

Conservation Innovation in America: Past, Present and Future

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If I am not for myself, who will be for me?
If I am only for myself, what am I?
If not now, when?

– Hillel the Elder



American conservation history is responsive to Hillel's question

- Throughout its history, land and biodiversity conservation in America has been about:
 - Self-interest and the motivation to build **private wealth**
 - Interest in the community, and the motivation to improve the **commonwealth**
 - The courage to observe with insight, to plan thoughtfully, and to **act decisively** for the benefit of present and future generations – that is, as the prayer goes: *“Bless our people with civic courage.”*

Consider the example of the Boston Common, established in 1634

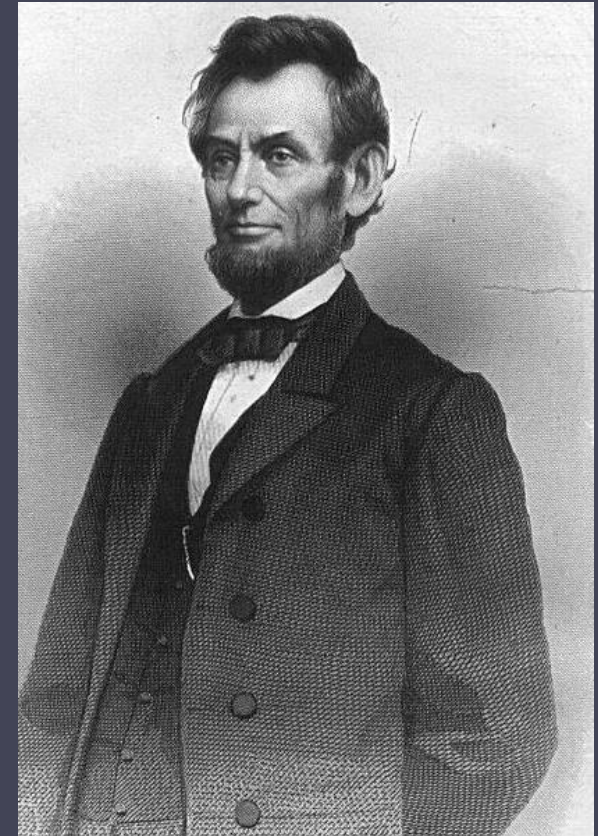


*John Winthrop, first Governor of
Massachusetts and author of
“A Modell of Christian Charity”*

- The freemen of Boston taxed themselves to buy the Common
- Each wanted to fatten his own cows *and* provide a common training ground for the militia
- “We must be knit together in this work as one man... We must uphold a familiar commerce with one another... For we must consider that we shall be as a city upon a hill. The eyes of all people are upon us.”

Consider the example of the diffusion of the National Park idea

- Abraham Lincoln created the first state park from federal land in 1864 at Yosemite; U.S. Grant followed his lead, creating the world's first national park at Yellowstone (about 1 million acres)
- By 2000, there were nearly 1 billion acres of national parks in virtually every member country of the United Nations
- Over the span of two lifetimes, national parks accounted for a land mass the size of the 15 members of the European Union at the end of the 20th century



Engraving from 1864 Matthew Brady image, available from Wikipedia Commons

The National Park idea has proved to be a landmark in conservation innovation

- It is marked by:
 - Creativity and novelty in conception
 - Tremendous public significance
 - Measurable effectiveness (tourism/land/ habitat)
 - Global transferability, and
 - An ability to endure for more than 140 years.

Americans have an enormous capacity to innovate; too often, however, we do so after looking the other way for too long

- Repeatedly in American history, resource issues have been marginalized for decades before events on the ground made them urgent public concerns
- In the 1860s, George Perkins Marsh warned, “the vast forests of the United States and Canada cannot long resist the improvident habits of the backwoodsman...” and argued that modern forestry practices be adopted
- His writings inspired a generation of reformers, but an overhaul of American forestry and conservation policy didn't occur until vast deforestation helped spark fear of a timber famine some 40 years later

Governors' Conference on Conservation at the White House, May 1908



Photo: National Governors' Association,
Library of Congress

The 1908 conference was a milestone,
but there was unfinished business

- Despite warnings by George Perkins Marsh in the 1860s, by railroad magnate James J. Hill in 1908, and by a young Hugh Hammond Bennett, the Bureau of Soils was unmoved
- In fact, in 1909, after the conference, the Bureau Chief wrote: “The soil is the one indestructible, immutable asset that the Nation possesses. It is the one resource that cannot be exhausted... that cannot be used up.”

