Order Number 9229330

A historical and political analysis of the Reclamation Reform Act of 1982

Hackenbracht, Anna Margaret, Ph.D.

The Johns Hopkins University, 1992

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

A Historical and Political Analysis of the Reclamation Reform Act of 1982

by

Anna Margaret Hackenbracht

A dissertation submitted to The Johns Hopkins University in conformity with the requirements for the degree of Doctor of Philosophy

Baltimore, Maryland

1992

ABSTRACT

This dissertation examines the political and social aspects of the Reclamation Reform Act (RRA), signed into law by President Ronald Reagan on October 12, 1982. The thesis specifically investigates the issues that arose in the discussion and debate that eventually led to enactment of the RRA after a span of ten years. The research contained in this thesis contributes a comprehensive historical analysis to the general record of reclamation history. A particularly unique contribution is the detailed material provided on the events spanning the time period of 1964 to 1982.

The research consisted of identifying key reclamation issues and evaluating the evidence to determine whether the issues were valid and how extensive. These factors were then analyzed through the period covering the final development of the Act, the promulgation of regulations, and the first years of implementation. Material for the thesis was obtained from a review of the general reclamation literature, legislative and agency documents, and interviews with key participants in the legislative process. Additional information was from interviews with a sample of irrigation districts and data submitted to the Bureau by these districts.

The analysis found that most irrigation districts chose to come under a set of provisions that increased the acreage limit and the price for reclamation water. The percentage

of districts subject to these provisions was not uniform geographically and did not correlate with farm size. Only a small number of districts took advantage of a provision to increase their acreage limit. Few landholders were paying the higher water rate, although the Bureau has used it as an enforcement tool. This is primarily because large landholders have reorganized their farm operations. As a result, the overall impact of the RRA has been minimal. The water subsidy for large-scale landholders has not been reduced even though Congress intended to limit the amount of subsidized water delivered to a farm operation. This is due to certain "loopholes" in the Act as well as the impact of certain policy decisions made by the Bureau. The kind of reform originally intended will likely occur only through further action by Congress.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

This dissertation examines the political and social aspects of the Reclamation Reform Act (RRA), signed into law by President Ronald Reagan on October 12, 1982. The RRA represented the first substantial modification of reclamation law since 1946. The changes affected fundamental aspects of the program such as the acreage limitation and the price of reclamation water. In addition, the Act significantly changed the traditional roles of the Bureau of Reclamation Regional Offices, the irrigation districts, and the reclamation recipients, as well as their relationship with each other.

The thesis specifically investigates the issues and problems that arose in the discussion and debate that eventually led to enactment of the RRA after a span of over ten years. The research contained in this thesis contributes a comprehensive historical analysis to the general record of reclamation history. A particularly unique contribution is the detailed material provided on the events spanning the time period of 1964 to 1982. In addition the research evaluates evidence for the validity and importance of selected reclamation issues. These factors are then analyzed through the final development of the Act, the promulgation of rules and regulations, and finally the first years of the Reclamation Reform Act's implementation.

Chapter One traces the early history of irrigation development and use as well as the development of the Reclamation Act of 1902. The Chapter concludes by outlining the implementation of the program through 1960. Chapter Two presents the detailed history from 1960 until the passage of the Reclamation Reform Act in 1982. These two chapters provide the historical background and context. Information for these two chapters is largely from historical written literature, congressional hearings, agency reports, and interviews with principal participants. Material from two references in particular, From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931 by Donald J. Pisani and Water for the West, The Bureau of Reclamation 1902-1977 by Michael E. Robinson, was used for Chapters One and Two. Chapter Three examines the hearing record and identifies the issues and problems that thread through the debate. The Chapter also looks at the evidence supporting these issues. Material for this chapter is largely from the congressional hearing record and agency reports. Chapter Four examines the specific features of the Reclamation Reform Act and identifies how it addresses the issues raised in the congressional debate. Chapter Five examines the development of the regulations which exposed some of the policy differences among various groups when the Act was implemented. Material for this chapter is based on a thorough review of the proposed and final regulations as well as the extensive public hearings

conducted for the regulations. Chapter Six analyzes the impact of the RRA by examining the evidence by issue or problem. Material for this chapter draws on in-depth interviews conducted with a sample of irrigation districts as well as reporting and certification forms submitted by the districts in compliance with the Reclamation Reform Act. The final Chapter presents conclusions and recommendations.

Many people contributed to the development and completion of this dissertation. Foremost is my adviser, Dr. John Boland, Professor, Department of Geography and Environmental Engineering (DOGEE), The Johns Hopkins University. John provided insightful guidance at critical stages but still granted me the latitude to create a document of my own design; and over the course of the years of completion, always gave "nonjudgmental" backing and support. Dr. M. Gordon ("Reds") Wolman served as Chair of DOGEE during most of my graduate career. Reds supplied continual encouragement and provided crucial advice from his many years of guiding dissertation students; advice that made all the difference in those last hectic days of creating the dissertation into a polished product.

The development of this dissertation necessitated assembling an extensive amount of material. Many people freely provided help; I want to acknowledge two in particular. Mr. James Handlon, formerly with the Division of Water and Land, Bureau of Reclamation in Washington, D.C., guided me through the mountain of documents,

identified the right people for me to talk to, and provided endless explanations of the numerous details of the reclamation program. Ms. Dorothy ("Dot") Aho, an Acreage Limitation Specialist in the Analysis, Contracts, and Lands Division, Bureau of Reclamation in Denver, Colorado assembled lots of statistical information and patiently helped me wade through countless Bureau tables filled with data on irrigation districts.

And last, but not least, one cannot go through the development process of a massive product like a dissertation without solid support from your personal network. My most important network was my family. My mother, Margaret Hackenbracht, helped in numerous ways but at the very end she spent four solid weekends working at the computer, painstakingly typing in corrections and making sure the format was in order. And during that month, my father, Dick Hackenbracht, did all the errands so we could work and also functioned as principal proof-reader. My sister, Mary Hackenbracht, provided lots of support as well as guidance on using WordPerfect at critical moments. And then there's my husband, David Koo. I couldn't have made it without his infinite support, countless dinners, making the tables and figures, and all those bribes. David, the kid is done!

CHAPTER ONE

Early Irrigation in Southwest United States

The history of reclamation policy in the United States began before Europeans migrated to this country. Beginning in about 800 A.D., Native American tribes living in southern Colorado and New Mexico began forming permanent villages where they practiced farming (Golze 1952, 2). Agriculture became essential to the Pueblo Indians (as they are now called) because there was not enough wildlife or other food to sustain the communities. Plots were located near rivers and streams so they could easily be irrigated by simply diverting the water. The tribes also devised methods to control the water flow. The reclamation historian, Michael Robinson writes that:

> Rock check dams were built across ravines and gullies to trap alluvium and water during storm runoffs....After cloudbursts, freshets rushing down canyons were slowed by small dams and the water spread evenly over flat areas to create productive fields. The Southwest's Puebloan peoples stored rain and spring water in natural catchment basins and small manmade reservoirs for irrigation and domestic uses (Robinson 1979, 2).

The Indians in southern Arizona, called the Hohokam or Canal Builders, are particularly notable for the extent to which they utilized irrigation by tapping into the Salt and Gila Rivers. For example, according to economist Roy Huffman, Hohokam in the Salt River Valley irrigated as many as 250,000 acres using 1,000 miles of canals and laterals

(Huffman 1953, 13). And Robinson points out that they developed an expansive canal system of over 150 miles of large canals that irrigated thousands of acres (Robinson 1979, 2). By 1200 A.D., there were twenty Hohokam Indian villages and ten separate canal systems in the vicinity of present-day Phoenix, Tempe, and Mesa, Arizona (Robinson 1979, 2).

During the seventeenth and eighteenth centuries, Catholic priests and settlers began to move into the Southwest region where they established many settlements (Robinson 1979, 3). At the settlement site they built a water supply system which was a combination of the systems they had used in Spain and the systems developed by the local Indians (Robinson 1979, 3). Robinson describes their systems:

> Small storage dams on streams created reservoirs that were filled overnight and water was diverted onto fields in daylight hours. In some places, water was brought to the crops over irregular terrain through narrow channels carved out of the hard surface of hillsides. Retaining walls conserved water and inhibited erosion during rainstorms, and tile conduits carried domestic water to cisterns and patio gardens (Robinson 1979, 3).

Robinson notes that:

> When Americans began investigating the Far West, they encountered a thriving Spanish civilization that was based on water conservation (Robinson 1979, 3).

In the nineteenth century, the members of the Church of Jesus Christ of Latter-day Saints (commonly called "the Mormons") advanced the use of irrigation by becoming the first group of new settlers in the United States to organize

"a regional agricultural economy based on irrigation" (Robinson 1979, 3). (Some historians, however, give this distinction to Dr. Marcus Whitman who established a mission in 1837 near the present-day city of Walla Walla, Washington. For example, see Huffman 1953, 15.) Prior to 1847, when the first Mormon community was established in the valley of Great Salt Lake, new settlements had been confined to the humid areas of the country in the East (Huffman 1953, 14). The Mormons demonstrated that it was possible to build communities in a region thought to be uninhabitable due to its arid climate (Robinson 1979, 3).

The Mormon settlements consisted of a small community surrounded by "intensively cultivated" fields of ten to forty acres (Robinson 1979, 4). The size of one's family determined how much farmland and irrigation water was received and how much labor the family was required to contribute to the construction of the canal system. For example, a family allocated twenty acres contributed twice as much work as did a smaller-size family that had ten acres (Huffman 1953, 7-8). The system of water allocation and distribution was administered by water masters, also called ditch riders. These persons were appointed by the community's ruling body to regulate and enforce the water systems operation.

Historians have viewed the Mormon settlements as very successful, although the statistics cited to support this view vary greatly. For example, according to Robinson, by

1865, the Mormons had built approximately one thousand miles of canals which irrigated 1.5 million acres and supported sixty-five thousand settlers (Robinson 1979, 4). In contrast, Alfred Golze, former Assistant Commissioner of the Bureau of Reclamation, claims that by 1850, over 16,000 acres were irrigated in Utah, which grew to 263,500 acres by 1890 (Golze 1952, 6). Perhaps the difference can be explained if Golze's figures only include Mormon communities in Utah, whereas Robinson covers land in all the territories of the western United States and even northern Mexico. Regardless, they both commend a notable accomplishment which was due to two factors. First, like the Indian and Spanish settlements established earlier, the Mormons established communities in areas where there was a sufficient amount of water readily available. Robinson writes that:

> Brigham Young and his followers had fortuitously populated an area of abundant small streams where the natural terrain facilitated simple diversions to nearby fields. Therefore, considerable acreage could be brought under cultivation without building large dams, tapping the waters of major rivers, and distributing water from a single canal over extensive land areas (Robinson 1979, 4-5).

Second, the Mormon community had "a cohesiveness and a high degree of cooperation among its members" which assured that their ventures would be successful (Robinson 1979, 4). Some historians believe that this aspect of the Mormon communities was crucial to their success and was a factor often overlooked or not recognized by other groups seeking to imitate the Mormon achievement (Robinson 1979, 5).

Private Irrigation Development

Information about the Mormon settlements traveled to the East Coast. Excited by the Mormons' accomplishments, others decided to start their own colonies, as these "community-based" settlements were called. One of the first attempts was led by Horace Greeley, the owner of the New York Tribune newspaper (Huffman 1953, 16). Greeley and his agricultural editor Nathan Meeker knew about the Mormon communities in Utah and in 1868, Greeley visited northeastern Colorado. He was impressed with the possibilities for establishing a settlement and upon return to New York City he placed an announcement in the Tribune, advertising for prospective settlers to form a "Union Colony of Colorado." Settlers were required to have a certain amount of money in order to be members, although Greeley also contributed a substantial amount of financial support.

The settlement was started in Spring 1870. Meeker traveled with the other settlers to Colorado to direct the building. They decided to locate the Colony fifty miles northeast of Denver on twelve thousand acres. The Colony was named Greeley, after their benefactor. When building commenced, it became evident that the leaders had greatly underestimated the cost of constructing the canal system as well as the amount of area each canal could service. Donald Pisani writes that:

> Greeley...modeled the settlement after the New England village and Mormon towns in Utah. Civilization, they believed, could only flourish in the arid West if farmers lived in close-knit villages surrounded by

> their farms.... Unfortunately, the colony's leaders knew little about the cost and construction of canals, or the techniques of irrigation. Initially, Meeker estimated the cost of irrigating the 12,000 acres at $20,000, promising the first batch of settlers that this sum had already been raised through land sales. He assured the colonists that they would pay only for the repair and maintenance of ditches. But the first canal alone cost $27,000 and served less than 2,000 acres; a second ditch, expected to irrigate 5,000 acres, watered only 200. By 1890, the cost of constructing the four main canals stood at $412,000 (Pisani 1984, 120-121).

Greeley ended up financially supporting the Colorado development until his death.

According to Golze, much of the knowledge about what is necessary to make irrigation successful in the western States was learned from the Greeley Colony experience (Golze 1952, 10). The Colony learned that one had to determine the proper amount of water needed to grow different crops. It was also important to account for the amount of water lost to evaporation and seepage. And finally the system had to account for various engineering features such as the best slope for gravity canals.

Another early settlement, also modeled after the Mormons, was established by a group of fifty Germans living in San Francisco, California. In February, 1857 they formed the Los Angeles Vineyard Company and established California's first irrigation colony at Anaheim (Pisani 1984, 82). The settlement was located thirty miles southeast of present-day Los Angeles near the Santa Ana River, on 1,165 acres. The price of the land was $2.00 an acre (Pisani 1984, 82).

The settlement was financed by the settlers' own funds. Land located in the center of the community was reserved for schools and other public buildings. Each settler was entitled to a farm of twenty acres and within a year, eight acres of vines had been planted on each farm. To irrigate the vineyards, a five-mile canal was constructed from the Santa Ana River to the community.

In 1860, the Anaheim Water Company was formed to manage the canal operation and water distribution system. The Company was not designed to be a profit-making enterprise. Each landowner received one share of stock, which "could not be transferred independent of title to the land" (Pisani 1984, 82).

Pisani outlines several other governing principles of the Company:

> ...irrigation water should be sold at cost; that company policies should be determined by the water users themselves; that the amount of water received and the individual farmer's influence over company policies should depend on the amount of land irrigated; and that water rights should be appurtenant to, or attached to, the land watered (Pisani 1984, 82).

These policies "laid the foundation for the mutual water companies that became dominant in southern California by the late 1880s (Pisani 1984, 82).

As the Colony grew and the land was divided or consolidated, "the original policies became impractical" (Pisani, 1984, 82). According to Pisani:

> In 1880, the company's stock was divided into 3,000 shares, each representing an acre. Only landowners could buy the stock, but by that time it could be

> transferred from one parcel to another. Moreover, when company assessments for the maintenance and repair of ditches were not paid, the stock could be advertised and sold at public auction to any interested buyer, landowner or not (Pisani 1984, 83).

With these changes, the policies governing the operation of the canal were no longer determined by the farmers themselves, i.e. those who used the irrigation system directly.

During the 1870s, other colonies were established, especially in southern California. One, the Riverside Colony, was established in 1871 on the Santa Ana River, fifteen miles east of the Anaheim Colony. In general, the record of the colonies was mixed, although most were successful to some degree. As in the past, the prosperous enterprises were those that located near a source of water that could easily be diverted. Another important factor was the availability of substantial funds to finance larger projects as the community grew (Teele 1915, 194).

From 1880 to 1890, the development of irrigation systems expanded greatly. According to Golze, most of the growth was from speculators and occurred so rapidly that it was almost uncontrolled (Golze 1952, 11). The development was fueled by substantial migration from the eastern United States. The historian Raymond Moley writes:

> ...[that there was a] bombastic and nonsensical promotion of the idea of reclamation. Land companies and railroads flooded the East with advertising material which under present laws would land its authors in jail (Moley 1955, 5).

A great deal of the speculation took place in California which according to Pisani:

> ...offered the best opportunities for reclamation and land speculation, corporate development during that decade outstripped that in other states (Pisani 1984, 120).

This favorable climate was created by:

> ...[t]he decline of the mining industry, the adoption of no-fence laws, and the expansion of rail transportation into the San Joaquin Valley and southern California [which] contributed to a dramatic increase in irrigation during the 1870s (Pisani 1984, 102).

The area near the community of Fresno in central California was particularly attractive to speculators. Fresno was situated near the Kings and San Joaquin Rivers and so had a plentiful water supply. It was also located on the Southern Pacific railroad route which provided convenient transportation. Pisani writes that:

> Speculators had acquired land in huge blocks, suitable for large-scale reclamation and subdivision, and the ten-foot-high wild sunflowers that welcomed newcomers testified to the richness of the soil. At Fresno, many different companies and promoters competed for settlers, and the competition forced them to offer inducements not extended to purchasers of irrigated land in other parts of the state (Pisani 1984, 121).

Various methods were used to attract settlers. Elaborate advertising campaigns were prepared for future homesteaders. Glossy brochures extolling the rich agricultural potential of the area were distributed. To increase the number of potential buyers, they portrayed farming as an easy occupation and offered many inducements. For example, free train transportation to the West was usually provided. The advertising utilized by the investors of the Washington Colony, organized in March 1878 near Fresno, illustrated the

approach:

> Business men who wish to retire from their monotonous toil, can here find change and rest, pleasant surroundings and a better income than they have often realized from their life-long drudgery. People in reduced circumstances who are struggling to keep up appearances in the city, with children unemployed, and with young men and women seeking in vain for employment, should at once seek a good location and direct their energies to the cultivation of vines and fruits. In this way every member of the family can find pleasant and profitable employment, and all can enjoy health and the pleasures of a pleasant and happy home. The thousands of young men who are always seeking clerkships, or "waiting for something to turn up," would do much better to come to the country and go to work, earning money and getting a vineyard and orchard started, that, if well attended to, will make them fortunes for life. Nor should they think that because they have no money their case is hopeless. Every young man of good sense, industry and a will, can easily work his way to a competency if he will determine to be self-reliant and do it (Pisani 1984, 123-124).

In these speculative ventures, the company built the irrigation system and then sold "water rights" to the settlers (Teele 1915, 196). These rights entitled the buyer to obtain water in exchange for paying an annual charge. Contracts outlined the conditions under which the purchasers of rights were to receive water and the price. The water rights did not confer ownership in the irrigation system or the company. In this way:

> ...the builders planned...to reimburse themselves for the cost of the works and still retain ownership, and operate them indefinitely for annual charges which would return a profit (Teele 1915, 196).

On the whole, historians rate the "for-profit" irrigation systems as "poor performers." According to Pisani, a federal commission charged with recommending an irrigation system design for the Sacramento and San Joaquin Valleys

concluded that:

> ...the track record of private irrigation companies had been poor. Their irrigation works were poorly designed, flimsy, and wasteful, constructed for speculative profit rather than for permanence (Pisani 1984, 117).

And Robinson writes:

> [The systems] were often designed, engineered, and promoted by speculators having insufficient capital and technical resources. Dams, reservoirs, and canals were sometimes poorly built and the quantity of available water frequently misjudged. Settlers were sometimes enticed onto lands with heavy alkali concentrations, short growing seasons, and inadequate drainage.... Private irrigation projects suffered from severe handicaps. Before the 1890's, few stream gaugings were made to determine seasonal flows and variations from year to year. There were no records of water volumes diverted by upstream users, and western water rights were in such chaos that engineers and investors could rarely anticipate the amount legally available. A California canal owner when asked how to protect water rights replied that he first obtained a judicial decree given (sic) him legal title and then hired guards during periods of low flow....
>
> Canal projects on public lands were hampered by land laws framed in the humid East. An engineer could estimate the acreage a canal would water, but he could not judge whether the adjacent public lands would be filed on by potential irrigators or speculators. Each ditch survey, therefore, was followed by a stampede of speculative land filings under the Homestead and Desert Land acts. By refusing to enter into water contracts, speculators could starve ditch companies into bankruptcy or force purchase of their claims to end the settlement embargo.
>
> ...Many of the large canal projects were undertaken by promoters who obtained money from eastern investors. The basis of their operation was usually a preliminary survey and a claim to the water of a stream under the appropriation doctrine. Surveys were inadequately funded and there was little interest in accuracy since someone else's money was often at risk. In nearly every instance, engineers were pressured to reduce cost intimates so as to encourage the sale of shares. Thus, in many cases projects began without sufficient capital, work was suspended before water was furnished, and the hopes and dreams of settlers

depending on canals to mature crops were dashed (Robinson 1979, 9 - 10).

Another impediment to well-ordered irrigation development by private enterprise was the attitude of the settlers, most of whom had little experience with irrigation. Most of the settlers were from the East where issues such as adequate water supply and distribution were not the kinds of problems they were in the arid West. Their experience with irrigation was minimal and often they "did not appreciate that irrigation required cooperation." Robinson writes that:

> Unlike the Mormons and other cooperative irrigation ditch companies, they opposed water regulations and raised and lowered headgates when it suited them. In dry weather, farmers at the lower ends of canals discovered all the water diverted by neighbors. Thus, fights with fists, shovels and guns frequently broke out among water users (Robinson 1979, 10).

By 1900, many of the private companies were in financial trouble. According to Robinson, over ninety percent of the private irrigation companies were in or near bankruptcy in 1900, and it was virtually impossible to raise investment capital for new ventures." (Robinson 1979, 9). In some cases, the irrigation system of a failed company was purchased by the farmers who used the system. The farmers then reorganized and formed a joint-stock company.

Although the private companies did not do well financially, they did serve to expand irrigation in the West. Teele writes:

> Few were successful financially although they resulted in a large extension of the irrigation acreage (Teele 1915, 11).

Early Involvement by the Federal Government

At the time the Mormon settlers were traveling to the West and establishing their first settlements, the United States Government owned almost all the land west of the Mississippi River. As such, the Government had a special interest in the use and development of this land. The Federal Government's approach was that the best use of public lands was to provide homes for settlers, rather than produce revenue through sales (Teele 1927, 62). To this end, beginning in 1862, a series of bills were passed over the next thirty years to encourage settlers to homestead the land.

The first legislative proposal was the Homestead Act of 1862. This Act focused on "providing free homes for the settler and finding compensation in the increased national prosperity and increased property values to serve as the basis of public revenue." Under the Homestead Act, settlers could receive up to 160 acres of land if they lived on it for five years and paid a nominal fee. Within a few years, it became evident that the program was not well-suited to the arid lands of the West. Teele writes that:

> When the Homestead Act was passed, much of the fertile plains of the Mississippi Valley was available for settlement. In large part, these lands were open, grass-covered plains that could be plowed and seeded without "reclamation." But when attempts were made to settle the arid lands of the West, it was found that some modifications of the homestead plan were necessary (Teele 1927, 63).

One of the main weaknesses of the Homestead Act was that it did not provide for enough acreage to make

irrigation profitable. Congress responded by passing the Desert Land Act on March 3, 1877. The purpose of this Act was to provide new settlers with a substantial amount of land to homestead. The law allowed settlers to purchase 640 acres of land if they agreed to irrigate it within three years. The total cost of the land was $1.25 per acre. Once the terms of the law had been satisfied, title to the land was transferred to the settlers (Huffman 1953, 19). The Desert Land Act applied to public land in California, Oregon, Washington, Idaho, Nevada, Montana, Utah, Wyoming, Arizona, and Dakota, some of which were territories at that time. Colorado was added in 1891 (Golze 1952, 16).

When the Act first passed, many people were quick to take advantage of it. In the first three months of passage, applications were received for more than 250,000 acres and before long, the rate of application reached between half a million and one million acres a year (Huffman 1953, 19). Although there was a high application rate, less than twenty-three percent of the land was ever patented. For example, a report by the General Land Office found that as of 1914, over 30 million acres were entered, but only about seven million acres, or 22 percent, were patented (Teele 1915, 12).

The low rate of reclamation, as evidenced by the low percentage of lands patented, was due to several factors. The foremost reason was that the applicants themselves abused the program. According to Huffman (1953, 19), "The

law was widely used by interests in the eastern states to enter land and hold it for speculative purposes." And Hollon writes:

> Each of these measures [including the Desert Land Act] was an open invitation to fraud, for the burden of proof rested with the federal government. It has been estimated that 95 per cent of the final proof titles were fraudulent. For a fee, settlers filed, then transferred their holdings to some corporation and moved on. Cattlemen often induced their hired hands to take entry on land and then turn it over to the boss (Hollon 1966, 133).

In some instances, claims were filed on behalf of babies and deceased people. And many times the applicants applied for more than one claim, in direct violation of the acreage restrictions.

The Act had certain weaknesses which made it easy for those who would take advantage of the program. As stated previously, the burden of proof that the land had not been reclaimed rested with the Federal Government. Without sufficient personnel in the West, there was little likelihood that the applicant's claim would be checked. Teele (1927, 64) points out that another problem was the land could not be used as security to obtain loans to finance reclamation construction because the Federal Government kept title to the land until it was "reclaimed by the individual farmers...."

The well-publicized abuse of the Desert Land Act attracted a growing group of critics. Among them was the United States Surveyor General for Arizona. In a 1887 report he said:

> Speculators of all degrees have now turned their attention to the facilities offered by the desert land law....Parties have obtained 4,000 or 5,000 acres under this law by illegal methods....The desert land law as it stands fosters a wild spirit of speculation (Hibbard 1965, 429).

The Wyoming Surveyor General, in a 1889 report, recommended that other methods should be used to settle the West:

> The irrigation of the arid lands of the West should be undertaken by the government or the lands [should] be granted to the respective states and territories upon such terms and conditions as will assure the construction of necessary canals and reservoirs for reclaiming all of the lands possible (Hibbard 1965, 430).

Given the experience with the homestead laws, sentiment was building for granting public lands to the States in order to facilitate irrigation development. Many noted that irrigation systems required close supervision. This could be done by the States more easily than the Federal Government. Furthermore, States advocates pointed out that the Desert Land Act did not provide for a plan to irrigate on a large scale. The settlers on 640 acres could not finance the construction of large irrigation systems. And the States could not help without the authority to do so. Furthermore, the States could better decide what kind of large system they needed.

On August 18, 1894, States advocates won a victory with the passage of the Carey Act, named after Senator Joseph M. Carey of Wyoming, the chair of the Public Lands Committee. Under the Act, each State containing arid lands could be granted the authority to control the development of up to

one million acres. The State was to ensure that the land was irrigated and farmed, and that at least twenty acres out of each 160-acre parcel were cultivated within ten years (Golze 1952, 16-18).

The States developed their own procedures for implementing the Act (Golze 1952, 18; Teele 1915, 67-69, 153-155). In most instances, the program was directed by a State board. Individuals and corporations who wanted to obtain land had to submit an application to the Board which identified the land the applicant wanted to farm and described how the land would be irrigated. If the State board approved the application, it was forwarded to the United States Department of the Interior. At this point, the land was withdrawn from entry so another applicant could not apply for the same land. If the Department of the Interior approved the application, the land would be formally "segregated" or set aside. If the application was rejected, the land would be released from withdrawal.

After approval by the Department of the Interior, the plan was forwarded to the State. The State board would then enter into a contract with the applicant which specified the terms under which the applicant would construct the irrigation works and sell the water rights. Under the Act, the State could sell land "only to persons who have contracted with the applicant to purchase water rights" (Golze 1952, 18). And the water rights must carry an interest in the works, so that when the payments for the

rights were completed, the works and rights became the property of the purchasers, i.e. the landowners (Golze 1952, 18).

The settlers had to satisfy certain requirements before they were granted land patents. They had to show the State that they had established residence, that they had made certain improvements to the land, and had satisfied the payment requirement, which was "usually a nominal amount such as fifty cents per acre (Golze 1961, 18). According to Golze:

> It was contemplated that when the Carey Act enterprises were completed and the land and water rights were paid for, stock in the company would be turned over to the holders of the water rights, usually the landowners, and the undertaking would then become a cooperative enterprise (1961, 18).

On the whole, the Carey Act was marginally successful. As of June 30, 1949, of almost 8.5 million acres for which applications had been received, only about 1 million acres were patented (Golze 1952, 19). Over seventy-seven percent of the patented lands were in two states, Idaho and Wyoming. And four states had either no patented land or less than 5,000 acres (Golze 1952, 19).

There were several problems with the program. Many times the settlers could not afford to make their water rights payments or the land improvements that were necessary in order to secure title. Without title they could not use the land as collateral to obtain the funds they needed to finance the improvements (Huffman 1953, 22). In much the same way, the States were not allowed to use unreclaimed

land as collateral. This eliminated an important method through which they could raise the funds to finance reclamation (Lilley and Gould 1966, 70). According to Golze, many applicants were hesitant to start construction because of increasing construction costs (Golze 1952, 18). There were also bureaucratic hurdles. According to Lilley and Gould (1966, 69), "The processes of selection and patent were hamstrung by cumbersome bureaucratic requirements."

Growing Support Leads to a Federal Reclamation Law

The chaotic and ineffectual development of irrigation by private developers and State entities fueled growing public frustration. Settlers in the West, who were working hard to establish successful farms, were becoming resentful of:

> ...foreign investors owning large landholdings, railroads withholding millions of acres from sale and development, and schemes by eastern monopolists to carve huge empires of timber and grazing lands from the public domain.
>
> Farm tenancy rose rapidly in the West, causing fears that the democratic Jeffersonian ideal of America as a country of small landowners was imperiled. These frustrations found expression in various radical agrarian movements during the 1880's and 1890's. Farmers and other reform groups sought political action by banding into Farmers Alliances that evolved into the Populist Party. The movement, which had strong support in the West and South, advocated a broad spectrum of reforms to rid the country of special interest domination. They supported government ownership of railroads, free coinage of silver, election and tax reforms, and economy in government. Some Populists also called for government aid to irrigation, forest conservation, and controlled development of natural resources. A Federal reclamation law was viewed, therefore, as the first step in the evolution of progressive programs that

would insure the availability of resources for future generations (Robinson 1979, 10).

During the same period, various organizations were formed that provided "a common focus and ideology for the irrigation movement." The Nebraskan journalist William E. Smythe, who founded the National Irrigation Congress (NIC) in 1891, viewed reclamation as a means to "...transform arid and semiarid lands into productive, small family farms" (Robinson 1979, 13). Through annual meetings of the Congress and the NIC's publication "Irrigation Age", irrigation leaders had a public platform during the 1890s. Although the NIC provided tools for educating the public about reclamation, according to Robinson, "...[it] failed to develop an ongoing institution that would promote public and congressional support for western irrigation. In 1897 [George W.] Maxwell, a California lawyer with broad experience in western water development, organized the National Irrigation Association (NIA) at a meeting of the Trans-Mississippi Commercial Congress in Wichita, Kansas. The new organization's purpose was to augment, not replace, the National Irrigation Congress. It was devoted to organizing nationwide support from the general public, business, farmers, and politicians for a national reclamation act (Robinson 1979, 14).

The efforts of the NIA and other organizations, as well as individuals within Congress and the Federal bureaucracy, developed a solid base of support for reclamation and made it a national issue. In 1900 the

political platforms of the Democratic and Republican parties supported Federal reclamation legislation. Important public officials, including the Secretary of the Department of the Interior, the Commissioner of the General Land Office, and the Director of the Geological Survey, gave their endorsement. Backing came from many groups including various local Chambers of Commerce, labor organizations, western State legislatures, newspapers, farm organizations, and railroads (Gates 1968, 652; Lampen 1930, 35). Support also came from different trade associations including the National Association of Manufacturers, the United Mine Workers, the National Board of Trade, and the National Business League (Robinson 1979, 15). During this period several reclamation bills were introduced in Congress and while they were not approved, they kept the discussion of the issue alive and educated both the public and Congress.

Advocates supported federal reclamation for a variety of reasons (Hays 1959, 12-15; Lampen 1930, 35-41). The program they envisioned would promote settlements of small-scale farmers, who many believed would develop the best social and economic communities for the West -- communities of families, homes, and small businesses, not large estates. Irrigation development would create employment opportunities because workers would be needed to construct dams, canals, and other parts of the irrigation system. And the new communities that would be created would provide numerous jobs. Reclamation's potential for creating new employment

opportunities was especially attractive to eastern politicians who saw it as a way to relieve their cities of high unemployment. In addition, they liked the prospect that there would be new markets for eastern businesses. Conservationists supported federal reclamation because it would utilize millions of acres that would otherwise go to waste.

The opponents of federal reclamation voiced their concerns. Midwestern and eastern farmers feared the program would increase competition due to the additional agricultural production made possible by Federal reclamation in the West. They also worried that the value of their land would go down because reclamation would increase the total supply of agricultural land. The constitutional legality of federal reclamation measures was challenged on the grounds that federal revenue would be used to benefit only one region of the country. The claim that the level of funding for reclamation would be an enormous drain on the U.S. Treasury was also used by opponents. Many charged that, in reality, federal reclamation would only benefit special interests in the West, especially the railroad companies (Lampen 1930, 42-43, 45-47).

Reclamation supporters responded to the opposition's arguments by maintaining that the program would be "self-financing" because the sale of public lands and the repayment of capital and operation costs by water users would raise the necessary revenue. To the farmers in the

Midwest and East, advocates pointed out that agricultural production in the West would not compete with them because "...the fast-growing Western population would consume most of the food grown and, besides, most of the Western crops, (e.g. fruits, vegetables and sugar beets) would not compete with Midwestern grain commodities" (Leveen, 62). To those who believed the program would only benefit one region of the country, supporters maintained that irrigation in the arid West would foster economic benefits that would aid the entire nation. Finally, western legislators argued that the expenditure of federal funds for reclamation was justified because it would make up for their loss of potential revenue when the Federal government used thousands of acres of potentially taxable land to create the Federal forest reserves.

The reclamation debate turned in favor of the advocates when Theodore Roosevelt became the U.S. President in 1901 following the assassination of President McKinley. Almost immediately he began promoting the reclamation movement (Lampen 1930, 37). In his first message to Congress, Roosevelt addressed the importance of conserving the nation's natural resources and linked it with an appeal for federal reclamation:

> The forests alone cannot, however, fully regulate and conserve the waters of the arid region. Great storage works are necessary to equalize the flow of streams and to save the flood waters. Their construction had been conclusively shown to be an undertaking too vast for private effort. Nor can it be best accomplished by the individual States acting alone... The Government should construct and maintain these

reservoirs as it does other public works (Richardson, Messages and Papers of the Presidents, XIV, 6657).

Roosevelt also realized that Federal involvement in reclamation was critical to achieving the goal of settling arid lands in the West when he said:

> The lands reclaimed by them [the Federal government] should be reserved by the Government for actual settlers, and the cost of construction should so far as possible be repaid by the land reclaimed. The distribution of the water, the division of the streams among irrigators, should be left to the settlers themselves in conformity with States laws and without interference with those laws or with vested rights. The policy of the National Government should be to aid irrigation in the several States and Territories in such manner as will enable the people in the local communities to help themselves, and as will stimulate needed reforms in the State laws and regulations governing irrigation...Our people as a whole will profit, for successful homemaking is but another name for the upbuilding of the Nation (35 Congressional Record 1901, 86).

The Administration's view that Federal reclamation was necessary was supported by an important General Land Office report published in 1902 (Gates 1968, 654). The report concluded that it would be very difficult for the States to conduct an expansive irrigation program, that a Federal program would be self-financing, that developing agriculture in the West "would do no more harm to farmers than had agricultural development in the Great Plains" and that Western development would spur national growth (Gates 1968, 654).

The Reclamation Act of 1902

On June 7, 1902, the Reclamation Act was signed by President Theodore Roosevelt. Earlier opposition from

southern and midwestern legislators had dissolved when reclamation advocates threatened to filibuster the Rivers and Harbors bill (which was very important to legislators in those regions) unless they supported federal reclamation. As a result, most of the remaining opposition was from eastern representatives (Hays 1959, 13-14). But rather than vote against the bill, many chose to abstain, possibly because of pressure from President Roosevelt who strongly supported federal reclamation.

Under the Reclamation Act, the Federal Government was authorized to reclaim public land in sixteen western States and sell it to settlers under the provisions of the Homestead Act, i.e., settlers had to reside on the land in order to retain title. Ownership was limited to no more than 160 acres per landowner. The Interior Secretary would make the final decision on size based on the amount of land necessary to support a family. (Under a Secretary's ruling in 1904, a landowner could transfer land in excess of 160 acres to his or her spouse and/or children, which would enable the family to receive project water for use on 320 acres.) Private land could receive reclamation water only if the owner complied with the same acreage and residency requirements.

Revenue from the sale of public lands would go into a revolving fund called the Reclamation Fund. This Fund would pay for the project construction and operation/maintenance costs. These expenditures would be returned to the Fund

through the repayment requirement for project settlers and the Fund would be expanded with the sale of more public lands. In this way, the program would be self-financing.

Under the repayment requirement, settlers who used the water from a project were to repay the construction costs for their project. The Department of the Interior determined what portion of the repayment amount each settler was to pay. The individual repayment obligation would be satisfied by making ten annual payments into the Reclamation Fund. The repayment amount did not include interest, which therefore constituted a subsidy. This subsidy was a conciliation for limiting the amount of owned acreage to 160 acres. This was considered appropriate for a program that would benefit small-scale farmers. After the obligation was repaid, patents of land ownership would be issued and the operation and management of the irrigation system would be given to the land owners (Gates 1968, 655).

Early Years of the Reclamation Program

The Interior Department's Reclamation Service, an entity in the U.S. Geological Survey (USGS), was responsible for implementing the Reclamation program and quickly began the task. By 1902, when the Reclamation Act was passed, the USGS had already surveyed much of the West. They had studied "streams, watersheds, irrigable lands, and potential dam and reservoir sites....The service supplemented these data with more intensive surveys that enabled it to

recommend projects, prepare plans and specifications, advertise for bids, and begin construction" (Robinson 1979, 19). On March 14, 1903, the Interior Secretary approved six projects and in August 1903 the Truckee-Carson Project in Nevada was started (Robinson 1979, 19). In the first five years of the program, twenty-five projects were authorized (Robinson 1979, 19-20). For the next fifteen years, the Service "concentrated on completing these projects and conducting investigations of potential sites, called 'secondary projects,' in cooperation with State Agencies" (Robinson 1979, 20).

From the beginning, it was clear that constructing the irrigation systems for the projects was a huge undertaking. One important factor was obtaining sufficient hydroelectric power to operate the construction machinery (Robinson 1979, 27). The power could also be used later to pump irrigation water and supply electricity to consumers. On April 16, 1906, Congress passed the Town Site Act which allowed excess power generated on Reclamation projects to be leased for up to ten years (Gates 1968, 660). By 1923, eighteen powerplants with a total capacity of over 33,000 kilowatts were operating on twelve projects. Power development on the Salt River Project in Arizona and the Minidoka Project in Idaho was especially notable. In 1923 the Salt River and Minidoka projects generated $527,642 and $121,055 in gross power sales (Robinson 1979, 29).

Despite the fact that the Reclamation Service enjoyed

success in terms of initiating projects and developing hydroelectric power, the first ten years of the program were difficult ones for the Service and its settlers. The projects were much more expensive to build than originally estimated. Projects were initiated without sufficient research and planning. Most of the settlers lacked the necessary resources and experience to engage in reclamation farming. And, as with previous land settlement programs, speculation was practiced.

The Reclamation Service construction cost estimates were too low. When the original planning was conducted, the Service estimated that the average cost of construction would be $25.00 per acre (Robinson 1979, 38). But the actual cost was often much higher. This meant that settlers faced unexpectedly high construction repayment costs. According to Robinson:

> Angry settlers argued that their per-acre obligations were often more than 50 percent higher than original estimates. Many portrayed the Reclamation program as a devious hoax and accused the agency of intentionally underestimating costs and overdesigning dams and canals (Robinson 1979, 39).

The principal problem was the Service relied on price information dating from 1902 to 1906 to estimate "labor and material costs" for expenditures made five to eight years later. (Robinson 1979, 40) In the West, the price for these basic items had increased as a result of the increased demand for resources to construct the railroad system and rebuild the parts of San Francisco damaged in the 1906 earthquake and fire. Robinson noted that:

> Labor rates increased 20 to 50 percent, and the Service bore the added cost of recruiting and transporting workers from cities such as Chicago, Omaha, and Kansas City. Prices for horses and mules nearly doubled. Costs for lumber, steel, and cement not only soared but the raw materials were in short supply. In addition, water users often sought construction of drainage systems and other supplemental works not included in original estimates. These cumulative factors increased project costs despite efforts by field personnel to keep them down (Robinson 1979, 40).

The situation was compounded by the fact that some questionable projects were undertaken. After passage of the Reclamation Act, the Government was immediately flooded with requests for projects. Legislative requirements and political pressures sometimes precluded careful, exhaustive surveys of all physiographic and economic aspects of proposed projects. The short investigatory period barely allowed time to determine engineering feasibility and prepare cost estimates of proposed structures. Projects were frequently undertaken with only a sketchy understanding of the area's climate, growing season, soil productivity, and market conditions (Robinson 1979, 38). In addition, Section 9 of the Reclamation Act required that funds from public land sales in a particular state be spent for reclamation in that state. Based on this provision, most states assumed they would receive at least one reclamation project. But some of the proposed projects were not very important, and often the lowest-priority projects were in states that had sold the most public land. Robinson writes that in the Director's Second Annual Report, Frederick H. Newell observed that:

> ...[the] pressures were intense from individuals whose 'chief interest is not so much in reclamation as it is in having the funds spent to...improve business conditions. On the other hand, the states and territories which have the smallest fund have [the] greatest need and possibilities of development and [the] widest opportunities of making prosperous, self-supporting homes' (Robinson 1979, 38-39).

When the program was developed, little attention was given to the difficulties settlers would face. According to Robinson (1979,38) no assistance was given to settlers to help them do "....the difficult and costly work of clearing and leveling the land, digging irrigation ditches, building roads and houses and transporting crops to remote markets." Furthermore, settlers were not required to have funds or experience in irrigation farming. Robinson (1979, 38) points out that, "Most project homesteaders had no irrigation experience and lacked the requisite skills for success."

Land speculation contributed to the problems faced by the settlers. Prospective settlers were willing to pay higher prices for lands located in a future project site because they knew the land value would rise with the new water supply. As a result, they had few funds to invest in preparing the land for farming. In addition, some homesteaders filed on more land than they could prepare and farm. And even though the land was not farmed, the settlers had to pay all expenses attached to the land. Consequently, they were paying taxes, mortgages, and construction repayments on fallow ground (Robinson 1979, 39). In one project, the average landholding was sixty-five acres, while

only twenty-five acres were farmed (Robinson 1979, 39).

