


“Conservation, viewed in its entirety, is the slow and laborious unfolding of a new relationship between people and land.”

Aldo Leopold, “Wisconsin Wildlife Chronology” (1940)

- 
- Water in the news
 - Aldo Leopold and the land ethic
 - Leopold, water, and ethics
 - An emerging water ethic
 - Waters of Wisconsin project

Wisconsin waters in the news

“Bacteria in Wisconsin's Drinking Water is a ‘Public Health Crisis’”

WUWM, 1 May 2016

“Salmonella, rotavirus found in 11 Kewaunee County wells”

Green Bay Press Gazette, 4 May 2016

“Great Lakes states tighten spigot on Waukesha's water request”

Milwaukee Journal Sentinel, 6 May 2016

“Wisconsin water quality questioned”

WISN, 8 May 2016

“Counties Finding Shoreland Zoning Changes Cumbersome”

Wisconsin Public Radio News, 9 May 2016

“Wisconsin Attorney General Issues Opinion Curbing DNR Regulation Of High Capacity Wells”

Wisconsin Public Radio News, 11 May 2016

Wisconsin waters in the news

“As groups step up, hopeful signs for solving state water problems”

Madison.com, 2 May 2016

“Wisconsin farmers take the initiative on water conservation”

Wisconsin Public Radio News, 5 May 2016

“Madison recognized as model for preventing lead contamination in water”

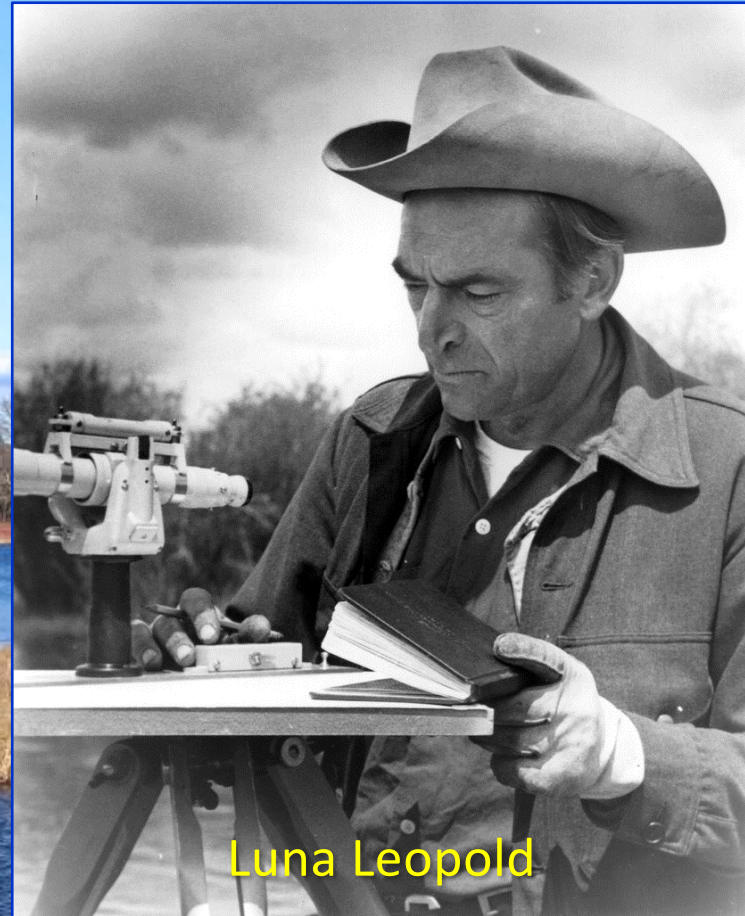
Madison.com, 11 May 2016

“Hundreds of Marathon County students bag trash on Wisconsin River”

WAOW, 13 May 2016

“Lake Michigan levels stage big comeback from 2013 lows”

Milwaukee Journal Sentinel, 16 May 2016



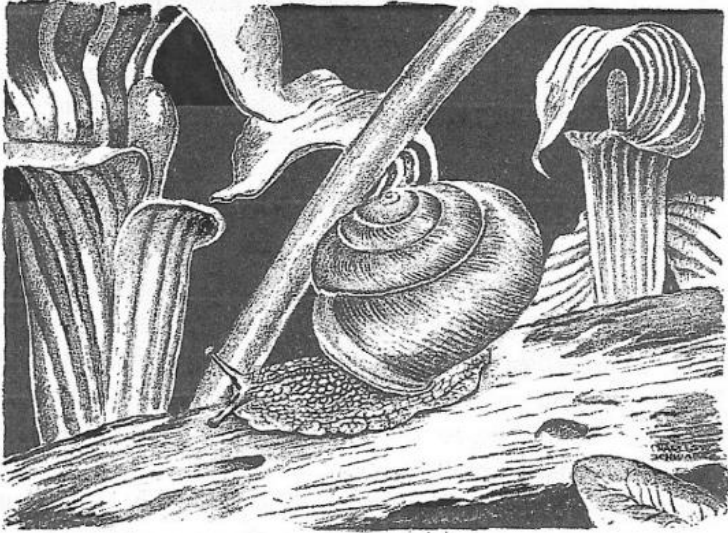
Luna Leopold

“Water is the most critical resource issue of our lifetime and our children’s lifetime. The health of our waters is the principal measure of how we live on the land.”



THE LAND ETHIC

raw wilderness gives definition and meaning to the human enterprise.



The Land Ethic

When god-like Odysseus returned from the wars in Troy, he hanged all on one rope a dozen slave-girls of his household whom he suspected of misbehavior during his absence.

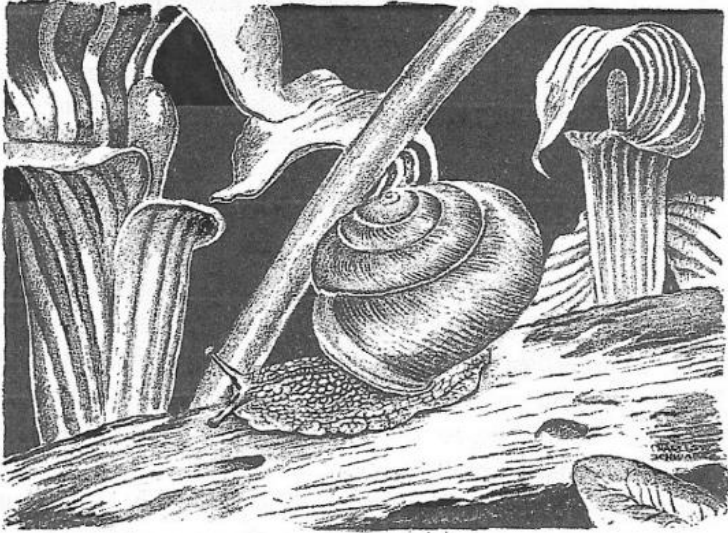
This hanging involved no question of propriety. The girls were property. The disposal of property was then, as now, a matter of expediency, not of right and wrong.

Concepts of right and wrong were not lacking from Odysseus' Greece: witness the fidelity of his wife through the

“We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”

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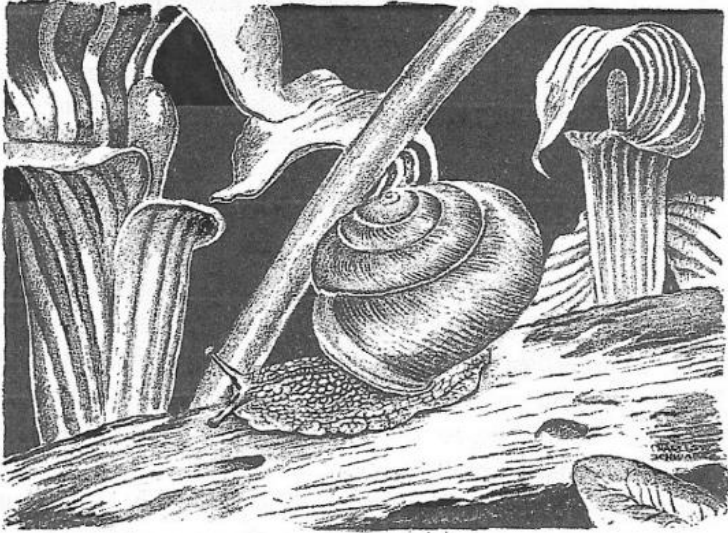
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“The land ethic simply enlarges the boundaries of the community to include soils, *waters*, plants, and animals, or collectively: the land.”

