From Archive to Evidence: Historians and Natural Resource Litigation

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Abstract: Within the field of natural resource law are several specific areas that are well suited for the historian's skillset and knowledge. The deployment of the historian's tool box when conducting research in the legal world, however, can result in deliverables which vary significantly from those found in the academy, as they range widely in both size and scope and do not always use the full range of a historian's skills. New technological platforms provide consulting historians with creative opportunities to disseminate valuable information and sources and enhance important scholarly debates.

Key words: natural resource litigation, environmental history, Superfund, Clean Water Act of 1972, digital history

Who among us doesn't long for more time in the archives, running our hands over crumbling papers, eliciting stories from the buried treasures in dusty boxes? My colleagues in academia often listen with envy when I tell them about the archives I have visited recently, which sometimes number ten to fifteen in a given year in places spread across the country. Sometimes my friends respond by thoughtfully recalling the last time *they* traveled to a repository with dreamy expressions on their faces, faces that openly divulge the number of years that have passed since they got dusty in an archive. In turn, as I struggle with decisions about spending my firm's overhead money on conference travel, I listen to them with equal pensiveness and a tinge of envy as

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they discuss their plans for spending their annual conference budget that forms part of their compensation package.

Ah, but isn't the grass always greener on the other side? Although I'm not qualified to comment on ways to get full-time professors into the archives more, nearly twenty years of historical consulting work allow me to expound on both the continuing need for history scholarship in the public domain as well as on ways for the consulting historian to find an outlet for her academic and intellectually inquisitive side. In the first part of this article, I will examine the particular areas of natural resource law and policy that are best suited for a historian's skills and knowledge, and explore how historical research in the legal world—and more specifically, the variety of deliverables resulting from such research—differs from that of the academic world. The field of natural resource litigation is vast, and describing one legal consulting project in a single policy area would be enough to demonstrate just how relevant the study of history remains—particularly environmental history. However, there are several current policy debates and legal disputes over natural resources that are being resolved by using historians to uncover facts that explain the problems' origins. Much of the research required to craft an expert report of this type delves into topics of great interest to the academy as well as to the general public. This article will detail some of these key areas.

Finally, although natural resource litigation illuminates the continuing contemporary need for humanities scholars, a historian's scope in litigation is often so narrow that it leaves her wanting for an audience or alternative forum to explore the extraneous materials she collects along the way. In the last part of this article, I will also comment on how new technologies and platforms can provide opportunities for creatively and intellectually analyzing the vast amount of archival research that consulting historians undertake. I will argue that these are valid places for professional history discussions and provide excellent ways to bring history to the wider public and to engage in real-time debates over important sources, offering an alternative to the traditional publishing process that can render scholarly debates stagnant.

Natural Resources: How History Matters

A cursory review of the general press over the past few years reveals a somewhat tired but persistent debate over the modern relevance of our profession as well as other disciplines that fall under the humanities category.[1] Socratic debate on the topic permeates the pages of newspapers and magazines like *The New York Times* and *The Atlantic,*[2] revealing a variety of opinions about the correlation (or the absence of one) between a humanities

1. See "The Fate of the Humanities," *New York Times*, Nov. 4, 2013 as just one example.

2. Jordan Weissman, "Should Science Majors Pay Less for College Than Art Majors?," *The Atlantic,* Nov. 5, 2012, http://www.theatlantic.com/business/archive/2012/11/should-science-majors-pay-less-for-college-than-art-majors/264417/.

or social science education and gainful employment. Some policymakers are taking the issue one step further, discouraging students from pursuing one of these degrees. One example occurred during the 2013 Florida legislative session, when elected members debated the education committee's proposal to reduce tuition rates at state schools for students entering any of the STEM (science, technology, engineering, or math) majors. Florida Governor Rick Scott supported the policy, and was quoted in March 2013 saying, "You know, we don't need a lot more anthropologists in the state. It's a great degree if people want to get it, but we don't need them here."[3] So, at a time when the humanities continue to be under attack and STEM degrees are heralded as the only avenue that will land jobs for students, it is important to make a case for the relevance of history in environmental lawsuits and policymaking. For not only is knowledge of history significant, but also the skills needed to practice the discipline are more valuable than the public widely recognizes.

Historical research for litigation requires the same deployment of our discipline's basic skills as any academic research project, even though our scope often has narrower parameters. Lawyers ask their experts to educate the judge (only rarely a jury) on the genesis of a law or policy whose modern impact is hard to understand. They do that through oral and written testimony, and their clients expect them to educate the judge on *why* something happened the way that it did and not simply supply facts; a historian's explanation for the unfolding of certain events is critical for the lawyer to get the expert's testimony admitted. Historians are qualified to offer opinions on an unending list of historical topics, ranging from land surveying techniques to business or industrial development, to historic labor practices. For a historian, educating a judge on the historical problems a particular law aimed to overcome or how a policy came to be enacted is akin to educating a class of students, just as arguing a thesis or opinion in court is akin to academic writing. Both are important facets of historical legal work. Research skills and the ability to analytically situate your findings in a larger body of scholarship—in other words, the basics of all graduate programs—are necessary to succeed in this field.

