

Rivers of Empire: Water, Aridity, and the Growth of the American West

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When Henry David Thoreau went for his daily walk, he would consult his instincts on which direction to follow. More often than not his inner compass pointed west or southwest. "The future lies that way to me," he explained, "and the earth seems more unexhausted and richer on that side." In his own imaginative way, Thoreau was imitating the countless young pioneers, prospectors, and entrepreneurs who were zealously following Horace Greeley's famous advice to "go west." Yet while the epic chapter in American history opened by these adventurous men and women is filled with stories of frontier hardship, we rarely think of one of their greatest problems--the lack of water resources. And the same difficulty that made life so troublesome for early settlers remains one of the most pressing concerns in the western states of the late-twentieth century.

The American West, blessed with an abundance of earth and sky but cursed with a scarcity of life's most fundamental need, has long dreamed of harnessing all its rivers to produce unlimited wealth and power. In *Rivers of Empire*, award-winning historian Donald Worster tells the story of this dream and its outcome. He shows how, beginning in the mid-nineteenth century, Mormons were the first attempting to make that dream a reality, damming and diverting rivers to irrigate their land. He follows this intriguing history through the 1930s, when the federal government built hundreds of dams on every major western river, thereby laying the foundation for the cities and farms, money and power of today's West. Yet while these cities have become paradigms of modern American urban centers, and the farms successful high-tech enterprises, Worster reminds us that the costs have been extremely high. Along with the wealth has come massive ecological damage, a redistribution of power to bureaucratic and economic elites, and a class conflict still on the upswing. As a result, the future of this "hydraulic West" is increasingly uncertain, as water continues to be a scarce resource, inadequate to the demand, and declining in quality.

Rivers of Empire represents a radically new vision of the American West and its historical significance. Showing how ecological change is inextricably intertwined with social evolution, and reevaluating the old mythic and celebratory approach to the development of the West, Worster offers the most probing, critical analysis of the region to date. He shows how the vast region encompassing our western states, while founded essentially as colonies, have since become the true seat of the American "Empire." How this imperial West rose out of desert, how it altered the course of nature there, and what it has meant for Thoreau's (and our own) mythic search for freedom and the American Dream, are the central themes of this eloquent and thought-provoking story--a story that begins and ends with water.

Rivers of Empire: Water, Aridity, and the Growth of the American West Details

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From Reader Review Rivers of Empire: Water, Aridity, and the Growth of the American West for online ebook

David Bates says

In his 1985 work Rivers of Empire Donald Worster studied the political and social implications of the increasingly extensive irrigation works projects that transformed the arid inland valleys of California into agricultural meccas. The intricate, centralized control of water that made the desert bloom had not, Worster argued, done the same for democracy. Agriculture could not exist without water, and from the late 19th century on the expense of constructing and maintaining irrigation projects had given rise to an increasingly authoritarian political economy in which government bureaucracies operated hand in hand with wellconnected agribusiness owners to determine how and where water would be used. The work is theorized by the writings of the post-war sinologist Karl Wittfogel, who argued that the authoritarian nature of Chinese society arose from its irrigation. Like the "hydraulic" ancient societies of Egypt and the Near East which created centralized priestly city states to manage irrigation works, China, and as Worster argues, the irrigated west, tended toward rule by stifling, anti-democratic, managerial bureaucracy. Rather than citizens, the farming districts of California had a labor pool. Worster makes this argument both figuratively in the sense that the technological control of water was operated in the interests of large business farms rather than small holders, and literally, in the sense that ethnically marginalized or non-citizen workers were sought after as a workforce too economically vulnerable to complain. Exploitation of nature and exploitation of people went hand in hand, both the outcome of heavy investment that demanded maximization of returns and a capitalist philosophy that viewed labor and resources as instruments for that maximization. California's hydraulic civilization is, Worster tells us, "a culture and society built on, and absolutely dependent on, a sharply alienating, intensely managerial relationship with nature . . . the modern canal, unlike a river, is not an ecosystem. It is simplified, abstracted Water, rigidly separated from the earth and firmly directed to raise food, fill pipes, and make money."

Michael Phillips says

The American West continues to need irrigation resources but as with the Colorado Flood of 2013 water can sometimes overwhelm the people. Wurster is a prolific author and I wish more of his books were in the Corning, Ia library. So many promising writers out there and I've set my goal to read 10 a month and perhaps write one of my own about the freedom people enjoy in the American West and the stark landscape of mountainous arid terrain.