By 1910, it was clear that even with future revenue from public land sales and repayments from project settlers, the Reclamation Fund would have insufficient funds to complete the projects underway (Gates 1968, 663-664). "Congress responded to the crisis ....by authorizing a $20 million loan from the [U.S.] Treasury to the Reclamation Fund. The funds were to be allocated after a special board of Army engineers surveyed the projects' conditions, reported on their engineering and financial feasibility, and determined the funds required to complete them" (Robinson 1979, 41). The law also stated that settlers were not allowed to move onto public lands reserved for a reclamation project until the irrigation system had been built. In addition, Section 9 of the Reclamation Act was repealed so projects could be located and built regardless of how much public land was sold in the various states (Robinson 1979, 41).

Despite these changes, the 1910 legislation did not relieve the settlers of their repayment problems. Robinson (1979, 41) writes that from 1911 to 1914, "the Service and its water users were often at odds over repayment policies. Under the leadership of Director Newell, the agency steadfastly enforced the repayment provisions of the Reclamation Act. On the other hand, various irrigation interests sought to obtain a broad range of financial concessions....The major demands included extending the

repayment period, graduating charges, writing off excessive costs, adopting direct Federal appropriations for part or all of project features, [and] transferring project operations to water associations..." (Robinson 1979, 41).

At first the calls for financial relief were largely ineffective. But in 1911, the National Water Users Association (NWUA) was formed "to pressure Congress to liberalize repayment policies" (Robinson 1979, 42). The NWUA managed a critical attack on Director Frederick H. Newell. As a result of their pressure, when President Woodrow Wilson took office in 1913, the new Secretary of the Interior, Franklin K. Lane, decided to convene a conference to discuss reclamation problems. The conference included public hearings which while expected to last a few days, "dragged on for seventeen days." At the conclusion of the conference, a set of recommendations were forwarded to Secretary Lane. The Secretary endorsed most of the conference recommendations and "accused the agency of being interested chiefly in making wonderful dams and reservoirs -- not in making the people industrious and contented" (Robinson 1979, 42).

Many of the recommendations were incorporated in the Extension Act, signed by President Wilson in August 1914 (Gates 1968, 670-671; Swain 1963, 77). The Act increased the time allowed to repay project construction costs from ten to twenty years and "established a graduated rate schedule that required smaller payments during a project's

early operating years (Robinson 1979, 42). The Act also transferred from the Interior Secretary to Congress the power to appropriate money from the Reclamation Fund and select new projects. Congress also tried to tackle the speculation problem by requiring those who owned more than 160 acres to sell their excess property according to terms (which would include price) set by the Interior Secretary (U.S. Congress, Senate 1975, 801).

Inflated agricultural prices and smaller repayments provided by the Extension Act improved the economic condition of reclamation settlers during World War I (Robinson 1979, 43). But after 1919, crop prices dropped steeply and the old financial problems returned. From 1919 to 1922, the annual crop value of reclamation farms fell from $152 million to $83.6 million. As a result, many farmers were "unable.... to meet [their] repayment obligations. The delinquency rate, which was already fifteen percent in 1919, climbed to forty percent by 1922 and peaked at sixty percent in 1925" (Robinson 1979, 43).

Robinson writes that "Congress responded by passing a series of four "Leniency Acts" from 1921 to 1924 that granted temporary relief. They authorized the Interior Secretary to defer payments with interest as they became due." These measures were, however, only temporary. They did not address Reclamation's "fundamental fiscal shortcomings." For example, in 1921 the Service received $10 million for the Reclamation Fund - half of what was due.

"By 1922 only 9.5 percent of the $135 million invested in Reclamation by the Federal Government had been repaid and declining receipts from public land sales threatened the program's future" (Robinson 1979, 43).

In an effort to help the program, Congress approved legislation to include other revenue sources in the Reclamation Fund. For example, under a 1917 revenue from potassium deposits on public land went to the Reclamation Fund (Robinson 1979, 43). The 1920 Oil Leasing Act provided the Fund the majority of the annual federal receipts from oil and other minerals. The 1920 Federal Water Power Act also granted the Fund with fifty percent of the money obtained from licensing hydroelectric projects (Robinson 1979, 43).

With continual problems, Director Arthur P. Davis became the program's "scapegoat". Complaints were voiced throughout the West about "the alleged wasteful, inefficient, patronizing record of the Service" (Robinson 1979, 43). In a major shuffle within the Harding Administration, Dr. Hubert Work replaced Albert B. Fall as Interior Secretary in 1923. In June, Work dismissed Director Davis and appointed David W. Davis Commissioner of the newly-created Bureau of Reclamation, which replaced the Reclamation Service (Robinson 1979, 44). Work pledged to put the reclamation program on a sound financial footing and in a move towards this end he "assembled a distinguished Committee of Special Advisers on Reclamation (commonly known

as the Fact Finders Committee) to make an intensive study of the policy, application, and operation of Government methods of reclaiming arid lands by reclamation" (Robinson 1979, 44).

The Fact Finders Report "marked a major turning point in the evolution of Federal Reclamation policy" (Robinson 1979, 44). The Committee reaffirmed that the goal of the program was to promote the settlement of family farms and concluded that "the Government reclamation program had in a measure, failed to accomplish the human and economic purposes for which it was created" (Robinson 1979, 44).

The program's problems were thoroughly examined and attributed to several factors. According to Robinson, one problem was that the settlers did not take advantage of the advice of agricultural experts (Robinson 1979, 44 The Committee also criticized the Service for not dealing with the problem of speculators taking advantage of increasing land prices. The Committee reported that speculation caused severe economic hardships and was the source of a high rate of farm turnovers. Finally, the Fact Finders alleged that the tightly controlled Federal program induced settlers to view themselves as wards of the Government entitled to direct aid and repayment moratoriums (Robinson 1979, 44).

The Committee was particularly critical of the failure of the Reclamation program to place homesteaders on public land. They found that "only seven of the active twenty-two projects in 1922 encompassed more public than private land,

three had none at all, and thirty-seven percent of Reclamation's total project acreage consisted of former public domain" (Robinson 1979, 45). According to Robinson (1979, 45) the Committee concluded "that the main beneficiaries of the program were speculators and absentee landlords who rented their farms to tenants."

Based on the Fact Finders Report, Congress passed the Second Deficiency Act, also called the Fact Finders Act on December 5, 1924 (Lampen 1930, 71 - 72; Swain 1963, 83 - 84). The Act stipulated that prior to approving a project, the Secretary of the Interior would now be required to determine its overall feasibility. This evaluation would include engineering feasibility, the cost of construction and land development, the supply of water, and the price of land (Robinson 1979, 45). In addition, all project "lands were to be classified according to their potential to support a family and pay water charges" so that in setting the repayment level, the Bureau would consider the productivity of the land. The 20-year repayment period was replaced with an annual construction charge set "at 5 percent of the average per-acre, yearly gross income, calculated over a 10-year period" (Robinson 1979, 45).

The Bureau of Reclamation was also required to "set standards for prospective settlers, including farming experience, character, and capital" (Robinson 1979, 45). For instance, in the future, prospective homesteaders would be required to have at least $20,000 in savings and/or

equipment investment. In addition, no funds would be spent on a new project until a repayment contract was signed with an irrigation district or a water user organization (Robinson 1979, 45).

While Commissioner Elwood Mead (who replaced David W. Davis as Reclamation Commissioner) and Secretary Work believed the new Act would help bolster the program, conditions on the projects created an "immediate crisis." In 1924, reclamation settlers paid "less than half of their construction obligations and only fifty-four percent of the operation and maintenance charges" (Robinson 1979, 45). Mead decided that suspending the payments, as had been done in the past, would only make the problem worse. Instead, he decided to require each water user to apply for assistance individually so the Bureau could investigate each separate case. According to Robinson (1979, 46), "[the] new policy reduced unjustified defaults and resulted in the discovery that some settlers 'urged their neighbors to oppose payments." The Bureau also announced that it would not deliver water to farmers who did not pay their fees for operation and maintenance costs.

At the same time, the Bureau of Reclamation continued to help the reclamation settlers by persuading Congress to modify the construction charges. The 1926 Omnibus Adjustment Act authorized the Bureau to suspend the repayment obligation for land that was determined to be unsuitable for agricultural production. (For a discussion

of the Omnibus Adjustment Act see Lampen 1930, 72-73; Swain 1963, 84-85.) Robinson writes that, as a result, some $14 million in construction charges were eliminated for over 185,000 acres of land that "had become waterlogged, saturated with alkali, or otherwise rendered unproductive" (Robinson 1979, 46). The two-year-old repayment plan of the Fact Finders Act which was based on a percentage system was replaced with a 40-year maximum repayment period. "The Act also attempted to control speculation on new projects by prorating for the appraisal and sale of excess lands owned by individuals" (Robinson 1979, 46).

During the late 1920s, the Bureau slowed its building program and announced that for the next decade, the focus would be to complete projects already authorized. The Bureau would devote $97 million dollars to this effort (Robinson 1979, 46). The policy was side-tracked a bit when congressional pressure forced the Bureau to begin the Owyhee Project in Oregon and Idaho and the Vale Project in Oregon. But overall, "there was a strong effort to limit new starts" (Robinson 1979, 46).

In 1926, the Bureau also increased its effort to transfer management of the irrigation project to its recipients. Under legislation passed that year, the Bureau negotiated special contracts, called water service contracts, with irrigation districts. The districts then transacted subcontracts with the individual water users. With this change, the districts assumed at least some major

administrative tasks for the Bureau, such as collecting fees. The districts also became more responsible for ensuring that the recipients of project water complied with federal reclamation law, including the acreage limitation and excess land provisions (Candee 1989, 661).

While the reclamation program was instituting some rather significant internal changes, outside groups were pressuring Congress to restrict or stop irrigation development. Surpluses of various commodities were growing which decreased prices. Some legislators " questioned the advisability of subsidizing Reclamation in the Far West while Great Plains farmers and southern cotton growers were going broke" (Robinson 1979, 46).

The U.S. Department of Agriculture was reclamation's principal critic. The Department pointed out that through the reclamation program the country was expanding irrigated agriculture with interest-free loans while elsewhere plans were being developed to raise prices by restricting production (Robinson 1979, 46).

Commissioner Mead responded to the charges. Robinson (1979, 47) writes that in the late 1920s and early 1930s, the Commissioner "issued a barrage of speeches and articles in defense of the program." He pointed out that most crops grown on reclamation-irrigated lands were not in surplus and were consumed locally and regionally. In addition, reclamation projects comprised less than one-half of one percent of the total cultivated acreage in the United

States. He maintained that the West and the country needed "the water, crops, electric power, employment, and purchasing power engendered by the Bureau's activities" (Robinson 1979, 47).

In summary, the years from 1902 to 1928 saw the beginning of the federal reclamation program and its early development. During these early years, Congress and the Department of the Interior tried to deal with "high irrigation costs, low repayment rates, and, on many projects, the virtual control of the land by a small class of large-scale landowners and land speculators" while developing a building program.

Reclamation Program Builds Diversified Support

The Colorado River is a large system that encompasses over 250,000 square miles of the Western United States. Its 1,400 miles of water flow through seven states as it travels from the Colorado and Wyoming mountains to the Gulf of California (Robinson 1979, 49). Robinson describes it as "a turbulent, unruly river that varied from silt-laden floods in spring to low flows during hot, dry summer months."

In the late 1890s, private interests in southern California's Imperial Valley began constructing an irrigation system to divert Colorado River water. By 1904,

"75,000 acres were under cultivation" (Robinson 1979, 49). But that winter a series of unexpected floods caused the river to cover much of the valley. When efforts to solve the problem were marginally successful, the Federal government was approached and the problem was handed to the Bureau of Reclamation. The Bureau conducted a survey which recommended a "comprehensive development scheme to regulate the river, generate power, and irrigate the lower Colorado Valley" (Robinson 1979, 50). Congressional authorization of the project was delayed until inter-state water disputes were settled, but on December 21, 1928, the Boulder Canyon Project Act was signed by President Calvin Coolidge (Robinson 1979, 51). The law authorized $165 million for constructing a 726-foot-high dam at Boulder Canyon, which was "nearly twice as high as any then-existing dam. Also authorized was the All-American Canal system which would bring water to the Imperial and Coachella Valleys. Most of this appropriation would be reimbursed through revenue from power sales (Robinson 1979, 51).

The Boulder Canyon Project "was significant because it represented the first large Federal conservation undertaking based on multiple-purpose objectives." Robinson (1979, 51) writes that, "[h]enceforth, Federal irrigation and hydroelectric development would go 'hand-in-hand.'" Moreover, it set the stage for river basin planning that integrated irrigation, power, flood control, and other benefits. Although irrigation remained the primary core of

its mission, Reclamation was transformed by this project into a multiple-purpose water resource agency" (Robinson 1979, 51).

Unfortunately, for several years the Bureau was unable to move ahead with its new mission because of the economic troubles during the Depression period. Although construction began on Hoover Dam (as the dam in Boulder Canyon was named), "elsewhere the agency was cutting back on construction and [project] investigations (Robinson 1979, 55).

During the early 1930s, the problems continued until the construction program was in fiscal crisis. Repayments had declined, and the Bureau lacked funds to continue construction activity (Robinson 1979, 56). In 1933, the Reclamation Fund received only one third of its expected receipts, or $2.1 million (Robinson 1979, 56). In order to continue the construction program, Congress provided the Bureau a $5 million loan from the Reconstruction Finance Corporation (Robinson 1979, 56).

The social programs of the New Deal "infused new life to the Reclamation program as President Franklin D. Roosevelt developed a legislative package of comprehensive public works programs which were designed to "become the means to attain two objectives: (1) conservation and utilization of natural resources in the public interest, and (2) expanding employment and business activity to put the economy on the road to prosperity" (Robinson 1979, 56). The

National Industrial Recovery Act, which President Roosevelt signed on June 16, 1933, created the Public Works Administration (PWA) and committed "the country to using public works construction as a means of combating unemployment and promoting economic recovery." In 1934, the Reclamation program received $103 million from the PWA. According to Robinson (1979, 56), "[t]he sum was roughly equivalent to half of the total expenditures on Federal Reclamation from 1902 to 1933" (Robinson 1979, 56).

The infusion of PWA funds allowed the Reclamation Bureau to expand greatly its construction program. Prior to 1933, the average annual expenditure for reclamation was $8.9 million. From 1933 to 1940, the annual average zoomed to $52 million (Robinson 1979, 56). These funds, combined with the hydroelectric power revenues to aid in repayment, allowed the Bureau to undertake more complex projects. Between 1933 and 1940, the Columbia Basin Project, the Central Valley Project, and the Colorado-Big Thompson transmountain diversion, all very large, multi-purpose projects, were authorized (Robinson 1979, 56).

Meanwhile, the Depression and severe drought were hurting farmers, including those on the reclamation projects. Crop production on reclamation projects fell from $161.2 million in 1929 to $50.2 million in 1932 (Robinson 1979, 57). With declining farm income, construction repayments virtually stopped. "Most of the settlers were heavily indebted from land and machinery loans and

additionally burdened by taxes. They tended to meet these obligations first and often defaulted on Reclamation debts" (Robinson 1979, 57). In response to the situation, Congress authorized payment relief. Over the course of the next several years, a moratorium was placed on repayments covering the years 1931 to 1935. In 1936, all water users were required to repay only half of the repayment amount (Robinson 1979, 58).

According to Robinson (1979, 58), Commissioner Mead and the Bureau opposed "blanket repayment relief." Although they were interested in helping the water users, they feared the unrelenting chorus of cries for aid would jeopardize appropriations for future projects (Robinson 1979, 58). Congress itself continued to act, and in 1937 it established a Repayment Commission to study the problem. The Commission visited all the projects and made specific recommendations concerning the level of repayment relief each should receive. "Deferments granted on the basis of these findings totaled some 10 percent of the aggregate charges due in 1937" (Robinson 1979, 58).

The most significant contribution the Repayment Commission made was a new repayment plan which Congress included in the 1939 Reclamation Project Act. Under the new plan, water prices would be set according to the water users' ability to pay, rather than at a level sufficient to repay project costs. The portion of the construction costs that was determined to exceed the water users' ability to

pay would be covered by revenues from the sale of hydroelectric power (Gates 1968, 688). The Act also extended by forty years the time allowed for repayment of the total obligation. This last provision, when combined with earlier extensions granted a repayment time range of 50 to 100 years (Gates 1968, 688). In 1939, Congress also began appropriating funds for the reclamation program from General Revenue so the projects would not be delayed due to inadequate revenue in the Reclamation Fund. In theory, the "borrowed" funds would be repaid by water users.

Following a period of low construction activity during World War II, building resumed on the large, multi-purpose projects in California, Washington, and Colorado. The rapid post-war population growth in the western United States shifted the primary purpose of reclamation from providing irrigated land for rural settlers to assisting urban development. In this effort reclamation contributed large power installations and water for industrial and domestic use. In so doing, the reclamation program:

> ...gained a new and powerful constituency in the cities and industries which wanted cheap energy....[But at the same time] private utilities were threatened by [the competition posed] by these reclamation projects and fought their development. Because hydropower was so much cheaper to produce than other forms of electricity, however, the Bureau was able to negotiate mutually advantageous arrangements whereby private utilities were allowed to share in the economic rents provided by hydroelectric development (Leveen, 65).

The Westlands Water District and the Excess Land Provision

As Congress pushed ahead with its construction

program, some sensitive political issues began to surface. The most controversial item was the excess lands provision and the focus was the Central Valley Project (CVP) of California and specifically the Westlands Water District.

The Westlands Water District (WWD or "Westlands") is located in California's San Joaquin Valley. According to the Department of the Interior: "....the Westlands Water District contains some of the richest agricultural land in the Nation. Encompassing over a half million acres of cropland, it is one of the largest districts in the country receiving water from a federally developed irrigation project.

> Some idea of the District's agricultural importance can be gained from the knowledge that it accounts for over 15 percent of the cash value of crops produced in California - the first-ranked State in terms of crop production in the country - and actually exceeds the cash value of crops produced in 14 states, while rivaling that produced in one other (U.S. Department of the Interior 1981, 3-57).

The U.S. Department of the Interior report, "Acreage Limitation, Draft Environmental Impact Statement" (1981) contains an excellent description of the historical development of agriculture in the Westlands Water District.

During the "gold rush" era of the 1850s many settlers moved into the San Joaquin Valley, homesteading largely where water was available. As a result, most settlements located in the eastern portion of the Valley by the Kings and San Joaquin Rivers (Department of Interior 1981, 3-59). The western area was more arid. Irrigated agriculture was not readily available. Instead, settlers developed "large

cattle and sheep ranches" (Department of Interior 1981, 3-59).

One of the principal crops in the area was wheat and during the late 1800s, California led the nation in producing this commodity (Department of Interior 1981, 3-59). The opportunity for large profits led to land speculation and the establishment of agricultural colonies. According to a Bureau of Reclamation report:

> The colonies were the ventures of land speculators who first purchased large tracts of land from the Government for under $2.50 per acre and secured a water supply through a system of ditches and canals, either directly from the Kings River or as an extension of an earlier canal system. At a substantial profit to themselves, these promoters then advertised throughout the United States and Europe the availability of small farms - 20 acres was a common size - in a land of wonderful climate and soil. The colonies proliferated at such a rate that by the 1890's the demand for irrigation water far exceeded the natural flow of the area's rivers. The overtaxing of the area's surface water supply, coupled with open confusion over what constituted legal water rights in the State, led to the abandonment of many farms in the [area] around the turn of the century (U.S. Department of the Interior 1981, 3-59).

In the 1940s and 1950s the Central Valley Project brought water to the northern and eastern portions of the Valley. With this water, many small farms were established. In contrast large scale farm operations developed in what became the Westlands Water District. This development began when in 1936 certain Federal regulations were removed. The regulations had been issued during World War I in order to control agricultural production and marketing (Department of Interior 1981, 18-60). In addition, the turbine pump which allowed farmers to reach new groundwater sources. The

Department of Interior report adds that:

> Aware of the possibilities in these developments, cottonseed oil companies began offering financial backing for the sinking of deep wells while local utility companies extended credit for the necessary electrical power. With most of the land being owned by large ranches, corporations, or railroads, leasing in large blocks of 640 acres or more became the common form of farm operation. Financial risks and initial investment for equipment were also large and tended to attract the entrepreneur-farmer rather than the family farmer with his more limited resources. Further contributing to the development of large-scale farming in the Westlands were Federal price supports in the 1940s for many crops, particularly cotton (Department of Interior 1981, 3-60).

In the 1950s the groundwater supply diminished because pumping exceeded the aquifer's recharge capability. For example, between 1946 and 1951, groundwater levels dropped about twenty-five feet per year, to a level of approximately 400 feet. And in the years 1951 and 1952, about one million acre-feet of groundwater was pumped, while the replenishment was only 210,000 acre-feet (U.S. Congress, Senate 1975, 711). The declining groundwater level increased pumping costs, harmed the water quality, and increased land subsidence (in some areas the land had subsided as much as 30 feet) (Department of Interior 1981, 5-60). The situation jeopardized further farm production in much of Westlands. To maintain and increase productivity a supplementary water supply was needed. Westlands farmers "who had once been wary of Federal involvement because of the acreage limitation provisions in Reclamation Law, began to petition Federal assistance" (Department of Interior 1981, 3-60). They eyed the Central Valley Project (CVP) as a solution to

their problem.

The purpose of the CVP was "to capture the excess runoff in the Sacramento Valley so it [could] be used in the arid San Joaquin Valley in the south....Because of the Central Valley's configuration....pumping plants [would be necessary] to lift the water from the delta to the higher land in the south. [H]ydro-power plants [would] supply the energy requirements and [an] elaborate canal system to deliver the water to its points of use (Department of Interior 1981, 3-60). Initially, the CVP would be a State project. But the Depression in the 1930s make it impossible for the State to commit to the project and supporters turned to the Federal government for help. In 1935, President Franklin D. Roosevelt approved Public Works Administration Funds for the project and the Bureau of Reclamation began construction.

Even though it was clear in 1944 that the CVP was a federal reclamation project, when the Secretary of the Interior, Harold I. Ickes, publicly stated his support of the 160-acre limitation provision, many Central Valley landowners were upset. In congressional hearings in 1947, Roland Curran, a spokesman for large-scale landowners in the valley stated that there had been an understanding between the owners and Bureau officials since 1937 that large landowners "could count with certainty that...the acreage limitations would be removed" (U.S. Congress, Senate 1947, 1310). Russell Giffen, then a member of a committee for the

formation of a proposed "Westlands Irrigation District" testified similarly that leading Bureau of Reclamation officials had "indicated" that "the 160-acre provision was not to be taken seriously" (U.S. Congress, Senate 1975, 1516). They turned to Congress for assistance and convinced Senator Sheridan Downey (D-California) to introduce legislation to exempt the CVP from the excess land laws. Of the large landholders, Senator Downey stated that, "They are not susceptible to the kind of land reform the Bureau seems interested in introducing via the back door. The 160-acre limitation clause is a wholly inadequate club with which to coerce the big landowners into dividing their baronies among the serfs" (Warne 1972, 76-77). After extensive debate, Senator Downey's legislation was defeated as was another legislative attempt in 1947.

Frustrated by their failure in Congress, landowners considered other options for avoiding the 160-acre limit. For example, they proposed that the State pay the Federal government for its portion of the investment. But this alternative was "quickly abandoned once the full extent of the Federal investment (U.S. Department of the Interior 1981, 3-62). The landowners then approached the U.S. Supreme Court. But in an unanimous 1958 decision (Ivanhoe Irrigation District vs. McCracken) the Court upheld the acreage limitation provision. In the decision the Court said:

> From the beginning of the federal reclamation program in 1902, the policy as declared by the Congress has

> been one requiring that the benefits therefrom be made available to the largest number of people, consistent, of course, with the public good. This policy has been accomplished by limiting the quantity of land in a single ownership to which project water might be supplied. It has been applied to public land opened up for entry under the reclamation law as well as privately-owned lands, which might receive project water...As to the claim of discrimination in the 160-acre limitation, we believe that it overlooks the purpose for which the [CVP] project was designed. The project was designed to benefit people, not land. It is a reasonable classification to limit the amount of project water available to each individual in order that benefits may be distributed in accordance with the greatest good to the greatest number of individuals. The limitation insures that this enormous expenditure will not go in disproportionate share to a few individuals with large land holdings. Moreover, it prevents the use of the federal reclamation service for speculative purposes. In short, the excess acreage provision acts as a ceiling, imposed equally upon all participants, on the federal subsidy that is being bestowed (U.S. Department of the Interior 1981, 3-61 and 62).

The debate about the acreage limitation provisions surfaced again when Congress considered legislation to build the San Luis Unit of the CVP in 1959. The San Luis Unit was the portion of the CVP that would deliver water to the Westlands Water District. It was designed to be a joint project between the Federal government and the State of California. As with the original legislation to authorize the CVP, congressional supporters argued that the Unit was necessary in order to supplement the ground water supply. For example, Congressman Bernard Sisk (D-California) warned his colleagues that disastrous consequences would occur if the legislation did not pass:

> What do they face in the future, the 10,500 rural people and 12,500 townspeople who live in the Federal service area, if this project is not provided? Most of the cultivated land which is the basis of their

> economy will revert to desert. They will have to leave and seek livings and homes elsewhere, for without water, they will have no jobs and no businesses. This will be a desert in the middle of the finest and most productive agricultural area on the face of the earth, starved out of existence by lack of water (U.S. Congress, House 1959, 13).

And Representative Fiske pointed out the features the project would provide:

> But if San Luis is built...the present population of the area will almost quadruple. There will be 27,000 farm residents, 30,700 rural nonfarm residents and 29,800 city dwellers -- in all 87,500 people sharing the productivity and the bounty of fertile lands blossoming with an ample supply of San Luis water. Why will this land support four times as many people if this project is built? Because it is inevitable and historic that under the impact of reclamation laws, as well as the economics of farm management and operation, these lands will break down into family-size units, each cultivated by individual owners and their families, a scale of farm operation which is largely impossible under present conditions of high costs and water uncertainty. Without an assured water supply, as you must realize, our lands cannot be operated in units which, with water, would provide a family living. As we sit in this committee considering these matters and trying to serve the people of our districts and the Nation, we are concerned with more homes, more farms, more businesses, and more opportunities for the people making up our rapidly expanding population. We are seeking to make our great land resources available to provide more and better living for more people. This, I believe, is the real and ultimate goal of the reclamation policy laid down by Congress more than a half century ago -- not merely to irrigate land and produce crops (U.S. Congress, House 1959, 13-15).

As discussion of the San Luis Unit authorization bill proceeded in Congress, skeptics voiced their concern regarding whether the Department of the Interior would enforce the acreage limitation provision in the Westlands Water District. They argued that without a strong enforcement presence, large-scale landholdings would

continue to exist. Senator Paul Douglas (D-Illinois) argued their point:

> We do not want a system with a big manor house on the hill, and farm laborers living in hovels. We want a system in which the owner is the cultivator. That is the basis of American agrarian democracy. ...The people of Illinois are paying taxes, and have paid taxes, to build these CVP dams, reservoirs, conduits, and irrigation systems. They have paid taxes against their own economic interests, because they believed it was in the national interest; and are ready to continue to do so, but on the condition that the money which we contribute shall be used to maintain agrarian democracy, and not huge agrarian estates. We are willing to have money spent for a democratic farm system, but we do not want to have it spent to build up the power and strength of huge landowners (Congressional Record 1959, 7496-97).

Despite the opposition's argument, Congress voted to authorize the San Luis Unit and on June 30, 1960 President John F. Kennedy signed the San Luis Authorization Act.

CHAPTER TWO

In the 1960s, the principal on reclamation issue was the performance of the Bureau of Reclamation in administering the program. A succession of congressional hearings, court cases, and independent studies challenged the policies of the Bureau, particularly those regarding it's interpretation and enforcement of the acreage limitation provisions.

The focus of the debate was the Westlands Water District in California. Westlands occupied center stage because it was the largest district in the reclamation program (in acres) and a sizeable percentage of the land was farmed in large acreages by a few operators. When the reclamation program began in the District, seventy percent of the land was "ineligible to receive project water because [the land is] owned in tracts, the acreage of which far exceeds the 160-acre limitation." (U.S. Congress, Joint 1975, 23-24). These features made Westlands unique when compared with other reclamation districts.

After the San Luis Act was approved in 1960, the Bureau of Reclamation began preparing a contract with the Westlands Water District which set the terms and conditions under which the District would receive federal reclamation water. Under the Act, Congress had an opportunity to review

the contract and raise issues of concern. Following its review, the Senate Subcommittee on Irrigation and Reclamation decided to conduct a hearing on July 8, 1964 to discuss issues related to the contract.

At the hearing, several issues were raised. The primary one was voiced by critics who charged that ineligible lands were receiving project benefits. The benefit was the result of the fact that when reclamation water was delivered to eligible land, some of the water would percolate through the soil into the groundwater table. (Eligible land is land for which the landowner has entered into a "recordable" contract with the Federal Government agreeing to abide by the requirements of the reclamation program. Ineligible lands are those for which the landowner has not entered into such an agreement.) This action increased the supply and level of the groundwater which incurred a benefit in the form of reduced pumping costs for anyone (eligible or ineligible) who wanted to pump the groundwater. As long as some landowners signed contracts and received water, the benefit from the groundwater recharge was a disincentive for others to sign contracts (U.S. Congress, Joint 1976, 1519). The Department of the Interior Solicitor Frank Barry emphasized the point at the 1964 hearing:

> Suppose that you have someone in the Westlands District who feels that he wants to see whether his groundwater will be sufficiently improved by the project so that he can derive water from the underground rather than sign a recordable contract. Now he has unlimited time. (U.S. Congress, Joint

1976, 1519).

In the proposed contract, the Bureau maintained that the benefit was the "unavoidable" result of delivering water to eligible lands and it was all right for landowners who had not signed recordable contracts for their land to pump this water (U.S. Congress, Joint 1975, 24).

As a result of questions raised at the hearing, DOI notified Congress on October 9, 1964 that the contract would be modified (U.S. Congress, Joint 1975, 763-764). This new contract deleted the statement that "project water was needed to replenish the depleted groundwater levels" and the "unavoidable clause." In order to prevent ineligible lands from receiving project benefits, the agreement included a requirement that the District pump (at its own expense) from groundwater aquifers, an amount equal to the estimated quantity of project water that percolated into the underlying aquifers (U.S. Congress, Joint 1975, 764). The operating agreement also stipulated that the water price under the water service contract would not exceed an average of $7.50 per acre-foot. All additional revenues would be raised by ad valorem taxes which would apply to both eligible and excess lands in the district. These modifications were to remain in effect until 76 percent of the irrigable land in Westlands had become eligible to receive project water (U.S. Congress, Joint 1975, 671). Secretary Udall approved the operating agreement on March 24, 1965 and it became effective on April 1, 1965 (U.S.

Congress, Joint 1975, 670). With these changes, the Bureau emphasized that compliance would occur because ineligible excess landowners would face ever-increasing pumping costs and they would be paying ad valorem taxes for a distribution system they would be unable to use. This provision was not implemented due to a provision in the agreement which stated "that the pumping of such amount of water will not significantly contribute to land subsidence within the San Luis Unit," (U.S. Department of the Interior 1978, 58).

In July 1966, the Senate Committee on Interior and Insular Affairs held another set of hearings to examine how the reclamation program was being implemented in the Westlands Water District. Committee Chair, Senator Gaylord Nelson (D-Wisconsin) expanded on this point in his opening statement:

> In the intervening years since the inception of the Westlands Project, there have been some significant indications, it seems to me, of a lack of intent to divest excess lands (U.S. Congress, Joint 1975, 631).

Nelson referred to information provided by the Bureau which suggested that landowners were not entering into recordable contracts. Unless land owned above the acreage limit was designated as excess through the recordable contract, the land would not have to be sold under the reclamation program. For example, in 1965, only 2,800 acres out of 403,900 acres of excess land had been placed under recordable contracts while the 240 landowners who owned the 401,100 acres balance had not negotiated reclamation

contracts (U.S. Congress, Joint 1975, 668). Critics pointed out that these landowners had not signed recordable contracts for over six years (U.S. Congress, Joint 1975, 668) and urged Congress to direct the Bureau to require all landowners to participate in the reclamation program.

Concern was also expressed about how the Bureau would administer excess land sales. Some urged that all excess land sales be used to create "authentic" family farms, as opposed to absentee-owner, industrialized agriculture. One witness suggested that the DOI create a billion dollar revolving fund to purchase excess land and then sell it to family farmers at subsidized rates (U.S. Congress, Joint 1975, 642).

Excess Land Sales

In 1975, a new contract afforded Congress another opportunity to take a look at the Westlands Water District and reclamation policy. The new contract was prompted when the California legislature enacted a bill to merge the Westlands Water Districts with the adjacent Westplain Water Storage District (U.S. Department of the Interior 1978, 61). The merger increased the size of the District from 391,000 acres to 535,630 acres and made it necessary to amend the existing water service and distribution system contracts in order to increase the water allotment and provide for the additional distribution systems needed to serve the expanded acreage. (U.S. Department of the Interior 1978, 61). Draft

contracts were developed in 1967, 1968, and again in 1969, but none were finalized. It was not until August 1, 1975 that a contract was finally submitted to Congress for the mandatory 90-day review. The delay was caused partially by a controversial proposal made by Westlands. In 1967, the District offered to loan the Bureau the funds necessary to complete construction of the distribution system (U.S. Congress, Joint 1975, 1858-1859). Even though the proposal was eventually rejected, the Bureau's decision did not occur until the proposal had gone through extensive review by the Office of Management and Budget and the Treasury Department.

The new contract increased the amount of water annually delivered to Westlands to 1.15 million acre-feet (U.S. Congress, Joint 1975, 1859). The Bureau asked Congress to increase the authorized spending level for the District's water distribution and drainage systems to $227.9 million, an increase of $25.2 million (U.S. Congress, Joint 1975, 1859). Landowners would "begin repaying the cost of the project interest-free when a substantial portion of both the distribution and drainage systems [were] constructed" (U.S. Congress, Joint 1975, 1859). Of a more controversial nature, the contract included the "unavoidable" clause which the Bureau had deleted from the 1965 contract. The contract also contained a provision which allowed excess landowners to sell their land under recordable contract to other excess landowners (U.S. Congress, Joint 1975, 1860).

The Senate Select Committee on Small Business and the

Senate Committee on Interior and Insular Affairs held four days of hearings in July 1975 and February 1976 to "reexamine the Westlands Water District and the vast Federal expenditures that have been made there in bringing the landowners' water," (U.S. Congress, Joint 1975 and 1976). In opening the hearings, Senator Floyd K. Haskell (who co-chaired the hearings with Senator Nelson) observed, "We want to learn the extent to which these excess land sales are creating new opportunities for independent farm ownership and bona fide family farm operations in the Westlands," (U.S. Congress, Joint 1975, 11). The Senate had data from the Bureau of Reclamation about the excess land sales that had been approved in Westlands as of June 1975. The information showed that nearly 100,000 acres of excess land had been sold to about 800 purchasers. Eighty-six farming operations from the land were formed, indicating that the purchasers were not farming separate, 160-acre parcels, but combining their individual portions to form a large unit. In addition, the General Accounting Office (GAO) had completed a review of how the Bureau of Reclamation was administering the acreage limitation provision in the CVP. In the report, "Congress Should Reevaluate the 160-acre Limitation on Land Eligible to Receive Water from Federal Water Resources Projects," GAO found that the acreage limitation had "not resulted in preventing large landowners and farm operators from benefiting under the subsidized irrigation program [and]

landowners and farm operators from retaining or acquiring large landholdings (U.S. General Accounting Office 1972, 1). The report stated that these large farm operations were possible by leasing eligible land from individual owners and/or by retaining or controlling eligible land through the establishment of corporations, partnerships, and trusts (U.S. GAO 1972, 10).

Congressional interest was also heightened by a judicial inquiry into excess land sales in Westlands. Several months before the hearings began, a Federal grand jury was convened to examine several sales in the WWD (U.S. Congress, Joint 1975, 1860-1861). After some preliminary inquiries, the jury decided to focus its attention on excess land sales to "syndicates formed by John Bonadelle, a local land developer and chairman of the board of Land Dynamics, Inc. in Fresno, [California]" (U.S. Congress, Joint 1975, 1865). In one transaction, a buyers group, which consisted of Bonadelle family members, associates, and friends, bought 1,758 acres of excess land from Giffen, Inc., held it for eleven days, and then sold it to a second syndicate headed by C.R. Shannon, a "wealthy cattleman from Visalia", California for a $321,000 profit (U.S. Congress, Joint 1975, 1865). "After the sale to the Shannon syndicate, each of the 12 members of the syndicate leased their land to [C.R.] Shannon who farmed the land as one operation (U.S. Congress, Joint 1975, 1874). An indictment was brought, the first ever by the Bureau of Reclamation (U.S. Congress, Joint

1975, 1877). When the case was settled on February 23, 1977, Bonadelle pleaded guilty to a criminal charge of "conspiracy to defraud the U.S. of and concerning its governmental function in having its reclamation and irrigation programs administered in accordance with the provisions of the Reclamation Act." For Congress, the investigation raised questions about the Bureau's administration of the program.

On the first day of the hearings, the Committee heard two organizations describe excess land sales in the WWD. The National Farmers Union (NFU) and National Land for People (NLP) saw the reclamation program as an opportunity to break up large landholdings in California and produce small-scale, "family" farms. David Weiman, the Legislative Assistant for NFU, told about one excess land sale in which Russell Giffen sold over 12,000 acres to eleven entities (U.S. Congress, Joint 1975, 33-37). (The Bureau referred to the sale by the collective name, the "Rogers Group purchase.") All the sales were recorded on July 12, 1974 and on the same day, all the buyers leased their parcels to Jubil Farms. Weiman told the Senators that in his research he discovered that Jubil Farms was actually a corporation located on Fifth Avenue in New York City. The principal stockholders were William and Judith Rogers (they owned 80 percent of the corporation), who were two of the eleven buyers of the Giffen land. Weiman questioned whether the intent of reclamation law was satisfied by this sale, since

the 12,000 acres would be farmed as one unit by Jubil Farms, a New York company, not as separate, 160-acre farms. And furthermore, the operator was a corporation based in New York City, not a "hands on" individual who resided in the District. In addition, Weiman reported that prior to the sales, Russell Giffen had sold all the improvements on the "Rogers Group purchase" land (buildings, irrigation pipe, machinery, etc.) to Jubil Farms. According to Weiman, this indicated that the purpose of the sale was never to create 160-acre farms, but to continue to farm the land as one unit while giving the appearance of dividing the land into separate farms in order to satisfy reclamation law. Weiman concluded that, "Many of the transactions examined reveal that massive amounts of paper are shuffled, but little, if anything, ever happens where it counts -- on the land," (U.S. Congress, Joint 1975, 30).

On the same day, NLP presented the research they had conducted on 35 excess land sales in the WWD (U.S. Congress, Joint 1975, 57-64 and 1631-1683). NLP reiterated many of the same points expressed by NFU. NLP alleged that the Bureau-approved sales did not satisfy reclamation law because either the land was farmed as one unit, not in separate 160-acre parcels; the seller did not relinquish complete control of the land; the buyers were not residents of the land, nor did they live in the vicinity; and the land was not sold at a price which reflected the value of the land without reference to the irrigation works (U.S.

Congress, Joint 1976, 1142). NLP concluded that in the WWD:

> ... large landowners are selling their excess land pursuant to recordable contracts in a manner which assures the continued and permanent exclusion of small family farmers from the land (U.S. Congress, Joint 1975, 1169).

NLP identified several features of the sales which strongly suggested that although each buyer purchased 160 acres or less, the land would be farmed as one unit. For example, in many of the sales, the buyers all purchased their parcel on the same day and they listed the same address (usually a business, not a residence address). Often the buyers had no prior farming experience. Usually the parcels were leased to a farm management company to operate the farm. (In one case the excess land buyers and the farm management company had the same address.) In some instances, the land was sold to a series of individual partnerships, all of whom were members of the same family and farmed the land as one unit.

NLP also pointed out that in some sales, the seller did not relinquish control or interest in the excess land because the seller held either part or all of the mortgage. For example, in many of the sales involving Giffen land, the mortgage was shared by Russell and Ruth Giffen (or Giffen, Inc.) and the Traveler's Insurance Company. According to NLP, this arrangement was conducive to "friendly foreclosure," as had occurred in one sale involving Harris Farms, Inc. In 1968, Harris Farms, Inc. sold 158.7 acres to Albert and Lois J. Nave. According to NLP:

> ...six transactions, two years, and a friendly foreclosure later [Harris Farms, Inc.] was the owner once again. Just eight days before the friendly foreclosure, the Bureau of Reclamation filed a document with the Fresno County Recorder releasing the land from the excess land law because, the bureau said, all the requirements of the law had been met (U.S. Congress, Joint 1975, 61).

In other sales, the seller maintained control of the land by leasing it from the buyer. For example, in 1972 Anderson Clayton & Co. sold 632,74 acres to Dura-Style Homes, Inc. Less than two weeks later, Dura-Style Homes, Inc. sold the land to four members of the Moitozo family. Almost immediately, the land was leased to Vista Del Llano, a division of Anderson Clayton & Co.

NLP also alleged that the residency provision was still a feature of the reclamation program and some of the excess land sales violated that provision (U.S. Congress, Joint 1976, 1144). For example, in the thirty-five sales analyzed, various buyers listed their residence as Corvallis, Oregon; New Orleans, Louisiana; and different cities in the vicinity of San Francisco, California. According to NLP, none of these buyers qualified as residents of the Westlands Water District.

In the hearings, some voiced the opinion that excess lands should be sold in an impartial method so everyone would have a fair opportunity to obtain land. Russell Giffen was often criticized for selling his land to either friends or employees. For example, in 1974, Giffen sold over 1,000 acres to James Lowe and members of the Lowe

family. Lowe was one of Giffen's principle employees and in 1971 he and John L. (Jack) Woolf assumed the day-to-day operations of Giffen, Inc. Woolf was also the Secretary-Treasurer of Giffen, Inc. In 1971, Giffen sold 200 acres to Jack and Bernice M. Woolf. Giffen's son and daughter-in-law (Price and Joan Giffen) also bought 588 acres of Giffen land. Berge Bulbulian, President of NLP, summed up NLP's testimony, "In the end the same circle of people control the land. They farm it, or lease it to a friend or relative who farms it, and the wealth stays with the same people." Giffen's response to NLP's testimony was, "We had the option and we chose to deal with people we knew," (U.S. Congress, Joint 1975, 1867).

The implementation of the excess land laws was also criticized by former Department of Interior officials. Edward Weinberg, former Solicitor for the DOI, testified that:

> The administration of the excess land laws in the Central Valley Project have [sic] been further complicated by the understandable tendency on the part of excess landowners to work out contractual arrangements which, on the one hand, could be said to bring their excess holdings into compliance with section 46 so that they can receive a project water supply, and on the other hand to provide for their sale or other transfer, again hopefully in compliance with Section 46, to new holders in such a way as to continue the largescale farming operations practiced by the original excess owner or to retain ownership within that owner's family or business associates, or both (U.S. Congress, Joint 1975, 151-152).