In many disputes over natural resources, the lawyers are dealing with laws passed more than one hundred years ago. Usually, Congress wrote the laws to facilitate certain policy aims that are, in 2014, obsolete at best but which nonetheless resulted in the entrenchment of certain resource uses over time. Sometimes, users of a resource, such as miners or groups of recreationalists, deem their entrenched use worthy of legal defense due to a clear financial value, although sometimes resource users will initiate litigation based on principle alone and a deep seated belief in the value or inherent worth of a particular resource use. In other cases, the laws leading to the legal action are relatively new (like the Comprehensive Environmental Response, Compensation, and Liability Act—CERCLA—or the Clean Water Act), but their

3. *Independent Florida Alligator*, March 25, 2013, http://www.alligator.org/blogs/monday/gator_aider/article_27a54856-9511-11e2-bd84-001a4bcf887a.html.

implementation requires the reconstruction of history dating far beyond the law's passage. Sometimes the laws work in favor of the client; sometimes they do not. Either way, the attorneys are in the precarious situation of trying to argue a case based on an unknown set of facts covering one-hundred-plus years of on-the-ground development and nary a clue on what it all means. I have found that many lawyers are frustrated historians inside, and they therefore make excellent partners in the hunt for facts. However, the lawyer's job of advocating for their client differs significantly from the role of an expert. The expert historian is hired to find the "truth" and to ensure that the legal team faces no surprises from the opposing side. Historians, being experts at reading the past, know where to find documentation, artifacts, and even oral histories that can assist in laying out the elusive data in a given case. We have the training and experience to reconstruct decades of land, law, and business history and explain the meaning of the given situation in order to help the attorneys properly represent their clients.

Generally speaking, attorneys long have recognized the value that historians bring to natural resource litigation and have found that their skills are useful on a variety of case types. However, although there are several areas of environmental law particularly suited for historians, each case is not necessarily suited to a long historical narrative, and each attorney's unique approach to a case can also shape the type of deliverable a historian produces. Over the past eighteen years, I have worked on disputes that involve multiple natural resource issues. The first area consists of cleanup cases. Across the nation, many highly polluted sites are somewhere in the lengthy process of being cleaned up and/or regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly known as Superfund), Resource Conservation and Recovery Act, or the Toxic Substance Control Act. The lawyers who represent corporations (usually past users of the site) or citizen groups (affected by pollution at the site) know that hiring a historian will help them reconstruct a site's complex history, which may include detailed research on land use, technological evolution, and business and corporate history.

The second area of natural resource law falls under the rather gargantuan topic of water. Disputes over water—no matter the specifics—beg for historical research. These legal tangles can stem from periodic resource shortages (brought on by drought or other factors) that cause parties to sue each other over water deliveries, or from efforts to comply with the Clean Water Act. I have conducted research for clients involved in water-related litigation on subjects as wide-ranging as private irrigation efforts pre-dating the formation of the Bureau of Reclamation, Spanish and Mexican water use and law (in former territories where those nations ruled), and the nature of a particular stream or watershed in its pre-contact, pre-irrigation state. Finally, a relatively new area for historians is in road law, in which private citizens, county and state governments, and federal agencies contest continued public access to certain remote areas. In these cases, historical research involves many of the same broad themes—when and how the land (wagon road or trail) in question

was used, the technology of road construction tools, and the physical means of transportation. Each area of the law and the particulars of any given case dictate the ultimate deliverable, and unlike academia, there is no single accepted format (such as the book-length manuscript). Instead, an expert report is based on several inputs.

The products or deliverables produced by historians in CERCLA cases can be as dissimilar as the sites themselves, and sometimes the written product submitted to the court does not adequately deploy the historian's full range of skills. As an expert witness I have worked on several CERCLA cases during the past decade, many related to some aspect of the mining industry. The Environmental Protection Agency (EPA) designates sites for Superfund's National Priorities/CERCLA Cleanup List only after completing a preliminary assessment measuring the site's harm to humans and the environment and scoring it on a hazard ranking scale. The cleanup sites come in a variety of shapes and sizes. I have researched the histories of physically small sites with only one or two historic operators as well as much larger places with hundreds of potentially responsible parties. The reports are as varied as the sites. On one project, the client asked for a full narrative about the site's seventy-year history, including government regulation and a characterization of the company's compliance and cooperation (or not) with the various government entities and laws. But on another site, months of research boiled down to an annotated timeline and a brief set of opinions. On yet another, my main job was simply to collect and filter through relevant documents, bringing the most significant ones to the client's attention.

The history of American business during the twentieth century—a critical component of CERCLA cases—is nothing if not a history of mergers, acquisitions, and consolidations.[4] Determining who did what and when—in other words, the reconstruction of that history and the identification of culpable parties—is the most effective work done by the historian. Although the volume of research on any of these projects is an excellent perk of the job, less satisfying is the infrequency with which experts are asked to write a full narrative in CERCLA cases. In my personal experience only about 25% of our Superfund projects result in the type of narrative writing that historians are trained to do. In the rest, attorneys prefer the deposition or trial setting as the place to provide historical context for the completed research.

Usually, the Superfund process is a lengthy one, a fact that subjects the law to a great deal of criticism from government agencies, citizen groups, and corporate entities.[5] The complicated process can baffle the best of minds. An

4. Alfred Chandler's many works on the subject of American business history remain the dominant books and essays on the development of business structures during the Industrial Revolution and the decades that followed. Some of his best articles can be found in *The Essential Alfred Chandler: Essays toward a Historical Theory of Big Business*, edited by Thomas K. McGraw (Boston: Harvard Business School Press, 1998).

5. As just one example, the Portland Harbor Superfund Site, located on stretch of the Willamette River downstream from Portland, Oregon, was placed on the National Priorities List

average citizen might look at a site that contains signage identifying a modern, well-known company—say, Proctor and Gamble—and not understand why the government does not merely fine that company the suitable amount of money to clean up the site.[6] The response might start with the fact that today's operator of the site is sometimes only the latest in a very long line of corporations operating on the site over the course of one hundred or more years, often since the Industrial Revolution.[7] Also, although there is no one-size-fits-all process in a CERCLA proceeding, the law requires that the Environmental Protection Agency first propose several cleanup options before beginning the actual process. The agency must facilitate a period of public comments on the proposals that lasts for several months or even years. The length of the undertaking can stretch over a decade or more and involve many experts, all of who are working within their disciplines to help the EPA or the courts determine who is going to pay for cleanup.

