



The System of the River

Francis Newlands and the Improbable
Quest to Irrigate the West

by WILLIAM LILLEY III



STANFORD UNIVERSITY
THE BILL LANE CENTER
FOR THE AMERICAN WEST

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A young Francis G. Newlands poses for Carelton Watkins. (ca. 1874)

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FOREWORD

The Bill Lane Center is pleased to publish “‘The System of the River:’ Francis Newlands and the Improbable Quest to Irrigate the West.” This work is a labor of love by my good friend and colleague, William Lilley III. A founding member of the Center’s Advisory Council, Bill originally drafted portions of this work for his doctoral dissertation at Yale in the 1960s, where he was classmates with Lane Center director emeritus, David Kennedy.

This biography of Francis G. Newlands (1848–1917), Congressman and Senator from Nevada, remains deeply relevant to the Center’s work on issues of environmental governance and public land management in the American West. Newlands, as Lilley notes, moved in the same circles as many major figures of the 19th-century West, including Newlands’ photographer Carleton Watkins and Newlands’s father-in-law William Sharon.

Lilley details Newlands’s career, up to and including his greatest accomplishment: drafting and passing the National Reclamation Act (known as the Newlands Act). This law, which Lilley describes as “behind only the Homestead Act in its significance to the settling of the West,” was unique in its regional approach to water management in the West. Newlands’ plan transferred control of all aspects of irrigation in the West to the federal government, allowing for comprehensive regional irrigation plans that transcended the powers of the individual states. The need for regional management of water remains one of the most salient issues in the West, and one that the Center continues to study with enthusiasm.

I am grateful for Bill's tireless work to help students, academics, and members of the public understand the historical roots of regional water management in the West during a rare moment in time when the federal government envisioned the West as one region.

BRUCE E. CAIN, PHD

*Spence and Cleone Eccles Family Director of the
Stanford Bill Lane Center for the American West*

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ACKNOWLEDGEMENTS

This biography of Francis G. Newlands comes from a small world of people and places. The people are John Morton Blum, David M. Kennedy, Zev Karlin-Neumann and myself. The places are New Haven and Palo Alto. David Kennedy and I became friends in New Haven in 1962, when we were getting our PhDs in the Yale American Studies program. That was 57 years ago. John Blum was our professor, mentor, and eventually, friend. He directed our dissertations. John died in 2011, but his friendship played an important role in our lives.

John suggested in 1962 that I write my dissertation on Francis Newlands, who in 1902 had authored the first major law of the Progressive Era, the National Reclamation Act. Both John and I were easterners, and I had never heard much about Newlands. John said that Newlands was all about water and that water was a big Progressive Era issue. “It will get bigger,” John said. He was right then, about water and about writing about Newlands.

I wrote a tidy dissertation on *The Early Career of Francis Newlands, 1848–1898*. The dissertation cut off four years before he drafted his Reclamation Act. The short circuit is entirely my fault, as I let the Newlands manuscripts capture me. Newlands’ papers were voluminous and beautifully archived. They contained unique, original materials (especially maps and pamphlets) that later were transferred to Yale’s Beinecke Rare Book Library. The papers also were substantively rich. Frank Newlands had lived quite a life as a young man. You could say correctly that he was the proverbial right man

in the right place at the right time. His papers read like an adventure book on the Gilded Age. When I emerged from writing about the Gilded Age, I chose to end my dissertation. Newlands' life was some story even before he became politically important. The historical year was 1898 and Newlands was 50. It was 1965 in New Haven for Bill Lilley.

I left Newlands for a while, but David Kennedy and I stayed close. He left New Haven for Stanford where he has long taught American history. He also started the Bill Lane Center for the American West at Stanford in 2005. David grew it from an infant to the big boy it is now, and I serve happily on its advisory council.

One day, David asked me if I would consider publishing my Newlands dissertation on the Lane Center website. David set several conditions. David wanted the dissertation thoroughly rewritten and researched, and he wanted Newlands' life brought up to 1902 and the Newlands Act. Just as John Blum had said, David was saying that Newlands was about water.

David offered me a lifeline in making these changes. He had a brilliant, former Stanford student who could help me, but I had to persuade him to help. "It is up to the two of you to work out an arrangement. His name is Zev Karlin-Neumann, and he lives near you in Washington," David said. Zev proved to be the helper of the century. Zev is good at merging old, typewritten documents into new, digital formats, and he is not fazed by opaque original documents from other times, places, and formats. He is a genius as a conceptualizer. I have a fond hope that someday I might be able to help him as he helped me.

Newlands II, as I call this study, is very different from and far better than Newlands I (the dissertation). The advantages of a digital world are immense. For instance, much of the political conflict in this study revolves around whether the separate states should control the interstate flow of river waters. In Newlands I, I could not make proper use of the famous Geological Survey map of "The Yellowstone Basin," drawn by

Frederick Newell for John Wesley Powell in 1890. The map shows that the Yellowstone water basin was split equally between Montana and Wyoming. In the original paper version of “Yellowstone,” the boundary line was there but not emboldened. In *Newlands II*, the reader can click on the indistinct boundary line and make it stand out in color. The lesson becomes obvious—one river feeds two states.

The mistakes in this book are mine alone. I thank Kennedy and Karlin-Neumann for trying to prevent them. I also cite Donald Pisani and William Rowley, two *Newlands* scholars in their own rights, for doing their best to help someone who had left *Newlands* to them for 53 years.

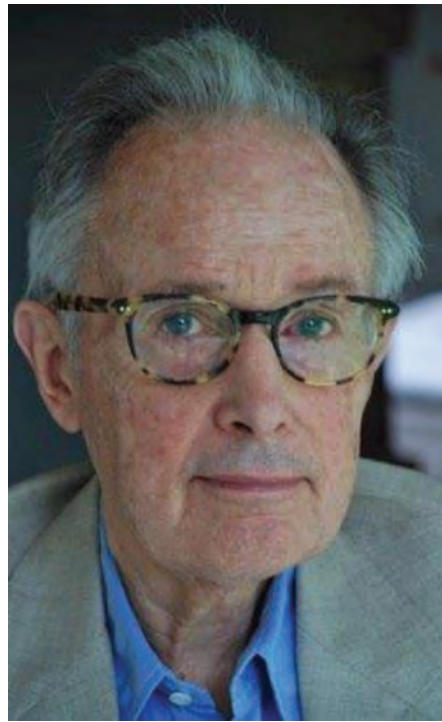
Most important, I want to thank my lovely wife Eve for tolerating what became the digital coming of Francis *Newlands*. We have had a long and happy marriage, and she never let Frank *Newlands* disrupt it.

ABOUT THE AUTHOR

William Lilley III had an academic career at Yale in the 1960s, where he taught American History for eight years. He wrote his dissertation on *The Early Career of Francis G. Newlands, 1848–1898* (1965). His interests centered on the political and economic development of the American West in the 19th century. He co-authored an article analyzing why so many of the irrigation ventures in the 19th century West were failures.

Lilley had careers separate from academics. He first worked in the federal government as deputy assistant secretary for the Department of Housing & Urban Development, then as the director of the Council on Wage and Price Stability, and lastly as the director of the Budget Committee of the House of Representatives.

Lilley also worked in the private sector. He started working for CBS Inc., the media company in New York, where he was the senior vice president for corporate affairs for eight years. Lilley left CBS to co-found and manage iMap Data Inc. for a number of years before selling the company. iMap-Data was one of the several companies in the 1990s that built extensive libraries of databases which could be visualized on a web-based platform.



Clients were able to merge their own data with iMapData's data and detect anomalies in their performance. Lilley made the platform available to the Bill Lane Center to analyze water, rural poverty and institutional change, all in the West.

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What the Past Teaches Us About Managing Water Scarcity

Q&A WITH WILLIAM LILLEY

Here's something many people don't know: When it comes to diminishing water supplies in the American West, we've been down this road before—specifically, in the late 19th century when the region's exploding population combined with severe drought conditions called for a long-term solution. We got one, thanks to the ingenuity and perseverance of an unheralded hero named Francis Newlands. Here, author William Lilley III talks about how Newlands' vision for water management forever changed the West.

You first studied Newlands while writing your dissertation, “The System of the River,” at Yale in the 1960s. What inspired you to update that work now?

Today's issues around water are the same as they were during Newlands' time. If anything, they're more urgent now. It's important that we recognize that. Media reporting on today's water scarcity and water mismanagement has the flavor of “discovering a new crisis.” The same goes for all of the news stories about how the precipitation from last winter's rains and snowfalls were not captured and stored to the extent they need to be to ensure sufficient water supplies in the future. These are both old problems.

Newlands' landmark achievement was the Reclamation Act of 1902, whose passage the *Washington Post* attributed to "the unique campaign of Mr. Newlands." Why was it so significant then and why does it matter now?

The road to the Reclamation Act showed how hard it can be to reach political consensus, especially when it comes to water management. In 1900, the public knew that the huge arid West, especially California, could not survive bout after bout of drought. Politicians and businessmen in the West clamored for irrigation, but every proposal, such as ceding public lands back to state management, hit a dead end. Congress and the state legislatures were stuck in the same place for decades. You can see parallels in today's political climate.

The Reclamation Act's passage was significant for several reasons. One, it enabled the vast irrigation system that now waters the western United States. It also represented a significant transfer of power from the states to the federal government. Finally, you could say that Newlands' savviness, persistence and influence in getting the law passed marked the arrival of the policy expert as a major player in Washington.

How, exactly, did Newlands pull it off?

He was able to jumpstart progress precisely because he was an outsider to the Western delegation and so were his allies. He showed that breakthroughs can happen when outsiders get involved.

Newlands' personal style also had a lot to do with it. He had the gumption for it. He showed patience, perseverance, an ability to cajole, and a willingness to listen. He never involved himself in a water issue until he had been tutored by the leading experts and felt he understood all of the angles.

Remember, this was the early 1900s. Newlands' professorial-style lobbying, combined with input from outside experts, was new in Washington. He would spend endless hours with key politicians,

patiently briefing them on issues just as experts had taught him. When he was marshaling support for the Reclamation Act, he would host elaborate “irrigation dinners” at his home so fellow lawmakers could hear directly from outside experts. In this regard, he helped usher in the modern era of the outside policy expert as a major power player in national affairs.

PROLOGUE — *“The System of the River”*

The Gilded Age West was good to Frank Newlands. It made him rich and influential, even famous. At the tender age of 21, Newlands arrived in San Francisco, penniless and jobless. Glamorous and dangerous, the city was wide open for a young striver. Just four short years after his arrival, Newlands was general counsel of the Bank of California, general counsel of the Spring Valley Water Works, and—crucially for his future—the son-in-law of William Sharon, the richest man in the city.

Working closely with his father-in-law, especially on water projects, Newlands quickly learned that success required thinking on a large scale and relying on technical experts. He managed businesses that were regional in scope and required deep engineering expertise. Newlands’ business career was a long tutelage in managing water—how to acquire it, how to conserve it, and how to make money from it. It was also a tutorial in overcoming setbacks both personal and professional, as Newlands found himself exiled to dreary Nevada, only to use the state as a springboard to national politics.

By the end of the century, Newlands was in Congress and at the vanguard of the Progressive Era. His long love affair with western water positioned him perfectly to almost single-handedly bring into being the National Reclamation Act. In turn, that landmark law marked the beginning of a long national effort to conserve, dam, and harness the big interstate rivers of the American West.

This study details how that happened. It tells the improbable story of an obscure Nevada Congressman who drafted the bill and shepherded it into law. It's a story about an Eastern-educated western businessman who tumbled into alkali-ridden western politics, all the while promising his family that he had no intentions of becoming "a Nevada politician."

It's a story of political perseverance, strange bedfellows, and impeccable timing. By standard political rules, Newlands had no business writing and passing what became the National Reclamation Act. He was an outsider to the western Congressional delegation. He had no interest in these states' territorial pasts and disdained western political beliefs in states' rights and the sanctity of state borders. He hardly even lived in Washington, D.C. Yet over the course of two crucial years, Frank Newlands educated, cajoled, and maneuvered to passage one of the most significant laws ever to shape the American West. He dreamed of an approach to irrigation that mirrored "the system of the river." And he achieved it.

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Like the roaring rivers he spent a lifetime seeking to tame, Newlands' career was a winding one. It boiled with frenetic forward motion, transcending arbitrary boundaries of place and profession. There were moments when his power slowed to a trickle. At other points, it burst forth unrestrained. By the time his career had run its course, the West would be changed forever.

San Francisco

(1848-1885)

CHAPTER 1 — *Youth and Yale*

FRANK NEWLANDS WAS BORN IN 1848. He was poor most of his childhood. His mother doted on Frank, one of four children, and schooled him in manners and style. Under her tutelage, Frank grew into a highly polished young man. He appreciated learning, enjoyed the arts, and knew how to sit a horse.

For all his polish, Newlands' early life was repeatedly disrupted and precarious. Newlands was born in Natchez, Mississippi, but moved soon to Quincy, Illinois, then the second-biggest city in the state. His father James was a gifted surgeon, himself the son of a gifted surgeon, both graduates of the esteemed Edinburgh School of Medicine. But James was also a hopeless alcoholic, whose binge drinking eventually killed him. His widowed mother Jessie, a Scot like his father, took him to Quincy, where she remarried to Ebenezer Moore, Quincy's mayor and banker. For five years, Newlands lived in a large house with a library and a grand piano. Then, in 1857, a worldwide financial panic hit, sending shockwaves through the region. Devastated by the sudden decline in traffic, the Illinois Central Railroad folded. So did many of the Quincy bankers who had financed Illinois' railroad expansion. Moore lost everything.

Luckily for Moore and his family, a powerful friend from Quincy stepped in to help. Orville Browning, the city's most influential Republican politician and soon-to-be United States Senator, found Moore a Treasury

Department job in Washington. The young Newlands moved once again, this time to the nation's bustling capital, where Jessie employed a tutor to prepare Frank for Yale.

In 1863, at the precocious age of 16, Newlands entered Yale. He was an indifferent student, a prize-winning orator, and a first-class friend to his classmates. While financial difficulties compelled him to withdraw during his junior year, Yale was to make all the difference in Newlands' career. Aided once again by Browning, Newlands secured a day-time postal job. At night he attended Columbian Law School, now George Washington University, from which he graduated in 1869.

Within a year, Newlands was gone for San Francisco. His years in New Haven set him on his new path. Newlands borrowed money from wealthy classmates and collected fulsome letters of reference. He landed his first job in a law firm of a Yale alumnus. Before long, Francis Newlands—son of a departed drunk, stepson of a banker gone bust—was on his way to a fortune.¹

¹ William Lilley III, *Early Career of Francis G. Newlands, 1848–1898* (Yale PhD Dissertation, 1965), pp. 1-20; hereafter, Lilley, "Early Career." The study relied heavily on Newlands' own papers, which are available at Yale MSS under Newlands Mss. The Newlands papers also include those of his mother and his aunt, titled "Newlands-Barland mss" and "Newlands-Johnston mss." Also used were the relevant Yale University mss: "Class of 1867," Yale Alumni Association, Yale MSS. Yale's archives maintain all grade transcripts, including those for courses given during the Civil War.

CHAPTER 2 — Moving With “All the Elite”

TWENTY-SIX YEARS OLD and about to marry a local heiress, Frank Newlands sat for a photo shoot with Carleton Watkins, a talented photographer whose iconic images of Yosemite had caused a sensation back East. Sitting in his San Francisco studio, Watkins captured a handsome, patrician-looking young man with reddish-blond curly hair worn in the carefully-unkempt style of Lord Byron. Gazing off into the distance, Newlands appears well-coiffed, calm, and confident.

And why shouldn't he have been? San Francisco in the 1870s was the best of cities for Newlands. He made money fast and became a social icon even faster. “He moved at a hurried pace...seeming to jam five minutes into one,” noted the *San Francisco Chronicle*.¹

Newlands was not the only one on a tear. From 1860 to 1870, San Francisco's population nearly



Figure 2.1. Photographed by Carleton Watkins in San Francisco in 1874, a patrician-looking Frank Newlands appears well-coiffed, calm, and confident. (Courtesy of Yale University Libraries)

¹ *San Francisco Chronicle*, November 20, 1874 “Sharon-Newlands Wedding” edition. Hereafter Chronicle, “Wedding.”

tripled, growing from 56,802 to 149,473 souls. And what a population it was. James Bryce, writing in his magisterial *American Commonwealth*, declared that there was no city like it in the United States. So remarkably “turbulent” and “unstable” was its population that Bryce devoted a whole chapter to its foibles and crotchets. Bryce had never seen such a polyglot city, where even the children of Australian convicts were accepted as upstanding citizens. Bryce also noted the towering presence of the very rich, whose fortunes fed the city’s already dizzying instability.

A handful of speculators, industrialists, and financiers dominated the city.



Figure 2.2. A portrait of San Francisco in 1870 from atop Russian Hill, later called Nob Hill. Sweeping down steep Vallejo Street past the busy commercial harbor and into the Bay, residential and commercial buildings are jammed into every space. The city’s population grew 166% since 1860, leading James Bryce to write wonderingly of a “turbulent” and “unstable” city. (Courtesy of the Society of California Pioneers)

Atop the social pyramid sat the men who had built the Central Pacific Railroad—the so-called “Big Four” of Collis Huntington, Charles Crocker, Leland Stanford and Mark Hopkins. While the ranks of the rich chiefly comprised those who had speculated successfully in mining stocks, the speculative fever spread to all classes. A favorite pastime in the city was to go to the San Francisco Mining Exchange and watch what the Chicago Tribune called “the West’s most flamboyant financial institution.”²

Bryce also noted that the city’s upper crust were more than a little odd.

Many had gotten rich so fast—and gotten poor just as fast—that they remained vulgar and insecure. So peculiar were these monied San Franciscans that their ostentatious houses and lavish lifestyles became fodder for shelves of books, equally derisive and admiring. Into this orgy of opulence Newlands leaped headlong.³

the city’s upper crust were more than a little odd. Many had gotten rich so fast—and gotten poor just as fast—that they remained vulgar and insecure.

Needing some hands-on experience with California law, Newlands sought out his initial “clients” in the only place he could—the city’s notorious police court. Mark Twain called the court “the black hole of San Francisco,” deriding Newlands’ clients as “drunken filthy

² James Bryce, *American Commonwealth*, V2, pp 1071-1074. Bryce’s entire chapter on San Francisco, Denis Kearney and the new state constitution of 1879 is pp. 1066-1086. Footnotes refer to the edition of Bryce published in two volumes by the Liberty Fund in Indianapolis in 1995. Bryce’s chapter on California and San Francisco differentiates the state and city from the eastern United States. Bryce wrote the San Francisco chapter in the early 1880s.

³ The most detailed of the many books about the rich were written by the prolific Oscar Lewis who became a one-man industry writing about the eccentricities of San Francisco’s rich. Lewis’s signature book was *The Big Four* (Comstock NV, 1938) about the founders of the Central Pacific RR. *Chicago Tribune*, July 15, 1992 has a good obituary on Lewis and reviews his many books. The Lewis books include documents relevant to the subject matter, such as depositions and testimony.

loafers, thieves, prostitutes, china chicken stealers.”⁴ Newlands did well for his “chicken stealers,” well enough that the municipal court judges began sending real clients his way. The fees were petty, and so were the cases. Newlands worked out of his hotel room. But he was making money.