Lesley Fuller says

Water. You can drink it; you can swim in it; you can use it to grow crops and even power entire cities. All of this can be done with the use of something as simple and abundant as water. However, as any first grade student can tell you, without clean water to drink, human beings would die. Without sufficient rainfall, crops would not grow. Water may be everywhere, but that doesn't mean we have a drop to drink. Nothing about water is as simple or as abundant as it might seem.

In Donald Worster's book, Rivers of Empire, from the New Western History school of thought, he explores the history of the Western United States through the lens of its irrigation and development. The American West was the untamed frontier, but open expanses of land were useless without water to irrigate crops and build communities. Despite the obstacles, to many the West became a symbol of American ingenuity, patriotism and pride. The land could be tamed and conquered; it would be controlled because Americans can do anything they set their minds to.

With visions of the American dream in their head, many of the poor and working class moved out West with the promise that the land would be irrigated and they would become wealthy farmers. However, Worster makes a strong and compelling argument that rather than turn the West into the Jeffersonian Democracy that they dreamed and were promised it would be, the poor farmers who moved out West became tyrannized by those who controlled the water. Those who controlled the water controlled the world.

Eventually, the harsh reality of nature and the brutality of the West threatened those who attempted to live and farm there. The Federal government was called on to rescue the region and through the Reclamation Act, the government became the one who controls the water. Rather than save the farmers, the Reclamation Act was a disaster and only served to pillage the land and reinforce the rigid social structure. Worster questions everything that Americans believe about Manifest Destiny and the great adventure of Western Expansion with unflinching detail.

Encapsulating the scope of Worster's work is nearly impossible. In many ways, he elevates the development and irrigation of the West to universal significance, indicting man's need to dominate the land and each other. Dense and challenging, it touches on themes of man vs. nature, man vs. man, the control of natural resources through a symbiotic relationship between the Federal Government and Big Business, and the symbol of water as not just life, but a means of controlling and dominating the lives of others. Exhaustively researched, Worster uses primary and secondary sources from multiple disciplines. Overstating the importance of Worster's work isn't really possible either and indeed he is one of, if not the most, respected authorities on the subject of Environmental History that has ever lived.

Kirk Astroth says

This was a difficult book to get into. The beginning chapters were too heavy on philosophy, Marxism, and the ideas of Wittfogel among others, there was an extensive historical review of other civilizations dependent on irrigation. Eventually, though, the writing began to coalesce into a message about democracy in the West versus empires built by a small wealthy elite aided and abetted by the Federal government. Major irrigation projects were undertaken to support small family farms and no farm larger than 160 acres was ever supposed to benefit from Federally-subsidized water. The Bureau of Reclamation was created for enforcing this agrarian vision but failed to enforce the 1902 law. Instead, a small wealthy elite which owned thousands of acres benefitted (and benefits today) from this subsided water paid for by everyone

For example--56 farmers in Colorado benefit from a \$70 million dollar irrigation project--all funded by US taxpayers and for which no interest would be charged to the big water users for 50 years. The examples in the book are legion. Boondoggle. Here is a great passage:

"For scale of engineering, for wealth produced, the American West had become by the 1980's the greatest hydraulic society ever built in history. It had made rivers run uphill, made them push themselves up by their

own energy, and celebrated the achievement in brilliant neon colors playing over casinos, corporate offices, shopping malls, over all it's new-age oases. It had turned an austere wilderness into sparkling serpentine seas where fleets of motorized houseboats circles under cloudless skies, where water skiers turned playfully in and out of once desolate, forbidding chasms. Then it had taken that same water and raised cotton with it, fuller city pools with it, thrown it into the air with fountains and let it blow away. It had made its rivers over to produce art, learning, medicine, war, vulgarity, laughter, stinginess, and generosity. All this it had done with unmatched zeal, and most of it with the aid of the East."

No other major American region had a single federal agency devoted so single-mindedly to so narrowly regional a mission as the Bureau of Reclamation. Bureau projects--far from expanding family farms and democratizing irrigation--had forced out of use at least 5 to 18 million farm acres in the East, sending thousands of rural men and women into bankruptcy. None moved to the West looking to start a new farm life--in large part because land was so expensive and controlled by the water elite.