At most Superfund sites, the first phase alone can take many years. The EPA or the potentially responsible parties (PRPs) hire consultants to assess the site and produce the Remedial Investigation/Feasibility Study or RI/FS, a document that examines environmental damage to the identified contamination pathways (air, water, soil) and proposes several potential options, including the cost of doing nothing, to solve the identified problem. Therefore, a great deal of negotiation occurs up front as the PRPs work with the EPA to determine the path forward and choose a solution.

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in 2000. In 2014, the Environmental Protection Agency promised that it would issue a Record of Decision regarding the cleanup method by 2017. "EPA Delays Cleanup for Portland Harbor Superfund Site," *Portland Tribune*, May 13, 2012, http://portlandtribune.com/pt/9-news/220508-81494-epa-delays-cleanup-for-portland-harbor-superfund-site; John M. Barkett, "Orphan Shares," *Natural Resources and Environment* 23, no. 1 (Summer 2008): 46-48; Jeffrey C. Miller, "Cleaning Up Clean Rivers: Dollars Well Spent?," Natural Resources and Environment 24, no. 4 (Spring 2010): 56-58.

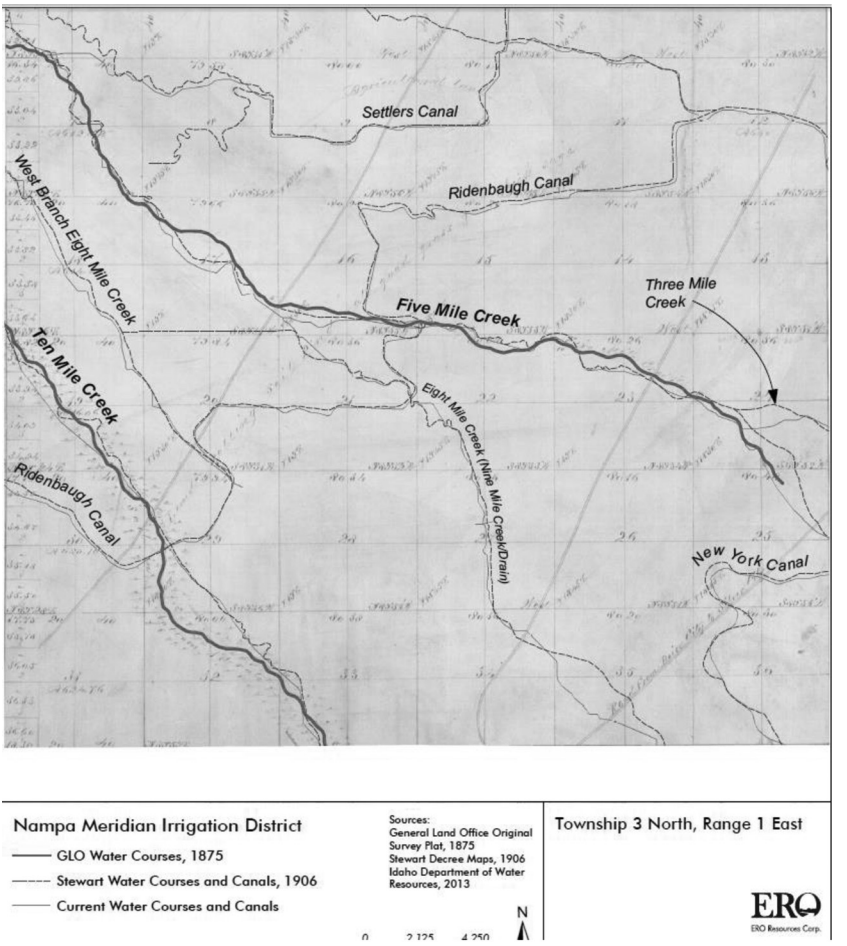
6. I chose this company at random, and do not have any knowledge whatever of this corporation's liabilities or lack thereof for any polluted site in the United States.

7. There is a small body of legal scholarship that discusses the issue of liability in CERCLA litigation. One of the major legal questions with which the courts have struggled revolves around the relationship between parent and subsidiary corporations. The still evolving case law has made it increasingly difficult to "pierce the corporate veil" and hold a parent company responsible for the actions of its subsidiary. See Joel R. Burcat and Craig P. Wilson, "Post-Dissolution Liability of Corporations and Their Shareholders Under CERCLA," *The Business Lawyer* 50, no. 4 (August 1995): 1273-92; and Michael Carter, "Successor Liability Under CERCLA: It's Time to Fully Embrace State Law," *University of Pennsylvania Law Review* 156, no. 3 (January 2008): 767-816. In cases such as those discussed in these articles, understanding the historical context within which mergers or buyouts in a particular industry occurred is critical for a judge's understanding of whether a parent company's ties to its subsidiary represented a departure from business norms at a given moment in time. Stated differently, parent/subsidiary relationships have evolved and changed since the Industrial Revolution when the geographic expansion of markets and the development of improved communication technologies gave rise to companies' ability to communicate across long distances and coordinate their resource extraction with their end-product production. The vertical integration that took place, and about which historian Alfred Chandler wrote extensively, had profound impacts on corporate organization.

However, a historian's involvement usually does not occur until the parties' frequent and typical turn to the courts to solve the question or degree of liability. In CERCLA cases, judges often bifurcate the process, first litigating *who* is liable, and subsequently litigating exactly *how* to divide the costs, based on the outcome of the first phase. It is typically during the first phase of a lawsuit that PRPs research how they might distribute the cleanup costs for any given site to other entities, and as part of that, might hire a historian to examine their own corporate history or that of another potentially responsible party. If the client's own corporate history involves a former subsidiary that is still solvent (or any other similar arrangement), the lawyer may opt to lay out a case which demonstrates the other entity's role in operations at the site, either as an operator, an arranger, a transporter, or an owner, the four categories of "persons" with potential liability identified in the law. On larger sites, such as the Portland Harbor site on the Willamette River near Portland, Oregon, the process can differ somewhat, particularly now as the EPA is trying to reduce the litigiousness over these properties by adopting a new process called allocation, intended limit the use of the courts as much as possible. Regardless of the order of events, however, determining liability is the phase best suited for historians' skills.