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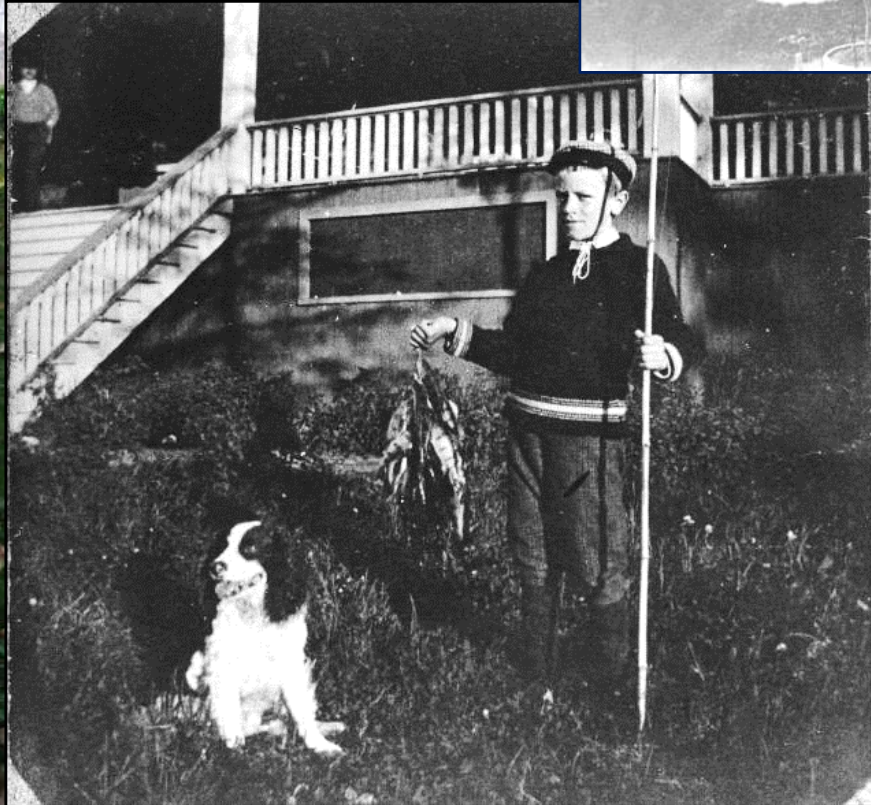
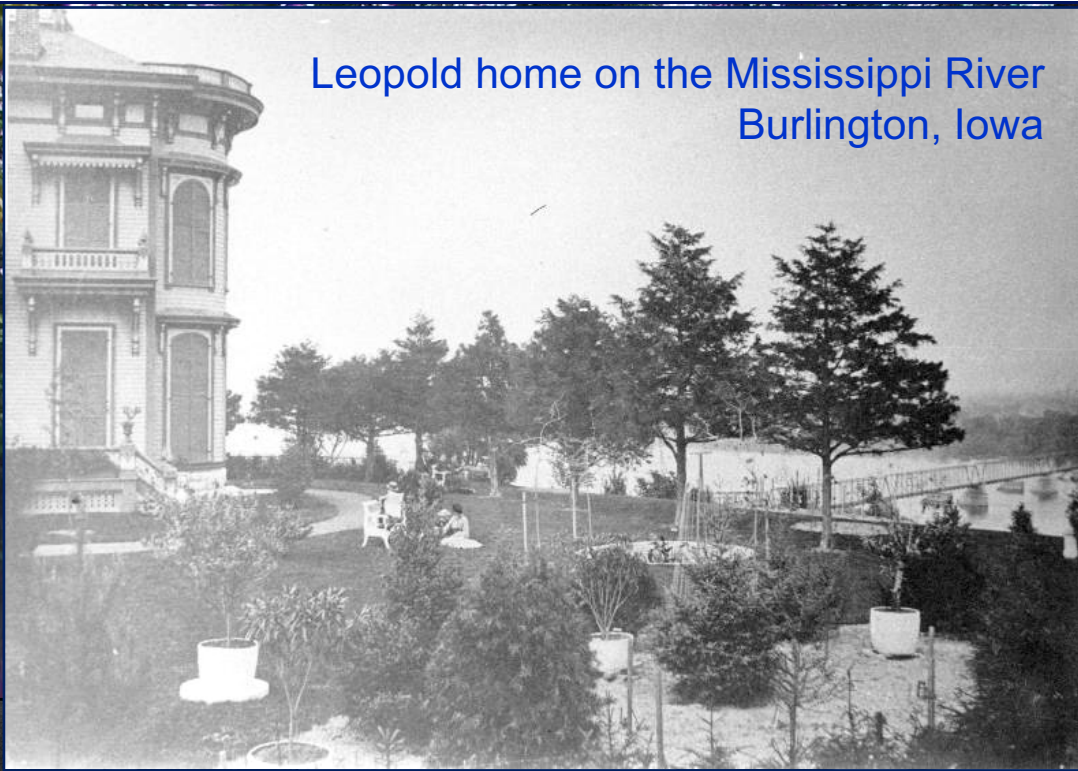
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“A land ethic reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for **the health of the land**. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.”





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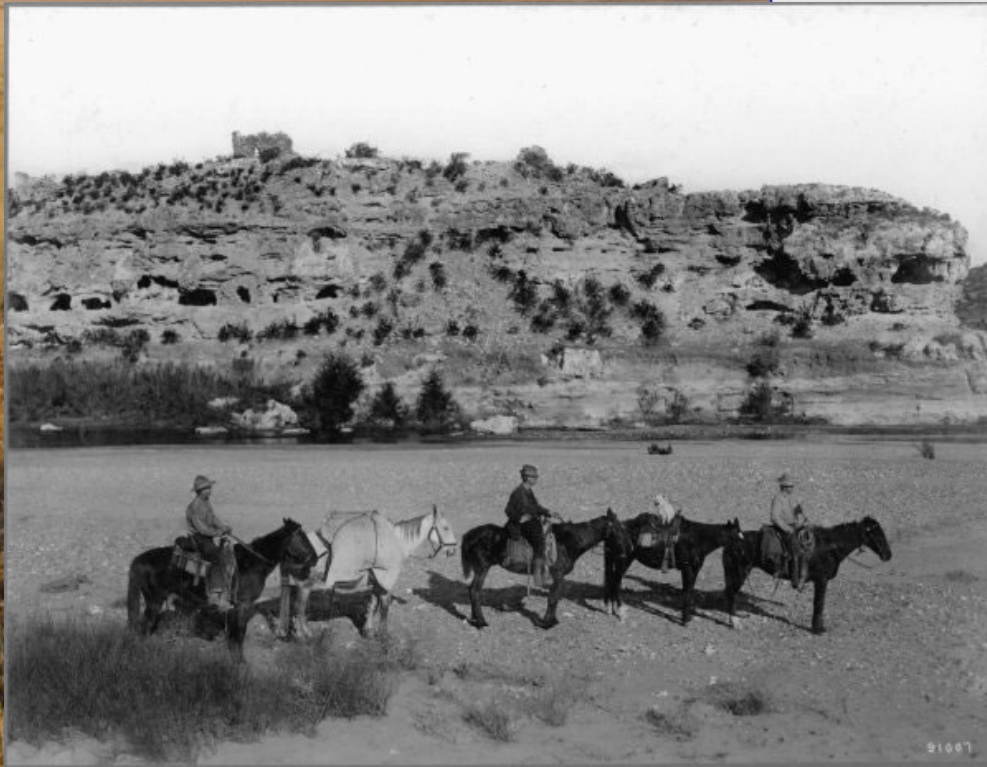
GENERAL INSPECTION REPORT

of the

GILA NATIONAL FOREST

May 21 - June 27, 1922.

Aldo Leopold, Assistant District Forester



Approved: Aug 3 1922

Frank W. Fowler
District Forester.



