Irrigation in Australia and the Western United States, Circa 1885
by
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“The river systems of Australia bear a very close analogy, in many respects, to those of the arid portion of the United States, in which the rainfall is not sufficient for the production of the crops.”
— John Quick & Robert Randolph Garran (1901)

In 1901, John Quick and Robert Randolph Garran wrote, “In a country of vast distances, scanty rainfall, and unlimited thirst, these rivers are of immense importance both as highways of commerce as channels for the water necessary for the development and settlement of the land; whilst the problem of their best utilization for either purpose involves vast schemes and undertakings.”¹ They were writing about Australia, but they could have been writing about the United States west of the Missouri River. A few years earlier, in her 1896 doctoral dissertation, Helen Page Bates wrote, “Irrigation throughout the Australian colonies is one of the most important issues of the day. It is being realized there, as here in the United States, that a large part of the continent can never be developed except by means of an artificial water-supply.”² Both the United States and Australia are “hydraulic societies, which is to say, a social order


based on the intensive, large-scale manipulation of water and its products in an arid setting.\textsuperscript{3}

The similarities between American and Australian irrigation and water policy have been examined and commented upon before. In addition to Bates, and Quick and Garran, Alfred Deakin, then chairman of the Victoria Royal Commission on Water Supply and later Prime Minister of Australia, wrote in his official 1885 report,

In fine, the close resemblance of the peoples, there social and political conditions, and their natural surroundings, renders the parallel between Southern Australia and the Western States of America as complete as such parallels can well be. It is thither, therefore, that we should naturally look to learn with least difficulty the modes of successful irrigation.\textsuperscript{4}

Elwood Mead, one time State Engineer of Wyoming, U.S.A, one time Chairman of the State Rivers and Water Supply Commission in Victoria, Australia, and later Chairman of the United States Bureau of Reclamation, claimed that “rural development by California ... was in part due to the influence on public opinion of the success of similar action in Australia and New Zealand.”\textsuperscript{5} Historian Ian Tyrrell Tyrrell believed that “one the most striking features of the exchanges ... was the degree of cooperation and experimentation undertaken, the cross-fertilization, the interests in solutions derived from each other’s experience.”\textsuperscript{6} But Tyrrell warned, “The complicated take of Californian [or more broadly, American]-Australian


\textsuperscript{4} Australia. Victoria. Royal Commission on Water Supply. \textit{Irrigation in Western America So Far As It Has Relation to the Circumstances of Victoria}, report prepared by A. Deakin, John Ferres, Government Printer, 1885, 12 (Hereafter “Deakin’s Report.”)

\textsuperscript{5} Elwood Mead, \textit{Helping Men Own Farms} (New York: The Macmillian Co., 1920) 29.

environmental contacts does not present simple contrasts, such as might be derive from inherited ideology ... reality is always more complicated.” Peter N. Davis examined Australia’s water policies “in detail” and compared them to their American counterparts.°

The purpose of this paper is to examine the simultaneous development of irrigation and water law in Australia and the Western United States using 1885 as a sort of temporal meridian. I choose 1885 because in that year Alfred Deakin of Victoria traveled to the United States to study irrigation and water policy development. Deakin’s observations had a pivotal influence on both sides of the Pacific. Australia and the Western United States each passed through three distinct stages of development: a riparian phase, an entrepreneurial phase, and a governmental phase. Given the similarities of geography, climate, history, and demographics between Australia and the Western United States, similarities in social development, including irrigation and water policy, ought to be expected; however, significant differences also materialized. These differences in irrigation and water policy demonstrate fundamental underlying differences between Australian and American attitudes toward government and society.

The riparian phase in both Australian and American irrigation policy owes its origin to their common heritage in England and the English common law. Under English common law, riparian property owners, that is, the owners of property along the banks of a river or the shores of a lake, are entitled to the reasonable use, called a usufract, of water flowing past, through or over their land; however, property owners must not materially diminish the usefulness of the

7 Tyrrell, 222.

water to other property owners. If a riparian owner diverts water from a stream’s natural course, he or she must return it to the streambed undiminished. The riparian property owner’s, usufruct included the right to reasonably use it for irrigation. Non-riparian land owners have no rights to the water at all.

North America east of the Missouri River enjoys, on average more than twenty inches of rain per year. Rivers, streams and creeks are common. The area is well suited to the riparian doctrine. When Americans moved from the humid East to the arid West, they took the doctrine with them. There were a few attempts to adopt the riparian system in the West, or merge the riparian and prior appropriation systems. However, the lack of rainfall and the scarcity of rivers and streams soon persuaded the pioneers that riparian rights were unsuited to the country, and for the most part these attempts were quickly abandoned. In the case Reno Smelting Works v. Stevenson, the Nevada State Supreme Court ruled, “The condition of the country and the necessities of the situation impelled settlers upon the public land to resort to the diversion and use of the waters. This fact of itself is a striking illustration and conclusive evidence of the

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William E. Smythe, “The Struggle for Water in the West,” The Atlantic Monthly 86, no. 517 (Nov. 1900); 647.

Americans quickly adopted the doctrine of prior appropriation of water. The doctrine of prior appropriation of water originated among the gold-rush miners of California in the late 1840s and soon spread to all the Western States and Territories. It was a natural extension of mining law which permitted the first prospector to stake a claim the right to exploit it. Inasmuch as water was necessary to placer and hydraulic mining, including the use of water necessary to mine within the miner’s claim was logical. The doctrine of prior appropriation held that the first person to use the water had an unconditional right to continue doing so regardless of whether or not the water is consumed or polluted; and whether or not there is any water available for anyone else. The doctrine of prior appropriation is sometime summed up as “first-in-time-first-in-


\textsuperscript{13} Wiel, Water Rights, 1:123 citing Twaddle v. Winters, 29 Nev. 88, 85 Pac. 284, 89 Pac. 289.

\textsuperscript{14} William E. Smythe, “The Struggle for Water in the West,” The Atlantic Monthly 86, no. 517 (Nov. 1900); 647.

\textsuperscript{15} Wiel, Water Rights, 1:66.
right.”

Gradually, prior appropriation of water was applied to uses other than mining, including irrigating crops and driving machinery. Congress tacitly approved prior appropriation in 1866 by declaring that “rights to the use of water ... [which] have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and decisions of courts, ... shall be maintained and protected in the same.” The Colorado Supreme Court was the first appellate court to explicitly reject the common law of riparian rights. Gradually, the “Colorado doctrine” was accepted throughout the West. Prior appropriation provided a sound basis for resolving disputes over access to water and established certainty which in turn spurred economic development. However, as the newspaper *Daily Nevada State Journal* cynically commented, “the first crop raised ... was a lawsuit.”

Although the doctrine of prior appropriation remains in the statute books and case reports of Western States, it has been largely replaced by the doctrines of public ownership of water and of beneficial use. Wyoming was the first State to declare the “water of all natural streams ... to

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be the property of the State.”\textsuperscript{20} Colorado on the other hand, declared “The water of every natural stream to be the property of the public.”\textsuperscript{21} Whether the water is property of the “public” or property of the “State,” is a distinction without a difference. Joseph R. Long, a jurist and early-twentieth century expert on Western water law, wrote, “The first extensive code of water laws was that adopted by Wyoming in 1890. In 1895 Nebraska adopted a code substantially the same in principle as that of Wyoming, and in 1903 Idaho, Nevada, and Utah adopted similar codes with modification suggested by the experience of Wyoming.”\textsuperscript{22}

The concept of beneficial use was grafted onto the doctrine of prior appropriation and public ownership. It added use-it-or-lose-it on to first-in-time-first-in-right. Garrett Hardin, in his seminal paper “The Tragedy of the Commons,” suggested that a common resource such as water in a natural stream or river, might be rationed “on the basis of merit, as defined by some agreed-upon standard.”\textsuperscript{23} The problem with merit-based allocations is coming to an agreement on the standard by which “merit” is to be judged, and then implementing it in a fair and impartial way. These requirements doomed any sort of merit-based allocation because Americans are fearful and jealous of any one else getting some special privilege or advantage. Donald Pisani named value-neutral allocation one of prior appropriation’s advantages. Westerns were never

\textsuperscript{20} Wyo. Const. art. 8, § 1 (1889). “Wyoming was the first State to provide by Constitutional enactment that the water within the borders of the State is the property of the State.” Grace Raymond Hebard, \textit{The Government of Wyoming: The History, Constitution and Administration of Affairs} (San Francisco: The Whitaker & Ray Co., 1907) 127.

