

**GESM 130: How Water Made Modern Los Angeles**  
**Units: 4**  
**Spring 2021, T TH 11 – 12:20 pm (section 35429) and**  
**T Th 2 – 3:20 pm (section 35435)**

**Location:** Virtual  
**Instructor:** Dr. Audra Bardsley aka Dr. B, pronouns: she/her  
**Office:** Zoom meeting room – see Blackboard for details  
**Office Hours:** M, 11-1 pm or by appointment  
**Email:** aibardsl@usc.edu

### **Course Description**

Los Angeles is the second most populous city in America, yet has only modest local water supplies and straddles a river prone to periodic catastrophic flooding. How did this seemingly unsuitable landscape come to support an economically robust, densely populated metropolis? In this course, we will examine the extraordinary engineering feats, people, and policies that brought water to thirsty Southern California and tamed the unpredictable Los Angeles River. We'll also explore some of the environmental and social justice issues that have developed as a result. Finally, we'll discuss potential solutions to LA's water needs for the coming century and efforts to revitalize the Los Angeles River.

### **Course Objectives**

1. Evaluate the key people, policies, and infrastructure development that allowed for massive changes to California's natural water systems for municipal/irrigation use and flood protection in Los Angeles
2. Examine major social, economic and environmental impacts of LA's water acquisition and flood control efforts including modern day plans to revitalize the Los Angeles River
3. Consider the broader national social and political climate that allowed for massive investment in water infrastructure during the 20<sup>th</sup> century and LA's imported water revolution
4. Discuss potential solutions to LA's key water challenges for the next century and LA River revitalization efforts
5. Develop awareness, appreciation of, and ability to use different data sources including primary archival material available online and at USC's Special Collections, free spatial data, government data including census
6. Practice critical thinking, reading, writing, and speaking skills through response to reading questions, Chinatown movie analysis, podcast production, primary document writeup, and in-class discussion

### **Email/Course Communication Policy**

This course will use Blackboard for communication, information, and turning in assignments. When applicable, lecture recordings will be made available after the synchronous virtual lecture is given.

When reaching out by email, please put '320b' in the email title and a bit about the reason you are reaching out, e.g. 'reading guide #2'. I will do my best to respond to you within 24 hours. If you don't hear from me in 2 days, please send me a reminder email. I usually go by 'Dr. B' in my classes and you can address me that way in email.

*We are living in an unusual and often very stressful time. If you are experiencing particular life or academic challenges this semester, please email me. You don't need to share the details if you don't feel comfortable, but we can start a conversation and find solutions that will help you be as successful as possible this semester.*

### **Required Readings**

1. Water and Los Angeles: A Tale of Three Rivers, 1900-1941 by William Deverell & Tom Sitton (Available for **free online** through UC Press or as a Kindle Textbook via Amazon)
2. Storm over Mono: The Mono Lake Battle and the California Water Future by John Hart (Available for **free online** through UC Press)
3. Water to the Angels: William Mulholland, His Monumental Aqueduct, and the Rise of Los Angeles by Les Standiford, 2016. Ecco; Reprint edition. ISBN-13: 978-0062251459
4. Water and the California Dream: Historic Choices for Shaping the Future by David Carle, 2016. Counterpoint; Revised edition. ISBN-13: 978-1619026179
5. The Los Angeles River: Its Life, Death, and Possible Rebirth by Blake Gumprecht, 2001. Johns Hopkins University Press. ISBN-13: 978-0801866425

Additional readings in the form of articles, reports, and book excerpts will be posted on Blackboard as noted on the weekly schedule.

### **Description of Assignments and Exams**

Additional information and rubrics for assignments will be provided to students throughout the semester vis Blackboard.

#### READING GUIDES

Guiding questions for reading assignments will be distributed through Blackboard each week they are assigned (19 total). One will be dropped when calculating the final grade for a total of 18 reading guides. These short questions should help students focus on key concepts, prepare them for class and discussion, and help with exam review. Students are also expected to offer two questions and/or comments of their own when submitting each reading guide.