Bennett, sent to survey South America, later said:
“I didn’t know so much costly misinformation
could be put into a single brief sentence”

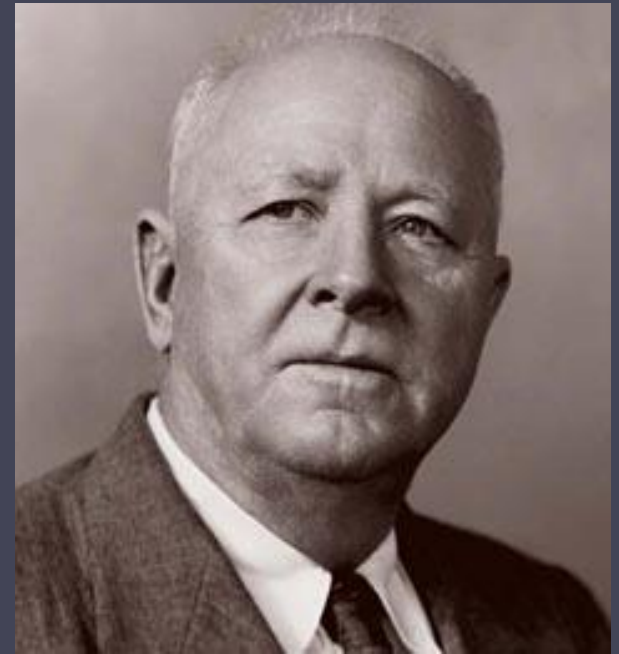


Photo: Library of Congress

The witness was not cheerful, but he was persistent...

"The witness was not cheerful, but he was persistent, informed, and courageous. He told a grim story. He had been telling it all morning... [Eventually] one of the senators remarked — off the record — 'It is getting dark. Perhaps a rainstorm is brewing.' Another ventured, 'Maybe its dust.' 'I think you are correct,' Bennett agreed. 'Senator, it *does* look like dust.' The group gathered at a window. The dust storm for which Hugh Bennett had been waiting rolled in like a vast steel-town pall, thick and repulsive. The skies took on a copper color. The sun went into hiding. The air became heavy with grit...

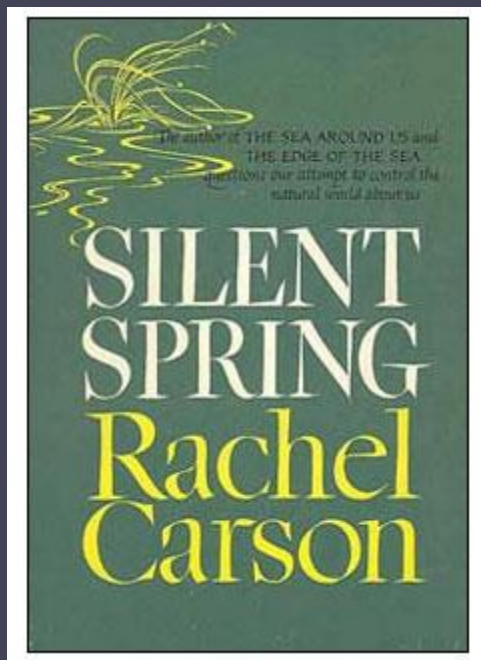
"The committee went back to the conference table no longer in doubt. This was the turning point. The 74th Congress passed [the legislation] without a dissenting vote .. It was signed by the President on April 27, 1935."



Hugh Hammond Bennett

Photo: www.nrcs.usda.gov/ABOUT/history/bennett.html . Quote from "Hugh Hammond Bennett: the Father of Soil Conservation," by Maurice G. Cook, Emeritus Professor, NC State, available at www.soil.nesu.edu

It took another three decades, an eloquent book and a burning river before a new set of landmark initiatives emerged



James Thomas photo

A little reminder of what's at stake in our own time, highlighted by recent events in Florida

U.S. Sugar OKs sale of land to state, but hurdles remain

Brian Skoloff | The Associated Press November 26, 2008

WEST PALM BEACH - U.S. Sugar Corp., the nation's largest producer of cane sugar, has agreed to sell its nearly 300 square miles of farmland to the state of Florida for [Everglades](#) restoration.

The deal must still be approved by the boards of U.S. Sugar and the [South Florida Water Management District](#).

Under the proposal, the state would buy 180,000 acres from U.S. Sugar for \$1.34 billion. U.S. Sugar would keep its mill, railroad lines and citrus-processing plant, along with the 7,000 acres the properties are on.