\textsuperscript{21} Colo. Const., art. 16, § 5 (1876).

\textsuperscript{22} Long, § 11, 21.

about to devise any sort of merit-based allocation scheme. The concept of beneficial use was not as a system of merit-based rationing, but rather as a check on speculation and hoarding of water and water rights.

However, some sort of check was necessary because of the perpetual nature of appropriation and the ease with which one made an appropriation. William E. Smythe wrote, “The great lesson that has been learned is that water in an arid land cannot be treated as private property, subject to barter, like land and livestock. ... Every human being is entitled to receive as much of it as he can apply to a beneficial use.”

Irrigation Age claimed that “The universal law that water must be applied to “a beneficial use” is in itself a denial of the right of ownership. What a man owns he may apply as he pleases.” United States Senator William Morris Steward, of Nevada, thought that unused appropriations should be taxed, not to raise revenue, but as a punitive measure, “If those who have acquired a claim to water allow it to be wasted, or not used to the best advantage, and persist in retaining this precious fluid, there is no reason why they should not be taxed for it.”

When British settlers first went to Australia, they believed that riparianism would be suitable to the arid conditions they found there. They were mistaken. Instead, riparian rights

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24 Smythe, “The Struggle for Water In the West,” 651.

25 “The Progress of Western America,” Irrigation Age 7, no. 1 (July 1894): 5.


“impeded the development of mining, agriculture, and towns during the nineteenth century.”

Warren Musgrave wrote, “Water was a major cause of unhappiness, disputation, and administrative action from the beginning of settlement in southwestern Australian.”

Australia is much too dry to justify the doctrine of riparian rights which presupposes much rain and many rivers, streams and creeks. There is only one major river system in Australia, the Murray-Darling river system; Helen Page Bates called it “the Mississippi of Australia.”

Like the Western United States, Australia’s lack of water resources is matched by its abundance of mineral resources. In 1851, a mere three years after gold was discovered at Sutter’s Mill on the American River, Australia experienced its own gold rush. However, Australians did not choose to follow the American doctrine of prior appropriation. Australia rejected the doctrine of prior appropriation, in part, because of the crop of litigation is grew.

Therefore, riparian rights took a different path in Australia, although this path also led to extinction. One effective method of abolishing riparian rights without abolishing riparian rights was to legislate that all natural stream beds and the land on either side for distance of “from one to three chains” was owned by the government.

Before the foundation of the Commonwealth of Australia, “the legal rights of each Colony—or the residents of that colony, as against residents


29 Musgrave, 30.


31 Musgrave, 30.

32 Mead, 21. “One to three chains” is about twenty to sixty meters, or sixty-six to 198 feet.
of another colony—to the use of the waters of rivers flowing through the colony, were
absolute.”

For example, the colony of Victoria passed the Irrigation Act, 1886 to deal with
water issues “in a comprehensive manner.” For its part, the colony of New South Wales passed
the Water Rights Act, 1896, which “defined the rights of riparian proprietors in that colony, and
subject to those rights, vested in the Crown the right to the use and flow and to the control of
water in rivers and lakes.” Specifically, the Act declared, “The right to the use and flow and to
the control of the water at any time in any ... water-course shall ... vest in the Crown.” The Act
gone on to ban all diversions of water not licensed. Nationalization of water in this manner
“gave the Crown power to allocate water freely, tended to diminish litigation in irrigation areas
and avoided monopolization of water rights by land speculators after canals were constructed.”
The Victorian Irrigation Act of 1886 was only the first; New South Wales enacted a similar law
in 1896, and South Australia did so in 1919.

During the federal conventions which resulted in the formation of the Commonwealth of
Australia, several members, mostly representing South Australia, insisted that the proposed
federal constitution for Australia recognize and protect “riparian rights between the colonies,

33 Quick & Garran, 887.

34 Irrigation Act, 1886, No. 898 (Vict); Quick & Garran, 887.

35 Quick & Garran, 888.

36 Irrigation Act, 1886, No. 898, § 4 (Vict.).

37 Davis, 652.

38 Ibid., 651.

39 Ibid., 656.
based either upon common law, or upon international law, or upon international comity; and that relief might be had, if not in the colonial courts, at least by application to the Imperial Government.”\textsuperscript{40} South Australia was concerned that irrigation schemes in Victoria and New South Wales would harm navigability on the Murray River, while New South Wales, and to a lesser extent Victoria, were absolutely dependent on the water of the Murray and its tributaries for irrigation and economic development.\textsuperscript{41} Deakin, then a member of the convention representing Victoria, “pointed out that there were no settled principles which a tribunal could apply, and urged ‘the unwisdom of endeavouring to include in the Federal Constitution the settlement of a problem such as this—the acquirement, in point of fact, under this Constitution of a legal right where at present no legal right exists or in enforceable.’”\textsuperscript{42} Ultimately, South Australia’s demands were rejected, and the Australian Constitution provided, “The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.”\textsuperscript{43} Quick and Garran’s detailed and contemporary analysis of the Australian

\textsuperscript{40} Quick & Garran, 888.
\textsuperscript{41} Ibid., 175.
\textsuperscript{42} Ibid.
\textsuperscript{43} Australian Constitution, § 100 (1900); Quick & Garran, 275. The United States Constitution is much more vague on the powers of Congress to regulate interstate rivers. Article 1, section 8, clause 3 provides only that “The Congress shall have power ... to regulate commerce with foreign nations and among the several States, and with the Indian tribes.” The general effect of section 100 of the Australian Constitution was achieved for the United States through the United States Supreme Court case \textit{Kansas v. Colorado}, 206 U.S. 46 (1907). According to Donald J. Pisani, \textit{Kansas v. Colorado} “denied that the federal government had any right to control interstate streams, and it cast a long shadow over the future of the bureau [of Reclamation].” Donald J. Pisani, \textit{Water and the American Government: The Reclamation

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Constitution points out

The scope of the section is limited to reasonable use for these two purposes [that is, conservation and irrigation]. Any use by a State or its residents which does not come within one of these heads is not protected by these sections, but is subject to the dominant power of the Federal Parliament with respect to navigation.\footnote{44}

In 1909, Charles Edward Wright wrote, “There is no such thing as a riparian right in this progressive British colony.”\footnote{45}

Eventually Australia adopted the principles of beneficial use and public ownership of water, but without the overlay of prior appropriation.\footnote{46} Under the Australian program, no person was permitted to “permanently divert water; [rather] a license is granted for a limited period. And no diversion is free. Every user pays for what he uses.”\footnote{47} Charles Edward Wright claimed, “The justice of this plan is apparent; he who enjoys pays therefor, and he who has an equal right in the water but cannot use it, is indirectly the beneficiary of the rental paid by the user.”\footnote{48} Wright boasted, “During the last decade there has not been a single lawsuit over water rights in


\footnote{44} Quick & Garran, 893. Quick and Garran’s detailed, clause-by-clause analysis of the Australian Constitution is comparable to the analysis of the United States Constitution provided by Alexander Hamilton, James Madison, and John Jay in the \textit{Federalist Papers} (1787-1788), but without the rabid partisanship of “Publius.”


\footnote{46} \textit{Ibid.}, 86.