John Harmon, a respected San Francisco lawyer and fellow Yale alumnus, soon brought Newlands into his practice. Harmon’s firm was a mid-rank firm with a decent library, and it was more than enough to launch Newlands into a new level of influence. Newlands’ personal papers, archived at Yale, tell the story of a young man on a rapid rise. His \$2,000 income in 1871 grew fivefold by 1874. Newlands moved his mother to an apartment in Oakland; like their old Quincy home, it came with a grand piano. He bought a better horse each year, and upgraded the stable address at the same rate.

He was the richest man in the city—and the fiercest.

He started sporting tailored clothes and drank French wine. He was a founding member of the city’s Bohemian Club, a somewhat avant-garde club, dedicated to the city’s artists and open only at night. On one such evening, Newlands hosted club members for a talk on the British romantic poet Thomas Hood, modestly famous for his “Bridge of Sighs.”⁵ *“In she plunged boldly/no matter how coldly/The rough river ran...”*

There was romance aplenty as Newlands moved into the city’s social world. San Francisco was a party town, especially for a young bachelor. The city’s glitterati clamored for their daughters to meet the right men. Dinner parties were an almost nightly event during the week, and weekend picnics, typically involving horseback riding, were just as frequent. Newlands juggled two to three invitations a week, and was a popular choice for the Saturday parties. Before his first year was done, he had broken into the highest levels of the city’s society. He moved, his mother boasted, with “all the elite.”⁶

4 Mark Twain’s *San Francisco*, ed. Bernard Taper (Santa Clara University, 2002) pp. 171-173. The quote is from Mark Twain’s column carried in *Virginia City’s Territorial Enterprise*, December 29, 1865.

5 Receipted bills, 1871-1873, Newlands-Johnston mss.

6 Jessie Newlands to James Newlands, June 1, 1871 in Newlands-Johnston mss.



Figure 2.3. An 1874 Taber photo of William Sharon, which served as the official photo for his daughter's wedding (Oct 1874) and his election by the Nevada state legislature to the United States Senate (Jan 1875). Fittingly, Sharon is in full banker regalia, with his trademark black hat and black suit. He is slight but grim, befitting the tycoon of San Francisco. Newlands, his son-in-law, wrote that Sharon's "personality was too pronounced to make him very popular." (Courtesy of UC Berkeley Libraries)

In 1871, Newlands was dating the daughter of Judge E.B. Crocker, the general counsel of the Central Pacific and brother of the Big Four's Charles Crocker. Fortune hunting was no stranger to San Francisco, and suitors usually were vetted by the daughters' fathers—a commonplace precaution, as Newlands' subsequent father-in-law said publicly. Newlands passed the Crocker vetting.⁷

By the following year, however, Newlands had turned his charms on another woman, Clara Sharon. Clara was beautiful and interested in the arts. She was also very rich. Her parents had gone to great lengths to shield her from San Francisco's lotharios. Accompanied by their mother, Clara and her sister Florance, also a beauty, had been educated in a French convent and then at a Parisian "finishing school." Clara's education abroad helped her cultivate a sense of mystery. The sisters started socializing in San Francisco in 1872, gracing the frequent dinner parties at Sharon's Sutter Street mansion. Newlands was on the guest list and soon

7 Sharon boasted that so many men wanted to marry his daughters that he needed to vet each suitor at \$10,000 per vetting. He liked to tell the vetting story because an English lord (George Fermor-Hesketh) wanted to marry daughter Florance. Sharon's detectives found that Hesketh was far richer than Sharon. *Chicago Herald*, June 4, 1884, and Oscar Lewis, *Bonanza Inn* (Comstock, 1939), pp 142-45.

he and Clara were an item. Matters became serious quickly, and Newlands feared that Clara's father would end the relationship. But Clara was persistent and, once again, Newlands passed a patriarch's careful vetting. Frank Newlands and Clara Sharon were engaged in 1873, due to be married a year later.

Much happened to Newlands once he became Sharon's son-in-law, some of it bad. But Newlands knew what he was getting into. The story of William Sharon was one of the grand fables of San Francisco. He was the richest man in the city—and the fiercest. Partnering with San Francisco's Bank of California, he had plunged into Nevada's Comstock silver mining in the 1860s and consolidated more than 300 small-scale placer mines into a handful of deep hard-rock shafts. Sharon was a flamboyant presence in Nevada's Virginia City, about 20 miles southeast of Reno.

Sharon cut an unusual figure around the mines. While other miners wore rough work clothes and snowshoed to the mines in cold winters, Sharon always sported his black broadcloth banker's suit. He moved about the mines surrounded by his expert team, including a legendary German metallurgist. He worked around the clock, sleeping in a small room next to his office in the bank's building. He owned the mines, the stamping mills, the railroad, and the water company. He dominated the mining exchange and was a co-equal force to William Ralston, the Bank of California's spectacularly colorful bank president. Like so many Gilded Age greats, Sharon was *sui generis*. He dramatically changed the nature of silver mining. He changed Nevada and California. And he changed the entire western United States forever.

THE PARTNERSHIP THAT SHAPED NEWLANDS' THINKING

Francis Newlands had the good fortune to work for the fabled business partnership of William Ralston and William Sharon. Both men were large for their times. They thought big and built big, running businesses at a scale and sophistication uncommon to the American West. Newlands began his apprenticeship with them when he was 24, and the work he did for them foreshadowed his later career.

William Sharon

Sharon was born in 1821 on the Ohio frontier, and he kept moving west until he hit San Francisco. He made a small fortune in St. Louis in the 1840s as a land speculator. Moving to San Francisco in 1850, Sharon again made a killing in land speculation. In the 1860s, he went to Virginia City, Nevada, a small town 200 miles east of San Francisco. There, Sharon quickly made his mark in the Comstock mines. He consolidated the many placer mines and started mining in deep, 500-foot shafts—an innovation that brought him bonanzas of silver ore. At the same time, Sharon vertically integrated his mining operation with stamping mills, a railroad, and a water company. Later in life, Sharon was caught up in a spectacular and tawdry scandal that forced his family to resettle in Nevada. The great bulk of the writing about Sharon has been tabloid in character, excepting: Michael J. Mackley, *The Infamous King of the Comstock: William Sharon and the Gilded Age West* (Nevada: Reno, 2006).

William Ralston

The story of William Ralston is one of San Francisco's wildest tales. A Gilded Age tycoon and a notoriously sharp dealer in business, Ralston was nonetheless beloved in the city. He dreamed of making San Francisco "the Venice of the West," bestowing on San Francisco a museum, a park playground, a school teaching technical skills, a

luxury hotel, and an opera house, which he designed personally in both the Greek and French Renaissance styles. Ralston's signature business achievement was expanding the Bank of California into a regional bank for the West Coast. Historians of California and San Francisco have written much about Ralston. The most thorough book is George D. Lyman, *Ralston's Ring: California Plunders the Comstock Lode* (Scribner's, 1937)

CHAPTER 3 — *Son-In-Law*

AS FRANK NEWLANDS AND CLARA SHARON pledged their undying love to one another, all eyes were on someone else—William Sharon. As local luminaries gathered at Sharon’s large and lavish home on November 19, 1874, the bride and groom were but bit players in their own nuptials. William Sharon was the star, and he put on quite a show.

Sharon’s wedding staff gave the press a guided tour of his ritzy residence, included photographing all the furnishings—even the sheets in the bridal bedroom—and the price tags conspicuously adorning them. The wedding itself was a brief event, limited to immediate family, followed by a massive reception with 800 members of San Francisco’s rich and famous. The entire invite list was published in the *Chronicle*, which ran a special edition of the paper. Three whole pages—including the front page—were devoted to the wedding, which the paper treated as if it were the wedding of the century.

Sharon made sure that copies quickly found their way across the state line to, of all places, Nevada. One of Nevada’s first two U.S. Senators, William Stewart, had recently decided to retire and return to practicing law and overseeing his “disastrous” mining operations.¹ The Nevada legislature had until January 1875 to fill the vacant seat. Befitting the diversity of Gilded

¹ William M. Stewart, *Reminiscences of Senator William M. Stewart of Nevada* (Neale Publishing Company, 1908), p. 261.



Figure 3.1. Virginia City, NV. Lithograph shows a frenzied frontier mining town in a year of silver bonanzas. C Street, the main drag, runs east to west, ending abruptly where snowshoe paths start uphill to the silver mines, the stamping mills and the Sierra Nevada. The Bank of California is on the southerly corner of the second block. The Territorial Enterprise is on the third block, and the Wells Fargo stagecoach stop is on the 4th block (TAHOE is emblazoned on the building). (Courtesy University of Nevada Reno Special Collections)

Age politics, William Sharon, the mine owner, had designs on replacing William Stewart, the mining lawyer.

Sparsely populated, only a decade removed from statehood, Nevada remained a plaything of wealthy and powerful interests in California—the “rotten borough” of San Francisco. Accordingly, Sharon opened his campaign not on the hustings in Nevada but in a ballroom in San Francisco. Shrewdly, Sharon sought to send a message to the Nevada legislature that he was even richer and more influential than anyone had imagined. The two wedding toasts were made by California heavyweights Leland Stanford

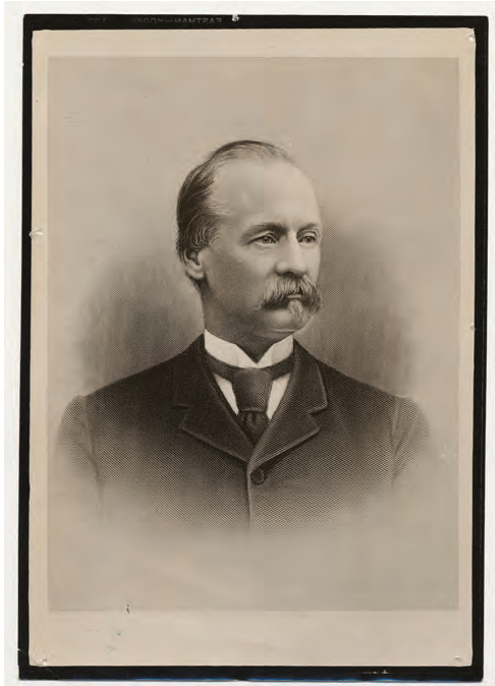


Figure 3.2. William Sharon in his forties in Virginia City. Known as the “king of the Comstock,” the dour titan is a slight man with thinning hair. Only rarely was Sharon photographed without his trademark black banker’s hat. (Courtesy of UC Berkeley Libraries)



Figure 3.3. Movers and Shakers, Virginia City 1864. Mark Twain at 29 flanked by William H. Clagett and A.J. Simmons. The trio pooled their funds to speculate in silver mines on which they had been tipped. Twain’s columns in the Territorial Enterprise (rerun in the San Francisco papers) made him a local celebrity. Simmons was speaker in the territorial assembly and “Billy” Clagett, also a member of the assembly, was active in Nevada silver mining. (Courtesy of the University of California Press)

and George Hearst, both soon-to-be senators from the Golden State. Each singled out Sharon as a prospective Nevada senator. So did Ralston, the master of ceremonies. In one fell swoop, Sharon simultaneously married off his oldest daughter and kicked off his campaign.

With such powerful backing, Sharon handily won the seat. But Sharon’s tenure in the Senate would ultimately become a fiasco, both for Sharon and for Nevada. As he presided over Newlands’ wedding, little did Sharon

know that his single undistinguished Senate term would eventually invite the ridicule of the press and the embarrassment of his children.

Frank Newlands could have seen it coming. In 1872, Sharon's devious dealings had become the talk of the city's mining exchange. What happened—and how it happened—said a lot about Sharon's character, and the Gilded Age West's. Events came to a head on May 15, 1872, as Newlands was courting Clara. The incident involved the Crown Point silver mine in Nevada's Comstock region. Sharon owned one-third of the shares, but mine employees were secretly contesting his control. Sharon learned from a snitch that he was being tricked, and that his own employees were amassing shares bought on margin—meaning they were borrowing money from a broker and pledging their shares as collateral. This left them vulnerable.

What Sharon did next was cunning and willful. He began selling Crown Point shares in indigestible blocks every thirty minutes. This drove the price of Crown Point down from \$1,875 per share to less than \$100. The attack on Crown Point was so overwhelming that margin calls were triggered across the exchange. The prices of other shares fell as well. Sharon bought the whole lot—including Crown Point—at distressed prices, netting some \$5 million and inflicting a \$3 million loss on his challengers.²

What did Newlands make of this? Newlands accepted Sharon and San Francisco as they were in the early 1870s. He lived in a time and a place where things were wide open, and where the people liked it that way. In the *American Commonwealth*, Bryce singled out how San Franciscans sided

² May 15, 1872 became one of San Francisco's days famous for speculation in mining stocks. An excellent book on that day, and on the Comstock, is Eliot Lord, *Comstock Mining and Miners* (US Geological Survey, 1883), reprinted by Howell: Berkeley, 1959, see stock tables on p. 292 for May 15, 1872. See also George Lyman, *Ralston's Ring* (Scribner's: NY, 1937) 210-219; Theodore Hittell, *California*, IV, 541-44

with the speculator. “Everybody gambled in stocks,” Bryce wrote, “from the railroad kings down to the maidservants.”³

At ease with his hard-charging father-in-law, Newlands moved into the Sharon house, where he and Clara had their own quarters. He simultaneously moved into the big leagues in business. Newlands became counsel to the Bank of California and the Spring Valley Water Works. He was given a choice office in the first-class building immediately across the street from the Bank of California. His office was on the second floor, with French doors opening out to face the doors of the bank. He could not have imagined what he was soon to see—riots, despair, and a suicide.

“Everybody gambled in stocks,” Bryce wrote, “from the railroad kings down to the maidservants.”

3 Bryce, V2, p. 1070.

CHAPTER 4 — *Ralston's Ruin*

Frank Newlands never complained about the wedding. Nor did his status-conscious mother. At least they never wrote it down. Nor did Newlands ever complain about working for his father-in-law. In fact, he excelled at the job. Newlands knew his way around balance sheets, was adept at managing people, and was a natural at lobbying. His associates found him quiet, loyal, and hardworking. He was, in short, the ideal son-in-law. Before long, thanks to his abundant talents, Newlands had made himself the heir apparent.¹

Just as Newlands' star was rising, Ralston's was on the wane. Sharon and Ralston had been a team—and a legal partnership—since 1865. Ralston was Mr. Outside, while Sharon played Mr. Inside.

But by 1875, Ralston had gotten himself into trouble. The catastrophic national panic of 1873 had infected the California economy, particularly the silver mining industry. To sustain his many ventures, Ralston had borrowed heavily from “his” bank, otherwise known as the Bank of California. Spring Valley Water Works was the partnership’s “cash-cow” investment. Together, Sharon and Ralston controlled the water monopoly, which paid nine percent interest on its bonds. The bonds did not trade publicly. In *Ralston's Ring*, George Lyman claims that Ralston and Sharon

Newlands knew his way around balance sheets, was adept at managing people, and was a natural at lobbying.

¹ Hubert H. Bancroft, *Chronicles of the Builders of the Commonwealth* (San Francisco, 1892) IV, 29

owned so much of the bonds—62 percent of 80,000 bonds—that their voting control was never contested.

Ralston cooked up a daring scheme to use Spring Valley as the vehicle to exit his debts. He needed cash—a lot of it—and he needed it fast. So Ralston concocted a plan to expand Spring Valley’s network of reservoirs, thereby rendering the city safe in the worst of drought situations. Ralston would then sell the “improved” package to the city for \$15 million. Ralston’s numbers were fuzzy, but the consensus was that Spring Valley—with its new reservoirs added—was a \$6 million property, whose sale at \$15 million would yield a profit of \$9 million. If Spring Valley could fetch that price, with Ralston and Sharon splitting the \$9 million profit, Ralston would be able to clear his debts with the bank.²

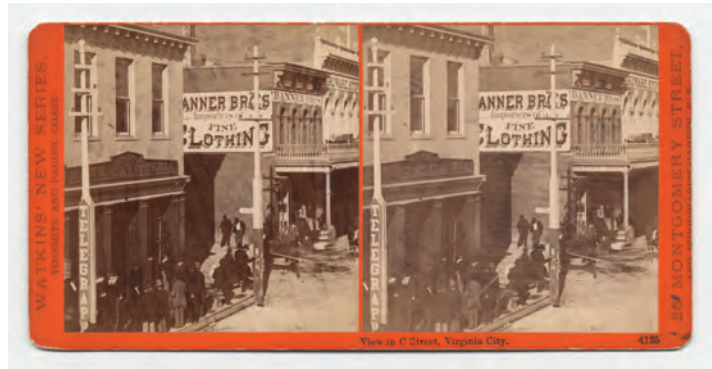
Ralston’s gambit was not a crazy idea. This was San Francisco in 1875. This was the Spring Valley Water Works. Only two cities in the world with populations over 50,000 had privately-held water companies—London and San Francisco. The London company was heavily regulated, San Francisco’s hardly at all. And the history of Spring Valley since its 1858 inception was an encouraging sign for Ralston.

Only two cities in the world with populations over 50,000 had privately-held water companies—London and San Francisco.

When chartered by the legislature, the company’s bonds paid 20 percent, competition was prohibited, and the company had the power of eminent domain. Spring Valley had a reputation for prohibitive rates and lousy distribution.

But Ralston miscalculated—fatally. In 1874, in a feeble effort at reform, the California state legislature had reduced the rates to nine percent interest and created a surveying commission to identify alternative reservoir sites. The commission published its survey on March 18, 1875, at which point the press

² Lyman’s *Ralston’s Ring*, pp. 262-323, is the most detailed account of Ralston’s spectacular fall. Both the water company and the bank are covered. The book reprints many documents and is footnoted extensively.



Figures 4.1 and 4.2. Virginia City, NV. These photos of the Bank of California were taken by Carleton Watkins, illustrious photographer of western landscapes and work sites. The photographs capture the low-budget look of the Sharon bank. The stereopticon shot by Watkins, taken in the afternoon, shows the heavy foot traffic at the bank. Sharon’s living quarters, facing out onto C Street, are on the second floor with the windows open. Sharon lived on the town’s edge where the paths went up to the mines. (left: Courtesy of the Comstock Foundation for History and Culture; right: Courtesy of California State Library)

discovered that Ralston had already bought the alternative sites and cornered all the water. An outcry arose, in both San Francisco and Sacramento. By August of 1875, with Spring Valley still unsold and gossip running wild, the Bank of California was struggling to meet the mini runs on it. At 2:35 pm on August 26, 1875, the bank ran out of cash and closed its doors. Rioting broke out in the street. Newlands watched it all, “a vista of horror.”

In the center of the maelstrom was his father-in-law’s erstwhile business partner. A broken man, Ralston could go on no longer. As Newlands looked on, Ralston “took his hat and walked from the bank. The object of his pride and solicitude, the victim of his folly.” He “went to the ocean beach, looked through the Golden Gate... and swam to a point whence it was impossible to return.”³ Water had built Ralston up and laid him low. Tragically but fittingly, it was to the deep that he commended his soul.

3 *San Francisco Bulletin*, October 10, 1884, from Newlands’ testimony in *Odd Fellows Bank v. William Sharon*. The bank panic and Ralston suicide drew national attention. A good summary (and dramatic art) is in *Harper’s Weekly*, v.19, September 27, 1875, p. 776.

Upon Ralston's untimely demise, Newlands assumed many of Ralston's roles in the Sharon partnership. He slipped seamlessly from the role of counsel to that of consigliere, becoming a public face for the Sharon interests. Much of the work that Newlands had thrust upon him involved cleaning up after Ralston's booster-ish optimism.

