

Robert R. Crifasi

Western Water A to Z: The History, Nature, and Culture of a Vanishing Resource

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Environmental scientist and historian Robert Crifasi captures the interdisciplinary spirit of *Western Water A to Z* in one of his concluding remarks:

When I went to school for geology, one of the core mantras in the field was that by studying the present, one could unlock the past's mysteries. But after spending a career in water resources, I like to invert that wisdom and posit that to understand western water better, we must study our past to gain deeper understandings of the present (pp. 317).

By combining both scientific expertise and a wide reading of historical scholarship, Crifasi has constructed a book that will allow historians to better understand the terminology and governmental policies that surround rivers, wetlands and lakes in the US West. Likewise, the work is accessible to scientists and adventurers alike, and details how the present waterscape of the US west was formed through both natural and human actions over time. There are many potential audiences in and beyond academia who may will find this book useful, but US historians and educators will find it most helpful as a resource for reference and teaching.

Crifasi organises his book in three sections. After a brief preface and acknowledgements on the book's inception while whitewater rafting, Part One explains why the book is organised like an encyclopaedia and outlines several key ideas in Western US water history. Specifically, Crifasi chose to utilise approximately-one-page entries for the reader to form a sense of innate interconnection between each entry. After this justification, he then outlines the contested cultural definitions of the geography of the American West (he chose to define the region west of the one-hundredth meridian as 'the West') and describes how drought is a cultural manufacture which stems from a human refusal to recognise the limits of water in arid environments. Finally, he then briefly explains the histories of American conquest, the Prior Appropriation Doctrine and American hydraulic development for irrigation. Though Part One rapidly moves through historical definitions and material, it is lucid enough to serve as a primer for an undergraduate or graduate classroom on US environmental or Western history.

Part One also outlines how the art of photography has a rich relationship with the history of US water and why the book is dense with images. According to the publisher's website, the book contains 216 images. To Crifasi, these 'images comprise a central position in the cultural dialogue on water and deserve recognition as something more than a documentary rendering of structures' (p. 8). The curated images are a definitive success in this work. It seems that at

least one photo, whether black-and-white or in colour, accompanies each entry to dynamically illustrate the ecology, humanity and hybridity (or hubris) in Western water. Just as a photo of Akimel O'odham farmers and Ojibwe artist Isaac Murdoch's protest art against the Dakota Access Pipeline accompany the entry on 'Indigenous Water Rights' (pp. 175–178), an aerial shot of the 'Confluence of the Green and Colorado Rivers' (pp. 96–97) companions its own entry. In this way, the art, labour and cultural meaning that Indigenous communities invest in critical water sources appear as living and material forces beyond the text.

Part Two contains about two-hundred individual entries on topics that range from species histories tied to Western water to US government policies and governmental organisations. Around a quarter of the entries are directly related to the names of natural river processes, such as 'Oxbow' (pp. 209–210) lakes that form when river meanders are cut off from the river, and roughly another quarter to measurement styles or dam technology deployed by engineers. At its best, this is a solid encyclopaedia. Unfortunately, one drawback to this structure is that the book narrates its histories non-linearly and it requires a full reading of the book to grasp one of the narrative threads contained within. In other words, the structure is counterintuitive for writing a historical narrative. For example, the entry on the film '*Chinatown*' (pp. 79–80) summarises the plot of the 1974 neo-noir mystery and alludes to the water grab of the Los Angeles elite in the early twentieth century. Yet, readers will need to read at least three other entries which appear long after *Chinatown's* entry to get a full view of the relevance of the film and the historical moment it represented: 'Mulholland, William' (pp. 201–202), 'Owens Valley' (pp. 207–209), and 'Water Grab' (pp. 291–292). Though Crifasi's writing and histories are engaging, a reader may likely overlook inter-entry connections within the vortex of alphabetically arranged information. Yet, it is important to note that these narratives are still present in this work, and that the entries on the natural processes of rivers are digestible and informative.

Finally, Part Three offers a reflection on the present and future state of the American West amidst legacies of conquest and imminent destruction of contemporary climate change. At heart, Crifasi is here an optimist who argues that cooperative governmental policies and local environmental, communal initiatives are possible, and that addressing the future of Western water requires understanding the ecological limits of the region. Crifasi draws this point from the ambivalence of the past, where colonisers developed Prior Appropriation to ward against individualistic monopolisation of water at the same time as the dispossession and elimination of Indigenous and Hispanic people 'who were the true pioneers in understanding and managing water resources in the West' (p. 316). Though the particularities of future cooperation driven by climate change is a bit fuzzy here, and a decolonial future unaddressed, Crifasi does make a compelling point. Perhaps cooperation driven by environmental

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concerns is not an aberrant part of Western water history, as the text often gestures to. Yet, there remain many episodes – such as the Owens Valley water grab and the fraught history of Indigenous dispossession – that counter that claim. Even so, a pessimist like this reviewer cannot help but be swayed by the possibilities of cooperative water use that Crifasi has successfully located within *Western Water A to Z*.

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