\footnote{47} \textit{Ibid.}

\footnote{48} \textit{Ibid.}, 86-87.
Between 1930 and 1946, New South Wales, on the recommendation of American Elwood Mead, experimented with a system of prior appropriation; however, the Australian system blended in the concept of beneficial use by assigning all licensees to one of three classes. Class one users included “domestic, municipal, and railway water supplies, and water supplies for hydro-power stations.” Class two users were all others, including manufacturing and irrigation other than irrigating pasture land. Class three users were those who irrigated only pasture land. In times of shortage, inferior classes were cut-off first, regardless of date of licensure, while among class members the rule of first-in-time-first-in-right prevailed. The experiment was abandoned because officials found it to be unworkable.\(^{50}\)

The entrepreneurial phase of water development involved individuals’ efforts to build irrigation works and distribute water among themselves. At first these efforts were simple, even crude, and very localized. After visiting the Western States, Deakin admonished his fellow Australians, “To comprehend the nature of their [the Americans’] works it is desirable to bear in mind their history, for they have rarely been the result of one foreseen plan, but have as a rule, been brought into their present condition piecemeal.”\(^{51}\) Deakin also observed, “In western America, the water is almost invariably provided by private companies. ... They [irrigation works] are constructed outside the law, extra-legally, if not illegally.”\(^{52}\) Deakin complained that

\(^{49}\) Ibid., 87.

\(^{50}\) Davis, 661-662.

\(^{51}\) Deakin’s Report, 34.

\(^{52}\) Ibid., 13.
the irrigation works were built by amateurs, sometimes “the farmers themselves, either singly or banded together,” and “without engineers, almost always without plans, and their defects are patent,” but he obviously admired the “untiring energy and self reliance of the [American] people.”

The earliest instances of irrigation in America are prehistoric. The Native American Mogollon, Hohokam, and Anaszai developed effective, ingenious strategies for handling the problems inherent with an arid climate. For example, the Hohokam built the most extensive pre-Columbian irrigation system in America outside of Peru. By 800 CE, the Hohokam built complex canal systems with a main canal and a few branch canals. By the twelfth and thirteenth centuries, the system had grown to over 360 miles of main canals, some of them ten feet deep and eight feet wide, and 1,000 miles of lateral canals and distribution channels. In addition to the impressive “Great Houses,” the Anasazi at Chaco Canyon built dams, ditches, canals, and reservoirs to collect water and transport it to their fields. The water-collecting system was mostly on the north rim of the Canyon where a large expanse of bedrock provided runoff. Hispano-Mexican settlers also built a society based on irrigation. Before the English successfully settled along the well-watered Chesapeake Bay, the Spanish began irrigating at San Juan, New Mexico. Along the Rio Grande and elsewhere in New Spain and, after 1810, in Mexico, Hispano-Mexican settlers created communal water distribution systems called acequias. Under this system, an

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53 Ibid., 36-37, 52.


55 Ibid., 85.
village official called the *mayordomo* was responsible for maintaining irrigation canals and ditches, and for allocating and distributing water.\(^{56}\)

The first Anglo-Americans to irrigate in America were the Mormons who settled in the Great Salt Lake Valley in 1847. After the murder of the Prophet Joseph Smith, June 27, 1844, Brigham Young assumed the leadership of the Church of Jesus Christ of Latter-day Saints and organized the Mormons’ evacuation from Illinois during the winter of 1846. Young personally led the first company of Mormon pioneers from their refugee camps along the Missouri River at Council Bluffs, Iowa to the Great Salt Lake Valley in the spring of 1847. An advance party led by Orson Pratt entered the Valley on the morning of July twenty-second. After a prayer of thanksgiving, the group immediately began plowing and planting—and irrigating.\(^{57}\)

Once the Mormons arrived in the Great Salt Lake Valley, they established a collectivist regime over the control of water resources, which was unique, despite some reciprocal borrowing from the England common law, the law and customs of California miners, and the Spanish and Native Americans.\(^{58}\) The first and most important element of Mormon water law was collective ownership.\(^{59}\) Soon after entering the Great Salt Lake Valley, Brigham Young declared, “There shall be no private ownership of the streams that come out of the canyons, nor the timber that

\(^{56}\) Worster, 75-76


grows on the hills, These belong to the people, all the people.”60 Although Young, recognized by the Mormons as a prophet of God, ruled by divine decree, the same principle was duly enacted into law by the legislature of the provisional State of Deseret, and re-enacted by that of the Territory of Utah.61 “With 20,000 Mormons en route and the anticipation that thousands would follow,” wrote Edwin Brown Firmage and Richard Collin Mangrum, “it was obvious that a first-come, first-served policy would seriously jeopardize a cooperative community effort.”62 The next element of Mormon water law, and this one is truly unique to them, is the use of ecclesiastical authorities and councils to administer water rights and adjudicate disputes.63 This state of affairs is perfectly logical and understandable. Ownership by the “people; all the people” effectively meant Church control. For the first three years the Mormons lived in the Great Salt Lake Valley, or Deseret as they called it (1847-1850), there was no secular authority whatsoever, and, even after the Territory of Utah was organized, secular authority was more nominal than real until the Utah War in 1857. The final element of Mormon water law was cooperative irrigation.

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62 Firmage & Mangrum, 315.

63 Firmage & Mangrum, 314-321. Quotation is at page 312.
Young told his followers, “Our object is to labor for the benefit of the whole.”

Leonard Arrington described Mormon’s irrigation scheme as “one of the greatest and most successful community or cooperative undertakings in the history of America.”

William E. Smythe said of the Mormons, “The Utah system was clearly the outgrowth of the peculiar conditions with which the Mormons dealt. They were so far removed from all centers of production as to make self-sufficiency an imperative condition of existence.”

Although universal poverty and abject isolation no doubt helped, the roots of Mormon collectivism can be found more in a shared religious belief and a common experience of persecution. Thomas Alexander wrote, “Strongly communitarian, [the Mormons] sought to build the Kingdom of God on earth; and, ... they expected ... to refashion the arid west both as a fit place for Christ's second coming and as an earthly home.”

Thus, collectivism, co-operation, and communitarianism were religious obligations.

Other than the Mormon communitarian irrigation projects in Utah, the first irrigation schemes in the United States were privately financed. Smythe wrote favorably of the Mormon

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experience, “Probably the Mormons owed their escape from the misfortune of private irrigation works mainly to the fact that this feature of their institutions was established at a time when none of their people possessed sufficient private capital to engage in costly enterprises.”68 In 1888, Francis Griffith Newlands, then a prominent attorney for mining interests and as well as an investor and entrepreneur in Comstock Lode mining ventures and not yet holding public office, launched the Truckee Irrigation Project, a private venture. Marc Reisner called this project “one of the most ambitious reclamation efforts of its day.”69 Alas, the project failed costing Newlands $500,000 “not because it was poorly conceived or executed (hydrologically and economically, it was a good project),” concluded Reisner, but because squabbles among its beneficiaries and the pettiness of the Nevada legislature ruined its hopes.”70 In addition to the money, Newlands lost “whatever faith he had in the ability of private enterprise to mount a successful reclamation program.”71 Thus, Newlands knew whereof he spoke when, in 1901 as a Congressman from Nevada, he told his colleagues:

As to private enterprise, under existing laws it is utterly impossible to make reclamation, for the reason that any reclamation scheme involves a very large expenditure in the storage of water, a very large expenditure in the main canals, and a very large expenditure in the diverting ditches, and it is absolutely essential to obtain the control and the ownership of large areas of land in order to make a storage and reclamation enterprise profitable or even compensatory of the

68 Smythe, “Utah as an Industrial Object-Lesson,” 612.


70 Ibid.

71 Ibid.
Nevertheless, others would try to raise money in private bond and equity markets for a few more years. For example, On March 29, 1890, the Wall Street Journal announced that the “Kraft Irrigation District, near Colusa, California [would] sell ... $50,000 of gold 6% bonds not below 90.” Most private irrigation companies went bankrupt. For example, The Irrigation Age reported that the “Arizona Improvement company controlling the largest irrigation system in the Southwest, will pass tomorrow [November 17, 1897] into the hands of a receiver.” W.G. Mount, also in The Irrigation Age, wrote, “Judging from the almost complete cessation of irrigation enterprises, by ditch and reservoir companies, it would appear that a statement lately made by the the [sic] State Engineer of Wyoming [Elwood Mead] in his report, was correct, namely, that their security for any return on their investment was so very slight that it caused them to hesitate before engaging in that kind of enterprise.” Unfortunately, the economic fallout from the Panic of 1893 “discouraged investment in water companies.” In 1896, the editor of The Irrigation Age complained, “Before the close of 1892 capital had begun to flow freely in this direction, where it gave promise of exceptional returns from investment. Since that

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72 House Committee on Irrigation of Arid Lands, Hearings on the Reclamation of the Arid Lands of the United States, 56th Cong., 2nd sess., 1901, 8.