In a discussion of one excess land sale, where 1,900 acres were sold to twenty-six "newlyformed" corporations who

then leased the land to the original owners, Weinburg explained that such sales were allowed because:

> The Department has been indifferent to the size of the functional, operational farming enterprise....It has approved multiple ownerships, knowing that prior unitary farming operations would not be changed....Large scale leasing operations wherein the right of control of the owner-lessor is largely passed to the lessee is not questioned...excess land laws are more concerned with legal relationships than with economic consequences" (U.S. Congress, Joint 1976, 1155).

Geoffrey J. Lanning, former Assistant Solicitor, was more critical of the Bureau. "The Bureau of Reclamation deliberately violated or avoided the 160 acre limitations, doing so by the failure to administer the law at all, or when pressed, by having its captive lawyers write crude loophole provisions that let the many big landowners ignore this public safeguard," (U.S. Congress, Joint 1975, 926-927). In the 1974 article, Lanning wrote:

> The writer [Lanning], as the Assistant Solicitor of the Department of Interior, had the opportunity to see at first hand over a period of years the overt bureaucratic bias inherent in this deliberate avoidance of the family farm laws. These efforts on behalf of the large landowner were evident at every level of the government decision processes supposedly created to enforce such laws as the family farm provisions (U.S. Congress, Joint 1975, 934).

Former Secretary of the Department of the Interior, Stewart L. Udall, offered his perspective:

> The Reclamation Act was a land reform program, an historic program....In many of the projects that have been built in the western part of the States the land reform worked and this was a proud hour for the country and good for the whole Nation. But when you brought the family farm concept and the 160-acre limitation into the Central Valley of California and applied it to these excess land

> situations, you were dealing with a different situation where inevitably there would be insoluble problems or very difficult problems. This is what the skeptics said back in the early sixties. Those who objected to this project, including Members of the Senate, said that this would give benefits to the owners of enormous tracts of land, and the land reform provisions would not work because the owners would not allow them to work or the Bureau of Reclamation would not enforce them. All of us who defended the project and went along with it felt somehow that it would work. It is clear, if the evidence that has been presented here is sound, that it is not working. I think that this ought to be very disturbing to the Congress. It is disturbing to me (U.S. Congress, Joint 1975, 157-158).

When the Bureau of Reclamation testified, it maintained that the excess land provisions were being correctly implemented and enforced (U.S. Congress, Joint 1976, 543-555). According to their interpretation of Section 46, (which stipulated the excess land sale provisions) the Bureau could only require that excess landowners sign a recordable contract and sell the excess land within ten years to an eligible buyer at a price that did not reflect the value of the reclamation project. The Bureau said it could not dictate how the buyer was selected, interfere with the negotiation between seller and buyer, or regulate the subsequent sale of excess land after its initial sale (U.S. Congress, Joint 1976, 554-555).

Billy E. Martin, the Director of the Bureau's Mid-Pacific Region, which includes Westlands, explained the Bureau's policy regarding multiple ownerships:

> The proposed amendatory contract recognizes the holder of an undivided interest in land as a nonexcess owner provided the terms of his coownership meet all Bureau criteria for multiple

> ownerships, including the right to artition and alienate. This does not represent a change in the Bureau's interpretation of excess land law. Multiple ownerships have long been recognized as acceptable forms of nonexcess ownership. Undivided coownerships have been approved in the District and are presently receiving Project water. Should any coowner partition and/or alienate, he may then farm his land 'individually' (U.S. Congress, Joint 1976, 559).

Martin acknowledged that leasing was an issue that was receiving more attention.

> Reviewing lease arrangements has become an important part of excess land administration. It has been the policy of the Regional Solicitor's office and of the Bureau not to approve leases in excess of five years, with one 5-year renewal option, in approving a sale of excess land. Lease arrangements are reviewed on a case-by-case basis to avoid utilization of leases to evade the spirit and intent of the acreage limitation provisions of Reclamation law. For example, a landowner could sell his excess land to eligible purchasers and obtain a lease back for 50 years under terms favorable to him. This would, in our opinion, constitute such retention of operation and control (as well as benefits) as to render the sale unacceptable and it would not be approved (U.S. Congress, Joint 1976, 560-561).

In regards to the residency issue, the Bureau maintained that they were not enforcing the residency requirement based on their interpretation of amendments passed in 1926. The Bureau reasoned that the 1926 Act had substantially changed reclamation law because in the new law irrigation districts replaced individuals as the water contractors. And since Section 46 of the Act did not mention residency, the Bureau interpreted that the requirement was implicitly repealed (U.S. Congress, Joint 1976, 561).

Supporters of the residency requirement on the other

hand maintained that it had not been repealed. They pointed out that in 1941, Congress approved a Bureau-sponsored proposal to suspend the residency requirement during World War II. And in 1947, the U.S. Senate considered and defeated a bill to repeal certain parts of reclamation law, including the residency requirement. They questioned why the requirement had to be repealed in the 1940s, if it had been abolished in 1926.

Court Cases

While the United States Senate was looking closely at the reclamation program, other federal bodies were conducting their own investigations. In the late 1960s, three court cases were filed that examined important points of reclamation law. The cases were U.S. v. Imperial Irrigation District, Yellen v. Hickel and U.S. v. Tulare Lake Canal Company. Each case raised substantial issues that could greatly impact the reclamation program.

In 1967, the Federal government filed a case in Federal District Court in San Diego, (U.S. v. Imperial Irrigation District). The Government sought "a judicial declaration that 160-acre limitation applied to privately-owned lands in the Imperial Irrigation District (U.S. Congress, Joint 1976, 980-981). In 1933, Interior Secretary Ray Lyman Wilbur had exempted the Imperial Irrigation District from the provision because he said the law did not apply to privately-owned property in the District under the

terms of the contract. In March 1966, Secretary Stewart L. Udall decided that the Wilbur decision was wrong and asked Acting Attorney General Ramsey Clark to file suit. (In 1964, the Solicitor had issued an Opinion that the law applied in the District.) The Court heard the testimony and in January 1971 the Court ruled that reclamation law did not apply. Despite the expectation that the Government would appeal, Solicitor General Erwin N. Griswold announced on April 9, 1971 that the Department of Justice would not appeal (U.S. Congress, Joint 1975, 565). A group of Imperial Valley residents "petitioned for leave to intervene after judgment in order to....appeal [on] behalf of the Government. [The] [l]eave to intervene was denied by the District Court, but that order was reversed by the Court of Appeals, Ninth Circuit, on August 6, 1973" (U.S. Congress, Joint 1976, 982). On August 18, 1977 the same Court held that the reclamation law applied in the Imperial Irrigation District.

In 1969, the case Yellen v. Hickel was brought by a group of 120 Imperial Valley citizens against the U.S. Department of the Interior. The plaintiffs were led by Dr. Ben Yellen, who as a physician in Brawley had many farmworkers as his patients. They wanted "a writ of mandate to enforce the residency requirement in the Imperial Irrigation District" (U.S. Congress, Joint 1976, 982). On October 20, 1972, the District Court for the Southern District of California issued a judgment requiring the Secretary of the Interior to cease water deliveries to non-

resident landowners in the Imperial Valley (U.S. Congress, Joint 1976, 982). Both the Government and a group of landowners appealed the judgment before the U.S. Court of Appeals for the Ninth Circuit. Oral argument was presented on May 28, 1974. The Court ruled that reclamation law applied to the District, but the Court avoided dealing specifically with residency by ruling that Yellen did not have standing to sue on that issue.

The third case, U.S. v. Tulare Lake Canal Company, was filed by the Government in 1970. The Government wanted to enforce reclamation law on the privately-owned lands receiving irrigation water from the Pine Flat Dam (U.S. Congress, Joint 1976, 983). The Pine Flat Dam was an Army Corps of Engineers project constructed under the Flood Control Act of 1944. The Federal District Court in Fresno ruled that the reclamation law did not apply. In its Opinion, the Court said that even if the law did apply, if the District recipients paid their repayment obligation early and in a lump sum, the reclamation provisions would not apply (U.S. Congress, Joint 1976, 983). The Government appealed the decision. In April 1976, the Court of Appeals for the Ninth Circuit held that the reclamation law, particularly the Omnibus Adjustment Act of 1926 applied to the Pine Flat project, and by inherence to other Corps of Engineers projects. The Court also ruled that excess landowners could not, at their option, prepay their portion of the construction obligation in lieu of agreeing to sell

their lands at pre-water prices. The defendants asked the U.S. Supreme Court to hear the case, but the Court denied the petition.

These three Court cases challenged the status quo. The Yellen v. Hickel case had implications for all the districts. Speculating what the impact could have been in Westlands, Ralph M. Brody, manager of the WWD said, "In Westlands, we'd have chaos. There are very few owners living on their land now," (Fresno Bee 1977). The U.S. v. Tulare Lake Canal Company case challenged the policy that Army Corps of Engineer projects were exempt from acreage limitation and excess land laws. One group of landowners, in particular, were very worried about the Tulare Lake decision. The Salyer Land Company and the J.G. Boswell Company were among the largest landowners in the area serviced by the Pine Flat Dam. Each corporation owned approximately 60,000 acres. In June 1977, officials of the two companies discussed a proposal with several members of Congress. In light of the Court decision they wanted to purchase the Pine Flat Dam from the Federal government. The purchase agreement would have to be authorized by Congress. The two businessmen proposed that a nongermane amendment be attached to "an innocuous" bill. Salyer told the legislators, "There is no power in heaven that will cause me to break up that land. They can just leave the gates open and let the water run through," (Fresno Bee 1977). No legislation was ever introduced.

Court Forces Bureau to Develop Regulations

During the 1975 Senate hearings it became public knowledge that the Bureau of Reclamation did not have published rules and regulations that specified how excess land sales should be administered. On November 14, 1975, NLP filed a Petition for Rulemaking pursuant to 5 U.S.C. 553 (Administrative Procedure Act, (APA)) (U.S. Congress, Joint 1976, 1158). The Petitioner NLP asked the Secretary of Interior "to formulate public rules and regulations establishing criteria and procedures" to direct how the Bureau administered excess land sales under the Reclamation Act. (The APA requires federal governmental agencies to publish their proposed regulations in the Federal Register, to solicit public comment, and to hold at least one hearing on their content.)

On February 5, 1976 the Acting Commissioner of the Bureau rejected NLP's petition (U.S. Congress, Joint 1976, 1195). The Bureau said it could best enforce the reclamation law by analyzing each sale on a case-by-case basis. "It is our opinion that the creation of an excess land code of rules will require a program of constant revision and hearings to accommodate contingencies not originally anticipated. This would appear to be counterproductive to our present employment of timely decisions issued by the Solicitor on an as-required basis to accommodate any unique sale arrangement" (U.S. Congress, Joint 1976, 1196). The Bureau also disputed NLP's claim

that they had approved excess land sales in violation of reclamation law and reiterated that the residency requirement had been repealed.

In response to the Bureau's denial of the petition, NLP filed suit in U.S. District Court for the District of Columbia. NLP had standing to sue in Federal Court because in 1976, twenty-four NLP members offered to buy 640 acres of excess land in WWD owned by the Southern Pacific Land Co. Their offer was denied. NLP asked that the Court order all excess land sales in WWD stopped and require the Department of the Interior to institute public rulemaking procedures. Soon after the suit was filed, several large-scale landowners in the WWD and the California Westside Farmers, Inc. (an agricultural organization based in Westlands) intervened on the side of the U.S. Department of the Interior.

Judge Barrington Parker ruled in favor of NLP on August 9, 1976. The DOI was ordered to prepare regulations pursuant to the APA to enforce the 1902 Act and submit monthly progress reports to the Court. The Court also issued an injunction that prohibited the Bureau from processing excess land sales in Westlands, submitted after August 1976, until the regulations had been completed. Subsequent motions to stay the injunction pending the appeal and other growers' motions to intervene and modify the injunction were all denied. On June 27, 1977, the DOI announced, "...a halt to the processing of all excess land

sales and the signing of new recordable contracts until final regulations are promulgated."

Controversial Rules

The task to prepare the regulations fell to the Carter Administration and the new Secretary of the Interior, Cecil Andrus. President Jimmy Carter had deviated from past practice and appointed many non-industry individuals into top positions at the Department of the Interior. Leo M. Krulitz, who was Andrus's former campaign manager and Vice President of the Irwin Management Company of Columbus, Indiana, was made Solicitor. John Leshy, formerly with the Natural Resources Defense Council, was appointed Associate Solicitor for Energy and Natural Resources. Leshy supervised the development of the rules (Kirschten 1978, 150). Joe B. Browder from the Environmental Policy Center was nominated Assistant Secretary, Land and Water Resources Division. The purpose of these appointments was clear by a statement from the new Interior Secretary:

> We have begun to make sweeping institutional and policy changes to end the domination of the department by mining, oil and other special interests. Our President...is canceling the blank check which once went to those who would exploit resources and pollute the environment in the name of progress. Business as usual has been put out of business (Hornblower 1977, A1).

When Leshy reached Washington, D.C. in April 1977, the proposed regulations were being drafted by a Bureau Task Force. Dissatisfied that issues raised at the hearings were not being resolve, he decided to get very involved.

According to an interview with Leshy, he wrote a paper outlining the issues to be resolved, pro and con, and in a series of meetings, Andrus made decisions. The proposed regulations reflected Andrus's policy that reclamation was a social program. As such, Andrus wanted to remove corporations from the program. The Department also recognized that the reclamation constituency was very diverse and most of the issues were isolated to a small number of districts.

On August 25, 1977, the Department of the Interior published proposed regulations that followed a fairly strict interpretation of the 1902 Reclamation Act. In issuing the new rules, Secretary Andrus remarked:

> ...because the law has not been strictly enforced, 160 acre parcels have been lumped together in sales to absentee owners and sales or leases to farm management syndicates. The 'family farmers' whom the law was designed to benefit sometimes can be found in the corporate board rooms of Los Angeles or New York, in Caribbean tax havens, or 'farming' out of the 40th floor of an office building or a lawyer or doctor's office (Baker 1978, 22).

In several areas, the proposed rules were a significant departure from the way the program had been administered. The proposed rules instituted a residency requirement for all recipients of reclamation water. Present recipients would have a transition period within which to come into compliance. Excess lands would be sold through a lottery system administered by the Bureau. Certain entities, such as partnerships or trusts, were prohibited from buying excess land unless the members had a

family relationship with one another. The Bureau of Reclamation would be allowed to regulate the sale price of excess land after its initial sale. (In the past some excess land buyers obtained large profits by immediately selling their land.) And new limits were placed on leasing both excess and non-excess land.

Shortly after the proposed rules were published, a special task force issued a draft report of a study of the San Luis Unit, CVP that was critical of how the Bureau was implementing the law. The San Luis Task Force was created by Congress in 1977 when the House Interior and Insular Affairs Committee was deliberating over the appropriations figure for the San Luis Unit. Members of the House Committee agreed to approve a one-year, $31 million appropriation for the Unit if before any more money was appropriated, a task force was created to do a study and prepare a report for Congress (Kirschten 1978, 151). The 12-member Task Force was appointed by Interior Secretary Cecil Andrus and chaired by Assistant Interior Secretary Guy R. Martin.

The Task Force concluded that the intent of reclamation law had not been achieved in the Westlands Water District. They wrote:

> ...it is clear that to date the objective of settling families on farms which they would own and operate has not been achieved within the [San Luis] Unit (U.S. Department of Interior 1978, 210).

The Task Force found that the average farming operation in Westlands was 2,200 acres and concluded that more progress

had been made to reduce the large ownerships than the large operations. The Task Force wrote that a 2,200 acre farm "is not the 160-acre farm to which reclamation law intended spreading the benefits of the subsidized irrigation program" (U.S. Department of the Interior 1978, 197).

The Task Force recognized that reclamation law did not address the issue of land control through activities such as leasing. They recommended that Congress enact legislation to ensure that various organizational tools such as leasing, trusts, or partnerships could not be used to evade the intent of the law (U.S. Department of the Interior 1978, 211). They also recommended that the Bureau enforce the residency requirement (U.S. Department of the Interior 1978, 212). And finally, the Task Force suggested that Congress evaluate the nation's reclamation program to determine if the goals had changed or whether new farming techniques necessitated major revisions (U.S. Department of the Interior 1978, 211). The impact of the Task Force was that through the information it collected, many of the critic's charges were confirmed and the conclusions supported many of the Administration's policies which were expressed in the proposed regulations.

The findings of the Task Force report heightened the very negative and emotional reaction to Andrus' proposed regulations. According to one high Interior official, "everyone in Congress was upset, even their allies." Western agricultural interests and legislators were

particularly infuriated. They felt that DOI had gone far beyond what was necessary in order to satisfy the court order. Critics were particularly upset with the residency requirement and the restrictions on leasing (Fresno Bee 11/5/77). Jerald R. Butchert, manager of the WWD expressed the attitude of many reclamation recipients:

> There is no question they had a grudge against Westlands...California had tried to change the law since the 1940s but never could get support. Then the West was galvanized, and it coalesced (Sinclair 1983, A4).

The proposed rules were issued during a period when relations between the Congress and the Administration were very poor. Several months earlier, Congress and the Administration had gone through a bitter dispute over water projects for fiscal year 1978. During the presidential campaign, Carter had repeatedly emphasized the need to reduce inflation, which he said could be helped by reducing "wasteful" federal programs, such as water projects. At one point in the campaign he announced, "We are coming to the end of the dam-building era in America."

Shortly after the Carter Administration took office, the Office of Management and Budget and the Council on Environmental Quality were asked to identify water projects that would cause an adverse environmental impact, had costs that exceeded benefits, would pose safety issues and had already had substantial federal investment. The evaluation was to be completed in time to make any necessary changes to the budget prepared by the Ford Administration. On February

21, the Administration published a tentative list of 19 projects to be eliminated. Canceling these projects would save an estimated $268 million.

Congressional reaction was quick and harsh. Many were angry because the White House had not informed them which projects would be cut. (The final selection had been made on a Friday. The White House claimed they tried to contact the legislators who represented areas affected by the proposed cuts (Rich 1977, A1).) After a meeting with the President on March 10, frustrated Senators attached an amendment to a $4 billion public works employment bill to prevent the Administration from withholding money for 18 of the 19 projects for the remainder of fiscal year 1977 (Rich 1977, A1). The one exception was the Meramec Dam in Missouri, which was opposed by the state's two senators. On March 12, Senate Majority Leader Robert C. Byrd (D-West Virginia) met with President Carter to encourage him to modify his position and warn him that the Senate would defeat any effort to halt projects, but would be receptive to efforts to develop tougher criteria for new projects. Carter responded with a letter that promised to consult with Congress but maintained his determination to eliminate "unnecessary" projects (Braden 1977, A1).

On April 8, Carter announced that he wanted to see eight projects receive full funding, 17 projects terminated, and 5 projects modified and/or receive less funds (Pincus 1977, A15). The House Appropriations Committee agreed to

eliminate one of the 18 projects; Grove Lake, Kansas which was criticized because it would flood productive farm land and it had a poor cost-benefit ratio; and modify four other projects (Washington Post 6/15/77). When the bill was considered by the House of Representatives on June 13, Silvio O. Conte, (R-Mass.), offered an amendment to deauthorize 16 more of the projects opposed by Carter and to modify a fifth. The amendment was not expected to pass, but the narrow margin of its defeat (194-218) made it clear that the House would be unable to override a presidential veto. The House vote also put pressure on the Senate to enact a bill that was similar to Carter's proposal.

The Senate bill eliminated funds for nine projects, reduced or modified three projects and voted not to fund any water project starts in fiscal 1978. The final conference bill was the same as the Senate bill (Washington Post 8/9/77).

1978 saw a repeat of the 1977 water project scenario between the Administration and Congress with the Administration gaining some ground. The House and Senate bills contained funds for six water projects that had been on the 1977 "hit list" and had received no funding for fiscal year 1978. Carter vetoed the final conference measure on October 5 and on the same day the House failed to override the veto.

The dispute over the water projects was symbolic of a larger struggle between President Carter and Congress over

who would control more than $3 billion spent each year on water development. Under the traditional system, Congress distributed federal funds for water projects. Legislators usually voted without question for their colleagues' projects in return for projects in their own districts. The Administration sought to change that system so that only those projects that were environmentally and economically sound would be funded. In a 1989 interview, Leshy acknowledged that the hit list was a gross tactical error. It served to unite western water and agricultural interests against the Bureau. In a January 1978 interview with the Washington Post, Andrus said he would not propose another "hit list." "I'm not stupid. If you think I'm going to walk up to the Hill with another hit list and go through the agony and heartburn, I can only say, I'm not stupid," (Washington Post 1978, A3).

Legislation to Avoid Regulations

Opponents began to make their concerns known. They flooded their legislators with mail. Full-page ads in major newspapers and magazines forecasted the disastrous affect the regulations would have on farmers. The Fresno Bee wrote an editorial that captured some of the tone:

> There is big money involved in this battle, perhaps hundreds of millions of dollars, and though they may be just "family farmers," opponents of the reforms have been able to raise a considerable war chest. Farmers in the Imperial Valley, for instance, have spent more than $700,000 in legal fees and have raised $50,000 for a media blitz decrying what they believe is unfair treatment by the government. In the

> process, they have helped to confuse the issues by portraying themselves as innocent victims of a new government policy imposed upon them by vacillating public officials. What is left unsaid is that they are subject to a federal appeals court ruling requiring the breakup of their land in accordance with federal law. Unwittingly, perhaps, Andrus' proposals, made in response to a federal court order, reached beyond Westlands, thereby enlarging the constituency opposed to any reform (Fresno Bee 11/18/77).

The opponents (water districts, agricultural organizations, and local governments in the West) organized to block the regulations. Several court suits were filed against the Department of the Interior to enjoin the government from continuing with the rulemaking process until it had completed an environmental impact statement (EIS) on the effect of the rules (Hornblower 1977, A3). The DOI had decided earlier that an EIS was unnecessary because the environmental effects were "probably insignificant" and the regulations "merely reflect existing law" (Hornblower 1977, A3). On December 7, 1977 the District Court for the Eastern District of California, Judge Crocker presiding, granted the plaintiffs' motion for a preliminary injunction compelling the preparation of an EIS (Washington Post 11/8/77).

While the lawsuit was under consideration, several western Senators had introduced legislation to delay the implementation date for the new rules. Senate Joint Resolution 96 would suspend the regulations for one year. Senate Joint Resolution 93 went further and required that for one year the Bureau could not withhold water from reclamation projects or administer excess land sales. During hearings held by the Senate Committee on Energy and

Natural Resources, many Senators said they needed time to assess the impact of the proposed regulations. "I am gravely concerned that in the rush to correct the abuses found in the Reclamation program or in our desire to reaffirm or redefine the reclamation program - we may lose sight of the needs of the farmers on the ground," Henry Jackson, (D-Washington), claimed (U.S. Congress, Senate 1977, 3).

Opponents of Andrus' regulations knew that the EIS would take at least a year to prepare. With that in mind, they shifted the focus to Congress with the hope that they could rewrite reclamation law to reflect the policies they supported. In 1977, over thirty bills were introduced, but two Senate proposals represented the positions of those in the two camps. They were S.2606 sponsored by Frank Church (D-Idaho) and S.1812 authored by Gaylord Nelson (D-Wisconsin).

The Church bill replaced the 160-acre ownership limit with an absolute limit on farm size of 1280 acres. The limit included owned and leased land. (Under the current interpretation of reclamation law, landowners could increase the size of their farm by leasing land to add to their 160 acres of owned land.) The residency requirement was eliminated. Church said he would ensure that the program benefited farmers, not investors, by including a "proprietorship test." Under this provision, for example, new purchasers would have to farm their land for 10 years

before they could lease it. The legislation also gave the Interior Secretary the discretion to limit the number of landholdings an individual or entity could manage on behalf of other reclamation owners.

S.1812 was substantially different. Nelson's bill explicitly required that a recipient be a "family" farmer who lived on or near the farm and derived a major portion of his or her income from the farm. Each recipient could own 320 acres and through a dependent, could add only an additional 160 acres. The bill included a program to help those with limited finances secure reclamation land. Under the program, each year, for five years, the Bureau would purchase $5 million worth of excess land. Eligible individuals (i.e., those with limited funds) could secure a seven-year lease on 160 acres. At the end of seven years the recipient could then apply to purchase the land. All other excess land would be distributed through a lottery. S.1812 also required that the contract repayment amount be renegotiated every five years and the repayment period would begin when water was received, not when most of the project had been completed.

In April, the Senate Subcommittee on Public Lands and Resources held hearings on the package of reclamation bills (U.S. Congress, Senate 1978). Those testifying agreed that the reclamation program should be modified. They also agreed that the program should benefit family farmers, not corporations, investors, or speculators. But there was

substantial disagreement about the degree of change necessary, what changes should be made, and why. Nelson urged that while the acreage limitation should be large enough to provide an adequate living, it was critical that it be small enough so the subsidies would be widely distributed (U.S. Congress, Senate 1978, 227). Senator Hayakawa (R-California) argued that the subsidy should be removed and recipients should pay a price that more closely reflected the actual cost of providing the water, also called "full price" (U.S. Congress, Senate 1978, 241). NLP told the Subcommittee that there was no magic acreage limitation number, what was important was how the program was administered by the Bureau, particularly the excess land provision. NLP emphasized that, "It's a limitation for those who already own land, but an opportunity for those who don't" (U.S. Congress, Senate 1978, 580). Secretary Andrus agreed and advised the Subcommittee that, "Given the subsidies involved, optimum production efficiency size should not be the overriding factor (U.S. Congress, Senate 1978, 540).

None of the 1977 legislation passed and no legislation was reported in 1978. Meanwhile, the Carter Administration was modifying its reclamation policy. In February 1978, Andrus modified the proposed regulations to increase the ownership limit to 1,280 acres. Residency would be gradually phased-in over a number of years, rather than implemented immediately (Hornblower and Morgan 1978, A14).

The new regulations closed a loophole in the previous regulations that would have permitted large families to accumulate more than 1,280 acres by assigning extra acreage to minor children. The new version was greeted negatively by supporters of the earlier proposal. Senator James D. Abourezk (D-South Dakota) claimed that the Andrus proposal was so weak it amounted to a "sell out" to conservative western interests. One senior DOI official said, "It's being perceived as far to the right. But I'll let you in on a little secret; it's to the left of where we were," (Hornblower and Morgan 1978, A14).

The Administration took other steps to "mend fences" with western interests. For example, in early 1978, Secretaries Andrus, Bergland from USDA, and Vice President Walter Mondale traveled to several Western states. They met with thirteen Democratic Governors of states that had all voted for Gerald Ford in the 1976 election. Some of the Governors were facing difficult reelection campaigns. Given the activity of the Administration on water policy in general and reclamation policy in particular, it was clear that the Governors could gain electoral support by criticizing the water policies and proposed regulations of the Carter Administration. The trip was intended to unify and strengthen Democratic support before the 1978 elections (Kirschten 1978, 149).

In 1979, another effort was made to enact reclamation legislation, and on September 14, the Senate approved S.14,

authored by Frank Church on a 47 to 23 vote (Koch 1979, 2121). As introduced, S.14 was virtually identical to Church's 1977 bill, S.2606. But when the bill reached the Senate floor, some Senators were determined to change several provisions. As reported from the Energy Committee, S.14 allowed landowners/operators to lease an unlimited amount of land as long as the term of the lease was for one year. Senators Church and Hatfield (R-Oregon) pointed out that leasing had been used by several landowners, particularly in the WWD, to amass enormous amounts of land. The Senate voted to delete the unlimited leasing provision (Congressional Quarterly Almanac 1979, 691). The committee bill also allowed districts to make early, accelerated, or lump-sum payments (with interest) rather than the regular interest-free payments over a 40-year period. Opponents argued that accelerated and lump-sum provisions would be a financial burden on small-scale farmers in districts dominated by large landowners. Hatfield successfully eliminated this provision (Congressional Quarterly Almanac 1979, 692). A third controversial section of the bill provided an exemption from the acreage limitation for recipients in the Imperial Irrigation District in California and in the water projects built by the U.S. Army Corps of Engineers. Senators Alan Cranston (D-California) and S. I. Hayakawa (R-California), successfully defeated efforts to delete the provisions (Congressional Quarterly Almanac 1979, 691). In addition to the Imperial Irrigation District, a

substantial amount of Army Corps of Engineers project land was located in California.

The companion bill in the House of Representatives was H.R. 6520 (Congressional Quarterly Almanac 1980, 598-602). This bill allowed a recipient to own 960 acres and lease 2,400 acres, but water for leased lands above the 960-acre limit of owned land would be charged a higher price. Corporations with more than 18 shareholders could own only 160 acres. The residency requirement was eliminated. Like S.14, Army Corps of Engineers projects and the Imperial Irrigation District would be exempted from the acreage limitation provision of reclamation law. Excess lands not sold within the term of the recordable contract would be distributed through a lottery.

H.R.6520 was reported by the House Interior Committee on July 15 (Congressional Quarterly Almanac 1980, 598). Although it received a rule to be considered by the full House on September 29, it was never considered on the House floor. "Hindering its progress were lukewarm congressional support, dissension among its proponents, and pre-election worries by the White House" (Congressional Quarterly Almanac 1980, 598).

The leasing limitation was the most controversial part of the bill. The Interior Committee first voted for unlimited leasing. But the Administration strongly opposed the provision, "claiming that the 960-acre limit on ownership was rendered meaningless by the unlimited leasing

provision (Congressional Quarterly Almanac 1980, 600), Andrus charged that "[i]t would allow the federal water subsidy to "fatten the profits of large landowners who hold massive acreages in a few districts" (Congressional Quarterly Almanac 1980, 600). Many legislators outside the Committee also opposed the provision and they warned that without a leasing limit, "the bill would have little chance of passage on the House floor...." (Congressional Quarterly Almanac 1980, 598). Interior Committee Chairman Morris K. Udall, (D-Arizona) commented that "those who had favored unlimited leasing had been playing a hot hand, and risked a backlash on the House floor (Congressional Quarterly Almanac 1980, 598). The House committee decided to reverse its position on leasing and it approved an amendment to place a 2,400-acre limit on the amount of land a farmer could lease.

But the leasing limit was opposed by large farm interests in California. "'It takes away flexibility,' said Kendall L. Manock, counsel to the Farm/Water Alliance, a coalition of farm and water groups seeking relaxation of the 1902 restrictions. 'It will mostly (sic) hurt the folks in Yuma, Ariz., who grow specialty crops like lettuce and melons,' said Gordon Nelson, executive director of the alliance. 'Those are perishable, high risk crops, and the farmers can't hack it with small acreages.' He predicted that if 3,360 acres were not enough to support the lettuce and melon farms, production would move down into Mexico where there were no acreage limits" (Congressional Quarterly

Almanac 1980, 599).

Even with the leasing limit, many members of the Committee were still displeased with the bill, because the 3,360 acre limit (owned and leased land) was "far in excess of the 1,280-acre per farm operation limit in the Senate-passed measure. 'The big agricultural interests had so much clout with this committee we were lucky to get any cap,' argued Udall. 'They would have resisted a 50,000-acre cap....I may oppose it if it is worsened on the floor, or unless there is some improvement over what I see now,' he said (Congressional Quarterly Almanac 1980, 600). "It stinks," Phillip Burton (D-California), another Committee member declared. "We'll try to clean it up if we can, or kill it if we can't." (Congressional Quarterly Almanac 1980, 600).

The Administration was also dissatisfied with the bill. In a letter to the House Interior Committee, Andrus wrote, "The reclamation program was not designed for the giants of the agricultural world, but they are the ones who would benefit from the bill in its current form. The family farmers, for whom the program was designed, would suffer irreparable harm over the long run, (Congressional Quarterly Almanac 1980, 600). And in a speech delivered on May 30 Andrus said he would "recommend a veto if the final bill 'simply legitimizes those abuses which have continued for years'" (Congressional Quarterly Almanac 1980, 600).

Given the general level of dissatisfaction, "the

outlook for the bill appeared gloomy." Not only was there "lukewarm support" within the House of Representatives and the Administration, but Congress was preparing to adjourn. When on September 9 the House Rules Committee postponed the vote on a rule to bring the measure to the House floor, both proponents and opponents said there was little chance the bill could be considered before Congress recessed for the national elections. 'Even if we had gotten a rule, I would have been skeptical that there was time to get it to the floor,' Nelson of the Farm/Water Alliance said at the time. 'But with this delay and the White House still blocking it, there's not much chance of getting it to the floor -- unless we can turn the White House around,' Nelson added. He said his group would try to convince President Carter's California campaign organizers that he would do better in the November 4 [Presidential] election if he [supported the bill]....But Carter's campaign strategists did not want him to take a position on the controversial bill before the election and the White House asked House leadership to block it, Nelson claimed (Congressional Quarterly Almanac 1980, 601).

But the Rules Committee finally acted on the bill. The key was Rep. Morris Udall (D-Arizona), (Congressional Quarterly Almanac 1980, 601). Rules Committee Chairman Richard Bolling, (D-Missouri) who personally opposed the bill was under pressure from Western legislators to act on the bill and had said "he would take his cue from Udall and

would not move the legislation unless Udall thought it could be improved on the [House] floor" (Congressional Quarterly Almanac 1980, 601). Udall was pushing the bill because he had promised his Arizona constituents that he would help get the bill to the House floor for a vote. In addition, as Chair of the Interior Committee, he wanted the issue resolved.

But in spite of the Rules Committee action, the Democratic leadership did little to build support for the bill. "'There's a certain smell about this bill that has scared off the Democratic leadership,' said a staff member for the House Interior Committee. 'Agribusiness has overplayed its hand.' California's agribusiness industry had been the primary force behind the bill and waged one of the most intense lobbying efforts in recent congressional history in support of it. Rep. Bob Carr, (D-Michigan), told the Rules Committee the lobbying had resembled a 'well-oiled bulldozer,' [On the House floor], opponents Carr and Miller, complained that the bill would continue to provide huge federal subsidies to agribusiness, contrary to the original purpose of the reclamation law" (Congressional Quarterly Almanac 1980, 602), Miller characterized the bill as "socialism for the rich" and "the biggest Western stage coach robbery of the public since Jesse James." (According to an interview with John Lawrence, Legislative Assistant to Representative Miller, when the bill was considered by the Interior Committee, Miller filed almost 100 amendments in an

attempt to filibuster and stop the bill in committee.)

"Also contributing to the bill's demise was dissension among the legislation's supporters. The farmers' lobby split on the issue of the leasing cap. One group, made up primarily of farmers who had been leasing thousands of acres in the Westlands District of central California, adamantly insisted on deleting the leasing cap when the bill reached the floor. The farmers opposed the bill as reported. But the Farm/Water Alliance, which would not have been as adversely affected by the leasing limitation, supported the bill. The split between the two groups was blamed in part for the bill's loss of momentum" (Congressional Quarterly Almanac 1980, 602).

New Administration Pushes Bill

Shortly after the Reagan administration took office, the new Interior Secretary, James G. Watt, announced that the Department would hold hearings on the proposed rules and the draft Environmental Impact Statement in early 1982. He informed the agricultural interests that eventually he would have to enforce the 160-acre limit unless Congress changed the law (Wehr 1982, 487).

With this warning, those who opposed the proposed rules stepped up their efforts to pass reclamation legislation. The House of Representatives acted first. On May 5 and 6, H.R.5539 was debated on the House floor. Representative Kazen (D-Texas) opened the debate by

explaining that the bill was necessary because the 1977 regulations would reverse:

> ...decades of administrative interpretations upon which the irrigators had relied. Understandably, the irrigators, in confusion and frustration, turned to the Congress in the hope and expectation of clarifying their position and creating certainty where it does not now exist (U.S. Congress, House 1982, 8807).

Kazen also tackled the subsidy issue in his opening remarks. He acknowledged that the program provided a subsidy to recipients and explained why it was justified:

> That subsidy is intended to and does encourage farmers to make the required investment in the land and machinery which constitute the farm operation. That subsidy is intended to and does result in lower production costs which are passed on to consumers in the form of lower prices. That subsidy has resulted in making otherwise unproductive land productive. And, may I point out, it is only one of the literally hundreds of subsidies which the Congress has conferred upon all segments of our economy over many years (U.S. Congress, House 1982, 8808-8809).

The bill's supporters presented the bill as a "pro family farm" measure because with a 960-acre ownership limit it would provide enough acreage for a viable farm:

> In providing for an increase in the acreage limitation, the committee recognizes that 160 acres of land is simply not sufficient, except in very isolated cases, to support a viable farming operation in today's economy...upward revision of the acreage limitation is clearly required to increase farm efficiency and to justify the substantial, capital investment for equipment and machinery required for anybody who wants to remain competitive as a farmer or to become a farmer for the first time (Congressional Record 1982, 8808- 09).

The bill's proponents were careful to explain that the increase was not a six-fold increase:

> I should mention that an increase from 160 acres to 960 acres is not a sixfold (sic) increase even though it looks that way. The present limitation is based on

> 160 acres per person, but the 960 acres would be per family of farming unit. Thus, a family of six under the present law will not gain anything under the new law if the ownership limitation is increased to 960 acres per family (U.S. Congress, House 1982, 8815).

Another point the bill's backers emphasized was that the bill would reduce the subsidy and produce revenue for the Federal Government. Rep. George Miller (D-California), a long-time critic of the Bureau's administration of the program and author of the provision to reduce the subsidy, explained:

> This legislation does alter the goals of the program because it permits larger growers to participate as they have participated for decades because of weak enforcement of current law. We will allow larger farmers to participate, but we will not allow them to receive the Federal subsidies that were promised to their predecessors on the theory that the long-term beneficiaries of these projects would be small, family farmers. [This bill will bring]...the end of unjustified subsidies for the well-to-do who have too long postured as the independent, rugged farmers, while lining their pockets with subsidies intended for the family grower (U.S. Congress, House 1982, 8811).

Rep. Kazen explained how the bill would reduce the subsidy:

> While our bill would permit a farm operation to exceed 960 acres by permitting an operator to lease additional lands to which water might be delivered, in return for this benefit, the district in which the lands are located, or an individual who elects to come under the provisions of the new law, would be required to agree to an increase in the construction cost repayment obligation which is attributable to the additional lands over and above 160 acres and which would be farmed as a part of the operation. Interest would be charged as to that part of the repayment obligation on the remaining balance due and the obligation would be computed without regard to the farmer's ability to pay. This would substantially reduce the subsidy... (U.S. Congress, House 1982, 8808).

Under H.R. 5539, all participants in the program would

have to pay the full operation and maintenance costs. These costs would be calculated annually "and modified as necessary to insure that the Government receives the full return of all money it has expended for operation and maintenance costs related to irrigation" (U.S. Congress, House 1982, 8808). Miller, author of the pricing provision, pointed out that:

> Although the Bureau of Reclamation currently calculates these costs on an annual basis, O&M charges have frequently been frozen in long-term contracts. Thus, in some areas farmers pay $3.50 an acre-foot or less for water which costs the Government many times that amount to deliver, despite the irrigator's much greater payment capacity (U.S. Congress, House 1982, 8811).

Udall emphasized that the House bill would even produce some revenue for the Federal Government:

> ...there could be some small addition to the administrative cost as we get this new system in operation, but this is not a revenue reducer, it is a revenue gainer (U.S. Congress, House 1982, 8827).

And reading from a letter from the Congressional Budget Office, Udall told his colleagues:

> If the full cost of water delivery were received on 325,000 acres, at an average additional payment of $30- 40 per acre, the additional annual receipts for the Federal government resulting from the full cost provisions of the bill would approach $10-13 million per year (U.S. Congress, House 1982, 8827).

The first day of the hearing closed with some words of caution from Miller. He warned his colleagues:

> I have made some very great concessions in this legislation. In the past, I strongly opposed efforts to merely liberalize the acreage limitation. Over six years ago, when this debate first began, I declared my thorough opposition to any legislation which failed to address the need to eliminate unwarranted subsidies. But this legislation is as far as I can go. If there

> is any attempt to weaken this legislation, to ramrod the Senate committee's proposal down the throats of the House in a conference committee, they will simply find out that many of us who have walked a great distance to meet the compromise of this legislation will not longer be able to participate...We are here to improve and broaden the reclamation program, not to emasculate it and call it reform. I, for one, will not participate in that charade; in fact, I would gladly lead the effort to kill any legislation which weakens the bill before us today (U.S. Congress, House 1982, 8811).

Lujan echoed the delicate nature of the compromise:

> So my first reason in asking you to support the bill is that it is the product of many years of study, hearings, debate, and compromise by our committee. Tinkering with amendments here on the floor could kill the bill (U.S. Congress, House 1982, 8815).

On the second day of debate, eight amendments were proposed. Although none of them would alter the basic thrust of the bill, several would significantly modify some provisions. The most significant amendment that passed was one offered by Rep. Dale E. Kildee (D-Michigan). The amendment would reduce the acreage limitation for corporations of more than 18 shareholders who presently receive reclamation water from 960 acres to 160 acres. Supporters argued that these recipients were "large, profitable corporations" and the government should not be subsidizing them. Kildee pointed out that the amendment would impact less than 1.1 percent of all reclamation farms.

Kazen argued for the opposition that Kildee's amendment was unfair. He told his colleagues that:

> ...the committee took the action it did in regard to corporations for good reason. Once again, we were faced with the fact that the Department [of the Interior] had interpreted the reclamation law almost from the very day it was enacted, 80 years ago, to

> permit corporate farming and to permit corporations, regardless of size, to be treated in the same manner as any individual. In reliance on the years of administrative interpretations which permitted corporate operations and permitted leasing, substantial investments have been made by some corporations having more than 18 shareholders in farming operations. The amendment would change the rules under which the program has been administered for many years and would retroactively penalize corporations which have, in good faith, relied upon the interpretations of those who are assigned the responsibility to administer the law (U.S. Congress, House 1982, 8919).

The most controversial amendment did not pass. Following the successful passage of Kildee's amendment to reduce the acreage limitation for certain corporations, Emery introduced an amendment that would reduce the entire acreage limit from 960 acres to 640 acres. Proponents of the amendment pointed out that since over 96 percent of all reclamation farms were less than 640 acres, only four percent of the farms would be affected by the measure. And with the equivalency provision, some farmers could receive water for more than 640 acres. Supporters also emphasized that the acreage limit did not restrict the size of the farm, only the amount of land that could receive subsidized water. Opponents argued that 960 acres was a more realistic size for a viable farm and when compared to the Senate figure of 2,080 acres, 960 acres was not that high. They reminded their colleagues that the 960 figure was "based on testimony from hundreds of witnesses over a period of six years and it was part of a delicate compromise negotiated in exchange for the reduced subsidy provisions."

At the conclusion of the two days of hearings and

after the bill had been approved, several opponents expressed their feelings about the debate. "The action yesterday,...,had all the aspects of a fast-moving train that would not be stopped," remarked Kildee. And Rep. Douglas K. Bereuter (R-Nebraska) added "This is a California train, a long time leaving Union Station. But the crew is Californian; the grease is Californian; all the fares were paid by California" (Sinclair 1982, A10).

