FACILITATING VOLUNTARY TRANSFERS OF BUREAU OF RECLAMATION - SUPPLIED WATER

VOLUME I

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PREFACE

The federal reclamation system, constructed over a period of nearly 90 years, is at a critical juncture. The era of system expansion at substantial federal expense is nearly over. The storage and delivery facilities that have been constructed under this program control an important portion of the water supply of the western states. As the demands for water use change in these states, there is increased interest in making the water in these federal reclamation facilities available for additional uses.

The importance of this issue prompted the Natural Resources Law Center to initiate this research project in 1990 with support from a grant under the Water Resources Research Act. The primary objective of the research was to examine experience in making voluntary transfers to new uses of water already provided from reclamation facilities for existing uses. To this end, we carried out detailed case studies of reclamation projects in nine western states. The results of this research are presented in volume II of this report.

This first volume seeks to provide a summary of the issues identified concerning federal transfer policy and procedures that affect transfers of water provided by federal reclamation facilities. It provides an analysis of legal issues that were identified and discusses how these issues have been addressed in the context of the case studies. It considers at length the Principles and Guidance concerning transfers issued about two years ago by the Department of the Interior and the Bureau of Reclamation. It offers recommendations for improvements and clarifications in federal laws, policy, and procedures.

Primary authors of this volume were Larry MacDonnell, Richard Wahl*, and Bruce Driver. Valuable research assistance was provided by Richard Smith, University of Colorado School of Law, Class of 1992, and Peter Waack, Class of 1991. Dale Milne handled the word processing task with his usual outstanding professionalism. The report was greatly improved as a result of the comments and suggestions of an outside group of reviewers, listed on the following page, who met with us in Boulder on April 26, 1991. Of course, responsibility for the report rests with the authors.

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* Office of Program Analysis, U.S. Department of the Interior. The views in this report reflect those of the author and not necessarily the Department of the Interior.

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CHAPTER 1: Introduction

Section 1: Project Scope and Objectives

In 1902, Congress committed federal resources to the task of expanding the usable supply of water available to "reclaim" lands in the West for irrigated agriculture. Under this program, facilities for the diversion, storage, and delivery of water have been built in 17 western states. These facilities include more than 600 dams and 53,000 miles of canals and laterals, representing a federal investment of nearly $10 billion as of 1988.[1] Total storage capacity in these federally constructed facilities is about 134 million acre-feet of water.[2] Water deliveries in 1988 totaled about 29 million acre-feet: 25 million (85%) for irrigation, 3 million (11%) for municipal and industrial use, and 1 million for other uses.[3] Nearly 190 projects or units are currently in operation.

The federal reclamation program is at a crossroads. Its primary purpose -- the substantially subsidized construction of storage dams to increase the usable supply of water -- is coming rapidly to a close. The Bureau of Reclamation, the federal agency charged with implementing the reclamation program, issued a report in 1987 (Assessment '87) aimed at charting a new mission for itself.[4] It presents a picture of the Bureau as water "managers", emphasizing such things as "system optimization," shifting control of federal facilities to the water users, and otherwise making the use of the facilities more efficient.

An issue acknowledged but not substantially addressed in Assessment '87 is the growing need to reallocate some portion of the water made available through these facilities to meet the new and changing demands for water throughout the western states. In fact, the federal role in this reallocation process is not well defined in federal reclamation law. For the most part, the plans and legal authority for Bureau of Reclamation projects do not contemplate changes in project functions or in uses of water that may become desirable or necessary after the project is in use.

As mentioned, most of the water delivered from Bureau of Reclamation facilities goes to irrigation use.[5] Yet agriculture is declining in relative economic importance in the western states. In many areas, agricultural lands are becoming urbanized and demands for municipal and industrial water are increasing. The value of water for a variety of instream flow purposes such as fisheries maintenance, recreation, and riparian and wetlands protection has increased. In a water-limited area like the western United States where demands are increasing, reallocation of some existing uses of water to new uses is inevitable.

The importance of redefining the role of the federal reclamation system in meeting the contemporary water needs of the West prompted this project. The research built on several other recent studies.[6] In particular, the project examined the effect of federal law, policy, and procedures on transfer of water supplied from federal storage facilities. There has been a widely held perception that transfers of federally supplied water are constrained by "impediments" in federal law and practice.[7] By evaluating the water transfer experience in a broad cross-section of federal reclamation projects, the research sought to better identify the type and nature of factors found to impede transfers, to evaluate the basis and purpose of these factors, and to consider possible changes to facilitate valuable transfers.

As a framework for considering a redefinition of the federal reclamation system, it may be useful to divide the functions of reclamation facilities into three categories: those facilities presently providing water to irrigation, municipal, and industrial users under legal arrangement; those with a commitment to provide water but where the water is not being taken; and those where the U.S. itself is the user (for recreation or for hydroelectric generation, for example). Of course, reclamation facilities may, in fact, fall into all three of these categories. The focus of this research is almost exclusively on the issues involved in making changes relating to the first category -- the facilities involved in the delivery and use of the roughly 30 million acre-feet of water provided each year.[8]

There is increasing interest in making voluntary transfers of water provided from Bureau of Reclamation facilities. As used here, transfers refer to temporary or permanent changes in the purpose and/or place of use of water. The change of use may be made by the existing user or the right to use the water may be transferred to another who then follows the legal requirements necessary to make the change of use. The key is that the transfer is initiated primarily by the user of the water as opposed to the Bureau of Reclamation and the result is a new purpose or place of use of the water.[9] Transfers of this type either occurred or have been proposed in each of the projects studied in this research. Nevertheless, there continues to be considerable uncertainty about the transferability of Bureau-supplied water. This report seeks to address these uncertainties.

Federal reclamation law does not address transfer of water entitlements governing rights to use water supplied by reclamation facilities. Under Section 8 of the 1902 Reclamation Act, water-right matters are explicitly subjected to state law.[10] This unaltered principle, strongly reaffirmed by the U.S. Supreme Court in *California v. United States*,[11] makes clear that state law related to water rights transfer ultimately must be followed.[12]

At the same time, there are federal interests potentially affected by such transfer that must be considered. At base, the reclamation program represents a major national investment in the western states. The most tangible products of this investment are the facilities built to store and deliver water to project beneficiaries. By law, these facilities remain in U.S. ownership unless otherwise authorized by Congress. The U.S. has a clear interest in protecting its investment in these facilities and a legal obligation to meet commitments it has made respecting their use. Transfers impairing these interests should legitimately be subjected to federal review.

Congress simply has not addressed the question of how transfers involving federal reclamation facilities should occur. In the absence of congressional guidance, the Department of the Interior issued a statement in December 1988 entitled *Principles Governing Voluntary Water Transactions That Involve or Affect Facilities Owned or Operated by the Department of the Interior.*[13] These *Principles*, together with the Bureau of Reclamation's implementing *Criteria and Guidance* issued in 1989, recognize the increased interest in changing some uses of water made available by federal storage facilities.[14] For the first time they establish a federal policy for such transactions.

This report recommends several specific additions and clarifications to this existing water transfer policy. In

particular, there is a need for clarification of the nature of the water right held by a user of water supplied from Bureau facilities. As a general matter, we conclude that these rights are state water rights and -- subject to possible contractual limitations -- are transferable according to state law. In addition, the federal role in these transfers needs further clarification regarding such matters as when a new or amended contract with the U.S. is required, when a transaction requires Congressional authorization, how the U.S. determines that a transaction will be detrimental to the water service of the project or impair the efficiency of

the project for irrigation purposes, what charges should be paid to the U.S. by new users, and the role of the U.S. in addressing other third party effects (beyond those to other project water users) of a proposed transfer. The case studies indicate considerable variation in approach by the Bureau to these matters. The *DOI Principles* and Bureau *Guidance* help to clarify some issues but create uncertainty and confusion in other areas and neglect some matters altogether.

In the next section a brief introduction is presented to the case studies that were the primary work of this project. Chapter 2 works through the various legal issues raised by transfers. It begins with a brief discussion of federal reclamation law and then turns to specific federal legal interests implicated by transfers. Chapter 3 provides a summary of the Interior Department's *Principles* and the Bureau's *Guidance* related to transfers. Several specific areas of needed clarification are discussed in detail. Finally, recommendations are presented in chapter 4. These recommendations are directed at the Bureau of Reclamation, the Department of the Interior, and Congress.

Section 2: The Case Studies

This project emphasized the analysis of water transfer issues in the context of specific reclamation projects located in nine western states. These states are Arizona, California, Colorado, Nevada, New Mexico, South Dakota, Texas, Utah, and Wyoming. The projects provide a diverse sample in terms of when they were constructed, their size, their purposes, their location, and the legal arrangements under which they operate. Consequently, the analyses of these projects allowed us to consider a broad range of transfer issues. Detailed descriptions of the case studies are provided in volume II of this report.