#### CHINATOWN MOVIE ANALYSIS

Students will also write a ~2 page review of the film Chinatown evaluating its historical merits as compared to events discussed in class, treatment of class/race, and use of LA as a backdrop for the storyline.

#### BLACKBOARD PARTICIPATION

Periodically students will engage in activities that help them explore datasets and information that complements topics explored in class. This may take the form of interactive software like GoogleEarth, interactive census data mapping Social Explorer, and StoryMaps then answer some questions. These activities will be in addition to reading guides.

#### THE FUTURE OF LA WATER PODCAST

Using audio recordings and free editing software, students will produce a five-minute water focused podcast style audio file that they will submit via Blackboard and discuss in class. Working alone in in groups of up to three, students will select a topic that touches upon the future of water in Los Angeles that is relevant to topics covered in class. Students might choose something we did not have time to cover or explore a topic we discussed in greater depth. Possible topics might include drinking water sources, recycled water, habitat restoration, recreation and access to the LA River, social equity and gentrification of LA River adjacent areas, pollution concerns, and beyond. Using information from class readings or lecture material, students will also provide historical context to provide the listener with a fuller understanding of the current issue being explored.

### PRIMARY DOCUMENT PROJECT

Primary documents and archival materials are essential for reconstructing LA’s water history. The books we will read this semester rely heavily on other sources to construct their narratives. Secondary texts like these can be hugely helpful in understanding a broad scope of issues and time scales, but it can be very informative to look back at the first-hand accounts, photographs, official documents, and newspaper articles that shape our understanding of the past – and help us to recognize the interpretation secondary sources might impose. To better understand the importance of primary source documents, we will work with USC librarian Suzanne Noruschat to familiarize ourselves with USC’s Special Collections, which contain a wide variety of physical and digital (or digitized) items, and other online archives. Students will then work to find an archival item of interest to them, write up a brief description of its historical significance and then integrate these to the interactive map Visualize LA with help from USC visualization specialist Andrzej Rutkowski.

### **Additional Notes on Assignments**

Late assignments will not be accepted for credit, unless explicit permission has been given for extenuating circumstances. As noted above in the email policy section, I understand that this is a difficult time so please reach out if you have concerns.

### **Exams**

There will be two non-cumulative exams this semester – one midterm and one final. Exam questions will be drawn from course readings and lecture materials, and will include multiple choice, fill in the blank, short answer and essay questions. ***No make-up exams or assignments will be allowed without explicit permission.***

### **Grading Breakdown**

<b>Assignments</b>	<b>Points</b>	<b>% of Grade</b>
Midterm	100	27%
Final	100	27%
Chinatown Movie Review	10	3%
Reading Guide Questions (2.5 pts x 18)	45	12%
Podcast Assignment	45	12%
Blackboard Participation Modules	20	5%
Primary Document Project	45	12%
<b>TOTAL</b>	<b>365</b>	<b>100%</b>

## Grading Scale

Course final grades will be determined using the following scale. Points earned will be divided by points possible and result rounded to the nearest full percentage point.

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Notes: Schedule is subject to change based upon in class progress, discussion, speaker availability.

## Zoom Etiquette

We are all adjusting to the online learning environment. For me and many of you this will be our first experience interacting in a virtual classroom. A few reminders for online lecture/discussion:

