Lake Shasta, nearly every month. Despite our reliance on water, we squander this limited resource through overuse, neglect and waste. The recent exposure of drinking water contamination in Flint, Michigan, as well as ongoing water shortages in the American West and the debate surrounding gas fracking’s impact on residential wells have reignited conversation about potable water use, infrastructure and pollution in the US.

The intimate connection between water infrastructure and the built environment has long been evidenced in architecture from the aqueducts and public fountains of Rome to the elaborate irrigation canals of the ancient Mayans. Today, however, much of the infrastructure dedicated to modern water consumption — treatment facilities, pipelines, sewer networks — is hidden from view and utilitarian in design. The separation of water from the city eliminates water as a resource from our consciousness and allows our awareness of this mutual dependence to fade. Contemporary architecture has an important role to play in exposing and redefining the meaning of water infrastructure and public access to our shared water resources.

What if architecture was made to reveal our consumption and was built to conserve this fundamental fluid of life? Where are both the weak points and the instances of successful symbiosis of water and urban systems? In researching the intersection of architecture and fresh water issues, I propose to travel through the central and western United States, exploring key sites of both water conservation and contentious water management and use. Beginning in the city of Flint, Michigan, I will travel west through Utah and Nevada, the two most arid states in the nation where decreasing snow-pack and the manipulation of rivers is affecting critical water supplies. I will journey to Southern California to visit Orange County’s innovative new Ground Water Replenishment facility, the San Luis and Lake Shasta reservoirs, and San Diego’s new Carlsbad Desalination Plant, the largest facility of its kind in the Western Hemisphere, all locations of critical water management issues and contemporary solutions. Explorations into these and additional destinations will serve to inform a proposal for new readings and alternative architectural language addressing our age-old relationship with fresh water and public space. The architect’s ability to transcend the boundaries of specific scales, mediums, and disciplines suggests a real potential to promote a water consumption paradigm shift, establishing a new relationship between Americans and our water resources for both the present and future generations.

TRAVEL ITINERARY

New York City – Flint, MI

1. FLINT + DETROIT — 3 DAYS
Cities of Broken Infrastructure

Flint River shoreline, University of Michigan-Flint
Flint City Wastewater Plant, Tour of improved practices
Detroit Wastewater treatment Plant – Largest in USA

Detroit – Salt Lake City, UT

2. SALT LAKE CITY — 5 DAYS
Oasis in the Desert

Great Salt Lake (Including Smithson’s Spiral Jetty)
Bonneville Salt Flats
Big Cottonwood Canyon (Salt Lake’s primary water supply)
Mountain Dell Dam, primary local reservoir
Little Cottonwood Water Treatment Plant

Salt Lake – Redding, CA

3. REDDING, SHASTA LAKE — 2 DAYS
Land of Dams

Shasta Lake boat tour, observe low water levels, management
Shasta Lake Dam
Trinity Lake Dam

Redding – Reno, NV

4. SALT WELLS + RENO — 2 DAYS
Aquifer Addiction

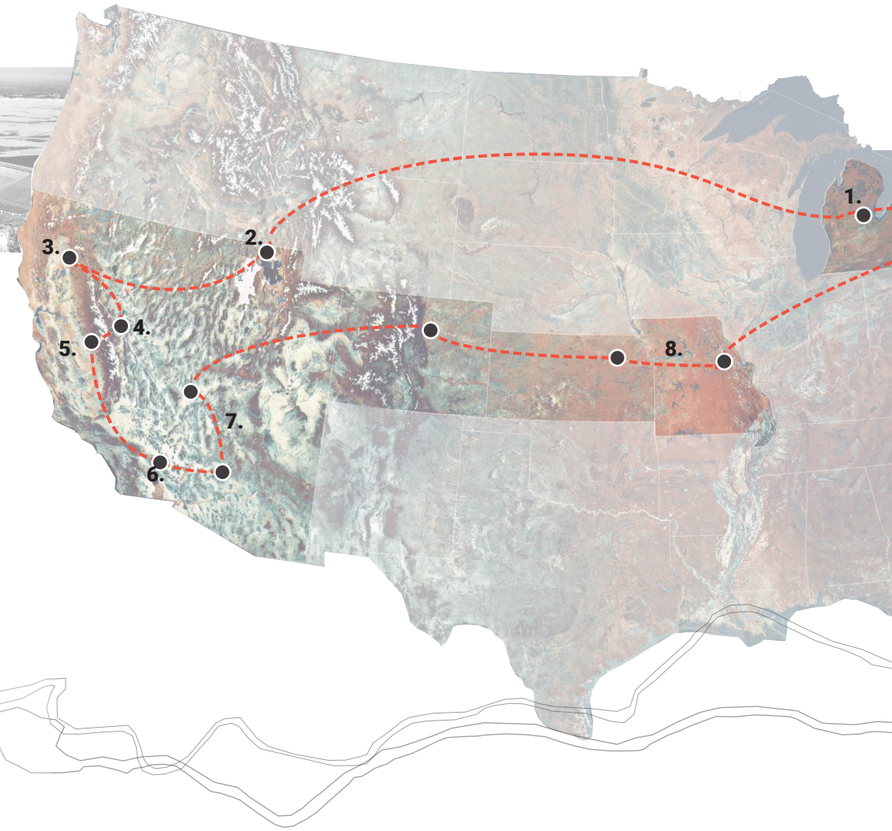
Tahoe Reno Industrial Center – closed loop water system
Trukee Meadows Water Authority visit
Noble Energy fracking fields

Reno – Fresno, CA

5. FRESNO — 4 DAYS
Agua + Agriculture

San Joaquin River, Agriculture and Vineyard production
Irrigation water use and drought/ rationing implementation
San Luis Reservoir
Tulare Lake
Greater San Francisco Desalination Facilities

Fresno – Palm Springs via Los Angeles



6. SOUTHERN CALIFORNIA — 6 DAYS
Land of Opportunities

Orange County Ground Water Replenishment Facility
Carlsbad Desalination Plant
Colorado River Reservoir/ Palm Springs
Anza-Borrego Desert
Explore Salton Sea, conditions of Colorado River

Palm Springs – Phoenix, AZ

7. PHOENIX + LAS VEGAS — 4 DAYS
Driest Cities in America

Observe water usage, desert vs cultivated greenery relationships
Hoover Dam, Lake Mead, Grand Canyon
Observe relationship between water tourism vs water demand

Las Vegas – Denver, CO

8. COLORADO TO ST. LOUIS via KANSAS — 4 DAYS
Land of the Dust Bowl

Drive through dust-bowl territory of Midwest, Kansas
Travel to St. Louis along Missouri River
Arrive St. Louis, explore Mississippi River Basin,
Granite City US Steel facilities
Visit Meramec Wastewater Treatment Plant

St. Louis – New York City