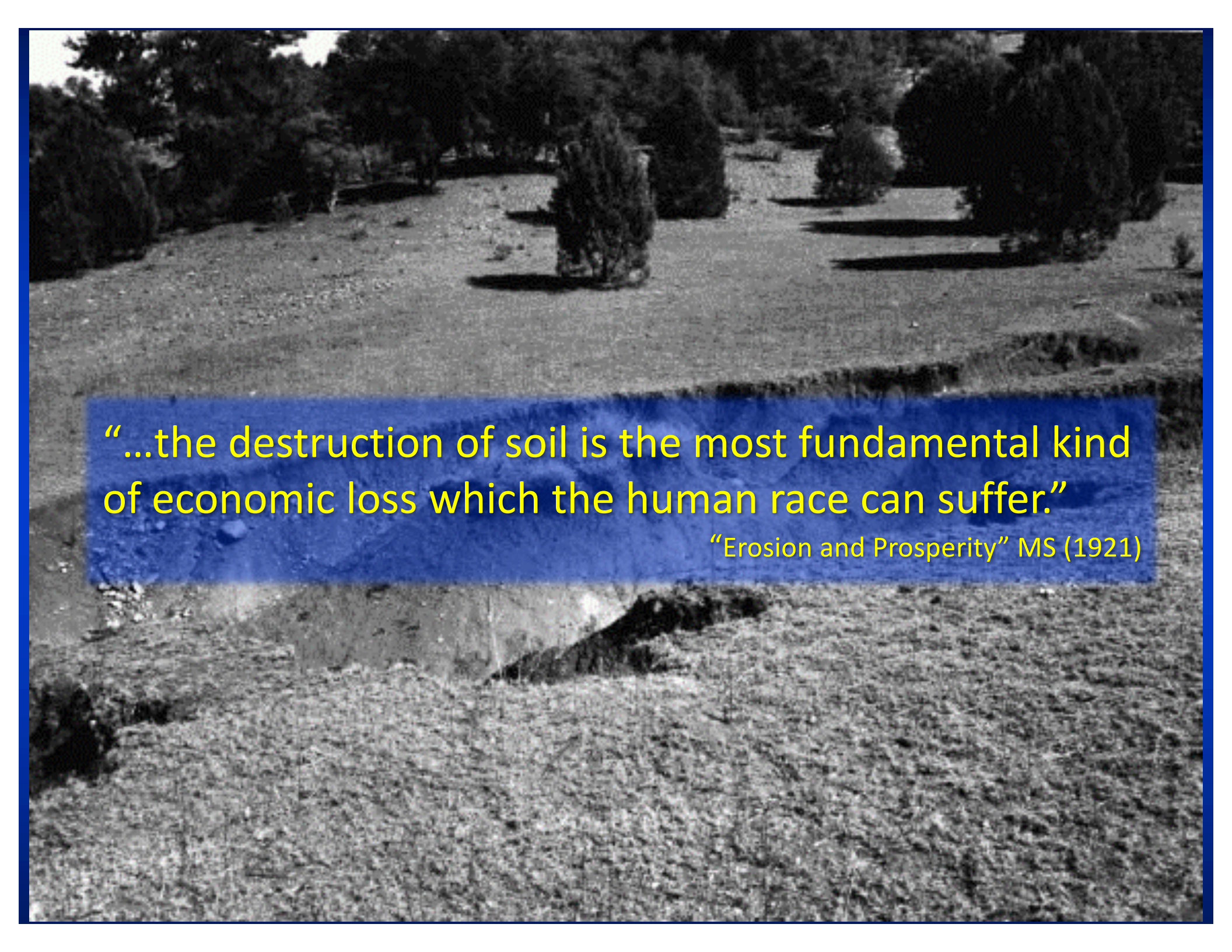
Prescott NF



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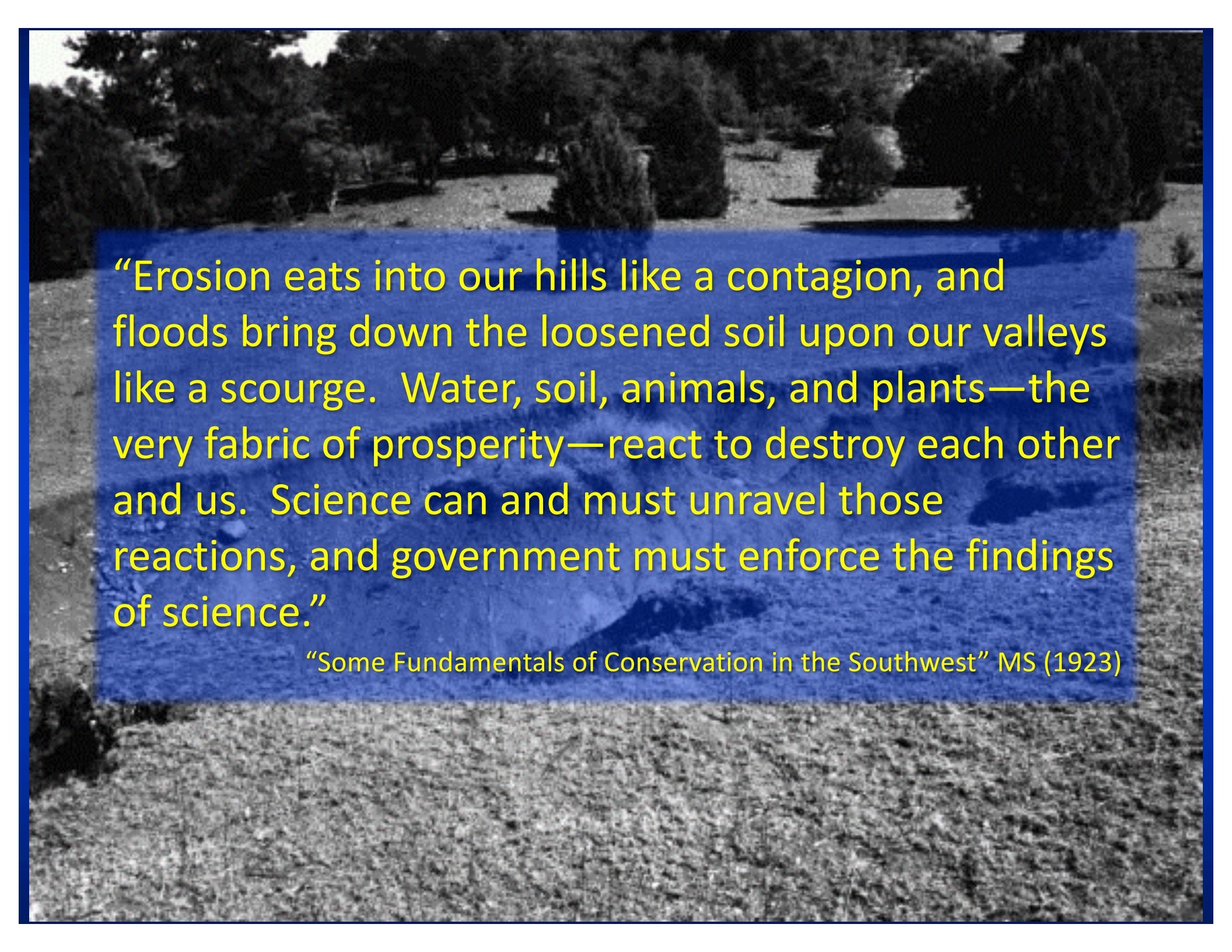
Tonto NF





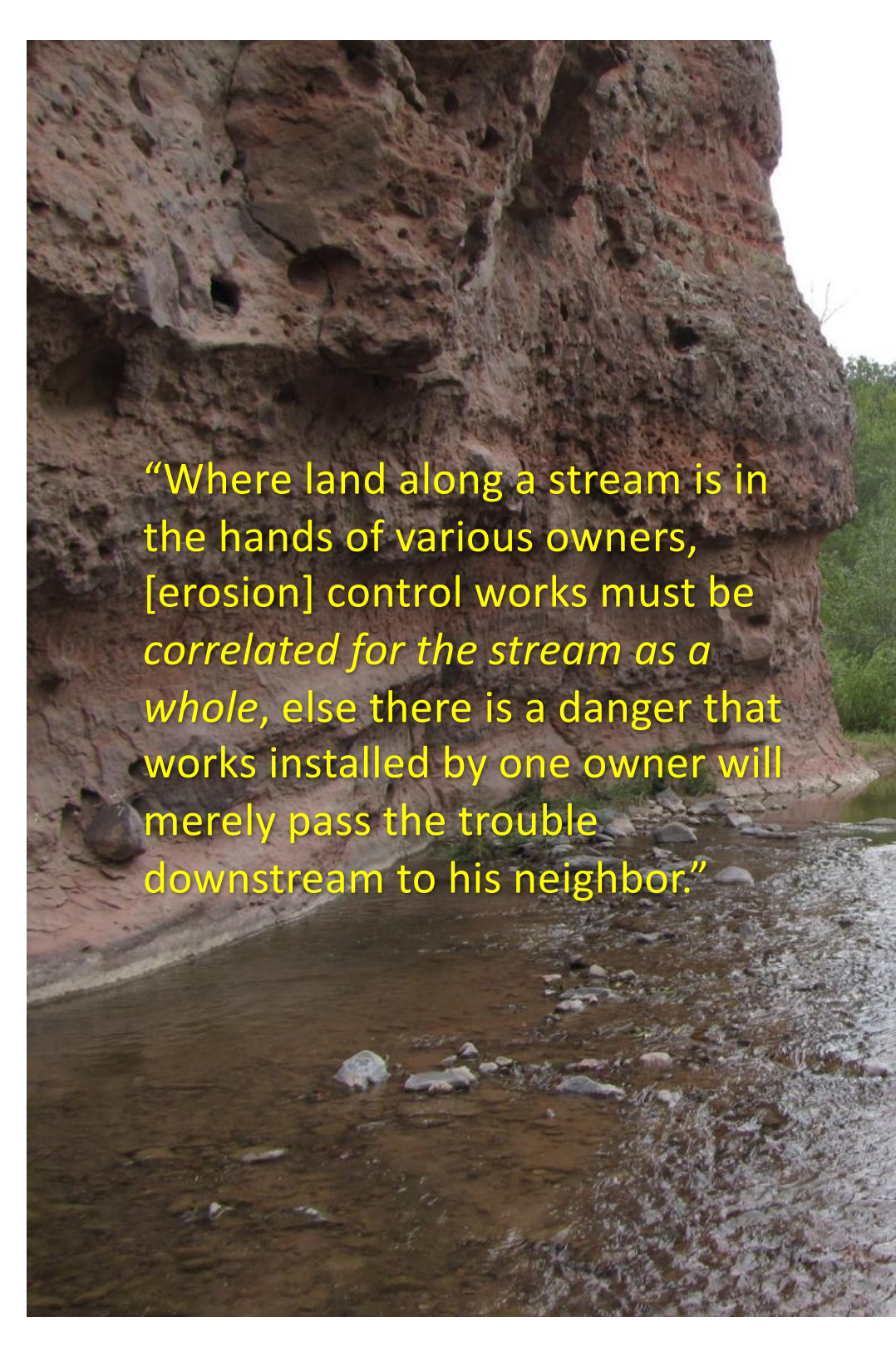
“...the destruction of soil is the most fundamental kind of economic loss which the human race can suffer.”

“Erosion and Prosperity” MS (1921)

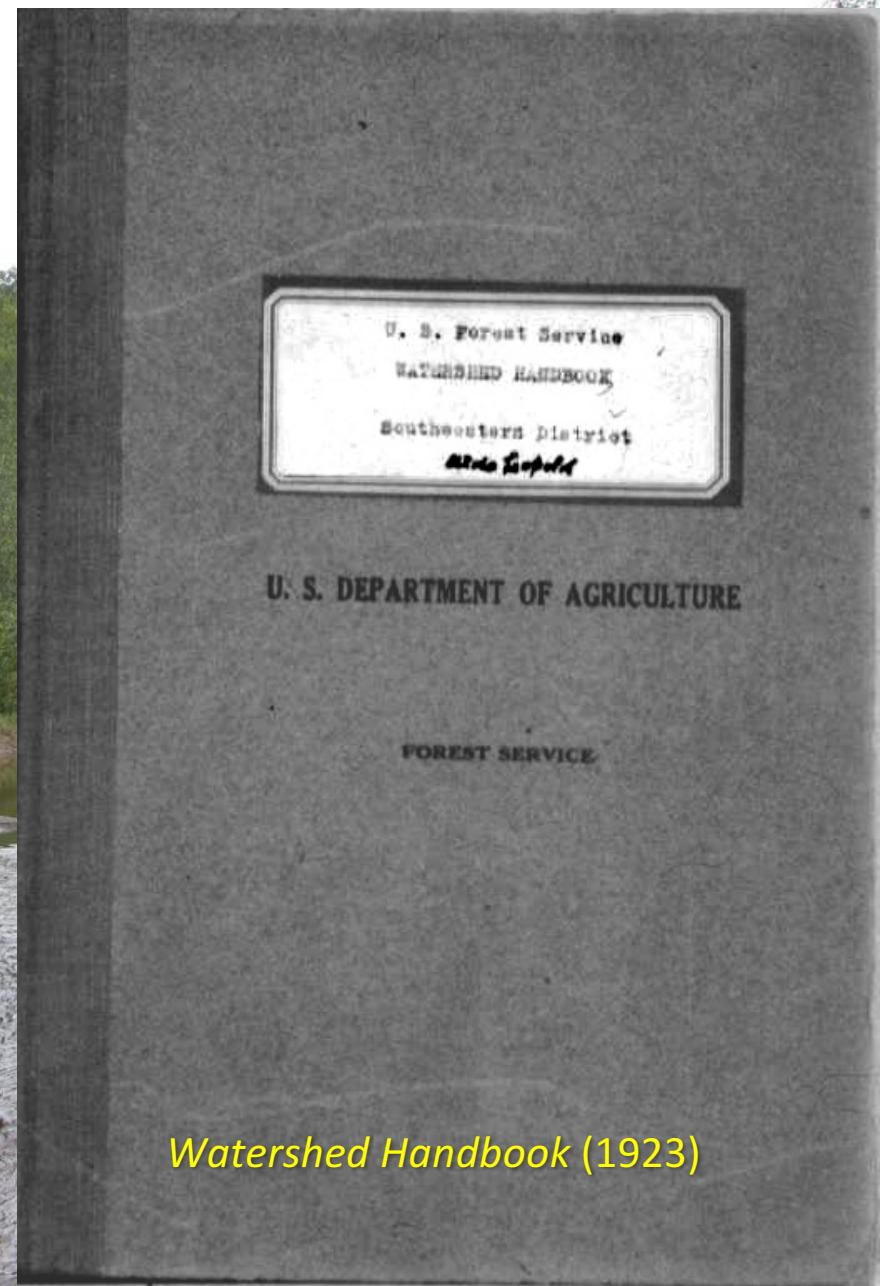
A black and white photograph of a desert landscape. The foreground is a wide, flat, sandy or gravelly area. In the middle ground, there are several small, dark, scrubby bushes or trees. The background shows a line of taller, denser trees under a bright sky. A large, semi-transparent blue rectangular box is overlaid on the middle of the image, containing yellow text.

