

CE 3372 WATER SYSTEMS DESIGN

INTRODUCTION PART 3 (FALL 2020)

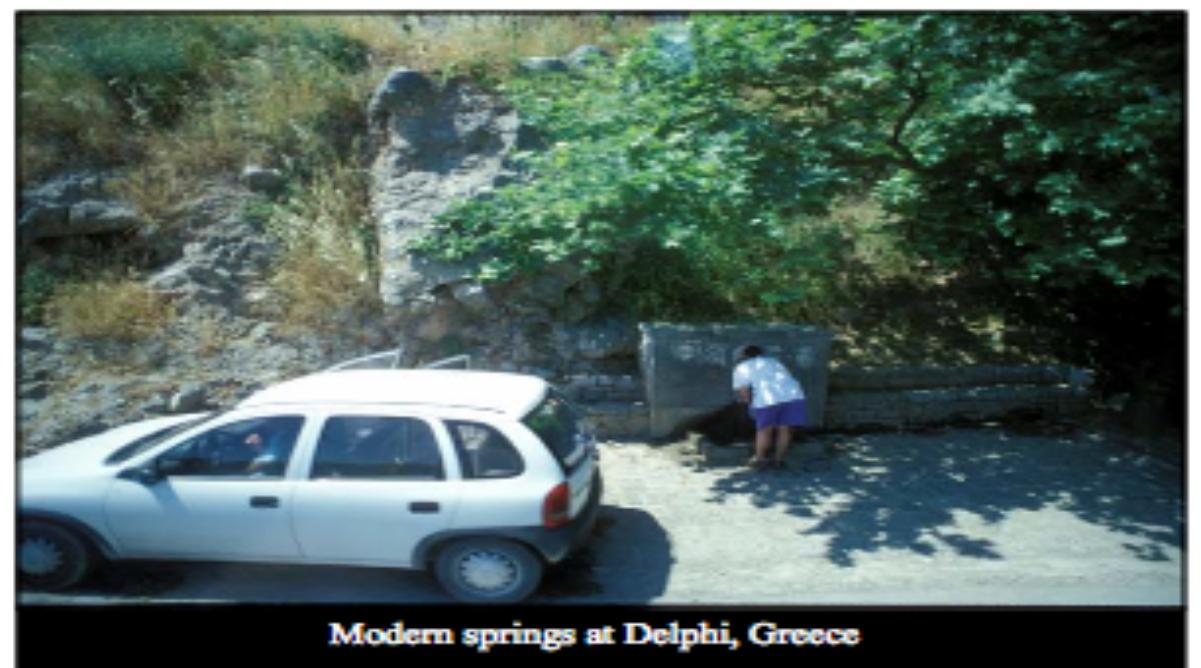
BRIEF HISTORY OF WATER SYSTEMS

- This brief history is adapted from
 - “Historical Urban Water Systems” by Dr. Robert Pitt, Department of Civil and Environmental Engineering, University of Alabama, Tuscaloosa, AL 35487
- As we proceed through the history, consider whether the picture is a water control, water use, or environmental restoration system.

BRIEF HISTORY OF WATER SYSTEMS

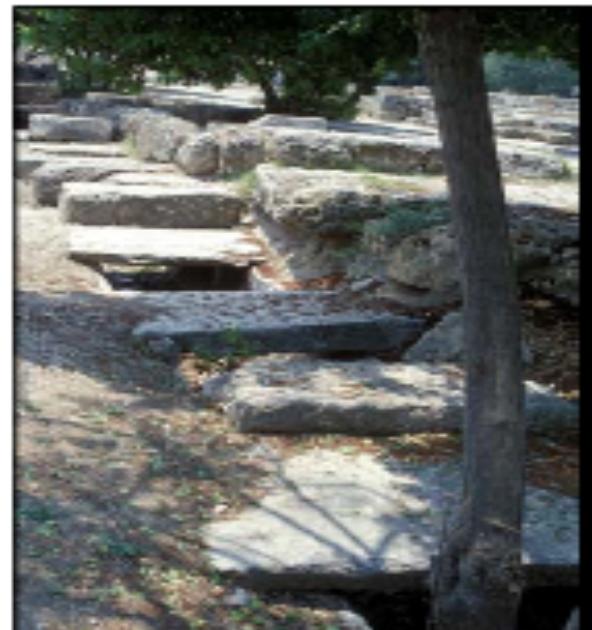


Ancient springs at Delphi, Greece (site of Oracle)
(bronze age center of the universe)