73 “Bonds to be Issued,” Wall Street Journal, March 29, 1890, 4.

74 The Irrigation Age, 12 (December 1897):76

75 W.G. Mount, “The Cessation of Irrigation: The Causes That Have Led To It And the Remedies Proposed,” The Irrigation Age, 12 (March 1898):160

time not only have no new investments been undertaken, but many of the greater works which were unfinished have been left in such a state as to involve heavy loss and to preclude any possible profit from the amounts already expended.’’  

Frederick H. Newell wrote, “Instead of fat dividends and huge profits, receiverships and ultimate bankruptcy, with the loss of every dollar invested, have been the common results of speculation in irrigation securities.”  

Thomas Wellock summed up the situation, “By the time of the Roosevelt administration, Western states were frustrated with private irrigation schemes.”

An official Australian governmental report stated, “Irrigation in Australia is an art learnt from America.” In 1884, Victoria appointed a Royal Commission on Water Supply with Alfred Deakin as its chairman. Deakin immediately undertook a fact finding junket to the North America to study irrigation and water policy in the United States. Deakin and his companions—J.D. Derry, an engineer; E.S. Cunningham, a journalist; and J.L. Dow, also a journalist—left Sydney on January 1, 1885 and returned May 10, 1885. They spent 11 weeks in North America and visited irrigation projects in California, Arizona, Mexico, New Mexico, Kansas, Colorado, and Utah. He also spent three weeks in the Eastern States. Deakin and his party traveled 26,000

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miles, on average 142 miles per day. His official report, *Irrigation in Western America So Far As It Has Relation to the Circumstances of Victoria*, would become near holy writ on the subject of irrigation on both sides of the Pacific. It would be widely quoted in America and even republished as a part of a report by the United States Senate, Special Committee on Irrigation and Reclamation of Arid Lands. Deakin would also later travel to India, Egypt and Italy to study irrigation there.

According to Cunningham, as quoted by J.A. Alexander, “When we arrived in San Francisco on January 25, 1885, Mr. Deakin enquired about the most likely places to visit, with a view to gaining the practical information he was in search of. He was advised to visit Los Angeles and there to ask for the Chaffey Brothers, who were interested in irrigation in enterprises in that region.” The Australians took this advice and went to Los Angeles where the dropped in unannounced on George Chaffey. George welcomed the Australians “cordially” and suggested that they visit Ontario and meet with his brother W.B. The Australians were immediately impressed with the Chaffey brothers.

The Chaffey brothers,—George and William Benjamin (W.B. to his friends)— were born in Canada and came to Riverside, California in about 1880. They saw irrigated orange groves

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83 Alexander, 87.

and were inspired to formulate a business plan: “to buy land, irrigate it, prepare it, sell it in blocks on time payment, use the money so gained in development, then realize on real estate. Grants in the desert were practically given away.”\textsuperscript{85} Their first attempt was at Etiwanda and was an “outstanding success.”\textsuperscript{86} Etiwanda, in San Bernardino County, California, was founded in 1881 as an unincorporated community, and became part of the City of Rancho Cucamonga in 1977. Their next project, Ontario, California, was also successful.\textsuperscript{87} According to Hall, “Ontario for many years has been famous throughout U.S.A. as a perfect example of what an irrigation colony should be.”\textsuperscript{88}

Deakin and the Chaffey Brothers formed a fast, life-long friendship based in large measure on their mutual interests in reclamation, irrigation, and conservation. Soon after Deakin returned to Australia, George and then W.B. followed him seeking to do in Australia what they had done in California. However, government regulations pertaining to “Crown Lands” was so very different from the American policy of homesteading that the Chaffeys were frustrated and discouraged.\textsuperscript{89} Had the Chaffey Brothers known this before they made the journey, they might have just stayed in California.

\textsuperscript{85} Ernestine Hall, \textit{Water Into Gold}, 9\textsuperscript{th} ed. (Melbourne: Robertson & Mullens, 1951) 60.

\textsuperscript{86} \textit{Ibid.}, 60-61.

\textsuperscript{87} \textit{Ibid.}, 61-62.

\textsuperscript{88} \textit{Ibid.}, 63.

\textsuperscript{89} \textit{Ibid.}, 63-65. Various public land acts in the United States gave away land to the settlers for free or at very low prices. The transfers were in fee simple, that is actual ownership of the land was transferred from the government to the settler. In Australia, crown lands continued to be owned by the government; settlers were granted only a “perpetual lease.”
In Australia, the Victoria government passed the Irrigation Act of 1886 at Deakin’s urging. This act authorized “irrigation trusts” as a legal framework for establishing irrigation projects. On October 21, 1886, the Victoria government and the Chaffey Brothers signed an agreement “secure the application of private capital to the construction of irrigation works, and the establishment of a system of instruction in practical irrigation.”

The agreement granted the Chaffeys 50,000 acres and an option to purchase 200,000 more at one pound per acre. In return, the Chaffeys promised to “establish an irrigation settlement ... and effect useful and permanent improvements upon it, such as irrigation canals, [etc.] ... within twenty years.”

Despite having a signed agreement in hand, parliamentary opposition demanded that the entire scheme be the subject of competitive bidding. Offended, the Chaffeys refused to make a bid. Hoping to profit at Victoria’s expense, South Australia offered to let the Chaffeys establish a colony there. The Chaffeys accepted. The agreement between them and South Australia was much the same as the agreement with Victoria; no competitive bidding required. This settlement would be known as Renmark. When the two-month bidding period demanded by the Victoria government expired, the government had received no bids. Embarrassed, the Victoria government asked the Chaffeys to reconsider, which they did. Thus, the Chaffeys undertook to build two irrigation colonies on the banks of the Murray River, Renmark, South Australia and Mildura, Victoria. Ten years later, in 1896, Bates wrote, “Within four years the population of

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91 Ibid.

92 Hall, 70-72.
Mildura numbered four thousand inhabitants nearly half of whom were engaged upon the soil either as workmen or land-owners.”\textsuperscript{93} However, this was not enough settlers to make the colony economically stable. In 1894, the Chaffey Brothers tried to recruit settlers from the United States, Canada and England, but were unsuccessful. Ultimately, the Chaffey Brothers were forced to declare bankruptcy.\textsuperscript{94} The Victorian government then stepped in with loans to keep the settlement from failing utterly.\textsuperscript{95} According to Bates, “Much criticism has been leveled at these [irrigation] settlements, and the £25,000 already expended upon them, but government maintains that they will prove more remunerative than relief works for the unemployed.”\textsuperscript{96} Alas, by 1905, the irrigation trusts established by the Irrigation Act of 1886 were all insolvent. That same year, Victoria abolished irrigation trusts and the management and operation of irrigation systems under the direct control of the State Rivers and Water Supply Commission.\textsuperscript{97}

Nevertheless, as of 1915, Mildura and Renmark held about 8,000 “prosperous fruit growers and their families and their vines produce far more raisins and currents than the whole of Australia can consume.”\textsuperscript{98} The purpose of this pamphlet was to recruit settlers to Australia from the United States, Canada, Great Britain and elsewhere, so its statements ought to viewed in this light with a certain amount of caution. In his 1886 report, Deakin wrote, “In the States, it is

\textsuperscript{93} Bates, 60.