“Erosion eats into our hills like a contagion, and floods bring down the loosened soil upon our valleys like a scourge. Water, soil, animals, and plants—the very fabric of prosperity—react to destroy each other and us. Science can and must unravel those reactions, and government must enforce the findings of science.”

“Some Fundamentals of Conservation in the Southwest” MS (1923)



“Where land along a stream is in the hands of various owners, [erosion] control works must be *correlated for the stream as a whole*, else there is a danger that works installed by one owner will merely pass the trouble downstream to his neighbor.”



Watershed Handbook (1923)

Jour. Forestry, 44: 9: 627-633.
(Sept. 1946)

album 114
carded to erosion

Erosion As a Menace to the Social and Economic Future of the Southwest

Aldo Leopold¹

This article by Leopold was the first statement by a member of the profession of forestry as known, which called attention to the magnitude and seriousness of soil erosion in the areas of fertile valleys in the arid Southwest upon the intensive use of which the economy of the region depends. The direct cause was indicated as overgrazing of the land occurring since recent white domination. His suggested course of action emphasizes for public regulation of grazing in arid regions. Written 24 years ago and delivered at an address but never published, the contents of this article stand as a landmark in the solution of the fact that the upsetting of delicately adjusted natural forces in critical areas to destruction of resources on a scale which makes later attempts at restoration practically

ONE of the basic objectives of civilized man is to modify and improve the physical condition of the virgin earth so as to render it suitable for building homes and supporting families. This process of clearing, fence-

MUCH PIONEERING EFFORT has been efficient, it has certain ful. But in certain semiarid Southwest, it seems not only to

Please return to
Aldo Leopold

Reprinted from the Journal of Forestry
Vol. XXII, No. 6, October, 1924

JOURNAL OF FORESTRY

VOL. XXII

OCTOBER, 1924

No. 6

The Society is not responsible, as a body, for the facts and opinions advanced in the papers published by it.

GRASS, BRUSH, TIMBER, AND FIRE IN SOUTHERN ARIZONA

By ALDO LEOPOLD,
U. S. Forest Service

SOME FUNDAMENTALS OF CONSERVATION IN THE SOUTHWEST.

Aldo Leopold
U. S. Forest Service

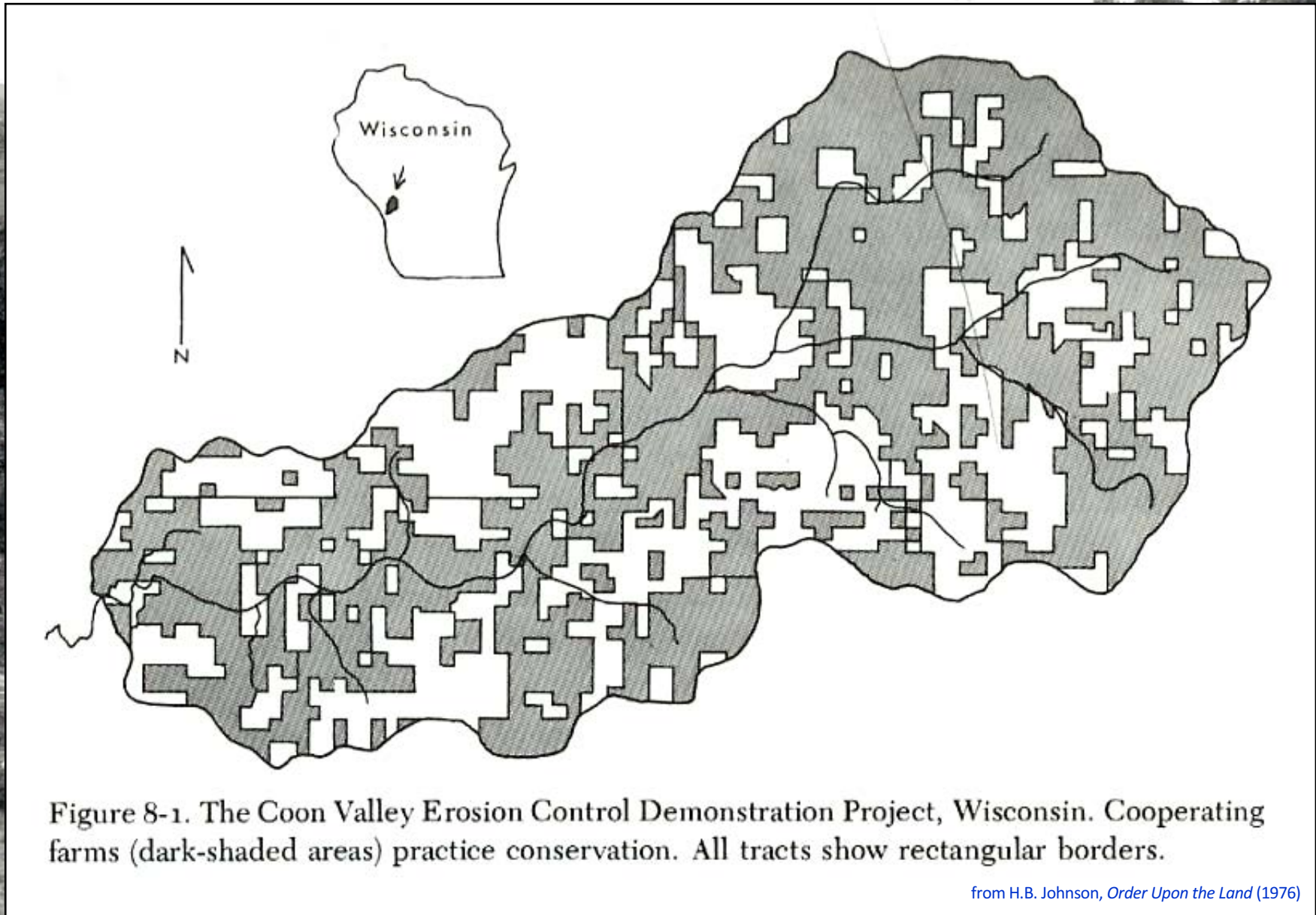
The future development of the Southwest must depend largely
on the following resources and advantages:

Minerals: Chiefly copper and coal.

Organic: Farms, ranges, forests, waters and water



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Wis-717

AMERICAN FORESTS

Vol. 41

MAY, 1935

No. 5

COON VALLEY

AN ADVENTURE IN COOPERATIVE CONSERVATION

By ALDO LEOPOLD

(Photographs by courtesy of the Soil Erosion Service)

THERE are two ways to apply conservation to land. One is to superimpose some particular practice upon the pre-existing system of land-use, without regard to how it fits or what it does to or for other interests involved.

The other is to reorganize and gear up the farming, forestry, game cropping, erosion control, scenery, or whatever values may be involved so that they collectively comprise a harmonious balanced system of land-use.

Each of our conservation factions has heretofore been so glad to get any action at all on its own special interest that it has been anything but solicitous about what happened to the others. This kind of progress is probably better than none, but it savors too much of the planless exploitation it is intended to supersede.

Lack of mutual cooperation among conservation groups is reflected in laws and appropriations. Whoever gets there first writes the legislative ticket to his own particular destination. We have somehow forgotten that all this unorganized avalanche of laws and dollars must be put in order before it can permanently benefit the land, and that this onerous job, which is evidently too difficult for legislators and propagandists, is being wished upon the farmer and upon the administrator

of public properties. The farmer is still trying to make out what it is that the many-voiced public wants him to do. The administrator, who is seldom trained in more than one of the dozen special fields of skill comprising conservation, is growing gray trying to shoulder his new and incredibly varied burdens. The stage, in short, is all set for somebody

to show that each of the various public interests in land is better off when all cooperate than when all compete with each other. This principle of integration of land uses has been already carried out to some extent on public properties like the National Forests. But only a fraction of the land, and the poorest fraction at that, is or can ever become public property. The crux of the land problem is to show that integrated use is possible on

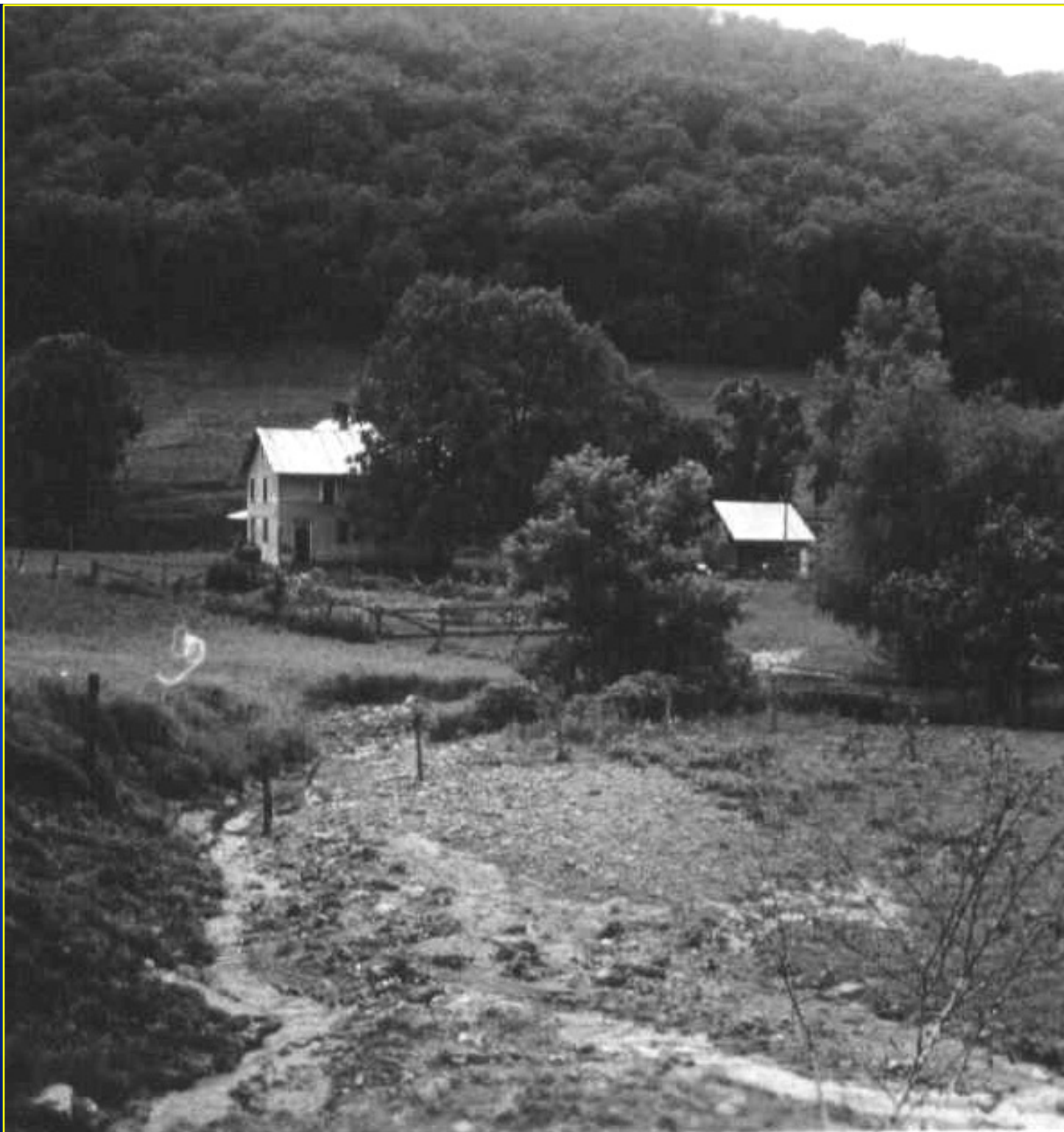
private farms, and that such integration is mutually advantageous to both the owner and the public.