An eye opening account of Western development built on the domination of nature but now with foreboding consequences.

Susie says

It was really good, even infuriating at times... Although it filled in gaps with stuff I didn't know, if you've read other books on water and dam-building, etc. some of the information is already covered. The conclusion was also pretty far-fetched, but overall a really good book.

Essie says

This book is a fascinating perspective on the history of the American West. It's a classic of environmental history, and I can certainly see why. That said, I'm not entirely sure what I think of his narrative style. I love that environmental history tells stories, be Worster quite often goes off on extended metaphors that are sometimes incredibly helpful and sometimes just tiresome. And sometimes his use of tense and narration make it difficult to understand who or when exactly he is talking about and if whatever suppositions he is narrating were actually true or came to pass or what. So I'm ambivalent about how much I enjoyed this book, a good part also because I really get riled up reading US histories.

Other than that, the frustration of reading victory after victory for a small group of people using federal money and the slighting of minorities, broken treaties, and single-minded pursuit of gain and conquest was exhausting. It is essentially a story of a few wealthy speculators and government corruption. I appreciated the analysis of the depression-era writers like Steinbeck that was included. Overall, it's not just a history of the 'natural' environment of the American West. It uses the history of rivers and irrigation as a means to talk about the social, economic, and political history of the region.

Overall, I'd recommend it to anyone interested in 20th century political/economic history, history of the American West from the mid 1800s, or historical and contemporary uses of rivers and ground water.

Rob Bauer says

This is an extended review of this classic and extremely important history of water and the American West.

Occasionally historians use the term hydraulic society to describe the famous civilizations of the ancient world. The empires of Egypt, Mesopotamia, and the Indus River Valley, to name a few, all existed by manipulating water supplies and building irrigation works. Few people identify the American West as having anything in common with these ancient civilizations. We consider the governments of ancient Egypt and Mesopotamia despotic empires, while in the popular imagination, the American West is known for its freedom and rugged individualism. In his book Rivers of Empire, historian Donald Worster has transformed this mythic picture of the West. To replace the myths, Worster demonstrates that much of the history of the American West consists of the interlocked stories of people, water, and technology.

In his Introduction, Worster clearly establishes two main themes. The first is that the West is "a land of authority and restraint, of class and exploitation, and ultimately of imperial power." (4) Because the West is arid, control of water gives control over nearly everything else. And secondly, "It is, first and most basically, a culture and society built on, and absolutely dependent on, a sharply alienating, intensely managerial relationship with nature." (5) Along with political control of water, engineering and technological control are central to the story. After establishing these two themes, Worster describes three kinds of irrigation societies, the local subsistence mode, the agrarian state mode, and the capitalist state mode. It is this last mode that dominates the American West after 1900.

Within the capitalist state mode, water is a commodity people buy, trade, and manipulate like any other, and technology enhances its value. "Where nature seemingly puts limits on human wealth, engineering presumes to bring unlimited plenty." (52) The drive to acquire material wealth from even the most marginal environment links large-scale agricultural producers with government technocrats and water management bureaucrats. For Worster, this triumvirate of powerful interests creates an unholy alliance: "Democracy cannot survive where technical expertise, accumulated capital, or their combination is allowed to take command." (57) Because these groups treat water as a commodity, the primary purpose of water use is economic gain and environmental or ecological factors are irrelevant: "It was then rational to destroy a river completely, to send it through canals or tunnels to another watershed altogether, to wherever a man could make money from it. Indeed, it was irrational to do otherwise..." (92)

In addition to the commoditization of water in the West, Rivers of Empire discusses other reasons for the rise of the irrigation society. Some saw irrigation as an engine of American imperialism. To stop short of maximum possible development was to see America fall short of its potential. The most powerful engine for developing irrigation was the federal government. In 1902 it responded to the cries for help by passing the Newlands Reclamation Act. According to Worster, "It has been the most important single piece of legislation in the history of the West, overshadowing even the Homestead Act in the consequences it has had for the region's life." (130-131) Further inspiration for the national government to take a role in creating irrigation works came from American observes abroad in the late 1800s, especially those in British India. Unfortunately, while these observers noted the grand achievements of British engineers there, they failed to notice some of the negative side effects—the disruption of native cultures, the ecological problems, and the increasing alkalinity of the irrigated lands generally escaped notice.