Arizona Case Studies

The major Bureau of Reclamation project in Arizona is the Central Arizona Project (CAP), which pumps water from the Colorado River and conveys it to the Phoenix and Tucson areas. The large number of contractors in the project -- more than seventy municipal and industrial entities, twenty irrigation districts, and twelve Indian tribes -- means that there is the potential for a significant amount of market activity to develop. To date, however, most of the proposed transfers involving CAP facilities have involved non-CAP water (e.g., groundwater), with the CAP facilities used for conveyance or with CAP deliveries being exchanged for non-CAP deliveries. Although there is a growing interest in transfers of CAP water, there has been little market activity to date because the less expensive, subsidized water from the project has not been fully contracted and is probably subject to reallocation to those contractors with additional demands for water. Also, the rules for transferring CAP water are not clear. In the case

studies in volume II of this report, we examine the rules that might apply to transfers of CAP water, including how the priorities attaching to different classes of water would apply, as well as the limitations on transfers that certain of the existing contractual provisions in the CAP might impose.

The Secretary of the Interior is the contractor for all Colorado River water in Arizona, and there are several contractors along the lower Colorado River whose contracts predate the CAP. Because of their more senior priority and the lack of clear rules for marketing CAP supplies, these contractors are being looked to as potential sources of water for central Arizona cities and for Indian tribes. In fact, one of the principal motivations for water transfer activity in Arizona is settlement of Indian water claims. In these settlements, there are often contributions of water from the federal government, as well as local water districts. As a result, the federal government has sometimes entered the market as a purchaser of water, and more transfers of this type are likely to occur.

The federal government has also been drawn into acquisitions of water to meet international treaty obligations with Mexico and to find replacement water for Cliff Dam, a feature of the CAP which will not be built.

Boulder Canyon Project (BMI/Henderson Transfer)

In understanding under what conditions the Bureau of Reclamation will allow transfers of water, it is also of interest to examine cases in which proposed transfers were either substantially modified or disallowed. A proposed transfer in southern Nevada between Basic Management, Incorporated (BMI) and the city of Henderson represents such a case. Because of its proximity to Las Vegas, Henderson has been growing in recent years and has projected a need for additional water supplies. BMI, an industrial concern that has a contract with the Bureau of Reclamation for water from Lake Mead, sought to increase the amount of water it subcontracted to the city. This additional water was to come from BMI's unused industrial entitlement.

The Bureau objected to an outright resale (or subcontracting) of water by BMI to Henderson, principally because BMI had not established beneficial use of the water. However, the Bureau did allow a "reassignment" of previously unused water from BMI to Henderson. This was accomplished by (1) reducing the contractual entitlement of BMI, (2) executing an "assignment and transfer of entitlement to delivery" from BMI to Henderson, and (3) executing a new Bureau contract with Henderson.

Central Valley Project, California

Because of its size and importance, special attention was given to the Central Valley Project (CVP). The CVP provides water to irrigate over three million acres in California's Central Valley, or nearly one-third of the acreage irrigated with Bureau water in the West.

Several forces create pressure for reallocation of a portion of the water provided by the CVP for irrigation, including urban growth, need for water for environmental uses, salinization of cropland served by the CVP, and drought conditions. The Mid-Pacific Region of the Bureau allows and even facilitates transfers of entitlements to receive CVP water on an annual basis, albeit on a not-for-profit basis. However, a mix of water service contract provisions, contract

administration policy, and law effectively prevents most transfers of CVP water for more than one year. These policies include preclusion of any profits by contractors on transfers, informal rules restricting the voluntary reallocation of water from irrigation to other uses, and take-or-pay and other contract administration policies that impede conservation of water for long-term transfer. As a result, urban and other potential new users of CVP water cannot plan on the availability of CVP water as a firm source of supply.

The facts generated by the CVP case study impel the conclusion that the regional office should revisit policies that impede long-term transfers of CVP water. In particular, the regional office should bring its transfer policy into line with the Department's Voluntary Water Transaction Principles. Otherwise, a significant opportunity to improve the efficiency of water allocation in California -- desirable even if the drought did not exist and essential in time of drought -- will be lost.

Emery County, Utah

A participant in the Colorado River Storage Project, the Emery County Project is situated in the Green River basin southeast of Provo. The project was planned and built to provide a water supply for agricultural users in the Castle Valley vicinity. In fact, early project reports specifically stated that the project would provide no opportunity for domestic water supplies or power development. Project plans changed when local farmers failed to subscribe for about 6,000 acre feet of the 28,100 acre feet available from the project. At the same time, Utah Power & Light Company was looking for a water supply for its Huntington plant. UPL subscribed for this 6,000 acre feet and then, 15 years later, purchased an additional 2,500 acre feet of water provided by the project directly from agricultural users. In addition, a local municipal water district recently purchased 189 acre feet and converted this from agricultural to municipal use. The major impediment to these Emery County transfers has been at the local level: extended negotiations have been necessary to obtain the approval of one of the irrigation companies in the area.

Fryingpan-Arkansas Project, Colorado

Extending from the headwaters of the Fryingpan River and Hunter Creek on the west slope of the continental divide eastward to the Arkansas River basin, the Fryingpan-Arkansas Project was authorized and currently operates equally for the benefit of municipal and agricultural users, in addition to other authorized purposes. Under project operating principles, municipal users are entitled to 51 percent of the project water supply, while at least 49 percent of the supply is offered to agricultural users. The water supply in most years exceeds demands of both municipal and agricultural users. However, the users are concerned with the current allocation and operation of the project storage space. Agricultural users are seeking a commitment of storage space in Pueblo Reservoir for available nonproject water. Municipal users, who have storage rights for carryover project water, would also like to be able to store nonproject water in project storage facilities. Southeastern Colorado Water Conservancy District policy precludes transfers directly between irrigation users, utilizing instead an annual administrative allotment process. Limited transfers may occur among users within the municipal water supply allocation.

Kendrick Project, Wyoming

The Kendrick Project is located southwest of Casper along the North Platte River. Originally the project was to supply water only for irrigation and power purposes. Financial difficulties of the irrigation water users in the Casper-Alcova Irrigation District (CAID) combined with the City of Casper's desire to acquire more water for anticipated population growth led to an agreement to supply the City with up to 7,000 acre feet annually of project water. The water delivered to the City is limited to water saved through conservation measures funded by the City with some state assistance, thereby not reducing CAID's irrigation supply. In addition to funding and planning the conservation measures, the City agreed to pay off CAID's remaining repayment obligation. Based on system improvements funded through 1989, the cost to the City of Casper to make the conserved water available is $542 per acre foot (permanent cost, as opposed to the annual cost).

Newlands Project, Nevada

Named for the senator from Nevada who sponsored the 1902 Reclamation Act, this project was among the first to be authorized for construction by the Secretary of the Interior. The primary purpose of the project was to irrigate an expected 240,000 acres of land in the Great Basin area of Nevada with water from the Truckee and Carson Rivers. Efforts by the Pyramid Lake Paiute Tribe to increase and protect flows of the Truckee River into Pyramid Lake have led to careful scrutiny of irrigation water uses in the Truckee-Carson Irrigation District. The Nevada change of water rights process is being used to clarify the status of rights to use project water on certain lands within the District. Irrigation water rights based on supply from the Newlands Project have been purchased and are in the process of being transferred to use for wetlands maintenance in the Stillwater Wildlife Management Area. In 1990, Congress enacted legislation which, in part, specifically authorized use of the Newlands facilities for a broad set of purposes including fish and wildlife.

New Mexico Case Studies

The case studies of water transfer activity involving federally constructed facilities in New Mexico focused on the Rio Grande River basin.[15] Although the City of Albuquerque has a standing offer of $1,000 per acre-foot to acquire water rights, these purchases involve privately held water rights within the Middle Rio Grande Conservancy District, rather than rights associated with the Middle Rio Grande Project. The lack of transfers appears to be due not to any prohibitive policies of the Bureau of Reclamation, but rather to uncertainty over the status of such rights. This uncertainty arises because of lack of quantification of rights by the district, questions about whether rights still exist on district lands on which irrigation has been abandoned, and, if they do, questions about whether they can be transferred. The district and the state can play important roles in resolving these uncertainties.

Albuquerque and the Middle Rio Grande Conservancy District have rights to surface deliveries from another source -- the San Juan Chama Project. Albuquerque intends to make full use of its San Juan Chama project water to maintain flows in the Rio Grande River when the city reaches the ceiling on the amount of local groundwater that it is allowed to pump (the city's primary water source). However, in the meantime, Albuquerque has marketed small amounts of San Juan Chama Project water. One

of the more interesting of these transfers involves leases for recreational purposes to the downstream Elephant Butte Reservoir. Another lease by Albuquerque to winegrowers in the Elephant Butte area resulted in conflict with the Bureau of Reclamation over whether the acreage limitation and "full-cost" pricing provisions of the Reclamation Reform Act (RRA) apply. Albuquerque believed these restrictions should not apply because the city was reselling municipal and industrial water, not irrigation water. The Bureau took the opposite view, claiming that it had the right and the obligation to apply RRA restrictions to all water that was delivered for agricultural purposes.