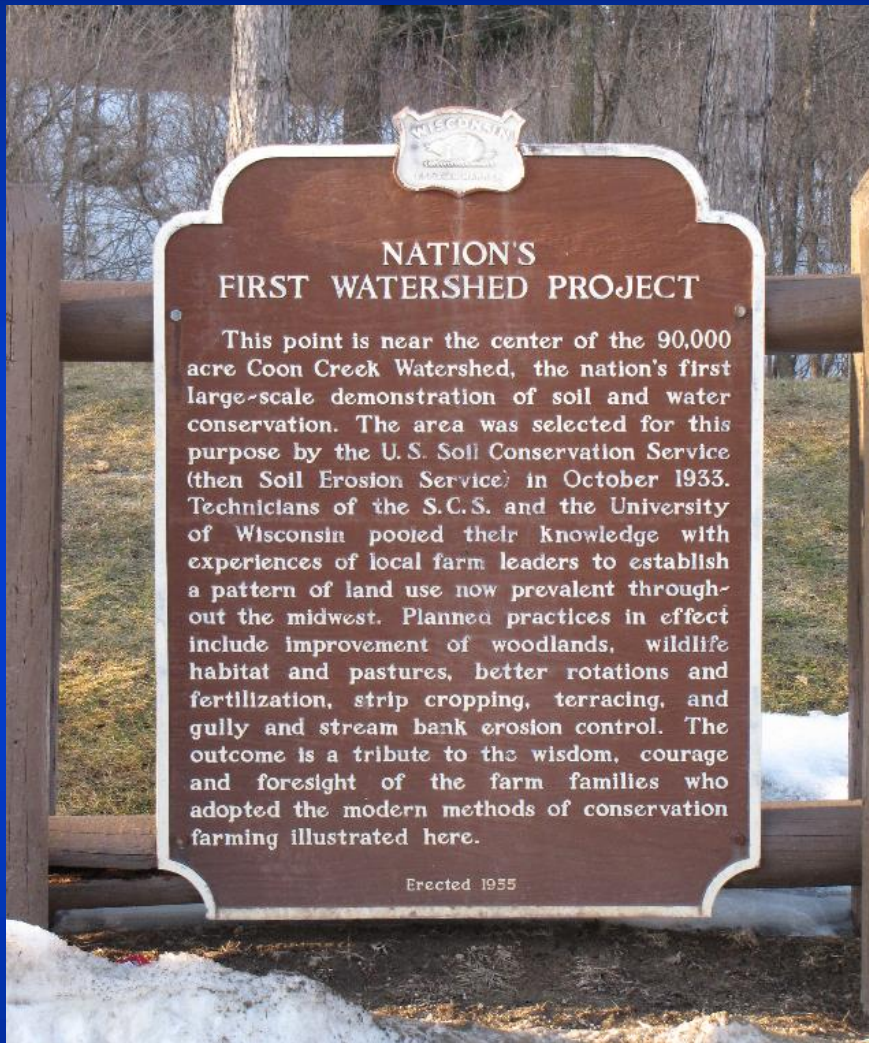
Such was the intellectual scenery when in 1933 there appeared upon the stage of public affairs a new federal bureau, the United States Soil Erosion Service. Erosion-control is one of those new professions whose personnel has been recruited by the fortuitous interplay of events. Previous to 1933 its work had been to define and propagate an idea,



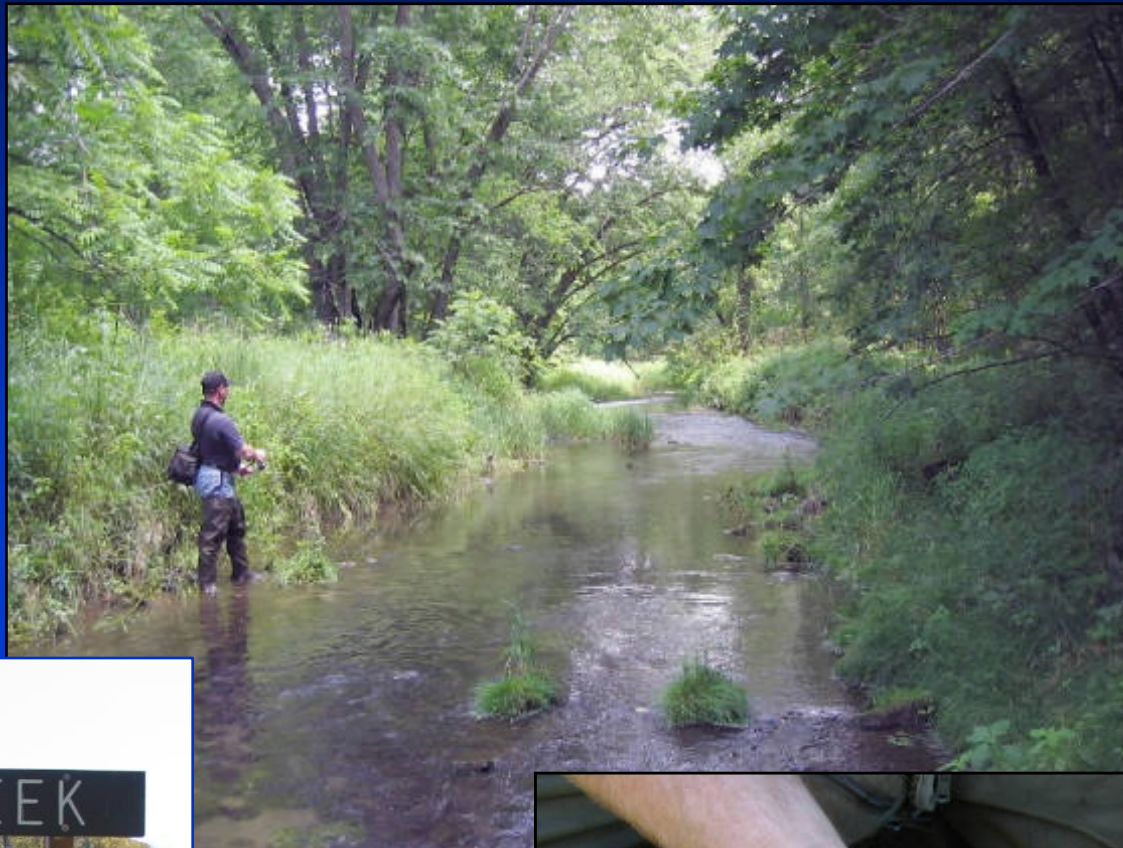
Coon Valley is one of the thousand farm communities which, through the abuse of its originally rich soil, has created the Mississippi flood problem, the navigation problem, the overproduction problem, and the problem of its own future continuity.

“Coon Valley is one of a thousand farm communities, which through the abuse of its originally rich soil, has not only filled the national dinner pail...but has created the Mississippi flood problem, the navigation problem, the overproduction problem, and the problem of its own future continuity.”