Worster describes in intricate detail the results of the Newlands Reclamation Act. The justification for the act

was that it would benefit family farmers by setting a 160-acre limit on the size of farms using irrigation. This often did not come to pass, for several reasons. The bill's authors underestimated the powers of corporate agriculture to find loopholes in legislation and take advantage of them to amass huge landholdings. In addition, farmers on irrigated lands largely reproduced the same crops others grew elsewhere more cheaply without irrigation. Finally, much of the money spent to increase irrigation went toward improving existing private landholdings instead of opening up new areas of settlement for family farmers: "By and large, federalization worked to enrich speculators and enhance the holdings of established owners, not to furnish inexpensive new homes for homeless folk from the overcrowded cities." (172)

An especially vivid example of the influence of corporate monopoly existed in California. In a situation popularized by John Steinbeck in The Grapes of Wrath, the United Farmers in California paid a family of migrant agricultural laborers an average yearly salary of \$289, when \$780 was the minimum subsistence income in California. Any attempts to organize on the part of migrant workers met with armed violence from anti-union brigades aided and abetted by local police: "Year after year of strikes, eruption after eruption of violence, blow after blow rained on workers' heads – until finally the workers' militancy had subsided, had spent itself in futile protest, until the growers had won." (227)

Worster's description of the role of government technocrats in water management leaves the reader astounded at the level of technological arrogance towards the environment. Backed by the rhetoric that "Irrigation experts are now convinced that the rapidly growing U.S. can expand almost indefinitely within its present boundaries." (266) the Bureau of Reclamation adopted the slogan "total use for greater wealth." The Bureau of Reclamation, along with the Army Corp of Engineers, proceeded to dam the Columbia, Colorado, and Missouri Rivers, as well as hundreds of tributaries, in their quest to completely subjugate nature to mammon. "What those northern rivers, the Missouri and Columbia, were still struggling towards, the Colorado had become – a part of nature that had died and been reborn as money." (276) According to Worster, the net effect was to use tax dollars for giant federal projects that subsidized elite western corporate agribusiness to grow crops that could be, and already were, produced more cheaply in the East. A stinging economic criticism, and yet another example of how the US government provides corporate welfare to those who need it least.

In its conclusion, Rivers of Empire examines some possible future costs of the American Irrigation Empire, and the findings are not optimistic. Worster sees three environmental vulnerabilities. These are the limited quantity of water in the face of increasing demand, declining water quality under intensive water use strategies, and irreversible environmental decline. Worster fears that instead of embracing the simple solution of decreasing demand, people will seek a technological panacea instead. The most grandiose scheme mentioned was a proposal to utilize the waters and glaciers of Alaska and Canada through a monumental series of canals, pumping the water throughout the western United States. Truly, this was a scheme worthy of an Egyptian Pharaoh of the Old Kingdom or a Chinese Emperor of the Tang Dynasty. Worster's preferred solution is along the lines of the watershed-defined regions first expounded by Major John Wesley Powell.

Rivers of Empire is a very impressive interpretation of water use in the American West. Worster writes in a clear style that is very readable yet direct and often profound, and he makes liberal use of statistics to buttress his arguments. If he seems too critical of the irrigation society he describes, Worster produces facts and interpretation to support his claims. Some may criticize the heavy emphasis placed on the economics of irrigation rather than the cultural implications for the farmers who benefited from it, but this criticism fails to follow the logic of Worster's argument about the irrigation society. Early on, he claims that corporate interests and agribusiness, not family farmers, derived most of the benefits from irrigation, and corporate interests are all about making money. The only mild criticism I have for Rivers of Empire is that more and better maps would benefit the reader. All things considered, this is an outstanding book. It is difficult to

imagine studying the present or future state of water use in the American West without using Rivers of Empire as a central text.

Feather says

Fear the Iron Triangle - the alliance between politicians, businesses and the regulatory offices created to maintain standards of safety, sustainablity and democracy. Political and economic systems reliant on this alliance become anti-democratic, anti-environment, and anti-life in thier amoral and unaccountable pursuit of profit and power.

Donald Linnemeyer says

This is one of those books that are fascinating or its sheer originality. As an American, I've never really thought about water scarcity, at least not about it actually affecting me. But Worster puts the irrigation history of the west at the forefront of America history, and he places us in that story, still to be decided. Throw in some interesting Marxist analysis of western settlement (water scarcity typically leads to powerful, centralized, oppressive government), and you've got a great read.

