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RECLAMATION UNDER THE DESERT-LAND ACT

KARL S. LANDSTROM*

AFTER a flourishing epoch lasting half a century, disposals of public lands by reclamation under the Desert-Land Act declined sharply during the first World War. In 1937, Professor Ganoë, writing in "Agricultural History," concluded that the "era of the Desert-Land Act as an important policy for reclamation of arid lands was now over."¹ A new surge of interest has occurred, however, and there is a current heavy volume of applications. In the year ending June 30, 1953, 3,280 desert-land applications were filed, exceeding the number filed for homestead entries, public-land sales, small-tract sales, exchanges, or any other single class of land disposals administered by the Bureau of Land Management.

This article traces the general developments under the act, analyzes the origin and economic significance of the current developments, outlines certain economic and administrative problems, and discusses the outlook for future developments.

General Developments under the Act

The Desert-Land Act of 1877 was intended originally to promote the reclamation of arid and semi-arid public lands by making them available for privately-managed irrigation developments. Under the act, a total of 10,042,787 acres of public lands had been patented or approved for patent through June 30, 1953. Large areas in certain Western valleys, such as the Salt River of Arizona, the Imperial of California, the Snake River of Idaho, the Gallatin of Montana, and the Yakima of Washington were patented under the act. Federal projects under the Reclamation Act of 1902 were later constructed in many of these valleys to supplement the water supplies and to reclaim additional lands.

Professor Ganoë traced three epochs under the Desert-Land Act to 1914. The first of these, up to 1887, was characterized by extensive disposals to cattlemen, many of whom allegedly obtained the lands by fraud with no intention of reclamation.² A decrease in the number of original entries occurring in 1887 was reported by the Secretary of the Interior as being due to newer methods that had been adopted by the General Land Office to prevent fraudulent entries.³

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¹ John T. Ganoë, "The Desert Land Act Since 1891." *Agricultural History*, 11:266-277, 1937.

² John T. Ganoë, "The Desert Land Act in Operation, 1877-1891," *Agricultural History*, 11:142-157, 1937.

³ Department of the Interior, Annual Report, 1:6, 1887.

Fraudulent entries have not been limited to this first epoch. In his book on irrigation policy, Professor Huffman writes that he is personally familiar with a tract of land that was acquired under the Desert-Land Act where the irrigation ditch is a plow furrow beginning at a diversion on a dry stream bed and ending on a hill that is 25 or 30 feet higher in elevation than the alleged water supply.⁴

A second epoch, from 1888 to 1893, began with the decline of the Western cattle industry, and ended with the 1893 depression. An amendatory act, approved March 3, 1891, required a showing by an entryman as to how he intended to irrigate the land, provided for the filing of joint or association irrigation plans, required minimum annual and total reclamation expenditures, limited entries to individual citizens, and extended the operation of the act to Colorado.⁵

A third epoch began about the turn of the century, with the return of prosperity and revived interest in irrigation. The annual number of original entries increased rapidly to a peak of 15,620 in 1910. The act of March 28, 1908, provided that no assignment of an entry would be recognized unless the assignee was eligible to make an entry, and that entries could not be made on unsurveyed lands. This epoch ended about 1914, when the market for irrigation company securities collapsed.⁶

The number of original desert entries per year fell off rather steadily after 1914. This declining period witnessed considerable development under the act within State irrigation districts. Under the act of August 11, 1916, such districts, when approved by the Secretary of the Interior, were authorized to apply their liens to the public lands within unperfected entries. A total of 62 State districts have been approved under this authority.

Annual activity under the Desert-Land Act reached an all-time low in the year ending June 30, 1946, when only four original entries were allowed and only 10 final entries were approved by the Bureau of Land Management.

Recent Developments under the Act

The recent renewal of activity under the Desert-Land Act is a part of the general upsurge in farm-land development stimulated by higher farm real estate values and favorable ratios of farm commodity prices to farm production costs. Important specific factors influencing added desert-land

⁴ Roy E. Huffman, *Irrigation Development and Public Water Policy*, The Ronald Press Company, New York, 1953.

⁵ John T. Ganoe, "The Desert Land Act in Operation, 1877-1891," *Agricultural History*, 11:142-157, 1937.

⁶ John T. Ganoe, "The Desert Land Act Since 1891," *Agricultural History*, 11:266-277, 1937.

development include the greater technological efficiencies in well drilling, pumping, and irrigating; the extension of rural electrification; and the general improvement in desert living opportunities through such means as highways, refrigeration, and air conditioning.