We enjoy unprecedented power to
transform our world -- for now



Photo: NASA, available at
http://www.nasa.gov/multimedia/imagegallery/image_feature_397.html

However, water levels at critical reservoirs, such as Lake Mead, are dropping at alarming rates



USGS Photo

Lake Mead water levels 1935-2008



Graph source: Paul Lutus, <http://www.arachnoid.com/NaturalResources/>, based on USGS data available at <http://www.usbr.gov/lc/region/g4000/hourly/mead-elv.html>

Global warming puts many things at risk
– for example, Las Vegas' water supply

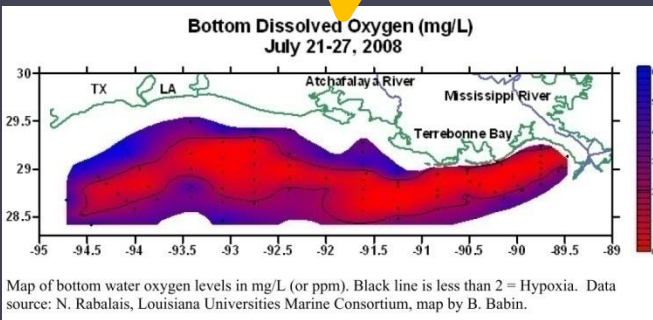
Dry Lake Mead? 50-50 chance by 2021 seen

MSNBC staff and news service reports
updated 1:57 p.m. ET, Tues., Feb. 12, 2008

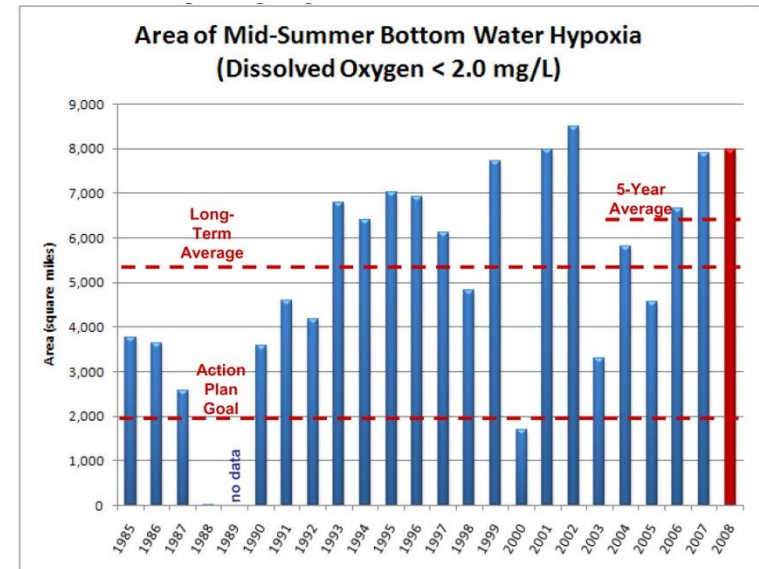
What are the chances that Lake Mead, a key source of water for more than 22 million people in the Southwest, would ever go dry? A new study says it's 50 percent by 2021 if warming continues and water use is not curtailed.

(see also, Felicity Barringer in the *New York Times*;
wonderful understated report of Federal planning process)

With regard to water quality, hypoxia is now an urgent issue in the Gulf of Mexico



Source: USGS, information available at http://www.cop.noaa.gov/stressors/extremeevents/hab/features/hypoxiafs_report1206.html



Source: N. Rabalais, LUMCON

The average size of the Dead Zone over the past 5 years has been 6,600 square miles, much larger than the interagency Gulf of Mexico/Mississippi River Watershed Nutrient Task Force goal of 2,000 square miles. The long-term average is 5,300 square miles.

According to the USGS, the size of the dead zone in the summer of 2008 was about 8,000 square miles, larger than the size of the state of Massachusetts

There is an urgent need to value and acquire land that provides ecosystem services and that helps us adapt to climate change

- Wetlands that absorb excess nutrient (phosphorus and nitrogen) that otherwise would cause hypoxia in the Gulf (e.g., the Wetland Initiatives pilot project along the Illinois River)
- Forested watershed uplands that filter urban water supplies and mitigate erosion (e.g., New York City water supply, Costa Rican Payment for Ecosystem Services programs)
- Coastal land and estuaries that buffer human populations from increasingly severe storm events (Hurricane Katrina)

50 years hence, we will view this new approach to valuation as a landmark conservation innovation if it proves to be:

- Novel and creative in conception
- Strategically significant
- Measurably effective
- Transferable, and
- Enduring, for decades or generations.

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