\textsuperscript{94} Ibid., 69.

\textsuperscript{95} Ibid., 70.

\textsuperscript{96} Ibid., 130.

\textsuperscript{97} Davis, 657.

\textsuperscript{98} Irrigation Farming in Australia, 7.
found that irrigation attracts population, and there is no reason why it should not so here [in Australia]." Boosters in the United States and in Australia promoted their communities with reckless abandon. In this context, boosterism is the promotion of a town, community, State, region or nation for purposes of developing it economically, politically, and socially. Boosterism is typified by vain-glory, braggartly, boastfulness, hucksterism, puffery and, on occasion, charlatanism. Boosterism is founded on the assumption that more-is-better; that more people means more business activity and higher real estate values and this must be better than less. Speculation is the soul of boosterism. For example, Clarence H. Northcott wrote:

> Scanty rainfall operates to prevent agriculture in sections where the soil is rich in nitrogen. Tropical heat has hindered the settlement of and development of large, fertile and well watered areas. The productive areas are not naturally restricted relatively to the population of five millions persons. But wise choice is needed concerning their relative values in pasture and in agriculture, scientific knowledge concerning their capacities and the mode of their highest utilization, and organized social effort towards securing that utilization.

William D. Boyce was even more rhapsodic, "It [Australia] is the land of opportunity, and were it nearer the crowded centers of Europe and its resources as well advertised as those of Canada and Argentine and the United States, it would be the Mecca of the European emigrant."

Boosters in America described their communities in similar terms.

While Australia followed America’s lead in regards to the first two phases, in the government phase Australia led. In addition to many similarities, Deakin observed

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99 Deakin’s Report, 34.


“unlikenesses, ... and among them one of the chief is the attitude of the State toward every form of enterprise, including the construction and management of railways, telegraphs, and water supply.”¹⁰² Deakin continued, “Outside of Colorado and Utah, government has done nothing even to secure to the appropriator of water the fruit of his labors, or enable him to take a position in the Courts.”¹⁰³ This was true. In the United States, the government’s attitude was generally laissez-faire; with a few exceptions, the United States government policy was to convert the public domain into private property quickly as possible, and then allow private individuals to do as they pleased. Any government intervention in the economy was seen as “socialism,” the bogeyman of American politics. Bogeyman or not, an American version of socialism called “progressivism” was gaining support in America during the second half of the nineteenth century.

After a century or so of disposing of the public lands, all the most desirable land in America had passed to private hands, often the hands of speculators. Historian Roy M. Robbins wrote, “No nation in world history had so wasted its natural resources or opened up its national treasure to unbridled exploitation as had the United States of America.”¹⁰⁴ S.M. Jelley, writing in The Voice of Labor, complained that during the twenty years between 1868 and 1888 there had been “no proper management of public lands, but our national legislators have actually given away to corporations, in a spirit of prodigality without parallel in the world's history, more land

¹⁰² Deakin’s Report, 12.

¹⁰³ Ibid., 23.

than is contained in the states of Illinois, Iowa, Ohio and Michigan combined.”

With so much land tied up, there was very little land left for actual settlers to find home sites. The land that remained was in the West, and most of that was unsuitable for farming without irrigation. It was nearly an article of faith among progressives that waters running to the sea or into desert sinks needed to conserved so that the vacant lands could be reclaimed. Once the water had been conserved and the land reclaimed, people could be settled on the land in new homes, by which progressives meant farms.

Progressives all agreed that federal government aid was necessary. Irrigation promoters did not see themselves as socialists. Frederick H. Newell wrote, “The Nation has entered upon an experiment unique in its scope and character. It has been variously declared to be socialistic or paternalistic, but by the majority it is regarded as good business.” F.W. Blackmar wrote, “The management of the water is finally given back into the hands of the people where it rightly belongs. The Government becomes merely a temporary promoter of wealth, aiding and abetting its citizens in legitimate industry.” Blackmar’s phrase “temporary promoter of wealth” sounds suspiciously like Vladimir Ilyich Lenin’s “withering away of the State.” Senator William M. Stewart, of Nevada, wrote, “The successful reclamation of the arid region of the United States requires an harmonious and appropriate system of laws to be enacted by Congress and the several

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States and Territories where irrigation is necessary.”

Water is the thing with value, land without water is worthless, or words to that effect, became almost a mantra among irrigation enthusiasts. Bringing water from the few available streams required large outlays in capital. Marc Reisner, in his seminal book Cadillac Deseret, wrote, “For the first time in their history, Americans had come up against a problem they could not begin to master with traditional American solutions — private capital, individual initiative, hard work — and yet the region confronting the problem happened to believe most fervently in such solutions.”

One of the earliest attempts at federal government aid to irrigation was introduced by Representative James Mitchell Ashley of Ohio. In 1865, Ashley “introduced a bill to develop and reclaim public lands requiring irrigation in the Territories of Idaho, Colorado, Arizona and Montana, and the State of Nevada, which was referred to the Committee on Public Lands.”

The bill died in committee. In 1877, Congress passed the Desert Land Law. The act permitted married couples to purchase 640 acres, one square mile, of arid, public land for $1.25 per acre, on condition that the purchaser irrigate the land. Single men could purchase one half that amount, or 320 acres. According to Thomas Wellock, “Fraud rather than vegetables grew from this law. Speculators simply dumped a barrel of water on land and had a witness sign that it

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109 Reisner, 115.


111 Desert Land Law, ch. 107, 19 Stat. 377 (1877).
was irrigated.” Wellock concluded, “The Desert Lands Act proved a hard truth. Even with the lure of almost free land, private enterprise did not have the resources to irrigate desert land. Only the federal government had the money, expertise, and disregard for the bottom line to do it.”

Alfred G. North wrote in *The Irrigation Age*, “The financial failure of these private ventures has been due mainly to the great cost, the slow returns, and to the fact that the projectors could not own and control both the land and the water supply.”

Newell wrote,

> Millions of dollars raised by selling irrigation stocks and bonds in the East and in Europe have been invested in large works, and corporations formed for the purpose have made hundreds of farms in every arid State and Territory of the West. Unfortunately, the success which in the majority of cases attended the efforts of individuals and co-operative associations, almost without exception has failed to reward the corporation. Instead of fat dividend and huge profits, receiverships and ultimate bankruptcy, with the loss of every dollar invested, have been the common results of speculation in irrigation securities. Communities have grown up under these works and have prospered, but the capitalist who constructed them has reaped no profits from his investment.

Irrigation is expensive and requires lots of capital outlay, hence “settlers of limited means cannot engage in them and small land-holding is discourage.” Blackmar asked rhetorically, “But why should the Government have undertaken this irrigation project? Why not have left it to

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112 Wellock, 41.


private investment? Because private investment had about reached the limit of its
development.” Blackmar continued, “It [irrigation] can no longer be done by individuals or by
groups of individuals, but only through the unifying and directing agency of the Government. It
is the true province of government to aid citizens wherein they cannot help themselves.”
When the private sector failed, Americans turned to the government for help. Pisani noted
another problem with private irrigation companies, “Private irrigation companies did try to
monopolize water—they had to—and that led to baneful results.”

The first direct federal aid to irrigation was the Carey Act of 1894, named for Senator
Joseph M. Carey (R-Wyo.). This law awarded each State in the arid region one million acres
of federal land, on condition that the State provide irrigation works within ten years. Seven
eligible States accepted the challenge of irrigation. Of these, five States passed laws requiring
actual settlement and cultivation of the land, thereby preventing speculative claims; limited
filings to 160 acres, attached the water right to the land, and provided for the ultimate ownership
by the irrigators of the ditches on which they depend. The Carey Act filled “the gap between
what the individual settler is able to do by his own efforts in reclaiming a single homestead or

117 Blackmar, 135.

118 Ibid., 136.

119 Pisani, To Reclaim A Divided West, 107.

120 Carey Act, ch. 301, § 4, 28 Stat. 422 (1894).

121 Elwood Mead, Irrigation Institutions: A Discussion of the Economic and Legal
Questions Created by the Growth of Irrigated Agriculture in the West (New York: Macmillian &
Co., 1903) 24.
Many State-level irrigation schemes during the 1880s and 1890s also failed, due to “[i]nadequate budgets, insufficient knowledge of hydrography and irrigation agriculture, nonexistent or limited engineering staffs, defective water laws, and shortsighted legislatures.”