The work shaped Newlands' thinking in a very particular way. He inherited businesses that had been built with a regional emphasis, not a local one. He also inherited businesses that ran on technical expertise. Both Ralston and Sharon were inclined towards these approaches. Their early business coup had been the breaking open of the Comstock mines, an operation which, from the start, spanned 2 states and 200 miles. Technical experts helped Ralston and Sharon mine at 500 feet and bring water to Virginia City through seven miles of Sierra Nevada mountains. Ralston and Sharon had built and managed stamping mills, a railroad, and a water company. And they developed systems to move silver rapidly from the mines of Nevada to the bank in San Francisco.

The other enterprises these two men created similarly reflected their regional and technical emphasis. The Bank of California was run as the big bank for the West Coast. Together, Sharon and Ralston built the West's first deluxe hotel, the Palace, which they marketed as a "destination hotel" for East Coast and international travelers. Their Spring Valley Water Works drew its supply from reservoirs in distant counties. The water company's key man was German-born engineer Hermann Schussler, a water-systems engineer and dam architect. Newlands had the luxury of starting at the top of businesses that required him to think regionally and to think like an expert.

Ralston's death pitched Newlands into the recapitalization of the Bank of California. This was tricky business. The regional economy was in bad shape. The faltering bank was the region's pre-eminent financial institution. With it teetering on the brink, San Francisco—that turbulent city Bryce had deemed like no other in the United States—was melting down.

Moving quickly to avert catastrophe, Sharon called in favors and raised a rescue package of \$7 million. Rescuing the bank then fell to Newlands. The exceedingly delicate task facing him was to carve out of the \$7 million enough new capital to open the bank, all while liquidating the \$4 million in debts the bank held against the Ralston estate. Even more vexingly, some of the Ralston assets (all hard to value in depressed times) overlapped with the Ralston-Sharon partnership. If Newlands paid out one hundred cents on the dollar for Ralston's debts, it might liquidate the entire estate and encroach on the Ralston-Sharon partnership—and his father-in-law's fortune.

Citing the hard times and depressed values of the assets, Newlands cajoled Ralston's creditors into taking 50 cents on the dollar. Though he later acknowledged that he had dealt too sharply—and, in a prominent subsequent court case, increased the payout to a persistent creditor⁴—Newlands never agonized over his role in the recapitalization. He had a panic on his hands, and a bank to get back on its feet. He got the job done in 37 days. On October 2, 1875, just over a month after the runs and riots that closed its doors, the Bank of California resumed normal operations.

Newlands hardly had a moment to savor his triumph. Mere weeks later, on October 15, he assumed oversight of the Palace Hotel. The hotel opened to great reviews in 1875, but ran in the red from the start. The problem, once again, was Ralston. He had thought too grand. True to its name, the Palace was the largest hotel in the West. It soared 120 feet above San Francisco's bustling streets, the tallest building in the city. Guests had their pick of 755 luxury rooms, a first-rate dining room, banquet facilities, and shops. And they could delight in each room's private bathroom and electronic intercom system, as well as the handsomely-appointed hydraulic elevators known as "rising rooms."

To oversee the hotel operations more closely, Newlands and his family moved into the hotel. Two adjacent suites were connected for Frank and

4 Newlands testimony, *Odd Fellows Bank v William Sharon*, *San Francisco Bulletin*, October 13, 1884; Lilley, "Early Career," pp. 62-65..



Figure 4.3. San Francisco's Palace Hotel opened in 1875. From its inception, the hotel figured prominently in the city's imagination. William Ralston designed the hotel, William Sharon financed it and Francis Newlands managed it. It was built to be big and grand. With 755 rooms, hydraulic elevators ("rising rooms"), a first-class restaurant, and luxury shops, the hotel attracted travelers from the East Coast and London. Oscar Lewis wrote a fine book, *Bonanza Inn* (1939), about the palace and its mark on San Francisco. It is still in print.

Clara and their two daughters, Clara and Janet. For five years, home was the towering edifice at the corner of Market and Montgomery Street. The girls loved every second of it, but for their father, being "overseer" was a trial. The hotel was geared to serve business and tourist travel, yet the aftershocks of the panic of 1873 meant the economy was faltering. Costs could be "managed down" only so far. Yet there was a silver lining. Living at the Palace—and shouldering the responsibility of running it—further exposed Newlands to life in the regional business world.⁵

⁵ Conversation with Janet Newlands Johnston, September 1963, in Truckee, NV. *Palace Hotel, San Francisco*, in *Wikipedia*, retrieved May 7, 2019 gives all the details on the "out-sized" dimensions of the hotel. Oscar Lewis, *Bonanza Inn* (Comstock, 1939) is good on the hotel's place in the imagination of San Francisco. Lewis makes much of how Ralston designed and built it, but Sharon opened and ran it.



Figure 4.4. This photo captures the grandness of the courtyard entrance to the hotel. The scale is big and the taste is opulent. (Courtesy of the San Francisco Public Library)



Figure 4.5. Palace Hotel and Grand Hotel. San Francisco, 1880s. Sharon owned both. The second-floor covered passageway is rich in local lore. Allegedly, businessmen had meetings in the more lavish Palace Hotel and stashed women in the simpler Grand. The covered passageway kept the comings and goings off the streets. (Courtesy of the San Francisco Public Library)

Having put the Bank of California and the Palace on firmer footing, Newlands turned his attention to resolving the Spring Valley furor that Ralston had ignited. Ralston's water monopoly was still intact and just as controversial, with Sharon replacing Ralston as the major owner. In December of 1875, the state legislature met in Sacramento, determined to deal with the matter. Sharon put Newlands in charge of the work in Sacramento—and Newlands, once more, stepped into the breach.

It would be an uphill battle. As Newlands wrote to Sharon in a letter the following March, the legislature was awash in bills hostile to their

interests.⁶ Newlands hired an army of lobbyists, who identified three assembly bills as especially threatening. Taken together, this legislation gave the board of supervisors tough rate-making powers over the water company, which threatened to undo the sacrosanct 9 percent interest and Spring Valley's cash cow status. The Assembly was chaotic, but with the exertions of Newlands and his lobbyists the bills were defeated.

But a fourth bill loomed, which Newlands deemed the most troubling. This bill, championed by an Assemblyman named Rogers, would have authorized an alternative—and publicly-owned—competitor to Spring Valley. To Newlands' great chagrin, the bill passed the Assembly. Newlands worked to get "six or seven amendments" added to the Senate bill. He boasted that the amendments were "not very skillfully drawn," with the effect of gutting the bill. Newlands was pleased with himself; Spring Valley had once again weathered the storm of legislative reform. In fact, as Newlands crowed when he sent Sharon a copy of the amended bill, he had let the so-called Rogers Act pass deliberately.

Why the seeming about-face? The answer is that Newlands intended to bring back the old Ralston scheme. The Rogers Act authorized a publicly-held water company—overseen by the San Francisco Board of Supervisors—and Newlands intended to sell them his father-in-law's water company at a tidy profit. As he advised Sharon, by selling Spring Valley to the city—thereby making it publicly owned—they stood to reap 12 or 13 million dollars. Shrewdly, Newlands realized that it would behoove Spring Valley to appear supportive of a public water entity, if only to improve their chances of a sale.

Newlands wrote Sharon that "given the condition of public sentiment," the Supervisors would pay no more than \$13 million, provided the package included Ralston's additional reservoirs and water catchment sites. Sell them

6 The lobbying incident is taken from a long letter that Newlands sent to Sharon, March 30, 1876, Newlands Mss.

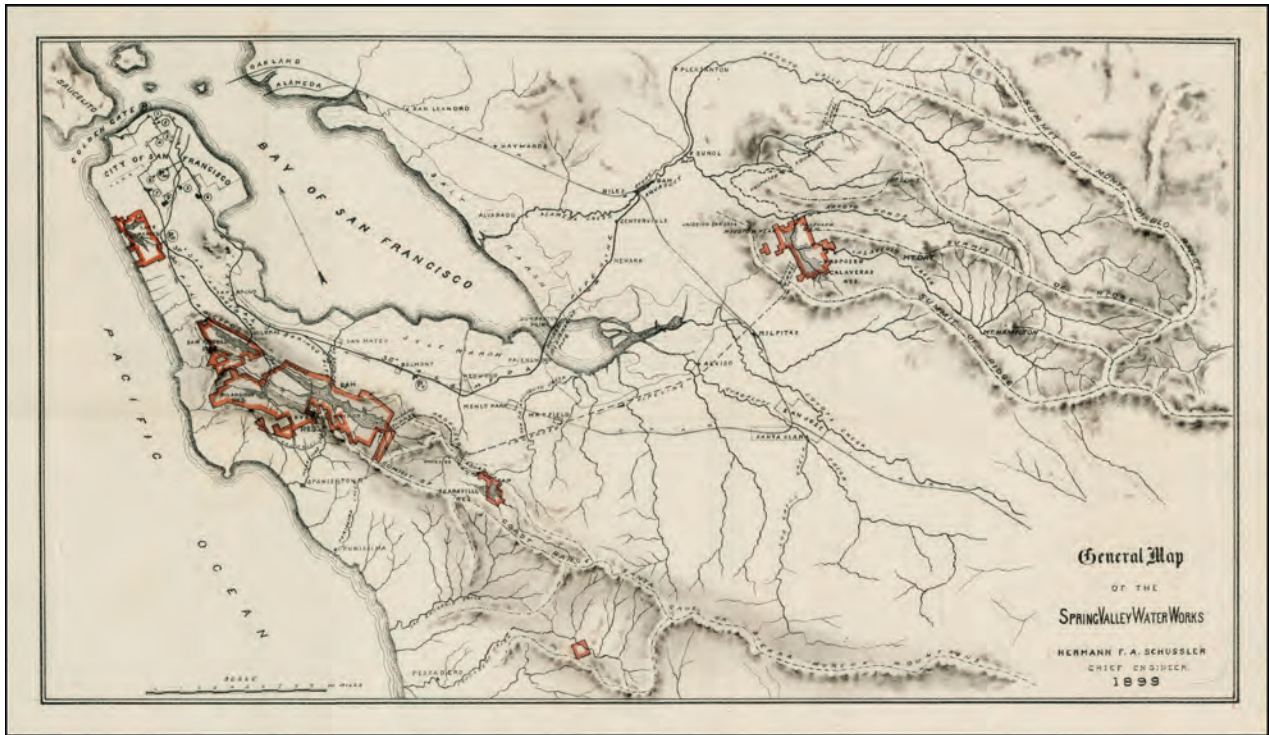


Figure 4.6. An 1899 map illustrating how Spring Valley’s water sources encircle San Francisco. This map was prepared by the company’s chief engineer, Hermann F.A. Schussler, a brilliant engineer and skilled businessman who was a prominent force in the water company. Schussler’s map shows that Spring Valley’s operations were necessarily regional in character, drawing water from reservoirs in Santa Clara, Alameda and San Mateo counties. (Courtesy of Stanford University Libraries)

all, Newlands told Sharon, but hold back on the Calaveras site, which “is generally considered a humbug.”

In truth, Newlands thought it far from “a humbug.” He and Hermann Schussler, the company’s water engineering expert, both thought highly of the Calaveras site.⁷ Schussler drew a map (shown above), which illus-

⁷ Schussler and Newlands were right about Calaveras. Schussler stayed in the office at Spring Valley long enough to make the Calaveras acquisition in 1902. See *San Francisco Call*, October 22, 1902: *Spring Valley’s Water Monopoly Now Controls Entire Santa Clara County Watershed*. For the history of the Calaveras scheme, see Theodore Hittell, *California*, IV, 554.

trated vividly the complicated regional enterprise that was Spring Valley. Yet the ingenious engineer was confident that he could run pipe for the 53 miles northwest from Calaveras into San Francisco, For his part, Newlands believed that once Spring Valley was purchased, the supervisors would “be forced” in two years to buy Calaveras, “and here the great profit can be made.”⁸

For a relative novice in state politics, Newlands had emerged from Sacramento with an impressive bounty. His legislative maneuvering would enable Sharon to “double dip” off the supposedly reformist Rogers Act.⁹ Out of the ruins of Ralston’s overreach, Frank Newlands had further solidified his family’s fortune.

8 Newlands letter to Sharon, March 30, 1876. Newlands Mss.

9 Michael J. Makley, *The Infamous King of the Comstock: William Sharon in the Gilded Age West* (Nevada, Reno, 2006). Hereafter *Sharon*, pp. 40, 145-146.

CHAPTER 5 — *Spring Valley*

The years 1877-1881 were transformative for San Francisco and for Newlands. The panic of 1873 had pitched nation and city into an economic slough—the so-called “long depression”—from which they only began to emerge in 1878. Twenty-five years of western drought had withered the agricultural economy, and the recession crippled the mining economy. San Francisco was hit hard.

Bryce described the city as a tinderbox. Angry unemployed men, 15,000 of them, prowled the streets. The Irish unemployed were allegedly the angriest, and they poured out their fury against Chinese businesses. “The Irish were the poor [in San Francisco] and they hated the Chinamen,” observed Mark Twain.¹ Denis Kearney, an Irish drayman who had attended Irish lyceums for public speaking, put the match to the tinder. Washed up and fed up, Kearney claimed that a friend had “put him into stocks” but that he had been swindled out of every penny. He was vituperative and histrionic—and boasted that he loved bonfires. At the end of every speech, Kearney concluded with the incendiary declaration, “And whatever happens, the Chinese must go.” He was all of San Francisco’s problems rolled into one. Bryce considered him San Francisco’s perfect storm.²

*Washed up and fed up,
Kearney claimed that a friend
had “put him into stocks” but
that he had been swindled out
of every penny.*

1 *Mark Twain’s San Francisco*, p.xvi.

2 Bryce, *American Commonwealth*, “The Sandlot Party,” V2, 1070-74

While the fires of discrimination and discontent simmered, water issues once again rose to the fore. In January 1879, the board of supervisors began discussing the new water-rate schedule, to be published in 1880. The new rates would be the first test of the state's new constitution, which singled out "water-supplying bodies to be regulated and limited by law."³ The public expected a ten percent rate reduction. Newlands spent a great deal of time testifying before the board on Spring Valley's costs. He adopted a moderate, professorial tone. One of Sharon's many biographers said Newlands had "a new, sophisticated approach" that enabled the regulators for the first time to understand Spring Valley's costs. "Fair dealings" with the company followed. Sharon's biographer wrote that Sharon, always a hard liner, noticed that the less contentious approach was good for the company.⁴

The Spring Valley rate hearings were a personal triumph for Newlands. His years at Sharon's side built on his natural affinity for technical expertise, and he habitually gave credence to the expert planner. Whenever he faced a problem, he attacked it with an expert at his side. In the Spring Valley rate matter, Newlands felt that rate setting under the new constitution required a new approach that convincingly explained the company's cost structure. Schussler, the company's well-known engineer who had run Sharon's water company in Virginia City before he ran Spring Valley, tutored Newlands in the science of rate-setting.

Newlands swiftly converted his own education into a tutorial for the board of supervisors. He drew up for the supervisors an array of charts, diagrams, and maps explaining the company's costs. The graphics showed how the company's costs were linked to the size of the population served.⁵

3 Bryce discussed the new constitution and reprinted parts of it in *American Commonwealth*, "The New Constitution," vol. 2, 1076-1081.

4 Makley, *Sharon*, p. 159.

5 Proceedings before the Water Committee of the Board of Supervisors of the City and County of San Francisco, concerning the fixing of rates of the Spring Valley Water Works (San Francisco, 1880). Pp. 39, 41, 44-46, 49-50, 53, 59 and passim. Also San Francisco Municipal Reports, 1879-1880, p. 940



Figure 5.1. Hermann Schussler’s engineering and architectural skills were legendary. When Newlands sought to persuade the San Francisco Board of Supervisors to adopt a mutually agreeable new rate schedule for the Spring Valley Water Company, Schussler tutored Newlands in how the company’s complicated cost structure was tied to the size of the city’s population and the size of the city’s own “free” water consumption. In the photo, Schussler, sporting a sombrero, is in the field, checking the delivery pipes running from Hetch Hetchy to San Francisco. (Courtesy of the McCune Collection and The San Francisco Public Utilities Commission)

Newlands’ goal was to convince the supervisors that costs rose on a per capita basis when the population declined and fell when the population increased. The lesson was not novel—but the approach was.

Newlands’ tutorial worked. In 1880, the supervisors published a new rate structure, which they claimed was a ten percent rate reduction. Because the price of water was linked to the growth or decline of population served, the schedule was very complicated. It is unclear whether actual rates ultimately rose or fell. What’s certain is that the press did not attack the supervisors, who were so pleased with the 1880 schedule that they reaffirmed it for 1881.⁶

⁶ The San Francisco press had been notoriously hard on the Spring Valley company. One paper, the *Bulletin*, was known as “the hydrophobic maniac.” *San Francisco Chronicle*, September 4, 1881.

Rate structure principles reached by the San Francisco Board of Supervisors, as printed in the city's Municipal Reports. These principles mirrored what Newlands had presented. *San Francisco Municipal Reports, 1879-1880, p. 940*

First—that that the principal which should govern the regulation of rates is, that the Spring Valley Water Works is entitled, in addition to operating expenses, to a fair rate of interest upon the value of its works.

Second, that a fair rate of interest is between eight and ten percent.

Third—that the income derived from existing rates, after deducting operating expenses, does not even equal eight percent upon the value of the works.

Fourth—that the old system of collecting rates, which placed the whole burden upon the rate payers, is unjust and inequitable. And is the real cause of the dissatisfaction with the rates. [sic]

Fifth—that this system has been abolished by the new constitution, and that, under the new constitution, the municipality is compelled to pay for water for all municipal purposes.

Fortuitously, San Francisco's population rose so rapidly that company revenues increased. From 1870-1880, population grew by 57 percent. The city economy improved between 1879 and 1880. And the supervisors reached the same conclusions as Newlands' tutorial. The company was entitled to "a fair rate of interest" over its costs, a "fair" rate was "between eight and ten percent," and "current income...after deducting operating expenses" was below eight percent.

The supervisors had reached the right points about rates once they had accepted what Newlands said were the costs. Newlands believed that the way he presented the costs was critical. The modest professor armed with charts, diagrams, and maps had carried the day.

The success he had before the board was a triumph he always savored. Newlands saw himself in the role of the water expert, all mapped out and diagrammed up. He frequently tried to replay the triumph of 1880. Newlands was so devoted to experts on water issues that observers thought him “a crank.”⁷ Yet in the years to come, it was the crank with his charts who would have the last laugh.

7 William D. Rowley, *Reclaiming the Arid West: The Career of Francis G. Newlands* (Indiana Univ.: Bloomington, 1995), ch. 1, “first among irrigation cranks.” Rowley’s biography is admirably thorough. He also has written on Nevada history and western resource history. His biography captured one instance in Newlands’ personal life that exemplified the importance he attached to experts. His wife Edith mentioned, in 1905, that she was going to start a garden at their house on the Truckee Bluffs overlooking the Truckee River north of Reno, NV. Newlands promptly hired a landscape architect. (Rowley p. 67 citing local papers). When I was researching my dissertation on Newlands in the 1960s, I spent three afternoons at the Truckee Bluffs house in September 1963, interviewing Janet Newlands Johnston (his daughter). She showed me the garden, very majestic years after its designing, just as the landscape architect had planned.

Nevada

(1885-1892)

CHAPTER 6 — “Mr. Sharon and Lady”

JUST AS FRANK NEWLANDS WAS RIDING HIGH, it all came crashing down. No sooner had Newlands successfully managed the regulation of the Spring Valley water company than a succession of freakish events transpired that would socially disgrace him in San Francisco and force him to Nevada. The bizarre events involved the richest man in the city— his father-in-law—and they centered on sex.