Kyle says

its been a long time since i read Cadillac Desert so i cant compare the two very well but i remember that book focusing a lot on the california water wars and the reign of floyd dominy at the bureau of reclamation. by contrast worster mentions floyd dominy mainly in passing and the DWP/mulholland only once (in connection to the collapse of the st. francis dam). the two books overlap in discussing the central valley and the insanity of agriculture in california generally. but worster discusses much more and from a much less sensational/journalistic perspective, with long digressions for discussions of dialectics or literature or legal theory (all very useful).

worster discusses the early uses of irrigated water in the american west, from the hohokam through the spanish and up to the mormons, then he discusses the problems that emerged from private, small-scale agriculture attempting to grapple with the much larger problems of interbasin transfer, salinity, flood control, and storage, the solution, decided on at the end of the 19th century, was massive federal intervention, as long as that intervention favored the largest landowners and as long as it came with no strings attached, not even a vague promise of repayment, the next period worster tackles is the dam-building frenzy from the 1930s to the 1970s, bookended by the spectacular success of the hoover project and the ignominious failure of teton, worster then makes some remarks about the future of the west, cautioning on one page against 'utopianism' (earlier he slags off communists) and on the next page encouraging Concerned Western Citizens to radically excavate john wesley powell's water basin government proposal and graft localism and participatory democracy onto it, in other words, he advises them to create a utopia.

before all of that worster gives us an excellent chapter on the legacy of marx and wittfogel (this is one of the areas where worster's book stands well above cadillac desert - an academic has a lot of advantages over a mere journalist) and the dialectical relationship of humans to their environment. later on he demonstrates how the 'base' of water scarcity modified the superstructure of western capitalism and government, and then

how the imperatives of water control and what worster calls 'instrumental reason' fed back onto the base in increasingly destructive and self-contradictory (even by ordinary 'common sense business' standards) ways. the book was written in the early 80s and worster comments that the hegemony of the large farmers and ranchers over federal policy has been broken and the reputation of total water control, after the wild schemes and failures of the 70s, been irreparably tarnished. marc reisner's book also makes a similar observation, that western citizens have begun to defend wilderness areas and have effectively turned the tide of dam construction.

what either of them would have to say about the shift from agriculture to industry and suburbanization would be very interesting (we have to infer what reisner would have to say). what would be even more interesting is something worster mentions in passing during his discussions of the 1930s: he says something to the effect that Marxists have never commented seriously on the american west or its water problems, and so we have to infer from other examples (the one he gives is collectivization in the soviet union) what a communist program for the west would look like. i wonder if that situation has changed in the 30 years now since worster's book. i would be very interested in finding out.

Patrick says

A scathing critique of farm subsidies in the form of water rights, as well as industrialized irrigation. If the good folks at Toro or Rainbird hear about this...

Glen says

This book is a tough read. It features quite a few pages on Marx and a German philosopher named Wittfogel who write about what it is that big irrigation projects do to the societies that build them. In the end there is a bit of description of how the Western US could have been settled without Hoover dam and the like. Not a lot of take home value in this environmental history. It did give a good context in which to consider water projects that are under consideration today.

Billy Marino says

Review for class. Not my best work, but it's overall message stands:

Worster's Rivers admirably aims to explain the entire origin and contemporary situation of the American West, which focuses on a generalized version of Americans' relationship to their environment. Oddly broken into seven convoluted and chronological parts, the book follows three themes, or stages of the American West: "Incipience," Florescence," and "Empire." Worster's thesis is that the "American West can best be described as a modern hydraulic society, which is to say, a social order based on the intensive, large-scale manipulation of water and its products in an arid setting." (7)

Part two discursively explicates the underpinning theories of Worster's work, especially Wittfogel's "hydraulic society," which explained previous empires' power housed in control of water, and the Frankfurt School's "Instrumental reason," or focus on means instead of ends. In addition to this theoretical framework, is the prominent description of the three modes of water control, "Local Subsistence Mode," "Agrarian State

Mode," and the only relevant one to this work, "Capitalist State Mode." This last mode creates centralized power through private agriculturalists and bureaucrats alike.

Part three, "Incipience," focuses on 1847-1890s, and sporadically examines the origins of water control in the west. First, the Mormons settled Utah and constructed the first large-scale, local irrigation systems where American Indians and Spanish did not bother. This local system increasingly gave way to more centralized control attached to the idea of "democratic conquest." While intriguing, this section skirts the concept of Manifest Destiny that sums up the various motivations Worster attempts to elucidate.