Between 1890 and 1906, Congress, both the Senate and the House of Representatives, held a series of hearings on irrigation. These hearings provided fora for partisans to present their views. Newlands, Mead, Newell, L.H. Taylor, Supervising Engineer in Charge of Nevada Works; and many local dignitaries and officials testified before the committees. Nearly all the witnesses were in favor of irrigation, and the purpose of the hearings was to build public support for government involvement in irrigation. In this they eventually succeeded.

After the passage of the Carey Act, irrigation generally languished. Enthusiasts such as Maxwell, Smythe and Mead continued to lobby for government involvement in reclamation, or at least government financing through congresses and the pages of The Irrigation Age. Maxwell published several magazines devoted to irrigation and social reform, notably the California Advocate, National Advocate, and National Homemaker. “Maxwell’s greatest triumph was nationalizing the irrigation issue—something Smythe, Warren, and Newlands had been unable to do. He began by approaching the directors of the West’s railroads. In 1913, railroad baron James J. Hill of the Great Northern and Northern Pacific took personal credit for the Reclamation

122 C.A. Norcross, Agricultural Nevada (San Francisco: Sunset Magazine Homeseekers Bureau, 1911) 23.

123 Pisani, To Reclaim A Divided West, 169.

124 Ibid., 287.
Act of 1902, pointing out that it had been his idea to hire Maxwell as a lobbyist. Hill, a
Jeffersonian with a deep faith in the family farm, was convinced that one day Montana and the
Dakotas would be the granary of the world. The Great Northern and Northern Pacific would carry
the region’s crops to harbors on the Pacific coast for transport to China and the Far East.”125 The
political will simply did not exist. That is until Theodore Roosevelt succeeded to the Presidency
on September 14, 1901 after the assassination of William McKinley. Roosevelt was both the
über-progressive of his generation and a Westerner, in spirit and by adoption, if not by birth.
After the deaths of his first wife and his mother within hours of each other February 14, 1884,
Roosevelt went West to live the life of a rancher and cowboy. He returned to New York in 1886
and began a public service and political career that would elevate him to the vice-presidency on
March 4, 1901. On September fourteen of that year, Leon Czolgosz’s bullets catapulted
Roosevelt to the White House.

A few weeks after Roosevelt became President, Senator Henry Clay Hansbrough (R-
N.D.) called on Roosevelt at the White House. Hansbrough urged Roosevelt to support federal
aid to irrigation in his State of the Union message. This was the first time anyone had called
Roosevelt’s attention the problems of irrigation “in a concrete manner.”126 Harold Rowland, an
early biographer of Roosevelt, related a slightly different set of events. According to Rowland,
Gifford Pinchot and Frederick H. Newell met with Roosevelt “on the first Sunday after he
reached Washington as President, before he had moved into the White House” and discussed
with the new President “the twin policies [conservation and reclamation] that were to become

125 Ibid., 288.

two of the finest contributions to American progress of the Roosevelt Administrations."

Regardless of whether Roosevelt took advice from Hansbrough, or Pinchot and Newell, or all three, in his first State of the Union message to Congress, December 1, 1901, he wrote:

Great storage works are necessary to equalize the flow of streams and to save the flood waters. Their construction has been conclusively shown to be an undertaking too vast for private effort. Nor can it be best accomplished by the individual States acting alone. Far-reaching interstate problems are involved; and the resources of single States would often be inadequate. It is properly a national function, at least in some of its features. It is as right for the National Government to make the streams and rivers of the arid region useful by engineering works for water storage as to make useful the rivers and harbors of the humid region by engineering works of another kind. The storing of the floods in reservoirs at the headwaters of our rivers is but an enlargement of our present policy of river control, under which levees are built on the lower reaches of the same streams.

The Government should construct and maintain these reservoirs as it does other public works. Where their purpose is to regulate the flow of streams, the water should be turned freely into the channels in the dry season to take the same course under the same laws as the natural flow.

The reclamation of the unsettled arid public lands presents a different problem. Here it is not enough to regulate the flow of streams. The object of the Government is to dispose of the land to settlers who will build homes upon it. To accomplish this object water must be brought within their reach.

With the presidential blessing bestowed, Congressional work on irrigation began in earnest. Two bills were introduced in the first days of the first session of the Fifty-Seventh Congress. One bill was introduced in the House of Representatives by Francis G. Newlands (D-Nev.). The other bill was introduced in the Senate by Hansbrough. *The Irrigation Age* quoted

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Hansbrough saying, “Congress is going to be liberal with the West in dealing with irrigation questions, and I believe that President Roosevelt will also be most liberally disposed. I believe that the government should give the proceeds of the sale of public lands to irrigation purposes.” Hansbrough told *Forestry and Irrigation*, “To say that the national government cannot, within the Constitution, do its part in the development of the [West] is to discredit the genius of the American people. To say that we may not utilize the waste waters ... is to admit that national progress has reached the end.”

In December 1901 during an after-dinner speech at the Willard Hotel in Washington, Secretary of the Interior James “Tama Jim” Wilson “spoke for a broad, prompt, energetic Governmental policy in the interest of such development of the West as would increase the greatness of the nation and extend our home market.” “The United States have in the arid and half-arid States and territories,’ he [Wilson] said, ‘immense areas of lands chemically capable of yielding incalculable wealth if irrigated; and we have in the same regions tremendous quantities now going to the sea, without have done any good to man. It is beyond the range of individual enterprise to wet these dry lands with these waste waters; but to do this great work is a legitimate function of the Government.”

Both the Newlands bill in the House and the Hansbrough bill in the Senate were

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substantially the same. Both provided “for the setting aside of the proceeds from the sale of public lands in the arid States and Territories as an ‘arid land reclamation fund’.” Money from the fund would then be “used for building such reservoirs, and that the cost of such construction shall be put upon the land reclaimed by them, and the land then offered for sale by the Government in small tracts to bona fide settlers, upon easy terms.”

The bills faced some opposition, mostly from cattle interests in Wyoming, and from “several of the more prominent of the great newspapers, the New York Sun among them” on the grounds that the national irrigation scheme would “impoverish the national treasury.”

President Roosevelt made full use of his bully pulpit and big stick to secure passage. When Representative Joseph Gurney Cannon (R-Ill.) and Representative Sereno Elisha Payne (R-N.Y.) opposed the bill, Roosevelt “took them in hand, and finally they yielded to him to the extent of being willing to refrain from speaking against the bill. ... Other influential republican members from the eastern states were controlled in a similar way.” In addition to the lobbying efforts of Smythe, Mead, and Newell, the Denver (Colorado) Republican credited Newlands with “an entirely unique method of using photographs and the magic lantern” in lobbying for


135 Ibid.


137 Ibid., 224.

138 Ibid., 226.
legislation.\textsuperscript{139}

The opposition to reclamation mostly came from the mid-West and mid-Atlantic States,\textsuperscript{140} and was based on two grounds. One “principal objection to the bill has arisen upon the ground of constitutionality, it being held that the government could not improve its own lands, or exercise the privileges of a land-owner in removing obstacles to development.”\textsuperscript{141} Newlands defended the bill’s constitutionality, “The United States owns the great area in the States mentioned in our bill ... and by virtue of that ownership has an unassailable right to do whatever addresses itself to Congress as proper to make that land of value for settlement.”\textsuperscript{142} Hansbrough also defended reclamation’s constitutionality, “To say that the national government cannot, within the Constitution, do its part in .the development of the latent wealth that exists in a region that is nearly one-third of the total area of the United States is to discredit the genius of the American people.”\textsuperscript{143} “With reference to the constitutionality of the reclamation act, it was declared by the Supreme court in the case of \textit{Kansas v. Colorado} that congress has no power to provide for the reclamation of arid lands not the property of the United States, nor situated within the limits of a territory, but it was conceded that it has this power a to lands within the territories, and also, subject to the state laws on the subject, as to lands of the United States lying within the

\textsuperscript{139} \textit{Denver (Colorado) Republican}, September 14, 1902, as quoted by “Press Comment on the Irrigation Proposition,” \textit{Daily Nevada State Journal}, November 2, 1902, 3.