Elephant Butte Reservoir, which is the principal storage facility for the Rio Grande Project, stores water for the Elephant Butte Irrigation District in New Mexico and for several irrigation districts near El Paso, Texas. The El Paso County Improvement District No. 1 borders on the city and has been looked to as a source of water for district lands converted to domestic use, both inside and outside the El Paso city limits. Although the Bureau of Reclamation initially resisted one proposed transfer agreement on the basis that the project was authorized for irrigation use, it subsequently allowed the transfer to proceed on the authority of the Miscellaneous Purposes Act of 1920. Under this arrangement, individual owners within the district assign their water deliveries to a municipal supplier in exchange for payment of tax assessments by the municipal supplier.

There may be a potential for interstate trading of Rio Grande Project water to occur, but to date this has been clouded by the controversy over El Paso's attempt to secure rights to groundwater in New Mexico.

Provo River Project, Utah

The Provo River Project is located in north-central Utah, northwest of Provo and southeast of Salt Lake City. The project was planned with a major municipal component to serve present and future needs of the surrounding communities. Many aspects of the project work to facilitate the transfer of project water from agricultural to municipal use. The percentage of project water controlled by municipal users has increased from 58.3 percent at the project's inception to 73.4 percent today. This figure is expected to increase another 10 percent once current irrigation company stock transfers are completed. The authorizing legislation is broadly worded to include M&I uses, and there is specific anticipation of future conversions of project water use from agriculture to municipal. The Provo River Water Users Association, which is the contracting agency, similarly recognizes future conversions in its by-laws. Project water rights approved by the state were broadly described as to purpose and place of use. The water may be used anywhere within project boundaries for agricultural, municipal, or other types of use. Further, agricultural and municipal users pay the same for project water, so transfers require no reallocation of the repayment obligation.

Rapid Valley Unit and Rapid Valley Project, South Dakota

The Bureau of Reclamation constructed these two projects to increase the usable supply of water in the Rapid Creek Basin of South Dakota. The facilities are operated jointly and supply water primarily to Rapid City and, on a supplemental basis, to irrigators in the Rapid Valley Water Conservancy District.

Rapid City has recently transferred private irrigation water rights to municipal use and now is considering ways to increase water deliveries from Bureau storage facilities. The city's 40-year water service contract with the U.S. is up for renewal in 1992. Supply commitments from these facilities, especially to the Rapid Valley Water Conservancy District, must be clarified before additional water can be made available to the city.

Strawberry Valley Project, Utah

The Strawberry Valley Project, located in the Spanish Fork area southwest of Provo, is one of the earliest Bureau projects authorized and built. As was sometimes the case with the early projects, there was no organization representing the water users when the project first began delivering water. Each user was required to enter an individual agreement with the Bureau. Although an association eventually was formed, the Bureau nevertheless issued certificates to all users once the reimbursable costs of the project were paid out, recognizing that the user had fully paid the construction project costs associated with delivering a specific quantity of water to a specific parcel of land. The Association's Articles of Incorporation presently place some limitation on transfers of water to new uses. While project water has been used primarily for agricultural purposes for many years, recently some of the local communities have become interested in acquiring the right to use project water for their outdoor watering and domestic needs. The Association is currently in the process of developing policies, rules, and guidelines to assist it with processing such requests.

Trinidad Project, Colorado

The Purgatoire River in southeastern Colorado runs through the heart of the City of Trinidad, and until the completion of the Trinidad Dam and Reservoir, was responsible for extreme floods that caused extensive damage to the City. These same erratic flows made irrigation difficult much of the time, so storage for irrigation was added to the primary project objective of flood control. Additionally, future conversions of project water from agricultural to municipal use by the City of Trinidad or any other entity were specifically recognized in reports supporting the enabling legislation. Another feature of this project is the nature of project water rights: they are largely preexisting water rights held by irrigators in the area. The Purgatoire River Water Conservancy District manages and regulates water rights owned by the ditch companies under an agreement with each company. The City of Trinidad is currently seeking to change water rights it holds that are part of the project water supply from irrigation to municipal and other uses, as well as to change the place of use. Additionally, a group of irrigation users are negotiating with the State Division of Wildlife for the sale of their water rights to be used for wildlife habitat and other related uses.

CHAPTER 2: Legal Considerations

Section 1: Federal Reclamation Law

The 1902 Reclamation Act authorizes and directs the Secretary of the Interior to construct "irrigation works" determined to be "practicable" and to assess charges "apportioned equitably" upon the lands to be irrigated in an amount adequate to return the estimated cost of construction.[16] No more than 160 acres per individual landowner could be served by these irrigation works.[17] The Act allows the users to control operation and maintenance of the works but stipulates that title to the facilities remains with the U.S.[18] It subjects the "control, appropriation, use, or distribution of water used in irrigation, . . . " to state law.[19] The Secretary is given broad authority to carry out the Act.[20] Upon this basic foundation and subsequent modifications the federal reclamation system, summarized in chapter 1, was built.

Payment Obligations

Much of the change in reclamation law between 1902 and 1939 came out of the widespread difficulties landowners were having in paying their share of the cost of the facilities. Under the 1902 Act, landowners were to repay their share within ten years. In 1914, Congress extended the payment period to 20 years.[21] In 1926, the repayment period was extended to 40 years[22] and, in 1939, a ten-year "development" period was added.[23] The 1924 Fact Finders Act introduced the idea of basing repayment obligations on ability to pay.[24] Congress more fully embraced this approach in the Reclamation Project Act of 1939.[25]

Project Uses

The 1902 Act also has been modified by subsequent legislation to recognize additional uses of reclamation facilities beyond irrigation. In 1906, Congress authorized the use of reclamation facilities for the supply of water to towns in the vicinity of irrigation projects.[26] In 1920, Congress authorized the Secretary of the Interior to provide water from reclamation facilities "for other purposes than irrigation, ..."[27] In the 1928 Boulder Canyon Project Act, Congress authorized the first multipurpose Bureau project.[28] The 1939 Reclamation Project Act directed the Secretary to consider a broad range of possible uses including power, municipal water supply, flood control, navigation, and other "miscellaneous" purposes, as well as irrigation, in investigating the feasibility of constructing new or supplemental facilities.[29] The 1946 Fish and Wildlife Coordination Act made the conservation of wildlife resources a consideration in the construction of any new federal water project.[30] The 1965 Federal Water Project Recreation Act required that "full consideration shall be given to the opportunities, if any, which the [Federal water resource] project affords for outdoor recreation and for fish and wildlife enhancement . . . . "[31]

Contract Arrangements

Reclamation law also has evolved considerably in the manner in which contracts for the payment of the reimbursable construction costs of the projects are handled. Originally each individual landowner contracted with the U.S. by means of a "water-right application." The application described the land area to be irrigated and typically specified a maximum quantity of water per acre that would be delivered by the U.S. The application agreement obligated the landowner to pay a specified annual charge per acre during the repayment period, calculated to return to the U.S. the cost of the irrigation works allocated

to these lands. If the U.S. operated the project, an annual charge for operation and maintenance (O&M) costs also was included. The U.S. typically held a lien on the land and the water right application as security for payment of the construction costs. Upon full payment of the construction charges (originally to be within ten years) the landowner received a "final water-right certificate."

Because of widespread problems in securing project repayment from individuals, Congress in 1922 authorized the Secretary to contract with irrigation districts for payment of the reimbursable construction costs of reclamation facilities as well as O&M costs.[32] In 1926, Congress authorized the Secretary to establish contracts with water users' associations or irrigation districts that would, in effect, take over all outstanding repayment obligations on lands within their boundaries.[33] A major incentive for conversion to contracts with districts was the 40-year repayment period authorized for such new contracts. In addition, Congress required that deliveries of water from new projects could only occur under contracts between the U.S. and irrigation districts empowered by state law to pay the U.S. the costs of constructing, operating, and maintaining the project facilities.[34] It was understood that state law had to give districts the necessary taxing authority.[35]

The Reclamation Project Act of 1939 continued and expanded the repayment contract approach. Under Section 9(d), irrigation water from a new project could not be delivered until a repayment contract had been established with "an organization, satisfactory in form and powers to the Secretary, . . . ", thereby authorizing contracts with conservancy districts and other types of irrigation water supply organizations.[36] As mentioned earlier, a ten-year "development" period was authorized during which only O&M charges had to be paid. The contracting entity could allocate the payment obligation for construction charges according to the productivity of lands within its boundaries and according to the benefits accruing to the lands because of project construction.