Things began in a small way in the small frontier town of Virginia City, Nevada. William Sharon liked sex, and he treated it like a business. By the mid-1860s, Sharon had become the “king of the Comstock,” having vertically integrated most of the mining-related businesses in Virginia City. He had also started a little sex business. Sharon began the decade seeing Belle Warner, a local courtesan, on a regular basis. He helped her set up her own business, managing a string of young women on his behalf. He paid her a monthly retainer and regularly escorted Belle’s employees to the Glenbrook Hotel—co-owned by Sharon and Ralston—where he signed in as “Mr. Sharon and lady.” It was a tidy little business in a small town with 49 saloons and an established prostitution district. That was Virginia City in the 1860s. Nobody cared as long as there was no commotion.¹

¹ Makley, *Sharon*, pp. 66-102 provides a detailed, matter-of-fact account of Sharon in Virginia City (population 2,345 in 1860). Even toned down, it is one of the great tales of the Wild West. Nevada was a territory until 1864 and Virginia City was a classic frontier town. Mark Twain made Virginia City justifiably notorious for its roughness. His columns in the town’s *Territorial Enterprise* are reprinted in *Mark Twain’s San Francisco* which includes Twain’s best from Virginia City’s *Territorial Enterprise*.

San Francisco in the 1880s was another matter. The San Francisco Sharon had entered in 1850 was still partly a tent city, not so different from Virginia City at its inception. Three decades later, San Francisco prided itself on its sophistication.² The city by the bay boasted stately office buildings and grand hotels. It was known for its many restaurants, so many that “restaurant living”—eating out every night—was possible. At 60 years old, Sharon was a U.S. Senator and the richest man in the city. He expected that his business in sex would continue as before. He was wrong. Sharon’s ego hid from him that he was too old for the pace of a Virginia City lifestyle. Most important, his ego blinded him from seeing that—when it came to sex—the roles were reversed. Rich, old, and easily dazzled, Sharon was now the prey.

Sarah Althea Hill captured Sharon for one year, in 1880, and he never got rid of her. Attractive, sensuous, and haughty, she cost him almost everything—his health, his prominence, his California residence, and the respect of his family. Sharon kept his estate away from Sarah, but in the process forced his children to live in dusty Nevada.

² Makley, *Sharon*, p. 157



Figure 6.1. Attractive, sensuous, and haughty, Sarah Althea Hill claimed that her family was Southern planter aristocracy. She and Sharon began an affair in 1880. When Sharon tried to end their relationship, Sarah initiated a lengthy and tawdry legal battle that ultimately cost them both everything. (Courtesy of UC Berkeley Libraries)

When Sharon started seeing Sarah, he was a sitting U.S. Senator—in name only. Even by Gilded Age standards, Sharon’s performance in public office was pitiful. Whereas Stewart, his predecessor, was credited with authoring the Fifteenth Amendment to the Constitution that protected voting rights, Sharon was almost two years late getting sworn in. Finding Washington dull and legislative sessions boring, Sharon attended only three of the Senate’s six sessions. He voted hardly at all and spoke on the Senate floor but once, explaining that he had been too busy to be a Senator.³ He never once visited his Nevada constituency.

As a Senator, Sharon kept busy chasing two old favorites—land and ladies. When in the capital, Sharon’s biggest occupation was speculating in real estate. He had an eye for buying the right raw land just before it was developed. He had done it in St. Louis in the 1840s and in San Francisco in the 1850s and 1870s. In Washington, Sharon bought land in what was to become Dupont Circle. So shrewd was this investment that, a decade later, Newlands was to sell the Dupont Circle parcels and develop Chevy Chase, the country’s first “suburban new town.”⁴

The relationship with Sarah began in the spring of 1880. It is unclear who picked up whom. They met in the bar at the Grand Hotel, a Sharon property across Montgomery Street from the Palace. After a spell, they adjourned to Sharon’s suite at the Palace. An affair began. Soon, Sharon started making the kinds of mistakes he usually avoided. He installed Sarah in one of the Grand’s special suites, where he lived openly with her, on and off. And

3 Makley, *Sharon*, devotes ch 11, pp. 142-157, to Sharon’s poor Senatorial performance. Nevada newspapers were rough on Sharon. Characteristically, he seemed oblivious to their criticism. Asked by the *Territorial Enterprise* for his views on Washington, Sharon off-handedly cabled back: “Outside of political circles, it is dull. It never was intended for a city—only as the seat of Government, and excepting when Congress is in session there is very little done.”

4 Lilley, *Early Career*, pp. 207-214. Sharon spent \$160,000 on Washington real estate. Newlands sold those properties for more than ten times their purchase price about twelve years after Sharon bought them.

he encouraged her to play hostess at parties given at his Belmont beach residence 23 miles south of the city.

Sometime in 1881, Sharon tired of Sarah. He ended the affair and had her evicted from the Grand. Astonishingly, he started seeing no fewer than eight other women. Sarah would have none of it. She claimed that she and Sharon were in love and that Sharon had married her secretly on August 8, 1880. Sharon ignored her.

On September 8, 1883, Sarah had Sharon arrested for adultery. It was the first shot fired in a lengthy imbroglio. Sharon's lawyers had the charge dismissed, contending that Sharon was not married to Sarah and, moreover, that adultery was not a crime in California. Sarah promptly sued for divorce, claiming to be in possession of a secret marriage contract with Sharon. Sarah filed her suit in the city's superior court, part of the state court system. Sharon counter-sued in federal circuit court, claiming Nevada citizenship.

So began what became one of the era's most high-profile and ill-fated court cases, breathlessly covered as far away as New York and London. It dragged on for five years. By the time the dust settled, Sharon had died, Sarah had gone insane, court bailiffs had been beaten up, a former chief justice of the state supreme court was jailed and then shot by a U.S. Marshal, and a United States Supreme Court Justice was attacked.⁵

The case ended with decisive rulings from the federal court in 1888, three years after Sharon died of congestive heart failure. Upon Sharon's death, Newlands became the executive trustee for the Sharon estate. He left nothing to chance. Along with all the heirs to

Upon Sharon's death, Newlands became the executive trustee for the Sharon estate.

⁵ The whole affair is covered in detail in Oscar Lewis, *Bonanza Inn* (Comstock, 1939), pp. 116-214. It contains many reprints of official documents, court testimony, and newspaper articles. The most thorough study of the legal aspects of the case is Oscar T. Shuck, ed., *History of the Bench & Bar of California* (Los Angeles, CA, 1901 pp. 137-148.)

Sharon's estate, Newlands moved to Nevada, thereby maintaining Sharon's Nevada citizenship and protection under federal courts.⁶ Newlands found Nevada drab and dull. But in it, he also found the makings of his own political future.

6 Newlands to Frederick W. Sharon, February 3, 1888, Sharon Mss, Bancroft Library. Newlands' wife Clara Sharon had died in 1882 during childbirth. Newlands in 1888 was a single father to three girls—Clara (b. 1875), Janet (b. 1876), and Frances (b. 1878). Sharon died on November 14, 1885 of congestive heart failure. Newlands' ultimate role as executive trustee was never in question. He was treated as the heir apparent from early on. Sharon's son (Frederick W. Sharon), who had gone to Harvard but never worked, had resigned from any trustee responsibilities upon his father's death. The executive authority always was with Newlands. Newlands and Fred were very close, and they had similar interests in cosmopolitan issues like city planning. Newlands dictated a loving reminiscence of his brother-in-law. He made a fuss about Fred winning Harvard's middleweight boxing championship. The document is in the Sharon mss, Bancroft Library.

CHAPTER 7 — *Alkali Exile*

“AFTER THE SAGE-BRUSH and alkali deserts of Washoe [Reno], San Francisco was paradise to me,” Twain wrote in *Roughing It*.¹ Thanks to his father-in-law’s peccadillos, Newlands would live Twain’s trajectory in reverse, trading the paradise of San Francisco for the sage brush and alkali of Reno. Still, while Newlands may have decamped for Nevada not entirely by choice, he made the most of his adopted state.

Newlands began all over again in 1888. His beloved Clara had died years earlier, in 1882, and Newlands remarried to Edith McAllister, a childhood friend of Clara’s. Edith turned out to be a political force in her own right. When the couple met, she was 28 and he was 39. Edith was good looking, fluent in four languages, and ambitious. She was also well connected: her father, Hall McAllister, was the dean of the San Francisco bar, and her uncle, Ward McAllister, the arbiter of New York society. Soon letters were flowing within the family that Newlands was “a new man.”²

Newlands also acquired a new political companion, meeting frequently with Nevada’s renowned senior senator, William M. Stewart. The amply-bearded Stewart was a politician from Nevada’s territorial days, the legendary first senator of the state. It was to Stewart’s Senate seat that Sharon had ascended for his undistinguished single term in Washington. Since

1 Mark Twain, *Roughing It*, quoted in *Mark Twain’s San Francisco*

2 James M. Allen to Frederick W. Sharon Jan 7, 1889 Sharon Mss.

the beginning of his public life, Stewart had engaged in lawsuits and quarrels, and he continued in that style. He loved mixing in the state's rough-edged politics, and he loved making local business deals. Always, Stewart seemed to end up with his own piece of any deal in which he participated.³ In one such deal, Newlands and Stewart created Washington, D.C.'s Rock Creek Park as a national park in 1890. To get the deal done, Newlands paid Stewart with stock in the Chevy Chase Land Company, as the creation of the park removed land from the Washington-Chevy Chase market.

The Stewart-Newlands relationship was a win for each man.⁴ Newlands had begun to set his sights on the Senate himself, and Stewart was the state's most prominent politician. Newlands also wanted to develop the many Nevada properties held in the Sharon estate. Stewart could help Newlands access the right people to get both jobs done. Stewart, meanwhile, saw in Newlands his richest constituent. Stewart always wanted to broker a campaign for a wealthy candidate.

In 1888, Stewart and Newlands were caught up in the mini-boom for development of irrigation facilities in the arid West. The boom was short-lived, spanning only 1887-1893, and cut short by the depression of 1893.

3 Stewart involved himself in Washington land dealings first with Sharon and then with Newlands. The shareholder books of the Chevy Chase Land Company (founded by Newlands) show Stewart owning \$300,000 of the original stock. The \$300,000 number was just an accounting conceit, carried on the books under Stewart's name with attached notes that Collis P. Huntington loaned Stewart \$175,000 and the Sharon estate loaned him another \$97,000, of which the Senator had repaid \$28,000.

4 Newlands to Frederick W. Sharon 4, Dec. 10, 1888, Sharon Mss.

But it brought to the western stage some new players who never left it.⁵

One of those players—perhaps one of the most remarkable characters in the boom—was George Maxwell. Always fervent and seemingly ubiquitous, he came on the stage in 1887 and stayed there into the 20th century. Born in California in 1860, Maxwell put himself through law school to become an early specialist in water rights law. He made a small fortune representing bondholders in California irrigation districts that had filed for bankruptcy.

In 1891, Maxwell created the first irrigation lobby, the National Irrigation Congress, with Newlands as a founding member. As the paid irrigation lobbyist for the railroads, he became an ally and beneficiary of Newlands as well as of President Theodore Roosevelt. A fierce lobbyist, Maxwell saw the world in black and white; the few people in the irrigation movement who disagreed with him he never forgave. His lifelong passions were the family farm, irrigation of the arid West, and the agricultural potential of California's Central Valley.

Fueled by characters like Maxwell, the boom began in 1887. Previously, farmers had accessed readily available water sources using ditches and small-scale water storage facilities. Financiers and engineers had not then

5 A full discussion of the irrigation boom, and the characters involved, is in Howard R. Lamar ed., *Readers Encyclopedia of the American West* (Crowell: NY, 1977) pp.1000-1002. One of the boom's spokesmen, William E. Smythe, *The Conquest of Arid America* (Harper, 1906) tells the story on a state-by-state basis. See also Gordon Nelson, *The Lobbyist: The Story of George H. Maxwell, Irrigation Crusader* (Bowie MD, 2001). Hereafter Benson, Maxwell.

Maxwell was one of the great characters in the irrigation movement. He was there at the start of the National Irrigation Congress in 1891, he brought the railroads into the effort in 1899, and he was involved in Roosevelt's signing of the bill on June 17, 1902. Newlands was a founding supporter of Maxwell's cause, and remained Maxwell's ally, even though Maxwell was quick to feud with friends. Benson's biography of Maxwell has much about Maxwell's running feud with Rep. Frank Mondell (R-WY), Senator Warren's loyal lieutenant in the House, and there was bad blood between Maxwell and Elwood Mead, the Wyoming State Engineer.

been needed. But with many of those streams tapped out by 1887, now they were. The construction of dams, reservoirs, and diversionary ditches required capital. Capital required financiers. Engineers were needed to manage the complex ditch network serving multiple users.

Introducing financiers and engineers to irrigation changed it entirely. The irrigation business in the 1880s was undergoing the same revolution that the silver mining business did in the 1860s. Just as Sharon had mastered the changes in silver mining—bringing to the Comstock banks and 500-foot-deep shafts—Newlands and Stewart were positioned to take advantage of the irrigation transformation.

*He did not intend to become
“a Nevada politician”*

The revelation that Stewart and Newlands were meeting—which Stewart leaked to the press—signaled that a newcomer with new money was entering state politics. The news shook Newlands’ in-laws, who remembered the ridicule and reproach heaped on Sharon as Senator. Newlands promised the family that he would not repeat the Sharon mistake, insisting that he did not intend to become “a Nevada politician” but rather wanted “to identify [him]self with matters relating to the Sharon estate.” He hoped, Newlands said, to be “called” to a Senate seat “by an enthusiastic national following.”⁶

Newlands was splitting hairs but he was not untruthful. He intended to mobilize the Sharon estate behind an effort that would put Nevada into the irrigation boom. Newlands was one of many smart people who thought that economic and political success lay in joining the irrigation boom—if you identified the right place and the right approach when you joined.

It is difficult to get a handle on just how big the boom was. There must have been a number of irrigation project startups, because there were a number

6 Newlands to Frederick W. Sharon, January 10, 1889, Sharon Mss; Newlands “Autobiographical Sketch for the Senatorial Campaign of 1886-1887,” mss in Newlands-Johnston Papers

of failures. Many irrigation districts in California went bankrupt, turning to lawyers like Maxwell for assistance. The boom was also stymied by the depression of 1893, which halted irrigation development and other economic activity. Nevertheless, the boom had its successes.⁷

William E. Smythe's 1906 book, *The Conquest of Arid America*, promoted the success of irrigated agriculture in California, which was the poster child of the boom. Smythe made much of how irrigation projects gave California a monopoly on oranges, raisins, olives, and nuts—formerly rare, but now commonplace in the East.⁸ Smythe's book was designed as a report card on how well the arid states did during the boom. California earned an "A," as did Colorado. Smythe called Colorado "the crown," because the promise of irrigation had lifted land prices sharply.⁹ Smythe was pro-developer, and developers liked rising land prices.

The Smythe book also gave report cards to the states for the steps taken to update water rights laws and regulation of irrigation facilities. A basic premise of the book was that irrigation had been ushered into the West on an industrial scale, and state laws needed to adjust accordingly. For its irrigation reforms, Wyoming received an A+. Nevada received an "F"—the only one of the arid states to score so poorly. The Silver State, Smythe noted, had done little new irrigation work and had regressed administratively.¹⁰

One man deserves special credit for the irrigation reforms in Wyoming. His name was Elwood Mead. A self-described "professor, politician, and engineer," Mead was one of the first of a new breed of reformer on the American political landscape—the scientific expert. Born in 1858 in Indiana, he studied engineering at Purdue. Mead worked in the field of irrigation his entire life, becoming one of America's longest-serving and most admired scientific bureaucrats. He was a designer of the monumental

7 Benson, *Maxwell*. pp. 45-60.

8 Smythe, p. 133

9 Smythe, p. 154

10 Smythe, pp. 194-206

Hoover Dam; Lake Mead, the dam's reservoir—the largest in the United States—is named in his honor.¹¹

Starting in Colorado as an assistant in the state engineer's office, Mead moved on to Wyoming, where he drafted laws to create a powerful state engineer's office. He carved Wyoming up into four "hydrographic" basins—rivers and their drainage basins—and assigned a "basin engineer" and two assistants to each basin. Until Mead's innovation, western water had been allocated according to a so-called system of "prior appropriation," meaning that, once granted, the amount and use of water were fixed and could not be adjusted to changing conditions. This inflexible system proved problematic if, for instance, a farmer wished to rotate crops or use more or less water in a given spot. The crux of the Mead system was to empower the basin engineers to determine annual approval for how much irrigated water could be appropriated and for what beneficial use. By making the "prior appropriation" system adjustable, Mead solved the weakness of the existing approach. According to Smythe, Mead's reforms made Wyoming "Law Giver of the Arid Region."¹²

11 See the biography of Mead, James R. Kluger, *Turning Water on with a Shovel: the Career of Elwood Mead* (Albuquerque, 1992), hereafter Kluger, *Mead*.

12 Smythe, pp. 207-221. See also Samuel P. Hays, *Conservation and the Gospel of Efficiency* (Harvard, 1959), ch 1, "Store the Floods," 5-26.

CHAPTER 8 — *Trouble on the Truckee*

NEWLANDS SET OUT TO BRING MEAD'S same scientific approach to Nevada. It was "an elaborate effort" for irrigation development in the state.¹ First, he hired a highly-regarded accounting firm from Manchester, England to identify and value Sharon's estate—especially its irrigation assets. For years, Sharon had owned the Virginia and Gold Hill Water Company in Virginia City, which drew water from deep within the Sierra Nevada mountain range. He had also bought vast tracts of land in Burlingame, California and Phoenix, Arizona, both of which would require irrigation for development. The accountants took a hard look and concluded that the Sharon estate was Nevada's second-biggest property owner, right behind the Central Pacific Railroad.²

Next, Newlands assembled a team of irrigation experts—engineers, water law specialists, and geophysicists—whose comings and goings were reported in the Nevada press. Newlands' team was headed by William Hammond Hall. Considered by one historian to be "one of the country's leading irrigation experts,"³ Hall was a big "catch" for a study of Nevada. Hall was known

1 Smythe, p. 205

2 J.R. Bridgford & Sons, chartered accountants, Manchester, England, "Balance Sheet, Sharon Estate, January 1, 1890" & "Analysis of Sharon Estate, 1889-1890," Sharon Estate, 1889-1890." Newlands Mss. See also, Lilley, "Early Career," p. 194.

3 Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (Oxford: NY, 1985, pp. 110-118, quote p. 117. See Lilley, Early Career, p. 199, footnote 19. See also *Reno Gazette*, October 8, 21-22. Also William Hammond Hall to Charles F. Crocker, January 5, 1891, Newlands Mss.



Figure 8.1. The Truckee River at spring runoff. (Courtesy of University of Nevada Special Collections)

throughout the West as California's pre-eminent irrigation engineer. He had been involved in John Wesley Powell's renowned irrigation surveys for the U.S. Geological Survey, and shared with Newlands drafts of the USGS surveys for the Truckee and Humboldt river basins.⁴

Newlands put his experts to work surveying all the rivers in the state suitable for dams and reservoirs. For his irrigation ambitions to come to fruition, it was imperative that Newlands know the right places to capture the spring floods. In the summer of 1890, after a year of intensive effort, Newlands published the results of his team's surveys in a sleek pamphlet entitled *General Plan for the Irrigation and Reclamation of the Arid Lands of Nevada*.