\textsuperscript{140} Worster, 161.

\textsuperscript{141} “The Irrigation Bill,” \textit{Forestry and Irrigation} 8 (1902): 232.

\textsuperscript{142} “Great Wealth in the Arid Lands of the West,” \textit{Daily Nevada State Journal}, January 7, 1902, 3.

\textsuperscript{143} Hansbrough, 102.
The Newlands Reclamation Act was declared constitutional in the cases United States v. Arizona, and Kansas v. Colorado from the provision, U.S. Const. art. IV, §3, conferring upon Congress the power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States. The passive acceptance of reclamation’s constitutionality shows that the Jacksonian attitude opposing internal improvements was dead.

The other ground came from the farmers' organization known as the National Grange of the Order of Patrons of Husbandry or, more commonly, “the Grange, from the fear that with the increase of tillable area in the West, farm values in the East would be reduced.” This objection was summarily dismissed by reclamation’s partisans, “This fear has been shown to be groundless, ... The agricultural products of the West differ widely from those of the East, ... In short, the opposition from this source has been based wholly upon ignorance of the true condition.”

Opposition was not universal. Forestry and Irrigation cited several Eastern newspapers supporting reclamation, including the Boston Herald, Scientific American, the New York Commercial, the Syracuse, New York Post-Standard, and the Philadelphia Inquirer, among

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144 Long, 560.


147 Ibid.
With the President’s active support, passage of some form of reclamation act was a foregone conclusion. The Senate version of the bill named for Senator Harbrough was passed on March 1, 1902 without a dissenting vote.149 Worster reported, “In the Senate, there was hardly any debate, and the individual vote went unrecorded.”150 The breakthrough in getting the reclamation act passed was reached on April 2, 1902, at a White House conference between President Roosevelt, Representatives Frank Wheeler Mondell (R-Wyo.), Newlands, George Sutherland (R-Utah), Victor Howard Metcalf (R-Calif.), and Senator Charles Henry Dietrich (R-Neb.) and William Maxwell, chairman of the National Irrigation Association, and Gifford Pinchot, Chief Forester. According to the Daily Nevada State Journal, “The question discussed related to the withdrawal of irrigation lands and the State control section. Discussion developed the fact that all were agreed as to the purpose to be accomplished, but that they differed as to phraseology.”151 The breakthrough was suggested by Maxwell who suggested that Newland’s language “would satisfactorily adjust differences as to construction and this view was generally accepted.”152 Once the final language was worked out, Newlands moved that the Senate bill be substituted for his House bill. After this parliamentary maneuver The motion was carried. Next,


149 “The Irrigation Bill,” Forestry and Irrigation 8 (1902): 231.

150 Worster, 161.

151 “Bill Has Been Amended: White House Conference Results in Change in Irrigation Measure,” Daily Nevada State Journal, April 3, 1902, 1.

152 Ibid.
the committee made several amendments to the bill which in effect rewrote it to be the former Newlands bill in substance.\textsuperscript{153} The final vote in the House was 146 for and 55.\textsuperscript{154} Roosevelt signed the bill into law on June 17, 1902. The pen with which Roosevelt signed the bill was given to Mondell. According to \textit{Irrigation Age}, “Mr. Mondell, however, was almost as little entitled to that pen as one of the avowed opponents of the bill. But the gift of the pen was a small matter, and Mr. Mondell was permitted to bear it away in triumph.”\textsuperscript{155}

Mondell was not the only person taking credit where it may not have been due. \textit{The Carson (Nevada) News} tried to give credit for the passage of reclamation to Roosevelt and Hansbourgh, “insisting that Mr. Newlands had little or nothing to do with its enactment.”\textsuperscript{156} \textit{The Daily Nevada State Journal} dismissed these allegations as the work of partisans of William Morris Stewart, one of Nevada’s two United States Senators and a fierce political rival of Newlands.\textsuperscript{157}

Passage of the Newlands Act was widely hailed as a great breakthrough. The national magazine \textit{Harper’s Weekly} opined, “There is some reason to believe that the unexpected strength which the irrigation bill displayed in Congress in its final stages was due to the particularly glowing picture which the happily named Representative Newlands of Nevada presented to the

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\item[154] Worster, 161.
\item[155] Jermane, 226.
\item[157] \textit{Ibid.}
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national imagination in his great speech in favor of the measure.”

*Scientific American* commented, “According to Mr. Newlands, the Representative from Nevada, who has promoted the legislation of the subject this bill is very complete and comprehensive in its scope and automatic (so to speak) in its plan of action.”

A “Nevadan” wrote to the Editor of the *Daily Nevada State Journal* on June 18, 1902 suggesting, “When the President signs the Irrigation Bill the people of Reno should immediately hold a great jubilee. ... The irrigation bill is the greatest boon to the west and especially to Nevada. What a great region this will be when the deserts are watered and tilled by prosperous people!”

Frederick Newell wrote, “The Nation has entered upon an experiment unique in its scope and character. It has been variously declared to be socialistic or paternalistic, but by the majority it is regarded as good business.” Smythe believed that June seventeenth should be kept as a “holiday” to remember the Theodore Roosevelt signing the Newlands Act.

The progressives never lost sight that what was important was providing homes—that is farms—for settlers that thereby the political imbalance between East and West, and the demographic imbalances of the urban centers might be corrected. Smythe correctly wrote, “The

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161 Frederick H. Newell, 933.

true significance of the National Irrigation Law consists much less in the amount of money it will make available for domestic development than in the principle it establishes. While in one sense it is merely an extension of the homestead policy, in another and far more vital sense it marks the beginning of a new era in social legislation.”

Newell wrote, “The building of large structures for water conservation and for the reclamation of land is not, however, the ultimate object. These works in themselves are notable, but their importance to the nation comes from the fact that they make possible opportunities for the creation of small farms and building of homes for an independent citizenship.”

Blackmar wrote,

No other act of Congress in recent years has been so radical in its departure from older methods of governmental administration, and no other has been of greater service to the far West or more promising of real good, that the Reclamation Act of June 17, 1902. The newness of the act consists in the governmental policy inaugurated for the disposition of public lands, on the one hand, and the new species of government service to the people, on the other.

Pisani concluded, “Maxwell also played on such fears because he knew that irrigation could not pay for itself: it had to be justified as a social reform because the collapse of private reclamation had already demonstrated that water projects could no longer be regarded as profitable business ventures.”

Later historians agreed with contemporary commentators. Lawrence B. Lee concluded, “The overwhelming vote registered in favor of Newland's bill in Congress was in some degree a

163 Ibid., 376-377.


165 Blackmar, 131.

166 Pisani, To Reclaim A Divided West, 287.
measure of the success of William Ellsworth Smythe's propaganda which employed the venerated symbol of the homestead farmer as the agent for the conquest of arid America.”

Gene M. Grassley wrote, “The Newlands legislation, as we now know, was an anomaly, cleverly conceived by a conservation-minded, politically astute president and a crusading Nevada congressman. Suddenly, his fellow western senators, who had long trumpeted the virtues of private enterprise, found themselves in the bastion of public subsidy.” Pisani called the Newlands Act the “boldest piece of legislation ever enacted pertaining to the trans-Mississippi West.”