In addition, the 1939 Act introduced the alternative of so-called "service" contracts. Section 9(e) authorized the Secretary to enter into contracts of any length up to 40 years to furnish water for irrigation purposes.[37] Unlike repayment contracts, service contracts need not require the recovery to the U.S. during the original contract term of the full construction costs of the project attributable to these uses. Rather, the charges are to cover "an appropriate share of annual operation and maintenance costs and an appropriate share of such fixed charges as the Secretary deems proper, ..."[38] Apparently, the purpose of 9(e) contracts was to allow water to be supplied as available from large-scale projects such as the Central Valley Project in California that would not be completed, and thus where total construction costs would not be known, for many years.[39] Section 9(c) authorized the Secretary to contract for the supply of water for municipal, industrial, and other miscellaneous purposes.[40]

The 1911 Warren Act authorized an additional type of contract, aimed at utilization of excess capacity in existing reclamation facilities or for construction of additional facilities for the benefit of lands not originally to be served from the project. Thus, where excess capacity exists the Secretary is authorized to contract with individuals and organizations that provide irrigation water under their own water right to use excess storage and

delivery capacity in reclamation facilities.[41] The charges in the contract for use of the facilities are to "take into consideration" the cost of construction and maintenance of the facilities, and contractors are limited in the charges they can impose on users of this water.

In addition, water users whose lands are either within or outside an authorized project area may contract with the U.S. for the construction of additional facilities beyond those originally planned and authorized or for the use of existing facilities.[42] The purpose of any such facilities is limited to irrigation, and the title to works that are constructed stays with the U.S. The Warren Act has been interpreted as limited to situations where the rights to use the water involved are already established under state law.[43]

There are now more than 4,000 contracts of various types involving the use of reclamation facilities.[44] In addition to the different sources of legal authority under which these contracts were established, there are a number of other factors that tend to make certain aspects of these contracts unique. These include the particular facilities involved, the uses to be made of the water, and the payment provisions. Furthermore, the contracts are the result of a negotiation process and may reflect particular interests of the users as well as of the U.S.[45]

Summary

Federal reclamation law is predominantly concerned with setting the framework within which reclamation facilities are to be built and operated. Conceived initially as a means of facilitating the supply of irrigation water, the purposes of the reclamation program have been greatly expanded over the years. The federal interest in receiving reimbursement for the cost of these facilities has been outweighed by the politically stronger interest in subsidizing the settlement and development of the West.

For a program that has provided such major benefits there are remarkably few absolute prescriptions that apply to all projects. One is the limitation on acreage that may be served. Another is the U.S. ownership of facilities. A third is the requirement that state law be followed concerning water rights for these projects. Individual projects are subject to the framework established by general federal reclamation law and, in some instances, to a specific statutory authorization. More important are the contracts between the U.S. and the entity representing the water users. These contracts set forth the commitment of the U.S. to make certain uses of project facilities -- most importantly to provide specified maximum deliveries of water -- in return for a commitment by the contracting entity to make specified payments for the facilities.

Section 2: Reclamation Water Supply and Water Rights

The West was rich with land but short of the rainfall that made agriculture possible in other parts of the country. Supporters of the reclamation program believed that the costs of increasing the consumptively usable water supply in the West would be returned by the increased value of the lands that would become agriculturally productive through irrigation.[46]

While the western states wanted the federal government to build the necessary storage and delivery systems, they did not want the U.S. to control the allocation of water from these facilities. The western lands and waters at one time had all been under federal control, but Congress had deferred to the states in the creation of rules regarding water allocation.[47] Section 8 of the 1902 Reclamation Act continued this federal deference to state law. It

expressed the intent of Congress that this important new law not "interfere" with state law "relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder," and directed the Secretary of the Interior to conform with "such laws" in carrying out the provisions of this act.[48] In *California v. United States*[49] the U.S. Supreme Court strongly affirmed the primacy of state law in this area.

Of course, to the users who were expected to pay for the construction of reclamation facilities, it was the delivery of water that had value -- not the facilities themselves. Thus the payment obligation for the facilities was tied to the agreement to provide water. As mentioned, originally settlers made arrangements with the Bureau for the delivery of water by means of a "water-right application." Since the U.S. typically held the state-based water rights allowing diversion and storage of water and then delivered water under water-right applications, the U.S. did in fact appear to be selling water. Even the U.S. seemed to believe it had this authority.

In a 1937 decision, *Ickes v. Fox*,[50] the U.S. Supreme Court found to the contrary. This case involved the Yakima Project in the state of Washington. Irrigators in the Sunnyside Unit of this project held water delivery entitlements of 4.84 acre-feet per acre. The construction cost charges of $52 per acre had been fully paid by the users. To make water available for irrigation use in another unit, the U.S. decided to reduce deliveries from 4.84 acre-feet per acre to 3 acre-feet. The U.S. argued that it owned the water rights under which the deliveries of water were made and therefore could control the use of the water.

The U.S. Supreme Court noted that the U.S. had agreed to supply the applicants with "that quantity [of water] which shall be beneficially used for the irrigation thereof, not exceeding the share proportionate to irrigable acreage of the water supply actually available, to be paid for [in ten annual installments] in an amount which was fixed in each application."[51] It found that this quantity had been determined to be 4.84 acre-feet per acre, that deliveries of this quantity had been made for 20 years, and that 3 acre-feet per acre was not sufficient to beneficially irrigate the lands in the project area.

The Court next considered the question of ownership of water rights. It characterized the position of the U.S. in its reclamation capacity as "simply a carrier and distributor of the water . . . ."[52] It went on to draw a clear distinction between the interest of the U.S. in the facilities it had constructed to provide water and the water rights held by the irrigators:

> Although the government diverted, stored and distributed the water, the contention of petitioner that thereby ownership of the water or water-rights became vested in the United States is not well founded. Appropriation was made not for the use of the government, but, under the Reclamation Act, for the use of the land owners; and by the terms of the law and of the contract already referred to, the water-rights became the property of the land owners, wholly distinct from the property right of the government in the irrigation works.[53]

The U.S. provided the water but the water right to the water that had been provided and used under contractual

agreement vested in the user and not in the provider.

In distinguishing between ownership of facilities and ownership of water rights the U.S. Supreme Court indirectly drew on a considerable body of law that had developed in western states involving irrigation water supply systems not owned by the irrigators themselves. The court referenced the following discussion from a federal district court decision, *Murphy v. Kerr*:[54]

> In the larger systems it has been the practice for an irrigation company to construct diversion dams, canals, ditches, reservoirs, and other physical works for the irrigation of bodies of land, and to sell the land to be irrigated to farmers and to enter into contracts with the purchasers thereof to maintain the physical works, and to divert, store and deliver, or where storage is not used to divert and deliver to the owner of the water right at the land, the water for beneficial use thereon. The property right in the irrigation works is in the irrigation company, and the water right is appurtenant to the land and belongs to the owner thereof.

This decision goes on to characterize the owner of the irrigation works as an "agent" of the owner of the land and water right and as a "carrier" of the water.[55]

Unlike mutual ditches or irrigation districts which existed only for the benefit of their members, carrier companies were commercial enterprises.[56] In many cases they were land sales companies. The provision of water was important primarily because of the increased selling price for the land.[57] Conflicts between the profit interests of these commercial enterprises and the inability of irrigators to make adequate payments led to litigation and state regulation in many situations and, eventually, to the virtual disappearance of this form of irrigation water supply organization.

As mentioned, there is a substantial body of case law seeking to define the relationship between the water carrier and the water user and, in particular, the nature of the water rights that they respectively hold. The Colorado courts were the first to address this issue and, in the 1888 decision of *Wheeler v. Northern Colorado Irrigating Co.* the Colorado Supreme Court concluded that the water appropriation made by a carrier company depended for its "birth and continued existence upon the use made by the consumer."[58] In later Colorado cases this relationship was described as a kind of joint appropriative right. For example, in *Combs v. Farmers' High Line C. & R. Co.* the Colorado Supreme Court said:

> [W]hile the rights of the consumer to the use of water are distinct and independent of the rights of the carrier, which transports the water for hire, yet the rights of the two combined constitute a completed appropriation, and it is the completed appropriation for which the decree is rendered. The decree embodies not only the rights of the carrier, whatever they may be, but also the rights of its consumers.[59]

A 1913 federal district court decision offered this summary of carrier ditch law in Colorado:

> (1) the owner of the carrying ditch in making the diversion from the natural stream acts solely as the agent or trustee for him who

> applies the water to a beneficial use, (2) gets no title in or right to the use of the water and has no property in it subject to disposal, and (3) he who applies the water thus diverted to beneficial use acquires a property right in the use of the water thus applied which he, and he only, can sell, dispose of and convey by deed separate and apart from the land to which it has been applied or with land to which it has been applied.[60]

In this interpretation, the carrier is simply acting as an agent for the user in diverting the water and holds no property interest in its right of use. Moreover, under Colorado law the user is free to transfer the water in the same manner as any other appropriative right.

This expansive view of the rights of the user is tempered somewhat by language in other cases pointing out that the user must comply with the provisions of the contract under which the water is delivered.[61] For example, where a consumer used water supplied by a carrier ditch on lands other than those specified in the contract such use was enjoined.[62] The carrier may require users to "exercise such rights under reasonable regulations and limitations."[63] If upon the expiration of the contract supply term the user fails to renew the contract he may lose his right.[64] And, of course, he must make all legal payments that are due.[65]

The Supreme Court of Nevada followed a similar approach in the 1914 decision, *Prosole v. Steamboat Canal Co.*[66] This case involved the duty of a canal company to continue to deliver water to a user in the same manner as it had in the preceding 20 years. Apparently there was no formal contract between the company and the user. The Court found that the user held a legally protectable interest in the water since it is the act of applying water to beneficial use that makes the diversion into "a complete and valid appropriation."