Part four and five, "Florescence," shift to state and federal control of water between 1902-1940, largely taking power away from private hands. These sections decisively show that agencies such as the Bureau of Reclamation became a class of "technical elite," especially in areas such as California's central valley, and successfully commodified the river and created a hierarchy of class in the region.

Part five, "Empire," drives the message home, and focuses on the "alliance" of private elites and the government agencies, which solidify what Worster views as a hydraulic society unparalleled in history. These "power elites" controlled the technology necessary to control the water needed for the now major cities in the west. These elites were, and are, the only ones with the capital to build technology that can overcome the limits imposed by nature.

Rivers is simultaneously impressive and disappointing. Worster's goal is complex, and while his West is limited to arid regions, he largely succeeds in proving his point that irrigation is the key to controlling the American West. His examination of America's "economic culture" is lacking thanks to a continued ignoring of Roderick Frazier Nash and Henry Nash Smith. Without these scholars, Worster only scathes the surface of how Americans' thought about their relationship to their environment and the West, even while this "cultural" analysis underpins his economic-environment work. He also proudly affirms his reliance on generalizations, which, compounded with digressive and tedious writing, nearly limits the impact of the immensity of the work he's done. Ultimately, this will remain an important text in Environmental and American West History, but it is something to understand and build on.

Matt Shake says

Concentrating less on government corruption and waste than "Cadillac Desert" and more on water allocation as a form of social control, Worster's analysis of Western water projects paints--in my opinion--an even scarier picture of the future of the West than "Cadillac Desert." He points out that in an arid environment like ours, he who holds the keys to cheap water holds great power and control. While I do agree with him on this point, I do not know for sure if this system has created as much potential for class conflict as he thinks.

Samuel says

Donald Worster recognizes that west of the hundredth meridian, he who has the water rights makes the rules. Or rather, this history of the west posits that the scarcity of water in the arid west made it the most important resource. Therefore, by chronicling how water was controlled and developed by "elites of wealth and technological power," Worster sets out to show how no other factor is more important to the growth and history of the West. Beginning first with a reflection from a ditch in the contemporary Imperial Valley,

Worster goes on to explain the "taxonmy" of historical irrigation. He establishes how scholars such as Wittfogel first conceptualized the Marxist theory of "hydrological society" that developed in China and other eastern societies where there was less rainfall and humidity than say in Europe. Worster then creates three categories of these societies: (1) the local subsistence model--small scale and local, (2) the agrarian state model--larger and semi-communal, and (3) the capitalist state mode--ever-larger and economy maximization based.

The next chapter "Incipience" speaks to beginnings of mid-nineteenth century American irrigation communities in the West. In the section "The Lord's Beavers," Worster contends that although the Mormons adopted the bee and hive as symbols of their communal industry, the beaver and dams might have been more appropriate given their network of irrigation ditches and water works. Whereas the Mormons' success depended upon communal, religious organization, the first networks of irrigation construction in Colorado and California developed under more capitalistic, individualistic auspices. Hence, these beginnings were frustrated largely by greed and contention. But eventually, the ideology of democratic conquest spread from west to east and back again, and the federal government helped to redeem the Great American Desert and turn California and other western states into major agricultural producers and more gradually consumers.

"Florescence: The State and the Desert" deals mainly with federal government aid in western growth beginning with the late nineteenth century reconnaissance surveys of John Wesley Powell. Although his model of a "commonwealth within itself" was impractical due to conflicts among communities both within individual states, across state lines, and even across international borders, his work informed much of the conversations leading to the 1902 Reclamation Act--wherein the federal government assumed the responsibility to manage western water sources to promote maximum settlement. Under the control and direction of Elwood Mead, the Bureau of Reclamation from 1924-1936, the Bureau was redeemed of its initial two decade failure by accomplishing many of its greatest successes including the construction of the Hoover Dam.

Environmental history often comes under harsh critique for being less human-based than other methods of history, but this book seems to prove itself and the field. Water was the resource that determined the settlement of the west. It unites diverse stories and patterns into one rather convincing thesis: limited sources of water challenged Americans to optimize its use at the cost of environmental sustainability.

(pg. 1-188)