The Nevada plan was an important milestone in Newlands' career. It also marked a high point in the irrigation boom in the West. The pamphlet ran 26 pages, punctuated with colored maps and tables. Infused with idealism,

⁴ See William H. Hall to Newlands, January 9, 1890, Newlands Mss. Richnak, *River Flows*, pp. 85-89 discusses the Hall-Newlands collaboration.



Figure 8.2. The Truckee River in Nevada, fed by the run-off from Lake Tahoe, flows between Reno and Truckee Bluffs. Newlands solitary house, built in 1890, perches on the bluffs at Rattlesnake Point. The size of the house, and its separation from Reno, attests to Newlands status as Nevada's "peacock in the chicken yard." The photos capture the difference between mountain West rivers at spring flood run-off (left) and placid summertime (right). (Courtesy of University of Nevada Special Collections)

expertise, and a call to overhaul both the state economy and the state government, it was distributed free to every registered voter.⁵

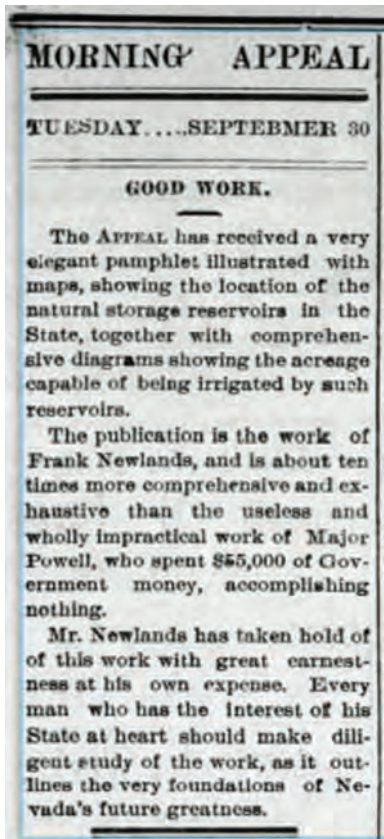


Figure 8.3. Newlands' irrigation plan dazzled the Nevada press, which cited the maps and diagrams. The reliably skeptical Carson City Daily Appeal praised it in contrast to "the useless and wholly impractical work of Major Powell."

Not only had Newlands surveyed every river with an eye to irrigation, he'd also begun purchasing the relevant properties, starting with the Truckee River.

Apart from the pamphlet's overall thoroughness, two pieces of content are noteworthy, both shown here. One is the official letter from Hall to Newlands, telling developers where to buy irrigable land. The letter is written on Hall's stationary (highlighted in yellow), identifying Hall as the Chief Supervising Engineer for the Western Division of the U.S. Geological Survey. As was not unusual in the Gilded Age, Newlands and Hall were acting out roles that blurred the distinction between private power and public authority. Hall's letter reviews each water storage site on Nevada's lakes and rivers, ranks each according to storage feasibility, and calculates the cost to store water at each site. Highlighted in yellow are the estimates for the Truckee project, which Newlands favored as most feasible for development.

Also notable is a map of the Truckee project (shown on page 51), if it were developed according to Newlands' plan. The Truckee runs 100 miles from Lake Tahoe to Pyramid Lake. Blue coloring indicates lakes and rivers, green indicates land under irrigation, and yellow indicates irrigable land.

The plan put Newlands at the head of the boomer parade. And he moved quickly to capitalize on it.

⁵ The document is available for examination and photocopy in the Beinecke Rare Book Library at Yale.

APPENDIX.

APPENDIX A.

OFFICE OF THE
SUPERVISING CIVIL ENGINEER
ROOM 75, FLOOD BUILDING
SAN FRANCISCO

WESTERN GRAND DIVISION
CALIFORNIA, OREGON, WASHINGTON, IDAHO, NEVADA,
ARIZONA AND PART WEST OF
THE MOUNTAINS.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
IRRIGATION BRANCH

SAN FRANCISCO, August 22, 1890.

HON. FRANCIS G. NEWLANDS, Reno, Nevada:

My Dear Mr. Newlands—You have asked me to write something concerning the cost of canal works and of storing water, for your irrigation pamphlet to be put before the good people of Nevada, and I take pleasure in sending you this hastily-written letter, regretting that I am not enabled to lay before you, in detail, the full line of data on these subjects at my command.

Of course there are storage sites like Lake Tahoe, and similar natural lake basins which might be mentioned (the outlets being narrow and easily closed), where storage may be effected at exceedingly low rates; but these are hardly to be regarded as artificial reservoirs, even after dams are built.

In such places water may often be stored at less than a dollar per acre-foot of storage capacity. As you very well know from your own examinations, the cost of storage in Lake Tahoe will come to only a few cents per acre-foot.

At sites, however, such as are usually found, and such as must ordinarily be availed of, the cost of storage in California has ranged from two and a half to twenty dollars the acre-foot, (this unit of measure being the quantity of water, which will cover one acre of land, a foot deep). I will cite a few instances for your information.

The Boorman reservoir, the property of the North Bloomfield Mining Company, situated on one of the forks of the Yuba river, in Nevada county, holds about 22,000 acre-feet of water. It is closed by a rock dam of what is known as the hydraulic-mining type, of about 100 feet in extreme height, which backs water over about 500 acres of land, and, with a subsidiary waste-way dam, cost about \$246,000,—making the cost per acre-foot of storage something over eleven dollars.

This was regarded as a very favorable storage site, but not an exceptionally good one. Probably, at the present day, the dam might be built for about two-thirds of its original cost, reducing the cost of storage in that site to something between seven and eight dollars per acre-foot.

Eureka lake reservoir, another site within the water-shed of the Yuba river, constructed also for hydraulic mining purposes, occupies a natural lake basin. Here about 15,000 acre-feet of water were stored, at a cost of something less than two dollars and fifty cents per acre-foot, with a rock dam whose greatest height is sixty-eight feet.

The Faucherie, a reservoir situated on one of the forks of the Yuba, another one of the hydraulic mining storage basins in Nevada county, also occupies a natural lake basin, wherein something less than 1,500 acre-feet of water have been stored at a cost of about six dollars the above unit of measure.

The English reservoir, still another of the famous hydraulic mining group, occupied a natural basin, which, however, had three outlets, and, consequently, required three dams. One of these was 131 feet high, the highest of its type (that is, the hydraulic-mining rock type) ever constructed in California.

The volume of storage in this basin was something less than 15,000 acre-feet, and the total cost of the works brought the rate per acre-foot to the neighborhood of eleven dollars.

Going to the southern part of California, Bear valley, in San Bernardino county, presented one of the best sites for water storage which California holds. With a dam sixty feet in height, in the neighborhood of 30,600 acre-feet of water were stored. The cost of this construction was such as to make the rate per acre-foot about two dollars and a quarter. The work was far too light, however, and if a proper dam had been built there the cost would probably have been somewhere between three and four dollars per acre-foot. The company are building another dam to back up that now in place, so that the total cost of their storage (counting the two dams) will probably exceed five, if not six, dollars per acre-foot.

The Sweetwater reservoir site, in San Diego county, California, with a dam ninety feet in height, has a capacity to hold something over 18,000 acre-feet of water.

The dam here built is of masonry in cement, and, consequently, a high-class work. Its cost was in the neighborhood of \$234,000, or nearly thirteen dollars per acre-foot of storage commanded. Had this site been situated where, as in the case of irrigation reservoirs generally, it would not be necessary to construct such a high-class work, the storage within it might have been effected, in all probability, at an expense of eight or nine dollars per acre-foot.

The Crystal Springs reservoir, of the Spring Valley Water Company of San Francisco, is in one of the finest sites, not already a natural lake basin, known to exist anywhere. The dam which is now being constructed there is a high-class work of concrete. The estimated capacity of the reservoir space is over 90,000 acre-feet, and the expected cost of the work will bring the rate to the neighborhood of twenty dollars the acre-foot, or, probably, more.

Figure 8.4. This letter, which is written on official U.S. Government stationery, identifies William H. Hall as a senior federal official. The letter advises private citizens on how to invest in irrigable land in Nevada. (Courtesy of Yale University Libraries)

If this reservoir site were somewhere in the Sierra Nevada Mountains, commanding lands for irrigation, I am of the opinion that a suitable dam for that purpose could be built in its opening at a cost that would bring the storage effected down to eight or nine dollars the acre-foot.

The Cuyamaca reservoir, of the San Diego Flume Company, having an earthen dam forty feet high, cost for this work and outlet gates, something over \$47,000. It has a capacity to hold between 11,000 and 12,000 acre-feet of water, which storage, consequently, cost at the rate of about four dollars and ten cents per acre foot.

The Hemet reservoir site, commanding lands of the San Jacinto valley, in San Diego county, has been surveyed and a careful estimate made for a stone dam at its opening,—the expected cost being well over ten dollars to the acre-foot. This site will hold in the neighborhood of 18,500 acre-feet of water, with a dam 150 feet high.

A most wonderfully good site for the storage of water is found in Kern county, where 146,000 acre-feet can be stored in one basin, at an estimated cost for a rock dam of about \$152,500; or, at the rate of but little more than a dollar to the acre-foot.

And so at another point in the same county is found a site where 31,000 acre-feet can be stored, with a rock dam estimated to cost \$84,000, or something like two dollars and seventy cents to the acre-foot.

I might go on and enumerate many other examples, but, to cut the matter short, and give you my opinion as briefly as possible, I will say that storage, with works suitable for irrigation enterprise, will commonly cost from three to seven dollars and a half to the acre-foot, where conditions are most favorable—with the exception of that class of sites which I first mentioned as natural lake basins, and a very few others.

By far the greater number of storage basins commonly thought to be favorable for impounding irrigation waters, however, when closely examined, are found to necessitate expenditures for dams, ranging from seven dollars and fifty cents to fifteen dollars to the acre-foot of storage capacity.

Of the sites within your Truckee and Carson basins, of which I have exact data, I expect from the surveys made for the benefit of your own people, you have already some definite knowledge. I may say, however, that aside from Lake Tahoe, Webber lake presents opportunity for the cheapest storage. There something over 11,000 acre-feet of water can be held at a cost between three and four dollars to the acre-foot.

Then, next in order comes Donner lake, where something over 40,000 acre-feet can be stored at a cost between five and six dollars per acre-foot. Or, by another scheme, not taking in all of the Donner and lower part of the Coldstream basin, about 22,000 acre-feet can be stored at a cost (according to the General Government Irrigation Surveys) of five to six dollars to the acre-foot. But judging from an inspection of the locality, and from private surveys, I think it likely that the cost in this case may not exceed four dollars the acre-foot.

Independence lake presents a fine storage site where 23,000 or 24,000 acre-feet of water can be stored for six dollars or seven dollars to the acre-foot.

Hope valley, in the Carson water-shed, is a magnificent location, if we are to look to volume of water which may be held as the test, for there nearly 100,000 acre-feet of water might be confined, but the outlay would be at the rate of about nine dollars to the acre-foot.

Long valley, at the head of Carson valley, can be made to hold something less than 35,000 acre-feet, at a cost (estimated on the basis of the General Government Irrigation Survey) not to exceed five dollars and fifty cents for each acre-foot held, but the expense of this storage will be increased by the cost of delivering water to the site by means of a canal from one of the branches of the Carson. As in the case of Donner Lake, it is likely that a closer examination and estimate may show that this cost need not be so great.

There are other sites of which I have some personal knowledge, where storage may be effected almost as cheaply as in those that I have mentioned within the Truckee and Carson basins. As, for instance, Sardine valley and Hennes Pass valley. On the whole, I am of the opinion that conditions are exceptionally favorable for storage in the basin of the Truckee river.

I hope that better sites for storage may be found within the water-shed of the Carson, and I have reason to believe that excellent sites exist within the basin of the Walker river.

Of the Humboldt I have no personal knowledge, but from a general idea of the character of the country, I do not doubt the existence of excellent storage basins there. The question in that case would be as to sufficiency of water available for storage.

The cost of irrigation canals in California and elsewhere, of which I have knowledge, ranges from two dollars to ten dollars to the acre which they are capable of irrigating.

Irrigation upon the plains commanded by the Walker and Carson rivers, should not anywhere cost, for main canals with their principal branches, more than three dollars to the acre which they would be capable of serving.

In the basin of the Truckee this cost will be greater, I think, ranging between five dollars and six dollars to the acre—although, in the case of those lands which are already irrigated, doubtless their works can be duplicated at a less cost.

Supposing that your storage and canal combined works are to cost even as much as fifteen dollars per acre. Surely lands which are almost absolutely valueless without water, and which, being supplied with it are worth fifty dollars, can stand this outlay of fifteen dollars to effect the desired end.

Very truly yours,

WM. HAM. HALL.

Figure 8.5. The Hall letter is a detailed roadmap of current development costs for irrigation dam construction in Nevada. The Nevada numbers are contrasted with current market costs at comparable irrigation dam sites in California. (Courtesy of Yale University Libraries)

Tahoe, another on the Little Truckee, and, for good measure, three other sites on the neighboring Carson River. He bought an option for a reservoir site at Little Truckee Canyon. Recognizing that the irrigation developer would need to sell land to finance construction, he negotiated to buy land adjacent to the sites as well. In short order, Newlands had bought options at all the suitable dam sites on the Truckee River.

Newlands offered to sell his options to the state of Nevada at cost plus six percent—either to the state itself, or to a reclamation commission or an irrigation district. His one condition was that the state authorize an engineer to supervise construction and create a state reclamation commission to manage the system.⁶

Even as he bought up dam sites, Newlands was cajoling the Nevada legislature to adopt proposals he had broached in his plan. These proposals moved smoothly. The irrigation boom was popular in the West and Newlands was identified with it. He was new to Nevada politics and he was wealthy. He was also easygoing, as was his top lobbyist, William E. Sharon. “Willy” Sharon was the former Senator’s nephew and, as “the young Sharon,” had managed the family’s political affairs in the 1870s. Crucially for the chances of Newlands’ legislation, Willy also happened to be the majority leader of the Nevada Senate.

Throughout 1889, irrigation reforms coursed through the legislature like water through a spillway. The legislature created a state irrigation engineer, to supervise irrigation work in the state. They enabled counties to float irrigation bonds issued by local irrigation districts. They created a board of State Reclamation Commissioners, and empowered the board to construct and manage irrigation facilities. They approved \$100,000 to start dam

6 Newlands’ General Plan is discussed in detail in Lilley, *Early Career*, in the chapter on “Politics in Nevada, 1888-1892,” ch.6, pp. 190-240. Also, see Lilley & Gould, *Western Irrigation Movement, 1878-1902* (*Univ. of Wyoming*, V. XXXII (1966)). pp. 59-60 for more details. The on-the-scene mapping and printing is discussed in Richnak, *A River Flows*, pp. 85-86.

construction, and then authorized the Commission to use the untapped \$700,000 state school fund for irrigation work. One might have looked upon Nevada in that heady moment and proclaimed it, too, to be “Law Giver of the Arid Region.”

Yet the zeal for irrigation reform dried up as quickly as it had begun. The first test was the relatively small \$100,000 appropriation to buy out Newlands’ dam site options. While modest, the appropriation ran up against pork barrels. There were the “best” dam sites for irrigation and the “best” dam sites for the political districts of the senators—and rarely did the twain meet. The Senate finance committee deadlocked.

The failed appropriation started a cascade of reversals. The reclamation commissioners stopped meeting, because the state treasurer challenged their authority to tap the school fund. The state attorney general argued that counties could not issue bonds, which would compete with the state’s issuance of bonds. The state engineer’s job, the final piece of Newlands’ irrigation architecture, was never filled. In 1890, the legislature struck down what it had enacted the previous year. After all of Newlands’s work—after his extensive surveys and well-packaged irrigation pamphlets, his favorable press coverage and the encouraging initial actions of the legislature—Nevada was nowhere.⁷ So much for the irrigation boom in the Silver State.⁸

Newlands always believed that the state failed him in carrying out his plan, particularly the Truckee project. Smythe, who endorsed the Newlands plan, wrote that “it came to nothing because of public indifference and subtle opposition.”⁹ William Rowley, Newlands’ biographer

7 See *Reno Gazette*, Oct 17, 1889, “What F.G. Newlands is doing to develop our State.” The ups and the downs for the Newlands plan are summarized in Newlands’ talk to the Nevada Board of Trade, January 6, 1891, with attachment *Correspondence concerning Water Storage and Reclamation of Arid Lands in Nevada* (Reno, 1891), Newlands mss. Rowley, *Career of Francis G. Newlands*, p. 65, and ch. 6 “More than Noble Words.”

8 More information on Newlands’ legislative reforms is in Lilley & Gould, *Western Irrigation Movement, 1878–1902*, pp. 59–62

9 Smythe, p. 205

and the dean of Nevada historians, pointed the finger for that “subtle opposition” at Nevada’s livestock operations. In his article *Opposition to Arid Land Irrigation in Nevada, 1890–1900*, Rowley noted that the state’s livestock industry was fundamentally opposed to irrigation for agriculture. The livestock interests were ever-present in the state legislature. Newlands and the irrigation interests came and went.¹⁰ When push came to shove, the cattlemen carried the day.

The entire irrigation escapade in Nevada taught Newlands a valuable lesson. He became convinced that state governments by their very nature were unable to administer basin-wide irrigation programs. They were too politicized to manage something so complex—and too inept, to boot. The politics of the appropriations process, so central to legislative politics, bothered Newlands particularly. His plan for Nevada had foundered specifically on the legislature’s inability to appropriate a measly and already authorized \$100,000. To keep funds flowing but escape the appropriations trap, Newlands would have to find a novel way to finance irrigation projects.

“*In she plunged boldly/No matter how coldly/The rough river ran...*” At one of those long-ago Bohemian Club evenings, Newlands—a young romanticist on his way up—had reflected on Thomas Hood’s poem, and his suffering subject’s losing battle with the Thames. “*Over the brink of it/Picture it—think of it/Dissolute Man!*” Through his work, wealth, and willpower, Newlands had brought arid Nevada to the brink of harnessing its several rivers. But to finally capture the waters of the West, Newlands would have to go back East—to Washington.

10 William D. Rowley, *Opposition to Arid Land Irrigation in Nevada, 1890-1900*. Annual Report, Assoc. Pacific Coast Geographers, v. 43 (1981) pp. 113-123. After the Newlands Reclamation Act became law in 1902, Newlands still kept a close eye on the Nevada legislature and irrigation matters. He told Frederick Newell, his longtime ally and the first Director of the Reclamation Bureau, that he had always wanted a bill “which will give your department as free a hand as possible in this state.” FGN to Newell, February 6, 1903, Newlands mss. Quoted in Donald J. Pisani, *Water, Land and Law in the West: The Limits of Public Policy, 1850-1920* (Kansas, 1966), p. 41.

Washington

(1892-1902)

CHAPTER 9 — *To Washington*

NEWLANDS WAS ELECTED TO CONGRESS IN 1892. He came to Washington as an outsider, and he stayed that way. Hoping to ride Stewart's influence into the Senate as a Republican, Newlands ended up riding the purse of the Sharon estate into the House as a member of Stewart's Silver Party, itself a reflection of Nevada's unshakable belief that silver mining could get back on its feet.¹ Smythe ridiculed Nevadans for "the strange delusion" that the glory days of the Comstock were coming back. "No state has been so bitterly derided as Nevada...it has no other mineral wealth...it is 'flickering out.'"²

Newlands enjoyed a long tenure in Congress, ascending, after a decade in the House, to the Senate in 1903. Yet for all his longevity, Newlands never truly fit in—not even with his fellow members of the western delegation. During Newlands' House term, three Senators led the regional delegation—his Nevada colleague Stewart, who had returned to the Senate after a decade seeing to his affairs in Nevada; Francis E. Warren, the Civil War hero governor-turned-senator from Wyoming; and Henry M.