The Nevada Court cited with approval the rule set forth by the Arizona Supreme Court in *Slosser v. Salt River Valley Canal Co.* that the carrier ditch is only the agent of the water user in furnishing the water through its system.[67] The Court in *Slosser* had concluded that, under Arizona law, appropriative water rights for irrigation can only be held by the owner of the land on which the water is used.[68]

The Idaho courts have taken a somewhat different view. Early decisions recognized the right of a company or an individual to appropriate water "for sale, rental, or distribution, or for any beneficial purpose."[69] The validity of the appropriation depends on actual beneficial use of the water,[70] but the "appropriation of water carried in the ditch operated for sale, rental, and distribution of waters does not belong to the water users, but rather to the ditch company."[71] Nevertheless, the users have a "perpetual right [to the water], subject to defect only by failure to pay annual water rents and comply with the lawful requirements as to the conditions of use."[72]

Thus the legal relationship between water carriers and water users, used by the U.S. Supreme Court in *Ickes v. Fox* to characterize the federal reclamation system, has been the subject of considerable discussion by state courts. In all cases the rights of the water users are given protection against arbitrary actions by the carrier. There is considerable variation, however, in the nature of the water right found to be held by the water user -- ranging from the fully transferable right said to exist in Colorado to the more limited right described in Idaho.

It is arguable that the *Ickes* decision represents a statement of federal law that should be applied to analyze the water rights relationship between the U.S. and water users in other similar federal reclamation projects. An alternative view would be that this water rights relationship is a matter of state law and must be analyzed individually for each project. The first approach is supported by the fact that the U.S. Supreme Court in the *Ickes* case made limited reference to Washington state law and cited a federal district court decision (from New Mexico) for its conclusion that the user of water from a federal reclamation facility holds a property right to the use of the water even though the U.S. holds the legal right to divert the water.

Moreover, in two subsequent decisions the U.S. Supreme Court has specifically reaffirmed the *Ickes* decision.[73] Particularly relevant is the case of *Nevada v. United States*[74] involving an effort by the U.S. on behalf of the Pyramid Lake Paiute Tribe to obtain a reserved water right on the Truckee River in Nevada to maintain the fishery in Pyramid Lake. The U.S. Supreme Court held that the government was bound by an earlier adjudication of rights to use water from the Truckee River under which the U.S. had obtained appropriation rights for the Newlands Project, a federal reclamation project, and the tribe. In particular, the Court held that the U.S. had only a "nominal" interest in the water rights for the Newlands Project and that the "beneficial interest in the rights confirmed to the Government resided in the owners of the land within the Project to which these water rights became appurtenant upon the application of Project water to the land."[75] There is no mention of Nevada law such as the *Prosole* case discussed above, only of the *Ickes* decision. The U.S. Supreme Court, at least, seems to regard this issue as a matter of federal law.

To summarize, the U.S. Supreme Court has analogized the water delivery functions of federal reclamation facilities to that of a water carrier. Even though the U.S. may hold the state water rights governing the diversion and use of the water, it does so as an agent for those who apply the water to a beneficial use. In its carrier capacity, the U.S. may set the terms of the water supply arrangement, including the quantity of water it will supply (by federal reclamation law, limited to the amount that can be beneficially used) and the charges it will assess to repay some part of the cost of constructing the facilities and to pay for ongoing operation and maintenance costs. So long as this water is being applied to beneficial use in conformance with the water supply arrangement, the U.S. must continue to meet its supply commitment. The water right held by the user in these circumstances, while subject to certain contract obligations, has been called a property right by the U.S. Supreme Court.

Section 3: Federal Legal Interests in Transfers

Construction of a reclamation project represents the commitment of substantial federal resources. The project authorization directs the construction of specified facilities that will be used for certain described uses. The U.S. enters into a contract with an entity or entities representing the landowners and others who will use the water delivered from the reclamation facilities. The primary purpose of the contract is to specify the obligation of the U.S. regarding provision of water and the obligation of the representing entity in paying a share of the construction cost of the facilities and

an operation and maintenance charge if the U.S. operates the facilities.

Transfers of water supplied from Bureau facilities may implicate federal interests in a variety of ways. This section considers first the interests associated with ownership of the facilities and then the interests associated with the use of water provided by these facilities.

Interests in the Use of Federal Reclamation Facilities

1. Transfers involving uses not originally contemplated

The purposes for which reclamation facilities are authorized and constructed have expanded markedly over the years. Originally, irrigation water supply was the only purpose recognized. Even in more recent times, projects have been authorized for a limited number of purposes. Thus transfers may be proposed which involve uses of water not originally considered at the time the project was authorized. These transfers may require some change in the use of the facilities themselves. Are these new uses of reclamation facilities precluded without explicit federal approval?

Congress has never addressed the matter of water transfers directly. As described earlier, it has recognized the expanding uses for which reclamation facilities may be built. More specifically, it has authorized the Secretary of the Interior to enter into contracts for the use of facilities beyond those originally intended. These statutes do not appear to be directed at transfers of water already being provided and used but, rather, at allocation of water in reclamation facilities not being used. The clearest example of this authority is a single paragraph statute enacted in 1920 which, subject to certain limitations described below, authorizes the Secretary of the Interior to "enter into contract to supply water from any project irrigation system for other purposes than irrigation, ... "[76] A 1906 act authorizes the Secretary to provide water to towns "in the immediate vicinity of irrigation projects . . . " which hold a preexisting water right from the same water source as the project.[77] And the 1939 Reclamation Project Act, while generally concerning new or supplemental projects, provides the Secretary with general authority to "enter into contracts to furnish water for municipal water supply or miscellaneous purposes: . . . . "[78]

The 1920 act places three substantial limitations on contracts issued under its authority: (1) the new contract must be approved by the entity representing the irrigation water users in its contract with the U.S.; (2) there must be no other practicable source of water supply; and (3) deliveries of water under the contract may not be "detrimental to the water service" for the irrigation project or to the rights of any prior appropriator.[79] The 1906 Act applies only to nearby towns with a preexisting water right.[80] The 1939 Act provides that contracts issued under its authority must not "impair the efficiency of the project for irrigation purposes."[81] While authorizing contracts for purposes beyond those originally intended, these statutes express a strong concern for the protection of the irrigation water users receiving water from reclamation facilities.

Modification of reclamation facilities to enable additional uses is authorized under the 1911 Warren Act discussed above, and the Water Supply Act of 1958.[82] The Water Supply Act recognizes a federal role in developing water supplies for municipal and industrial uses. Storage for these purposes can be

included in new facilities, a fact already well established in the 1939 Reclamation Project Act. More importantly, modifications in existing facilities necessary to make water available for these uses can be made; but if these modifications would "seriously affect" the original project purposes or involve "major" structural or operational changes, approval of Congress is necessary.[83]

The case studies suggest that the U.S. must specifically authorize transfers where the proposed new uses of water are for purposes not originally anticipated. For example, there have been several transactions involving water originally supplied from the Rio Grande Project for irrigation use in Texas.[84] These transactions have resulted in water moving from irrigation use to municipal use in the city of El Paso. The arrangements made in 1962 and 1988 involved a new contract with the U.S. These contracts are based explicitly on the authority of the 1920 Act. Generally they involve the assignment of the rights to receive irrigation water from the Rio Grande Project by the landowners in favor of delivery of this water for municipal use. Among other things, the new contracts contain recitations that they meet the conditions of the 1920 Act regarding no detriment to irrigation service and no other practicable source of water.

The Emery County Project in Utah was planned and built for irrigation water supply.[85] The 1962 repayment contract between the Emery Water Conservancy District and the U.S. spoke only in terms of irrigation water use. To permit Utah Power and Light to use 6,000 acre-feet of water for industrial purposes -- water that had not been subscribed for by irrigators in the area, the U.S., the Emery Water Conservancy District, and Utah Power and Light entered into a new contract in 1972. In the new contract, the U.S. simply recognized industrial uses for the project and justified this new use by referencing the general authority under which this project had been built (the Colorado River Storage Project Act) which included industrial uses as one of the purposes for which projects could be built.

The Kendrick Project in Wyoming is another example of a project authorized only for irrigation purposes but from which a water supply for municipal uses has been established.[86] Again, the U.S., the irrigation water user organization (the Casper-Alcova Irrigation District), and the new user (the city of Casper) entered into a new contract. Legal authority for the new contract (and therefore the new use) was Section 9(c) of the Reclamation Project Act of 1939 which authorizes the Secretary to enter into contracts to furnish water for municipal water supply. Thus the U.S. construed this act as authority to provide for new uses of old reclamation facilities. The requirement in the act that the contract not impair the efficiency of the project for irrigation purposes was met by making the water available to the city of Casper out of efficiency improvements in the water delivery system to the irrigation district so the irrigators still received the same quantity of water at their headgates.