It is unlikely that the current revival will develop into a major epoch in reclamation history. The resurgence has shown, however, that private initiative under the Desert-Land Act still has a role to play in Western reclamation development.

Unlike earlier surface-water reclamations under the act, the present developments are mostly by pumping from ground water. The bulk of the new demand has been centered in certain ground-water basins in California, Idaho, and Arizona. Substantial demand has existed also in Nevada and New Mexico. Smaller demands have developed in Colorado, Montana, Oregon, Utah, and Wyoming. In the State of Washington, practically no interest has been shown.

In the five fiscal years 1949-1953, the greatest development under the act was in Idaho, with approximately 80,000 acres of entries allowed. In California, there were approximately 60,000 acres. In all other States combined, the area allowed was approximately 50,000 acres.

In the five fiscal years 1949-1953, a total of 189,869 acres was classified by the Bureau of Land Management as suitable for disposition under the act, out of 530,693 acres applied for or otherwise considered for classification.

Recent reclamations under the Desert-Land Act have had particular significance in an area such as the Snake River basin in Idaho, where unused ground-water resources in public-land areas are known to exist. Irrigation began in the Snake River basin in the 1860's. Nearly all of today's irrigated area was developed by 1920. Development thereafter was much slower, primarily because the newer surface-water projects tended to involve successively higher costs.

In the past five years, there has been a decided trend toward ground-water development in the Snake River Plain, amounting to approximately 150,000 acres of new farm land. A recent survey in Bingham County showed that about 35,000 acres of desert had been developed in the county by the use of wells since 1948. The average cost of drilling the wells and providing the pumping equipment was about \$35 per acre. The main crops grown on the new lands are potatoes and small grains, with some sugar beets and alfalfa. Potatoes have been favored because of the low farm capital requirement and the good cash returns in the main. Ground-water development in this area undoubtedly will continue until its full potentialities are realized.

Few surface-water developments remain in an area such as the Snake

River valley that would be feasible without considerable financial assistance. The direction and extent of surface-water reclamation in an area such as this is largely controlled by Federal policy toward this type of public works.

Administrative Procedures and Problems

An upsurge of desert-land and other applications beginning about 1950 found the Bureau of Land Management with inadequate staff to handle the workload expeditiously. Complicating factors, including a general lack of basic hydrologic data concerning certain Western ground-water basins, specifically hindered the processing of desert-land applications. In March 1954, the Bureau had a total of 4,192 new and reactivated desert-land cases awaiting decision, exceeding the number of any other type of cases

TABLE 1. PUBLIC LANDS CLASSIFIED AS SUITABLE AND NOT SUITABLE FOR DISPOSITION UNDER THE DESERT-LAND ACT, JULY 1, 1948-JUNE 30, 1953

State	Classified as suitable for disposition	Classified as not suitable for disposition	Total
	(Acres)	(Acres)	(Acres)
Arizona	16,804	96,499	113,303
California	60,900	79,870	140,770
Colorado	877	1,040	1,917
Idaho	79,196	42,036	121,232
Montana	397	320	717
Nevada	18,670	35,037	53,707
New Mexico	316	70,078	70,394
Oregon	1,400	2,600	4,000
Utah	6,726	10,270	16,996
Washington	80	0	80
Wyoming	4,503	3,074	7,577
Total	189,869	340,824	530,693

Compiled from annual reports of the Bureau of Land Management.

involving public-land entry. A total of 1,911 of these cases was held awaiting reports of field examination.

Vacant public lands within the eleven Western States and in the Dakotas may be applied for under the Desert-Land Act by any citizen of the age of 21 or over, and by qualified persons of that age who have filed declarations of intention to become citizens. Except when filing for lands in Nevada, an applicant must be a bona fide resident of the State in which the lands are located. Any citizen may apply under this law for lands in Nevada. Ordinarily up to 320 acres in compact form may be included within an application. Entries are restricted to 160 acres on lands that are withdrawn or classified as containing leasable minerals, or lands that are within irrigation districts approved by the Secretary of the Interior.

Upon filing, the applicant pays 25 cents per acre and upon filing final proof for patent, he pays \$1 per acre. These amounts, totalling \$1.25 per acre, are the price paid to the Government for lands patented under the act, except where the entry is perfected by commutation or purchase.