In my own experience, a historian's role in water disputes leads to deployment of a narrative format more often than in Superfund cases. Disputes over water have comprised a large part of my practice. I have worked on several cases whose origins lay in some aspect of the implementation of the Clean Water Act (CWA), a 1972 law that has triggered an immense number of lawsuits since its passage. I also have spent a fair amount of time examining the history of ground and surface water uses for river basin adjudications, as well as historic stream navigability for cases related to title disagreements over the beds and banks of rivers, disputes whose resolution depends entirely on the historic navigability of a river at the exact moment of statehood. Sometimes, cases that are really about land ownership but involve land that abuts a water body require a thorough understanding of stream and river behavior over time, and working knowledge of things like avulsion (when a single large event changes a river's course and results in changes to dry land acreage on one side or the other) versus accretion (small changes over time in a river's course that result in changing acreage). Projects related to the CWA and water rights provide good examples of Clio in the courtroom. And, of late, many of these cases involve collaboration with Geographic Information Systems (GIS) experts. Indeed, as technology advances, end products have become more dynamic and interesting in these areas.

The CWA regulates what kind of material and how much of it can be discharged into the "navigable waters of the United States." Everyone, it seems, is subject in some way to its reach, from small farmers to international corporations like Boeing. Congressional intent behind the term "navigable waters" seems like it should be straightforward, but nothing in the legal world ever is. It proved particularly unhelpful that Congress defined the term



Example of a project deliverable being utilized for policy decisions on water quality monitoring. Using GIS, we merged a historic General Land Office survey plat with the results of our historical research. The deliverable juxtaposes natural—albeit ephemeral—stream flows and man-made irrigation streams. (Image courtesy of the Nampa & Meridian Irrigation District.)

"navigable waters" to mean "waters of the United States." Legally interpreting those words has taken many years and trips to court, yet the issue remains unsettled.[8] As federal and state agencies implementing this law trended

8. Several law review articles have addressed the courts' efforts to provide the public with better guidance regarding this language. The scholarship has come in three eras. The first came immediately following the law's passage. See Daniel E. Boxer, "Every Pond and Puddle–Or, How Far Can the Army Corps Stretch the Intent of Congress?," *Natural Resource Lawyer* 9, no. 3 (1976): 467-75. The next group of analysis followed the *United States v. Riverside Bayview Homes, Inc.* 474 U.S. 121 (1985), the net result of which was to extend the Corps's jurisdiction to wetlands that were *adjacent* to navigable waters. See John F. Baughman, "Balancing Commerce, History, and Geography: Defining the Navigable Waters of the United States," *Michigan*

toward broader interpretation of the code's language, they came up against public resistance and ultimately, lawsuits.

In recent years, the United States Supreme Court granted certiorari (judicial review) in *Rapanos v. United States*,[9] a case that asked the court to interpret the "navigable waters" language in order to rule on the Army Corps of Engineers' jurisdiction over permitting fill on certain wetland acreage in Michigan. In 2006 the justices decided in a divided 4-1-4 decision to rein in the agency's broad interpretation of the CWA's "waters of the United States." In trying to determine Congressional meaning over the phrase, the Court had, in prior cases, determined that a "significant nexus" had to be established between the specific water body in question and the navigable water in the traditional sense.[10] In Justice Anthony Kennedy's concurring opinion in *Rapanos* (the "1" vote), he explained that:

> wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable." When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters."[11]

The 2006 *Rapanos* decision, despite its split nature, reshuffled years of legal CWA interpretation and signaled lawyers around the country that their clients may stand a chance against government agencies in court. The result has been more litigation. The most significant case to come to the courts in the wake of *Rapanos* was *Sackett v. United States Environmental Protection Agency* in 2012. In this case, the nine justices came down unanimously on the side of the Sacketts in finding that the federal agency had overreached its bounds on procedure. Although not ruling on the merits of the case, the Court still sent an indisputable message that the government had stepped over the line again with its enforcement of the CWA and that the court system was available to parties who objected to EPA's expansive view of its jurisdiction.[12]

Law Review 90, no. 5 (March 1992): 1028-61. Finally, a third round of scholarship arose in the wake of the 2006 *Rapanos* decision. See Jonathan H. Adler, "Reckoning with *Rapanos*: Revisiting 'Waters of the United States' and the Limits of Federal Wetland Regulation," *Missouri Environmental Law and Policy Review* 14, no. 1 (2006); Kimberly Breedon, "The Reach of *Raich*: Implications for Legislative Amendments and Judicial Interpretations of the Clean Water Act," *University of Cincinatti Law Review* 74 (2006), 1441-76; James Murphy, "Muddying the Waters of the Clean Water Act: *Rapanos v. United States* and the Future of America's Wetlands," *Vermont Law Review* 31 (2007): 355-79; and Taylor Romigh, "The Bright Line of *Rapanos*: Analyzing the Plurality's Two-Part Test," *Fordham Law Review* 75, no. 6 (2007), 3295-3335.

9. *Rapanos v. United States*, 547 U.S. 715 (2006).

10. *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers*, 531 U.S. 159 (2001) and *United States v. Riverside Bayview Homes, Inc.* 474 U.S. 121 (1985)

11. *Rapanos*, 547 U.S. 715 at 23 (2006).

12. *Chantell Sackett et vir v. Environmental Protection Agency*, 132 S. Ct. 1367 (2012).