In at least one case, new legislation has provided the basis for new uses of a reclamation project. Proposed transfers of water supplied by the Newlands Project in Nevada from irrigation use to wetlands maintenance in the Stillwater Wildlife Management Area raised the question of whether the project could be used for this purpose.[87] Again, irrigation was the only authorized use of this project. A 1989 Solicitor's Opinion had concluded that a 1956 act adding additional storage features related to the Newlands Project, which act recognized fish and wildlife purposes, authorized this new use of the Newlands Project. Congress laid this

issue to rest in legislation enacted in 1990 which, among other things, specifically authorizes the use of the Newlands Project for a broad set of potential purposes including fish and wildlife.

Cities adjacent to the Strawberry Valley Project in Utah have expressed interest in acquiring rights to use water from this project for municipal purposes.[88] As with the other examples, this project was authorized only for irrigation purposes. In response to a proposal by the city of Spanish Fork to obtain rights to project water, the Bureau of Reclamation concluded that the new use would require approval by the Secretary upon a finding that the water was determined to be "surplus" to irrigation needs in the project. A subsequent proposal sought to avoid the need for such a determination by characterizing the arrangement as a "delivery" contract. For reasons that are not entirely clear, the Bureau has determined that such a contract would not involve a change of water use. However, the Bureau has required that the contract identify the individual water deeds and land parcels involved.

The Provo River Project in Utah provides a useful comparison with these examples.[89] Originally envisioned as an irrigation project, it evolved into a multiple purpose project during the planning phase and, as approved for construction in 1935, provided for a major municipal use component. In anticipation of increasing municipal use of project water, mechanisms permitting this transformation, including provisions in the repayment contract with the U.S., were established at the outset. Consequently, the Bureau plays no role in the considerable number of transfers that are moving irrigation water to municipal use.

These examples suggest that transfers of Bureau-supplied water involving a use of water and therefore, presumably, a new use of federal reclamation facilities not already authorized will require U.S. approval. It appears that a new contract with the U.S. for this use of its facilities will likely be necessary. A primary concern of the U.S. will be to insure that the new use does not impair the irrigation and other existing purposes of the project. Agreement by the organization representing irrigation water users to the new use is necessary under the 1920 Act. It is not clear whether this agreement is sufficient to satisfy the U.S. that the new use will not harm the project's irrigation purposes. Nor is it clear what else will be considered by the U.S. in this regard.

2. Transfers for uses outside the original project area

Federal reclamation projects are authorized to provide service to users in some geographic area. The project authorization may specify a service area but, more often, the service area must be implied from other project-related reports. In practice, the service area commonly ends up being coterminous with the boundaries of the organization representing the water users.

Transfers of water use to new locations within the service area are unlikely to raise issues requiring U.S. approval so long as the purpose of the water use does not change. Transfers for use outside of the project service area raise questions similar to those raised by changes to purposes of use not contemplated by the original project authorization. Since uses outside the project service area were not anticipated, must transfers involving such uses depend on U.S. approval?

The city of Casper is not within the service area for the Kendrick Project. As mentioned, the water from this project

made available to the city is the subject of a new contract involving also the Casper-Alcova Irrigation District. The U.S. referenced the 1939 Reclamation Project Act as authority for this new contract involving both a type of use not originally authorized as well as a place of use outside the project service area. Similarly, the city of El Paso is outside the service area of the Rio Grande Project. In this case, the 1920 Act served as authority for the new contracts providing for the new type and place of use.

Transfers of water to new uses outside the original project service area appear to be less common than transfer to types of uses not originally authorized. In either case, a new or amended contract with the U.S. appears to be necessary. In the two examples found in our case studies the new contracts were based on different statutory authority.

3. Issues related to payment for the project facilities

The U.S. has a direct interest in recovering the construction costs of project facilities designated as reimbursable. Federal policy for the repayment of the cost of reclamation facilities has shifted over the years from full recovery of these costs (without interest) to only partial recovery. Wahl has calculated that irrigation water users repay, on average, about 14 percent of the full cost of reclamation facilities from which their water is supplied.[90] The subsidy for other users is considerably less.

A primary purpose of the contract between the U.S. and the organization(s) representing users of water from a reclamation project is to establish the total payment obligation for the reimbursable share of the project construction costs attributed to the water supply for these users. As discussed, a repayment contract anticipates complete payment of this cost during the 40-year life of the contract. Service contracts need not provide for repayment of total reimbursable costs during their initial term and have been used in situations such as the Central Valley Project in California where the U.S. believes total reimbursable costs cannot yet be determined because additional facilities are still planned for construction.

Payment requirements for classes of users (e.g. irrigators, cities, industries) are established in the contract between the U.S. and the organization(s) representing these users. The contracting entity takes on responsibility for the payment of the costs established in the contract. The precise manner in which the contracting entity finances its payment obligation to the U.S. is generally left up to the entity to decide, but the U.S. must be satisfied before signing the contract that the entity will in fact be able to make the payments.

Transfers of water among the same class of users receiving water from a reclamation project should not alter the repayment obligation established under the original contract. Transfers between classes of users, however, may require new financial arrangements with the U.S. because of the different subsidy policies that apply. More recent contracts in which transfers of water were anticipated have provided schemes for changing payment obligations in such cases.[91] Typically, however, there is nothing in the original repayment contract that addresses this matter.

The case studies reveal considerable variation in approach. The transactions providing for the use of Emery County Project water by Utah Power and Light (UPL) both involved payment obligations to the U.S. radically different than the payment obligations for the Emery

County Conservancy District on behalf of the irrigation water users.[92] The first transaction, which occurred in 1972 and involved the allocation to UPL of 6,000 acre-feet of water originally intended for irrigation use but not subscribed for by irrigators in the area, required UPL to pay the U.S. a total of $4.8 million over the 40 year contract period. By comparison, under the original contract the irrigators were responsible for paying about $2.3 million for an annual average water supply of about 22,100 acre feet. The second transaction, which occurred in 1987, involved the transfer of rights to water from the project that had been acquired from irrigators in the area. In addition to the cost of purchasing the rights to about 2,500 acre-feet of water from the irrigators, UPL agreed to pay the U.S. a total of about $2.9 million.

In return for receiving water from the Kendrick Project, the city of Casper agreed to pay to the U.S. the remaining obligation of the Casper-Alcova Irrigation District ($750,000) as well as a charge of $24 per year for each acre-foot of water available to the city.[93] The city also is paying the cost of the improvements that make the water available.

The transfers of Rio Grande Project water to the city of El Paso have not required any increased payments to the U.S. Apparently this is because the payment obligation associated with this water had already been completed. Transfers of Newlands Project water to the Stillwater Wildlife Management Area do not involve any change in the payment obligation for the related reclamation facilities. These transfers are being treated as straight changes of water rights under Nevada law with the existing payment obligation associated with the original water right remaining with the transferred water right. The Truckee-Carson-Pyramid Lake Water Rights Settlement Act, passed by Congress in 1990, authorizes the Secretary of the Interior to use or extend federal reclamation facilities on a non-reimbursable basis as necessary to provide water to the wetlands.[94]

Repayment of the original construction costs of the Deer Creek Division of the Provo River Project is shared equally on an acre-foot-basis by all users of project water, whether for irrigation or municipal purposes.[95] The plan and legal arrangements for this project anticipated shifts of water use from irrigation to municipal purposes. Thus, transfers of water from irrigation to municipal and industrial purposes are deemed not to require an increase in the payment obligation.

Several factors may be relevant in considering the differences observed in these examples. One consideration is whether the total allocated portion of the project construction costs has been paid back to the U.S. As mentioned, in the El Paso situation this fact was used to justify no increased payments. A second consideration is whether the transfer requires a new contract with the U.S. If no such contract is required, then very likely no change in the payment for project facilities is necessary unless specified in the existing contract. Assuming that a new contract is necessary and that the reimbursable construction cost of the facilities has not been fully repaid, there remains the question of the basis for establishing the new repayment requirement. This issue is discussed at length in chapter 3, below.

Water Rights-Related Interests

Section 8 of the 1902 Reclamation Act provides that state law governs the water rights associated with reclamation facilities. It states:

> Nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws . . . Provided, that the right to use of water acquired under provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.[96]

In *California v. United States*[97] the U.S. Supreme Court interpreted this provision to apply in two primary situations: first, the water rights necessary to support the project must be established in conformance with state law; second, the distribution of water released from reclamation storage facilities also must follow state law.[98]

The United States holds the water rights by which water is diverted and stored in most of the reclamation projects in the western states.[99] For the water that is delivered from reclamation facilities to beneficial users, the U.S. holds the diversion water rights, as suggested in *Ickes v. Fox*[100], in a kind of agency relationship. To the extent that water delivered from reclamation facilities is applied to a beneficial use in conformance with the contract arrangement with the U.S., the user may be considered to hold a legal right to permanent supply of that water.