The Senate met to consider their bill, S.1867, on July 14, 15, and 16. Compared to the House debate, the Senate debate was much more lively. For one thing, the Senate bill established a much larger acreage limit than the House bill; 1,280 acres owned plus 800 acres leased. According to an interview with Gary Ellsworth, Chief Staffperson for the Senate Energy and Natural Resources Committee, Committee Chair McClure (R-Idaho) wanted a high acreage figure to help farmers in cold regions (like Idaho and Montana) where agricultural productivity was much lower than in warmer regions like California.

Senator Malcolm Wallop (R-Wyoming) the majority floor leader introduced S.1867 and his opening remarks mirrored those made by Representative Lujan when he presented H.R. 5539 on the House floor. Wallop remarked:

> This bill is necessary not only because the acreage limitations in the 1902 act are, and have been, seriously outdated for some time, but also because previous administrations over the 80-year history of the program have employed conflicting interpretations of the law (U.S. Congress, Senate 1982, 16294).

Senator McClure addressed the necessity to pass

legislation, given the alternative of the proposed regulations:

> ...uncertainty over the status of the Federal reclamation program and the onus of the new regulations still hang over the heads of thousands of Western farm families whose livelihood depends on reclamation water (U.S. Congress, Senate 1982, 16294).

Senator Jackson reiterated this concern:

> Now that the House has passed a bill, we are presented with our last clear opportunity, to act prior to the imposition of rules and regulations proposed by the Department of the Interior. If we do not take this opportunity reclamation policy will be made by the Department and the Federal courts, not by Congress. I trust that my colleagues will agree that such a result would be an unfortunate abdication of responsibility (U.S. Congress, Senate 1982, 16414).

Supporters pointed out how much the country gained from the reclamation program. Wallop explained:

> Those who criticize these programs in terms of cost to the Federal Government often conveniently overlook the fact that, for roughly a $7 billion investment by the Federal Government over an 80-year period, the nationwide economic benefits have come to over $54 billion. Few, if any, other Federal programs have such a remarkable degree of success (U.S. Congress, Senate 1982, 16293).

McClure pointed out a unique aspect of the program:

> But I think it is important to recognize that the reclamation program is the only public works type Federal program in which recipients of the benefits are required to pay anything. Those who depend on harbors and waterways, highways, and airports do not pay any of their portion of such construction costs, let alone interest thereon (U.S. Congress, Senate 1982, 16295).

Other supporters who claimed that S.1867 was not a "giveaway" to large corporations, reminded their colleagues that the acreage limits were the same as S.14 which the Senate had passed in 1979.

The opposition began its activity at the end of the first day of debate. Senators Richard G. Lugar (R-Indiana) and William Proxmire (D-Wisconsin) introduced an amendment to change the pricing provisions and the ownership limit in a way that would increase the cost of water for many recipients. The amendment would require a grower to pay "full cost" for any acreage above 960 acres; acreage between 321 and 960 acres would be charged 50 percent of "full cost"; and acreage at or below 320 acres the subsidized rate. The "ability to pay" provision would apply to the rate for parcels less than 960 acres. According to an article in the Washington Post (1982, A2), Senator Lugar was dissatisfied that the bill increased the subsidy for some reclamation farmers when other farmers were being urged to manage with less federal assistance (Sinclair 1982, A2).

During the debate the proponents of the amendment argued that it was important to reduce what they considered to be a tremendous subsidy. Hatfield reminded his colleagues that:

> Within this 100-year history, Mr. President, emerges one clear responsibility of the Congress, that is, to assure the public that their financial interests in the reclamation program would be protected from abuse and monopoly, and that reclamation benefits would be preserved for the widest possible distribution to family farm operations...S.1867 can be improved. Specifically, the acreage allowance of 2,080 acres is too liberal and should be reduced to reflect current farm practices and historic reclamation policy which maintains farm sizes of between 640 and 1,280 acres (U.S. Congress, Senate 1982, 16414).

They noted that under S.1867, no interest was charged until a farm was at least 2,080 acres. At this level, only

400 of the 47,000 farm operators in the reclamation program would have to pay any interest.

Those who supported the amendment made a series of other points for their cause. They emphasized that they were trying to limit the subsidy, not farm size. They felt that those who owned more than 960 acres could afford to pay "full cost". Proponents pointed out that in California the gross crop value was approximately $1,000 per acre. With the acreage limit in S.1867, a grower could gross over $2 million a year. They noted that this figure was very high when compared with the fact that in 1980, eighty percent of American farms grossed less than $50,000 a year.

Proponents of the amendment made one more comparison. They pointed out that according to an analysis by the Congressional Budget Office, through this amendment the Federal Government could realize $17 to 33 million per year. They compared this figure with the fact that according to the General Accounting Office (GAO), at the end of the forty-year contract with Westlands Water District, the Federal Government would receive less than ten percent of the actual cost of the project. The GAO report also stated that over the next five years the Government would spend $3.8 billion on Bureau projects, but only $275 million of this sum would be repaid (U.S. General Accounting Office 1972).

The opposition contended that in the irrigation districts the amendment would create a distinction between

those who owned land and those who leased land. This would create a bureaucratic nightmare because it would require the Bureau to determine "ability to pay" on an individual basis and those who leased land would have to have their repayment rate revised every four years. But the repayment figure for owned lands would remain the same for the duration of the entire contract.

Several Senators recited a litany of other arguments against the amendment. They contended that the amendment would drastically change a program under which recipients had operated for years. And the measure was unnecessary because over time the large farms would be divided into smaller parcels when the recordable contract period expired. They also predicted that the amendment would not generate a substantial amount of revenue. And finally, they pointed out that the Government had established many subsidies and it was unfair to focus specific criticism on the reclamation program.

At the conclusion of the lengthy debate, the amendment was defeated 39 to 58.

In spite of the setback, Senators Proxmire and Lugar offered another amendment. Instead of the three-tier approach, the new amendment proposed that for all acreage above 960 acres, recipients would pay "full cost" and below 960 acres the subsidy rate would apply. The arguments offered for and against the amendment were nearly identical to the debate on the first Proxmire/Lugar measure.

In the debate, Senator McClure tried to explain how the committee derived at the acreage limit and why he opposed any decrease:

> ...We [the committee] are trying to draw the line on what is a family farm operation - a reasonably successful one. Why should we clamp the lid down so low that we say to people, 'There is a limit on your success. No matter how hard you work, no matter how much you might be able to accomplish as a family on your farm, we are going to tell you that you can't get any bigger than that. We will tell you that we're going to penalize you and change the economics to the point where you can't get any bigger?'(U.S. Congress, Senate 1982, 16513).

The amendment was defeated.

In spite of the Proxmire-Lugar defeats, Senator James Exon (D-Nebraska) introduced an amendment that tried to change the basic thrust of the bill. Exon's amendment would place an absolute limit of 960 acres on the amount of owned and leased land that could receive the subsidized water. In presenting the amendment, Exon said:

> A threshold decision for the Senate is who shall benefit from this Federal subsidy? Let us remember, above everything else, that it is a Federal subsidy, in the opinion of this Senator a worthy one as long as it is kept within due bounds...Certainly, the reclamation program is in need of updating. To be sure, agriculture has changed over the past several years. Larger acreages are required for efficient farming operations...On this question, I believe the Senate must seriously examine whether the law's acreage limitation is being expanded to accommodate changes in family farming operation or we are changing the limitations merely to accommodate large corporate operations, which are grossly out of compliance with existing law. (Congressional Record 1982, 16594).

This amendment was defeated 22 to 65.

Even though the bill's opponents knew the amendment would lose they used the opportunity to make their points.

For example, Senator Proxmire predicted that the bill would not meet the revenue projections:

> Certainly, in these recent days, Washington has become preoccupied with finding new revenue sources. Facing the largest Federal deficits in history, it is tempting to turn each piece of legislation into a new source of Federal revenues. However, the CBO [Congressional Budget Office] has indicated that this program will not be a money maker of any significance. In light of the estimated insubstantial budget impact of the committee bill, I am concerned that the important goals of the program are being lost sight of behind the thin veil of revenue gains....It is being used to bait unsuspecting Members into believing that it will be fine to expand Federal irrigation assistance to profitable, corporate agribusiness interests because 'they will pay for it' U.S. Congress, Senate 1982, 16595).

Senator Exon voiced his opinion about the subsidy:

> I believe that the most effective approach to limiting this Federal subsidy is to simply 'cap,' if you will, the eligible acreage. Under the committee's proposal, full cost recovery is practically nonexistent since the excessive expansion of the acreage limitation brings nearly all of the special interests now in noncompliance, within the law. Furthermore, those large corporate operations which are in excess of the committee's limitations can 'buy' into the program by paying for construction costs with a full cost interest charge. This is no limitation at all but, rather, merely provides an economic disincentive for those unable to afford full cost. Such an approach merely suggests that the Federal irrigation assistance program is not for the family farmer but for anyone without limitation, as long as they can afford to pay (U.S. Congress, Senate 1982, 16595).

Exon also challenged the unlimited leasing provision:

> Leasing has historically been one of the principal devices used by large landowners for avoiding the acreage limitations in the past...I know that leasing is an important means of entry for new farmers as well as a good way to provide some extra income to a small farmer [but]...If we allow a monopoly on land holdings, if we permit the expansion of the acreage limitation without meaningful limits on leased lands, we effectively reduce the opportunities for new farmers...The allowance of unlimited leasing, even at full cost as the committee's bill would propose, is

> no limitation at all for those who can pay so-called full cost. This is a limitation however, on those small farmers who cannot afford to pay the full cost price. This disincentive, as the committee would so characterize this proposal, is only a disincentive to those whom the Reclamation Act was originally intended to benefit (U.S. Congress, Senate 1982, 16597).

The debate proceeded for another day. Amendments were offered to reinstate the residency requirement and apply the acreage limitation provisions to Army Corps of Engineer projects. Both were defeated. On the third day, Senator Howard Metzenbaum (D-Ohio) began his own informal filibuster of the bill. (As a member of the Senate Energy Committee, he was the only Senator who voted against the bill, (Washington Post 1982,A4).) The Ohio Senator brought the Senate's business to a standstill by requiring a full quorum call for any action taken by the Presiding Officer of the Senate. Each quorum call took at least thirty minutes. After six or seven quorum calls, Senator Stevens (R-Alaska) objected. He angrily addressed the Senator:

> Mr. President, I would like to inquire of the Senator from Ohio what is going on here. We have a time agreement. I have never seen a filibuster under a time agreement. I thought a time agreement was a gentlemen's understanding, and ladies', too. I think the Senator from Ohio would do much better at home campaigning than here on the floor. I would like to go home sometime this afternoon. Are we going to be forced into a Saturday session in order to satisfy the whim of the Senator from Ohio? (U.S. Congress, Senate 1982, 16619).

Metzenbaum replied:

> Mr. President, I have never felt that I had to account to anyone for my actions on the floor of the Senate except to the people of the State of Ohio and the people of this country. I do not yield to the Senator from Alaska or anyone else in conducting myself as a

> gentleman...as of this moment I have not offered an amendment, but I have no reservations in saying that I expect to offer one amendment, two amendments, five amendments, ten amendments, as many amendments as I see fit, all in accordance with the Rules of the Senate. This is bad legislation. This is legislation that should be defeated. This legislation serves only the purposes of a few wealthy farmers, and I am not worried about my reputation as a gentleman in opposing legislation of this kind. This legislation should never have been brought to the floor of the Senate (U.S. Congress 1982, 16619).

At this point, Majority Leader Howard Baker attempted to break the deadlock. He arranged a meeting between Metzenbaum, several of Metzenbaum's supporters and a small group of the bill's proponents. They met for two hours and when the Senate reconvened, Wallop announced that a compromise had been reached (U.S. Congress, Senate 1982, 16637). One provision of the compromise was that the interest rate would be increased. The acreage limit would be reduced from 2,080 acres to 1,280 acres. The water conservation section was strengthened. The period within which excess land had to be sold was reduced from ten to five years. And the discretion of the Secretary was reduced because the compromise gave Congress the power to review certain decisions made by the Secretary and requires the Secretary to explicitly validate.

With the compromise, Senator Metzenbaum removed his formal objection. The amendment passed, 60 to 5, followed by the passage of the bill on a 49 to 13 vote. In the closing moments, many acknowledged that S.1867 represented a major victory for Western agricultural interests, particularly in California. But before the bill could go to

the President for signature, a conference committee would have to resolve various differences between the House and Senate bills.

The Senate and House reclamation bills differed fairly significantly in several respects. Both bills increased the ownership limit. The House bill set the acreage limitation at 960 acres while that in the Senate bill was set at 1280 acres. The House bill established an interest rate equal to the rate of all United States government obligations in the year the project expenditures were made. The rate will vary from project to project, but the bill stipulated that the rate cannot be less than five percent.

The Senate rate was the average of the average interest rate on all outstanding Treasury obligations of at least fifteen years' duration and the weighted average of all new Treasury obligations issued in the year preceding the year in which the project expenditures were made or the date of enactment, whichever is later. It was predicted that this formula would result in a rate of approximately twelve percent. Both versions provided for the application of an equivalency formula which permits an increase in the basic acreage limitation for those lands of less productive capability. The bills differ fundamentally in terms of how the program would be implemented. In the Senate bill, the changes (increased acreage limit, equivalency, etc.) would apply to all districts. The House bill establishes a two-tier system such that only those districts that voluntarily

or involuntarily change their contract can take advantage of the new provisions. Otherwise, the provisions of prior law apply. So for example, in terms of the ownership limit, those districts that remain under their old contract will keep the 160-acre ownership limit, while districts that have a new contract will be entitled to an ownership limit of 960 acres.

The conferees decided to accept the House bill's "two-tier" approach. The conference committee bill also reduced the subsidy for leased lands in those districts not amending their contracts. The conferees affirmed their goal of reducing the subsidy for water received for acreage above a certain level. The approach used in the House bill was attractive but in discussion it became evident that there would be very little incentive to a district to ever voluntarily amend its contract because under the status quo the recipients would never have to pay full cost and through leasing they could pay the subsidized rate on an unlimited amount of land.

The conferees agreed that the larger farming operations in districts which lease lands over and above the basic ownership limitation of 160 acres should not be able to receive the subsidy for the leased lands, but should be charged full cost. The provision, became known as the "hammer clause" was made effective four-and-half years from the date of enactment in order to give districts who wanted to amend their contracts, sufficient time to comply with the

requirements of State law for making such adjustments as well as the Federal requirement that the contracts and amendments be confirmed by a "court of competent jurisdiction."

The conferees also adopted a full cost formula which combined the House and Senate formulas. The House formula would be applied to expenditures made before the enactment date with a provision that the interest rate be not less than seven-and-half percent. For expenditures made after the date of enactment, the formula contained in the Senate bill would apply.

The conferees also agreed upon a provision which was only in the House bill, which would require each landholder certify compliance, including the number of acres leased, the term of the lease, and certify on a certification form, that the landholder would submit information that the rent reflected the "reasonable value" of the irrigation water.

The House bill contained civil penalty provisions "including fines at twice the fair market value of delivered water, and $5,000 for each day of a violation." The Senate bill had no such provision. The conferees deleted the House penalty provision because they decided that with the certification requirement, and the criminal penalties which would apply those individuals who submitted false information on the certification form, (along with other remedies available to the Secretary), there was no need for an additional penalty provision.

With the resolution of the issues, the final bill, S.1409, passed the week of August 16. And on October 12, 1982, President Ronald Reagan signed the Reclamation Reform Act.

CHAPTER THREE

Seven years had passed from the time the first reclamation bill was introduced until a legislative proposal was approved in 1982. Over that period, a rich hearing record was developed from which one can identify the issues policy makers wanted to address in a new bill. The issues fall into three broad categories; the size of farms receiving reclamation water, the beneficiaries of the program, and the subsidy received by reclamation farmers. In his opening statement at the 1975 Congressional hearings, "Will the Family Farm Survive in America," Senator Gaylord Nelson (D-Wisconsin) touched on these issues:

> But when public expenditures of this great magnitude are made and private benefits of enormous size are conferred through government subsidy, the Congress is dutybound to give the closest scrutiny to determine that these expenditures and subsidies are indeed serving the public purposes intended. And in the case of the national reclamation program, there is literally no question but that one of its fundamental purposes and intents was to encourage the development of independent, small-business, family-sized farms -- to settle people on the land or near it, and to enable them to own the land they farmed; to spread the benefit of subsidized irrigation water to just as many people -- independent, bona fide farm families -- as possible... The real question is how well, how effectively, and how fully the requirements of our legislation, the mandates of Congress, are carried out in practice; and that is the kind of question we are inquiring into today (U.S. Congress, Joint 1975, 4-5).

The Size Issue

During congressional consideration of the reclamation program, various aspects of the acreage limitation were

discussed. One issue was the 160-acre limitation and whether 160 acres were an amount sufficient to produce a financially productive farm. Many maintained that 160 acres was out-of-date and should be increased. For example, at a 1975 hearing, Bureau of Reclamation Commissioner Gilbert Stamm advised the Committee:

> My personal opinion is that it would be in order for the Congress to seriously consider modernization of the acreage limitation of Federal reclamation law...because almost everything about agriculture has changed in the last 70 years except the 160-acre limitation (U.S. Congress, Joint 1975, 126).

And at a 1976 hearing, Representative B. F. Sisk (D-California) urged an examination of the limit to ensure that it was an adequate amount for modern agriculture:

> In my personal view and long involvement in federal reclamation projects in California, I think it is past time that we look to easing the 160 acre limitation. Agriculture has greatly modernized since 1902 and 1926, but acreage limitation has not...The Comptroller General of the United States in a report issued on November 30, 1972, said Congress should reevaluate the 160-acre limitation on land eligible to receive water from federal water resources projects (U.S. Congress, House 1976a, 133).

Discussion about revising the acreage limitation naturally led to a debate concerning the correct acreage level. The debate heated up when President Carter's Administration issued proposed regulations that set an absolute individual limit of 480 acres; 320 acres owned and 160 acres leased. (A husband and wife were entitled to 960 acres. Historically, an individual was restricted to 160 acres owned, but could lease an unlimited amount.) In 1978,

different legislative proposals were introduced to change the acreage limit. The level in these bills ranged from an ownership limit of 320 acres to an absolute limit of 1,280 acres, owned and leased. Regardless of the specific limit, most agreed with Senator Gaylord Nelson (D-Wisconsin) when he said:

> Simply stated, we should have a law which creates a reasonable acreage limitation on a per farm basis, a limitation large enough for a family to make a good living, but small enough so that government subsidies are distributed to as many family farmers as possible (U.S. Congress, Senate 1978b, 227).

The agricultural community expressed its views on the size issue. The California Farm Bureau emphasized that as long as leasing was allowed, the specific ownership level was not a concern since through leasing the farmer would be free to assemble enough land to obtain what he/she felt was an optimal farm size (U.S. Congress, House 1980a, 133-134). John Nakamura, a California farmer, testified at reclamation hearings that there should not be a limit on farm size. Instead of a farm size limit, he favored paying more for the water received for land above a certain amount:

> I would say that I would agree...to limit the subsidy over and above a certain amount. I would be willing to pay whatever the overall cost would be, whatever that figure may be, but not have restrictions on this one size. This would be absolute disaster (U.S. Congress, House 1980a, 146).

Other farmers wanted to maintain the status quo. Jack Stone, Board President of the WWD, echoed this sentiment:

> All we want is when and if there is new legislation that it will be some legislation that will be a workable plan and that our farmers can still

> maintain a position in farming that they have today (U.S. Congress, House 1980a, 271).

Another aspect of the acreage limitation issue was a concern that farms significantly larger than 160 acres were receiving reclamation water. At the 1975 hearings, Senator Nelson pointed out that in the WWD:

> In practice, ownership patterns were changed as land was sold in parcels of 160 acres or less, but a GAO report concluded that farm operating size underwent much less change, and large scale farming remained very common (U.S. Congress, Joint 1975).

In 1979, Interior Secretary Cecil Andrus presented the results of a DOI report which showed that large farms did exist. According to the study, most farms (73 percent) were within the 160-acre limit and over 96 percent were less than 640 acres, but the remaining four percent of the owners owned over one-third of the land. This report showed that not only were there very large farms, but it also supported those such as Representative George Miller (D-California) who later pushed for a limit of 640 acres on the grounds that the overwhelming majority of owners would be in compliance:

> Moreover, as Secretary Andrus told this committee last fall, about 96 percent of reclamation farmers are in general compliance with the acreage limitation today. Yet the remaining 4 percent of farmers own over one-third of the land in the reclamation program. Whatever the intention of the original framers of the Reclamation Act with regard to the acreage limit or the leasing question, it is self-evident that they never intended to construct a program which would encourage the concentration of landownership and bestow billions of dollars in subsidies and wealth on a select class of the population. Yet, in some cases, this is precisely what has occurred. About 80 percent of the excess land lies within one state, California, and much of

> it is controlled by nonfarming corporate agribusinesses, including some of the most powerful business interests in the United States. They have perverted the reclamation program into a policy of welfare for the rich (U.S. Congress, House 1980a, 47).

Commissioner Stamm emphasized that the law regulates the amount of land owned, not the size of the total farm operation. For example, a farmer could own 160 acres and lease 1,000 acres. And all of the acreage could receive subsidized water (U.S. Congress, Joint 1975, 120).

The Beneficiaries Issue

Closely related to the issue of size was the question of who actually participated in the reclamation program. Throughout the hearings, policy makers debated whether program participants were interested in using the reclamation program as an investment opportunity or an aid to their farming operation. At the 1975 congressional hearing, Senator Gaylord Nelson (D-Wisconsin) expressed this feeling:

> I think the problem people are concerned about is the person, in the simplest kind of case, who is engaged in making a living out of an entirely different business, and is simply an investor in 160 acres, living within 50 miles, not working on the land or earning his living on the land, but thereby barring somebody else who would like to buy. That is the issue, as I see it (U.S. Congress, Joint 1976, 571).

Senator Nelson emphasized how attractive the program was to investors:

> Investing in reclamation land is very appealing because the sale price of the land is controlled...the land is typically sold at hundreds

> of dollars less than its market value. An investor can purchase land at bargain rates, therefore, and lease it at market rates (U.S. Congress 1979, 129).

Many emphasized that the recipients receiving the reclamation water should live on the land and be involved in the daily operation of the farm. Interior Secretary Cecil Andrus testified in 1977:

> The [reclamation] program program has become an investor activity rather than a residential [program]. Subsidies [through reclamation water] should be available to legitimate family farmers, but not to large corporations, absentee owners, and investors holding the land purely for speculation (U.S. Congress, Senate 1977, 85).

And continuing, Andrus brought the residency requirement into the debate:

> The existing procedures do not enforce the residency provision of the law, allowing absentee ownerships which counter efforts to promote family farms. It allows farming to be an "investor" activity rather than a residential one as intended (U.S. Congress, Senate 1977, 85).

Representative John Krebs (D-California) also emphasized the relationship between investor activity and residency:

> Let's talk about the situation which I assume you must be aware of, of an operative farmer, a farm operator on the Westside of the San Joaquin Valley who picks up leases from various individuals who live no where close to the proximity of where the farming operation takes place...Do you feel that this is in the best interest and consistent with the purposes of the act as it pertains to the development of the family farm? [Or consider]...the situation where a person buys 320 acres and that person is nowhere connected with agriculture. He or she lives in a metropolitan community, somewhere in this country, and after having purchased that acreage as excess land, turns around and leases it back to an operator x to farm it. This is not in my opinion...consistent with the purpose of the Reclamation Act. It is one

> thing to live in Fresno and farm in Firebaugh...But it is something else again to live in Dallas, to buy 320 acres on the west side of Fresno County, and then turn right around in the same transaction and lease it to farmer x who is already farming thousands of acres on the west side (U.S. Congress 1975, 152).

Senator Nelson worried that without a residency requirement it was "...theoretically possible,...,that every single acre of land out there [in the Westlands Water District] could be owned by somebody who lives on Wall Street, in Florida, in England, and so forth,...," (U.S. Congress, Joint 1975, 136).

Another issue was whether the program created the opportunity for individuals to enter the farming profession through the purchase of excess land. Some questioned whether sellers imposed conditions on sales which made it impossible for individuals with limited equity to buy reclamation land. Secretary Andrus cautioned:

> ...because the law has not been strictly enforced, 160-acre parcels have been lumped together in sales to absentee owners and sales or leases to farm management syndicates. The "family farmers" whom the law was designed to benefit, sometimes can be found in the corporate board rooms in Los Angeles or New York, in Caribbean tax havens, or "farming" out of the 40th floor of an office building or a lawyer's or doctor's office (U.S. Congress 1977, 85).

And continuing on the same theme, one year later Andrus cautioned:

> Creating equity and fairness in the distribution of these benefits is indeed one of the heaviest burdens a Secretary bears in carrying out the Reclamation program...But price controls and acreage limitations are not enough, for standing alone, they fail to address the inequity of creating a permanent, relatively closed class of

> beneficiaries, and correspondingly denying access to these benefits to many who wish to share the opportunity of participating in the Reclamation programs (U.S. Congress, Senate 1978b, 558).

Senator Nelson alleged that in districts where large farms dominated before the arrival of a reclamation project, reclamation law had not provided opportunities for small-scale family farmers:

> But the 1902 law was intended to settle family farmers on the land. In many projects throughout the West, reclamation has served this specific purpose. Unfortunately, these have been generally projects where small family farms were the rule before the project was built; where large farms predominated, however, reclamation law has done little, if anything, to provide opportunities for small family farmers to come onto the land (U.S. Congress, Senate 1978b, 227).

The Subsidy Issue

The third issue that infused the debate was the reclamation subsidy. In 1975, Senator Haskell remarked that, "In these circumstances, it is clearly essential for Congress to review very carefully the expenditures involved," (U.S. Congress, Joint 1975, 10). Two years later Secretary Andrus reminded Congress that:

> ...the subsidies provided to Reclamation farmers are substantial. The repayment by irrigators on the costs expended on reclamation projects includes no interest on the debt and includes only a portion of the capital cost, according to the ability of irrigators to pay. On the average, irrigators repay 15 percent or less of the total costs of a project, most of which are primarily for irrigation benefit. The remainder is picked up by power users, the taxpayers, and to a lesser degree, M&I users. The present value of the irrigation subsidy on the San Luis Unit is estimated at $770 million; for the Central Valley Project as a whole, $2.1 billion (U.S. Congress, Senate 1979, 253-254).

Opinion was divided over whether the subsidy should be reduced. Representative George Miller (D-California) believed that the water price should be evaluated periodically so it could be increased if delivery costs rose. Using the Central Valley Project as an example, he told his colleagues that:

> ...somewhere along the line when the Central Valley project was started, there was a congressional decision by this body to do that, [provide the subsidy]. The Federal Government is locked into a price of water, $7.50, yet the cost of delivering that water continues to rise, if I understand right. The cost of pumping the water plus other [costs], operation and maintenance, continue to rise and yet we are locked in at our end at $7.50, we are going to be locked in for the next 40 years...while we thought we made a decision for the public's benefit, the question is the public doesn't get another chance for 40 years to determine to what extent they are willing to subsidize that. It is clear that they are going to be subsidizing it at an increasing rate and when you are able to amend your contract for increased water deliveries and yet don't have to deal with the question of pricing, the rate of subsidization continues (U.S. Congress 1976, 191).

Secretary Andrus emphasized that the goal was not to eliminate the subsidy, but change its distribution. "Because the Administration continues to see value in the reclamation program, our goal is not to eliminate the subsidy, but to insure that it is distributed more broadly and equitably....It's validity comes from the opportunities it provides," (U.S. Congress 1978, 544).

Some suggested that the subsidy could be reduced by charging recipients the so-called full cost for water received above a certain level. Secretary Andrus opposed this proposal, which was known as the Engle formula, after

the former California legislator. He maintained that this provision violated the purpose of the reclamation program, which was to disburse the subsidy.

The Evidence about Size Issues

One assumption made by the authors of the reclamation program was that the program's benefits would be dispersed widely among the recipients. Reclamation benefits are derived from the fact that irrigation water from Federal reclamation projects is less expensive than other sources of water. (The section entitled "The Evidence about Subsidy Issues" on page 184 discusses why Federal reclamation water was cheaper.) This price difference confers a price advantage, or a benefit, to reclamation farmers over their non-reclamation colleagues. The acreage limitation provision, which limits the amount of water one could receive by restricting the amount of land that could be irrigated with reclamation water, was the tool through which the goal of wide distribution of benefits would be achieved. The historical record clearly supports this point. For example, in 1964, a Department of Interior report concluded that:

> After careful review of the legislative history of reclamation law and the chronology of administrative efforts to equitably implement those statutes, two salient facts become apparent. First, the Congress had repeatedly reaffirmed a policy designed to further the fundamental objectives of Federal reclamation: (1) To provide opportunity for the maximum number of settlers on the land, (2) to distribute widely the Government subsidy involved in interest-free funds for

> irrigation in such a manner as to preclude the accrual of speculative gains therefrom, [emphasis added] and (3) to promote the family farm as a desirable type of rural life (U.S. Congress, Joint 1975, 525-526).

Large Farms Existed

One way to gauge whether the reclamation benefits were widely distributed would be to determine whether the implementation of the acreage limitation had produced 160-acre ownerships in reclamation districts. It is clear from various studies that the size of reclamation farms cover a wide range and that many are substantially larger than 160 acres.

One of the first official reports to look at farm size on reclamation land was a 1972 study prepared by the Comptroller General of the United States (U.S. General Accounting Office 1972). The study, entitled "Congress Should Reevaluate the 160-acre Limitation on Land Eligible to Receive Water from Federal Water Resources Project", examined how the 160-acre limitation was applied in the Central Valley Project (CVP) in California. The authors concluded that:

> The 160-acre reclamation law limitation has not resulted in preventing large landowners and farm operators from benefiting under the subsidized irrigation program or landowners and farm operators from retaining or acquiring large landholdings (U.S. General Accounting Office 1972, 1).

This conclusion was based on information the authors compiled on farm size in seven CVP districts. (See Table 1.) In these districts, the CVP provided water for use on

Table 1. Central Valley Project Farm Operations

(In Acres)

District	Total	Largest Operation		Ten Largest Operations	
		Total	Owned	Total	Owned
1	35,503	17,338	1,728	31,794	(a)
2	30,188	2,820	2,105	16,505	6,293
3	17,119	2,471	1,778	10,437	5,129
4	232,440	40,404	23,436	127,162	73,572
5	45,945	4,359	3,809	18,439	15,777
6	44,865	1,774	304	11,469	3,423
7	96,439	2,479	1,205	14,721	10,125

Source: U.S. General Accounting Office 1972, 11.
(a) Not Available

502,499 acres in 1971. The table shows the size of the largest farm and the ten largest farms in each district. It is clear that the largest farms were all well above 160 acres. Their size ranged from 1,774 to 40,404 acres.

The most comprehensive information on farm size was collected in order to complete the Bureau of Reclamation's Environmental Impact Statement (EIS) on the 1977 proposed rules and regulations (U.S. Department of the Interior 1980a). (The data was gathered by the United States Department of Agriculture when it conducted the Land Tenure Survey for the Department of Interior. The Survey was one component of the EIS.) According to the draft EIS, in 1979 the overwhelming majority of recipients owned parcels whose size was within the acreage limit. Almost ninety-one percent of all recipients owned 160 acres or less. (See Table 2.) Furthermore, the average ownership size was 70 acres. But the data also revealed that land ownership was highly concentrated. For example, approximately 2.5 percent of the recipients owned twenty-seven percent of the land. And when one examined the data in the largest ownership class, only .1 percent of the owners owned over seven percent of all the acreage. On average, each landowner in this category owned 4,224 acres, more than twenty-six times the 160-acre limit.

When the EIS was prepared, the WWD was studied separately (U.S. Department of the Interior 1980b). This was because this District was the largest in the reclamation

Table 2. Distribution of Land Ownerships

Ownership Size (Acres)	Owners (a)		Owned Land (Acres)		
	Total	%	Total	%	Mean
1 - 160	114,467	90.9	4,572,638	52.1	40
161 - 320	8,518	6.7	1,838,941	20.9	216
321 - 640	2,018	1.6	890,916	10.2	441
641 - 960	435	0.4	332,392	3.8	764
961 - 1280	180	0.1	200,567	2.2	1114
1281 - 1920	195	0.2	317,236	3.7	1627
1921+	149	0.1	629,341	7.1	4224
Total	125,962		8,782,031		70

Source: U.S. Department of the Interior 1980c, 3-11.

(a) Owners are people who own land either solely or in combination with others. The amount of land per owner is each owner's pro-rated share of land held in joint or multiple ownership. For example, an incorporation of four people owning 640 acres is listed as four owners in the 1-160 acre size class, each with 160 acres. The only exceptions to this approach for determining the number of owners in an ownership arrangement are multiple ownerships of more than 10 owners, trusts, non-profit organizations, governments, and Indian tribes. These ownerships are treated as single owners.

program (both in terms of number of acres and the amount of water delivered) and it had been the center of a great deal of controversy regarding how the acreage limitation had been implemented and enforced.

In the WWD, ownership size was higher and more concentrated than in the other districts. For example, the average ownership size was 2.5 times higher. (See Table 3.) In the largest size category of farms (1,921 acres and more) Westlands farms averaged 10,704 acres compared to 4,224 acres for the same category westwide. In terms of land concentration, in the WWD one percent of the owners owned forty percent of all the land whereas westwide .8 percent of the owners had about seventeen percent of the land.

In preparing the EIS, the Bureau looked at not only the size of ownerships, but also the size of farm operations. An ownership unit consists of the amount of owned land. A farm operation consists of the total acreage used by business and can consist of a combination of owned and leased land.

According to the EIS, when farm operations were compared to ownerships, operating farm size was much higher and there were fewer farms than ownerships. The average farm size was 2.5 times higher and there were about one-third the number of ownerships. (See Table 4.) In addition, there were many fewer small farms (1-160 acres) and many more farms at the highest acreage levels. Almost 91 percent of the ownerships and about 75 percent of the

Table 3. Distribution of Land Ownerships

Westlands Water District

Ownership Size (Acres)	Owners (a)		Owned Land (Acres)		
	Total	%	Total	%	Mean
1 - 160	2,921	88.0	215,941	37	74
161 - 320	247	7.5	59,666	10	241
321 - 640	58	1.7	29,133	5	502
641 - 960	47	1.4	36,688	6	781
961 - 1280	12	0.4	13,545	2	1,129
1281 - 1920	14	0.4	22,161	4	1,583
1921+	19	0.6	203,379	36	10,704
Total	3,318		580,513		175

Source: U.S. Department of the Interior 1980c, 3-71.

(a) See note (a), Table 2.

Table 4. Distribution of Farm Operations

Operation Size (Acres)	Operations		Operated Land (Acres)		
	Total	%	Total	%	Mean
1 - 160	35,498	74.5	1,948,320	23.0	55
161 - 320	5,810	12.2	1,343,859	16.0	231
321 - 640	4,494	9.5	2,013,683	24.0	448
641 - 960	607	1.3	487,420	6.0	802
961 - 1280	399	0.8	433,463	5.0	1,086
1281 - 1920	396	0.8	605,275	7.0	1,528
1921+	435	0.9	1,618,630	19.0	3,721
Total	47,638		8,450,651		177

Source: U.S. Department of the Interior 1980c, 3-14.

operations were in the smallest size category. In the largest size category, the comparison was .1 percent of the ownerships and .9 percent of the operations.

When one examined farm operations in the WWD, the comparisons were even more striking. The average farm size was almost twice (1,500 acres), and there were less than one-tenth the number of ownerships. (See Table 5.) In addition, there were many fewer farms in the 1-160 acres range. Westlands had only 19 percent in this category compared to 74 percent westwide. In the large farm category, almost 22 percent of the farms were larger than 1,920 acres while only 20 percent of the farms westwide were in this category.

In summary, at the time when Congress was examining reclamation policy, most of the landowners owned land within the acreage limit of 160 acres. But the small number of owners with ownerships larger than the acreage limit owned a large amount of the total land, and some of their ownerships were many times larger than the acreage limit. These conclusions are even stronger when the farm operations are examined. In general, the farms were larger and land concentration was higher. All of this points to the fact that benefits were not equitably distributed.

In the EIS, the Bureau looked closely at how reclamation benefits were distributed in eighteen reclamation districts. In the reclamation program, the benefits of the program are tied to the land. For

Table 5. Distribution of Farm Operations

Westlands Water District

Operation Size (Acres)	Operations		Operated Land (Acres)		
	Total	%	Total	%	Mean
1 - 160	58	19.3	7,170	1.3	123
161 - 320	13	4.4	2,980	0.5	230
321 - 640	70	23.0	42,509	7.7	607
641 - 960	27	9.0	22,140	4.0	820
961 - 1280	24	8.0	27,948	5.0	1,164
1281 - 1920	44	14.7	69,044	12.5	1,569
1921+	65	21.6	378,119	69.0	5,817
Total	301		549,917		1,500

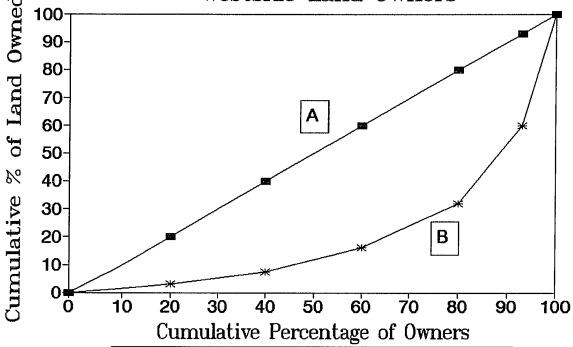
Source: U.S. Department of the Interior 1980b.

landowners, the benefit comes in the form of the irrigation subsidy while for farm operators, the benefit is the income earned (U.S. Department of the Interior, 1980a Vol. 1, 14). Economists describe the distribution of benefits in terms of income distribution. The Bureau applied two analytical tools used by economists to study the distribution of benefits; the Lorenz curve and the Gini coefficient.

The Lorenz curve is a plot of the cumulative percentage of income recipients against the cumulative percentage of income received. The diagonal line (A) in Figure 1 represents complete equality of income or distribution of the subsidy among landowners. The plotted income curve to the right of the diagonal (B) is the actual distribution of the subsidy. The distribution of income is less equal the further this curve is from the diagonal. Applied to the reclamation program, if there is an equitable distribution of benefits, which is expressed through the equal distribution of land, there will be a diagonal, or equitable, line (U.S. Department of the Interior, 1980a, Vol. 1, 18).

The Bureau also used "[a] related device to quantitatively compare different income distributions... by computing Gini coefficients. The Gini coefficient is the ratio of the area between the diagonal line of income equality and the actual income curve to the total area beneath the diagonal line of equality. Thus if everyone received the same income [or subsidy] the Gini coefficient

Figure 1. Lorenz Curve for Westside Land Owners



Source: U.S. Department of the Interior 1980a, 16.

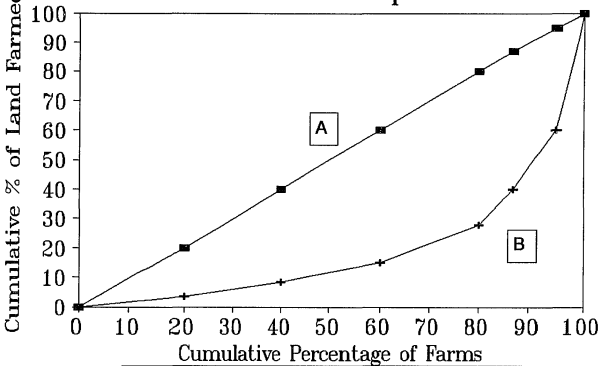
would be zero. The more unequal the distribution of income is, the higher the Gini coefficient (U.S. Department of the Interior, 1980a, Vol. 1, 18).

Figure 1 shows the Lorenz curve for landowners. The curve is quite bowed. The Lorenz curve for farm operators, Figure 2, is slightly more bowed. These curves verify the conclusions that benefits were not equitably distributed, and the inequality was higher for farm operators than for landowners.

The Bureau calculated the Gini coefficients and found that they were 0.37 for landowners and 0.60 for operators. These numbers indicate that a fairly high degree of inequality existed in the distribution of subsidy and farm income. Together these two figures reflect the fact that two percent of the landowners owned twenty-seven percent of the land, and three percent of the farm operations controlled thirty-one percent of the land.

An analysis of the 18 case study districts provides further information into the distribution of the subsidy. (See Table 6.) The Gini ratios for land ownership show that "the subsidy was highly concentrated [in] a small group of owners in a few districts (Imperial and Westlands), and widely distributed in others (Oroville-Tonasket, Black Canyon, Grand Valley, and Columbia Basin East). Of the 17 districts for which ratios were calculated, eight had a relatively wide dispersion of subsidy indicated by ratios of 0.25 or less. Two had ratios greater than .5 indicating

Figure 2. Lorenz Curve for Westside Farm Operators



Source: U.S. Department of the Interior 1980a, 17.

Table 6. Gini coefficient for 18 Reclamation Districts

District	Gini Coefficient	
	Owner	Operator
Extensive Forage Crops		
Malta	0.35	0.48
Moon Lake	0.36	0.36
Forage, Cereals & Field Crops		
Black Canyon	0.05	0.33
Farwell	0.38	0.38
Glenn-Colusa	(a)	(a)
Goshen	0.16	0.32
Grand Valley	0.06	0.38
Lower Yellowstone	0.13	0.34
Luger-Altus	0.24	0.53
Truckee-Carson	0.35	0.52
Field Crops & Vegetables		
Columbia Basin East	0.06	0.45
Elephant Butte	0.41	0.52
Imperial	0.55	0.57
Wellton-Mohawk	0.32	0.53
Westlands	0.52	0.52
Perennial Crops		
Coachella	0.38	0.65
Goleta	0.40	0.66
Oroville-Tonasket	0.00	0.00

Source: U. S. Department of the Interior 1980a, 19.

(a) Not estimated because this district uses a small percentage of Federal reclamation water.

[that] the subsidy was concentrated among a few landowners, and the remaining seven districts fell in between" U.S. Department of the Interior, 1980a, Vol. 1, 20).

The Gini ratios for farm operations indicated that in almost all the Study districts, benefits for farm operations were much more concentrated than were farm ownerships. This was probably due to the fact that there was no limit on the size of farm operations. In the Westlands Water District and the Imperial Irrigation District there was very little difference in the level of concentration between ownerships and farm operations (U.S. Department of the Interior, 1980a, Vol. 1, 20). According to the Bureau, this could be explained by the fact that the provision had never been enforced in the Imperial District and a lot of excess land under recordable contract in the Westlands District had not yet been sold. (U.S. Department of the Interior, 1980a, Vol. 1, 20).