¹ The Silver Party was an historical and political nonentity. It was a one-off party, which functioned only for the election of 1892 and only for the purpose of electing two men. Stewart wanted his Senate seat back, and Newlands wanted Nevada's House seat. Both were held by stubborn Republican incumbents. To make an end-run around these incumbents, Stewart and Newlands together created their own party and dressed it up as a pro-silver force. The gambit lasted for a single election cycle before being absorbed, first by the Populists and then by the Democratic Party.

² Smythe, p. 194.

Teller, President Chester A. Arthur's onetime Secretary of the Interior and Senator from Colorado.

Like the region they represented, each of these Senators was strongly Republican and fiercely protective of states' rights. All three men had absorbed their zeal for states' rights when their states were young territories. They bridled at federal interference in most state matters, and few issues raised their hackles like federal involvement in irrigation. As far back as the 1880s, all three men had sponsored legislation to enable the federal government to stimulate private enterprise in irrigation, empower state governments—and avoid the need for federal appropriations. (With the House Appropriations Committee stacked with unsympathetic Easterners and Midwesterners, western members could not hope to get pork appropriations from Congress.) They claimed this could be done if the federal government “ceded” back to the state governments the public lands within their borders. On irrigation issues, Warren was the delegation's undisputed spokesman.

Newlands, too, came from the West—but there the similarities ended. He was a western businessman, not a western politician. He had no interest in the territorial pasts of the western states, and he had little affinity for issues involving western state borders. While his fellow Westerners fretted over states' rights, Newlands' business background had given him a regional perspective. And there was the matter of party. The delegation was solidly Republican, whereas Newlands' affiliation had drifted from the Silver Party to the Populist Party and ended up in the Democratic Party. Newlands was a complete outsider, and in the minority as well. “Patrician, worldly, cultured,” wrote the Nevada historian Barbara Richnak, Newlands “appeared on the Nevada scene like a peacock in a chicken yard.”³

He was a western businessman, not a western politician. He had no interest in the territorial pasts of the western states, and he had little affinity for issues involving western state borders.

³ Richnak, 74.

Given these differences, it was perhaps unsurprising that Newlands did not even socialize with his delegation. Ironically, the consummate Westerner preferred the Eastern social set. He maintained his tony weekend residence in New York City, at 13 Gramercy Park, and rubbed elbows with the city's upper class.⁴ The family belonged to the elite Riding Club and equally elite Racquet Club. Newlands was also a member of the Lawyers Club, a proud bastion of the city's legal establishment dating back to 1810.

Outsider or not, Newlands found himself in Congress during a pivotal moment. The decade of the 1890s was a hard time for the West. A depression had hit the region in 1893, followed by a drought that stretched from 1898 through the early years of the next century. These hard times changed everything for irrigation. Livestock herds shrank, leaving railroads with less to transport. With the carrying trade sharply down, the railroads got involved in irrigation as a protection against future droughts.⁵ They were indifferent to irrigation for agriculture, but became more active in seeking irrigation to protect public grazing lands for stockmen. The Northern Pacific, the Great Northern, the Santa Fe, the Southern Pacific, and the Union Pacific all clamored for dams and reservoirs throughout the West.

The decade was bad politically for the West as well, as the western delegation chose the wrong way to go about promoting irrigation. The fly in the irrigation ointment was a concept known as "land cession," in which the federal government would cede back to the western states the arid public lands within their boundaries. Under the cession concept, states were expected to sell the lands cheaply to further the principles of the Homestead Act of 1862, which granted 160 acres of unsettled public land to American citizens who had not fought for the Confederacy and who pledged to farm the land. The Homestead Act has long been

4 *Social Register, New York, 1893* (Social Register Association: NY, 1893) p. 217.

5 Donald J. Pisani, "George Maxwell, the Railroads and American Land Policy," *Pacific Historical Rev*, v63 (May 1994), pp. 177-202

counted as “the mythic American law” embodying in one fell swoop yeoman-farmer Jeffersonianism, anti-slavery idealism, and settlement of the American West.⁶ This gifted land, in turn, was expected to trigger economic development.

Dreaming of dramatic development within their states, the western delegation sponsored a series of bills calling for land cession, proposing to cede enormous tracts ranging from 1 million to 2 million acres. But the cession concept appeared fatally flawed. No one wanted the parched parcels, no matter how cheap. One of the cession bills, sponsored by Wyoming Senator Joseph Carey, became law in 1894; it produced no leasing claims. Yet cession remained the choice of the stubborn states’-righters, preferred because state governments administered the program and federal appropriations were not needed.

The cession obsession turned out to be the Achilles’ heel of the Westerners. Once cession became vulnerable to attack, so did the idea of state management of public lands and irrigation. Inept administration allowed stockmen to acquire embarrassingly large amounts of rangeland, outraging the public and leading national politicians like William Jennings Bryan and Theodore Roosevelt to take up the issue.⁷ Cession of the public lands, and administration of it by the states, led the western delegation down paths it never foresaw and created heroes it never wanted.

Once the public lands issue made states’ rights vulnerable, the door opened for outsiders to the states’ rights cause to enter the irrigation movement. Experts like Newlands, Smythe, and Maxwell began to rally around the so-called “nationalist” banner. Unlike the “statists,” who reserved for the

6 Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (Penguin: N.Y., 2017), pp. 41-51.

7 William Jennings Bryan, speaking at the National Irrigation Congress in 1897 in Lincoln, NE, stated his worry about land cession instigating monopolies. The Wikipedia entry on the National Irrigation Congress features the Bryan talk, citing the *New York Times*, September 30, 1897. Wikipedia entry was accessed April 15, 2019.

state governments the power to locate and build dams and reservoirs, the nationalists wanted the federal government to be in charge. The nationalist cause drew support from the business community; the statist cause was dominated by politicians.

Newlands spoke frequently on the House floor about how states could not be trusted to administer land sales. When he talked about state governments and irrigation, his choice words were “ignorance,” “improvidence,” and “dishonesty.”⁸ Always, Newlands was ready with an example of livestock interests tricking the state into allowing one company to amass a large amount of grazing acreage. There was the man in Humboldt County, Nevada, who acquired 14,000 acres of “improvidently granted” land. And there was the ranch in Texas he harped on, which acquired five million acres.⁹ Newlands cited the Texas example because Texas, unlike the other mountain states, actually owned its own public lands.¹⁰

Newlands picked on the livestock industry deliberately. He never forgot how the industry had opposed his cherished irrigation plans in 1889, and he knew that his new political party, the Democrats, liked anti-monopoly politics. Newlands often lamented Nevada’s abuse of a land cession in 1880 where ranchers had “cut the state into ribbons...and acquired nearly all the available range.” The state’s sales plan, Newlands contended,

8 Newlands developed a “stump speech” promoting the nationalist approach, and disdaining the state approach, which he used when discussing the need for irrigation development in the West. Once he introduced his legislation (January 26, 1901), the speech was tailored to promoting his bill. His fullest floor version was delivered January 30, 1901, and a truncated version was included in the *Congressional Record* of January 9, 1901. The Arthur Darling compilation of Newlands public papers usefully combines the several versions Newlands used into one “omnibus” stump speech. See *Public Papers of Francis G. Newlands*, ed. Arthur Darling (Houghton Mifflin: Boston, 1932) vol. 1, pp. 58-65.

9 Ibid.

10 Quotes are from Newlands’ testimony before the House Committee on Public Lands, 56th Congress, 2nd session, *Hearings on Reclamation of Arid Lands*, January 21, 1901, *Testimony of Francis G. Newlands*, pp. 5-7.

produced “an explosion... in claims for ranching lands... but not one for farming, timber or minerals.”¹¹

Newlands spoke so often about state ineptitude that colleagues started challenging him. After all, he was criticizing his own state and breaching congressional etiquette. During the debate in 1901 on appropriations for the popular “rivers and harbors” bill, Massachusetts Congressman William Moody, an influential Republican member of the House Appropriations Committee, challenged Newlands head on. “Does the gentleman think that the management of these arid lands would be improvident and unintelligent under the state?” Moody inquired. Newlands pointedly replied, “I do.”¹²

By 1897, the western delegation’s position on irrigation had fractured. Cession had been tried and failed. States’ rights had withered along with it. Mead’s biographer wrote that “it had become obvious that federal involvement loomed, and attention centered around what form that action would take and who would lead it.”¹³ As in all movements in disarray, infighting began to weaken the cause further.

Mead went to Washington to head the Agriculture Department’s fight in the coming federal irrigation program. Yet Mead, who had been surefooted in Wyoming, found himself stumbling in Washington. In Wyoming, Mead was “the expert.” But in Washington, he started tangling with rival bureaucrats, experts in their own field. First, he feuded with Newlands’ ally Frederick Newell, the Chief Hydrographer and head of irrigation at the U. S. Geological Survey. Mead feuded with Newell over which department would do what in irrigation. It became a battle of dams versus ditches, with Newell grabbing control of the *conservation* of water (the dams and the reservoirs), and Mead securing authority over the *application* of water (the irrigation ditches). Mead bargained for application because he wanted

11 Newlands, Address to the Washoe County Improvement Association, *Reno Evening Gazette*, October 21, 1889., Lilley & Gould, p. 61.

12 *Congressional Record*, 56th Congress, 2nd Session, (January 30, 1901), 1701-1702.

13 Kluger, *Mead*, p. 27

states to control that phase of irrigation. Mead sought out the short end of the stick because he wanted it to be the states' rights end of the stick.¹⁴

Mead did not realize that he had lost his first Washington turf war. He thought he had been shrewd in establishing himself as the point man for "limited federal involvement."¹⁵ Mead started feuding with Maxwell over what positions should be taken by Maxwell's National Irrigation Congress, and he voiced his fear that Maxwell was giving the railroads too much power over "the location of irrigation works."

Then Mead made his big bureaucratic mistake. He picked a fight with Gifford Pinchot, chief of the Forestry Bureau in the Interior Department. Rep. Frank Mondell, a Wyoming Republican and active member of the House Irrigation Committee, was trying to shift Pinchot's Forestry Bureau away from the Interior Department and over to the Agriculture Department. Mondell's move was aimed at clipping Pinchot's power. Mead sided with Mondell in the fight, despite his open contempt for Mondell and his concern that Mondell was the states'-righters' point man in the House for forestry and reclamation issues, two turn-of-the-century hot topics. Mondell, Mead wrote Benjamin Wheeler, president of the University of California, was "opinionated and bumptious" and should be kept out of forestry and irrigation "because he don't [sic] know enough about either to deal with them intelligently."¹⁶

Pinchot won the fight. And Mead lost a bigger war. He made Pinchot, a formidable federal expert, receptive to Newlands whenever Newlands needed an expert rebuttal to Mead. Pinchot was a close friend of Newell's, and both believed that an aggressive federal irrigation program required an aggressive forestry program. Newlands, a Newell ally, always made sure that when the House held hearings on irrigation, not only was Newell an expert witness but so was Pinchot. Like Newell, Newlands believed that a successful

14 Kluger, *Mead*, pp. 20-33.

15 Kluger, *Mead*, p. 27

16 Kluger, *Mead*, p. 34

reservoir plan required a successful forestation plan, because the greater the forestation, the easier to hold back floods. Pinchot never failed to boost his bureau's motto: SAVE THE FORESTS / STORE THE FLOODS.¹⁷

The fracturing of the cohesion of the western delegation—and the political zigzagging of western players like Mead, Maxwell, and Mondell—foreshadowed how room was opening up in the western delegation for an outsider and nationalist like Newlands. The western infighting also signaled new opportunities for outsider technical experts like Frederick Newell and Gifford Pinchot to operate in what had been closed western politics. It was fertile soil for a new approach.

17 House Committee on Irrigation of Arid Lands, 56th Congress, 2nd session, Hearings on HR 13846 on Reclamation of Arid Lands, *Testimony of Gifford Pinchot*, February 8, 1901, pp. 77-88.

CHAPTER 10 — *The Short Session*

BUT FOR A MINOR LEGISLATIVE MIX-UP, one of the most influential laws shaping the West might never have happened. One of Newlands' friends in the House, Denver Republican John F. Shafroth, informed Newlands that he had just submitted a bill on irrigation. The legislation, Shafroth told Newlands, had been referred mistakenly to Shafroth's own committee, Public Lands, rather than to the Irrigation of Arid Lands Committee, which should have had jurisdiction. It was a small snafu, but Newlands saw his opening and seized it. Over the course of two years—armed with experts and aided, eventually, by a new and energetic president—Francis Newlands would bring into being the National Reclamation Act, “the boldest piece of legislation ever enacted pertaining to the Trans-Mississippi West.”¹

What Newlands intended to do for the West had never been done before. And, as an unremarkable backbencher, Newlands was an unlikely leader to challenge the irrigation status quo. But challenge it he did. Fed up with the timidity and backwardness of the western delegation—particularly the states' rights ideology that

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¹ Donald J. Pisani, *To Reclaim the Divided West: Water, Law & Public Policy, 1848-1902* (Albuquerque, 1992) p. 322.

hampered effective irrigation measures—Newlands sought to reimagine how Washington approached water projects. Aided by his policy soul mate Newell, one of Newlands’ watermen and an expert legislative draftsman, Newlands would marshal his affinity for regional solutions and technical detail to pioneer a different approach to early 20th century congressional politics.

FRANCIS NEWLANDS AND HIS WATERMEN

Newlands’ career was defined by three high-profile struggles over water management—one in San Francisco (1879-1880), one in Nevada (1889-1890), and one in Washington (1900-1902). In each tussle, Newlands partnered with a skilled technical expert.

HERMANN SCHUSSLER

Chief engineer, Spring Valley Water Works (1864-1914)

Schussler’s engineering and architectural skills were legendary. When Newlands sought to persuade the San Francisco Board of Supervisors to adopt a mutually agreeable new rate schedule for the Spring Valley Water Company, Schussler tutored Newlands in how the company’s complicated cost structure was tied to the size of the city’s population and the size of the city’s public (“free”) water consumption. Newlands distilled the tutoring into language, charts, and graphs that successfully convinced the politicians.

WILLIAM HAMMOND HALL

State Engineer of California and consultant to the USGS

Hall guided Newlands’ plan to survey all of Nevada’s rivers for their suitability for dams, reservoirs, and irrigation ditches. Hall had worked in San Francisco with Newlands on the development of the Golden Gate Park and with Sharon on the acquisition of Burlingame. Historian Donald Worster called Hall “one of the country’s leading irrigation experts.”

GEORGE H. MAXWELL

California lawyer specialized in water rights law

Maxwell was a tireless promoter of irrigation for agriculture development in the arid West. He founded the National Irrigation Congress in the 1890s, of which Newlands was a founding member, and represented Western railroads on irrigation issues. Newlands and Maxwell were early critics of state-run irrigation and early enthusiasts of federal control. Maxwell was a key lobbyist for the Newlands Reclamation Act.

FREDERICK H. NEWELL

Chief Hydrographer, USGS

Trained in hydraulic engineering at MIT, Newell was one of the leading scientific experts working for the federal government in 1900. Newell worked on the Powell survey of the arid West and was a confidant to Newlands, Gifford Pinchot, and George Maxwell. Having mapped the western rivers that formed multi-state hydrographic basins, Newell joined Newlands in championing a regional approach to irrigation. Along with Newlands, Newell co-authored the Newlands Reclamation Act.

The bill's winding path into law began in January 1901. Between the election and inauguration of President William McKinley and Vice President Theodore Roosevelt, Congress held a short session of the 56th Congress. Later in life, Newlands noted that he used those few short months—from December 3, 1900 to March 2, 1901—to make a run at passing a comprehensive irrigation bill. After eight years on the outside of congressional politics, Newlands sensed that the political tides had changed in his favor. A vacuum had opened up in the western delegation, and Newlands intended to fill it.

Drawing on his earlier experience in San Francisco and Nevada, Newlands

moved into action flanked with a cadre of technical experts. During the closing months of 1900, Newlands and his friend Newell, the USGS Chief Hydrographer, spent December shuttling back and forth between their separate offices. What emerged from their meetings was a new and comprehensive bill for irrigation in the West. By empowering the Secretary of Interior to determine where and how to build dams and ditches, it broke a longstanding western taboo and administered irrigation on a regional basis that overrode state borders. Newlands introduced their legislation, HR 13846, into the House on January 26, 1901.²

As he had tutored the San Francisco Board of Supervisors years earlier, Newlands once more sought to smooth the path of his preferred policy by educating—and entertaining—the policymakers. He mobilized his personal resources—his beautiful Washington house in Cleveland Park, his charming wife and his expert friends—to host “irrigation dinners” for the western delegation. The dinners were great fun, the irrigation education was enjoyable, and the experts were special events in themselves. These experts—like Pinchot, the government’s chief forester, and Maxwell, the longtime irrigation expert who represented the railroads—were charismatic men, on their way up in Washington. Newlands gave five of these dinners in January, three for the House delegation and two for the Senate delegation. The dinners became events in their own right, as the onetime outsider made himself into the consummate insider.

2 Newlands, Sheridan speech commemorating the Newlands Act of 1902, June 30, 1905, Newlands mss. Hereafter Newlands, Sheridan speech. The Newlands Act is reprinted and summarized on pp. 79-82. Newlands and Newell were the veritable two peas in a pod when it came to water management. They thought alike about rivers. Newell was interested in the “the nature of the river,” while Newlands cared about “the system of the river.” That kind of thinking led into “river basin” thinking, which in turn led into regional thinking. Newell knew that “river basin” thinking was contrarian, and he delighted in it. He lunched daily at the “Great Basin Lunch Mess,” a prominent table in the center of the dining room of Washington’s Cosmos Club, a haven for scientists and experts. Newell founded “the Mess,” and Gifford Pinchot was the first to sign up. There is a delightful gem of a biography of Newell by Donald J. Pisani, the authority on public lands. See Pisani, “A Tale of Two Commissioners, Frederick H. Newell & Floyd Dominy,” *History of the Bureau of Reclamation* (Las Vegas, June 18, 2002) available online at www.waterhistory.org.