Trelease has distinguished between the position of the U.S. as holder of the water rights in "external" relationships (those between the project appropriator and other claimants of water) and "internal" relationships (involving the Bureau as distributor of water and the users of the water).[101] In these external relationships the U.S. may be regarded as the appropriator. In internal relationships the *Ickes* decision suggests the user is to be considered the appropriator.[102]

Under prior appropriation law in the western states, the holder of a water right may transfer ownership or use of the right to another or may make changes in the manner of use of the right subject to state review.[103] Section 8 of the 1902 Reclamation Act suggests that state law governs water rights. Reclamation law, however, is silent on the question of transfer of water rights.

The first court to directly consider the transfer of water rights involving water delivered from a federal reclamation program concluded that state law should apply.[104] This case involved the adjudication of water rights for the Newlands Project from the Carson River in Nevada. The federal district court made it clear that the water rights based on a supply of water from the Newlands Project are vested in the irrigators who have used the water on their lands under legal arrangement with the U.S. Among the issues considered was the failure of the U.S. to formally change water rights it had obtained from private appropriators to establish a water supply for the project. In this context the Court stated:

> A careful examination of the Reclamation Act reveals no explicit congressional directives relating to the transfer of vested water rights to the United States. In fact, the conspicuous absence of transfer procedures, taken in conjunction with the clear general deference to state water law, impels the conclusion that

> Congress intended transfers to be subject to state water law.[105]

Thus, transfers of water to the U.S. to establish a project water supply are to be handled under state law. In a subsequent part of the opinion, the court extended this view and stated that any changes in the place of diversion , place of use, or manner of use are to be handled under state law.[106]

An earlier court decision concerning the Newlands Project had made it clear that water should be delivered only to irrigators whose lands were clearly identified as entitled to receive water.[107] Over the years some users of Newlands water had moved the water to lands not originally described in the water right certificate or allotment contracts. To come into compliance with this court decision, these users filed applications with the Nevada State Engineer to change the place of use of the water. In a 1989 decision, the Ninth Circuit affirmed that Nevada law applies to the transfer of water rights held by landowners within the Newlands service area.[108] It based this conclusion on Section 8 of the 1902 Reclamation Act. Consequently, pending transfers of Newlands Project water from irrigation to wetlands use are proceeding under Nevada state law.

Still another court decision regarding the Newlands Project considered whether federal interests would be sufficiently protectable under state law proceedings. The Ninth Circuit concluded that the notice and participation provisions in Nevada law, combined with the ability to appeal the State Engineer's decision to the federal district court, "provide full vindication of the admitted federal interests in the operation of federal reclamation projects."[109]

These cases hold that users of water delivered from the Newlands Project and used in accordance with contract arrangements hold a state law-based water right. As property, these water rights are transferrable according to state law. In this situation no changes in the contract between the U.S. and the representing entity (the Truckee-Carson Irrigation District) were involved. U.S. interests were determined to be adequately protectable within the state review process for water transfers.

Illustrations from case studies

Emery County Project

The case studies generally support this view that the users of water supplied from a reclamation project hold a water right that may be voluntarily transferred to another use.[110] For example, in the 1987 transfer of Emery County Project water to Utah Power and Light the utility directly acquired lands and associated water rights from the irrigators. Unlike the Newlands case, however, the individual rights did not go through the Utah change of water rights process. Rather, the U.S., which holds the water rights for the project, filed the necessary change of water right application with the Utah State Engineer, noting the change of use from irrigation to industrial and other purposes, and the change of place of use. A new contract with the U.S. also was required because of the change in the repayment obligation associated with this new use of water.

Provo River Project

By comparison, the transfers within the Provo River Project have occurred without any state change of use proceeding. The U.S. holds the diversion and storage water rights for the project. Transfers occur through the sale of shares

in the water user association or through the sale of shares in irrigation companies which hold association shares. No state change of use proceeding has been considered necessary because the water rights for the project provided that "uses may from time to time change from agriculture to municipal and domestic or other uses which may require additional rediversion and conveying works and increased capacity of rediversion and conveying works."[111] Moreover, the place of use is identified as anywhere within the boundaries of the water user association which extends to parts of five counties.

Rio Grande Project

Transfers of Rio Grande Project water from irrigation to municipal use in the El Paso, Texas area involved agreements with the individual landowners deemed to hold a right to receive water. These transfers required a new contract with the U.S. and the representing entity. The contract limited transfers to the water associated with two acres of land or less per landowner without approval of the district board. The transfers were for a fixed term of years -- 25 years in the 1962 transaction and 75 years in the 1988 agreement. No state change of use proceeding was involved in these transfers.

BMI/Henderson Transfer

The transfer of Boulder Canyon Project water from the entitlement held by Basic Management, Inc. (BMI) to the city of Henderson, Nevada involved a water supply arrangement unlike that in the other cases. BMI holds a "permanent service" contract for water from Lake Mead.[112] Under a 1954 contract, BMI had been supplying Henderson with about 5,000 acre-feet of water. Henderson sought to expand its supply to about 15,900 acre-feet.

BMI's municipal use allocation under its contract with the U.S. totaled about 9,400 acre-feet per year, some of which was already committed to other users in addition to Henderson. To expand its supply to Henderson, BMI would have to provide water from the allotment under its service contract that had never actually been used. Moreover, it would have to provide water to municipal use from its allotment for industrial use. Because of these factors, the Department of the Interior opposed BMI's original plan to simply extend and increase its contract with Henderson.

The arrangement approved by the Secretary involved an amendment to the 1969 contract by which BMI's water entitlement is reduced from 41,266 acre-feet per year to 23,158 acre-feet per year "or so much thereof as may be required for beneficial use."[113] In turn, BMI assigned and transferred its interest in 15,878 acre-feet per year from its Lake Mead entitlement, including 6,449 acre-feet per year of its municipal water portion and 9,429 acre-feet per year of its industrial water portion.[114] The U.S. agreed to deliver up to 15,878 acre-feet per year to the BMI intake structure at a charge of $0.50 per acre-foot plus an additional $0.55 per acre-foot for administrative costs.[115] Finally, BMI agreed to deliver the water through its pipeline for $110 per acre-foot the first year, increasing to $160 per acre-foot in five years and continuing for the duration of the contract.[116]

The greater degree of federal control over the form of this transaction probably arises from the fact the water is from Lake Mead. Under the Boulder Canyon Act, the Secretary of the Interior effectively controls all allocations of water from federal facilities in this part of the

Colorado River. Those with water entitlements such as BMI may be given a permanent right of service but transfer of these entitlements to new uses is probably subject to much greater control than in most other non-Colorado River federal projects.

Proposed CAID/GID Transfer

A proposed transfer of Kendrick Project water involving the Goshen Irrigation District (GID), not discussed in the case study in volume II, raises several interesting issues. The Casper-Alcova Irrigation District (CAID) holds rights to receive water from the Kendrick Project in Wyoming to irrigate 23,000 acres of land.[117] The U.S. holds the storage rights while CAID holds so-called secondary rights to the use of the stored water. In 1989 the Goshen Irrigation District (GID), located downstream from CAID on the North Platte River, sought to work out an arrangement with CAID whereby GID would receive 25,000 acre-feet of water out of the storage that provides water to CAID in return for allowing an equivalent amount of water to be stored in Kendrick reservoirs the following year. The U.S. objected to this transaction, primarily on the basis that it, not CAID, controlled the use of water stored in the Kendrick Project, and that any such transaction could occur only under a contract with the U.S. GID, supported by the state of Wyoming, refused to enter into such a contract, saying that CAID owned the water rights and, under both federal and state law, could determine the use of the water.

The litigation appears likely not to resolve the fundamental substantive issues that have been presented concerning who controls these kinds of transfer decisions. This situation is primarily useful as a hypothetical example in which to consider these issues. A brief analysis follows.

CAID unquestionably is the legal holder of water rights to irrigate lands within the district with water from the Kendrick Project. In *Nebraska v. Wyoming*[118] the U.S. Supreme Court explicitly followed its holding in the *Ickes* case that the U.S. is simply a carrier of water to the users who hold the legal right to the water beneficially used. As noted above, in the various cases relating to the Newlands Project the federal courts have followed this approach and have concluded that transfers are a matter of state law. This would suggest that so long as the proposed transfer conformed to state law, the U.S. should not be able to prevent it. Wyoming law authorizes short-term transfers upon approval by the State Engineer and approval was obtained.

Had the transfer simply involved water that CAID otherwise would have used in the same year, the above analysis should apply. However, the water to be supplied would have come out of storage in the Kendrick Project reservoirs. CAID still used its normal annual entitlement. At best this is water from the carryover storage which the Kendrick Project relies on to supply water to CAID. The storage rights held by the U.S. for the Kendrick Project are relatively junior and may not be in priority in many low flow years. By filling the Kendrick reservoirs in high flow years, water can be held that may be necessary to supply CAID in low flow years.

Originally the Kendrick Project was expected to support irrigation on considerably more acreage than has in fact been the case. In a sense the U.S. still holds this supply for uses yet to be determined. Just how much of the water in storage is directly attributable to support CAID's rights and how much is

there for other purposes is uncertain. Consequently the legal control of this water is uncertain.