Donald Worseter summed up the Newlands Act:

Historians have been explaining ever since why it [the Newlands Act] passed and what it reflected of American culture of the time. Their explanations generally follow one of two lines. First and more simply, it has been said that the act was the achievement of consummate political leadership, either that of Francis Newlands or of Theodore Roosevelt. Second and more abstractly, it has been argued that the act rolled through on a wave of something called ‘Progressivism’ or ‘Conservation.’ Neither theory is full convincing. They are either too narrow and dependent on personalities or too grandiose and abstract.

There is nothing grandiose or abstract about it. The progressives wanted to create a perfect society, their secular “city on a hill.” Progressives saw the West as a place where this city, or at least its suburbs, might be built. Among others, two questions needed to be answered to accomplish this. These questions were the political imbalance between East and West, and the


169 Pisani, To Reclaim A Divided West, 322.

170 Worster, 161-162.
demographic pressure in the Eastern cities. The answer to both questions was to move people from the overpopulated East to the underpopulated West. Irrigation was a tool to solve one technical aspect of this answer. Irrigation permitted land in the arid region of the West to be subdivided and sold as farms, a nostalgic echo of an earlier time, and these new farmers would learn or relearn the values and virtues of thrift, hard work, collectivism, cooperation and patriotism; would have a permanent, independent means of support; and the immigrants among them would be assimilated.

Australia turned to direct government intervention in irrigation matters earlier that the United States. In 1894, Helen Page Bates wrote, “The functions of [the Australian] government have been extended still further to assist directly in production, and the general development of the country. The colonies plan to effect by setting the working class back upon the land.”

The Lake Bonney Settlement Act of 1894 was passed by the Province of South Australia on December 21, 1894. Unlike the earlier agreements with the Chaffey Brothers, the Lake Bonney Settlement Act called for direct government construction and supervision of irrigation works. The stated purposes of the act were “(1) To provide for the establishment of a settlement at Lake Bonney, wherein (2) Irrigation works and improvements will be undertaken by the Commissioner of Public Works, and (3) Land may be acquired on (4) Terms which will recoup, with interest the public expenditure.” The Act required the governor to set apart certain land “described in the Schedule A” for the project, and required the Commissioner to “undertake—

171 Bates, 9.

172 Act Relating to Establishment of an Irrigation Settlement at Lake Bonney, 1894, c. 599, § 2 (S.A.)
(1) The construction of works, and the erection of machinery for supplying water to the settlement, and for irrigating the settlers’ blocks; (2) The erection of a dwelling on each settler’s block, and the fencing of each such block, and the planting of one-half thereof.” Each settler’s block was not more than sixty acres, and cost twenty-two pounds per acre. No settler was allowed to “hold, use, or occupy more than two settler’s blocks.” Settlers received a “perpetual lease” for the annual rent of one shilling per acre. The act contained precise instructions for both government officials and would-be settlers. The Commissioner was to undertake the construction of irrigation works, roads, even factories. Settlers were to purchase “perpetual leases.” Credit terms were generous: thirteen pounds down, and one pound per week until the balance was paid. Settlers also had an option to invest what today might be call sweat equity by working on the Commissioner’s projects at the rate of five shillings, five pence per day, two-thirds of which was applied by the Commissioner toward the settler’s balance.

In 1904, Victoria passed the Closer Settlement Act. This act provided specific initiatives

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173 Ibid., §§ 6, 10.
174 Ibid., §§ 13, 14
175 Ibid., § 41.
176 Ibid., §§ 52, 54.
177 Ibid., § 12.
179 Act relating to Establishment of an Irrigation Settlement at Lake Bonney, 1894, c. 599, Schedule C (S.A.).
for settlers in the form of financing, credit, farming practices, and irrigation, as well as tighter supervision of, and a more technical approach to, irrigation itself.\(^{180}\) The next year, 1905, Victoria passed the Water Act which abolished the locally-controlled irrigation districts created by the 1886 Act.\(^{181}\)

For much of the relationship between Australia and the United States, Australia was the “receiver of information and aid in the form of personnel from the United States.”\(^{182}\) In 1907, Elwood Mead was hired as head of the Victorian State Rivers and Water Supply Commission.\(^{183}\) Mead had previously been State Engineer of Wyoming. Mead’s motive for taking a job so far from home are “murky,” but Tyrrell speculates that it involved “disagreements” and “infighting” between himself, Frederick Newell and George Maxwell over the implementation of the National Reclamation (Newlands) Act of 1902.\(^{184}\) In 1915, Mead returned to the United States. The triumph of progressivism in America over the previous decade encouraged him to take his experience and expertise home.\(^{185}\) “Especially between 1915 and 1924,” according to Ian Tyrrell, “Mead used the Australian experience to push his schemes for greater use of state power to control special interests and enhance the prosperity of small-scale farmers against larger

\(^{180}\) Tyrrell, 154.

\(^{181}\) Ibid.

\(^{182}\) Ibid., 12.

\(^{183}\) Ibid., 155.

\(^{184}\) Ibid.

\(^{185}\) Ibid., 161.
landholders.” Mead published his theories and observation on irrigation in *Helping Men Own Farms.* Mead advocated small farms as a sort of social safety net. Mead wrote

Largely because our legislatures are not responsive to the popular will, we have fallen behind England, Germany, and France, and still farther behind the English speaking democracies of Australia and New Zealand in our industrial and social legislation the very things which exalt democracy and in which we should lead. Our condition might be regarded as tolerable were it not for the fact that we are beginning to realize that in the development of resources or extension of commerce no agency equals the State as a coordinating force. The countries which have gone farthest in using the Government as such a force have become our most active and successful business competitors. As a result, there is a growing feeling that our Government should became a more effective business partner of the people in what H. G. Wells calls "The everyday drama of human getting."

Mead continued:

Australia recognized the fact that one of the requirements of civilized society is an adequate supply of pure water for household and industrial uses and in arid lands for irrigation. The greater the population and the higher the civilization, the greater the value of water and the greater the need for public ownership and control over both the sources of supply and the means of distribution. In order to make state control of water supplies effective, the Australian States retain the ownership of the beds of streams and of strips of land on each bank from one to three chains wide. This makes the State the sole riparian proprietor. Riparian rights an archaic survival of a different industrial age has no recognition. This part of the British Empire has freed itself from the costly and absurd conditions of a doctrine which we have unwisely retained. In America the state has largely ignored the significance of water control or has shirked the responsibility which adequate action would involve. ....

Under the public control of Australia, water-right litigation is unknown. The state holds as part of its social creed that each generation has an obligation to the generations that are to follow. The control of resources on which all depend is, therefore, retained by the state. The publicly owned strips of land along the margins make rivers and brooks forever accessible to all the people. ... The best feature of the Australian state activity is that it has not been

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186 Ibid.

187 Mead, *Helping Men Own Farms.*

188 Ibid., 202.
handed down from above like that of socialized Germany; it has been created and is maintained by the free vote of the people. They have incurred great responsibility and heavy expense in the belief that there can be no really free society, no genuine democracy, so long as want and misery exist in the midst of abundance.\textsuperscript{189}

In 1924, Mead assumed office as head of the Bureau of Reclamation, which office he would occupy until his death in 1936.

In 1901, John Quick and Robert Randolph Garran wrote, “The river systems of Australia bear a very close analogy, in many respects, to those of the arid portion of the United States, in which the rainfall is not sufficient for the production of the crops.”\textsuperscript{190} These similarities led to both common solutions and different solutions to the problems of aridity. In both Australia and America, irrigation policy passed through three phases of development. In the first two phases, the riparian phase and the entrepreneurial phase, America led the way and Australia followed. In the third phase, the governmental phase, Australia led the way, and America followed. Leonardo Da Vinci supposedly said, “It is a poor pupil who does not surpass his master.” In regards to irrigation, Australia was the pupil and America was the master, but, being a good pupil, Australia eventually surpassed its master.

\textsuperscript{189} \textit{Ibid.}, 204-206.

\textsuperscript{190} Quick & Garran, 880.