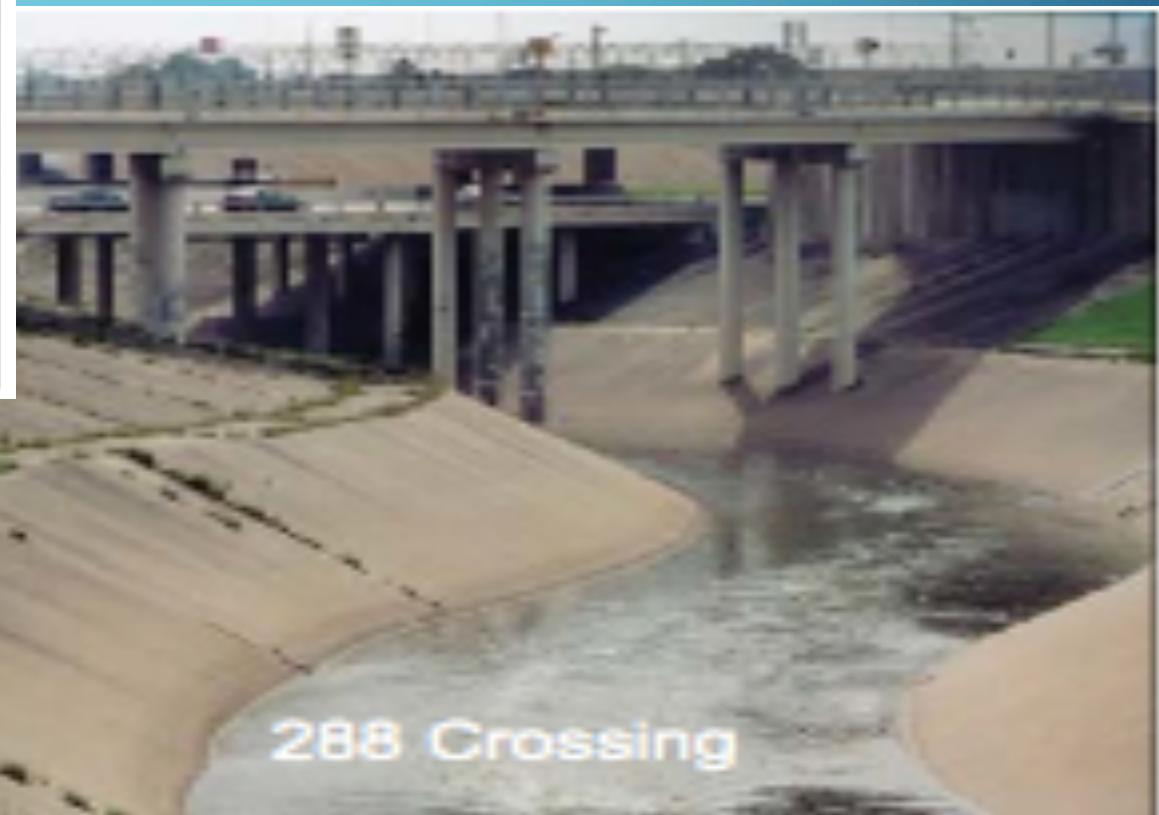


Modern springs at Delphi, Greece

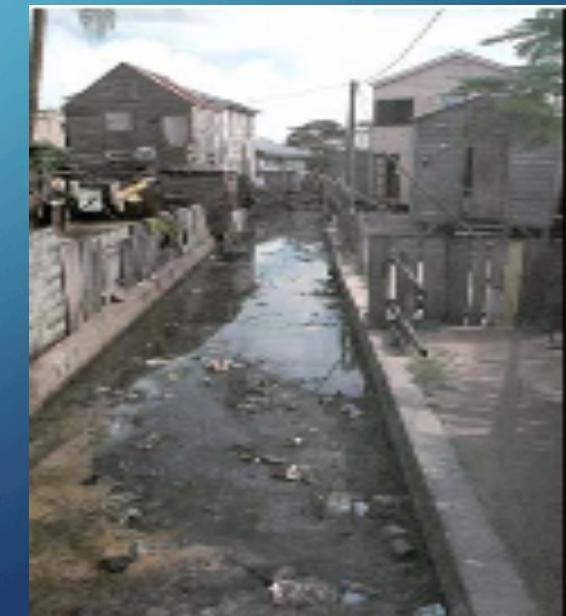
BRIEF HISTORY OF WATER SYSTEMS



Storm drainage channels at the Agora, Athens, Greece



BRIEF HISTORY OF WATER SYSTEMS



BRIEF HISTORY OF WATER SYSTEMS



Ancient stone pipe from reservoir at Knossos, Crete (Minoan 2600 to 1000 BC)