Since the 2006 *Rapanos* decision, several historical research projects have emerged that related to the CWA in Idaho. The projects required research on landscapes and hydrological systems in their pre-irrigation state. In each case, understanding the pre-development state of the underlying land and watershed assisted the attorneys in their legal strategy vis-à-vis the question of whether the water body in question met the "waters of the United States" test. In one criminal lawsuit,[13] the key historical inquiry centered on whether or not the water body in question historically possessed this "significant nexus" to a traditionally understood navigable body of water and whether the EPA therefore had the right to regulate. The legal significance of this inquiry is that the EPA and Army Corps of Engineers have disclaimed jurisdiction over wetlands that would revert to uplands if irrigation ceased. The defendant in the case was accused of undertaking unpermitted restoration work on land claimed by the Corps to be wetlands and therefore under its (and ultimately the EPA's) jurisdiction. Historical research demonstrated that the land had been virtually dry before the application of irrigation water and therefore would in fact revert to uplands without it. The case settled out of court so the judge never ruled on that point, but settlement negotiations relied at least in part on the reconstructed history of the land. Two civil lawsuits dealt with a similar physical landscape, pitting irrigation districts against municipalities or quasi-municipalities after the latter created policies requiring the discharge of polluted urban storm water into irrigation facilities without express permission from facility owners. Such storm discharge thereby subjected the irrigation companies to potential liability for illegal discharge to waters of the United States under the CWA for the ultimate release of their (now polluted) canal waters to the downstream navigable body of water.[14] The historical inquiry focused on the intent behind the original construction of the facilities and how they have been utilized during the past one hundred plus years.

The final CWA project I'll discuss was undertaken to assist with policy negotiations over water quality standards in man-made facilities that did not exist before irrigation.[15] In this situation, Idaho's Department of Environmental Quality (IDEQ) has embarked on an effort to create total maximum daily load (TMDLs) limitations for several irrigation water delivery conduits referred to in modern vernacular as "creeks." Setting a TMDL for these, however, begs the question as to their natural (pre-development) state, and whether, again, they have a "nexus" to the waters of the United States. However, many of the water bodies for which the IDEQ wants to draft TMDLs

13. The case itself must remain unnamed due to confidentiality requirements.

14. In the legal world, a natural watercourse needs to have a defined bed and banks. The water body in question, which barely existed in a pre-irrigation development world and was better described as merely a slight depression in the land, was found to be man-made, and therefore not subject to these storm water discharges without the express permission of the irrigation company.

15. All water that enters navigable streams must meet water quality standards. However, agencies are now trying to set the standards further upstream, before the confluence with a navigable water body.

were never streams before irrigation. In fact, many of them flow today only because of the return flows and seepage waters that irrigators use, which must find their way back to the main stream. The lawyers in this situation hope that the reconstruction of the land's history will help the agency make good policy decisions that make sense both environmentally as well as economically for the state. The entire situation evokes a question that one of our foremost environmental historians, William Cronon, has posed to his colleagues: are we trying to get back to the wrong nature? In this case, is the product of our restoration truly natural? Or, are our modern cultural values attempting to overlay a bountiful "natural" system on a landscape that was arid and forbidding before irrigation?[16]

As an environmental historian, I have found that all of the CWA projects presented truly remarkable research opportunities that evoke broad scholarly questions, including this question of defining the natural. Each dispute occurred in a desert community whose existing population is dependent entirely on irrigation and whose pre-development landscape would be unrecognizable to modern residents. Reconstruction of the landscape using old maps, irrigation district board minutes, Bureau of Reclamation records, newspapers, photographs, and case files, helps policy makers as well as judges make decisions that take into account the reason things are the way they are today. And in each case, the required deliverable was a narrative of the area's appearance before major population booms and irrigation development, together with the implications of subsequent changes. In each of those cases, the evidence clearly led to an argument that the area under investigation was an arid landscape before development and irrigation systems were put into place. As Mark Fiege stated in his introduction to *Irrigated Eden*: "the creek, then, was part of the very irrigation system that had so fascinated me in the first place; it was a component of hydraulic technology."[17] In these cases, the compilation of evidence lent itself beautifully to a narrative, desired by each of these clients because of their ultimate need to educate the court or agency through stories on the remarkable, if typically unknown or poorly understood, natural history of the area. The end products were good illustrations of the continued need for historians' skills in crafting the past for use in the present.

Historians working in road law have as many opportunities to write a narrative history as they would in water law. Road disputes stemming from R.S. (revised statute) 2477 date to Congressional passage of the 1866 Mining Law on July 26, 1866. When Congress acted that day, its members were quite unaware of the long-term unintended consequences the action would have. It took 110 years before Congress formally recognized that the law was no longer workable in a more modern society and repealed it by passing the

16. William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W.W. Norton & Co., 1995), 69-90.

17. Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999), 5.

Federal Land Policy and Management Act (FLPMA) in 1976.[18] However, the current law grandfathered in certain rights obtained by the 1866 law, in particular, the roads and ditches (which fall under a different part of the statute) that were built pursuant to it. And those grandfathered rights are being litigated all over the West today.

The year 1866 was a difficult one in a difficult decade. The Civil War had just ended, Congress was functioning without representation from the former Confederate states, and tensions remained high. Republicans in Congress were determined to cement northern influence on the still-developing West. Thus, it was important to many sitting members of Congress to provide incentives for quick and easy development in the region. To ensure access to the resources of the West, Congress passed the 1866 Mining Law, permitting the government to issue private patents for mineral lands in the public domain and grant rights-of-way to highways, ditches and canals that were constructed over public lands not already reserved for public uses.[19] The law was stated very simply, and virtually no guidance or other details were provided.

Nevertheless, the 1866 law served its intended purpose, and the West grew rapidly. Today, however, there is far less consensus on what should constitute our nation's policy goals related to natural resources in the West. The differences of opinion are further complicated by mushrooming oversight by government agencies that seem to have different and competing missions. Even the ownership of lands is disputed among the public, with some citizen groups advocating more federal wilderness designation while others believe we should transfer federal lands to the states for management and potential privatization. All the while, federal agencies like the US Forest Service and the Bureau of Land Management struggle with missions that seem to be either in constant flux or are at odds with one another. Indeed, both agencies grapple with such paradoxes as encouraging sustainable forestry and other resource use versus creating recreational opportunities and protecting habitats for endangered species while also facilitating public access.

