

ARCH 407/507 Sustainable Urbanism:Urban Waters

CRN:36175 / 36176

Instructor: Matt Tierney (mtierne8@uoregon.edu)

Spring Quarter_Tues/Thurs 5:30pm-6:50pm (3 cr)



Overview

In this research and representation focused seminar, we will be investigating the history, current state, and potential of urban water systems at the building, city, and global scales. Students will gain an understanding of the historical development and role of urban water systems within the framework of the (1) Anthropocene, (2) normative theories/models of urban form (Cosmic/Supernatural, Machine¹, Organism/Organic²). We will then develop opinions based on readings from (3) public interest design fields, and through the lens of (4) ecological urbanism and novel ecosystems. We will use these frameworks to map and write about the tenuous relationship of *free water*, *controlled water*, and *social water* in urban landscapes using multiple socio-climactic contexts as cases.

Through the case study methodology, student groups will objectively look at the progression/regression of natural and constructed water systems within a particular case city. Some cities exhibit cutting edge water technology, some are in a state of water crisis. Through this polarized field of comparison, we seek to uncover the formal (and invisible) social, environmental, and economic flows³, of these systems through a more open-ended reading of urban form. Case studies run through the entire quarter and are developed slowly, building off of readings and discussions held during class. These cases will be presented in the last two weeks of the quarter.

In addition to the case study, students will also investigate the (1) graphic conventions, modes of representation, and language used in multiple disciplines to establish a basis of understanding for how water is designed, or controlled, at the building and urban scale. Then we will investigate (2) alternative modes of representation (Fine arts, creative writing, etc) that foreshadow a more indeterminate understanding of water cycles. Finally, we will use (3) cartography, diagramming, collage, and cross-disciplinary literature, among others, to understand hybrid approaches to the representation of water within the earth system⁴. By understanding the role of urban form, the conventions of water infrastructures, and alternative modes of representation, we can begin *construct* more robust, performative, and sensitive urban waters.

Learning Objectives

1. Develop a working knowledge of the Anthropocene, the *new natural*, and *ecological urbanism* through literature, independent writing, individual and group research projects, and student led presentations/discussions.
2. Learn through case study methodology. Investigate the historical and projective role water systems play in the creation of urban sustainability around the world through the lens of a specific city along the spectrum of water security.
3. Understand the conventions used to describe water within multiple disciplines, and develop hybrids through projective representation exercises focused on water systems.
4. Understand the multifaceted effects that water systems have on urban form, equity, resilience, and flows.

¹ Molotch. (1976)

² Julian Beinat. 4.241J *Theory of City Form*. Spring 2013. MIT OpenCourseWare, <https://ocw.mit.edu>

³ Pierre Belanger. *Landscape as Infrastructure: A Base Primer* (2017)

⁴ Tim Fox, Matt Pope and Erle C Ellis. *Engineering the Anthropocene: Scalable social networks and resilience building in human evolutionary timescales*.