By executive orders promulgated in 1934 and 1935, all of the vacant public lands in the eleven Western States, and certain other States were temporarily withdrawn from most classes of disposal pending determination of the most useful purpose to which such land might be put in consideration of the provisions of the Taylor Grazing Act. Section 7 of the Taylor Grazing Act, as amended, authorizes the Secretary of the Interior, in his discretion, to examine and classify any of the lands so withdrawn, or within a grazing district, which are more valuable or suitable for the production of agricultural crops than for the production of native grasses and forage plants, or more valuable or suitable for any other use than the use provided for under the act, or proper for acquisition in satisfaction of outstanding rights or grants, and to open such lands to disposal under applicable land laws.

When an application is filed with the Bureau of Land Management under the Desert-Land Act, the application is considered also as a petition for the classification of lands under the Taylor Grazing Act. Classification may also be made of lands without an application having been filed. Classification in this sense means an administrative determination under the discretionary authority of the Secretary whether or not the conditions precedent to the opening of the lands, as prescribed by the Taylor Grazing Act, do in fact exist.

Classifications are applied to each of the smallest legal subdivisions (normally quarter-quarter sections) of the lands under the application.

The classification authority of the Secretary was delegated to the Commissioner of the General Land Office (later the Director of the Bureau of Land Management), and has been redelegated to Bureau field officials. By recent order, Bureau of Land Management State supervisors and their designees were delegated the authority to make classifications. The authority to adjudicate applications under the Desert-Land Act for some years has existed in the Bureau of Land Management district land office managers. All field decisions are subject to a right of appeal within certain time limits to the Director of the Bureau of Land Management and to the Secretary of the Interior. Protests may be filed by parties having adverse interest.

For the first time, as outlined above, both classification and adjudication decisions may be made by Bureau offices located within the individual States. This will simplify and expedite action.

Factors Influencing Land Classification

Economic factors obviously are of primary importance in considering land classification decisions relating to the Desert-Land Act. The provisions of law, however, closely control the application of economic factors.

The requirements of the law as outlined above have been assumed by some to imply that, where the Desert-Land Act is concerned, lands to be classified for disposal must unquestionably be suitable for irrigation with little or no risk of failure. Likewise, it has sometimes been assumed that a classification "not suitable for disposal under the Desert-Land Act" necessarily implies that the lands are not feasible of irrigation. Neither of these assumptions is correct.

The central conditions required to be satisfied in determining the suitability of public lands for disposal, as specified by law, are (1) whether the lands are more valuable or suitable for the production of irrigated crops than for the production of native hay and forage plants or any other use provided under the Taylor Grazing Act; and (2) whether there is any other condition that would reasonably require that the lands remain in withdrawn status under the discretionary authority of the Secretary. Under the discretionary authority, lands may be classified for retention as Federal holdings because of conditions that may have little relationship to irrigability. On the other hand, lands may be classified for disposal even though their irrigability has not been firmly established.

In a decision in the cases of Ezra M. Carter and Harry Fogliatti, A-26165, A-26191, decided October 5, 1951, the Acting Solicitor of the Department of the Interior described the element of risk in desert-land entries in the following language:

"In affording to individuals an opportunity to obtain patent to valuable lands by reclaiming them, the Congress is inviting the adventurous to a precarious enterprise. The regulations warn the applicant that the reclamation effort is full of risks, but beyond putting the applicant on guard they do not protect him. They leave it to him to calculate the risks and take or reject them, as he chooses. The regulations are liberal toward the applicant in allowing him to enter the land if there is plausible presumptive evidence that he will have an adequate and constant water supply for its reclamation. But the rules are not tender towards him at the time of final proof if before then some unforeseen eventuality shall have occurred to make reclamation seem impossible. In such case, whether the happening of the contingency result from natural causes or from the interposition of man, the regulations protect the interest of the whole people in their lands and deny patent to the individual despite his disappointment and his loss of time and money."

At one extreme, the law would be complied with in classifying lands for disposal even though there is only a minimum showing of greater value

or suitability for irrigated crops. Some entries have been allowed partly as explorations to augment the scanty knowledge of ground water.

At the other extreme, the law would be complied with in classifying lands for retention where there is no question of feasibility, but where, however, it is determined that retention is reasonably warranted by other important circumstances. One situation of this type is where the lands applied for are needed for Government purposes such as military uses or experimental projects, and where no alternative sites are reasonably available. If the lands are a so-called "key-tract," essential as part of a range livestock unit, such fact would be given consideration.

Petitions for classification under the Desert-Land Act, unlike those under the homestead laws, are ordinarily considered allowable even though the land to be entered would not in itself constitute a unit having the capability of providing farm-family livelihood. There must be a showing, however, that the lands will produce irrigated crops on a commercial basis.