As these federal agencies have tried to meet myriad competing aims, their solutions have at times included the closure of many travel corridors—roads—some of which have been in use for decades or longer by a significant portion of the citizen population engaged in activities as diverse as hiking, snowmobiling, off-road vehicle riding, and mining. The issuance of road closure announcements often provokes groups of users to join together and oppose the action. If opponents can prove that their road (or ditch) qualifies

18. *Federal Land Policy and Management Act of 1976*, § 706, 90 Stat. at 2793; S. Utah Wilderness Alliance, 425 F.3d at 741.

19. See *An Act Granting the Right of Way to Ditch and Canal Owners over the Public Lands, and for Other Purposes*, Ch. 262, § 8, 14 Stat. 251, 253 (1866) (codified at 43 U.S.C. § 932), repealed by *Federal Land Policy and Management Act of 1976*, Pub. L. No. 94–579 § 706, 90 Stat. 2743, 2793 (codified at 43 U.S.C. §1761–1771)

as an "R.S. 2477 road" under the 1866 law, there is a greater legal chance that the government will be forced to leave the road open in perpetuity or (in the case of R.S. 2339) exempt the ditch owners from some fairly intensive (and expensive) environmental laws for maintenance of their facilities.[20]

Where does an expert historian come in? Lawyers often use historians to prove that a road qualifies under the law. Producing a volume of fairly obscure historical facts and information can be difficult without a historian who is knowledgeable about where to find them. Although the legal standards vary from state to state, there are some standard facts that opponents need to prove in a road case. First, it is imperative to determine exactly when the land in question was withdrawn from the public domain. If the road or ditch in question is in a national forest, then one must establish when the forest was proposed, and then discern whether the road or ditch was present when the withdrawal occurred. If the ditch or road is on private land today and not a federal reserve, the historian must determine when a homestead or other land patent was applied for and perfected, and then research, again, whether the road or ditch was there first. Additionally, a historian will also be looking for a historical pattern of use by the public, since roads or trails that merely provided access to a piece of private property do not meet the legal burden of the statute.

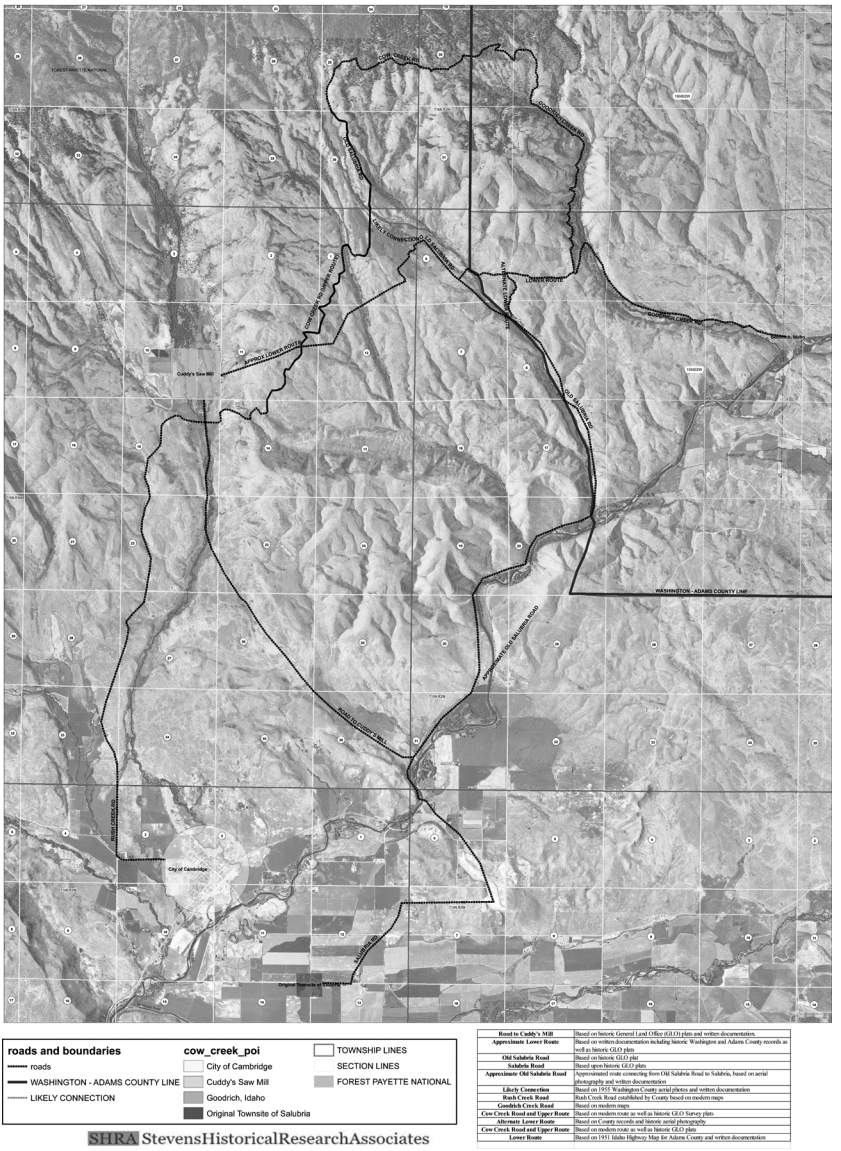
Road cases also lend themselves to written historical narrative. Setting the context for the court as to the road's history usually means describing travel routes through an entire region and providing information on the region's overall historical development. A road's history often results in an explanation of regional mining or farming history, or the history of the National Forest system and how trails and roads were utilized. Although there are critical court decisions that set rules on how to interpret R.S. 2477 claims,[21] none of them dispute the importance of a good set of facts to establish the road's history.