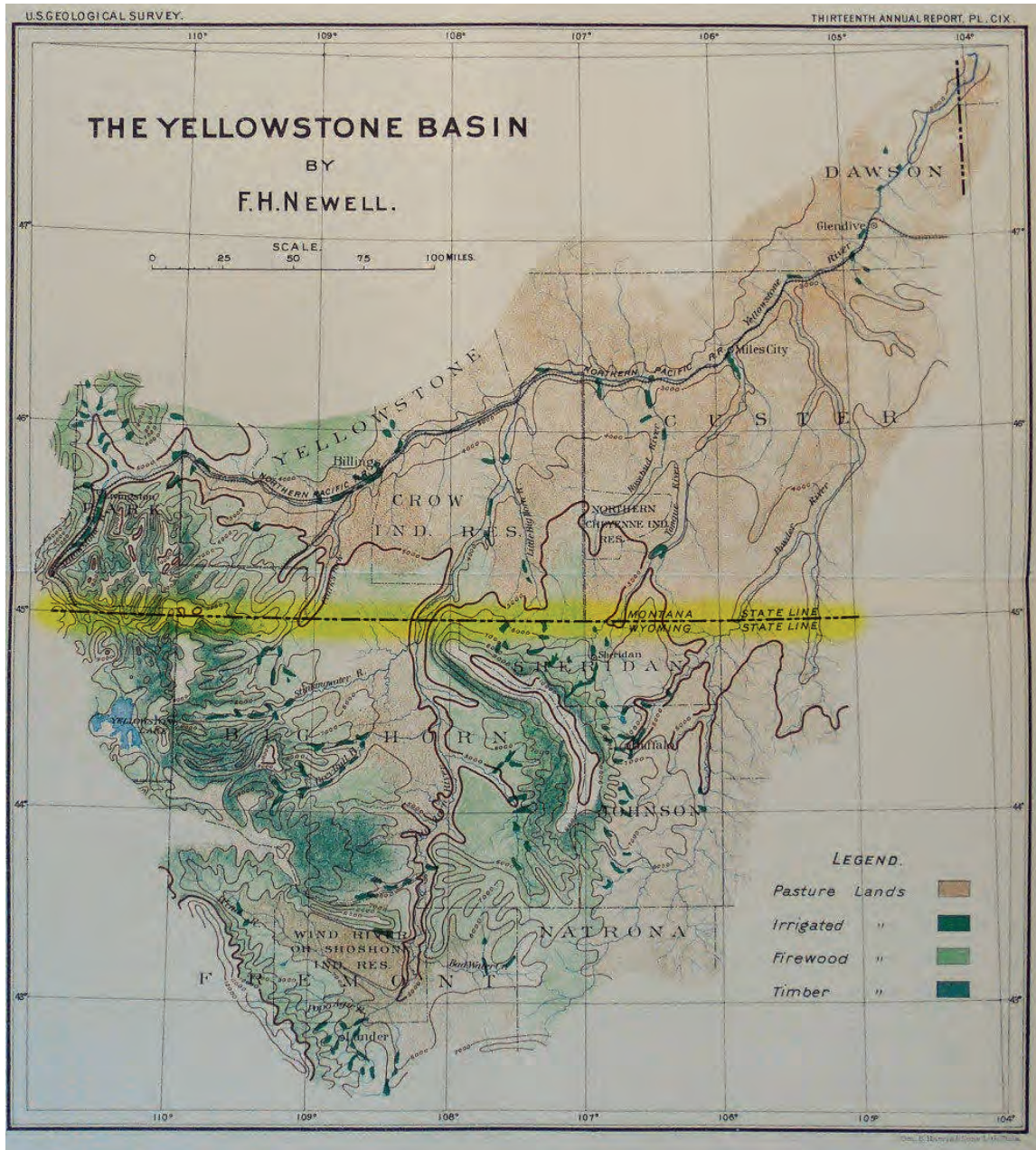


Figure 10.1. Frederick Newell was a pioneer in region-wide thinking, showcased in his mapping of multi-state, hydrographic basins, which he did for the USGS arid-land survey. Newell's signature regional map, shown here, was titled "The Yellowstone Basin"—not "Wyoming-Montana." The map is a cartographic lesson in the unsuitability of one state managing a river's water flow when its flows are multi-state and basin-wide. Note that the Yellowstone basin is split in almost perfect halves by the east-west border line running between Wyoming and Montana. (Credit: US Geological Survey)

The second dinner was attended by no less than the powerful Appropriations Chairman Joseph G. Cannon and the Speaker of the House himself, David B. Henderson. At it, Newlands spoke glowingly of his new bill and of his commitment to irrigation in the region. His friend Newell gave a lantern slide show, covering ancient irrigation facilities in exotic India, contemporary small-scale irrigation facilities in the West, and slides



Figure 10.2. Newlands in Washington 1900, at peak of House career while drafting his reclamation bill. Newlands “weekended” at his country estate in nearby Chevy Chase (MD) which Newlands developed as the country’s first “suburban new town.” He fancied himself an Edwardian gentleman, was an avid horseman, and dressed accordingly. Note the spats. (Courtesy of the Chevy Chase Historical Society)

from the famous Powell survey of river basins in the arid West. The assembled members of Congress were dazzled.

The dinners paid off, but it was the committee confusion that provided Newell his first major opening. Frank Mondell—the Wyoming Republican that Mead had alleged didn’t “know enough about either” forestry or irrigation—served on the House Irrigation Committee, which he kept dormant unless Senator Warren made a legislative move in the upper house. The accidental referral of Shafroth’s bill to the Public Lands Committee neatly avoided Mondell’s legislative graveyard. Newlands and Shafroth persuaded the Public Lands Committee to accept Shafroth’s bill and commence hearings. Next, in an act of legislative jiu-jitsu, Shafroth substituted Newlands’ bill for his own.

The hearings were set for January 11 and Newlands was given permission to arrange the witness list. He produced a list notable for its heavyweights, a sign that his time had come. Testifying in front of the committee were Newlands himself, as well as Maxwell, the executive chairman of the National Irrigation Congress and a frequent guest at Newlands' dinner parties. Representing the USGS were Newell, the USGS Chief Hydrographer; N. H. Darton, the Chief Geologist; and Charles D. Walcott, the USGS Director. From the Interior Department came Pinchot, the Department's Chief Forester, and E.A. Hitchcock, the Secretary of Interior himself. Mondell, a member of the committee in addition to his membership of the Irrigation Committee, asked to provide rebuttal witnesses. Arrayed against Newlands' heavyweights were Mondell himself and Elwood Mead, the Agriculture Department's irrigation expert. It was the best that the states' rights side could muster, and they paid dearly for it.

What happened next foretold what would happen, again and again, when irrigation came up for consideration in the House. Whenever the nationalists and statistes were pitted against each other—in hearings, in testimony, or before committee meetings—the nationalists were inevitably better armed and disciplined. By stark contrast, the hapless statistes in the western delegation had no experts and no discipline.

“The final conclusion has been reached that the Committee on Public Lands will assume jurisdiction of this subject,” Newlands observed at the January 11 hearing.³ Newlands noted that Public Lands “is a live committee and an active committee, and fully familiar with the land laws and the settlement of the western region and is probably better qualified than any other to take up this question.” The operative words were “live” and “active,” in stark contrast to Mondell's moribund Irrigation committee. By producing a top-flight group of experts who demonstrated their easy

3 House Committee on Public Lands, *56th Congress, 2nd session, Hearings on HR13846 Reclamation of Arid Lands, Testimony of Rep. Francis G. Newlands*, January 11, 1901, pp. 7-34.

expertise and prowled for bureaucratic influence over irrigation, Newlands guaranteed a “live”—and, indeed, lively—hearing on his bill.

The four-day hearings went well for the debut of HR 13846. The looming question was, “Would it work?” One by one, the expert witnesses were grilled on—and attested to—the feasibility of an irrigation scheme that encompassed the entire arid West. Collectively, Newlands’ witnesses acquitted themselves handsomely.

Newlands himself put on a sparkling performance. He knew the bill thoroughly, and he knew how and where irrigation worked and didn’t work. After Spring Valley and years trudging around the Truckee, Newlands’ detailed knowledge of water issues extended to how much irrigated water a crop required on a per acre/per year basis.

Newell and Maxwell also weighed in with their substantial expertise, the former a known commodity from his lantern slide shows at the Newlands’ dinners and the latter known to speak for the railroads. The Interior Department officials, most of them from the Geological Survey, jumped on the Newlands bandwagon. As they saw it, the bill would vastly increase the Interior Department’s power, and within the department, the Geological Survey’s power.

Perhaps the most interesting testimony came from Pinchot. He saw the irrigation movement as inevitable, and was intent on using the opportunity to promote his cause—forestry—as a key partner. While other witnesses talked about irrigation’s value to agriculture, Pinchot discussed how reservoirs needed forests in order to function properly. As presented by Pinchot, forestation was more interesting than agriculture. Pinchot had the rare ability to speak as if whatever he uttered was new. Gifford Pinchot made forestry new to irrigation.

The hearings were smooth sailing until the third day, when Mondell testified against the bill. In fairness to Mondell, he never should have been in the ring with the likes of Newlands, Newell, and Pinchot. Mondell was cast perfectly

to play the role of a non-commissioned officer in the western delegation. But he was not officer material. He came out of the Wyoming Territory, rising from rancher to mayor of Newcastle (population 659 in 1890). Mondell then graduated to the U.S. House of Representatives, where he became Senator Warren's man in the House. Inadvertently, the inept and cantankerous Mondell became Newlands' "secret weapon" in this legislative battle.

Mondell's task was to put a positive spin on the states' weakened irrigation position. He botched the job. Mondell struggled to explain what he called "the demarcation line" between the federal role and the states' role in irrigation, venturing that the federal government did "conservation and construction" while the states did "application." Mondell had the party line right. But lacking the background to extrapolate concept into actual practice, he stumbled. Embarrassingly, Mondell asked if he could return the next day with an expert. The next day he showed up for an anti-climactic repeat performance, with Elwood Mead by his side. For unexplained reasons, Mead left abruptly. It was a typically bungling performance from Newlands' opponents.

Nevertheless, Mondell persisted. Attempting once again to seize the initiative from Newlands, Mondell cajoled his Irrigation Committee into holdings hearings on his own bill, HR 14165, which again attempted to establish that "line of demarcation" and leave to the states the "application" of stored water. Hearings were held January 28, February 7, and February 9. Yet in trying to brake Newlands' momentum, Mondell made the tactical error of staging his show while Newlands was simultaneously holding carefully-orchestrated hearings and dinners on his own proposal.

Instead of being upstaged, Newlands stole the show. He gained permission to bring his expert witnesses to the Mondell hearings to promote the Newlands bill. Once again, the Newlands team—Newlands, Newell, Pinchot, Maxwell, and Darton—championed their nationalist approach. Mondell testified next—and inserted his foot into his mouth. He was not a lawyer, he said, but he thought it "was unconstitutional to actually irrigate

land and peddle water.” The committee construed Mondell’s remarks as a western challenge to the House’s favorite legislative activity—“rivers and harbors appropriations” for dams and dredging.

Challenging Mondell on that point, Congressman William King, a Utah Democrat, asked Mondell, “Is there any difference between having a dam to store flood waters and building a dam... for reclamation of extensive tracts of land?” Once again, Mondell fumbled. “I do not think there is a great difference,” he answered. The Mondell rebuttal to Newlands’ position was so weak as to be modestly harmful.⁴

With the hearings in the Irrigation Committee behind him, Newlands returned his focus to the Public Lands Committee. He visited with the six western Republican members on the Committee to ask for their support. Mondell he wisely excluded.

To Newlands’ dismay, the six were too timid to step forward. Appropriations Chairman Joe Cannon of Illinois—a dominant force in the House and future Speaker—frequently deprecated and bulldozed the western states, which, with the exception of California, had only one or two members. Cannon made a point of keeping the western delegation off of the rivers and harbors bill. Fearing retribution from their leadership, none of the Committee Republicans were willing to cross the “Tyrant from Illinois.”

Redoubling his efforts, on February 18 Newlands wrote a four-page letter to the six Republicans, urging them not to fear the anti-western sentiment of the House leadership. If the Public Lands Committee referred the Newlands bill to the Rules Committee, he reasoned, the worst that committee could do was reject it.⁵

Newlands tipped his hand to the House Public Lands Committee as to why he needed a referral. He explained in the letter that he had been hard at

4 House Committee on Irrigation of Arid Lands, *56th Congress, 2nd session, Hearings on HR 14165, January 28, 1901, Testimony of Rep. Frank Mondell*, pp. 57-68.

5 Newlands to House Public Lands Committee, February 18, 1901. Newlands Mss.

work on fellow Westerners in the Senate—and they had agreed to support his bill. The Westerners on the Senate Public Lands Committee were especially enthusiastic. Newlands had held two dinners for western senators, just like the ones he had held for the House members. At the second dinner, Senator Richard F. Pettigrew, a South Dakota Republican, had moved that the delegation support Newlands, which it did unanimously. He then moved that Senator Henry C. Hansbrough, a North Dakota Republican and Chairman of the Senate Public Lands Committee, introduce the Newlands bill as his own and move it through committee. Hansbrough agreed.

With the Senate prepared to move, Newlands asked the House Republicans, why was the House Public Lands Committee so fearful of “rapidity of action?” Yet Newlands’ attempt to embarrass the Committee’s Westerners made no impression on them. As Newlands later told President Roosevelt, their fear of Cannon was too ingrained.⁶

Newland’s letter was dated February 18, only 10 days before the adjournment of the 56th Congress. With time running out, Newlands appealed to the Public Lands Committee to put his bill on the floor, hoping that a Senate companion would be coming over to the House for a conference committee. Hansbrough nearly got it done. His Senate committee reported the bill to the floor and Hansbrough attached it to the catch-all Civil Sundry Bill. But the parliamentarian objected that Hansbrough’s bill was a general bill, not an amendment. On March 1, the parliamentarian’s ruling was sustained, 34-20.

Congress adjourned. In three short months, Newlands had accomplished three key breakthroughs. He’d drafted his bill. He’d built a cadre of experts. He’d assembled congressional support. But Newlands’ magisterial performance wasn’t enough. At the end of the short session, the nationalists had come up short. If he had any hope of achieving his long-held irrigation ambitions, in the coming months, Newlands would have to try again.

6 Newlands, Sheridan speech.

CHAPTER 11 — *New Lands*

THE ENDGAME FOR THE NEWLANDS BILL was a drawn-out affair. For most of 1901, Congress was out of session, and Newlands' legislation languished in parliamentary purgatory. Newlands kept occupied, traveling between Reno, his office on the Hill, and the Chevy Chase development, and keeping in almost daily contact with Newell and Maxwell regarding the far-reaching impact of a pending statist irrigation bill in Wyoming.

Yet the quiet on Capitol Hill belied the turmoil elsewhere in the nation. On September 6, 1901, President McKinley stood shaking hands at the Pan-American Exposition in Buffalo, New York. As he extended his hand to a young anarchist named Leon Czolgosz, Czolgosz slapped McKinley's hand aside and fired a .32 caliber revolver he'd concealed in a handkerchief. Eight days later, McKinley died of his wounds. America had a new President—Theodore Roosevelt. And Frank Newlands had an essential new ally in his fight.

The new Congressional session began on December 4, 1901. Right away, Newlands faced new threats from an old foe. Senator Warren, Wyoming's veteran states' righter, twice targeted Newlands bill. He failed to gain a foothold with each sally. The attempts to derail Newlands' "nationalist" bill occurred in circumstances that should have favored the state-managed approach. But the western delegation had lost confidence in a state-run irrigation program. Nothing could bring back the states' rights magic of the previous decade.

Of the two attempts at derailment, the first was the most serious. It came out of Warren's home state of Wyoming, long home to the western brain trust on water issues. Wyoming had set the pace in water management. Its State Engineer Office was the model for administrative machinery. Now, Wyoming would be the last stand for the state-run approach to irrigation.

Wyoming would be the last stand for the state-run approach to irrigation.

On June 10, 1901, the Wyoming state engineer had summoned to Cheyenne five other state engineers from adjacent states. The six engineers drafted a "state engineer bill" that followed the line of "demarcation" which Mead and Mondell had already laid out—"conservation and construction" reserved for the federal government, "application" for the states. In the engineers' version, state control was bolstered further because the federally-built projects would be constructed at sites determined by the state engineer. As in the land cession bills of the last decade, dams and reservoirs would be built in the states where public lands had been sold. The state engineers' bill elevated state experts over federal experts.

Barely a week and a half later, the state engineer approach fell apart. More state engineers, some western Congressmen, and George Maxwell arrived in Cheyenne. Maxwell and Mondell engaged in a running argument that disrupted the proceedings. Maxwell insisted that the new line of demarcation was impractical, and was not alone in his belief. In a blow to the Wyoming leadership, the bill was withdrawn. Amidst bad feelings, the meeting broke up.

In January 1902, as the 57th Congress began, the "state engineers" bill resurfaced. In his first speech to Congress on December 3, 1901, Roosevelt had declared that "The reclamation and settlement of the arid lands will enrich every portion of our country." But he had left the details up to Congress. Warren grabbed the opening and convened a western delegation meeting. At Warren's request, they had appointed a drafting committee of three pro-state members and two pro-national members. The statisticians were

Warren, Mondell, and Shafroth. Speaking for the nationalist approach were Newlands and Hansbrough.

The numbers favored Warren, but the underlying details favored Newlands. While Shafroth was a states' rights man, he was also a friend of Newlands. Better still, the meetings were held in the evenings at Newlands' house. At their first meeting, Newlands proposed using his bill as the basis for negotiations. Warren countered and offered the state engineers' bill. Hansbrough argued that the Senate preferred the Newlands bill. By mid-January, Newlands and Hansbrough had worn down Warren. Warren wrote to the president of the Burlington and Missouri Railroad, with whom he maintained close ties, that Newlands and Hansbrough had carried the day, but that he, Warren, had extracted some modifications. Warren was referring to a provision that required a majority of the revenue derived from land sales to be spent in the state where the land was located. The provision was a throwback to Warren's discredited public lands "cession" concept, which made it all the more valuable to him.¹

Ultimately, Francis Newlands outlasted Francis Warren.² The Senator from Wyoming withdrew from the fight in the middle of January 1902. On January 21, 1902, Newlands and Hansbrough introduced their nationalist bill— HR 9676 and S 3057—in both houses of Congress.

1 This account uses the Lilley-Gould article, pp. 57-76; Pisani, pp. 298-325; Nelson, *Maxwell*, pp.178-218. A word about the *Maxwell* biography: The book calls Maxwell "a master propagandist" (p.184). The penultimate chapter "The Breakthrough" (ch.10) uses diaries and telegrams to sustain a meeting-by-meeting narrative. The details are stitched together by two themes: Roosevelt in charge of the legislative process and "Newlands skill as a legislative tactician in rounding up votes" (p. 216). Benson credits Newlands with delivering the Democratic votes, "although he was one of only four Western Democrats in the House" (p.216).

2 This study of Francis Newlands highlights the retreat of Francis Warren from one of his favorite battlefields, the politics of irrigation. Setbacks in the political game were unusual for Warren. Historians have generally regarded him as one of the few western politicians who dominated their state both in territorial and in statehood status. The best study of Wyoming politics, and of Warren, is Lewis L. Gould, *Wyoming: From Territory to Statehood* (Yale, 1968).

The Senate debated Newlands' bill for several hours on March 1, in an unedifying discussion that largely reflected Eastern disdain for the West. A number of Eastern and Midwestern senators queried Hansbrough about irrigation as if it was an experimental technology, while Senator Stewart, an old hand at irrigation in the Senate, shared the load in explaining how irrigation worked. Seeing Newlands' bill as further evidence of the evils of log-rolling and pork, New Englanders like Massachusetts Senator George Hoar railed against the profligacy of the rivers and harbors bills. In an unintended but comic interlude, South Carolina Senator Benjamin Tillman—the volatile and racist “Pitchfork Ben”—asked if the bill provided funds for the Savannah River in his state. Senator Augustus Bacon, a Georgia Democrat, advised Senator Tillman that Southern rivers were “not in the class” of the western rivers. To laughter, Tillman acknowledged that “my few remarks have been made at random.”

Senator Warren, once the Senate's guru on irrigation, did not participate at all. He had gone from being the boss on irrigation to a nonentity.³ On March 1, 1902, the Senate unanimously passed Newlands' bill by a voice vote.

A few weeks later, Warren left town to be with his gravely ill wife in Wyoming. He was gone for at least six weeks, further clearing the legislative field for Newlands. Yet one usual blockage remained: the anti-West bias of the House leadership, personified in Cannon himself. Unless the leadership softened its stance, the House would adjourn on July 1 without voting on the bill.

To save his signature legislative effort, Newlands turned to the new President. Roosevelt jumped into the breach and took charge of the bill—so forcefully that its passage has been forever associated with his leadership.