- PLEASE NOTE: synchronous session will be recorded and distributed on Blackboard since we may be experiencing extenuating circumstances like living in different time zones or other challenges, however live attendance is always encouraged and preferred if possible
- Sharing course materials outside the learning environment is prohibited under USC policy (*SCampus Section 11.12(B)*)
- Please mute your mic when not speaking
- Use of webcam is encouraged and preferred, just remember to be properly attired (I know someone accidentally attended a work meeting shirtless during a heat wave, just saying...) and use backgrounds if you'd prefer some more privacy
- If you are unable to keep their camera on during a synchronous Zoom session, please contact me prior to the class session to discuss expectations and accommodations needed
- If you live with others, headphones with a mic might be helpful
- As long as you can focus, eating is totally fine – we may be coming from all different time zones/schedules
- Please do your best to focus on our class discussion, avoiding browsing social media/internet
- You can use the chat box or hand raising feature to ask questions during lecture or comment during discussion
- Come to synchronous meetings prepared
- We are all under extra pressure during this unusual time, please be thoughtful and respectful towards your classmates and me; more on that in the next section

## Classroom Ground Rules

Below is a brief summary of ground rules and expectations for our classroom. You can find a more comprehensive version of this list on the Environmental Studies Program website.

- Share responsibility for including all voices in the conversation
- Listen respectfully
- Be open to changing your perspectives based on what you learn from others
- Understand that we are bound to make mistakes in this space
- Understand that your words have effects on others
- Take pair work or small group work seriously
- Understand that others will come to these discussions with different experiences from yours
- Make an effort to get to know other students
- Understand that there are different approaches to solving problems

## Course Schedule

For the best learning experience, you are expected to have read assigned material by the date the topic is discussed in class and complete appropriate assignments or Blackboard participation modules by the due date. Article and supplemental readings will be posted online. ***The readings and schedule of topics may be adjusted throughout the semester depending on progress of the class.***

Week	Date	Topics/Daily Activities	Readings and Homework
1	Jan 19	- Introduction & course overview - Where do we get our water? - Have you ever seen the LA river? - Brief profile of Los Angeles today	
	Jan 21	- Basics of water cycle & hydrography including: watersheds, streamflow, groundwater dynamics - Water & humans	
2	Jan 26	- LA's climate, geography - Pre-European hydrography of Los Angeles basin; initial impressions of Europeans - LA's native people & water	Reading guide questions pt. 1
	Jan 28	- Age of the zanja: water management in LA during early European settlement - Irrigation & agriculture expansion - Statehood, transpacific railways, population growth and intensification of water management	Reading guide questions pt. 2
3	Feb 2	- City of LA near the turn of the 20 <sup>th</sup> century - Public vs. private control of water resources - Increasing water diversions & changes to the LA River - Key court decisions - Expansion of LA's territory	Reading guide questions pt. 3
	Feb 4	- William Mulholland: the man & his vision for LA - Fred Eaton - Beginnings of the Owens Valley project	Reading guide questions pt. 4
4	Feb 9	- Securing the land, money, and political will required to build the Los Angeles Aqueduct	Reading guide questions pt. 5