Alternative Deliverables

There is another side to the career of a consulting historian: how to make use of the material one gathers in the course of research on a particular case that may not be relevant to the legal issues at hand and the assignment's limited scope. Like academic research, individual cases can involve research into myriad subfields of history. Natural resource litigation research often entails setting out to discover what your subject area—river, factory,

20. It is important to recognize that even if the bar is met and the road or ditch is proved to qualify under the 1866 law, such a decision does not preclude the federal government from regulating its use. The government is merely prevented from closing it.

21. Lisa S. Greenberg, *Standing in the Desert: Prudential Standing in Wilderness Society v. Kane County*, 39 B.C. Envtl. Aff. L. Rev. E. Supp. 41 (2012), http://lawdigitalcommons.bc.edu/ealr/vol39/iss3/4.



R.S. 2477 projects also lend themselves well to digital deployment. Coupled with the written report, this map illustrated road connections through Washington County, Idaho. (Image courtesy of Washington County GIS staff.)

homestead—was like *before:* before development, before urbanization, before irrigation, before pollution. But along the way, a historian is likely to also encounter sources related to Native Americans, federal resource policy, business, gender, or wildlife history, sources that, given the time to write an article or book, could contribute significantly to one of those fields. (The image below is an example of a homestead document filled out by a pioneer woman in Idaho.) Analysis of the vast array of primary sources that are accessed for a given case can place a historian squarely in the midst of multiple historiographical debates. But, because experts usually are asked to answer fairly discrete questions, the intellectually curious among us are left longing for time to further analyze the *other* stuff.

As an example, my own Superfund research experience has related almost exclusively to the mining industry dating from the late nineteenth century. As such, the research topics have been what a mining historian might expect: changes in ore processing technology, disposal practices, and transportation and other operational details of a given industry, whether precious metals or minerals. But on each project, in addition to the clear environmental facts to be examined, I have encountered other interesting historical documents as well that were related to scholarship or ideas not included in the scope of work. Although a client might specifically have asked for research on the relationship of their company to the site's predecessors as well as the operational changes over time, it is likely that I may also have found an incredible amount of material related to subjects more likely to be of interest to the general public or other historians.

Such extraneous material can provide insight for the community of historians who might be researching other topics. I'll provide two examples. First, a 1972 cartoon called Mark Steel Fights Pollution (see image next page), demonstrates that industry's defensive efforts to portray themselves as fighting—not causing—pollution of the nation's air and water. This historical image helps inform the story of the steel industry's response to the rising environmental movement and the passage of several new laws designed to curb air and water pollution. Although the image was interesting for me, it was irrelevant to the research topic for which my client had hired me. However, I used it in social media and blogged about it so that others might see it. We were not the only environmental historians noticing the use of children's images to address the pollution issue at the time. Canadian environmental historian Mark McLaughlin was researching Captain Enviro at the time, and we are awaiting the publication this fall of his article on "Rise of the Eco-Comics!" Another example occurred while researching the history of an old, over twenty-mile long mining ditch in a National Forest that now supplies a small western town with its water supply. At that time, I also found intriguing information in the city's archives about their approach to arming the local militia against the German threat during World War I. The minute books I was reviewing provided rich insight into the cultural sentiment against Germans in small-town America.

(4–274.)

This affidavit can be made only upon applicant's personal knowledge, and from his own personal examination of the land, and must be subscribed and sworn to before the Register and Receiver of the land district in which the land is situated, or before the Judge or Clerk of a court of record of the county in which the lands are situated.

DESERT-LAND ACT OF MARCH 3, 1877.

DECLARATION OF APPLICANT.

No. 688

United States Land Office, Boise City Idaho

March 31st, 1890

I, Mary J. Curtis, of (town or city) Boise City

County of Ada, and ~~State (or~~ Territory) of Idaho

being duly sworn, on oath depose and declare: That I am a native-born ~~(or naturalized)~~ citizen (~~or have declared my intention to become a citizen~~) of the United States, of the age of ..... years, and a resident of said Boise City, and by occupation a ....; that my post-office address is Boise City, Idaho; that I intend to reclaim a tract of desert land not exceeding one section, or 640 acres, by conducting water upon the same, within three years from date of entry, under the provisions of the act of Congress approved March 3, 1877, entitled "An act to provide for the sale of desert lands in certain States and Territories." The land which I intend to reclaim is desert land and is situated in Ada county, in the Boise City land district, and is described as follows, to wit: The S W 1/4 of N E 1/4 and ~~[illegible]~~ S 1/2

of Section No. 11, Township No. 3 North, Range No. 1 West, containing 360 acres. Excepting from said description 24 acres right of way upon said canal belonging to the Idaho Central Railway Company. I further depose and declare that I have made no other declaration for desert lands nor any other entry under the provisions of said act; that I am not the assignee of any desert land claim; that I have made an actual personal examination of each and every legal subdivision of the land above described; that said land borders on (state what stream or body of water and describe the same) no stream or body of water whatever

and that there is through or upon said land (name and describe all water courses, springs, or other bodies of water) no water courses, springs or other bodies of water

that said land is not naturally irrigated or watered, nor overflowed at any season of the year by the foregoing or any natural stream, spring, or other body of water; that I expect to obtain my water supply to irrigate said land from what is known as the Ridenbaugh Ditch

that the character of the soil is sage brush sandy adobe soil

that said land will not, without artificial irrigation, produce an agricultural crop of any kind in amount reasonably remunerative, and that it will not, when unfed by grazing animals, produce native grasses sufficient in quantity to make an ordinary crop of hay in usual seasons; that there are no trees growing on said land, but that the same is devoid of timber; said land does not contain moisture sufficient to produce a natural growth of trees; that the same is essentially dry and arid land, wholly unfit for cultivation without artificial irrigation; that said land can not be successfully cultivated without being reclaimed by conducting water thereon; that said land has hitherto been unappropriated, unoccupied, and unsettled because it has been impossible to cultivate it successfully on account of its dry and arid condition; that it is a fact well known, patent, and notorious that the same will not, in its natural

[OVER.]

