

## **Water and US History**

### **Overview**

Water runs throughout US History. From the crossing of the Atlantic to decisions about settlement and conflicts with Native Americans, water played an important role in determining the shape and future of the United States in the early years. Water also fueled social progress during the industrial age, as it was critical for the development of industry and the generation of power. Water sanitation was also critical to public health in the United States as urbanization increased population density in cities and required access to clean water and sanitation.

### *Indigenous People of North America*

- What was the importance of water to the way of life of various Native American tribes? Compare how different tribes used water and how water affected settlement patterns of the different Indian Nations.

### *Colonization & Revolution*

- How did advancements in water navigation technology impact colonization? Explore the importance of water navigation technology in the colonization of the American colonies.
- Explore connections between water, sanitation and disease during early interactions between Europeans and Native Americans?
- How did access to water influence settlements in the New World?

### *Westward Expansion*

- How did access to water for drinking, agriculture and trade impact where settlements were placed?
- How did key waterways like the Gulf of Mexico, the Mississippi river and other waterways impact the territorial expansion of the United States?
- What obstacles did water create when expanding westward? What methods were used to cross rivers? Examine how the construction of canals impacted development and expansion in America during this time.
- What was the role of water in the Gold Rush?

### *Civil War and Reconstruction*

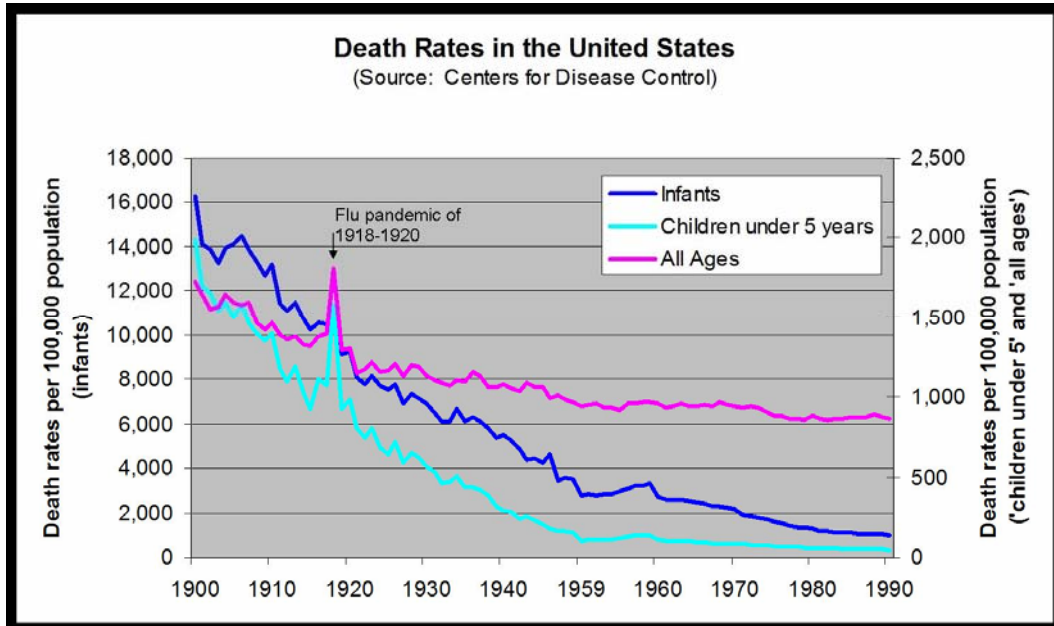
- How did access to waterways impact the Union and Confederacy's strategies in the Civil War?
- What was the role of rivers and waterways, for the Underground Railroad?
- How did strategic access to water impact post-Civil War westward expansion and relocation of Indian nations to reservations.

### *Industrialization*

- Water and sanitation during urbanization, industrial revolution. How did population growth and urbanization during the industrial age impact water usage? Compare to similar situations in developing countries currently.



- Explore the connections between water usage and the growth of industry. How did the rise of heavy industry and mechanized farming impact water usage during this time? How are industrial corporations revising their water usage strategies currently?
- Water and energy: converting water to steam, compare to uses of water today – i.e. hydroelectric power.
- How did water treatment technologies, chlorination and simple sand filtration, and modern sewer systems impact American progress?



Safe water and toilets were responsible for:

- Nearly 50% reduction in total mortality
- 74% reduction in infant mortality
- 62% reduction in child mortality
- Rise in life expectancy from 47 to 63 years, and too late for Willie Lincoln,
- Near-eradication of typhoid fever by 1936

#### *World Wars*

- Connections between advances in maritime transportation and navigation systems and rise of the US as a world power
- Significance of the Panama Canal

#### *Social Policies*

- Rise of Conservation, “planned use,” and preservationism (Yellowstone National Park, 1890; Sierra Club 1892) particularly in relation to water conservation and preservation
- Sanitation issues and discontinued city water during the Great Depression. How did New Deal infrastructure projects and the Civilian Conservation Corps change the water



infrastructure of the United States? Compare to the current economic stimulus. What is being done currently to address water sanitation and infrastructure issues?