Why Large Farms Might Exist

There are several reasons why there might be farms larger than the acreage limit of 160 acres. Large farms can occur when the ownership parcel includes excess land, when the owner leases land to supplement owned land, or when a group of owners pool their land to form one operation.

According to information in the EIS, in 1978 there was a sizeable amount of excess land receiving Federal reclamation water, almost 1.1 million acres (U.S. Department

of the Interior, 1980c, 3-12). This land was concentrated in a few districts in California. Nearly 90 percent of the excess land was in the California districts of the WWD, North Kern Irrigation District, Tulare Lake Basin Irrigation District, and the Imperial Irrigation District (U.S. Department of the Interior, 1980c, 3-13). In the WWD, 2,183 landowners received water on 230,383 excess acres for an average of 512 acres. Almost 90 percent of the districts had little or no excess land and 62 percent had none (U.S. Department of the Interior, 1980a, 6).

Farms exceeding the acreage limit also occur when the landowner supplements owned acreage with land leased from other landowners. It is clear that this practice has been used. For example, data from the 1972 Comptroller General report mentioned earlier showed that large operators in the Central Valley Project leased land. As evident in Table 7, in some cases the amount of leased land was substantial and it made a large contribution to the recipient's owned land. This was true whether one looked at the single largest farm operation or an aggregate of the ten largest farms.

Information in the EIS also supported the premise that landowners supplemented their owned acreage with leased land. According to the Land Tenure Survey, 37 percent of the land in farms westwide was leased (U.S. Department of the Interior, 1980c, 3-13). Over thirty percent of all operations had leased some land (U.S. Department of the Interior, 1980c, 3-13). Leasing was practiced heavily in

Table 7. Land Leased in the Central Valley Project

District	Largest farm Operator in District		Ten largest farm Operators in district	
	Total	Leased	Total	Leased
1	17,338	15,610	31,794	(a)
2	2,820	715	16,505	10,212
3	2,471	693	10,437	5,308
4	40,404	16,968	127,162	53,590
5	4,359	550	18,439	3,662
6	1,774	1,470	11,467	8,044
7	2,479	1,274	14,721	4,596

Source: U.S. General Accounting Office 1972.

(a) Not available.

the WWD. In that district, eighty-two percent of the farm operators leased land and eighty-two percent of the land in farms was leased.

A third reason why there may be farms larger than the acreage limit is that individuals have combined their 160-acre parcels to form one farm. Various combinations have been allowed almost since the beginning of the program. For example, under a Secretary's ruling in 1904, a landowner could transfer land in excess of 160 acres to his wife or children, which would enable them to receive water for 320 acres. And in 1945, the Secretary ruled that a husband and wife could receive project water for use on 320 acres.

Information on multiple-ownership farms was included in the EIS. From the data it is clear that individuals have entered into various types of business organizations to operate their farms. The most common organizational form was an entity involving a husband and wife. (See Table 8.) Over fifty percent of all farms were in this category (U.S. Department of the Interior, 1980c, 3-15). After the husband/wife model, entities made up of individuals and then various family members were the most common. Westwide, the corporation of more than ten unrelated individuals was used the least (U.S. Department of the Interior, 1980c, 3-15).

Viability of 160 Acres

The fact that there were large farms in the reclamation program raised the issue of whether 160 acres

Table 8. Distribution of Farm Organizations by Type of Business Organization

Type of Organization	Number of Farms	Percentage (%)
Individual	13,686	28.7
Joint with Spouse	24,143	50.7
Family Members	6,277	13.2
Incorporated > 10	516	1.0
Incorporated ≤ 10	2,271	4.8
Other	744	1.6
Total	47,637	100.0

Source: U.S. Department of the Interior 1980c, 3-15.

could provide a viable income. Throughout the course of the legislative debate views were expressed on both sides of this issue. Apart from a great deal of anecdotal testimony, reports by the United States Department of Agriculture (USDA), the Bank of America (BofA), and the Bureau of Reclamation framed the debate.

In 1976, the USDA examined the adequacy of the 160-acre limitation as part of its economic impact analysis (EIA) of the Department of the Interior's proposed rules (U.S. Department of Agriculture 1976). The USDA wanted to determine whether 160 acres was incompatible with modern, capital-intensive agriculture and whether a farm of that size could sustain a small-scale farm family. The acreage limitation provision was tested in four reclamation districts which were selected because, "they are located throughout the Western States, they represent a wide variety of commodities and farming practices, and are highly dependent on Bureau of Reclamation projects," (U.S. Department of Agriculture 1976, 11). The four districts were the WWD and the Imperial Irrigation District in California, the North Platte Project in Nebraska and Wyoming, and the Columbia Basin Project in Washington.

The study estimated the returns to management and operator labor for farms of 160, 320, and 640 acres. This figure was derived by "subtracting farm production expenses and the return to owner's equity from gross farm income. Farm expenses were based on a farm budget which assumed that

a crop rotation program was used and the required input of land, labor, buildings, machinery, and management for a typical farm in each region was made" (U.S.D.A. 1976). Estimated returns to management and family labor were based on "recent price-cost relationships, modern production practices, and an assumed average to better-than-average management ability. The return to management and operator labor was compared to the median family income for the region within which the district was located" (U.S.D.A. 1976). (In the study, the median family income figure served as a proxy for a reasonable standard of living. These figures were not included in the study.) The results of the comparison determined which farm sizes could be viewed as economically viable.

The study concluded that the viability of a 160-acre farm was mixed. In the WWD and the Columbia Basin Project, 160 acres produced an income "above the regional median family income." In the Imperial Irrigation District and the North Platte Project it did not. (See Tables 9, 10, 11, and 12.) These findings were based on several assumptions. First, it was assumed that "in the WWD the land was bought as excess land at a pre-project land price of $750 per acre, compared to the then-current market price for nonexcess land of $1,500 per acre. This assumption provided an annual cost advantage of about $9,900 for each 160-acre unit of farmland in Westlands over other regions." Second, in the Imperial Irrigation district "a pre-project land value had not been

Table 9. Estimated Returns to Management and Operator Labor, Westlands Water District

Returns to	Farm Size (Acres)		
	160	320	640
Management and Operator Labor	$25,000*	$54,000*	$81,000*
___ with 15% price decrease	$10,000	$23,000	$25,000
___ with 15% price increase	$40,000	$84,000	$135,000
___ at current land price	$15,000	$34,000	$41,000

Source: U.S. Department of Agriculture 1976.

* These figures are greater than the median family income figure for the region.

Table 10. Estimated Returns to Management and Operator Labor, Imperial Irrigation District

Returns to	Farm Size (Acres)		
	160	320	640
Management and Operator Labor	$6,000	$21,000*	$61,000*
___ with 15% price decrease	-($8,000)	-($7,000)	-($6,000)
___ with 15% price increase	$20,000	$49,000	$128,000

Source: U.S. Department of Agriculture 1976.

* These figures are greater than the median family income figure for the region.

Table 11. Estimated Returns to Management and Operator Labor, North Platte Project

Returns to Management and Operator Labor	Farm Size (Acres)		
	160	320	640
Rotation A			
At Current price	$7,000	$14,000*	$23,000*
___ with 15% price decrease	-($1,000)	-($3,000)	-($11,000)
___ with 15% price increase	$16,000	$31,000	$57,000
Rotation B			
At Current price	$8,000	$15,000*	$25,000*
___ with 15% price decrease	$0	-($2,000)	-($10,000)
___ with 15% price increase	$17,000	$33,000	$61,000

Source: U.S. Department of Agriculture 1976.

* These figures are greater than the median family income figure for the region.

Table 12. Estimated Returns to Management and Operator Labor, Columbia Basin Project

Returns to Management and Operator Labor	Farm Size (Acres)		
	160	320	640
At Pre-project Land Price	$35,000*	$85,000*	$189,000*
At current Land Price	$19,000	$53,000	$125,000
With 25% price increase	$55,000	$145,000	$309,000
With 25% price decrease	$5,000	$25,000	$69,000

Source: U.S. Department of Agriculture 1976.

* These figures are greater than the median family income figure for the region.

established because no excess land had ever been sold. Therefore, the study used the then-current average cash rent of $135 per acre." And third, the budgets were designed so that smaller farms in the IID would not depend on high-value, high-risk crops such as cantaloupes and lettuce.

The study noted that the viability of small farms was "very sensitive to changes in commodity prices." For example, because of price instability, estimated returns on the 160-acre North Platte farm using one set of crops varied from $37,080 in 1974 to a loss of $3,987 in 1976. And with a 25 percent reduction in commodity prices, "only the largest farms in the Columbia Basin Project would yield a positive return to management and operator labor."

The study pointed out that while all farm sizes, except the 160-acre farms in the Imperial Irrigation District and the North Platte Project, were economically viable, the largest farms were more efficient. For example, data on cotton farms in the WWD and in the IID showed that in both districts the cost per pound was the lowest for the 640-acre farms. (See Table 13.) Between the two districts, the WWD had a cost advantage for all sizes of farms. "Much of this advantage was due to relatively low pre-project land prices in Westlands, while current cash rents were used in Imperial." Cost data for the Columbia Basin Project showed that there was "considerable efficiency between a 160-acre farm and a 320-acre farm. But there was not as much of an

Table 13. Cost of Producing Cotton by Farm Size

(cents/pound)

Farm Size	WWD	IID
160 acres	45.3	60.0
320 acres	41.7	54.1
640 acres	39.8	51.9

Source: U.S. Department of Agriculture 1976.

advantage between the 320-acre farm and a 640-acre farm." At the time of the study a limited amount of information on efficiency was available for the North Platte Project. But a 1978 report showed that the average cost of sugar beets, dry beans, and feed corn was 15-20 percent higher on a 160-acre farm than on a 480-acre farm.

The Bank of America study, "The Economics of Small Acreage Farming Units in the Westlands Water District" (Montague 1978b), analyzed the viability of different farm sizes in the WWD. Five model farms of 160, 320, 640, 1280, and 2560 acres were examined. All the farms consisted of a mixture of various crops, but each combination included at least cotton, tomatoes, and barley.

The Bank of America study concluded that a farm in the WWD had to be at least 640 acres to be economically viable. But even at 640 acres, a farm would be viable only if a fairly large amount of land was planted with a high-income crop. According to the report, the 320-acre farm was very marginal, but under ideal conditions small farms between 320 and 640 acres could co-exist with the larger units. The 160-acre farm was not viable.

The Bureau also looked at the viability issue as part of the EIS (U.S. Department of the Interior 1980c, II-ii). They examined eighteen districts which were selected to represent the range in farm types and sizes in the program. The districts were divided into four classes which were based on the type of crops grown and their value. Crop

enterprise and farm budgets were prepared to represent 1978 price, yield, and input relationships in these districts. Returns to the farm family were estimated for four farm sizes - 160 acres, 320 acres, 640 acres, and 1,280 acres in each of the 15 districts where field crops dominated. Returns for three farm sizes - 40 acres, 80 acres, and 160 acres - were estimated for the three projects where fruit crops dominated. The income figures shown in Table 14 are "the net cash flow to the farm family for their labor, management, and equity after paying all production expenses and annual principle and interest due on their farm loan." (The budgets assumed the average equity position of existing farms was the same as reported by U.S. Department of Agriculture for the state.) "The range in percentage of equity for existing farmers in the budgets was 74 to 94 percent."

The Bureau compared the income for each farm size with the national average net farm income of $10,037. (According to the Natural Resources Economic Division, USDA, the national average income per farm operator in 1978 was $22,866. Of this amount, $12,829 was earned off-farm, leaving $10,037 as the national average net on-farm income.) Using this comparison, they found that the 160-acre farms in all but three districts were "capable of producing above the national average net farm income in 1978." The exceptions were Black Canyon ($9,400), Grand Valley ($7,800), and Moon Lake ($6,500). Forty-acre farms produced well above the

Table 14. Total return to family labor, management and equity, Westwide Case Study Districts, 1978

District	Total Acreage of Farm			
	160	320	640	1,280
Extensive Forage Crops				
Malta	12,600	35,800	51,300	82,300
Moon Lake	6,500	15,100	26,400	38,300
Forage, Cereals, and Field Crops				
Truckee-Carson	12,900	41,000	69,600	109,100
Grand Valley	7,800	12,900	17,000	40,000
Farwell	14,000	33,200	44,000	64,900
Goshen	17,900	36,100	46,500	75,000
Lugert-Altus	17,700	38,000	63,200	101,000
Black Canyon	9,400	28,000	27,000	84,800
Lower Yellowstone	18,700	41,800	66,900	132,200
Glenn-Colusa	22,900	36,000	48,500	24,100
Field Crops and Vegetables				
Columbia Basin East District	26,400	53,200	78,600	150,300
Westlands without	13,200	20,500	38,200	131,000
Westlands with Well	10,600	15,600	33,100	125,800
Elephant Butte	34,900	69,300	101,400	174,200
Imperial	18,900	34,800	50,700	114,500
Wellton-Mohawk	26,600	53,500	48,600	53,300
Perennial Crops	40	80	160	acres
Oroville-Tonasket	55,600	99,100	178,400	
Coachella	26,500	42,100	58,400	
Goleta	73,800	142,900	277,300	

Source: U.S. Department of the Interior 1980c, II-ii.
Note: A 2,400-acre farm was also budgeted for the Westlands District. Returns were $240,800 without a well and $221,100 with a well.

national average net farm income in the perennial crop districts. Farms of 320 acres or larger in all the districts were relatively prosperous compared to the national average.

In summary, the evidence of the viability of 160-acre farms is inconclusive. As the San Luis Task Force wrote in its report, "...the question of the viability of the 160-acre farm has still not been resolved,...." (U.S. Department of Interior 1978, 196). The Task Force concluded that a 160-acre farm could provide a viable income given the right circumstances. But minor changes in cost or price could significantly affect the farm's success.

Regardless of the acreage limitation figure, variations in the factors of production can produce different incomes in different reclamation districts. One important factor is the length of the growing season, which is measured as the number of frost-free days in a year. The length of the growing season affects not only productivity, but also what crops can be grown and how many crops can be planted within one growing season. Table 15 shows information about the growing season in the Bureau's eighteen districts (U.S. Department of the Interior 1980c, II-i). The districts were divided into four productivity classes. It is clear that the length of the season helps determine various aspects of production.

The Malta District in Montana and Moon Lake District in Utah have very short growing seasons, under 130 days a

Table 15. Characteristics of the 18 Study Districts

District	Crop Value per Acre (dollars)	Major Crops	%	Growing Season (days)
Extensive Forage Crops				
Malta	65	Hay Pasture	42 19	106
Moon Lake	189	Pasture Alfalfa	77 11	127
Forage, Cereals, and Field Crops				
Truckee-Carson	205	Alfalfa Pasture	62 33	130
Grand Valley Gravity	239	Forages Cereals	52 42	153
Farwell	246	Corn	87	149
Goshen	256	Forages Sugar Beets	35 23	131
Lugert-Altus	305	Cotton Cereals	57 37	220
Black Canyon	310	Forages Cereals	50 24	146
Lower Yellowstone	312	Forages Sugar Beets Cereals	34 32 27	130
Glenn-Colusa	362	Rice Cereals	50 21	260
Field Crops and Vegetables				
Columbia Basin East District	422	Forages Cereals Vegetables	38 30 10	140
Westlands	627	Cotton Cereals Vegetables	40 22 10	272
Elephant Butte	773	Cotton	37	194
Imperial	837	Alfalfa Cotton Vegetables	39 30 15	348

Table Continues on Next Page

Table 15. Characteristics of the 18 Study Districts

(Continued from Previous Page)

District	Crop Value per Acre (dollars)	Major Crops	%	Growing Season (days)
Field Crops and Vegetables				
Wellton-Mohawk	1,076	Alfalfa Cotton	30 27	348
Perennial Crops				
Oroville-Tonasket	2,165	Fruit	94	173
Coachella	2,252	Fruit Vegetables	48 21	310
Goleta	5,997	Fruit	88	330

Source: U.S. Department of the Interior 1980c, II-i.

year. The land in these districts was devoted to either pasture or low-yield hay crops. "Typically, the irrigated land produced winter feed to help support cattle operations that also used a large amount of rangeland pasture. The crop value per acre was relatively low, under $190 per acre."

The Truckee-Carson District in Nevada also produces predominantly forage crops, but "the longer growing season (130 days) and higher hay yields boosted its crop value ($205 per acre) closer to the next higher productivity class which include districts that produced forage, cereal, and field crops." This class includes Farwell, Lower Yellowstone, Goshen, Lugert-Altus, Black Canyon, Grand Valley, and Glenn-Colusa. In general, these districts produced a mixture of relatively low value crops ranging from $240 to $315 gross value per acre, with 130- to 260-day growing seasons. Glenn-Colusa, with a crop value of $364 per acre, "was borderline as to whether it belonged in this group or the next higher productivity group. However, the higher crop value of Glenn-Colusa was from rice, which is within the cereal crop classification. Only 1 percent of the harvested land of this district was in vegetable crops so it was not a good fit with the next productivity group from the standpoint of crops produced" (U.S. DOI 1980c).

The field crops and vegetables group includes East Columbia Basin, Westlands, Wellton-Mohawk, Elephant Butte, and Imperial Districts. Here, the growing season was between 140 and 350 days. The latter four districts make a

fairly well-defined class with their relatively high crop value of $600 to $1,100 per acre, "long growing season, high proportion of land devoted to cotton production, and significant acreages of vegetables." Columbia Basin was in this class because it had about 10 percent of its harvested land in vegetables. But it had a much shorter growing season than the other four districts and, therefore, a lower average crop value per acre.

The last group of districts, Oroville-Tonasket, Coachella, and Goleta have extremely high gross crop values ($2,200 to $6,000 per acre) derived predominantly from fruit production. Oroville-Tonasket specialized in apples, Coachella in citrus and grapes, and Goleta in avocados and citrus.

In summary, the lands that are included in the reclamation program are quite diverse. The length of the growing season varies across irrigation districts from a low of under 130 days up to over 350 days and crop value and the growing season length vary directly so that the districts with a short growing season tend to have a low crop value and vice cersa. This factor makes it difficult to specify an absolute acreage limit that is equitable between all reclamation districts.

The Evidence of Beneficiaries Issues

Another assumption of the reclamation framers was that the program would provide the opportunity for prospective

family farmers to settle on reclamation land and engage in agricultural production. In 1977, Gilbert G. Stamm, Commissioner of the Bureau said, "The [acreage] limitation was designed to...promote the family farm as a desirable type of rural life;..." (U.S. Congress 1976a, 2). And in 1978, a House of Representatives report stated:

> From the legislative history it seems clear that the Congress also wanted to [b]reak up large, private landholdings in order to provide opportunity for a maximum number of settlers on the land; and to promote homebuilding; [s]pread the benefits of the irrigation program to the maximum number of people; and promote the family-size farm as a desirable form of rural life (U.S. Congress 1978, 2).

The San Luis Task Force also concluded that, "The legislative history of the [1902 Act] indicates that Congress wanted to provide opportunity for a maximum number of settlers on the land and to promote homebuilding" (U.S. Department of the Interior 1978, 193).

Most Excess Lands Sales in WWD

In order to determine whether this goal had been achieved, it is best to begin by examining the excess land sales. It is through these sales that opportunities to secure reclamation land occur. All landowners who own more than 160 acres must agree to sell that excess land within ten years as a condition for receiving reclamation water. How the land is sold, what the sales agreement contains, and any conditions put on potential recipients all determine to what extent the opportunity to benefit from the reclamation

program is made available to new recipients.

The preponderance of excess land is located in the Bureau's Mid-Pacific Region. Eighty percent of all excess land is in this one region. The Region with the next highest percentage of excess land is the Southwest Region, which has only 6.5 percent of all excess land. (See Table 16.) According to the Bureau's data, only one district has more than 100,000 acres of excess land and this district is the WWD. In 1975, at congressional hearings, Commissioner Gilbert Stamm stated that approximately 136,000 acres of excess land had been sold (U.S. Congress, Joint 1975, 107). In conclusion, the Westlands Water District has by far the most excess land and has had the most excess land sales. Therefore, any discussion about excess land sales can focus on the WWD.

Who bought excess land in the WWD?

One issue is who were the beneficiaries of the excess land sales, i.e. who was buying the land. Were the individuals investing in land or were they interested in owning and operating their own farm?

At the 1975 congressional hearings, "Will the Family Farm Survive in America?", the National Land for People (NLP) organization presented their analysis of 35 excess land sales in the WWD (U.S. Congress, Joint 1975, 1631-1684). The sales represented approximately 55,000 acres and they occurred between 1970 and 1975. The major sellers were

Table 16. Excess Land by Region

Region	Total Irrigated Acres	%	Total Excess Acres	%
Pacific Northwest	1,533,958	22	38,003	3.5
Mid-Pacific	2,813,150	41	858,435	80.0
Lower Colorado	611,701	9	34,007	3.0
Upper Colorado	126,010	2	3,618	0.4
Southwest	684,846	10	71,170	6.5
Upper Missouri	577,389	8	39,302	3.6
Lower Missouri	577,518	8	30,301	3.0
Total	6,950,572		1,074,836	

Source: U.S. Congress, House 1976, 13.

Giffen and Company (approximately 26,863 acres sold) and Anderson Clayton and Company (approximately 14,674 acres sold).

The research conducted by NLP provided information about the buyers of excess land. In almost all the sales, the land was sold to individuals, not to corporations. In only four sales were corporations involved. Usually they were part of a group of buyers and they purchased a minimal amount of land. Two of the corporations were farm companies. Husbands and wives often purchased a parcel together. In at least twenty-two sales, the buyers consisted of members of one to three different families. While information about the buyers' occupation was usually not included, in three sales, the buyers included real estate agents, construction supervisors, an account, a lawyer, a waitress, and the president of a chemical company.

The specific residence of the buyer was usually not listed, except in a few instances. In these cases, the residences included Phoenix and Scottsdale, Arizona; Corvallis, Oregon; New Orleans, Louisiana; and other cities in California. The charts usually listed a city or town in Fresno County (where the WWD is located) as the mailing address for the grant deed. Some of the town names were Fresno, Five Points, Mendota, Firebaugh, Huron, Madera, and Westley.

At hearings before the House Interior Committee, Ralph Brody, Manager of the Westlands Water District presented

information about excess land sales made in the district (U.S. Congress, House 1976). The sales covered 109,000 acres of excess land which had been sold into nonexcess status as of December 31, 1975. According to Brody, less than five percent of the buyers were "professional people" (such as doctors, lawyers, dentists, school teachers, or accountants) who might be investing for tax shelters. In addition, Brody emphasized that:

> With very few exceptions, the buyers, excluding housewives, minors, and retirees, have as their principal business farming or a job directly related to farming. Not uncommon are family-run operations in which father, mother, children and their spouses own land and are involved in various capacities in the farming operation (U.S. Congress, House 1976, 171).

Brody estimated that most of the land was bought by "buyers [who are] members of a group of people who joined together to purchase lands located in the same general area with a view toward their lands being farmed together, at least during the initial years of their ownership" (U.S. Congress, House 1976, 171). According to Brody, there were approximately 125 such entities. The number of buyers who were unrelated by family to each other and who leased to an operator in which they had no interest was relatively small. Only about 10 percent (representing approximately 7,400 acres) of the groups of buyers, or about 35 of the 928 buyers fell into this category (U.S. Congress, House 1976, 172). Most of the buyer groups represented members of families. Brody estimated that about 38 percent of the 125 groups of buyers were composed solely of family members with

at least one member of each family farming the land (U.S. Congress, House 1976, 172). Another 31 percent (representing approximately 48,500 acres) of the buyer groups were composed of family members which had joined together, sometimes with employees and others, to buy lands and were leasing their land to one or more members of the group which purchased the land (U.S. Congress, House 1976, 172). And, another 21 percent (representing approximately 23,000 acres) of the buyer groups were family groups which had decided, to lease their lands to others (U.S. Congress, House 1976, 172).

In terms of residency, Brody reported that about 128 families, consisting of about 353 buyers of recordable contract land could be considered resident families, living on their land or within 50 miles (U.S. Congress, House 1976, 174).

At a hearing, the Bureau said data concerning sales of nonexcess land made for speculative purposes are not available:

> We are not required to and do not monitor sales of nonexcess land, therefore, we are unable to provide such data. The opportunity for speculation in the purchase and resale of excess land obviously exists and there may be instances where it has occurred, however, we are unable to provide any factual data of such instances (U.S. Congress, House 1976, 23).

The Bureau examined excess land buyers in the WWD as part of the EIS. From 1968 to 1978, over 198,000 acres of excess land had been sold. In this 10-year period, the number of landowners had increased by approximately 2,000 to

a total of 3,898 owners. But the number of new farms had increased by only 136, and of these, only 76 included land that had been bought as excess. According to the Bureau, this indicated that most purchasers of excess land were not farming the land themselves, but leasing it to large operators. The Bureau concluded that:

> ...as a general rule that District land becoming available for purchase as a result of the acreage limitation provision is being bought for investment rather than farming and homemaking purposes. [C]ontributing to this course of events is the fact that, at the present time, there is no limit on the amount of land that an excess owner can sell in a block, as long as the purchasers of the land hold no more than 160 acres of the total in individual ownership (U.S. Department of the Interior 1980c, 3-72).

According to the Bureau, the information in Table 17 supported their conclusion (U.S. Department of the Interior 1980c, 3-73). Farms of 961 acres or more were more numerous than those in the four smallest categories (1 to 960 acres). The 71 largest operations (those greater than 1,921 acres) controlled almost 80 percent of the land. Perhaps even more significant, the data showed that "the farms that consisted, in large part, of land that had been sold as excess had a larger mean size than all farms in the District and that as an absolute minimum, 161,000 acres of the land which had been sold as excess was farmed in operations that exceeded 1,920 acres." (Of the 218,000 acres in these farms, 198,000 acres were land that had been bought as excess. Therefore, at least 161,000 acres in the largest size class (181,444 minus 20,000) must have been land bought from excess

Table 17 Farm Operations and Excess Lands

Westlands Water District

Size Class	All Farms				Farms with Excess Land(b)			
Acres	#	Irrigated Acreage			#	Irrigated Acreage		
		Total	%	Mean		Total	%	Mean
1 - 160	31	3,258	0.7	105	3	819	(a)	106
161 - 320	19	4,997	1.0	263	4	1,242	0.5	311
321 - 640	30	16,262	3.3	542	7	3,616	2.0	517
641 - 960	27	21,689	4.5	803	13	10,526	5.0	810
961 - 1,280	15	17,522	3.5	1,168	4	4,629	2.0	1,157
1,281 - 1,920	24	38,261	8.0	1,594	11	16,507	7.5	1,501
1,921+	71	386,031	79.0	5,437	34	181,444	83.0	5,337
Total	217	488,020		2,249	76	218,283		2,872

(a) less than 0.1 percent
(b) farms which include land that has been bought from excess

Source: U.S. Department of the Interior 1980c, 3-73.

status.) In summary, the Bureau concluded that "the large farm pattern which existed prior to the delivery of Federal water still prevailed," despite the fact that almost 200,000 acres had been sold as excess to roughly 2,000 people for the purported purpose of providing farming and homemaking opportunities.

During the hearings, some were concerned about whether the program was attractive to speculators because of the opportunity for windfall profits. The scenario was that someone would buy excess land at a controlled price (a price which did not include project benefits) and then sell it at the higher market price. In testimony, Solicitor Krulitz pointed out that the Bureau could not control the price of nonexcess land:

> [Therefore] the opportunity for speculation is obvious, and claims of speculation have been made. Under the current policy, a purchaser of formerly excess lands can sell his or her land five minutes after purchase, at a price which fully reflects the availability of heavily subsidized water (U.S. Congress, House 1977, 22).

And Representative Krebs added:

> There is nothing...to prevent the buyer of such excess reclamation land [in the WWD] from turning around within minutes or hours after he purchases that land for $700 an acre, turn around and reselling that land for twice that amount (U.S. Congress, House 1977, 14).

The extent to which land speculation, involving resales of formerly excess land had occurred, was addressed in testimony by Leo Krulitz, Solicitor, Department of the Interior, at hearings conducted by the House Committee on Interior and Insular Affairs in 1977 (U.S. Congress, House

1977). He indicated that the Department of the Interior had inspected records involving land sales in the WWD. The Bureau wanted to identify sales of formerly excess land that represented "speculative" opportunities. The Bureau identified thirty sales of 14,500 acres of land that were purchased for speculation. In his testimony, Krulitz said the buyers paid between $450 and $700 per acre for the nonexcess land. During that period, the prevailing market price for nonexcess land ranged from $900 to $1,700 per acre. Based upon these figures, he estimated that "speculative profits of up to $17 million could have been captured on these transactions alone (U.S. Congress, House 1977, 40-41). There was not a lot of evidence, but there probably was opportunity.

How was excess land sold?

The way excess land was sold would affect the extent to which there was real opportunity to secure this land. For example, did the seller pre-select the buyers, or was the availability of the land widely advertized?

According to Ralph Brody, Manager, WWD, with few exceptions, the buyers of excess land had no prior business or family relationship with the seller (U.S. Congress, House 1976a, 173). The exceptions were when parents passed title to the land to a child through inheritance or "in anticipation thereof" and "in the few instances" of sales to employees or former employees of the excess landowners.

Brody commented that of the 928 buyers of excess land, approximately sixty-five were related by family to the sellers, twenty-four of whom acquired title to the land by inheritance or "in anticipation thereof" (U.S. Congress, House 1976a, 173-174). Only about twenty buyers were employees or former employees of the seller. One of the larger excess land sellers was Russell Giffen, who owned Giffen, Inc. According to Brody, of 43,210 acres sold by Giffen, approximately 1,800 acres were sold to members of his family and about 4,100 acres were sold to nine former employees and their families (U.S. Congress, House 1976a, 176).

From the testimony presented during the congressional hearings, it appears that often employees and family members were offered the first opportunity to purchase excess land. For example, some sellers first offered the land to their employees and/or those who were leasing the land. Evidently, Giffen, Inc. land was sold this way. According to Giffen, Inc. employee Nicholas Agundez:

> Until 1974, I was employed on the office staff of Giffen, Inc. I was employed by Mr. Giffen for 17 years. At the time their farming properties were placed on the market, I was told, along with all other employees, that we could buy land if we so desired (U.S. Congress, Joint 1975, 310).

Several land owners who had not yet commenced excess land sales indicated that they would offer it first to their employees and leassees. One Westlands farmer, John C. Harris stated:

> We have placed all of our excess land under

> recordable contract...We are now trying to plan how to dispose of everything. We have a group of employees which we feel are in large part the key to our having a successful operation. Several of these individuals have expressed an interest in buying parcels as they come up for sale. These are eligible buyers with strong farm backgrounds who would comply with the stringent requirements of the Bureau of Reclamation. It seems logical to us that they be given first consideration when we consider the sale of excess lands (U.S. Congress, Joint 1975, 317).

And in rejecting an offer by the National Land for People organization to purchase excess land, the Southern Pacific Land Company said:

> It is premature for me to make commitments on the property at this time; however, the current direction is to allow the people who have farmed the property in the past and are qualified purchasers, the opportunity to purchase the property should we elect to sell, since they have spent considerable time and money improving the quality of the soil (U.S. Congress, Joint 1975, 169).

In testimony, Southern Pacific continued:

> To the extent that our present lessees are not eligible purchasers under the 160-acre limitation, it is our policy that, other things being equal, the lands will be sold in 160-acre parcels to persons who intend to farm the land themselves. We intend to sell direct to the purchaser and not use brokers. Southern Pacific has declined offers from promoters of syndications and tax shelter deals. We want to sell to farmers, not to people seeking windfall profits through a fast turnover of land which we must sell by law at prices substantially under present open market values (U.S. Congress, Joint 1975, 634).

Jack Stone, President, Board of Directors, WWD testified that:

> As for the employees and managers, I see no reason not to reward them as long as they are eligible to buy land under the law; and they are (U.S. Congress, House 1976, 155).

One real estate firm that had a lot of experience with excess land sales in the WWD explained how such land is sold. In a letter to the Senate Committee on Small Business, R.B. Hollingsworth, Farm Lands Department, Pearson Realty related:

> ...I do not know of any cases of any individual buyers who wanted to purchase and farm 160 acre parcels who were prevented, or are being prevented, from doing so by excess landowners who wanted to sell their land only in large parcels to selected buyers...On the other hand, and for the following reasons, I do not know of any case where a large operating farm, in Westlands or anywhere else, was split up by offering it on the market in small parcels on a first come, first served basis. One reason is that unless the owner insists that buyers are found for all of the parcels before any can be sold, the resulting checkerboarding could make the farming of the unsold parcels quite expensive and uneconomic. Also, unless the relative desirability of the different parcels is carefully equalized out in the price, there is the danger of selling off the good land and being left stuck with the poor land. In the case of the Westlands land there was also the complication, for the buyer who wanted to farm, that 640 acres is considered the minimum sized economic unit for the crops grown. This meant that unless such a buyer had a family of four and $300,000 or $400,000 in cash, plus maximum financing he would have to have the help of an investor or other non-farming partner who would be willing to go in with him on the purchase and be willing to lease to, or joint venture with, him. Normally of course it is not possible for a farmer to work out any such solution to his financing problems because at normal farm land prices the returns are too low (around 4% in the past) to interest an investor. Because the land was being offered at roughly one half of its fair value, it was possible to make use of this type of financing in excess acreage sales and most of the non-farmer buyers that I know of who have bought such land have been brought in by farmers to put together an economic sized farming unit. As a result of the foregoing problems and considerations we have made it a practice when splitting up a large farm property to package the 160 acre parcels into economic sized units, in accordance with the irrigation systems and natural boundaries, and to

> relative desirability of the different parcels by including poor land with good, and these parcels were offered subject to the contingency that we had to have buyers for all of the parcels before we could sell any of the parcels. In addition we reserved the right to substitute the buyer of a larger parcel for the buyer of a smaller parcel if necessary to complete a package sale of all of the land. These practices were in all cases that I know of dictated entirely by the logistics of selling and never at the dictates of the seller (U.S. Congress, Joint 1975, 262-263).

How expensive was excess land?

An important factor that influences whether an individual can purchase excess land is the price of the land. In excess land sales, the price is controlled to the extent that the benefit received from the provision of Federal reclamation water cannot be capitalized into the value of the land. Before the Bureau approves an excess land sale, it must ensure that the sales price is acceptable with reclamation law.

In 1976, the General Accounting Office (GAO) examined how the Bureau appraised excess land before it was sold (U.S. General Accounting Office 1976). In their report, the GAO concluded that "improvements are needed in Bureau of Reclamation appraisal techniques to insure that large landowners in the Westlands Water District do not sell their excess lands at values which include enhancement resulting from the Federal irrigation project. [They found that] the Bureau does not adequately support its basis or give consideration to all appropriate factors, in establishing land values without project benefits; consider

the usefulness to the purchaser of farm facilities and equipment in estimating their value, [or] adequately document the basis for its independent evaluations (U.S. General Accounting Office 1976, 1).

The GAO determined how reclamation lands were appraised by questioning the appraiser for the Mid-Pacific Region. According to the Bureau appraiser, the basis for the Bureau selling price for lands in the WWD was data from actual sales in the District. But the sales they examined:

> were made after the San Luis Unit, which supplies water to Westlands had been authorized in 1960, and after the Westlands Water District had signed its water service contract with the Bureau in 1963. Six of the eight sales also involved nonexcess land and, therefore, the sale price did not have to be approved by the Bureau and did not have to exclude project enhancement. [Therefore], the sales may not have been representative of excess land sales without reference to the proposed project (U.S. General Accounting Office 1976, 9-10).

The GAO concluded that "the use of historical sales of land within the Westlands Water District is not a sound method for determining the value of excess land without reference to the project, if such sales occurred after 1960 - - the date the San Luis Unit was authorized (U.S. General Accounting Office 1976, 10).

The GAO also criticized the Bureau for not giving consideration to the evidence that without the Federal project there would have been a decreasing ground water supply, thus further reducing the value of the land without project enhancement. The appraiser assumed that without the Federal project there would have been sufficient ground

water supplies "economically obtainable" to sustain the then-current farm production (U.S. General Accounting Office 1976, 11). The GAO noted that information presented to Congress applicable to the San Luis Unit of the Central Valley Project stated that there would have been a decreasing ground water supply if the Federal project had not been built. By not considering the decreasing water supply, "the appraiser did not properly eliminate an important factor from the value of the land resulting from project enhancement" (U.S. General Accounting Office 1976, 11).

The GAO also noted that often large quantities of facilities and equipment were sold with the excess land as a package deal (U.S. General Accounting Office 1976, 14). This could include building improvements, various pieces of irrigation systems, different forms of land leveling and preparation, and all types of farm machinery and equipment. The adequacy of the Bureau's appraisal techniques for assessing the value of these items was as important as how the land was assessed. Without a careful evaluation, the Bureau would have no assurance that a low selling price assigned by the seller to the land to comply with the legal requirement that it not include enhancement resulting from the Federal irrigation project, was compensated for by the seller assigning a higher price than was justifiable to the other items in the total sale price.

According to the report, the Bureau did not have clear

guidelines for assessing the value of facilities and equipment. They did not try to determine the usefulness of the items to the buyer in estimating their value. The Bureau assumed that the equipment would be just as valuable to the buyer as it had been to the seller, without regard for the type of farming practiced by the buyer (U.S. General Accounting Office 1976, 14).

The GAO also found that the Bureau did not "adequately document the basis for values it assigns to the various components making up the facilities, equipment, and improvements included with sales of excess lands" (U.S. General Accounting Office 1976, 16), The sellers were not required to submit supporting data for the values estimated by the seller.

Would a residency requirement make a difference?

Critics of the way the Bureau has implemented the acreage limitation have maintained that a residency requirement would discourage land speculators and investors. This would ensure the land was available for family farmers who would settle on the land and farm it. Section 5 of the Reclamation Act of 1902, as amended, specified that no landowner would be entitled to receive Bureau water unless "he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land." The term "in the neighborhood" was interpreted to mean within 50 miles based on a Department of the Interior

decision in 1909. In 1926, the Department decided that residency was no longer required because the Congress did not specifically restate the requirement in passing the Omnibus Adjustment Act of 1926. In 1971, a suit was filed to compel the Secretary of the Interior to enforce the residency requirement within the Imperial Irrigation District of California. The Court upheld the residency requirement in Yellen v. Hickel. The decision was appealed to the Court of Appeals, Ninth Circuit.

In view of the fact that the Bureau did not interpret reclamation law as including a residency requirement, over the years the Bureau has not collected detailed residency information. At congressional hearings, Ralph Brody, Manager of the WWD presented some figures which showed that approximately sixty-four percent of the buyers of excess land (648 of 1,000 buyers) were residents who lived on their property or within fifty miles. Only thirty-six percent of the buyers were non-residents (U.S. Congress, House 1976, 161).

The first comprehensive examination of residency occurred as part of the Bureau's EIS (U.S. Department of the Interior 1980a). The Bureau collected information from landowners and farm operators except those involved in "nonfamily multiple ownerships of more than 10 people, trusts, nonprofit organizations, tribal lands, or various governmental organizations." The landowners covered in the study accounted for 99 percent of all owners and 86 percent

of the land westwide. The farm operators covered 97 percent of the farm operations and 95 percent of the land in farms.

Of those polled, "81 percent lived within 15 miles of their land, and 86 percent lived within 50 miles. Seventy-eight percent of the land owned was within 15 miles of the owner's residence and 84 percent was within 50 miles. A higher proportion of farm operators lived near their farm. Ninety-eight percent of the farm operators polled lived within 50 miles of their land and 95 percent lived within 15 miles. Ninety-four percent of the acreage was within 50 miles of the operator's residence and 89 percent of the land was within 15 miles" (U.S. DOI 1980c).

In preparing the EIS, the Bureau closely examined the residency issue in eighteen reclamation districts. Table 18 presents some very interesting information. In the three California districts, the average farm operating size was 724, 1,064, and 2,889 acres. In these districts only 30 percent, 46 percent, and 35 percent of the owners were residents. (As before, the Bureau included single, joint, and multiple ownership entities under 10 individuals.) Outside California, the average farm sizes were much smaller -- the largest was 418 acres in a Texas district -- while the "typical" average was about 200 acres. Moreover, in almost every district, over 85 percent of the owners were residents, and the smallest percentage was 65 percent.

Table 18. Residency in 18 Study Districts

District and Type of Ownership	Operator-ships	Ownerships Average Size (Acres)				Ownerships Residents (%)			
		Sngl	Jnt	Mult	Tot	Sngl	Jnt	Mult	Tot
Quincy ColumbiaBasin, WA	--	99	136	156	129	64	79	25	69
A&B Irrig. District, WA	167	368	228	276	316	45	45	13	35
Westlands Water Dist, CA	2,889	368	228	276	316	45	45	13	35
Panoche Water Dist, CA	1,064	378	136	579	493	56	72	20	46
San Luis Water Dist, CA	724	161	142	238	184	16	40	39	30
Yuma Irrigation Dist, AZ	82	49	51	69	169	94	98	90	93
Yuma Mesa IDD, AZ	78	30	3	44	---	54	95	94	84
Reservation Division	117	32	30	365	65	82	70	96	77
Hammond Irrig. Dist.	21	16	17	110	19	72	97	40	21
Emery County I.D.	---	75	5	80	9	89	94	20	92
Smith Fork I.D.	91	54	74	158	78	83	93	91	92
W. C. Austin I.D., TX	413	74	119	144	109	71	80	23	69
Fort Sumner I.D.	31	23	19	45	21	81	87	60	85
Touoanari I.D.	119	80	79	120	85	72	79	46	74
Bearg Mountain I.D.	139	43	167	86	103	93	92	27	139
Malta I.D.	151	114	124	268	506	96	99	90	97
N & RW I.D.	282	97	131	161	113	79	83	67	79
Goring-Ft. Laramie I.D,WY	290	136	134	157	139	89	96	78	89

Source: U.S. Department of the Interior 1980a.

The Evidence of Subsidy Issues

A concern of many policy makers was that the subsidy to the recipients was substantial and growing. Although most agreed that some level of subsidy was warranted, they also were uncomfortable with the magnitude of the subsidy given the existence of the rising federal deficit. Many believed that some adjustment was necessary.

The Level of the Subsidy

A 1972 study by the GAO was one of the first to document the level of the subsidy (U.S. General Accounting Office 1972). According to the GAO, from 1948 to 2031, the subsidy to irrigation users of water from the Central Valley Project would be $1.5 billion (U.S. General Accounting Office 1972, 10). Most of this amount, $1.2 billion, was from Federal financing costs based on the interest rates (2.5 - 3.01 percent) in effect at the time of construction of the CVP (U.S. General Accounting Office 1972, 10). About $300 million of the subsidy was "that part of the Government's investment in the irrigation facilities determined to be beyond the ability of the irrigation users to repay" and was charged to power and other project users (U.S. General Accounting Office 1972, 10). The overall subsidy was equivalent to $4.68 an acre-foot. The rates charged the irrigation districts for water ranged from $1.15 to $8.00 an acre-foot. GAO recommended that Congress require water users pay the full cost for Federal project

water provided above the acreage limit (U.S. General Accounting Office 1972, 21).