		<ul style="list-style-type: none"> <li>- Building the aqueduct</li> <li>- Wealthy land syndicates position themselves to profit big</li> </ul>	
	Feb 11	<ul style="list-style-type: none"> <li>- Completing the aqueduct &amp; arrival of Owen's River water to Los Angeles</li> <li>- Owens River waters San Fernando Valley</li> <li>- LA River after arrival of aqueduct</li> <li>- Backlash, doubts, unrest in Owen's Valley</li> </ul>	Reading guide questions pt. 6
5	Feb 16	<ul style="list-style-type: none"> <li>- Reservoir construction, water system expansion, continued development in LA</li> <li>- St. Francis Dam disaster, Mulholland's legacy</li> </ul>	Reading guide questions pt. 7
	Feb 18	<ul style="list-style-type: none"> <li>- Virtual visit to the USC Library special collection with Suzanne Noruschat</li> <li>- Archive resources and research as a way to understand human impacts on water system through time</li> </ul>	Special Collections Intro, link on BB
6	Feb 23	<ul style="list-style-type: none"> <li>- Historical flooding patterns</li> <li>- LA River floods a burgeoning metropolis once</li> <li>- Early flood control efforts</li> </ul>	Reading guide questions pt. 8
	Feb 25	<ul style="list-style-type: none"> <li>- Flood of 1938 overwhelms previous infrastructure</li> <li>- Partnering with Army Corp. of Engineers for a comprehensive solution</li> <li>- Building a water freeway</li> <li>- Debris basins</li> <li>- Pollution in the paved river</li> </ul>	Reading guide questions pt. 9
7	Mar 2	<ul style="list-style-type: none"> <li>- LA begins to outgrow its aqueduct</li> <li>- LA Aqueduct Extension to Mono Basin</li> <li>- Share selected archival images &amp; discuss</li> <li>- Introduce podcast project</li> </ul>	Reading guide questions pt. 10
	Mar 4	<ul style="list-style-type: none"> <li>- Formation of Metropolitan Water District of Southern California</li> <li>- Campaign for and construction of Colorado River Aqueduct</li> <li>- Fights over water allocation</li> </ul>	Reading guide questions pt. 11
8	Mar 9	<ul style="list-style-type: none"> <li>- Selling the California dream: advertising to attract new residents, population growth, real estate development</li> <li>- Podcast software editing options</li> </ul>	Reading guide questions pt. 12
	Mar 11	MIDTERM EXAM	
9	Mar 16	<ul style="list-style-type: none"> <li>- Seeking yet another source of water for LA</li> <li>- Projects that never came to be: Klamath River, etc.</li> <li>- State Water Project: a deal for the San Joaquin Valley and Los Angeles</li> <li>- A second barrel for the LA Aqueduct</li> </ul>	Reading guide questions pt. 13
	Mar 18	Visit with USC libraries visualization specialist Andy Rutkowski for	
10	Mar 23	WELLNESS DAY NO CLASS	

	Mar 25	- Chinatown movie discussion	- Chinatown (1974, included with Amazon Prime or available for online rental) - Standiford (Ch. 23) Movie analysis due
12	Mar 30	- Environmental & social impacts of water transfer: Owens Valley, Mono Lake	Reading guide questions pt. 14
	Apr 1	- Mono Lake Case study - Introduction of final group project	Reading guide questions pt. 15
13	Apr 6	-Trends in LA Water Sources 1980-2010s -Finish listening to podcasts - Check in with groups for final project	Reading guide questions pt. 16
	Apr 8	LADWP Guest Speaker Sarah Mouakkad - Municipal water sources for LA today & in coming decades	Reading guide questions pt. 17
14	Apr 13	- Los Angeles River today: ecology, public access, in the popular imagination - Kayaking to make The Los Angeles a river again - Check in with groups for final project	Reading guide questions pt. 18
	Apr 15	- Plans for the LA River Restoration: Birth of a movement, early successes, future plans, funding - Who might get left behind: gentrification, lack of attention to the southern LA River corridor	Reading guide questions pt. 19
15	Apr 20	- How do we reconstruct historical ecology of the LA River? - Guest speaker Eileen Takata, Army Corp of Engineers	
	Apr 22	WELLNESS DAY NO CLASS	
16	Apr 27	- Student podcasts presentations	
	Apr 29	- Student podcasts presentations	
	FINAL EXAM	T, Th 11 am section: T May 11, 11 am – 1 pm T, Th 2 pm section: Th May 6, 2 pm – 4 pm	

### Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code (*SCampus Section 11.12(B)*). This includes, but is not limited to, providing materials for distribution by services publishing class notes.

This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).

## **Support Systems**

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [sarc.usc.edu](http://sarc.usc.edu)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [equity.usc.edu](http://equity.usc.edu)

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. [studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. [dsp.usc.edu](http://dsp.usc.edu)

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. [studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](http://diversity.usc.edu)

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [emergency.usc.edu](http://emergency.usc.edu)

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.*

Provides overall safety to USC community. [dps.usc.edu](http://dps.usc.edu)