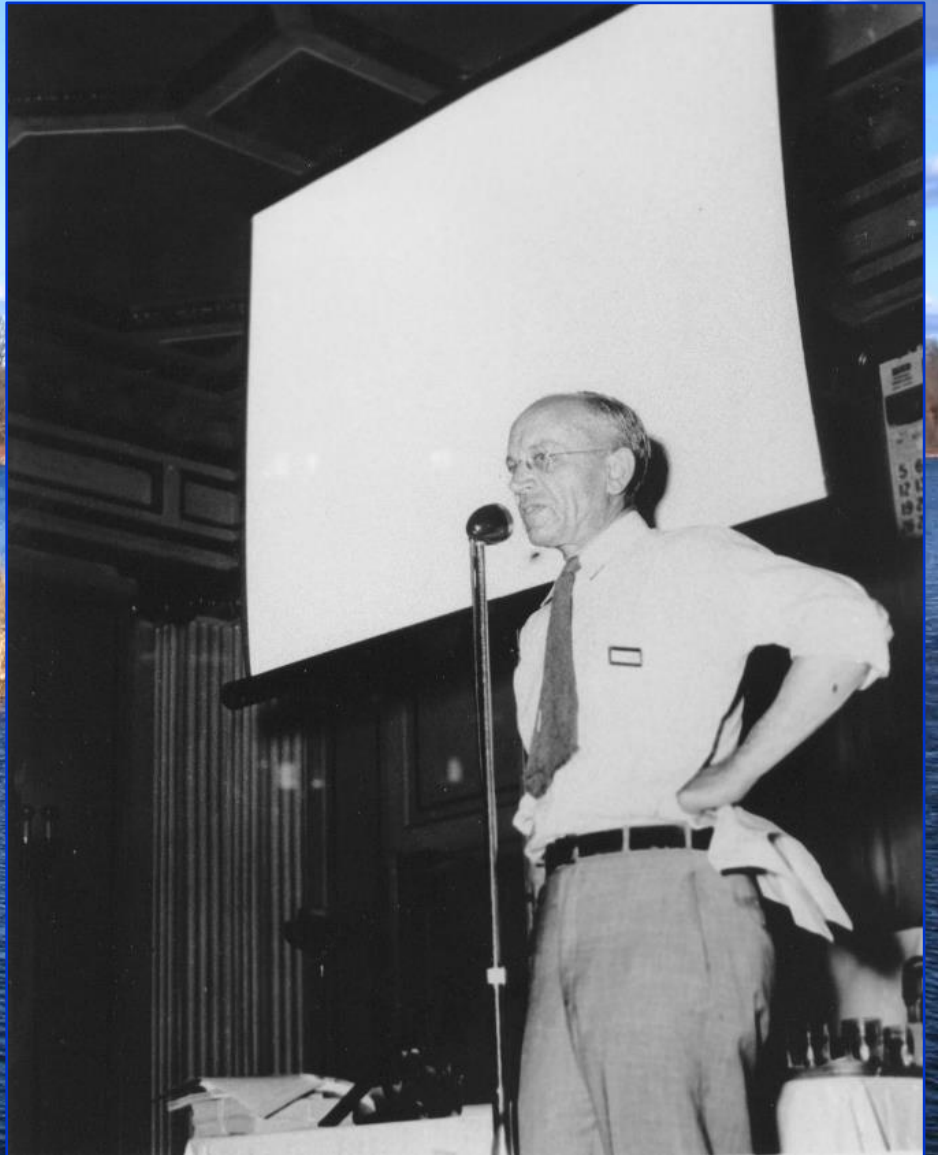








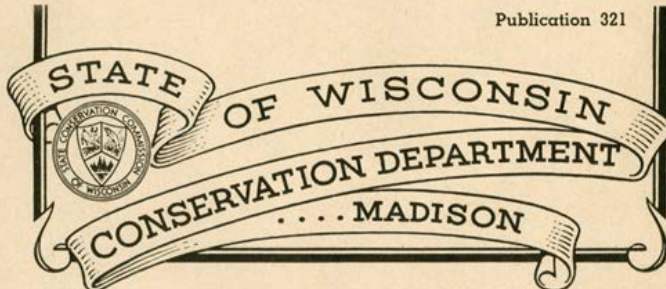




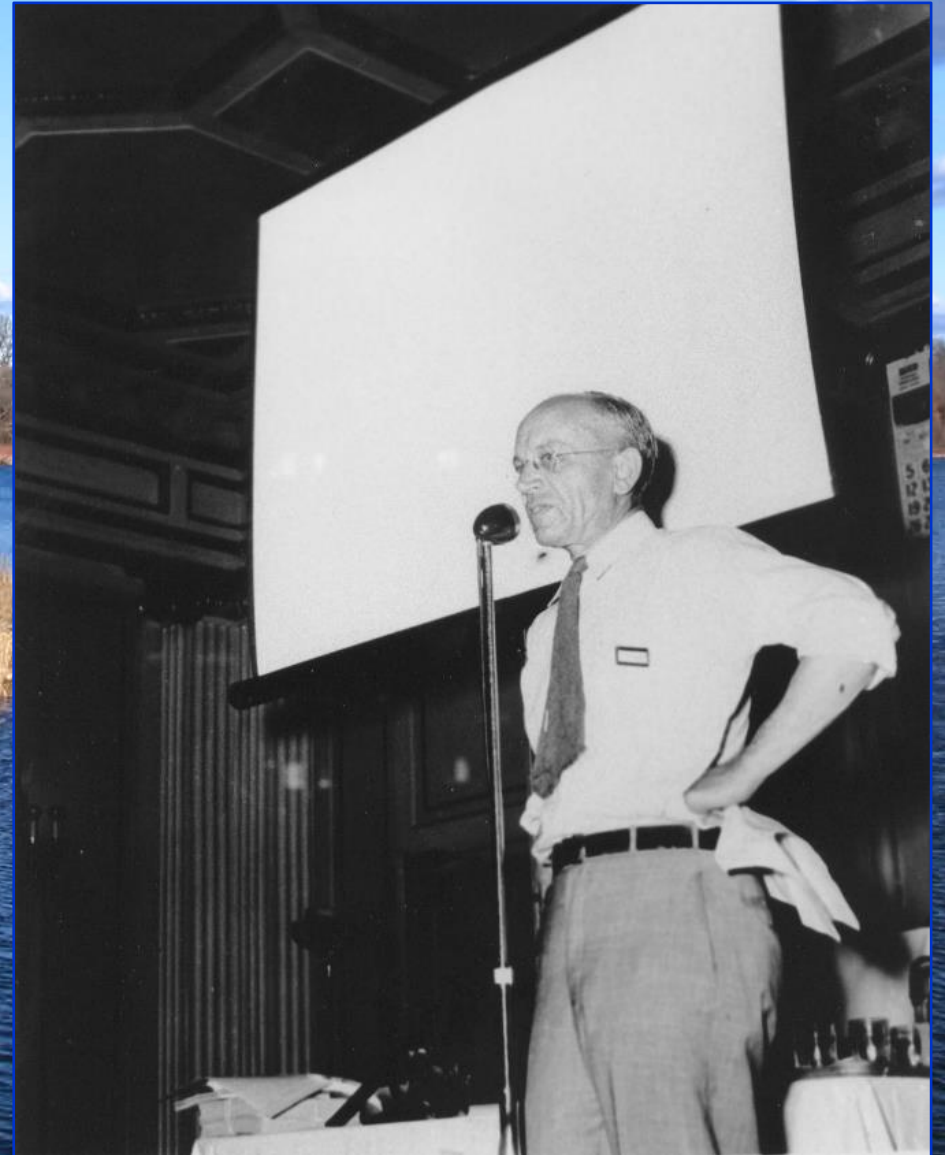
Wisconsin's Deer Problem



Publication 321

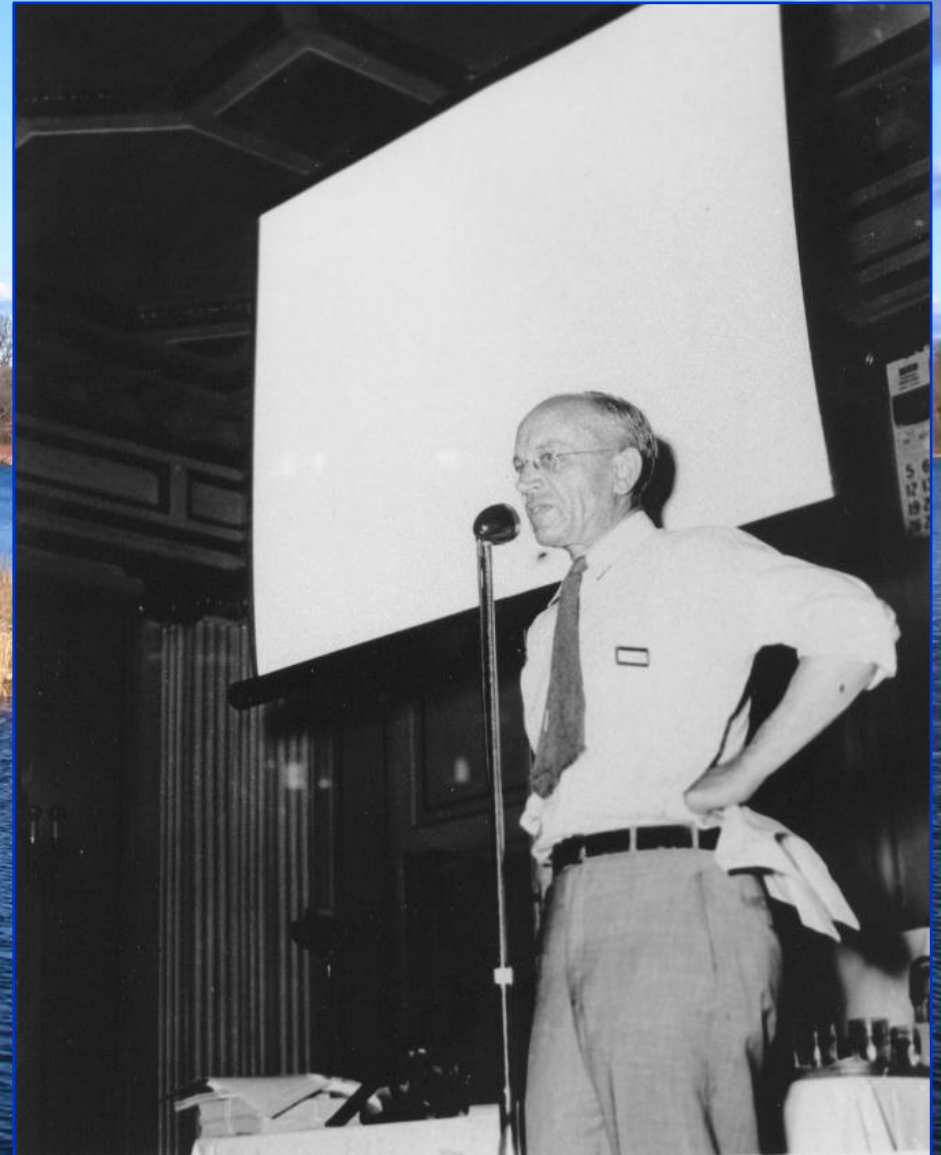


Reprinted from the Wisconsin Conservation Bulletin, August, 1943



“One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise.”

from “The Round River”



Lakes in Relation to Terrestrial Life Patterns

ALDO LEOPOLD

*Professor of Wildlife Management
University of Wisconsin*

MECHANIZED MAN, having rebuilt the landscape, is now rebuilding the waters. The sober citizen who would never submit his watch or his motor to amateur tamperings freely submits his lakes to drainings, fillings, dredgings, pollutions, stabilizations, mosquito control, algae control, swimmer's itch control, and the planting of any fish able to swim. So also with rivers. We constrict them with levees and dams, and then flush them with dredgings, channelizations, and the floods and silt of bad farming.

...Thus men too wise to tolerate hasty tinkering with our political constitution accept without a qualm the most radical amendments to our biotic constitution.