On April 9, 1902, Roosevelt convened the first of two legislative strategy

3 *Congressional Record*, March 1, 1902, pp. 2276-2285.

meetings on the Newlands bill. They met at the White House flanked by Pinchot, Newell, and Maxwell—Newlands’ “experts” had become Roosevelt’s, gravitating to the pull of influence. Roosevelt invited the largely Republican western delegation; Newlands was the only Democrat in attendance. The sole topic on their agenda was passing the bill through the House.

Newlands and Roosevelt took the opportunity to count Democratic votes and Republican votes in the House. “I assure you,” Newlands told Roosevelt, “that the Democratic Party is going to support this bill.” Roosevelt expressed disbelief, noting that it was too “national in character” for the Democratic Party. Newlands insisted. The Democrats, he promised the assembled group, were with him. Their only problem was the House Republican leadership, particularly Joe Cannon. To laughter, Roosevelt asked, “Uncle Joe? Who can do anything with Uncle Joe?”⁴

As it turned out, Theodore Roosevelt could. On May 7, 1902, Roosevelt held his second strategy meeting on the reclamation bill. The same experts attended. Invited was the leadership of the western delegation and Frank Mondell. Newlands was not present. Prior to the meeting, Maxwell had pressed Roosevelt hard on his fear that the bill, as written, could facilitate monopolies of newly irrigated land. It was a pet bugaboo of Maxwell’s and a point on which Roosevelt was sensitive. At the meeting, Roosevelt told Pinchot and Newell that the bill should be modified along Maxwell’s lines. He asked Mondell to manage the modified bill on the House floor, and Mondell agreed.

On June 13, 1902, Roosevelt leaned hard on Cannon. He sent the powerful chairman a message asking him to step aside for the reclamation bill and let it come to a vote—the first time, Roosevelt noted, that he had ever asked for anything regarding an individual bill. Appealing to his fellow Republican, Roosevelt couched his concerns in partisan terms. Cleverly,

4 Newlands, Sheridan speech

Roosevelt pointed out that the party would look unfair if it sponsored river and harbor bills for the East and the Midwest, only to snub the West when its time came.

Roosevelt handled the House leadership flawlessly. After receiving Roosevelt's letter, Cannon acquiesced. The iron-fisted chairman left the House early that day.⁵ In Cannon's absence, Newlands' bill came to a vote and passed easily, 146-55. Newspapers across the West hailed its passage, while the *Washington Post* declared, "*New Irrigation Law Opens up Immense Tract / Victory for Mr Newlands / Unique Campaign conducted by the Nevada Representative on Behalf of Measure.*"⁶

There would not have been a Newlands Act without Theodore Roosevelt.⁷ Nor would there have been a Newlands Act without Frank Newlands and his "unique campaign." His setbacks had tempered and taught him—the near-collapse of the Bank of California, Sharon's escapades, the failure of his General Plan for Nevada's irrigation. In an impressive legislative push, Newlands had marshaled all his experts and his experience. All the dinners, hearings, and legislative maneuvering had paid off. The onetime "crank" with his diagrams and maps had triumphed.

The Newlands Act was a revolution in reclamation—ranking, in Pisani's estimation, behind only the Homestead Act in its significance to the settling of the West. It disregarded state boundaries, overrode state governments, and bypassed the legislative appropriations process entirely. The law embraced the entire region of the American West, covering 15 states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, and Washington. In 1906,

5 Pisani, *Reclaim*, pp. 317-318 reprints Roosevelt's letter to Cannon.

6 *Washington Post*, June 21, 1902. Typical of the western papers, the *Los Angeles Times* headlined its front page, "*New West Created / Irrigation Bill is Now a Law / Most Complete & Automatic Measure Yet Passed. June 19, 1902.*"

7 See Lilley & Gould, Irrigation article, pp. 73-74, footnotes 46 & 47 on Roosevelt's appointment book.

Texas was added to the list. Newlands' legislation nationalized irrigation, granting the Secretary of Interior vast power over all aspects of an irrigation project, from surveying suitable lands and locating the project to managing the construction and selling the irrigated lands. And, in its greatest innovation, it funded irrigation projects through a revolving fund from the sale of public lands. The press hailed this financing mechanism as "comprehensive and automatic," two of Newlands' favorite adjectives.

All across the West, rivers would be dammed and diverted, and barren terrain made fertile. The Flathead and the North Platte; the Klamath and the Umatilla. Arizona's Salt River, and the river that in many ways started it all for Newlands—the Truckee. According to the Bureau of Reclamation created by the Newlands Act, more than 600 dams now irrigate over 10 million acres of farmland. Watered by irrigation projects, the West would become the nation's greengrocer, producing a quarter of its fruits and nuts and fully 60 percent of its vegetables. Those dams—their cataracts converted to kilowatts—would eventually power 53 power plants, yielding some 40 billion hours of electricity for the cities that sprang up in formerly desolate deserts.⁸ The vision of one western waterman had brought forth, quite literally, new lands.

Francis G. Newlands would not live to see the full scope of his dream realized. On Christmas Eve, 1917, while preparing for investigative hearings into war-time railroad problems, Newlands suffered a heart attack in his Capitol office. He was rushed to his home overlooking Connecticut Avenue and Western Avenue, where a doctor pronounced him dead at 10:15pm. Fittingly, Frank Newlands died at the westernmost edge of Washington. He was buried at the Oak Hill Cemetery in Georgetown, at the edge of the park he had once paid Stewart to create. Nearby, along the edge of the graveyard, Rock Creek flows ceaselessly into the Potomac River.

8 *About Us – Mission* Bureau of Reclamation. <https://www.usbr.gov/main/about/mission.html>. Accessed May 15, 2019.

SELECTED BIBLIOGRAPHY

The study is heavily footnoted, and this bibliography highlights recent scholarship critical to its argument. In addition, my original version of a Newlands biography, *The Early Career of Francis G. Newlands, 1848–1898*, is more heavily footnoted and has an extensive, eleven-page bibliography, which is rich in primary sources relating to economic development in San Francisco and Nevada, 1870–1898. These primary sources include contemporary company records and regulatory proceedings. *The Early Career of Francis G. Newlands, 1848–1898* was written as a PhD dissertation at Yale in 1965. It is available from Pro Quest Dissertations & Theses, an Ann Arbor-based company with an online presence. The original bibliography is reprinted pp. 333–344.

IMAGE BIBLIOGRAPHY

FIGURE 2.1. Francis G. Newlands, photographed by Carleton Watkins, 1874, MS 371, Francis Griffith Newlands Papers, Yale Collection of Western Americana, Beinecke Rare Book and Manuscript Library, Yale University, New Haven, Connecticut.

FIGURE 2.2. Portrait of San Francisco from atop Russian Hill, 1870, Lawrence & Houseworth Photography Albums: California Views, Society of California Pioneers.

FIGURE 2.3. Hermann Schussler, The Locality of the Broderick-Terry Duel on September 13, 1859, 1916, The McCune Collection, The McCune Foundation, Vallejo, California.

FIGURE 3.1. Virginia City, NV in Harper's, June 1865, Special Collections, University of Nevada, Reno.

FIGURE 3.2. Titans of Silver Town, California Faces: Selections from The Bancroft Library Portrait Collection, University of California, Berkeley, Berkeley, California.

FIGURE 3.3. Photograph of Billy (William Horace) Claggett, Samuel L. Clemens, and A.J. Simmons, Mark Twain Project Online, University of California Press.

FIGURES 4.1. Bank of California, Virginia City branch, C Street, headquarters for William Sharon (1865), Comstock Foundation for History and Culture.

FIGURE 4.2. Bank of California (stereograph) view in C Street, Virginia City by Carleton E. Watkins (1829-1916), California State Library.

FIGURE 4.3. Historical Souvenir of San Francisco, CA, Palace Hotel, Heninger, C.P.

FIGURE 4.4. Palace Hotel courtyard, 1883, San Francisco Historical Photograph Collection, San Francisco Public Library.

FIGURE 4.5. New Montgomery Street, 1880, San Francisco Historical Photograph Collection, San Francisco Public Library.

FIGURE 4.6 (AND TITLE PAGE). F.A. Schussler, General Map of the Spring Valley Water Works, 1899, The Barry Lawrence Ruderman Map Collection, Stanford University, Stanford, California.

FIGURE 5.1. Senator William Sharon, photographed by Taber, 1879, California Faces: Selections from the Bancroft Library Portrait Collection, Bancroft Library, University of California, Berkeley, Berkeley, California.

FIGURE 6.1. Sarah Althea Hill Terry, photographed by Taber, 1880–87, *California Faces: Selections from the Bancroft Library Portrait Collection*, Bancroft Library, University of California, Berkeley, Berkeley, California.

FIGURE 8.1. Newlands home on the Truckee River, Special Collections of Nevada, Reno Library.

FIGURE 8.2. “Senator Francis G. Newlands House, NHL,” by Mella Harmon, Special Collections Department, University of Nevada, Reno Libraries.

FIGURE 8.3. “Good Work,” *The Daily Appeal*. Carson City, Nevada. September 30, 1890, p. 5. Accessed 1/28/2020. <https://www.newspapers.com/clip/43162828/>

FIGURES 8.4 AND 8.5. Letter to Francis G. Newlands from William Hammond Hall in *Reno Gazette*, 1890, MS 371, Francis Griffith Newlands Papers, Yale Collection of Western Americana, Beinecke Rare Book and Manuscript Library, Yale University, New Haven, Connecticut.

FIGURE 8.6. “Plan of the Truckee River System of Irrigation and Water Storage.” in Newlands, Francis G. (Francis Griffith), 1848–1917. *An address to the people of Nevada on water storage and irrigation*. Reno, Nevada, Reno Gazette Print, 1890.

FIGURE 10.1. The Yellowstone Basin by F. H. Newell, in *Thirteenth Annual Report of the Director of the United States Geological Survey to the Secretary of the Interior*. Washington: G.P.O., Part 3, 1891–1892.

FIGURE 10.2. Congressman Francis Newlands, 1900, The Chevy Chase Historical Society.

RECENT BOOKS ON WATER IN THE WEST

Samuel P Hays, *Conservation and the Gospel of Efficiency* (Univ. of Pittsburgh, 1999)

Donald J. Pisani, *To Reclaim a Divided West: Water, Laws & Public Policy, 1848-1902* (Albuquerque, 1992)

Donald J. Pisani, *Water, Land & Law in the West, 1850-1920* (Univ. of Kansas, 1996)

Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (Penguin: NY, 2017)

Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (Oxford, NY, 1992)

RECENT BIOGRAPHIES

James R. Kluger, *Turning Water On with a Shovel: The Career of Elwood Mead* (Albuquerque, 1992)

Michael J. Mackley, *Infamous King of the Comstock: William Sharon and the Gilded Age West* (Univ. of Nevada, 2006)

Gordon E. Nelson, *The Lobbyist: The Story of George H. Maxwell, Irrigation Crusader* (Bowie, MD, 2001)

William D. Rowley, *Reclaiming the Arid West: The Career of Francis G. Newlands* (Indiana Univ., 1995)

SCHOLARLY ARTICLES ON IRRIGATION IN THE WEST

William Lilley III & Lewis L. Gould, *The Western Irrigation Movement, 1878-1902: A Reappraisal*, *The American West: A Reorientation*, vol xxxii, Univ. of Wyoming Publications (1966), 57-74

Donald J. Pisani, *George Maxwell, the Railroads and American Land Policy*, *Pacific Historical Review* V.63 (May 1994), 177-202

William D. Rowley, *Opposition to Arid Land Irrigation in Nevada, 1890-1900*, *Annual Report Association of the Pacific Coast Geographers* V. 43 (1981), 113-123.

APPENDIX I

Summary and Analysis of Reclamation Act

The Newlands Act is noteworthy in three regards. The act embraces the entire region of the American West; all powers involving irrigation are nationalized; the irrigation projects are funded by a revolving fund from the sale of the public lands in the separate states.⁹

The Newlands Act disregards state boundaries, overrides state governments, and bypasses the legislative appropriations process.

The original act covered 15 Western states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah & Washington. Texas was added in 1906.

The Secretary of Interior was given power over all aspects of an irrigation project. These included: surveying of suitable lands, locating the project, managing the construction, and selling the irrigated lands.

The Secretary of Interior also was empowered to withdraw from entry or sale any public lands contemplated for irrigation works.

⁹ The arid-land reclamation fund is considered the most innovative part of the act. Press hailed it as "comprehensive and automatic," two of Newlands' favorite adjectives. Conservation historian Samuel P. Hays wrote that funding by a revolving fund first appeared in Newlands bill HR 13864, introduced January 26, 1901. Section 1 of HR 13846 describes the fund and names it the "arid land reclamation fund" (quotes in original). Pisani, 323; Hays, *Conservation*, 12 n. 24

The Secretary of Interior specifically was authorized to let all contracts in an irrigation project.

The Secretary of Interior was prohibited to sell any irrigated properties of less than 40 acres or more than 160 acres.

APPENDIX II

National Reclamation Act (PL 57-161)

CHAP. 1093. An Act Appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all moneys received from the sale and disposal of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming, beginning with the fiscal year ending June thirtieth, nineteen hundred and one, including the surplus of fees and commissions in excess of allowances to registers and receivers, and excepting the five per centum of the proceeds of the sales of public lands in the above States set aside by law for educational and other purposes, shall be, and the same are hereby, reserved, set aside, and appropriated as a special fund in the Treasury to be known as the "reclamation fund," to be used in the examination and survey for and the construction and maintenance of irrigation works for the storage, diversion, and development of waters for the reclamation of arid and semiarid lands in the said States and Territories, and for the payment of all other expenditures provided for in this Act: Provided, That in case the receipts from the sale and disposal of public lands other than those realized from the sale and disposal of lands referred to in this section are insufficient to meet the requirements for the support of agricultural colleges in

the several States and Territories, under the Act of August thirtieth, eighteen hundred and ninety, entitled "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress approved July second, eighteen hundred and sixty-two," the deficiency, if any, in the sum necessary for the support of the said colleges shall be provided for from any moneys in the Treasury not otherwise appropriated.

SEC. 2. That the Secretary of the Interior is hereby authorized and directed to make examinations and surveys for, and to locate and construct, as herein provided, irrigation works for the storage, diversion, and development of waters, including artesian wells, and to report to Congress at the beginning of each regular session as to the results of such examinations and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all facts relative to the practicability of each irrigation project; also the cost of works in process of construction as well as of those which have been completed.

Sec. 3. That the Secretary of the Interior shall, before giving the public notice provided for in section four of this Act, withdraw from public entry the lands required for any irrigation works contemplated under the provisions of this Act, and shall restore to public entry any of the lands so withdrawn when, in his judgment, such lands are not required for the purposes of this Act; and the Secretary of the Interior is hereby authorized, at or immediately prior to the time of beginning the surveys for any contemplated irrigation works, to withdraw from entry, except under the homestead laws, any public lands believed to be susceptible of irrigation from said works: Provided, That all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms, and conditions of this Act; that said surveys shall be prosecuted diligently to completion, and upon the completion thereof, and of the necessary maps, plans, and estimates of cost, the Secretary of the Interior shall determine whether or not

said project is practicable and advisable, and if determined to be impracticable or unadvisable he shall thereupon restore said lands to entry: that public lands which it is proposed to irrigate by means of any contemplated works shall be subject to entry only under the provisions of the homestead laws in tracts of not less than forty nor more than one hundred and sixty acres, and shall be subject to the limitations, charges, terms, and conditions herein provided: Provided, That the commutation provisions of the homestead laws shall not apply to entries made under this Act.

SEC. 4. That upon the determination by the Secretary of the Interior that any irrigation project is practicable, he may cause to be let contracts for the construction of the same, in such portions or sections as it may be practicable to construct and complete as parts of the whole project, providing the necessary funds for such portions or sections are available in the reclamation fund, and thereupon he shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also of the charges which shall be made per acre upon the said entries, and upon lands in private ownership which may be irrigated by the waters of the said irrigation project, and the number of annual installments, not exceeding ten, in which such charges shall be paid and the time when such payments shall commence. The said charges shall be determined with a view of returning to the reclamation fund the estimated cost of construction of the project, and shall be apportioned equitably: Provided, That in all construction work eight hours shall constitute a day's work, and no Mongolian labor shall be employed thereon.

Sec. 5. That the entryman upon lands to be irrigated by such works shall, in addition to compliance with the homestead laws, reclaim at least one-half of the total irrigable area of his entry for agricultural purposes, and before receiving patent for the lands covered by his entry shall pay to the Government the charges apportioned against such tract, as provided in section four. No right to the use of water for land in private ownership shall be sold for a tract

exceeding one hundred and sixty acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made. The annual installments shall be paid to the receiver of the local land office of the district in which the land is situated, and a failure to make any two payments when due shall render the entry subject to cancellation, with the forfeiture of all rights under this Act, as well as of any moneys already paid thereon. All moneys received from the above sources shall be paid into the reclamation fund. Registers and receivers shall be allowed the usual commissions on all moneys paid for lands entered under this Act.

SEC. 6. That the Secretary of the Interior is hereby authorized and directed to use the reclamation fund for the operation and maintenance of all reservoirs and irrigation works constructed under the provisions of this Act: Provided, That when the payments required by this Act are made for the major portion of the lands irrigated from the waters of any of the works herein provided for, then the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby, to be maintained at their expense under such form of organization and under such rules and regulations as may be acceptable to the Secretary of the Interior: Provided, That the title to and the management and operation of the reservoirs and the works necessary for their protection and operation shall remain in the Government until otherwise provided by Congress.

Sec. 7. That where in carrying out the provisions of this Act it becomes necessary to acquire any rights or property, the Secretary of the Interior is hereby authorized to acquire the same for the United States by purchase or by condemnation under judicial process, and to pay from the reclamation fund the sums which may be needed for that purpose, and it shall be the duty of the Attorney-General of the United States upon every application of the Secretary of the Interior, under this Act, to cause proceedings to be commenced for condemnation within thirty days from the receipt of the application at the Department of Justice.

SEC. 8. That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: Provided, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

SEC. 9. That it is hereby declared to be the duty of the Secretary of the Interior in carrying out the provisions of this Act, so far as the same may be practicable and subject to the existence of feasible irrigation projects, to expend the major portion of the funds arising from the sale of public lands within each State and Territory herein before named for the benefit of arid and semiarid lands within the limits of such State or Territory: Provided, That the Secretary may temporarily use such portion of said funds for the benefit of arid or semiarid lands in any particular State or Territory herein before named as he may deem advisable, but when so used the excess shall be restored to the fund as soon as practicable, to the end that ultimately, and in any event, within each ten-year period after the passage of this Act, the expenditures for the benefit of the said States and Territories shall be equalized according to the proportions and subject to the conditions as to practicability and feasibility aforesaid.

SEC. 10. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect.

Approved. June 17, 1902.

CHAP. 1121.-An Act To authorize the Nashville Terminal Company to

construct a bridge across the Cumberland River in Davidson County, Tennessee.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Nashville Terminal Company, a corporation created and organized under the laws of the State of Tennessee, be, and is hereby authorized to construct and maintain, for the passage of railway trains, a bridge, and approaches thereto, over the Cumberland River at any point in the county of Davidson in said State within five miles above or within five miles below the corporate limits of the city of Nashville, in said county, which said company may deem most advantageous, and which may be approved by the Secretary of War.

Sec. 2. That said bridge shall be located and built under such regulations for the security of navigation as the Secretary of Warshall prescribe; and to secure that object the said company shall submit to the Secretary of War for his examination and approval a design and drawing of the bridge, and a map of the location, giving for such