The Bureau calculated the subsidy for eighteen reclamation districts and included the information in the EIS (U.S. Department of the Interior 1980c, II-iv). The subsidy information shown in Table 19 is "the unpaid full costs net of the present worth of future repayments as of 1978." In the case study districts, the subsidies for construction costs were substantial. According to the Bureau, "as of 1978, irrigation water users would repay between three and forty-three percent of the full cost of the irrigation system serving them. In dollar terms, the subsidy varied widely between districts, ranging from $58 per acre to over $1,750 per acre. Two-thirds of the districts paid 18 percent or less of full cost" (U.S. DOI 1980c). There did not seem to be any correlation between the productivity of the district and the amount of subsidy or percentage of repayment by water users.

How the Price of Reclamation Water is Determined

In 1973, the GAO examined how the Bureau determines the payment terms and development periods for irrigation projects (U.S. General Accounting Office 1975). Reclamation users are required to repay, over a period of up to fifty years, the portion of irrigation costs for which they have the "ability to pay" as determined by the Bureau. "The irrigators' ability to pay is determined by ascertaining the

Table 19 Subsidy for the 18 Study Districts

District	Subsidy Per Acre	Percent of Full Cost To be Repaid	Subsidized
Extensive Forage Crops			
Malta	812	7.8	92.2
Moon Lake	58	43.1	56.9
Forage, Cereals, and Field Crops			
Truckee-Carson	931	16.6	83.4
Grand Valley	1,623	14.9	85.1
Farwell	1,446	7.1	92.9
Goshen	416	26.0	74.0
Lugert-Altus	675	10.4	89.6
Black Canyon	762	11.0	89.0
Lower Yellowstone	507	27.4	72.6
Glenn-Colusa	101	9.3	90.7
Field Crops and Vegetables			
Columbia Basin East	1,619	3.3	96.7
Westlands	1,422	15.3	84.7
Elephant Butte	363	36.4	63.6
Imperial	149	26.5	73.5
Wellton-Mohawk	1,787	11.1	88.9
Perennial Crops			
Oroville-Tonasket	417	18.1	81.9
Coachella	1,000	30.5	69.5
Goleta	1,378	18.6	81.4

Source: U.S. Department of the Interior 1980a, 19.

estimated difference in farmers' income with and without an irrigation project. [It] involves estimated projections of farm sizes,type and quantity of crops, and crop prices.

The remaining portion of the Federal costs of providing irrigation water are repaid from power and other revenues. Irrigators are allowed a development period, not to exceed ten years, to develop their land and achieve the financial position necessary to meet any added costs before the start of the repayment period" (U.S. General Accounting Office 1975, 2).

The GAO review showed that "financial data applicable to all farm sizes and types of crops were not used in computing irrigators' ability to pay and that inconsistent criteria were used for establishing development periods" (U.S. General Accounting Office 1975, 3). For example, Bureau instructions specify that the farm budgets used to determine "ability to pay" should be based only on farms smaller than 320 acres. But the GAO found that in many cases, the farms were much larger than that level (U.S. General Accounting Office 1975, 4). GAO recommended that the Bureau base the irrigators' ability to pay on actual farming operations in the region. (General Accounting Office 1975, 5).

The GAO also found that the Bureau's long-term, 40-year contracts did not allow for any adjustment in the water rate. The GAO concluded "that the subjective nature of the Bureau's projections of the irrigation districts' ability to

pay and the changing economic conditions that occur over a 40-year period indicated that the irrigators' ability to pay figure should be periodically updated" (U.S. General Accounting Office 1975, 10).

They recommended a provision should be included in long-term irrigation contracts for periodically adjusting the repayment rates and other payments on the basis of changes in the irrigators' ability to pay. (The Bureau amends contracts to reduce water rates on the basis of decreases in irrigators' ability to pay.) GAO also acknowledged that in fairness to the multipurpose water resource project customers who are required to repay irrigation costs beyond the irrigation water users' ability to pay, it is important that irrigators pay as much of the costs allocated to the irrigation purpose as can be reasonably expected. Also, because interest is not required to be repaid to the Government on costs allocated to the irrigation purpose, granting irrigators unnecessarily long development periods will increase the interest costs to the Government, which borrowed funds to finance its construction program (U.S. General Accounting Office 1975, 11).

Repayment Policies for Operation and Maintenance Costs

One component of the price reclamation water users pay is the operation and maintenance (O&M) costs. In one study, the GAO focused on these costs when it examined whether the Bureau had instituted repayment policies and practices that

would "ensure prompt and fair cost recovery for Federal reservoirs, particularly ones that were underutilized" (U.S. General Accounting Office 1981). The GAO found that when reservoirs were not fully utilized, the Bureau did not recover all its O&M costs. (O&M costs are allocated and to be repaid annually.) In addition, the Bureau did not always use O&M revenues to pay O&M costs. Sometimes the revenues were applied to repay reservoir construction costs. In other situations, the Bureau did not compute an accurate O&M figure because they used outdated figures which underestimated the true costs. And finally, in some cases specific water users were not properly charged interest on their portion of the construction costs. Again, the Bureau absorbed the cost.

The Interest Subsidy

In the report, "Reforming Interest Provisions in Federal Water Laws Could Save Millions" (U.S. General Accounting Office 1981c), the GAO examined the various subsidies the Federal government provided to the users of reclamation water. The study specifically addressed the largest water subsidy provision, namely, interest costs that represented the cost of financing water projects.

Shortly after the reclamation program first began, the Federal Government was obliged to help fund water projects. The water users would repay the government for the funds, minus any interest cost.

Over time, the cost of the water projects has increased. The early projects cost approximately $1.25 million in 1903. By the 1970s, projects were often massive, multiple-purpose facilities that cost hundreds of millions of dollars. Interest rates have also increased. In 1931, when the U.S. Government first began automatically financing water projects on a continuing basis, the effective interest rate it paid on its long-term borrowing was less than three percent. Over time, the Government's borrowing costs have steadily gone up so that by March 1981 the Treasury rate was 13.12 percent. And finally, the repayment periods have lengthened. Over the years, there have been many extensions; from ten years to forty years with a ten-year development period. Together, the increased interest rate, the longer repayment period as well as the increase in the actual cost of the projects, have made the interest-free financing for reclamation projects quite high. For example, the interest subsidy for two Bureau projects (Tualatin Project in Oregon and Oroville-Tonasket Unit of the Chief Joseph Dam Project in Washington) exceeded $600 million, or more than six times their construction cost.

Can Reclamation Farmers Pay More?

In "Federal Charges for Irrigation in Projects Received do not Cover Costs" (U.S. General Accounting Office 1981a) GAO looked at several Bureau projects under construction to determine what charges will be made, to what

extent the charges will cover the costs to the Federal government for providing the water, and whether farmers could pay more for the water without impairing their operations or seriously damaging their profits. The GAO found that with the interest-subsidy price (full-cost price without the interest charge) four of the six projects could probably increase net income by buying Federal water. Given that the interest-subsidy price was between four and fifty times as high as the ability-to-pay price that the BOR was planning to charge the farmers in these projects, the GAO concluded that more of the Federal investment could be recovered from the farmers and still allow a positive net income from the Federal water. The Study also found that if the price was set at a level to cover construction costs plus a 7.5 percent interest charge, "the recipients of irrigation water could not generate enough extra agricultural yield to pay for the additional expenses required by irrigated agriculture."

CHAPTER FOUR

When Congress approved the Reclamation Reform Act (RRA) on October 12, 1982, the goals were to "modernize" the reclamation program by increasing the acreage limit and by bringing the program into check by reducing the amount of subsidized water available to the program recipients. This chapter begins with a description of the principal features of the RRA and is followed by a discussion of how the RRA addressed the concerns of Congress presented in Chapter Three. The chapter closes with a discussion of the potential impact of the RRA on the reclamation program.

The RRA Made Numerous Changes to Reclamation Law

One of the principal features of the RRA increased the number of owned acres that could be irrigated with subsidized water. For most recipients the increase was from 160 acres to 960 acres. This change represented the first time Congress had made an increase available to all recipients since 1902. The decision to increase the acreage limit reflected the view of many legislators that a 160-acre farm was not financially viable and it ought to be increased to reflect modern capital-intensive techniques that were most cost-effective with larger sized farms.

In exchange for increasing the acreage limit to 960 acres, Congress stipulated that any water received for acreage above that level be charged a higher rate called

"full cost." The RRA defines "full cost" as "the annual rate necessary to amortize Federal construction expenditures allocable to irrigation facilities in service, plus any operation and maintenance deficits funded, minus payments made on the costs allocated to irrigation, over that period required by Federal Reclamation law or applicable contract provisions." This change was important because for the first time it limited the amount of subsidized water a grower could receive. Previously a landowner could receive water at the subsidized rate on an unlimited amount of acreage principally by leasing additional land.

In addition to changing the subsidy level, Congress stipulated that all water users would pay a price at least high enough to cover the operation and maintenance (O&M) costs incurred by the Bureau of Reclamation. This provision would apply to the irrigation districts that do not conduct their own O&M activities. Under the RRA the new pricing provisions ("full cost" and O&M) do not automatically apply to all water users. Initially the provision applies to those districts that take certain steps that allow the district to receive certain benefits of the Act. The main benefit is the increased acreage level. But in addition the district can also increase the acreage limit by taking advantage of the equivalency provision. Under this provision, the acreage limit can be increased following an evaluation of certain factors including the relative soil types, level of rainfall, and number of frost-free days

between various classified lands within a district. The evaluation classifies the land in the district into various productivity classes. A district that has land deemed to be of lower productivity can receive a higher, adjusted acreage limit. In order to take advantage of these provisions the district must amend its contract with the Bureau. Individual farmers in districts that do not amend their contract can receive the increased acreage level and equivalency by signing an "irrevocable election" agreeing to conform with the new law. This irrevocable election would require, among other things, that the farmer pay at least the full operation and maintenance costs on all water received, including any increases that may occur in the future. In addition, the new rates must reflect the allocated share of project construction costs, although without interest.

If a district with landholdings over 160 acres does not amend its contract or its farmers have not entered into an "irrevocable election", the RRA stipulates that after April 12, 1987, all operators in such districts are required to pay "full cost" for all water delivered to land leased above 160 acres. The district must also cover the full operation and maintenance costs. This provision is often referred to as the "hammer clause."

The RRA requires similar price concessions from districts that amend their contract with the Bureau to obtain "additional or supplemental benefits." For example,

if a district wants to increase the acreage that may receive subsidized water, the amount of water it receives, or obtain some other additional benefit, the district must amend its contract with the Bureau to conform to the RRA and agree to pay a rate that recovers both the district's share of the project's capital costs and the Bureau's current and future operation and maintenance costs.

The new acreage limitation covers all operations of 960 acres, whether the acres are distributed in numerous districts or concentrated in one district. For example, if a person owns 480 acres each in two districts, the total acreage would be counted as 960 acres. In this case, the owner would have reached the acreage limit.

The RRA also eliminates the residency requirement. This provision had been one of the most controversial issues since the Carter administration included it in the 1979 proposed regulations. Congress eventually decided that water users should not be restricted regarding their residence. Numerous legislators argued that many owner/operators chose to live in neighboring towns in order to take advantage of schools and enhanced employment opportunities for various family members.

The RRA Limits Ownership Size, Not Farm Size

Like the original 1902 Reclamation Act, the RRA limits the amount of owned land for which a recipient can receive subsidized water. But the RRA includes a further

restriction by controlling the amount of leased land that can receive subsidized water because for owned and leased land together, there is an absolute limit of 960 acres. But as was true with the original law, the RRA does not place a limit on farm size. The 1979 Senate bill, S.1867 did set an absolute limit of 2,080 acres. But Congress finally decided that farmers should be allowed to determine how large they wanted their farms and to use the price of water as a mechanism to influence farm size.

As under previous law, landowners must place land owned in excess of the ownership limit under a recordable contract in which they agree to sell their interest in the land within a specific time period in exchange for receiving subsidized water for the acreage. If the district has entered into a new or amended contract, or if the owner has made an irrevocable election to conform with the discretionary provisions of the new law, the owner can amend existing recordable contracts to conform with the new ownership limitations of the RRA. The higher amount of owned land would effectively reduce the amount of excess land that would have to be sold. Recipients who had recordable contracts prior to the enactment of the RRA do not receive any extension of the ten-year time period within which all excess land must be sold. In addition, excess lands which on the date of enactment of the RRA are, or are capable of, receiving reclamation irrigation water, may receive those waters only if there is a recordable contract

in existence or a request that there be a recordable contract has been made. And finally, those who execute recordable contracts after the enactment date have five years to sell their excess land.

Certain Forms of Multiple-Ownership Farms are Restricted

The RRA restricts the ability of owners to combine their parcels to form farm operations larger than the ownership limit. For example, if a husband, wife, and dependents are under the discretionary provisions, as a group they are entitled to receive water for only 960 acres. Under prior law, a husband and wife were entitled to 160 acres each. (The term "under the discretionary provisions" means that the district or individual operates under a contract that entitles the recipients to 960 acres owned land, the equivalency provision, full cost, etc. Districts or individuals "under prior law", on the other hand, must abide by a 160-acre ownership limit.)

The RRA also restricts multiple-ownership arrangements where several owners combine their acreage and hire an outside management company to operate the farm. This is through the leasing provision which specifies the circumstances under which management arrangements constitute a lease. If the management arrangement or consulting agreement is such that the manager or consultant performs a management or consulting service for the landowner for a fee but does not assume the economic risk in

the farming operation, and the landowner retains the right to the use and possession of the land, is responsible for payment of the operating expense, and is entitled to receive the profits from the farming operation, then the arrangement will not be considered a lease. The distinction is important, because if it is determined that the arrangement is a lease then any water delivered to land above the acreage limit will be charged the full cost rate. If the operation is not a lease, none of the water will be charged at full cost.

Equivalency Increases the Acreage Limitation

As stated previously, districts with new or amended contracts and individual landholders, including those in nonamending districts who make irrevocable elections, have the right to request an evaluation be performed to determine whether the acreage limit should be increased. Individuals must make the request through their district office. The district membership will determine whether they wish to request a "class I equivalency" determination from the Bureau.

The equivalency concept was developed in the 1950s and has been authorized by Congress on a project-by-project basis for eighteen reclamation projects. Most of the projects are located in northwestern states such as Idaho and Montana, which when compared with other reclamation states, have much shorter growing seasons. Previous

legislative proposals restricted equivalency to districts which had a growing season of 180 days or less. Under the RRA, Congress chose to make the provision available to all districts.

Many Corps of Engineers Projects are Exempted from Acreage Limitation Provisions

Under the RRA, lands which receive water or "benefits" from Federal water resources projects constructed by the Army Corps of Engineers are "not subject to the acreage limitation and other provisions of Reclamation law unless the project is designated, made a part of, or integrated by Federal statute with a Federal Reclamation project, or unless the Secretary, under Federal Reclamation law, has provided project works for the control or conveyance of an agricultural water supply for the lands involved." However, the water users are obligated to repay their share of the construction costs and to pay their share of the O&M and contract administrative costs of the Corps of Engineers project allocated to conservation storage or irrigation storage.

The congressional debate about how to treat Corps of Engineers projects centered around the proper interpretation of the Flood Control Act of 1944. Section 8 of the Act provides that when the Corps of Engineers builds any dam or reservoir for flood control which may be "utilized" for irrigation purposes, the Secretary of the Interior is

authorized to "construct, operate, and maintain, under the provisions of the Federal reclamation laws...such additional works in connection therewith as he may deem necessary for irrigation purposes." According to the House of Representatives report on H.R.5539, "...the DOI is of the opinion that this language requires it to impose the acreage limitation and other provisions of reclamation law on landowners who 'utilize' water obtained from Corps projects for irrigation purposes..." (U.S. Congress, House 1982).

Many irrigators and members of Congress disagreed with the Bureau's position. Legislators and district representatives from California and Arizona were particularly concerned because most of the Corps projects are located in those states and the acreage sizes are quite high. The irrigators who used water for irrigation from rivers on which Corps projects are located but who had financed and constructed their own diversion and water delivery systems argued that they were never intended to be subject to the acreage limitation and other provisions of reclamation law. Congress also disagreed with the Interior Department, as evidenced by the House report for H.R.5539:

> The irrigation benefits, if any, which most of the projects, including the Kings River project in California, receive from the works constructed by the Corps of Engineers are incidental, at most, to the principal purposes of the project and the Committee intends that these projects are and shall be exempt from the acreage limitation and other requirements of the reclamation laws (U.S. Congress, House 1982b).

The Acreage Limitation Provision does not Apply to Various Land Categories

The RRA stipulates that under various circumstances, the acreage limitation does not apply. For example, the ownership limitations do not apply to land which receives a temporary supply of water. "Temporary" is defined as less than one year and is water which is available because either there was an unusually large water supply that could not be stored for project purposes or there were "infrequent and otherwise unmanageable flood flows of short duration." A contract specifying payment for this water must be prepared, although the Secretary has the authority to waive the payment requirement.

The ownership limits also do not apply to lands acquired through certain legal actions such as involuntary foreclosure, or similar involuntary processes of law, through bona fide conveyance in satisfaction of a debt (including a mortgage, real estate contract, or deed of trust), or through inheritance or devise, provided that these lands were eligible to receive irrigation water before they were acquired. If after acquisition, these lands are not qualified under Federal reclamation law to receive federal project water, (because with the amount acquired, the acreage limitation is exceeded), they may receive a temporary supply for up to five years after the date of acquisition. But the pricing provisions will still apply.

In addition, lands which are isolated tracts found by

the Secretary to be economically feasible only if they are included in a larger farming operation but which may, as a result of their inclusion in that operation, cause it to exceed the ownership limitation, are exempt from the ownership limits. But the recipients must pay full cost for any water delivered to land owned above the acreage limit.

And finally, the law permits lands held by a corporate or individual trustee in a fiduciary capacity for a beneficiary or beneficiaries to be exempt of the ownership and full cost pricing limitations as long as the beneficiary's or beneficiaries' interest in the land does not exceed the ownership and pricing limitations that are set forth in the law.

The RRA Does not Exclude Investors

The RRA does not directly limit who can participate in the reclamation program. But several sections do place restrictions on individuals who are not United States citizens and live outside the United States, called nonresident aliens. And some provisions limit program benefits for "large" entities, as defined by the number of owners.

The RRA restricts the ability of nonresident aliens to benefit from the reclamation program. They cannot receive irrigation water for land owned as an individual. The only way such individuals can receive reclamation water is if they are part of an entity legally established under State

or Federal law. And through this mechanism, a nonresident alien may not receive irrigation water for more than 160 acres, which is based on a cumulative ownership of all legal entity arrangements. With this provision, Congress wanted to counter the charge that "foreign interests" were benefiting from the program.

Legal entities of different sizes are treated differently with respect to the ownership and pricing provisions. Companies that "benefit more than twenty-five persons" are entitled to receive less subsidized water than smaller companies. The larger entities can receive enough subsidized water to irrigate 640 acres whereas the smaller ones can irrigate 960 acres. The RRA also stipulates that irrigation land held by a subsidiary entity is counted against the ownership amount of the parent company, so a company cannot gain by acquiring more land through its subsidiaries. With respect to pricing, the smaller companies, which are defined as "qualified recipients," pay full cost for water for leased land above 960 acres. The larger companies, or "limited recipients", pay full cost for land in excess of 320 acres if the recipient was receiving project water on or before October 1, 1981; otherwise they must pay full cost for all water delivered to any land, owned or leased. Through these restrictions, Congress tried to restrict the benefits available to large companies.

During the congressional debate preceding the RRA, it was noted that there was very little information by which to

judge the rate of compliance of recipients. Thus, the RRA requires that all "qualified" and "limited" recipients satisfy new reporting requirements. Each landowner and lessee must furnish the district with a certificate prepared by the Bureau of Reclamation stating that they are in compliance with the RRA provisions and include information about the number of acres leased, the term of the lease, and certification that the rent paid reflects the reasonable value of the irrigation water to the productivity of the land. The lessee may be required to submit a complete copy of the lease.

Excess Land Sale Profits Controlled

The RRA restricts the ability of excess land buyers to obtain a substantial profit when they sell land originally purchased as excess. Land acquired from excess status after October 12, 1982 can receive irrigation water only if a covenant controlling the sale price of the land is placed in the deed. (The purchaser must also be a nonexcess owner.) The covenant states that "for ten years from the date the land was first transferred from excess to nonexcess status, the land may not be sold for a price which exceeds the sum of the value of newly added improvements plus the value of the land as increased by the market appreciation unrelated to the delivery of irrigation water." If a sale occurs at a price that violates the covenant then the land will be ineligible to receive irrigation water. Many legislators

hoped this provision would discourage buyers who were only interested in reclamation land for its investment and profit value. In this way, more excess land would be available for buyers who would farm the land themselves.

How Excess Land is Sold and to Whom

The RRA does not include conditions specifying how or to whom excess lands are to be sold. Earlier legislative proposals included some requirements. For example, several bills required that the excess land buyer verify that he or she would be involved in the daily operation of the farm and certify that farming was the recipient's primary occupation. Other proposals required that all excess lands be sold through an impartial system, such as a lottery.

The RRA contains a minor reference to the excess land sales process. It states that the Interior Secretary has the power of attorney to sell any excess lands not sold by the owner in the time period specified in the recordable contract. The Secretary is required to sell the lands through an impartial selection process only to qualified purchasers according to reasonable rules and regulations the Secretary may establish, provided the Secretary shall recover for the owner the fair market value of the land unrelated to irrigation water deliveries plus the fair market value of improvements."

Excess land is appraised prior to sale. In several reports, the GAO found fault with the Bureau's appraisal

process. The RRA does not include any specific requirements regarding the appraisal process, such as when the appraisal should be conducted, what information should be used, and who should perform the appraisal.

Residency Requirement Eliminated

One important change included in the RRA is it removes the requirement that a landowner be a resident on or in the vicinity of the land in order to be eligible to receive reclamation water. Although the requirement had not been enforced since the 1920s, the Solicitor had ruled it as valid in a 1979 decision. Some reclamation supporters believed the residency requirement was fundamental to ensuring that the program benefits only "true family farmers."

But Congress decided otherwise, as shown in the House Report on H.R.5539. In that report, Congress:

> ...concluded that a requirement that the receipt of water be conditioned on residency is not practical. It is not uncommon today for a farmer to be actively engaged on a daily basis in a farming operation and yet reside many miles from the farm. Indeed, in many areas, because schools have been concentrated in the urban centers, a farmer with school age children of a necessity must reside some distance from the farm (U.S. Congress, House 1982b).

The RRA Adds "Full Cost" Pricing and Requires Coverage of Operation and Maintenance Expenses

As stated previously, one of the most significant changes the RRA makes to the reclamation program is the inclusion of a "full cost" provision. This provision

requires that recipients pay a higher price for water received above a certain amount. For "qualified" recipients, the limit is 960 acres or the equivalent. "Limited" recipients pay "full cost" above 320 acres or the equivalent if they received project water on or before October 1, 1981. Otherwise they pay "full cost" for all reclamation water.

The RRA also requires districts to reimburse the Bureau annually for any operation and maintenance costs associated with the Bureau bringing water to the district and distributing it on their land. Previously, the operation and maintenance cost was often fixed for the life of the 40-year contract, such that in periods of inflation, a wide gap developed between the actual O&M costs and the amount paid to cover the costs. The requirement that these costs be annually adjusted is postponed until April 12, 1987 for districts remaining under prior law. The requirement does not apply to districts which operate and maintain their own facilities.

In summary, the RRA changes the pricing provision by addressing the two key components of the water cost; namely, the base price for reclamation water which covers the capital cost obligation, and the charge for the district's portion of the operation and maintenance costs. The emphasis Congress placed on pricing reform is evident through statements made by legislators such as Representative George Miller (D-California) who said:

> There is no intent by the Committee, nor certainly on my part as author of these pricing reforms, to exact usurious repayment from irrigators. Rather, the legislative intent of these reforms is to eliminate unjustified and unintentional subsidies from those who can afford to pay benefits they receive, thereby stimulating improved management and more efficient use of water resources....There is no public purpose or rationale within the Reclamation laws for providing taxpayer subsidies to large-scale farming interests which can well afford to pay for the public benefits they receive (U.S. Congress, House 1982, 37).

How the RRA Might Impact the Reclamation Program

In writing the RRA, Congress chose to expand the amount of land recipients could own and for which they could receive reclamation water at the subsidized rate. This was made possible through the acreage limitation which increases the base ownership level, the equivalency provision through which the base amount can be augmented, and the package of exemptions which can provide further increases. Individually and together these items can be applied in numerous ways. Since it might take several years before the provisions would be implemented, the impact may not be felt for some time.

To a degree, a district can decide whether or not to come under the acreage limitation and equivalency provisions. For example, a district can decide whether to amend its contract or a district can decide whether it wants to receive supplemental benefits. Both of these decisions are voluntary, and a decision in the affirmative will result in the application of these provisions. On the other hand, if a district enters into a new contract because its old

contract has expired, the provisions automatically apply. The package of acreage exemptions, on the other hand, automatically apply to all districts.

One can look at the size of farm operations and predict how many might benefit from the increased ownership limitation and therefore find the discretionary provisions attractive. According to the EIS, about twenty-five percent of farm operations are larger than 160 acres. They comprise over seventy-five percent of the land. This indicates that a sizeable portion of reclamation farmers have used various methods to put together a farm operation larger than the prior acreage limit. These farmers might be interested in qualifying for the discretionary provisions which would automatically raise the ownership limit to 640 or 960 acres.

As a side note, unless an individual or district amends its contract by April 12, 1987, any water delivered to lands in excess of 160 acres will be charged "full cost." The financial burden this provision could put on farmers could also encourage them to come under the discretionary provisions. Financial issues, including the possible implications of "full cost" pricing, are discussed below.

Assuming that most districts will elect to come under the discretionary provisions, one can analyze the impact of the higher acreage level. The goal of the ownership limit was to ensure the widest possible distribution of benefits. That goal was reiterated in the RRA. As was shown in Chapter Three, even under the 160-acre ownership limit

landownership was highly concentrated. According to the EIS, approximately 2.5 percent of the recipients owned twenty-seven percent of the land (U.S. Department of the Interior 1980c). According to DOI, with the increase in the acreage limit, the goal of wide distribution would be weakened for two reasons. "One, owners of land in the 160-960 acre range would no longer have any excess land and therefore the ownership would not be separated into 160-acre ownerships as lands were sold. Any parcel that was not larger than 960 acres could stay as it is. According to the EIS, 99.6 percent of all landowners own 960 acres or less, and they own 87 percent of all reclamation land. This indicates that most landownerships would satisfy the new acreage limit and no change in their ownership would be necessary. Two, as more farmers retire, the 160-acre parcels would come onto the market for sale. Individuals and entities with ownerships below the ownership limit could have an incentive to purchase up to the limit. Both of these actions would lead to larger ownerships, moving to the level of 960 acres. With fewer ownerships below the 960 acre level, concentration would be increased" (DOI 1983, 9).

In addition to the ownership limit, the equivalency provision could also increase the amount of land a recipient could own. Again, according to DOI, "assuming the cost of doing the equivalency determination was modest, most districts could be expected to request that equivalency be investigated. And given that

the evaluation examines the relative productivity of the land within the same district, invariably at least some landowners, and probably many, would benefit" (U.S. DOI 1983). As a side comment, it is interesting that during the debate on equivalency, the concern that was voiced by districts was that the provision was needed to "equalize" many districts with the California districts which were much more productive. And yet the equivalency provision Congress developed does not equalize one district with another district, but rather only different lands within the same district.

It is difficult to predict the impact the various exemptions will have on farm size and land distribution. The exemption for land in Army Corps of Engineers Projects potentially could affect significant amounts of reclamation land. In some districts, such as those in California, this land is in very large ownerships which is partially due to the fact that the acreage limitation had not been applied to these projects. The impact the exemptions that deal with temporary supplies of water and the inclusion of isolated tracts in ownership parcels "will have depend on who will make the decision to designate a quantity of water as a temporary supply or decide that a particular tract of land can be included in another parcel. If the decision is made at the local level, the Bureau could be open to criticism that it is biased in favor of the districts. In addition, for some situations other agencies, state and federal,

should be involved and their role should be clarified (U.S. DOI 1983).

The impact of the other two provisions which deal with lands acquired through various legal actions and lands held by a trustee are likewise difficult to predict. Both of these provisions touch one of the main criticisms of the way the Bureau of Reclamation implemented and enforced the acreage limitation provision, namely that while large-scale landowners did sell their excess land in 160-acre parcels, they still maintained an interest (or even control) in the land through various devices such as trusteeships and foreclosures. Therefore, it will be important that clear rules are developed to ensure that various legal instruments are not used to abuse the system.

Few Restrictions on Beneficiaries

The impact the RRA would have on the beneficiary issues discussed earlier is mixed. For example, the RRA does little to direct the benefits of the program towards certain categories of recipients. Nor does it regulate the excess land sales process so certain groups have a higher probability of obtaining land. In contrast, the ownership limit could significantly affect the amount of land available for new owners. And without excess land, issues concerning who gets the land and the process for securing land are moot.

As far as present beneficiaries are concerned, the RRA does little to restrict who may participate in the program.

There are only a few instances where Congress placed limits. One is that individuals who are not U.S. citizens and live outside the U.S. cannot receive reclamation water directly. Since the Bureau does not collect statistics on the citizenship and residence of its recipients, it is difficult to predict how many recipients (present or future) would be affected by this provision.

Another restriction is that under the RRA, larger companies are restricted in the amount of water they can receive at the subsidized rate. In order to assess the impact of this provision, one needs to know what the universe of large companies is, how much water they use, and how the increased price would affect their management decisions. From Chapter Three, it is clear that a small portion of the recipients are large companies. The information in Chapter Three is largely based on the EIS, which defines a large company as one with more than ten persons. The RRA defines a large company as one with more than twenty-five individuals. And the amount of land owned by large corporations in the EIS is relatively small. Given the difference in definition, the amount of land controlled by large companies as defined by the RRA is probably smaller than would be under the EIS definition. In summary, the impact of the restriction is difficult to predict, but in all probability it would be minimal.

The RRA adds much more extensive reporting requirements than previously associated with the program.

This will place a burden on the district offices which must collect, record, report, and store the forms and handle any requests from the Bureau for information. For those offices with a limited staff, the task could be a real challenge. One other consequence of the reporting provision is that it will provide much information that has never been collected in such a comprehensive manner. When the EIS was developed, the lack of statistics on land ownership and farm operations, as well as other information, was recognized. With the new available information, the Bureau will be in a much better position to formulate policy and program direction and devise implementation plans. The certification requirement also strengthens the legal grounding of the compliance and enforcement program.

Available Excess Land is Reduced

The land base that would become excess is drastically reduced by several RRA measures. The exemption for Army Corps of Engineers projects (as well as an exemption for the Imperial Irrigation District in Southern California and the Elephant Butte Irrigation District in New Mexico) could remove 2.7 million acres from the program. According to the EIS, there are approximately 8.8 million acres in the reclamation program. These exemptions reduce the base to about 6.1 million acres. When the Bureau conducted the Regulatory Impact Analysis of the RRA (U.S. Department of the Interior 1983), it assumed that the farm size

distribution would be the same as that found in the EIS study. Therefore, there would be "about 5.25 million acres owned by over 86,000 landowners in ownerships of 960 acres or less and about 0.78 million acres owned by 350 landowners in ownerships greater than 960 acres. Given these estimates, the new excess land potentially available for new farm creation is estimated to be about 0.45 million acres. [Therefore], the estimated number of potential new farms of a size of 960 acres would be approximately 470" (U.S. Department of Interior 1983, 33).

No Real Change in Excess Land Sales

The RRA changes virtually nothing regarding how excess lands are sold. The decisions about how the sales are advertized, how the buyer is selected, and how the price is determined are made by the seller. The Bureau's role is to review the sales and confirm that they do not violate the law.

The RRA does change one aspect of the land sale process. It specifies that excess lands that are left unsold at the end of the designated time period will be sold through an impartial process by the Interior Secretary. The impact of this provision would probably be fairly minimal because almost all excess lands are sold within the allotted time period. Therefore, it is safe to assume that excess land sales would continue as they have in the past.

Profits from Land Sales are Reduced

The RRA restricts the profit excess land buyers can realize in a subsequent sale of the land. In the past, the Bureau has not collected information about these sales, so it is difficult to know how extensive the practice has been. From the information collected in the EIS, it appears that most buyers usually lease their lands to others. But in any event, since many of the RRA provisions will probably reduce the amount of excess land available for initial purchase, this issue could be moot.

Residency Requirement is Eliminated

The impact associated with eliminating the residency requirement probably has more to do with what the provision will do to future recipients, rather than the present ones, since the residency requirement has not been enforced for over forty years. To the extent that a residency requirement would be an important factor in a buyer's decision of whether or not to purchase excess land, such a provision could influence those who were interested in buying land for investment reasons alone. But in some districts, such as the WWD in California, if the residency provision was interpreted as residence within fifty miles of the ownership point, then individuals could live in a fairly large city such as Fresno and satisfy the requirement. In other words, the residency requirement would not necessarily have mandated residence on the land. In conclusion, since

the residency requirement was never enforced, it is difficult to predict whether its elimination will attract more "investors and speculators."

"Full Cost" Pricing

The changes made to the pricing provisions were among the most significant in the RRA. The pricing provisions were adjusted in two ways. First, the repayment rate to cover the allotted share of construction costs was increased for certain situations. And second, the operation and maintenance charges were to be paid in full and annually adjusted. Together, these changes constitute "full cost."

The impact of the "full cost" pricing provision depends on decisions made by the reclamation recipients. Those who come under the discretionary provisions will pay "full cost" above 960 acres. Those who stay under prior law will pay "full cost" over 160 acres after April 12, 1987. As stated previously, probably most, if not all of the districts will choose to come under the discretionary provisions eventually so they can benefit from the increased ownership limit and avoid paying "full cost" on a large portion of their acreage.

Given this assumption, the task of estimating the impacts of "full cost" pricing depends on how much acreage would be subject to the provision. Since the provision applies to the amount of water received for a farm operation, it is most useful to examine those statistics.

Using the same EIS figures presented on page 214, the potential acreage subject to "full cost" pricing is estimated to be about 1.0 million acres (U.S. Department of Interior 1983, 41). Assuming that the farm operators decide to maintain their present farm operations, a relatively small amount of land would come under the "full cost" provision (U.S. DOI 1983).

How this subset of farmers would respond to the "full cost" pricing provision depends on how the increased water price would affect net income. The Bureau looked at "full cost" pricing when they prepared the EIS. The analysis focused on the same eighteen districts the Bureau used throughout the EIS as their case study districts. The Bureau noted, after it calculated the "full cost" price for each district, that "there was an extremely wide variation in the 'full cost' price between the districts and a wide variation in the dollar difference between the subsidized price and the 'full cost' price." For example, the "full cost" figure ranges from $7 per acre-foot to $263 per acre foot. The ratio of the "full cost" to the subsidized rate ranges from 2 to 1, to 26 to 1. On half of the eighteen study districts, the "full cost" figure was more than six times greater than the current subsidized rate.

When the "full cost" rates were applied it was found that only eleven of the eighteen study districts had acreage in excess of the acreage limit. For eight of the eleven districts, the "full cost" formula would probably be "high

enough to make 960 acres the effective farm size limit because above that level, net farm income would go down. In these eight districts, farms somewhat greater than 960 acres could be maintained if the farm operators were willing to continue farming the excess acres at a loss, averaging those losses with profits on the first 960 acres to maintain an overall positive farm income." According to the EIS, there were only three districts which might maintain farm operations exceeding the 960-acre limit by using "full cost."

Operation and Maintenance Costs

The responsibility for conducting O&M activities for completed water facilities are transferred to local water user organizations as rapidly as the organizations become capable of assuming those functions. "Of the 220 operating projects or units providing service in 1982, 158 (72 percent) were operated entirely by water user organizations, 38 (17 percent) were operated jointly by the water user organizations and the Bureau, and 24 (11 percent) were operated solely by the Bureau. When facilities are operated by the Bureau, its policy (in conjunction with section 6 of the Reclamation Project Act of 1939) is to charge annually in advance for estimated operation costs for the ensuing year. Any shortages incurred are paid at the end of the year, whereas overpayments are credited to the following year's assessment. For the majority of these districts, O&M

cost estimates are made on a year-by-year basis" (U.S. Department of the Interior, 1983, 8).

In a few instances, districts pay their O&M costs based upon the average annual cost projected for the following five-year period, with a new average computed every five years. In these cases, the estimated annual charge is paid at the beginning of each year. Any overpayments or underpayments are included by adjusting the O&M cost estimates for the next five-year period. However, section 208(b) of the RRA requires that O&M charges for districts with new or amended contracts or for recipients who exercise irrevocable elections shall be calculated on an annual basis and adjusted to modify the price of water deliveries to reflect changes in O&M costs.

CHAPTER FIVE

With the passage of the Reclamation Reform Act (RRA) on October 12, 1982, the Department of the Interior began the task of developing rules and regulations to implement the new provisions. Over the next five years, the Department issued two sets of rules. The first was published in the Federal Register on May 3, 1983 and became final on December 6, 1983. The second was issued as proposed on November 7, 1986 and on April 13, 1987 were final. Most of the Act's provisions were quite specific and included a lot of detail. As such, for these sections the Bureau had very little discretion regarding the direction of the regulations. The primary purpose was to clarify how the Bureau would carry out the provisions. For a few sections, Congress was much less specific and largely stated a general policy. Here, the Bureau was afforded the opportunity to exercise much more choice. The main features of the regulations and impact they could have on the program are discussed here.

Issues Raised during Public Hearings Following Passage of the Reclamation Reform Act

Less than a month after the passage of the RRA, the Department of the Interior embarked on a series of three public hearings. The purpose of the hearings was to obtain public input regarding issues the Bureau should consider when developing the regulations. In November and December,

senior managers from the Bureau of Reclamation held these hearings in Boise, Idaho; Sacramento, California; and Washington, D.C.

Although numerous issues were raised at the hearings, a review of the hearing testimony shows several themes. In general, a strong view was expressed that irrigation districts should have as much information as possible prior to making decisions regarding their contract. In addition, recipients wanted the Bureau's assurance that flexibility would be built into the implementation program. And finally, program participants were disturbed that through the RRA the relationship between the Bureau, the irrigation districts, and recipients would change from an assistance mode to more of a "traffic cop", enforcement posture.

Among the specific issues discussed were the certification and reporting requirements, the repayment provision, the full cost element, the westwide provision, and the water conservation requirements. Recipients were concerned that the workload associated with satisfying the certification and reporting requirements would be too high. A number of individuals suggested that certain groups be exempt from the requirements such as those who do not amend their contract (either as an individual or as a member of a district) or those who own a small number of acres. The manager of the Idaho Cattle Feeders Association commented:

> The language in this section relating to certification could certainly create a large scale paper war. A study of the holdings of irrigated lands will reveal many small land holders. A reasonable exception of

> lands less than 80 acres would be helpful in reducing the paper war. If this is not possible, then the Bureau should provide for a short form for these smaller landholders. It is quite probable that many smaller landholders simply will not understand the provisions or certification or the need to apply for certification (U.S. Department of the Interior 1982).

Regarding the repayment program, the Bureau was asked to clarify what the status would be for irrigation districts that had repaid their total capital cost obligation. Those who addressed this issue assumed that the Bureau would state that recipients who were in districts of this category would not have to abide by the acreage limitation and other requirements of the program. Irrigation districts also wanted the Bureau to specify what the full cost figure would be before they made a decision regarding their contract. With respect to the "westwide" provision, which stated that the acreage limit would apply to the total amount of land owned by a recipient in all districts, many questioned how the district could or would enforce the provision. The manager of one water district in Idaho commented:

> As another certification problem, certainly my company cannot be asked to verify as to whether or not a landowner owns land in other districts that receive water from federal reclamation facilities. The responsibility of totaling the acreage must eventually rest with the Bureau of Reclamation who receives the information from all of the operating entities westwide (U.S. Department of the Interior 1982).

The issues related to water conservation ranged from a request that the Bureau clarify what the specific requirements would be to a concern that it not become a tool to control land use decisions by the landowner. For example, a spokeswoman for the National Cattlemen's

Association said at the Idaho hearing:

> Conservation measures must be economically feasible and practical to specific water owners. This section which is laudable should not be misconstrued as a land use planning vehicle nor should it impair the delivery of contracted water (U.S. Department of the Interior 1982).

Two other issues mentioned at the hearings later become quite controversial and were the focus of numerous efforts to amend the RRA. These issues were; how Section 203(b) called "the hammer clause", would be implemented, and how the definition of a lease would be interpreted.

The 1983 Rules

The proposed rules issued in May 1983, addressed all aspects of the Reclamation Reform Act. Comments the Bureau received through an extensive series of public hearings generally reflected recipients' concern that the program would prove to be too restrictive. As such, when the final rules were published, the Bureau did not include language to implement the "hammer clause", stating that it was awaiting legal clarification of the issue.

The hammer clause states that for districts which have not amended their repayment contract by April 12, 1987, the full cost repayment price will apply to water delivered to acreage over 160 acres. Many comments were received (52) in response to the proposed regulations. In general, their position expressed in the comments was that the provision violated existing district contracts, and therefore, it was unconstitutional. The Bureau responded that it had major

concerns with this section of the Act, specifically the relationship of 203(b) with existing contract commitments. In addition, the Bureau was concerned about the potential impact this section could have on the fiscal health of some districts. The Bureau said it was considering proposing legislation to repeal it. And if it was not repealed by January 1, 1987, the Bureau would fully implement it. (The Secretary of the Interior William Clark did ask Congress to repeal Section 203(b) on January 23, 1984 saying the RRA would cause "potentially adverse effects on operations of small family farmers throughout the West," (San Francisco Chronicle 1984, 10). Congress took no action on Clark's request and the hammer clause ultimately was held constitutional by a federal court in California.

Other issues related to the general unease with the hammer clause were addressed in the comments to the proposed regulations. Many had to do with what actions would be considered to constitute a new contract. For example, the Bureau rejected a suggestion that a district that enters into a new contract should be permitted to stay under prior law as long as the overall benefits the district would receive did not change. And in response to nine comments, the Bureau accepted a change stating that "if a district entered into a contract for a temporary amount of water for a duration of one year or less, then such action would not constitute an additional or supplemental benefit." Thus, the district would stay under prior law.