If there is high development risk involving the questionable availability of ground water, the applicant may be granted a special land-use permit to drill an exploratory well. This ordinarily carries a presumption that the entry will be allowed after satisfactory test of the well. This procedure allows the development of evidence without disturbing grazing or other preexisting uses. The permittee is not authorized to clear the land unless the entry is allowed.

Relationship to Water Conservation

A difficult classification situation that arises is where the proposed developments (usually in combination with others on public and private lands in the same locality) would tend to over-use the supply of local ground water to the detriment of existing water rights or uses. The frequency with which this situation is encountered varies by States and localities due to differences in the physical ground-water conditions and the effectiveness of State water conservation laws.

It is well established by decisions of the Department of the Interior that desert-land applications may be rejected where the entries, if allowed, would seriously damage water users.

In the case of Robert Charles Powell, A-25828, decided April 7, 1950, the Solicitor held that ". . . it does not seem proper or in the public interest for the Department to classify a tract of land as proper for desert-land entry under section 7 of the Taylor Grazing Act . . . when it clearly appears that the ultimate end will be disastrous to the applicant and to his neighbors." The lands within this application were located in an area where it was definitely known that the ground water was being exhausted many times faster than the recharge rate.

In the case of George Brown and Kenneth Lee Brown, A-26422, decided December 2, 1952, it was held that "The rejection of applications for entry under the Desert-Land Act is proper where it appears that available irrigation water is insufficient for additional crop production without endangering the supply of those now dependent on ground water in the area for irrigation."

On the other hand, in the Carter and Fogliatti decision, it was held that "Where the drilling of wells on nearby lands indicates that satisfactory irrigation water may be obtained at reasonable cost from underground sources for the desert lands sought, denial of entry on the ground that third parties using nearby surface waters may seek to enjoin development of the ground water is error." In this case it was ruled that the contingency of litigation was remote rather than probable.

The discretionary provision of the Taylor Grazing Act permits classifications to be made in such a way as to promote the general economic interest. The guiding principle as stated by Edward Woosley, Director of the Bureau, is that the Bureau "must be ever on the alert respecting the interest of the man who is applying for a desert-land entry and at the same time taking into full consideration increasing ground-water problems in the Western States. . . ."⁷

Outlook for Future Developments

Over-all results are that only one out of three original desert entries has reached fruition into a patent. The classification provision of the Taylor Grazing Act provides that certain resource and other conditions must be met before an entry may be allowed. Consequently a higher ratio of success may now be expected. Basically, however, desert-land entries are speculative ventures. The record of economic progress made by the current entrymen will be a major factor influencing interest in future developments. A research project to determine accurately the degree of economic success would be a valuable source of needed information.

The Bureau of Agricultural Economics has estimated that, if aggregate population growth continues at the current rate, greater aggregate demands for farm products within the next decade may about absorb the increased productivity on existing farm lands to a point where more improved cropland will be needed. It is cautioned, however, that investment in development of new lands should be made only when it is clearly justified by increased requirements and greater efficiency in the use of resources.⁸ Reclamation of productive arid and semi-arid public lands by private capital under the Desert-Land Act is one of the means by which

⁷ Edward Woosley, "Logan Conference," *Our Public Lands*, 4:8-9, January 1954.

⁸ H. H. Wooten, *Major Uses of Land in the United States*, USDA Technical Bulletin 1082, October 1953, p. 83.

the requirement of additional cropland acreage may be satisfied. There is a tendency, however, for some applicants to attempt the reclamation of lands that are of low or marginal capability.

Further efficiencies in well drilling, pumping, and distributing systems will tend to stimulate desert-land development. A continuing deterrent is the unexplored or undetermined ground-water characteristics of many Western basins. Another unknown is the extent to which reclamation of public lands by private capital under the Desert-Land Act may become a substitute for reclamation of such lands by the Government under the Reclamation Act.

Certain Reclamation Act projects include among their features the reclamation of public lands by pumping from ground-water sources. In some instances, canals would be constructed to provide community water deliveries similar to those in surface-water projects. In others, deliveries would be made by pipelines. Where local ground waters are to be used, it may be particularly important to consider the alternative of private development.

The extent to which public lands which are feasible of development from local ground waters may be released from Reclamation withdrawal and may be opened to private entry under the public-land laws will have an important effect upon future reclamations under the Desert-Land Act.