- How did the Environmental Protection Agency & the Clean Water Act (1972) impact water usage and conservation in the United States during the 1970s?
- What was the impact of Rachel Carson's *Silent Spring* on the environmental movement in the United States during the 70s?

#### *Contemporary America*

- Explore the privatization of water in the context of the post-war economic boom
- How has the bottled water industry impacted municipal water supplies? (ie TapMpls campaign)
- Recent controversies concerning desalination and irrigation in southern California and around Las Vegas
- *Exxon Valdezoil* spill in Prince William Sound off the coast of Alaska.

#### **Possible Topics**

- Comparison of water conservation policies in the US and other countries.
- Water as a human right – how do the issues of water access and privatization in the US compare to what is happening in other countries like South Africa or Bolivia?
- Water in the US West - comparison to other arid areas around the world – are there examples we can draw on or learn from about how to share water resources fairly within and between countries?
- Water sanitation – explore the importance of water sanitation technology during the industrial age and the surge of urbanization in the 19<sup>th</sup> and 20<sup>th</sup> centuries and compare to situations in developing countries today.
- Look at the environmental movement that began in the 1970s in the US and explore its progression to today. Compare with environmental movements in other countries or at the international level. Where has the US made advances and where has the US lagged behind?

#### **Lesson Plans**

##### **Water: To the last drop**

<http://school.discoveryeducation.com/lessonplans/programs/water/>

Students examine the role water has played in US history

#### **Online Resources**

##### **The Power of Water and the Industrial Revolution**

<http://165.29.91.7/classes/humanities/amstud/97-98/waterpwr/>

An overview of the importance of water in fueling the technologies during the industrial revolution.



### **History of Wetlands in the Conterminous United States**

<http://water.usgs.gov/nwsum/WSP2425/history.html>

A thorough examination of the history of the wetlands in the United States from the early 1600s to the present.

### **Significant Floods in the United States During the 20th Century**

<http://ks.water.usgs.gov/pubs/fact-sheets/fs.024-00.html>

During the 20th century, floods were the number-one natural disaster in the United States in terms of the number of lives lost and property damage. Read about the impact of flooding on US infrastructure and public health during this period.

### **California and water Chronology**

<http://geosun.sjsu.edu/~sedlock/Chronology.pdf>

Timeline of major water-related events in California during the past century.

### **Bureau of Reclamation: a Brief History**

<http://www.usbr.gov/history/borhist.html>

A history of how irrigation systems developed to ensure access to water for western states.

### **United States Water Infrastructure**

Diane Rehm Show

<http://wamu.org/programs/dr/09/03/25.php#25707>

Experts discuss the current state of the nation's water infrastructure and what it may take to avert critical shortages in the years ahead

### **Books**

#### **Cadillac Desert: The American West and Its Disappearing Water**

by Marc Reisner

The story of conflicts over water policy in the West and the resulting damage to the land, wildlife and Indians.

#### **The Great Thirst: Californians and Water-A History**

By Norris Hundley

Hundley tells how aboriginal Americans and then early Spanish and Mexican immigrants contrived to use and share the available water and how American settlers, arriving in ever-increasing numbers after the Gold Rush, transformed California into the home of the nation's preeminent water seekers. He offers descriptions of the major water-policy issues facing California, including accelerating urbanization of farmland and open spaces, persisting despoliation of water supplies, and demands for equity in water allocation for an exploding population.

#### **Unquenchable: America's Water Crisis and What To Do About It**

By Robert Glennon



Glennon documents present and future water crises in Georgia, California, and even seemingly water-rich Michigan, noting that states generally end up competing with one another over water allocation and that international conflict follows in short order. Desalination offers little immediate hope because of economic and ecological barriers. Glennon submits a list of possible reforms to decrease water consumption. Some, such as waterless toilets, are technological innovations. Others, such as restructuring sewer systems, require governmental intervention.

### **Videos**

**Thirst** – 62min

<http://www.thirstthemovie.org/>

Is water part of a shared "commons," a human right for all people? Or is it a commodity to be bought, sold, and traded in a global marketplace? "Thirst" tells the stories of communities in Bolivia, India, and the United States that are asking these fundamental questions.

**Water Front** – 53 min

<http://www.waterfrontmovie.com/>

Residents of Highland Park, Michigan, known as the birthplace of the auto-industry, have received water bills as high as \$10,000; they have had their water turned off, their homes foreclosed, and are struggling to keep water, a basic human right, from becoming privatized. On the website you can order the movie or see short films on "the water channel" documenting this fight.