Some issues had to do with the status of land receiving reclamation water. For instance, in the final regulations the Bureau added language which clarified that "in the case of an irrevocable election, such action is binding on the elector and the irrigation land in his/her holding, but not on a subsequent landholder of the land." On the other hand, the Bureau rejected a request to remove a provision requiring "owners of ineligible land to exercise an irrevocable election to come under the discretionary provisions by April 12, 1987 in order to receive irrigation water for the land." The Bureau also said no to a request to drop the requirement that land under recordable contract will be subject to the full cost provisions of law if the land is leased to another individual whose landholding exceeds the acreage limit.

The most comments were received asking the Bureau to clarify an issue regarding prior law recipients who owned land in more than one district. The final regulations included language specifying that prior law recipients who owned land in several districts before December 6, 1979, were entitled to maintain the ownership as long as no more than 160 acres were owned in each district. After December 6, 1979, the limitation would be 160 acres westwide.

The Bureau also rejected a whole series of comments asking the agency to make certain modifications. For example, recipients wanted the Bureau to change requirements for leases (such as that leases must be in writing), extend

the lease term beyond ten years, and stipulate that written leases would apply only to ownerships larger than fifty acres. Many comments were made requesting exemptions from the reporting and certification requirements. The Bureau chose to allow landowners with forty acres or less westwide to avoid the reporting and certification requirements.

And finally, the Bureau made one other important change when it issued the final regulations. The issue had to do with the repayment rate districts under the discretionary provisions would pay. The issue was presented by Hal Candee, Senior Attorney for the Natural Resources Defense Council in a 1989 article:

> ...districts that come under the RRA must pay at least enough to cover full operation and maintenance (O&M) charges. For those districts with whom the Bureau has a typical "9(d) repayment contract," this determination is easy, because such contracts specify separate charges for O&M versus capital repayment. In some projects, such as the Central Valley Project, districts have "9(e) water service contracts," which contain a single rate that does not distinguish between O&M charges and capital charges. Operators and districts in California used this lack of a bifurcated rate in their contracts to argue against the Bureau's proposed rules, which required that all amended contracts include charges for both capital repayment (without interest for all lands below 960 acres) and full O&M costs. The water users argued that the RRA only allowed an increase in the single contract rate sufficient to cover full O&M, not full O&M plus capital. While the growers' view clearly is contradicted by existing reclamation law, which requires all contracts to collect "an appropriate share" of capital costs, the Department bowed to the growers' pressure and changed the proposed rule. The final 1983 rule required that the amended contract rate be set sufficiently high to cover only O&M costs (Candee 1989, 670-671).

The 1987 Rules

The debate and discussion for the second rulemaking proceeding in 1987 was much more controversial and covered more issues. The initial goal was to develop regulations to implement the hammer clause, which was scheduled to go into effect on April 12, 1987. But many other issues also arose; most of which had been covered in the first set of rules. The following is a description of how the Bureau dealt with some major areas.

One of the most contentious issues the Bureau addressed had to do with the leasing provision. In the RRA, Congress stated that the pricing provision would apply to leased land. This meant that for recipients under the discretionary provisions, full cost would apply to land leased above 960 acres while for prior law recipients, after April 12, 1987, any acreage above 160 acres would be charged full cost. Given the large difference between the subsidized rate and the full cost rate, some farm operations larger than 960 acres might prove to be financially unsuccessful.

In 1986, allegations began to surface that some large-scale landowners were taking certain steps to avoid paying the full cost rate. According to research conducted by the California Institute for Rural Studies and later by the U.S. General Accounting Office (U.S. General Accounting Office 1989), the landowners were reorganizing their operations into separate 960-acre parcels which were then managed by a

farm management company. Through these arrangements, the farm operation as an ongoing business, did not change. The only difference was that whereas previously one owner controlled the entire operation, now several owners were involved; but each one owned no more than 960 acres. Hal Candee illustrated the basic arrangement in his 1989 article:

> For example, a 7,000-acre operation in Westlands previously operated under a lease would simply "restructure" the leased lands into separate 960-acre parcels, each owned by a different business partner or investor, who then collectively "manage" the entire operation via a separate company that is owned or controlled by the same partners or investors (Candee 1989, 673).

And a specific example was described in an article in a Northern California newspaper:

> 'With the crops we're growing here today, we simply could not pay full-cost rates and survive,' said Bill McFarlane, whose Cinco Farms uses almost 20,000 acre-feet yearly to raise 6,700 acres of cotton, wheat, tomato and other crops near Huron, in southern Fresno County.
>
> McFarlane said he and his partners plan to split their ranch into five separately owned farms, each small enough to get subsidized water on most of their land. But they also plan to form a collective "farm management" company to provide for joint ownership of costly machinery and to perform many of the actual farming operations.
>
> 'We have to deal with the realities of agriculture out here,' said the 61-year-old McFarlane. 'And the reality is that we need to maintain some of the efficiencies of scale, and this is one means of doing it,' (Diringer 1987, 4).

And the article continued:

> Although no one can say just how many growers are pursuing the same course, bureau officials acknowledge that there are others. That is why the agency proposed new rules in November that would outlaw the

practice (Diringer 1987, 5).

The Bureau of Reclamation responded by stating in the proposed rules that any "farm organization in which the farm manager or operator had any economic interest, direct or indirect, would be considered to be a lease." And therefore, the full cost rate would be charged above 960 acres for these farms. Farm operations where the manager received a fee that did not depend on the productivity of the farm would not be considered a lease. The Bureau also provided an exemption for "legitimate" custom farming operations and nonreclamation dependent activities. But it was up to the farm operator to show that an operation larger than 960 acres was not a lease.

The Bureau received a flood of comments about the leasing provision. Central Valley Representative Tony Coelho (D-California) insisted that:

> ...in 1982 Congress meant to allow the "farm management" option, which would permit centralized management of the now-separate holdings. The bureau never should have proposed a tighter set of rules, said Coelho. 'They should have left things alone.' (Sinclair, 1983).

In response to these charges, the Bureau changed the definition of a lease. The new definition would include "only those farm management arrangements in which the operator assumes the economic risk in the operation and management of the farm." If the payment received by the farm manager did not depend on the productivity of the operation, there would be no limit on the size of the overall unit that could receive water at the non-full-cost

rate. The final rules also eliminated the requirement that the landowner demonstrate that the farm operation was not a lease; but the operator must provide information regarding the farm organization at the request of the Bureau.

Another issue addressed in the second set of regulations were trusts. Like the issue of farm management arrangements, some critics maintained that trusts were being used to avoid paying the full cost rate for reclamation water received above 960 acres. According to Hal Candee, a 1986 Bureau report concluded that the 1983 regulations "did not place sufficient restrictions" on trusts, and:

> ...as a result, trusts could become a means for circumventing the acreage limitation of the RRA... [P]arents who are subject to the discretionary provisions could establish a separate trust for each of their minor children. They could then claim, as some already have, that each child is actually a nondependent and entitled to own and receive irrigation water on 960 acres. The claim for a child's nondependency has even been made based on the child's holding title to Reclamation land. By permitting such holdings to count, basically all minors can prove nondependency (Candee 1989, 675-676).

The proposed rules placed certain restrictions on trusts. Trusts must be irrevocable. Also, if the trust's beneficiaries were minors, they could not be declared financially independent the first year if "the beneficiaries had been listed the previous year as dependents on the owner/grantor's tax returns."

The Bureau received over seventy-five comments critical of the trust criteria. In a review of the RRA, The Bureau decided that trust agreements did not have to meet the criteria set forth in the proposed rules. Thus the

final rules "did not require that trusts be irrevocable to include the acreage in the beneficiary's entitlements. In addition, the final rules allowed a beneficiary to use income derived from the land (even though farmed by the parent in the case of a minor) as the basis of the beneficiary's independent status. This provision was adopted in response to water users' comments on the proposed rules that "the Act itself does not provide any limitations on trusts other than the limitations on the ownership entitlement of any single beneficiary'" (Candee 1989, 677). The final rules specify that trust agreements must be in writing, be approved by the Secretary, and identify the beneficiaries.

An issue that was addressed in the 1983 rules resurfaced in 1986. In the 1983 rules, the Bureau specified that the water rate must "be at least sufficient to recover all operation and maintenance charges." Under this interpretation, very little revenue would be collected to apply to the district's share of capital costs. In the 1986 proposed rules, the Bureau changed its position regarding this issue and said that:

> The emphasis within the RRA on the collection of at least full O&M should not be interpreted to mean that the law placed a deemphasis on the recovery of capital expenditures. It did not. Sections 203 and 208 in combination clearly mandate the measures necessary to correct any past contracting practice which may have inadvertently resulted in annual direct repayments that do not at least cover O&M. The recovery of the capital investment, at least up to the agricultural users' ability to pay, is still one of the underpinnings of Reclamation law and was not changed by RRA (U.S. Department of the Interior 1986).

The final rules adopted in 1987 increased the capital repayment obligation, but not to the extent of the proposed rules. They provide that "if a district's contract rate, less the O&M costs of delivering water, is positive when the district amends its contract to conform with the RRA, that positive difference must still be paid annually to the United States to cover capital costs, in addition to any adjusted O&M costs. If the contract rate is equal to or less than O&M costs, however, the rate will be increased only to cover O&M costs, and no additional payments to cover capital costs will be required."

On a number of issues, the proposed regulations issued in 1986 included new restrictions which were relaxed or eliminated when the final rules were published. For example, the proposed rules required farm operators to complete the certification and reporting forms. This provision was dropped in 1987. The proposed rules also contained penalty provisions for any "scheme or device designed to evade or having the effect or evading the rules", and for failing to report landholding information. The final rules weakened the penalty provisions. For example, while the rules retain the sanction of terminating water for failing to report information or trying to evade the rules, the final rules do not indicate what penalty applies to situations where water has already been delivered to the water user. The proposed rules would not have permitted nonreporting irrigators to continue receiving

water service without risking higher charges.

The final rules also made certain changes with respect to members of legal entities that were less restrictive. For example, the final regulations clarify that members of a legal entity do not automatically become qualified or limited recipients by virtue of a district action that causes the entity to become subject to the discretionary provisions. Members of a legal entity only become limited or qualified recipients if they (1) make an irrevocable election or (2) also own land directly, rather than through an entity, in a district that has become subject to the discretionary provisions. Likewise, based on an opinion of the Department of the Interior Solicitor (February 27, 1984) language was added which clarified that in an irrevocable election by an individual who is a member of a legal entity, that action is not binding on the entity. And in response to thirty-seven comments, the final regulations state that members of legal entities do not have to be U.S. citizens or residents.

As stated above, the main purpose of the second set of regulations was to provide for implementation of Section 203(b), the "hammer clause." The proposed regulations clarified that 203(b) would be applied on a westwide basis and all forms of landholdings under prior law (including husband and wife ownerships) would be limited to receive subsidized water on no more than 160 acres of owned land although a husband and wife operation can still receive

subsidized water on 320 acres of owned land. During the hearings on the proposed regulations, there were numerous requests that the Bureau not implement Section 203(b), or at least delay implementation. The Bureau refused the request on the grounds that the Section was the law. The Bureau received thirty-two comments and agreed with the position that a husband and wife operation would be eligible to receive subsidized water on 320 acres of leased land after 203(b). Nineteen comments were received to apply the Section on a district-by-district basis. The Bureau said no to this request. Fourteen comments were received to entitled each partner in a partnership to receive subsidized water on 160 acres. The Bureau accepted this provision because they reasoned that the entitlement was computed on an individual, rather than an entity basis. Thus each member of a prior law entity (other than a corporation) could receive subsidized water on 160 acres with no limit on the noncorporate entity itself.

Reaction to the RRA Regulations

Congressional and editorial reaction to the final 1987 rules was sharp and critical. Representative George Miller, chair of the Water and Power Subcommittee, criticized the regulations as having "severely undermined the 1982 law in many respect by permitting the use of trusts, farm management arrangements and other devices to circumvent the acreage limitation." He added that the rules were "a

double-cross," an "outrage" and "a horrible insult to Congress" (Shabecoff 1987). And, "These rules are riddled with loopholes big enough to drive a truck through, or a corporate farm" (Peterson 1987, A25). "It's a fraud being perpetrated on the Congress and the taxpayers," said Senator Bill Bradley (D-New Jersey), chair of the Senate Energy and Natural Resources, Subcommittee on Water and Power. He called the rules a "drastic retreat" that will invite abuse of reclamation law. "It is crystal clear that Congress intended that a limit be placed on the amount of a federal subsidy available to a landowner or farm operator" (Peterson 1987, A25). Farmers and water suppliers in the West also assailed the new rules, saying they were an intrusion into their right to make their own decision on how to run their own farm.

Dale Duvall, the Commissioner of the Bureau of Reclamation, said the rules "reflect our commitment to uphold the law and provide a reasonable and realistic regulatory framework to govern the reclamation program throughout the West," (Shabecoff 1987). He added that the new regulations would provide "a stable and predictable climate" for farmers and create "an administratively practical process" for assuring compliance with the 1982 Reclamation Reform Act. Duvall added that it was impossible to predict the full impact of the new rules. But according to an article in the San Francisco Chronicle, "sources within the bureau said there is a good chance that none of

the growers will end up paying 'full cost.' 'We don't have the resources the IRS has,' Duvall said. 'We are not a regulatory agency, so we have to write rules that are acceptable to the water community. So they will have a shared responsibility with us to help carry out the purpose of the act.'" (Diringer 1987, 1).

CHAPTER SIX

Almost ten years have passed since the Reclamation Reform Act (RRA) was enacted into law. The RRA represented some major changes in the reclamation program and several new policy directions. The RRA also provided some options for reclamation recipients. The purpose of this chapter is to identify how these provisions and options have changed the program. The next, and final, chapter discusses how well the RRA fulfilled the objectives of the various reclamation constituencies and offers some thoughts on the future direction of the program.

To briefly review the main features of the RRA, the Act increased the acreage limit to 640 acres or 960 acres (depending on the category of recipient). A two-tier system was created whereby irrigation districts and individual recipients would voluntarily or involuntarily come under one of two sets of provisions; the prior law provisions and the discretionary provisions. The main differences between the two provisions are the acreage limit level and the acreage level at which the full cost rate applies. The RRA also required that irrigation districts pay for all operation and maintenance activities conducted by the Bureau for the district. And finally, individuals and districts had the opportunity to receive a higher acreage limitation through the application of the equivalency provision.

The information presented in this chapter was drawn

from a number of sources. A substantial amount of statistical data was provided by the Acreage Limitation Office, Bureau of Reclamation in Denver, Colorado. Acreage limitation personnel in the five Bureau of Reclamation regional offices were interviewed as well as managers in the eighteen irrigation districts selected by the BOR as a representative subset of all reclamation districts for the EIS. Numerous documents including BOR annual reports prepared for Congress, GAO evaluations, and Bureau audits were also reviewed.

Most Irrigation Districts are Subject to the RRA Discretionary Provisions

Under the Reclamation Reform Act, districts can remain under prior law or elect to become subject to the discretionary provisions. Districts that are under prior law could continue to receive subsidized water on unlimited leased acreage until April 12, 1987 when all water delivered to leased land above 160 acres would be charged the full cost rate. Those districts that voluntarily or involuntarily are subject to the discretionary provisions receive subsidized water on 960 acres. Above that limit, the full cost rate is charged.

As of September 1991, a majority of irrigation districts in the reclamation program were subject to the discretionary provisions of the RRA. According to information collected by the Bureau of Reclamation,

approximately fifty-seven percent (or 200) of the 355 water districts are entitled to take advantage of the discretionary provisions including the receipt of subsidized water on 960 acres (U.S. Department of the Interior 1991, i-ii). (See Table 20.) Two years after the RRA was approved, thirty-eight percent of all districts were subject to the discretionary provisions. From 1984 to 1986, there was a slight increase in the total percentage. (See Figure 3.) The largest increase occurred between the years 1986 and 1987 when there was a seven percent increase. Water recipients in districts, which were not subject to the discretionary provisions by May 13, 1907, would have to pay the full cost rate for water received on acreage above 160 acres. This probably explains the noticeable increase between 1986 and 1987.

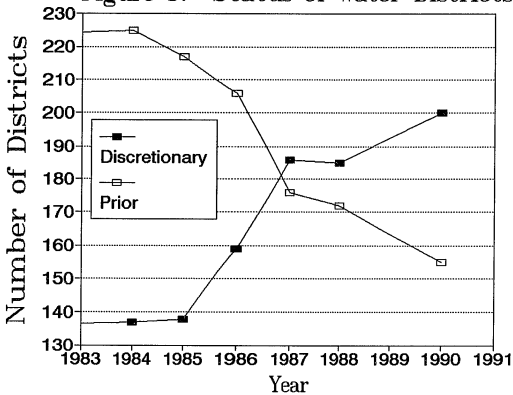
The percentage of districts subject to the discretionary provisions is not uniform among the five Bureau of Reclamation regions. (The geographical area served by the Bureau of Reclamation is divided into regions. Prior to 1989, there were six regions. In 1989, a reorganization effort reduced the number to five. See Table 21.) The Upper Colorado Region has the highest percentage of districts under the discretionary provisions with an average annual percentage of over ninety-six percent (see Figure 4). The Great Plains and Lower Colorado Regions also have relatively high percentages of districts subject to the discretionary provisions. The Great Plains Region averaged

Table 20 Status of Water Districts that Receive Reclamation Irrigation Water (September 1, 1991)

Water districts subject to the discretionary provisions	200
Water districts subject to prior law	155
Water districts subject to acreage limitation	355
Water districts exempt from acreage limitations because repaid construction obligations or legislative / administrative action	230
Water districts that receive Reclamation irrigation water	585

Source: U.S. Department of the Interior 1991a, i-ii.

Figure 3. Status of Water Districts



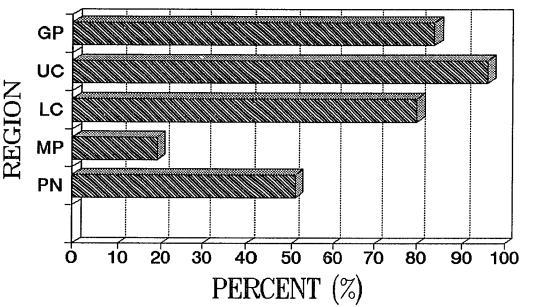
Source: U.S. Department of the Interior 1989a, 23.

Table 21 Bureau of Reclamation Regional Offices

Region	Headquarters	Service Area
Pacific Northwest	Boise, Idaho	Washington, parts of Idaho, Montana, Nevada, Oregon, Wyoming
Mid -Pacific	Sacramento, California	parts of California, Nevada, and Oregon
Lower Colorado	Boulder City, Nevada	Parts of Arizona, California, Nevada, New Mexico, Utah
Upper Colorado	Salt Lake City, Utah	Parts of Arizona, Colorado, Idaho, Nevada, New Mexico, Texas, Utah, Wyoming
Great Plains	Billings, Montana	Kansas, Nebraska, North Dakota, Oklahoma, and South Dakota, parts of Colorado, Montana, Texas, Wyoming

Source: U.S. Department of the Interior 1991a, 15.

Figure 4. Average Annual % of Districts Subject to Discretionary Provisions



Source: U.S. Department of the Interior 1989a, 23.

eight-four percent participation while the Lower Colorado Region averaged a bit over eighty percent participation. The Pacific Northwest Region averaged a bit over fifty percent participation. The lowest percentage of participation was the Mid-Pacific Region where less than twenty percent of the districts are subject to the discretionary provisions. In fact, approximately seventy percent of the districts not subject to the discretionary provisions are located in the Mid-Pacific Region.

The five BOR regions can be characterized by three factors: (1) the size of farm operations, (2) the value of crops grown, and (3) the percentage level of districts subject to the discretionary provisions. Farm size can be classified as either small, medium, large, or mixed. "Small" is characterized by districts where at least eighty percent of the farms are less than 320 acres. "Medium" covers districts where maximum farm size is 640 acres. And "high" applies to districts with farms larger than 640 acres. A region that has a combination of different ownership sizes is labeled "mixed." Crop value is defined as low, medium, high, or mixed. Crop value defined as "low" is under $350 per acre, "medium" is $351 to $600 per acre, and "high" is over $600 per acre. Likewise, regions that have a wide variety of crop values is "mixed." The level of districts subject to the discretionary provisions is low, medium, or high. "Low" is under thirty-three percent, "medium" is between thirty-three and sixty-six percent, and

"high" is more than sixty-six percent of the districts in the region are subject to the discretionary provisions.

The characteristics of the five regions are summarized in Table 22. The information is based on an analysis of the 18 study districts. The Upper Colorado Region (UCR) is characterized by small farms. For example, in the three UCR study districts, over sixty percent of the farms are less than 160 acres. Crop value is low, typically about $250 per acre. Much of the irrigated land produces winter feed to help support cattle operations. Most of the land is owned and farmed by a husband and wife. The Lower Colorado Region (LCR) has a mixture of different farm sizes. For example, one district is dominated by farms under 160 acres while another district includes farms larger than 1,000 acres. In contrast to the UCR, crop value for LCR farms is very high. One study district reported an average crop value of $1,076 per acre and a second district had farms that typically reached $2,252 per acre. Crops grown in the LCR cover a wide range and include cotton, citrus, and fruit orchards. These crops are typically high-value commodities. The Great Plains Region (GPR) is characterized by medium-sized farms. Crop value is low, typically below $250 per acre. One district reported an average crop value of $65 per acre. Crops grown include forage crops, hay, and sugar beets. Farm size in the Pacific Northwest Region (PNR) is mixed. For example, the farms in one district are under 160 acres while the farms in another district approach 960 acres.

Table 22. Characteristics of Bureau of Reclamation Regions

Region	Farm Operation Size	Crop Value	Districts (a)
Pacific Northwest	mixed	mixed	medium
Mid-Pacific	high	mixed	low
Lower Colorado	mixed	high	high
Upper Colorado	small	low	high
Great Plains	medium	low	high

(a) These districts are subject to discretionary provisions.

Source: Variety of U.S. Department of the Interior reports and interviews conducted with irrigation district managers.

Crop value is also mixed, ranging from $422 to $2,165 per acre. The district with the very high crop value is dominated by apple orchards. The farms with the lower average crop value grow mainly forage and cereal crops. The Mid-Pacific Region (MPR) districts are classified in the "high" farm size category due to the large number of farms greater than 640 acres. Like the PNR, crop value is mixed, with an extremely wide range of $205 to $5,997 per acre. As would be expected, the diversity of crops grown is great and includes cotton, cereals, alfalfa, vegetables, pasture, citrus and avocados, and rice.

The information displayed in Table 22 presents some interesting findings. First, there does not seem to be a correlation between farm size and the percentage of districts subject to the discretionary provisions. Regions with small- and medium-sized farms as well as a variety of farm sizes all rate in the "high" category. One would have predicted that districts in the Upper Colorado Region, in particular, would have remained under the prior law provisions because given the small size of the farms in the Region, the full cost rate would not have applied. Second, because the full cost rate would apply to farms larger than 160 acres after May 13, 1987, one would have predicted that a high percentage of Mid-Pacific Region districts would be subject to the discretionary provisions in order to avoid or reduce the impact of the full cost rate. But as was stated previously, only twenty percent of the districts in the Mid-

Pacific Region are subject to the discretionary provisions.

Information obtained through interviews with regional office staff and the staff and managers in the study districts, as well as a review of certain Bureau reports sheds some light on the information in Table 22. Notwithstanding the lack of a strong correlation between farm size and level of districts subject to the discretionary provisions, in general, most districts reported that they amended their contracts to come under the discretionary provisions in order to take advantage of the increased acreage limit and avoid or minimize the application of the full cost rate. A number of districts said the primary reason they did not amend their contracts was because the district had relatively small farms and therefore saw no advantage in coming under the discretionary provisions.

Unique features in various Bureau Regions and irrigation districts influenced decisions regarding whether to remain under the prior law provisions or transfer to the discretionary provisions. For example, the Lower Colorado Region (LCR) includes the Central Arizona Project (CAP). CAP water did not become available until January 1, 1989. And on that date, district lands receiving CAP water became subject to the acreage limitation provisions. The districts also had to enter into a water contract with the Bureau and under the "new contract" provision of the RRA, these districts are automatically subject to the discretionary

provisions. Ten of the thirteen LCR districts subject to the discretionary provisions are in the CAP.

Bureau officials in the Pacific Northwest Region identified several reasons why districts in the Region would remain under prior law (U.S. Department of the Interior 1991a, 16). One reason would be "to protect the ownership and nonfull-cost entitlements of nonresident aliens who would lose all entitlements for lands held directly under the discretionary provisions" (U.S. Department of the Interior 1991a, 16). A second reason would be to "protect the ability of certain legal entities that would be classified as limited recipients under the discretionary provisions and did not receive Reclamation irrigation water on or before October 1, 1981, to receive nonfull-cost water. Such limited recipients must pay the full-cost rate for all Reclamation irrigation water delivered to their landholdings under the discretionary provisions" (U.S. Department of the Interior 1991a, 16). A third reason would be to enable certain legal entities to own and/or receive subsidized water on more than 960 acres. The Bureau pointed out that, "...a partnership with seven owners, each holding an equal interest, would have an entitlement of 1,120 acres (7 times 160 acres) under prior law. Conversely, under the discretionary provisions as qualified recipients, all partnerships are limited to a maximum of 960 acres, regardless of the number of owners involved" (U.S. Department of the Interior 1991a, 16).

Some water district contracts in the Pacific Northwest Region (PNR) allow landholders to repay their construction cost obligation early. If the landholder selects this option, he/she is exempt from the acreage limitation. This feature is virtually unique in the PNR. According to the Bureau, about 1,000 water recipients in fifteen water districts have paid their cost obligation in full (U.S. Department of the Interior 1991a, 16).

Among all the Bureau Regions, the Mid-Pacific Region (MPR) had the lowest percentage of districts subject to the discretionary provisions. This reluctance to change their contract was influenced by at least two factors. The first factor is that the water rate for most recipients is less under prior law. Districts subject to the discretionary provisions must pay a rate that covers at least the full operation and maintenance (O&M) cost. Many MPR districts have fixed water rates that last for the duration of the contract. According to the Bureau, "[o]ver time, inflation has changed the repayment situation from where the contract rate covered the full O&M cost and provided some payment towards their construction obigation to a condition where the contract rate no longer covers the full O&M costs. If these water districts were to amend their contracts to become subject to the discretionary provisions, all water users in the districts would be required to pay, at a minimum, the higher full O&M water rate. By not coming under the discretionary provisions, these districts help

farmers with less than 160 acres (or 320 acres) who would not benefit from the expanded acreage limits, by keeping the existing low water rates for the duration of the water contracts" (U.S. Department of the Interior 1991a, 28). As the contracts expire (a process that will be completed by 2022), MPR districts with new contracts will be subject to the higher water rate under the discretionary provisions.

Another reason prior law districts in the Mid-Pacific Region might have decided to remain under prior law is they were waiting to see whether section 203(b) would be declared unconstitutional. The court case, Peterson v. Department of the Interior, (9th Cir. March 1990), challenged the constitutionality of the section. According to the Bureau, "[i]f section 203(b) had been overturned by the Supreme Court, those water districts that had amended their contracts to come under the discretionary provisions and those individuals who had made irrevocable elections would have continued to be bound by their actions and, thus, would be subject to both ownership and pricing limitations. But those water districts that had remained under prior law would only be subject to the ownership limitations" (U.S. Department of the Interior 1991a, 29). This point was raised in an interview with the manager of an irrigation district in the Pacific Northwest Region. He said that the district waited until "the eleventh hour" to amend its contract, and did so only when it was clear the hammer clause would be implemented. He also said that the district

knew it would need to build more facilities, so eventually it would have to change its contract to come under the discretionary provisions.

The Irrevocable Election was Utilized to Avoid Full-Cost Rate

Information obtained by the Bureau of Reclamation shows that many individuals and entities elected to come under the discretionary provisions by filing for an irrevocable election. Individuals in districts that decide to stay under prior law can become subject to the discretionary provisions (and receive the benefit of the increased acreage limit) by filing for an irrevocable election with the Bureau. By 1990, almost 7,000 individuals and entities had elected to come under the discretionary provisions by filing for an irrevocable election. Almost eighty percent of the irrevocable elections occurred before May 13, 1987; the date full-cost rates would be charged in prior law districts. (See Table 23.) And of those that took action before the May 1987 date, the majority occurred during the six-month period of November 1986 to May 1987.

A comparison of the data on districts subject to the discretionary provisions and irrevocable elections shows that there is a high correlation between the Bureau Regions that had a high number of irrevocable elections and a low percentage of districts subject to the discretionary provisions and vice versa. For example, the Mid-Pacific

Table 23. Irrevocable Elections (a)

Region	Before Nov 6,1986	Nov 6,1986 May 13,1987	After May 13,1987
Pacific Northwest	647	889	476
Mid-Pacific	1,510	2,350	770
Lower Colorado	87	41	23
Upper Colorado (b)	26	0	2
Missouri Basin (b)	65	35	11
RECLAMATION TOTAL	2,335	3,315	1,282

(a) This table includes the number of individuals and entities within prior law districts who elected to come under the discretionary provisions of the Reclamation Reform Act of 1982. the draft rules to implement Section 203 (b) were issued on November 6, 1986. Prior law landholders had until 13 May, 1987, to file irrevocable elections and avoid any full-cost charges.

(b) totals for the Southwest Region are included within the totals for the Upper Colorado and Misouri Basin Regions.

Source: U.S. Department of the Interior 1989, 24.

Region has the highest percentage of irrevocable elections (67 percent), but the lowest percentage of districts subject to the discretionary provisions. In contrast, the Upper Colorado Region has the highest percentage of districts subject to the discretionary provisions and the lowest percentage of irrevocable elections (0.4 percent).

Interviews with managers in the irrigation districts provide a clue as to why irrevocable elections were used by so many individuals. Districts with predominantly small farms that did not want to come under the discretionary provisions, had the landholders with farms approaching 160 acres submit an irrevocable election form. Some districts with many large farms delayed district action until they knew about the fate of section 203(b). In the meantime, landholders with farms larger than 160 acres were urged to submit an irrevocable election so the "hammer clause" would have no or minimal impact. One district manager from the Pacific Northwest Region remarked that after the Reclamation Reform Act was passed, he tried to get all the "over 160-acre" landholders to file for an irrevocable election. Over two hundred landholders did so, but as the May 1987 deadline approached, almost thirty landowners had not acted. The manager said they decided to amend the district contract "just to be safe."

The Equivalency Provision was Used by Very Few Districts

The equivalency provision has been used very sparingly

by irrigation districts. Under the Reclamation Reform Act, equivalency is available only to those districts that are subject to the discretionary provisions. As of September 1991, only four groups of districts had asked the Bureau to conduct a formal equivalency determination. These areas are the San Luis Agriculture Area (Mid-Pacific Region), the Wellton-Mohawk Irrigation Area (Lower Colorado Region), the Fresno Agriculture Area (Mid-Pacific Region), and the Columbia Basin Agriculture Area (Pacific Northwest Region). See Table 24 which displays the acreage adjustments allowed for each agricultural area under their specific equivalency determination. According to the Bureau, a landowner that had 160 acres of class 1 land in the San Luis Agriculture Area would be eligible to receive subsidized water on just 160 acres. If the total 160 acres were classified as class 2, subsidized water could be secured for 187.2 acres. And if all the land was of poor quality (class 3), then 209.6 acres could receive non-full cost water. If the landholder's property was a combination of class 1, 2, and 3 land such that she/he had 25 percent class 1, 25 percent class 2, and 50 percent class 3, then the total acreage eligible to receive subsidized water would be:

Class 1 40 x 1.00 = 40 acres
Class 2 40 x 1.17 = 46.8 acres
Class 3 80 x 1.31 = 104.8 acres
TOTAL 191.6 acres

From interviews with managers in the eighteen study

Table 24. Equivalency Land Classifications for Reclamation Water Districts

Agriculture Area	Class1*	Class2*	Class3*
San Luis	1.00 160	1.17 187.2	1.31 209.6
Wellton-Mohawk Irrigation	1.00 160	1.36 217.6	2.22 355.2
Fresno	1.00 160	1.21 193.6	1.85 296
Columbia Basin	1.00 160	1.29 206.4	1.84 294.4

Source: Interview with Bureau of Reclamation official.

* Class1 corresponds to land with the highest productivity and Class3 for lowest.

districts, several reasons account for the low number of districts that have taken advantage of the equivalency provision. Probably foremost is the fact that the district must reimburse the Bureau for conducting the various tasks associated with equivalency. Several districts related that they were interested in equivalency until they approached the Bureau and learned what it would cost. The total cost varied; from a low of $15,000 up to $50,000. Most districts considered this too high. A contributing factor was that the RRA included extensive certification and reporting requirements for the landholders. This provision put a strain on the limited resources of the irrigation district office. Additional funds to finance an equivalency determination were simply unavailable.

From the interviews, it is clear that another factor was that many districts were unaware of the opportunity to increase the acreage limitation level through the equivalency provision. The Reclamation Reform Act introduced numerous provisions that changed fundamental aspects of the program. The implementing regulations were detailed, complex, and extensive. As such, many districts were busy meeting the program's basic requirements and were simply unfamiliar with some of the "optional" aspects of the RRA. Therefore, it is not too surprising that the four areas that did take advantage of the equivalency provision included some districts that had a relatively large district office staff and a history of involvement in reclamation

issues.

The Full Cost Rate is Used to Serve Several Purposes

Under the Reclamation Reform Act, the full-cost water rate is charged for water delivered to acreage above a certain level. Individuals and districts under the discretionary provisions are charged full-cost above 960 acres (for a qualified recipient) or 640 acres (for a limited recipient). If subject to the prior law provisions, full cost is not charged until May 1987, at which time its application is to acreage above 160.

There is very little information on the amount of revenue collected through the application of full cost. According to an interview with the Bureau's Acreage Limitation Office in Denver, prior to 1988 no information was collected on full cost. Interviews with irrigation district managers found that in most districts, very few individuals were subject to full cost. And in the districts that had lands subject to full cost, it applied to only a few landholders and usually for only one or two years. For example, in the Wellton-Mohawk Irrigation District, two farmers were charged the full cost rate for some of their landholding for two years. And in the East Columbia Basin Irrigation District, one operator pays full cost on fifty acres.

According to the Bureau, reclamation water should not be delivered to land that is ineligible. But while this is

Bureau policy, such lands do occasionally receive reclamation and the Bureau acknowledged that once it has been delivered, the Federal Government cannot recover the water. Thus, in an opinion issued on March 8, 1988, the Department of the Interior Solicitor determined that "the Federal Government is entitled to recover the value of its property interest in the water that has been illegally delivered" (U.S. Department of the Interior 1991a, 9). The Solicitor's office also found "that in defining full-cost in the RRA, Congress had established what it believed to be the value of the Federal Government's interest in the water. Thus, the full-cost rate can be used to bill water districts for the delivery of irrigation water to ineligible lands" (U.S. Department ofthe Interior 1991a, 9).

The new policy further stated that the payment of the full-cost rate did not entitle the landholder to continue to receive the ineligible water. The Bureau said that, "Water deliveries to a noncompliant landholder must be terminated and cannot be resumed until the problem has been corrected. The application of the full-cost rate is not a penalty. In collecting [this] rate, the Federal Government recovers only the value of its interest in irrigation water delivered to ineligible recipients. It does not excuse the landholder" (U.S. Department of the Interior 1991a, 19). The Bureau has usually applied the full cost rate to situations where reclamation water was delivered to landholdings for which a RRA form was not on file or the land was otherwise

ineligible to receive reclamation water.

As of December 1990, the Bureau had found approximately 1,250 instances of noncompliance with the forms requirement and as of February 1991, it had billed reclamation districts $1.5 million in full-cost rate charges (U.S. Department of the Interior 1991a, 12). According to the Bureau, in almost all cases, the landholders turned out to be within the ownership and non-full cost pricing entitlements of Reclamation law. The remaining two percent of the 1,282 cases involved applying the wrong rate for water delivered to eligible lands, delivering water to lands ineligible because they were owned in excess of ownership limitations, or there were problems associated with irrevocable elections in general, or problems associated with irrevocable elections not being properly submitted.

According to the Bureau, one of the main problems with using the full-cost rate in situations of noncompliance is that given the broad range of full-cost rates in different districts, the result can be a very inequitable application. Full-cost rates in different districts range from 0.05 to over $900 per acre-foot (U.S. Department of the Interior 1991a, 90). This difference is due to the fact that the rate is based on factors that vary among districts such as when the project was built, the cost of the project, and the portion ofthe project cost allocated to irrigation. A low full-cost rate "provides little, if any, incentive for water users to comply with the acreage limitation provisions"

(U.S. Department of the Interior 1991a, 90). For example, in the Pacific Northwest Region, many districts have full-cost rates of $1.50 per acre-foot. Some district managers feel it is easier and cheaper to pay low full-cost rates than to administer fully the acreage limitation provcisions. Another aspect of the acreage limit is that since it is one of the only enforcement tools available to the Bureau, the full-cost rate "is applied in a wide variety of dissimilar situations, ranging from water deliveries to acreages held by landholders who fail to submit RRA forms to cases where reclamation irrigation water is delivered to excess acreages" (U.S. Department of the Interior 1991a, 91).

Various Farm Reorganization Methods have Reduced the Wide Distribution of Reclamation Benefits

One of the principal purposes of the RRA was to limit the amount of owned and/or leased land eligible to receive federally subsidized water to a maximum of 960 acres. A review of reports conducted by the General Accounting Office as well as audits by the Department of the Interior's Office of Inspector General and the Bureau of Reclamation itself show that farms larger than 960 acres have been reorganized to create an entity that consists of multiple landholdings. Each landholding is within the 960-acre limit, and thereby qualifies for non-full cost water, but the original operation continues to be operated as one large farm.

U.S. General Accounting Office Studies

The General Accounting Office (GAO) evaluated the implementation of the acreage limit in two studies entitled "Water Subsidies: Basic Changes Needed to Avoid Abuse of the 960-Acre Limit" (U.S. General Accounting Office 1989) and "Water Subsidies: The Westhaven Trust Reinforces the Need to Change Reclamation Law," (U.S. General Accounting Office 1990b). The first report was requested by Representative George Miller who served as chair of the Subcommittee on Water, Power and Offshore Energy Resources, House Committee on Interior and Insular Affairs. In the study, GAO analyzed eight farms from Washington's Columbia Basin Project and California's Central Valley Project that were larger than 960 acres "before the 1982 act was fully implemented." The Bureau identified these regions "as having the most acreage that could potentially be subject to the act's full-cost provision." GAO wanted to see what actions the landholders took given that they would face imposition of the full cost water rate. The GAO found that in two of the eight cases, the farmers had sold their leased land above 960 acres before April 1987. The other six operations had owners or lessees who reorganized their large farms into multiple, smaller landholdings and so were eligible to continue to receive federally- subsidized irrigation water from the Bureau. Essentially the operations "continue to be operated collectively as single large farms, much as they were before being reorganized" (U.S. General Accounting Office 1989,

18).

The reorganizations occurred through the creation of a combination of partnerships, limited partnerships, corporations, and trusts. Three of the six cases used all these tools, except the limited partnership (U.S. General Accounting Office 1989, 18). According to the GAO, one example involved "a 12,345-acre cotton farm (roughly 20 square miles), operating under a single partnership, was reorganized into 15 separate landholdings through 18 partnerships, 24 corporations, and 11 trusts. All of the 15 landholdings were eligible to receive subsidized water on land up to 960 acres. Indicators that the 15 landholdings continue to be operated as one large farm include (1) the four original partners continue to manage all 15 landholdings, (2) at least one of the four partners is either the president or vice president of the corporations that participate in the agricultural business decisions of nine of the landholdings totaling about 8,000 acres, and (3) the 15 landholdings are operated with a single loan secured in common by their combined crops and other farm assets" (U.S. General Accounting Office 1989, 18).

In another case, ten members of the same family put their land into a revocable trust that covered 3,116 acres. They made themselves beneficiaries of all income from the trust. The family had operated a farm of less than 960 acres in 1987. The trust they organized allowed them to receive subsidized water on all 3,116 acres. The GAO

pointed out that, "[s]ince there were 10 family members and the farm is comprised of 3,116 acres (or about 312 acres per member), they meet both of the act's requirements. And, if they should dissolve the trust at any time, the land would simply revert back to themselves as the grantors" (U.S. General Accounting Office 1989, 19). Amendments passed in 1987 addressed cases such as this by requiring that land held in a revocable trust be attributed to the grantors. "The 1987 amendment was meant to ensure that large landholdings are not placed in trust with multiple beneficiaries to meet the act's requirement that no one beneficiary's interest exceeds 960 acres only to be later revoked with the landholdings reverting back to the grantors" (U.S. General Accounting Office 1989, 19).

In 1990, the GAO examined the sale of the J.G. Boswell Company's Boston Ranch to the Westhaven Trust to determine whether the sale was an example of a large farming operation continuing to receive federally subsidized water on its entire acreage (U.S. General Accounting Office 1990b). The Boston Ranch Company was a subsidiary of the J.G. Boswell Company located in the Central Valley Project, California. In May 1989, Boston Ranch Company sold 23,238 acres to the Westhaven Trust. Previous to the sale, the land was farmed as one large operation by the J.G. Boswell Company. The Company paid full cost for the federal irrigation water delivered to the land for 18 months (U.S. General Accounting Office 1990b, 3).

As a result of the sale, the entire acreage became eligible to receive federally subsidized water. Because the landholdings were attributed to 326 trust beneficiaries (the range was from 21 acres to 547 acres per beneficiary) the trust met the Act's requirement that no individual beneficiary's interest exceeds 960 acres. Regardless, the GAO concluded that the acreage continued to be operated as one large farming operation (U.S. General Accounting Office 1990b, 4). First, the trust document stated that one purpose of the trust was to operate the acreage as one farm. Second, the purchase of the land as well as the operating expenses are financed by one loan. And finally, the beneficiaries have an undivided interest in the land.

Bureau of Reclamation Audits

From 1988 to 1991, the Bureau of Reclamation conducted an evaluation of large farm operations. The 1987amendments required the Bureau to complete within three years, audits of all landholdings and operations composed of more than 960 acres to determine their compliance with the RRA. There were approximately 1,400 landholders who owned and/or leased more than 960 acres. The Bureau concluded that nearly every landholder was in compliance with the acreage limitation because either the excess lands were not receiving reclamation water or the full-cost rate was paid for water received for the excess acreage. In cases where there was a discrepancy regarding the correct amount of acreage

operated, the Bureau requested the landholder submit new forms and pay the full-cost rate for water delivered to ineligible land. "In those few situations where Reclamation believes the landholder has intentionally misrepresented landholdings in order to obtain benefits from the Reclamation program for which the landholder was not entitled, Reclamation has requested, or is in the process of requesting, the Department of the Interior's Office of the General to gather additional evidence in order to pursue criminal or civil actions" (U.S. Department of the Interior 1991a, 11-12). Investigation of these cases was still ongoing as of December 1991. The Bureau also audited 120 operations that were more than 960 acres. The majority of these operations were in Arizona, California, and Washington. The Bureau concluded that all the operations met "the exception criteria of the acreage limitation rules and regulations and were considered exempt from application of the RRA pricing limitation (U.S. Department 1991a, 12). Forty-one cases were found to be contract operators who provided a specialized services. The Bureau said the Act did not apply. The rest of the operations involved situations where the Bureau determined that the operator had "not assumed the economic risk for the farm and did not have the use and possession of the land" (U.S. Department of the Interior 1991a, 12). Thus, these entities were exempt from the acreage limitation.