We acknowledge this interaction between water and land after erosion or pollution makes them sick, but we lack a "language" for describing



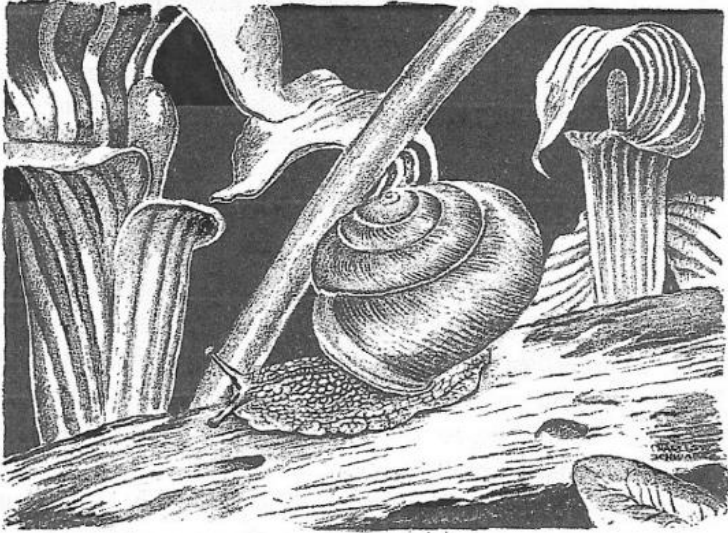
“...There must be some force behind conservation, more universal than profit, less awkward than government, less ephemeral than sport, something that reaches into all times and places where men live on land, something that brackets everything from rivers to raindrops, from whales to hummingbirds, from land-estates to window boxes. I can see only one such force: a respect for land as an organism; a voluntary decency in land-use exercised by every citizen and every land-owner out of a sense of love for and obligation to that great biota we call America. This is the meaning of conservation, and this is the task of conservation education.”

“The Meaning of Conservation”
unpublished lecture notes (c. 1944)



THE LAND ETHIC

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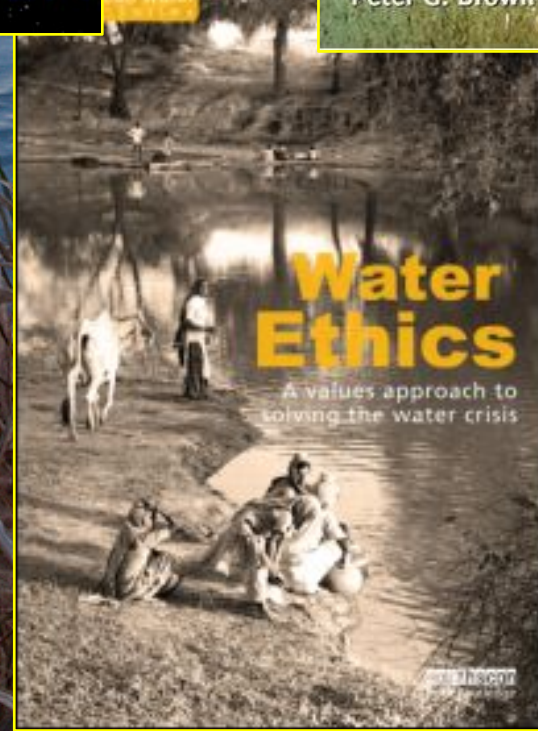
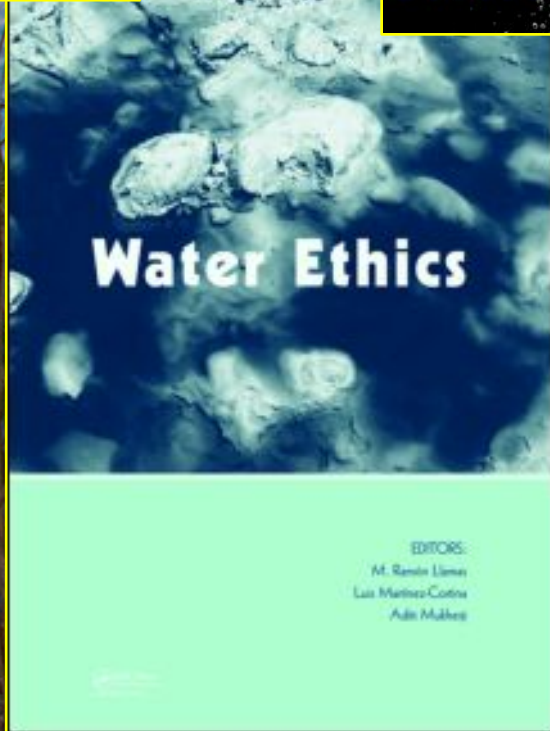
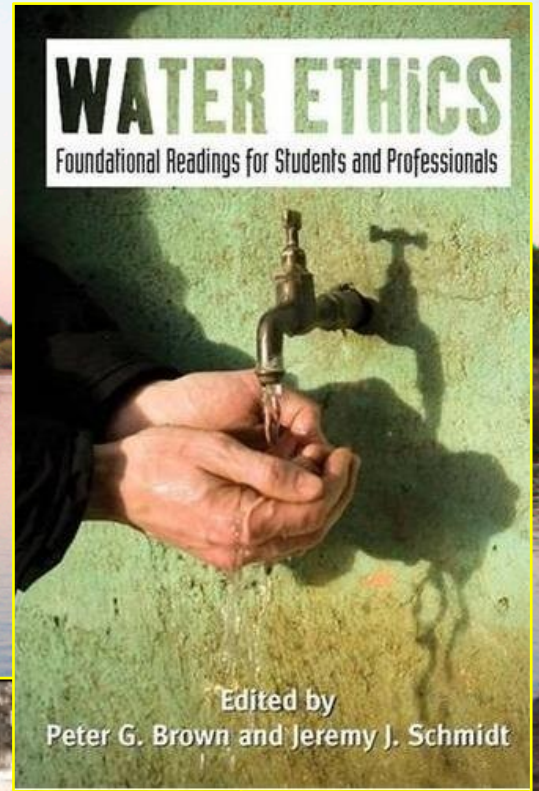
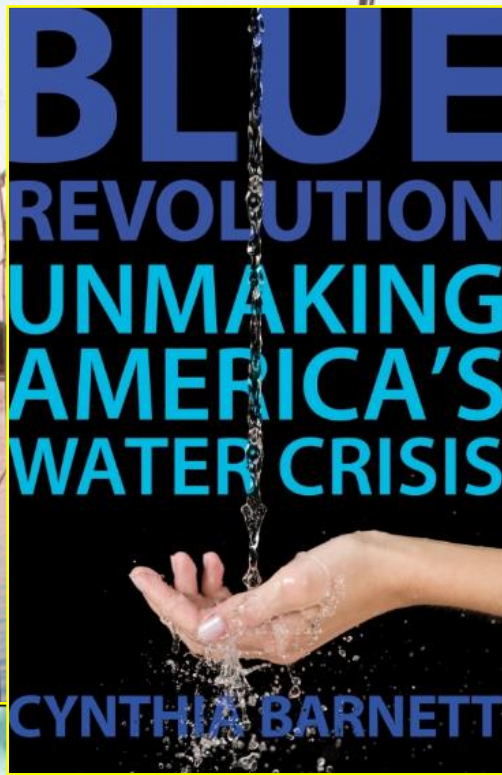
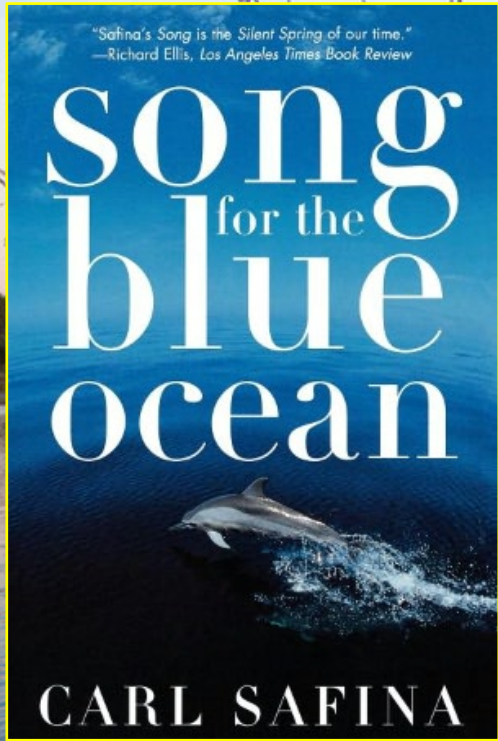
The Land Ethic

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This hanging involved no question of propriety. The girls were property. The disposal of property was then, as now, a matter of expediency, not of right and wrong.

Concepts of right and wrong were not lacking from Odysseus' Greece: witness the fidelity of his wife through the

“...Quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve **the integrity, stability, and beauty of the biotic community**. It is wrong when it tends otherwise.”



Kakagon Sloughs Wisconsin



The history of the Bad River Band, as well as our future survival and growth, is inextricably intertwined with pure water. Anishinabe considers Nibi, Water, as **the most sacred living part of our Mother, the Earth**. Without water, there is no life. Water is the life-blood of our Mother the Earth, and without healthy blood, illness prevails. Water is a finite resource, with its health being contingent on all sides of the environment that surrounds the water: above, below, and all around.

Bad River Band of the Lake Superior Tribe of Chippewa Indians
Water Quality Standards Resolution (6 July 2011)

LAUDATO SI'

ON CARE FOR
OUR COMMON HOME



POPE FRANCIS



ENCYCLICAL LETTER

Fresh drinking water is an issue of primary importance, since it is **indispensable for human life and for supporting terrestrial and aquatic ecosystems**. ...Even as the quality of available water is constantly diminishing, in some places there is a growing tendency, despite its scarcity, to privatize this resource, turning it into a commodity subject to the laws of the market. Yet **access to safe drinkable water is a basic and universal human right**, since it is essential to human survival and, as such, is a condition for the exercise of other human rights.