Idaho irrigation history research led to Mary Curtis's 1890 homestead application and her effort to prove up her acreage. (Patent image courtesy of the National Archives and Records Administration, Washington DC, Record Group 49.)

Mark Steel—the pollution fighting (not causing) comic book hero. (Image courtesy of University of Nebraska Libraries Image and Multimedia Collections, Educational Comics Collection.)

Thus, even in cases where our best writing skills are put to use in litigation, we still encounter primary sources that do not fit into our narrowly constructed legal inquiry but which would allow the development of a relevant and dynamic story that is highly relevant to larger historiographical questions.

A full-time academic might change course and decide that the story about the local militia was more interesting and significant for the discipline. By writing about it, the academic historian could contribute more to the historiography of homeland response to international hostilities. As a consultant, however, I am constrained by several factors. First, clients hire me to answer well-defined questions for a specific purpose, and these extraneous sources (while fascinating to me and likely the discipline) really do not fit the bill. Second, I do not own the research; the client does. Third, like everyone, I am limited by time (my firm bills in six-minute increments, so one can imagine the opportunity cost in dollars of choosing to write an article or book when there is billable work to do instead).

On the other hand, a historian who loves research and writing and has a plethora of sources but certain limitations has more options for collaboration than ever before. Public history attracted me in part because of the opportunity to bring history to people who might not otherwise pay attention to it, and definitely to people who will never read a historiographical article or a monograph on water disputes in the West or mining or smelting technology in the zinc industry. What I have realized in the diverse work that I have done is that even though my process and even sometimes my deliverables are so very similar to academic work, the sheer volume of my archival research provides me more occasions than the academic historian to disseminate information to the public. As historian blogger Claire Potter (@TenuredRadical) recently wrote:

> as academics, if we want to publish more, we might want to not be so damned careful about needing to be right all the time and we might want to try writing about topics that people other than academics are amused by . . . We need to encourage and emphasize short form writing, and admit that it is an easier and more practical way to keep publishing during the semester than slogging away on a historiographical article on the weekends that about 100 people will read.[22]

Potter's blog post, "Re-Thinking the Place of Writing in Our Lives," and her many other posts, should be inspiring to consultants and other public historians. Being a "natural resource" litigation expert means encounters with exceptionally cool things, opportunities for useful analysis and sharing of volumes of interesting archival material, and approaching their use in a way other than the long form.

Taking advantage of new platforms requires a willingness to put yourself out there. As historians we are trained to make arguments about historical events that can be supported by a substantial volume of evidence. But how about flipping that idea on its head? Instead of waiting to accumulate such a volume before making an argument, we should encourage historians to post thought-provoking 140-character tweets with a photo of an archival document

22. Clare Potter, "Re-thinking the Place of Writing in Our Lives," Tenured Radical (blog), January 23, 2014, http://chronicle.com/blognetwork/tenuredradical/2014/01/the-problem-of-writing-and-working-for-a-living/ . . .

that is tagged with one of the several subfield hashtags (#) being tracked by the American Historical Association. Alternatively, a longer Facebook post or a short blog entry are other appropriate and modern ways to make use of the extraneous documents we find.

Making a short statement about a single document or a collection that you encounter can be intimidating, since it seems counter to our formal training. But if one can get past that fear, there are many reasons why new digital technologies are so exciting for historians. First, the rapidity with which a new source or set of sources can be publicized and debated is dizzying. There are many public and academic historians out there who went to graduate school at least in part because of the intellectual debates in which they were invited to participate. New technologies allow us to continue having those conversations a hundred times over. A heretofore unseen document from a collection in Los Angeles that unveils some new information about a one of the city's failed urban park plans may give planning or urban historians new insight about our most sprawling city. And if you tag it right (#urbanhist, #envhist), you can have that debate almost instantaneously. Such a post can also alert historians to archival collections they may not have previously known. Second, the digital history world encourages teamwork in a profession that is prone to solitude. I personally cannot count the number of times I have been in an archive (alone) and found a document that made me laugh out loud or startled me by its raw insight to a difficult historical situation. Digital technology lets us share them with other historians. Although it is taking time, more and more trained academics are slowing crawling their way toward these technologies and recognizing their virtues.

Of course there are pitfalls to the newness of it all. Without a press or editor filter, the public could interpret a document or photograph as all the proof it needs to draw some ill-advised (and ultimately unsupportable) claims. But, I know that personally, I would rather have the public talking about history and debating these things than to continue to leave our process entirely to the somewhat outdated university press model (and I say this with all due respect to the press and its editors that publish this journal and which has my book under contract, which I very much still want to publish). It is a useful model but it is no longer the only one available, and consulting and other public historians who spend a great deal of time with primary sources have an obligation to bring the most useful documents to light, using the available technologies to encourage the kind of academic debates we all value. With tenured professors having less and less time to devote to the long form, I join the chorus of historians asking for our profession—institutions of higher learning as well as our journals—to consider rewarding those among us who are choosing to explore these new options.

Eventually, the work that natural resource consultants undertake will make an interesting archive of material that future historians could use to explore how attorneys approached environmental cases during a given era. But rather than awaiting a historian who has time to write a book about it, perhaps a series

of correspondence between a historian and her client will be all that is needed to spark a digital debate that changes history.

JENNIFER STEVENS is the founder and principal of Stevens Historical Research Associates (SHRA) in Boise, Idaho. Her firm offers public history services across the United States on issues related to the natural and built environments, providing litigation research and testimony for both public and private clients. She also teaches courses in Urban and Environmental History in the History Department and Environmental Studies program at Boise State University and is active on the Consultants Committee for the National Council on Public History.