Excavation of ancient Roman pipes, Rome (about 100 AD)
J. Harper photo



Wooden water pipe, Seattle, WA (Underground Seattle Museum)



Ancient clay pipe at Kamiros, Rhodes (ancient Greece, 7th century BC)

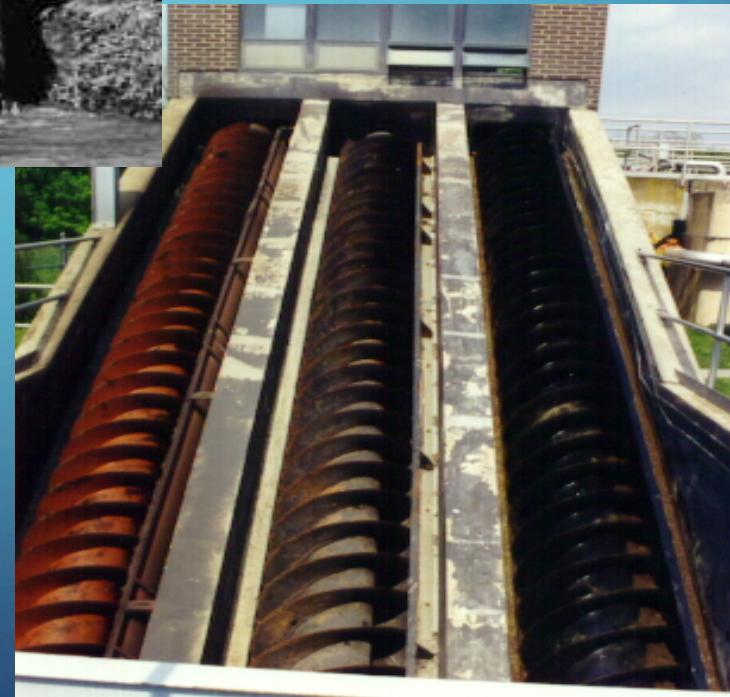


Lead pipe, Medieval London, 1000 to 1400 (Key Bridge Steam Museum)



Cast iron pipe,
Victorian
London, 1840 -
1900 (Key
Bridge Steam
Museum)

BRIEF HISTORY OF WATER SYSTEMS



BRIEF HISTORY OF WATER SYSTEMS



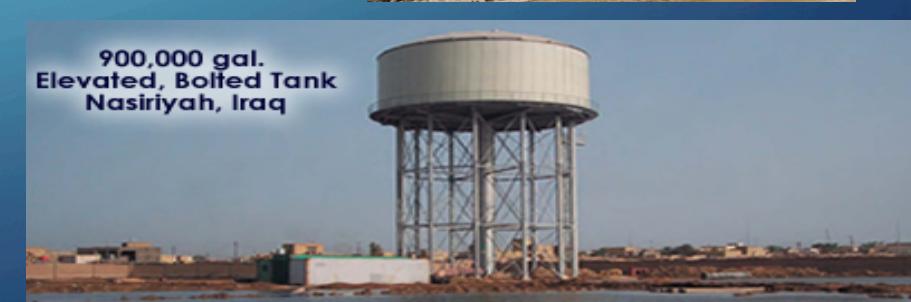
Cistern tank, Kamiros,
Rhodes (ancient Greece,
7th century BC)



Steps alongside cistern,
Kamiros, Rhodes (ancient
Greece)



Water storage jugs at Pompeii, Italy (prior to 79 AD). Harper photo



900,000 gal.
Elevated, Bolted Tank
Nasiriyah, Iraq

NOTABLE “BIG” SYSTEMS

- Los Angeles Aqueduct <http://www.history.com/topics/los-angeles-aqueduct>
- Central Valley Project https://en.wikipedia.org/wiki/Central_Valley_Project
- Salt River Project https://en.wikipedia.org/wiki/Salt_River_Project
- Tennessee Valley Authority (https://en.wikipedia.org/wiki/Tennessee_Valley_Authority)
- Three Gorges Project (https://en.wikipedia.org/wiki/Three_Gorges_Dam)

OTHER INTERESTING SYSTEMS

- Las Vegas Water Authority (
<https://www.reviewjournal.com/local/local-las-vegas/follow-a-gallon-of-water-from-lake-mead-to-a-las-vegas-tap/>)
- New York https://en.wikipedia.org/wiki/New_York_City_water_supply_system
- Paris (FRANCE) <https://parisianfields.com/2012/03/11/a-most-unusual-water-system/>
- Berlin (GERMANY) <http://www.bwb.de/content/en/html/index.php>

NEXT TIME

- Design criteria
 - Codes
 - Manuals
 - Literature