Pope Francis, *Laudato Si'* (2015)

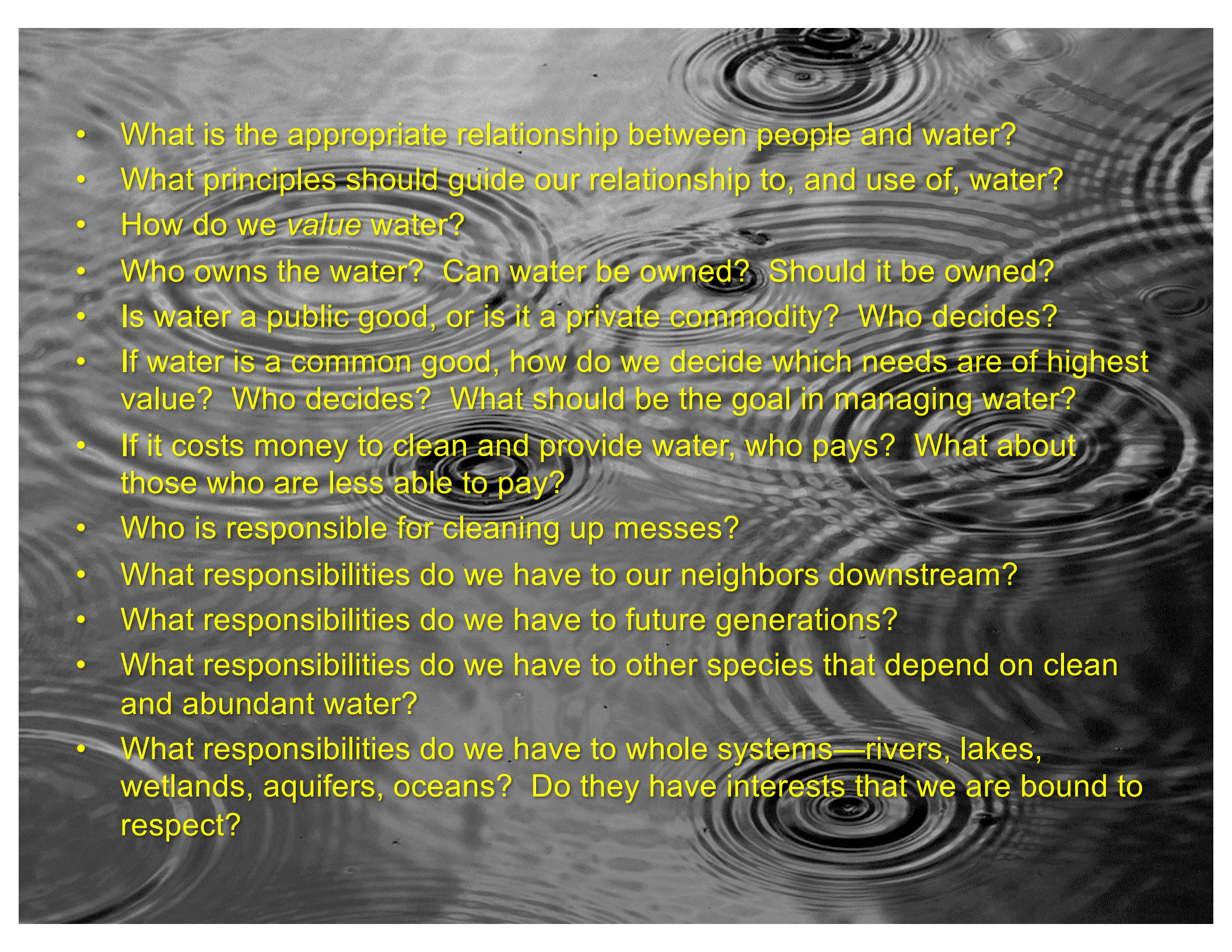
What do we mean by “ethics”?

- Ethics (also known as *moral philosophy*) is a branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct.
- A set of principles of right conduct. A theory or a system of moral values.
- Guidelines for appropriate behavior within a community.

The background of the slide is a grayscale image of water ripples. Numerous concentric circles of varying sizes are scattered across the frame, creating a textured, organic pattern. The ripples are most prominent in the center and right side, with some fading towards the edges. The overall tone is dark and moody, with highlights on the peaks of the ripples.

What are our ethical “sources”?

- Our families and communities
- Spiritual traditions and faith communities
- Literature, stories, mythologies, etc.
- Philosophical schools and traditions
- Economic and political schools of thought
- History and the sciences
- Personal experience and reflection

- 
- What is the appropriate relationship between people and water?
 - What principles should guide our relationship to, and use of, water?
 - How do we *value* water?
 - Who owns the water? Can water be owned? Should it be owned?
 - Is water a public good, or is it a private commodity? Who decides?
 - If water is a common good, how do we decide which needs are of highest value? Who decides? What should be the goal in managing water?
 - If it costs money to clean and provide water, who pays? What about those who are less able to pay?
 - Who is responsible for cleaning up messes?
 - What responsibilities do we have to our neighbors downstream?
 - What responsibilities do we have to future generations?
 - What responsibilities do we have to other species that depend on clean and abundant water?
 - What responsibilities do we have to whole systems—rivers, lakes, wetlands, aquifers, oceans? Do they have interests that we are bound to respect?

waters of wisconsin

the future of our
aquatic ecosystems
and resources



A report of the



Wisconsin Academy
of Sciences, Arts and Letters

“Water courses through our lives, connects us within watersheds, and ultimately binds us to the global hydrologic cycle. How we interact with water as it moves through our lives defines us as well — as individuals, as members of communities, and as participants in ecosystems. Water stewardship is thus **an expression of ethical responsibility** to fellow citizens, to downstream users, to future generations, and to the larger community of life.”



Shifting Currents

Waters of Wisconsin in 2016:

A preview of a new Waters of Wisconsin Report





Shifting Currents

Waters of Wisconsin in 2016:

A preview of a new Waters of Wisconsin Report

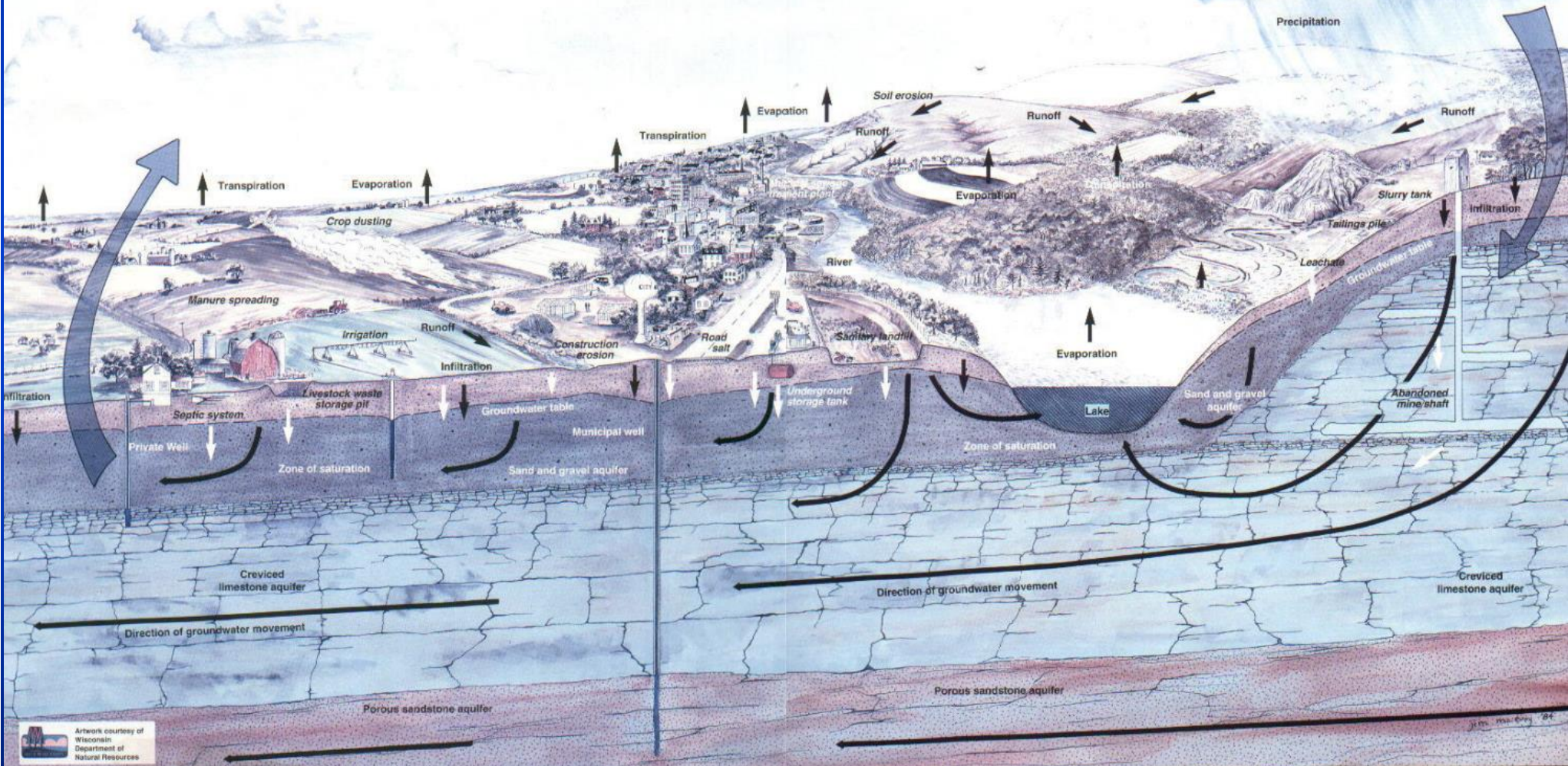
“Because the fate of Wisconsin’s waters cannot be separated from the fate of water regionally, nationally, and globally, we are part of a yet larger discussion of an emerging water ethic. In the last decade, that conversation has expended dramatically, as water needs, issues, and opportunities for sustainability have become increasingly evident. Wisconsin can contribute importantly to that conversation, while reinvigorating its own historic legacy of water ethics.”

Waters of Wisconsin
Draft *Shifting Currents* report

The Water Cycle

Groundwater and Land Use

- ← Direction of groundwater movement
- ⇩ Human induced impacts on groundwater
- ↓ Natural process



CONSERVATION HYDROLOGY:
ADAPTING OUR WATER FOOTPRINT
TOWARDS REGENERATIVE REHYDRATION

CONDENSATION

WATERSHED
AWARENESS
DON'T LIVE WITHOUT IT!

RELEASE

RECEIVE

TRANSPIRATION

EVAPORATION

NOW ENTERING
YOUR
WATERSHED

BIOSWALE

GREYWATER

ROOF
WATER
TANK

RUN IN

RAIN GARDEN

RECHARGE

INFILTRATION

UNDERFLOW

SLOW IT
SPREAD IT
SINK IT

PERCOLATION

RETAIN

LET'S KEEP THE CREEK
CLEAR, COLD AND COPIOUS... DUDE

By Jim Coleman www.oaecwater.org