The Bureau also audited the eight cases portrayed in

the General Accounting Office Report entitled "Water Subsidies Basic Changes Needed to Avoid Abuse of the 960-Acre Limit" (U.S. General Accounting Office 1989). According to the Bureau, "two were determined to be lessees and have been billed accordingly; four were found to meet the requirements specified within the acreage limitation rules and regulations; one will be turned over to the Inspector General to determine if civil or criminal action is warranted; and the final case is being monitored to determine if the Inspector General's assistance is needed" (U.S. Department of the Interior 1991a, 12-13).

The Bureau used the "Lease and Farm Operating Agreement Review Guidelines" (developed in April 1990) to evaluate the farm operations. According to the guidelines, the criteria that had to be met for a farm operating agreement to be exempt from the acreage and pricing limitations were: (1) The landholder retains the right to the use and possession of the land; (2) The manager or consultant receives a fee for service(s), but does not assume the economic risk in the farming operation; (3) The landholder is responsible for payment of operation expenses; and (4) The landholder is entitled to receive the profits from the farming operation. If any of these criteria were not met, the agreement would be considered a lease (U.S. Department of the Interior 1991a, 72).

The guidelines also evaluate the role of the operator as a "principal operator" in the determination of whether

the farm operator can assume any economic risk. In its 1991 Annual Report, the Bureau stated that it found it difficult to evaluate many farm operations because "the method of compensation used for many farming activities could be viewed as an assumption of at least some economic risk." The Bureau cited the example of a grain hauler whose pay is based on the number of trips made from the field to the grain elevator. In this situation, the hauler could be considered to have assumed some of the economic risk of the farm's operation. To draw a distinction between types of operators, the guidelines established that every farm must have a principal operator, either the owner, a lessee, a farm manager, or a consultant. "If the principal operator is not the owner or lessee, then the principal operator may assume no economic risk if the agreement is to be exempt from the nonfull-cost pricing provisions. However, if the owner or lessee is the principal operator, then other individuals and entities that provide services, such as crop dusting and custom harvesting, may assume some economic risk, but it must be directly related to the service(s) being provided (U.S. Department of the Interior 1991a, 72).

In a discussion of farm operations, the Bureau wrote in its 1991 Annual Report that, "Agriculture today is not economically efficient if each farmer must have the expertise and/or own the necessary equipment to provide all services. For example, every farmer cannot also be a pilot for the aerial application of pesticides. Every farmer

cannot be expected to own the customized equipment needed to efficiently harvest his holdings. Custom operators provide important services; yet, such services cannot be provided to only 960 acres if the operator is to cover expenses and make a reasonable return on his investment" (U.S. Department of the Interior 1991a, 83).

According to the Bureau, most of the farm operators they reviewed were either family operations or farm management companies. In the case of the family operations, the Bureau found that many were established after the RRA was enacted. The purpose was to combine the "expertise, equipment, and labor" of individual family members in one operation. The farm operating company usually charged the family member a "fixed fee" for a specific service (U.S. Department of the Interior 1991a, 83). The Bureau said that the farm management companies "usually farmed the holdings of retired farmers, investors, and others not actively engaged in farming" (U.S. Department of the Interior 1991a, 83). They were not owned by the landowners and lessees whose lands were serviced and they also charged a specific fee for a service. The Bureau did uncover some cases where the farm management company "may have assumed part of the economic risk for some, but not all, of the parcels they farmed. In these cases, the farm management companies may be subject to application of the non-full cost entitlements for those parcels for which they assumed a portion of the economic risk. Yet, such companies, many of which were in

existence for decades prior to the enactment of the RRA, did not have to change their business practices for all of the land they farmed (U.S. Department of the Interior 1991a, 83).

According to the Bureau, the existence of the Westhaven Trust and some large family trusts have raised questions regarding section 214 of the RRA. This section states:

> (a) The ownership and full-cost pricing limitations of this title and the ownership limitation provided in any other provision of Federal Reclamation law shall not apply to Lands in a district which are held by an individual or corporate trustee in a fiduciary capacity for a beneficiary or beneficiaries whose interests in the lands served do not exceed the ownership and pricing limitations imposed by Federal Reclamation law, including this title.
>
> (b) Lands placed in a revocable trust shall be attributable to the grantor if - (1) the trust is revocable at the discretion of the grantor and revocation results in the title to such lands reverting either directly or indirectly to the grantor; or (2) the trust revoked or terminated by its terms upon the expiration of a specified period or time and the revocation or termination results in the title to such lands reverting either directly or indirectly to the grantor (U.S. Congress 1982).

In summary, section 214 says that trustees "who hold title to land in their fiduciary capacity" may manage lands held through numerous trusts without any acreage limitation provision applied to their holdings. The Bureau acknowledges that the very large acreages contained in various trusts have raised concerns about whether the RRA is being abused. The concern is heightened when a trustee administers a large amount of acreage and also either farms the land or arranges for the land to be farmed as a unit in

the same manner as it was in the previous owner's holding. For example, the Westhaven Trust purchased over 23,000 acres that had been held and farmed under recordable contract by the Boston Ranch Company. The land continued to be operated as one farm, even though it was owned by over 300 beneficiaries. Since no one beneficiary held more than 960 acres, all are within their acreage entitlement. The situation is only compounded when the trustee hires the former landholder of the acreage as the farm operator. By doing so, the former landholder would seem to be continuing to receive Reclamation program benefits from the acreage. All of this gives the appearance that the trust is being used to avoid the requirements of the RRA.

The Bureau found in its audit activity that, other than the Westhaven Trust, there was only one other nonfamily trust holding more than 960 acres (U.S. Department of the Interior 1991a, 86). According to the Bureau, "the vast majority of the 550 trusts that hold land in Reclamation projects subject to the acreage limitation rules and regulations were family trusts whose holdings were well within the ownership and pricing limitations" (U.S. Department of the Interior 1991a, 86). Most of these trusts were formed prior to 1982 when the RRA was enacted. The Bureau also said in the 1991 Report, [T]he restrictions associated with the RRA do not restrict a family's ability to plan their estate and utilize the services of the trustee of their choice" (U.S. Department of the Interior 1991a,

86).

The Department of the Interior's Office of Inspector General (OIG) also evaluated farm reorganizations in its December 1990 report, "Excess Land Sales Policies and Land Use Conversion Issues Bureau of Reclamation." In this report, the OIG concluded that the Bureau of Reclamation's excess land sales policies and reclamation law had not, "...effectively limited the availability of subsidized irrigation water to 960 acres of privately owned land operated as a single farm..." The OIG pointed out that the Bureau had allowed landowners to select the buyers of their excess land and had not required buyers to reside on or near the land. As a result, some owners of large landholdings had been able to retain operating interests in land exceeding 960 acres, which continued to receive subsidized water, by selling and transferring excess lands to family members and/or trusts established to benefit family members or corporate employees. Consequently, some of the benefits derived from Federal subsidies in reclamation rpojects have continued to accrue to previous landowners who sold their excess land.

CHAPTER SEVEN

According to the framers of the Reclamation Reform Act (RRA), the purpose of the 1982 legislation was to "modernize" the reclamation program by increasing the amount of acreage eligible to receive subsidized water and to reduce the overall level of subsidy available to landholders. This chapter summarizes what the Act did, why, and what more can be done.

Reclamation Issues Minimally Addressed by the RRA

The legislative debate focused on three categories of issues. The first category was the size of the acreage limit which directly influenced the distribution of benefits. The second category was the beneficiaries themselves and specifically whether the program was creating adequate opportunity for open participation as well as the opportunity for certain groups to participate. And the third category concerned fiscal issues, one of which was the level of subsidy to be provided. As discussed in Chapter Four, the extent to which the RRA addressed these issues is mixed.

The purpose of the acreage limitation was to ensure that the reclamation benefits would be widely distributed. By increasing the basic acreage level by 800 acres, the RRA satisfied those who had pressed the point that 160 acres was an insufficient amount to provide for a viable farm operation. But with the higher acreage limit, the Act did

not encourage a wider distribution of benefits. In fact, just the opposite would occur if landholders took steps to increase the acreage in their operations to the new maximum level. And the fact that most districts chose to come under the discretionary provisions, and thereby were entitled to increase their landholdings to 960 acres, would seem to suggest that the concentration of benefits would increase.

Although almost every constituency in the reclamation debate supported an increased acreage limit, in general, landholders have not used it as an opportunity to increase their landholdings. For example, a review of the Bureau of Reclamation's Certification and Reporting Forms for the years 1984 to 1990 for the eighteen Study Districts (under the RRA, all landholders must complete either the certification form or the reporting form annually) shows that the distribution of landholdings by different size classifications had not changed significantly over that time period. The total number of landholders reporting information had changed in some districts, but the overall distribution pattern remained the same. Interviews conducted with irrigation district managers confirmed this finding.

In terms of the second category of issues, Congress did not include any provisions in the Reclamation Reform Act that would directly dictate who could participate in the program. The only requirement specified that a nonresident alien could not receive reclamation water as an individual

recipient. This provision will effect a small number of participants. Some interest groups viewed the program primarily as a tool to provide economic opportunity for certain classes of individuals. The lack of any language directed towards this objective was viewed as a significant omission. In fact, through a combination of the Act's provisions, the regulations, as well as various actions taken by large-scale landholders, the opportunity for individuals to participate in the reclamation program through the purchase of excess land was severely reduced, because the overall supply of excess land was significantly diminished. In fact, there is very little the Bureau of Reclamation or Congress could do to address this issue, if they chose to, because of the low stock of excess land. According to the Office of Inspector General, Department of the Interior (OIG), only approximately three percent of the excess land under recordable contract in 1982 remains to be sold as shown by the following information (U.S. Department of the Interior 1990):

Status	Acres
Excess land placed under recordable contract	509,101
Sold and disposed of through October 31, 1990	(423,086)
Deeds recorded to buyers; price approval pending	(69,001)
Remaining to be sold as of October 31, 1990	17,014

According to the Bureau of Reclamation, 16,461 acres of the remaining 17,014 acres of unsold excess land are located in the Central Valley Project, with 15,654 acres subject to sale by the owners by December 31, 1992 (U.S. Department of the Interior 1990, 6).

Although there is presently very little excess land available to be sold, several hundreds of thousands of acres could potentially be available for sale as excess land. The Bureau estimates that there are about 316,000 acres of excess land "which are ineligible to receive any reclamation water because owners of the land have not signed recordable contracts with the Department of Interior to sell their land. According to Bureau officials, it is unlikely that the owners will sign recordable contracts [soon] because there are [presently] alternative water supplies available to them or water delivery systems have not been constructed to serve some of this land" (U.S. Department of the Interior 1990, 7).

The third category is fiscal issues. One of the primary goals of the RRA was to reduce the subsidy available to landholders by applying the full-cost water rate to water received on land above the acreage limit. Actions taken by large-scale landholders to reorganize their farm operations so that virtually all of the land is eligible to receive subsidized water, have resulted in limited application of the full-cost provision and minimized its effectiveness.

Influence of Various Political Factors in Shaping the RRA

Even though the modern debate over reclamation policy covered almost twenty years, events in the last four or five years preceding 1982, largely determined the shape of the new Act. Interviews conducted with a number of the key participants in the Congress and the Bureau of Reclamation reveal how the events unfolded.

There is general agreement that the development of the Reclamation Reform Act was a direct consequence of the lawsuit brought by the land reform organization, National Land for People against the Department of Interior. The lawsuit brought the acreage limitation problems into focus by challenging the status quo. And when the Bureau of Reclamation issued its proposed regulations in response to the Court order, they were perceived by agricultural interests as very strict and consequently the effort moved to Congress to do something to provide a remedy. According to a high-level Bureau official, when the regulations were issued, the political climate was such that there was a perception that Carter was "out to get the West." This attitude was fed by Carter's proposal earlier in the year to eliminate numerous water projects. Consequently there was almost no support for the regulations, and even strong reformists like Representative Miller and Senator Nelson opposed them. As such there was no one to advocate the Administration's regulations.

By the late 1970s, the political balance was starting to change in favor of the agricultural interests. A number of western legislators were elected who were sympathetic to the status quo including Orin Hatch (R-Utah), William Armstrong (R-Colorado), Malcolm Wallop (R-Wyoming), and Alan Simpson (R-Wyoming). In the 1980 Republican election landslide, many prominent Democratic Senators were defeated, including Gaylord Nelson, George McGovern, John Culver, Frank Church, and Birch Bayh. Most of these Senators, especially Nelson, supported widespread reform of the reclamation program. The Republican Party assumed the leadership of the Senate. This, coupled with a President and Interior Secretary who were both extremely supportive of western agriculture and water interests, virtually assured the enactment of reclamation legislation.

Various participants in the reclamation debate point out that throughout the course of the legislative hearings, there was not an active, unified constituency working to reform the program. In some cases, those who were advocating change were perceived more as "enemies" of the program, rather than reformers. Some organizations such as the National Land for People were viewed as concerned only with California issues. Several Bureau officials said that the environmental groups, who could have mobilized a strong lobbying effort, as a group never made reclamation a central issue. Instead, they focused on specific projects.

Meanwhile, the agricultural interests were well organized and more than adequately financed. They selected issues that served to broaden their constituency and involve many more individuals in their effort. For example, they warned that some legislators wanted to include Army Corps of Engineers projects in the acreage limitation provisions. Since Corps projects are spread throughout the country, the strategy served to catch the attention of legislators beyond the western States. Residency was another issue that enlarged the constituency.

Despite the pro-agricultural interest political environment, a handful of legislators continued to push for reform. These legislators included Senators Metzenbaum, Proxmire, and Bradley, as well as members of the House Interior and Insular Affairs Committee. Representative George Miller emerged as one of the leaders of the reform side. According to his legislative aide John Lawrence, Miller made a conscious decision to address the environmental and fiscal issues of the reclamation program. In his opinion, the social goals were "outdated." And within the political context, there were few votes for issues like residency and a 160-acre limit. Also, with the Senate in Republican control, Miller knew he could not delay the enactment of reclamation legislation as he had in 1981. Miller decided that reclamation reform would have to include a water pricing mechanism. The steps would be to first "modernize" it by increasing the acreage level and then stop

the inefficient use of the resource through pricing. Miller knew that the Office of Management and Budget (OMB) would be an ally because OMB was supporting pricing reform given the subsidy issues and the fiscal situation. Miller did not object to landholders distributing their land to employees or family members; to him the issue was maintaining the farm operation as one unit and receiving subsidized water on it.

Opportunities to "Reform" the Reclamation Reform Act

Since 1982, various proposals have been offered to modify the Reclamation Reform Act. Many have focused on limiting the ability of landholders to continue to receive subsidized water on substantial amounts of acreage. In fact, concern that some farmers were not complying with the Act's acreage limit, led Congress to amend the RRA in 1987 to require the Secretary of the Interior, by December 22, 1990, to "complete audits of individuals and legal entities whose landholdings or farming operations exceeded 960 acres. The Bureau was required to report annually to Congress on its findings and actions taken to correct instances of noncompliance."

In its October 1989 report, "Water Subsidies: Basic Changes Needed to Avoid Abuse of the 960-Acre Limit," the GAO recommended that the Congress amend the Reclamation Reform Act to "apply the Act's acreage limit to farms and farming operations as well as to individual landholdings." The purpose would be to limit federally subsidized water to

960 acres irregardless of the organizational form of the farming operation. Under the GAO proposal, Congress would amend the RRA by including a definition of farm or farm operation that would state that "[t]he term 'farm' or 'farm operation' means any landholding or group of landholdings farmed or operated as a unit by an individual, group, entity, trust, or any other combination or arrangement. The existence of a farm or farm operation will be presumed, subject to contrary evidence, when ownership, operation, management, financing or other factors, individually or together, indicate that one or more landholdings are farmed or operated as a unit" (U.S. General Accounting Office 1989, 23).

In its response, the Interior Department agreed that "some farmers had reorganized their farms into smaller holdings to maintain large farming operations while complying with the RRA's acreage limits and that legislative restrictions resulted in implementing regulations that permit multiple landholdings to continue to be operated as one large farm while individually qualifying for federally subsidized water. Interior also agreed that the Act must be amended if the amount of acreage that a farm operator may hold and irrigate with federally subsidized water is to be limited" (U.S. General Accounting Office 1989, 24). The Department cautioned that "while it agreed that the Congress clearly intended to stop the flow of federally subsidized water to land over 960 acres owned or leased by one

individual, it [was] not convinced that the Congress expected this provision to be applied to land being operated as one unit (U.S. General Accounting Office 1989, 24).

The Department of the Interior's Office of Inspector General (OIG) agreed with the conclusion of the GAO 1990 Reclamation Reform Act. In the report, "Excess Land Sales Policies and Land Use Conversion Issues," the OIG advised the Bureau to "(1) seek changes in reclamation law and/or develop procedures which enable the Government to prevent owners of excess land sold or subject to recordable contracts from continuing to operate the excess land after its sale; (2) prevent granting of water subsidies to operating entities composed of several landowners who collectively farm their land as a single enterprise which exceeds the acreage limitation; and (3) attribute the landholdings of minor children to their parents or guardians regardless of their dependency status if such landholdings are part of an operation exceeding the acreage limitation" (U.S. Department of the Interior 1990, 8). The Bureau's position was that these issues should not be addressed in legislation until the Bureau had completed a detailed set of district audits. The OIG responded that the Bureau's audit program would "likely find that landholders generally have complied with the RRA acreage limitations because there is a loophole in the language of the Act....Therefore, [the OIG] considered it unlikely that the results of the Bureau's compliance audits [would] provide a basis for administrative

or legislative changes in excess land sales policies unless the Bureau [was prepared to discuss] the inherent limitations in existing laws and regulations" (U.S. Department of the Interior 1990, 10.) Thus, the delay was considered unwarranted.

In its 1991 Annual Report, the Bureau indicated some modifications they could support to the acreage limitation provisions. The proposal would "prevent the involvement of the sellers of excess land in farming [their former] land for ten years. This option would correlate with the ten-year deed covenant restriction placed on the future sales price of formerly excess land that is required by the RRA. At the end of the ten-year period, the former owners of the land would be able to lease or otherwise operate such lands....The main purpose of [this] change [would be] to ensure that no special arrangements [had been] made between the seller and buyer of excess lands to allow for benefits to accrue to the seller of excess lands through a later lease or farm operating arrangement" (U.S. Department of the Interior 1991, 100-101).

During the 1990 session of Congress, two bills were introduced which contained provisions that placed restrictions on landholders' eligibility for subsidized irrigation water. Senate Bill 1659 was sponsored by William Bradley (D-New Jersey) and House Resolution 1567 was authored by George Miller (D-California). Under both bills, farming operations of more than 960 acres would be

ineligible to receive subsidized water above the limit. The bills would consider the entire farming operation, not the separate components, in determining acreage limitation issues. Also, "no trust in excess of 960 acres, regardless of the number of beneficiaries, would be eligible to receive subsidized water and would be considered excess land. No trustee could administer more than 960 acres of land held in trust, regardless of the size of each trust or its relationship to other trusts managed by the trustee. The measures would require each landholder, farm operator, or custom farming operator to certify the status of his/her operation." The House approved its bill on June 14, 1990 on a vote of 316-97. Hearings were held on the Senate bill in July 1990, but the measure was stalled in the Energy and Natural Resources Committee. As a result, no legislation was enacted.

Legislators like Miller and Bradley have announced that they will continue to press for further reform of the reclamation program. Representative Miller would like to "trim the length of all federal water contracts from forty years to three years. Such legislation would make it easier for the Government to force future changes in the distribution of water." A particular target in this legislation is California's Central Valley Project. Senator Bradley has also pressed for reform in the Central Valley Project (CVP). The New Jersey Senator is sponsoring legislation to "reorder the priorities" of the CVP. His

legislation would "prohibit farmers from signing long-term water contracts unless they give up twenty percent of their allotment to meet the needs of fish and wildlife. It would also permit farmers for the first time to sell their unused federal water to urban areas. The only rquirement would be that twenty-five percent of the sold water must be applied to fish and wildlife protection."

Conclusion

Overall, the Reclamation Reform Act (RRA) has had minimal impact on the reclamation program. On the one hand, the RRA did resolve several issues, some of which had been the source of litigation. Although these issues were important to some individuals, they were not in the broad sense. For example, the RRA stated that the residency requirement did not apply to recipients of reclamation water. And the Act also relieved most of the recipients of water from Army Corps of Engineers projects from the acreage limitation restrictions. Certain reform groups would correctly view the impact of these two provisions as significant because in their opinion they allowed certain large-scale landholders to continue to receive "more than their share" of reclamation benefits. But when one looks at the more fundamental issue of whether the RRA has reduced the subsidy available to a large landholding, it is clear that it has not. The record indicates that when Congress passed the Act, it intended to limit the amount of

subsidized water delivered to a farm. The limit they chose was 960 acres. But this objective has been thwarted because the Bureau of Reclamation chose to implement the RRA based on a strict interpretation of the Act's language rather than the legislative history. And the RRA did not explicitly address farming operations as an entity. As the GAO pointed out in its 1989 report, this omission allowed landholders, particularly groups of landholders, to continue to operate their landholdings as they had before 1982 without incurring the full cost rate. The way the Bureau interpreted the Act is consistent with its historical role regarding its reclamation constituency, namely the irrigation districts and landholders. These groups have been the Bureau's traditional clients. And although the RRA modified the relationship somewhat, it did not predispose the Bureau to interpret the Act broadly and, as such, require its clients, which included certain large-scale landowners, to make major changes to their farm operations. In fact the Bureau did not commence its audit program to look at the large landholdings until after Congress had required the Bureau to do so. As for the Bureau's decision to postpone any policy changes or legislative initiatives until it has completed a set of more detailed audits, the OIG was correct. Additional audits will not provide more information of any significance. If the Bureau chose to, it could adopt a more strict interpretation of the Act that could reduce the amount of subsidized water for certain farm operations.

Past performance shows that it is unlikely that the Bureau, acting alone, will make any fundamental changes in how it implements the Act. Congress will have to take the lead and achieve change through legislation. And in order to avoid the problem of inadvertently including "loopholes" or relying on the Bureau to interpret congressional intent through legislative language, Congress will have to be very explicit in its language. Outside groups interested in reforming the RRA, could provide valuable assistance and support to congressional leaders like Representative Miller and Senator Bradley by working together to develop common goals, objectives, and strategy.

Outside events may well impact the reclamation program even more substantially than legislative modifications to the RRA. For example, urban and fish/wildlife interests are pushing to receive their "fair share" of the water supply. In California, where a five year drought has left the available water supply extremely low, the Bureau of Reclamation announced in early February 1992 that only twenty-five percent of the normal federal reclamation water allocation would be delivered to the Central Valley Project this year. The decision was made to meet the requirements of the Endangered Species Act and protect the threatened winter-run chinook salmon. According to the National Marine Fisheries Service, water diverted to Central Valley farms contributed to a ninety-nine percent decrease in the salmon in the San Francisco Bay Delta region. With this action,

CVP farmers have faced a second year of severe reductions in their allocation. Even though this is one incident, the struggle between urban, environmental, and agricultural interests over the best use of water will continue to be a growing theme that could do more to effect reclamation issues than deliberate efforts to modify legislation.

BIBLIOGRAPHY

Bain, Joe S., Caves, Richard E., Margolis, Julius. Northern California's Water Industry; The Comparative Efficiency of Public Enterprise in Developing a Scarce Natural Resource. Baltimore: The Johns Hopkins Press, 1966.

Baker, George. "Law Killing First Bonadelle Westlands Plan May Change." Fresno Bee. 19 August 1975.

Baker, George. "The Great Farm Flip-Flop; The Same Old Arguments, With a New Cast of Players." California Journal. Vol. IX, No. 1, January 1978, p. 22 - 24.

Baker, George. "The Same Old Arguments, with a New Cast of Players." California Journal. January 1978, p. 22 - 28.

Braden, Tom. "Scraping the Pork Barrel." The Washington Post. 23 April 1977, A11.

Candee, Hal. "The Broken Promise of Reclamation Reform." Hastings Law Journal. Vol. 40. March 1989, p. 657 - 685.

Congressional Quarterly Almanac. "Water-Use Reform." 1979, p. 688-692.

Congressional Quarterly Almanac, Vol. XXXV. 96th Cong., 1st sess., 1978. Washington, D.C.: Congressional Quarterly, Inc., 1980.

Congressional Quarterly Almanac, Vol. XXXVI. 96th Cong., 2nd sess., 1980. Washington, D.C.: Congressional Quarterly, Inc., 1981.

Davis, Joseph A. "Reclamation Reform Added to Bill Authorizing Dam, Settling Water Rights Issue." Congressional Quaterly. Washington, D.C. 28 August 1982, p. 2142.

deRoos, Robert. The Thirsty Land: The Story of the Central Valley Project. Palo Alto: Stanford University Press, 1948.

Diringer, Elliot. "Water Subsidies for Big Growers Called Extreme." San Francisco Chronicle. 22 August 1985, p. 13.

Diringer, Elliot. "Big Farms 'Get Small' to Keep Cheap Water." San Francisco Chronicle. 2 April 1987, p. 1, 4 - 5.

Duvall, C. Dale. "Water Rules." Letter to the Editor, The Washington Post. 1 May 1987, Section A22.

Duvall, C. Dale. "Reclamation Reform Act." Letter to the Editor Los Angeles Times. 21 May 1987, Section II, p. 6.

Editorial. "Don't Give Water Away." San Francisco Chronicle. 14 November 1985, p. 76.

Editorial. "Leaky Water Law." Los Angeles Times. 15 April 1987, Section II, p. 4.

Editorial. "Watering the Law." The Washington Post. 19 April 1987, Section D6.

Gates, Paul W. History of Public Land Law Development. Washington, D.C., 1968.

Golze, Alfred Rudolph. Reclamation in the United States. New York: McGraw-Hill Book Company, Inc., 1952.

Goodall, Merrill R., Sullivan, John D., DeYoung, Timothy. California Water: A New Political Economy. Montclair and New York: Allanheld, Osmur/Universe Books, 1978.

Hays, Samuel P. Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920. Cambridge: Harvard University Press, 1959.

Hibbard, Benjamin Horace. A History of the Public Land Policies. Madison: University of Wisconsin Press, 1965.

Hollon, W. Eugene. The Great American Desert: Then and Now. New York: Oxford University Press, 1968.

Holmes, Beatrice Hart. History of Federal Water Resources Pro-grams and Policies, 1800 - 1960. Washington, D.C.: GPO, 1972.

Hornblower, Margot. "A New Breed Shakes Old Order at Interior Department." The Washington Post. 3 April 1977, A1.

Hornblower, Margot. "California Farmers Turn Tables, Seek Impact Study on Land Regulations." The Washington Post. 8 November 1977, A3.

Hornblower, Margot. "Interior Is Gearing Up For Western Land Fight." The Washington Post. 5 November 1977, A2.

Huffman, Roy E. Irrigation Development and Public Water Policy. New York: Ronald Press Comp., 1953.

Hull, Victor. "Stop Subsidies for Irrigating Crop Surplus, Panel Urged". Los Angeles Times. 13 May 1987, Part 1, p. 12.

James, George Wharton. Reclaim the Arid West: The Story of the U.S. Reclamation Service. New York: Dodd, Mead and Company, 1917.

Kendall, Keith. "Economies of Size in Cotton Farming." National Cotton Council. January 1980.

Kirschten, J. Dicken. "Turning Back the Tides of Long-Time Federal Water Policy." National Journal. 11 June 1977, p. 900 - 903.

Kirschten, Dick. "The Quiet Before the Shootout Over The Water Law of the West." National Journal. 28 January 1978, p. 149 - 153.

Kirschten, Dick. "Carter's Water Policy Reforms - Trying Not to Make Waves." National Journal. 10 March 1979, p. 394 - 397.

Koch, Kathy. "Senate Water-Use Bill Pits Big Firms Against Small Farms." Congressional Quarterly. 29 September 1979, p. 2121-2133.

Lampen, Dorothy. Economics and Social Aspects of Federal Reclamation. New York: Arno Press, 1979.

Landrum, Dennis. "Costs, Returns, and Profitability of 160-Acre Farms for Selected Cropping Plans in the Elephant Butte Irrigation District of New Mexico." New Mexico State University. October 1977.

Larson, Lanny. "Bonadelle Argues U.S. Okayed Deal." Fresno Bee. 20 August 1975.

LaVeen, E. Phillip. "A Political Economic Analysis of the 1982 Reclamation Act". Western Journal of Agricultural Economics. December 1983, p. 255 - 266.

Leift, Leroy D. and Guenthner, Joseph F. "Economic Analysis of 160 Acre Limitations on Irrigated Farms in Montana." Montana State University. January 1977.

Lilley, William, III and Gould, Lewis D. "The Western Irrigation Movement, 1878 - 1902: A Reappraisal". The American West, A Reorientation. Laramie, Wyo.: University of Wyoming Publications 1966.

Magida, Arthur J. "Agriculture Report: Role of Family Farmer Figures in Reclamation Debate". National Journal. 11 August 1975, p. 1545 - 1550.

Mills, Mike. "Water Rules Draw Wrath of Small Farmers." Los Angeles Times. 11 April 1987, Section 1, p. 33.

Moley, Raymond. What Price Federal Reclamation. Washington, D.C.: American Enterprise Asso., Inc. 1955.

Montague, Robert C. "Comparative Analysis of the Influence of Unit Size on the Economic Viability of Farms in the Westlands Water District." Bank of America. July 1978.

Montague, Robert C. "The Economics of Small Acreage Farming Units in the Westlands Water District." Bank of America. July 1978.

Moore, Charles V. "The Reclamation Reform Act - P.E.S.T. or Pesticide." Western Journal of Agricultural Economics. December 1983, p. 246.

Peffer, E. Louise. The Closing of the Public Domain. New York: Arno Press, 1972.

Peterson, Cass. "Interior Department Reverses Water Rules." The Washington Post. 10 April 1987, Section A25.

Peterson, Cass. ""Interior Department Appraisal Blasted." The Washington Post. 22 April 1988, p. A21.

Peterson, Cass. "House Panel Seeks to Harden Water Subsidy Rules." The Washington Post. 18 June 1987, Section A6.

Pincus, Walter. "When a Campaign Vow Crashed Into a Pork Barrel." The Washington Post. 1 April 1977, A1.

Pincus, Walter. "Carter Narrows 'Hit List', Seeks Halt to 17 Projects." The Washington Post. 19 April 1977, A15.

Pisani, Donald J. From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931. Berkeley: University of California Press, 1984.

Rich, Spencer. "Senate Vote Defies President." The Washington Post. 11 March 1977, A1.

Rich, Spencer. "Senators, White House Wrangle Over Powers." The Washington Post. 12 March 1977, A1.

Robinson, Michael E. Water for the West, The Bureau of Reclamation 1902 - 1977. Chicago: Public Works Historical Society. 1979.

San Francisco Chronicle. "Clark Asks Change in Farm Water Law." 24 January 1984, p. 10.

San Francisco Chronicle Editorial. "Don't Give Water Away." 14 November 1985 p. 76.

Shabecoff, Philip. "U.S. Issues Rules on Water for West." New York Times. 10 April 1987.

Shaw, Gaylord and Steiger, Paul E. "Carter Will Ask Hill to Halt Aid for 18 Major Water Projects." The Washington Post. 20 February 1977, A6.

Sinclair, Ward. "House Panel Backs End to Limits on Irrigation Subsidy." The Washington Post. 25 February 1982, A1.

Sinclair, Ward. "Congress About to Pump up Subsidies to Irrigation - Water Users." The Washington Post. 16 May 1982, A1.

Sinclair, Ward. "Water War Isn't Over in San Joaquin Valley." The Washington Post. 23 April 1983, A4.

Sinclair, Ward. "Western Water Subsidies Assailed." The Washington Post. 25 May 1987, p. 27.

Smythe, William E. The Conquest of Arid America. New York: Harper and Brothers, Publishers, 1900.

Soiffer, Bill. "Central Valley Water Prices Worry Farmers." San Francisco Chronicle. 5 December 1984, p. 27, 34.

Stegner, Wallace. Beyond the Hundredth Meridian. Boston: Houghton, Mifflin, 1954.

Swain, Donald C. Federal Conservation Policy 1921 - 1933. Berkeley and Los Angeles: University of California Press, 1963.

Taylor, Paul S. "The Excess Land Law: Execution of a Public Policy." Yale Law Journal 44. February 1955, p. 477-514.

Taylor, Paul S. "Excess Land Law: Calculated Circumvention." California Law Review. Vol. 52, No. 5, December 1964.

Taylor, Paul S. "The Excess Land Law: Legislative Erosion of Public Policy." Yale Law Journal 1964, p. 480 - 489.

The Washington Post. "Andrus Promises No New 'Hit List' Will Be Proposed." 18 January 1978, A3.

The Washington Post. "Senate Unit Votes to Alter Water Law." 22 April 1982, A4.

The Washington Post Editorial. "Watering the Law." 19 April 1987. D6.

Tule, Ray Palmer. Irrigation in the United States. New York: D. Appleton and Companuy, 1915.

Tule, Ray P. The Economics of Land Reclamation in the United States. Chicago and New York: A.W. Shaw, 1927.

Turner, Wallace. "U.S. Moves to Collect Money Farmers Owe for Water Projects." New York Times. 21 November 1984, Part 1, p. 12:1.

U.S. Congress. Congressional Record, House. 5-6 May 1982, p. 8807-8827.

U.S. Congress. Congressional Record, Senate. 14-16 July 1982, p. 16293-16594.

U.S. Congress. House. Hearings on H.R. 301 before House Committee on Irrigation and Reclamation. 86th Congress, 1st sess., 1959.

U.S. Congress. House. Hearings before the Subcommittee on Water and Power Resources; Committee on Interior and Insular Affairs. Class One Equivalency for Certain Reclamation Projects. 19 and 20 July 1976.

U.S. Congress. House. Hearings before the Subcommittee on Water and Power Resources; Committee on Interior and Insular Affairs. Acreage Limitation Provisions of Reclamation Law. 13 and 14 September 1976.

U.S. Congress. House. Hearings before the Subcommittee on Water and Power Resources; Committee on Interior and Insular Affairs. To Reduce Speculation in Excess Lands Purchased Under Federal Reclamation Laws. 15 July 1977.

U.S. Congress. House. Committee on Interior and Insular Affairs. Reducing Speculation in Excess Lands Purchased Under the Federal Reclamation Laws by Imposing Additional Restrictions on Sales and Resales of Such Excess Lands. 27 February 1978.

U.S. Congress. House. Hearings before the Subcommittee on Water and Power Resources; Committee on Energy and Natural Resources. To Revise the Requirements of Federal Reclamation Law. 13 November 1979, 12 February and 18 - 20 and 29 March 1980.

U.S. Congress. House. Report Committee on Interior and Insular Affairs. Revising Requirements Under the Federal Reclamation Laws, Relating to Acreage Limitations, Equivalency and Residency, To Provide for Approval of

Repayments, Contracts and Written Representations. 15 July 1980.

U.S. Congress. House. Buffalo Bill Dam, Reclamation Reforms, and Papago Indian Water Rights: Conference Report. Report 97-855. 97th Cong., 2nd sess., 1982.

U.S. Congress. House. Committee on Interior and Insular Affairs. Amending and Supplementing the Federal Reclamation Laws, and for Other Purposes. Report together with Additional and Supplemental Views. Report 97-458. 97th Cong., 2nd sess., 1982.

U.S. Congress. Joint Senate Committee on Energy and Natural Resources and House Committee on Interior and Insular Affairs. Conference on S. 1409. Unpublished and unedited. 14, 15, 16 September 1982.

U.S. Congress. Joint Hearings before the Select Committee on Small Business and the Committee on Interior and Insular Affairs. Will the Famly Farm Survive in America? Parts 1, 1A, 1B, 1C, 3, 3A, and 3B. Washington, D.C.: GPO, 1975.

U.S. Congress. Senate. Hearings before the Subcommittee on Energy Research and Water Resources. Reclamation Projects. 26 August 1976.

U.S. Congress. Senate. Hearings before the Committee on Energy and Natural Resources. Administration of the Federal Recla-mation Program. 10 November 1977.

U.S. Congress. Senate. Select Committee on Small Business. Will the Family Farm Survive in America Washington, D.C.: GPO, 1978.

U.S. Congress. Senate. Hearings before the Subcommittee on Public Lands and Resources; Committee on Energy and Natural Resources. Acreage Limitations on Bureau of Reclamation Projects, Part I, II, III. 9 July 1977, 11 August 1977, 12 and 13 April 1978.

U.S. Congress. Senate. Report Committee on Energy and Natural Resources. Reclamation Reform Act of 1979. 6 July 1979.

U.S. Congress. Senate. Hearings before the Energy and Natural Resources Committee. Reclamation Reform Act of 1981. 10 December 1981; 11 January 1982.

U.S. Congress. Senate. Reclamation Reform Act of 1982. Report together with Additional and Supplemental Views. Report 97-373, 97th Cong., 2nd sess., 1982.

U.S. Department of Agriculture (Economic Statistics and Cooperative Services). The U.S. Department of the Interior Proposed Rules for Enforcement of the Reclamation Act of 1902: An Impact Analysis. 1976.

U.S. Department of the Interior, Bureau of Reclamation. Special Task Force Report on San Luis Unit, Central Valley Project, California, by San Luis Task Force. Washington, D.C.: GPO, 1978.

U.S. Department of the Interior, Bureau of Reclamation. "Acreage Limitation: Bureau of Reclamation Rules and Regulations." Federal Register 48-86, 3 May 1983.

U.S. Department of the Interior, Bureau of Reclamation. Regulatory Impact Analysis for Acreage Limitation. October 1983.

U.S. Department of the Interior, Burau of Reclamation. "Acreage Limitation: Bureau of Reclamation Rules and Regulations." Federal Register 48-235, 6 December 1983.

U.S. Department of the Interior, Bureau of Reclamation. Reporting Forms Booklet for 1984. Washington, D.C.: GPO, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Certification Forms Booklet for 1984. Washington, D.C.: GPO, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Certification forms Booklet for 1985 and 1986. Washington, D.C.: GPO, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Guidelines of Performance of Land Classification Studies for Class I Equivalency Purposes. Reference No. 426.7-0003, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Technical Instructions for Full-Cost Calculations. Reference No. 426.7-0003, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Reporting Forms booklet for 1985 and 1986. Washington, D.C.: GPO, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Reporting Forms booklet for 1985 and 1986. Washington, D.C.: GPO, 1984.

U.S. Department of the Interior, Bureau of Reclamation. Certification Forms Booklet for 1987. Washington, D.C.: GPO, 1986.

U.S. Department of the Interior, Bureau of Reclamation. Reporting Forms Booklet for 1987. Washington, D.C.: GPO, 1986.

U.S. Department of the Interior, Bureau of Reclamation. "Acreage Limitation Rules and regulations." Federal Register 51-216, 7 November 1986.

U.S. Department of the Interior, Bureau of Reclamation. "Acreage Limitation Rules and Regulations." Federal Register 52-70, 13 April 1987.

U.S. Department of the Interior, Bureau of Reclamation. Certification forms Booklet for 1988. Washington, D.C.: GPO, 1987.

U.S. Department of the Interior, Water and Power Resources Service. Acreage Limitation: Westlands Case Study, Appendix and Subordinate Appendixes A, B, C, D, E, and F: Vol. 1 and 2. Washington, D.C.: GPO 1980.

U.S. Department of the Interior, Water and Power Resources Service. Acreage Limitation: Draft Environmental Impact Statement. Washington, D.C.: GPO 1980.

U.S. General Accounting Office. Questionable Aspects Concerning Information Presented to the Congress on Construction and Operation of the San Luis Unit, Central Valley Project. 12 February 1970.

U.S. General Accounting Office. Congress Should Reevaluate the 160-Acre Limitation on Land Eligible to Receive Water From Federal Water Resources Projects. 30 November 1972.

U.S. General Accounting Office. More Effective Procedures Are Needed for Establishing Payment Terms and Development Periods for Irrigation Projects. 23 May 1975.

U.S. General Accounting Office. Appraisal Procedures And Solutions To Problems Involving The 160-Acre Limitation Provision of Reclamation Law. 3 June 1976.

U.S. General Accounting Office. Nonresident and Nonfarm Operator Ownership of Farmland. 6 August 1980.

U.S. General Accounting Office. Federal Charges For Irrigation Projects Reviewed Do Not Cover Costs. July 1981.

U.S. General Accounting Office. Changes in Federal Water Project Repayment Policies Can Reduce Federal Costs. 7 August 1981.

U.S. General Accounting Office. Reforming Interest Provisions in Federal Water Laws Could Save Millions. 22 October 1981.

U.S. General Accounting Office. Water Subsidies: Basic Changes Needed to Avoid Abuse of the 960-Acre Limit. October 1989.

U.S. General Accounting Office. Reclamation Law. Changes to Excess Land Sales Will Generate Millions in Federal Revenues. February 1990.

U.S. General Accounting Office. Water Subsidies: The Westhaven Trust Reinforces the Need to Change Reclamation Law. June 1990.

Warne, William E. "Land Speculation." The Reclamation. August 1947, p. 176.

Warne, William E. The Bureau of Reclamation. New York: Praeger, 1973.

Wehr, Elizabeth. "Committee Bill Extends Water Subsidy Limits." Congressional Quarterly. 27 February 1982, 487-488.

Wehr, Elizabeth. "Tougher Water-use Limits Set by Senate Panel's Bill." Congressional Quarterly. Washington, D.C., 24 April 1982, p. 944.

Wiegard, Steve. "New Rules Save Big Growers Cheap Water." San Francisco Chronicle. 4 April 1987, p. 1.

VITA

Anna Margaret Hackenbracht grew up in the San Francisco Bay Area, California. She graduated from Pomona College, Claremont Colleges in Claremont, California in 1976 with a Bachelor of Arts Degree in Government. In 1982, she began her doctoral studies in the Department of Geography and Environmental Engineering, The Johns Hopkins University. Completion of her doctoral studies is expected May 1992.

Upon graduation from Pomona College, Ms. Hackenbracht worked for two public interest organizations, first as the Western Area Field Representative for Bread for the World and next as the Food Policy Advocate, California Church Council. In 1985, she accepted a position as a policy analyst for the U.S. Environmental Protection Agency. Ms. Hackenbracht is currently the Chief, Planning and Analysis Section, U.S. Environmental Protection Agency, Region 9 in San Francisco, California.