An arrangement by which CAID transferred only water that was identified as part of the related carryover storage would fit more closely with the legal recognition that has been given to the rights of water users taking water from BOR projects under a water carrier-type arrangement. CAID must then either be prepared to forgo the future use of this water, work out an exchange agreement with the transferee whereby the water provided will be replaced in the following year or years, or hope that there are sufficiently high flows in the following years to fill the reservoirs anyway.

Central Valley Project

Transfers of water from the Central Valley Project (CVP) in California, the largest reclamation project in the West, have been the subject of intense interest. The Bureau of Reclamation has permitted short-term transfer of water to occur under certain conditions: (1) the transferor must have "excess" water available from its allotment; (2) the transfer can only be for one year; (3) the transferee must also have a contract with the U.S. to receive CVP water; (4) the transfer must not violate federal reclamation law; (5) the transferor may not profit from the transaction; and (6) transfers between certain field diversions are prohibited.[119] Only one permanent transfer involving a change of purpose of use of water, however, has been permitted.[120]

Water supply for irrigation from the CVP is provided under water service contracts authorized by Section 9(e) of the 1939 Reclamation Project Act. There is some question whether the nature of the water right held by the user under these contracts is different from that held under the Section 9(d) repayment contract. In both cases the U.S. commits to what may be a perpetual supply of water.[121] Contractors in the CVP had expressed concern that their water supply might be cut off at the end of their contract term. In *Ivanhoe Irrigation District v. McCracken*,[122] the U.S. Supreme Court determined that the renewal provisions in the 1956 act responded to this concern.

Section 9(e) contracts, however, have been compared to "utility" water supply arrangements.[123] The laws of a number of western states have recognized supply arrangements under which the users are not deemed to have obtained a water right.

For example, California law recognizes "public use" water suppliers. The legal basis for this category originated in an 1879 constitutional provision stating that the use of all water appropriated for sale or rental is deemed a "public use" and is subject to state regulation.[124] The California Supreme Court provided the following distinction between public use and private use:

> In the case of a public use the beneficiaries do not possess rights to the water which are, in the ordinary sense, private property. A public use "must be for the general public, or some portion of it, and not a use by or for particular individuals, or for the benefit of certain estates." [citation omitted] . . . The right of an individual to a public use of water is in the nature of a public right possessed by reason of his status as a person of the class for whose benefit the water is appropriated or dedicated. All who enter the class may demand

> the use of the water, regardless of whether they have previously enjoyed it or not.[125]

A subsequent decision noted that public use contracts are not attached to the land as an appurtenance in the way a water right would be.[126] So long as the land is within the area to be served, however, it has a permanent right of service.

In California these supply arrangements became subject to regulation by the Railroad Commission (now the Public Utilities Commission). This result was confirmed in *Glenn-Colusa Irrigation District v. Paulson.*[127] In this opinion the court described the user's right in the following way:

> [N]o private estate can be created in property devoted to a public use, and a consumer of water cannot have a water right in the sense of a private freehold interest in the real estate of the distributing company; . . . his right is simply a right of service.[128]

In the Clark treatise on **Water and Water Rights** this summary is provided of the protections afforded the user supplied by a water company in California:

> He is entitled to have his water supply continued unless there is a shortage of water for which the company is not responsible. There is a suggestion that the water must be fairly apportioned among all consumers when there is a scarcity of water or perhaps even when the demand for water is increased by new consumers. Moreover, by agreement with the water company, the water may be dedicated permanently for use on particular land; however, this does not technically create an appurtenant water right or give the consumer a permanent preferential right over other subscribers. Also, of course, rates charged may be extensively regulated by the State Public Utilities Commission.[129]

Texas law allows water companies to supply users on a contract basis. The courts have held that the supplier is in fact the owner of the appropriative right and that the user is merely the customer of the company.[130] By statute, the company may convey a permanent water right to the irrigator but apparently this is rarely done.[131] The user has a right of continuing supply upon the terms of the contract.

To summarize, under the water service model the appropriator provides water to users under a contractual or utility arrangement deemed not to vest an appropriative water right in the user. However, a number of duties attach that protect the rights of the user. Primary among these is the right of continued service. Depending on the state and the type of supply arrangement, additional regulation may occur, including control of the rates charged for service.

No courts have considered the nature of the water rights associated with 9(e) contracts.[132] Assuming this is a matter of state law under Section 8 of the 1902 Reclamation Act, a determination of this question could vary according to the state. Alternatively, the differences in the two types of contracts may be viewed as relevant only for the different options they provide for payment of the construction costs of project facilities. Since the water supply commitment under either arrangement is essentially permanent, the nature of the water right itself may not depend on the type of contract. This line of analysis is

supported by the act that reclamation law authorizes the conversion of 9(e) contracts to 9(d) contracts.[133]

Our analysis of California law in relation to the water supply arrangements from the CVP suggests that the users may in fact hold a water right even though they are supplied on the basis of water service contracts. However, some provisions in these contracts appear to substantially limit long-term transfers of water. Thus, Bureau of Reclamation policy regarding such transfers is especially critical to transfers in the CVP.

Other Considerations in Reclamation Law

As discussed, Section 8 of the 1902 Reclamation Act defers to State law in matters of water appropriation and distribution. There are two provisos in this section of the Act that must be considered in relation to transfers: the appurtenancy requirement and the beneficial use requirement. The effect of the 1982 Reclamation Reform Act also must be considered.

Appurtenancy

The first proviso of Section 8 is that the right to use water provided under the Reclamation Act "shall be appurtenant to the land irrigated . . . ."[134] What does "appurtenant" mean in Section 8? There is no definition of the term in the Reclamation Act. And there is no "plain meaning" of the term. As a result, a court would be compelled to interpret what Congress must have meant when it conditioned the use of project water on appurtenancy. In so doing, it may make reference to the legislative history of the Reclamation Act and to indicia of contemporary meaning of "appurtenancy".[135]

The legislative history contains sparse reference to "appurtenancy," but that which exists provides some limited support for the proposition that Congress intended that, once project water was applied to a particular tract of land, the water was inseparable therefrom. First, the report of the Committee on Irrigation and Arid Lands states that " . . . the character of the right which is contemplated under the act is clearly defined to be that of appurtenance or inseparability from the lands irrigated . . . . ".[136] Second, Rep. Mondell (from Wyoming), who carried the legislation from the Committee on Irrigation and Arid Lands and who was a primary sponsor in the House of Representatives, began floor consideration of the measure with a lengthy opening statement which includes the following passage:

> The water having been beneficially applied and payment having been made under the provisions of the bill, the water right would become appurtenant to the land and inalienable therefrom . . .
>
> The settler or landowner who complies with all the conditions of the act secures a perpetual right to the use of a sufficient amount of water to irrigate his land, but this right lapses if he fails to put the water to beneficial use and only extends to the use of the water on and for the tract originally irrigated. These most important provisions of the law prevent all the evils which come from recognizing a property right in water with power to sell and dispose of the same elsewhere and for other purposes than originally intended. This is an advance over the water usage of most of the States, and it is not denied that making water rights appurtenant

> to the tract irrigated will in some cases work hardship, but it is believed that it is much better to risk the individual hardships which will inevitably occur under a provision of appurtenance than to risk the evils certain to result from unlimited authority to transfer water rights.[137]

These remarks evince the intention to deny a landowner the right to transfer project water and to do so even in the face of state law to the contrary. If the court finds Rep. Mondell's concept of appurtenancy controlling, transfers away from the land to which it was originally applied are unlawful.

There are several reasons why a court would not likely adopt Rep. Mondell's interpretation. First, the words of one legislator, even a sponsor, do not control the meaning of a federal statute.[138] The reason for this policy is that there is no way to ascertain whether these words are what the rest of Congress intended. And while it is true that the report of the House Committee from which the legislation emanated mentioned the "inseparability" of project water from "lands irrigated", this explanation hardly passes for the detailed explanation of "appurtenancy" of which members of Congress can be presumed to have had full understanding. In addition, Rep. Mondell's remarks were not made during debate--in fact there was no debate on what was meant by "appurtenancy" in Section 8.

Second, Rep. Mondell indicated during debate that " . . . we are urging no new experiment and exploiting no new theories . . . [in] the principles which underlie this measure, the polices which it outlines, the detail of administration which it provides. There is in it no new thing."[139] If so, his concept of "appurtenancy" may not have been intended to be at odds with contemporaneous concepts of appurtenancy in western state water law, even though "appurtenancy" appears as a proviso to the general deference to state law.

The fact that a court could not be certain that Rep. Mondell's version of appurtenancy is what Congress intended will impel it to interpret congressional intent by reference to contemporaneous concepts of appurtenancy. "Appurtenancy" is a term that was at the time of the enactment of the Reclamation Act used widely in western water law. A court seeking guidance as to what the term meant (and, thus, how it was understood by Congress) would likely refer to "Kinney on Irrigation and Water Rights", the standard reference on water rights of the time.[140]

Kinney defines "appurtenances" as "things belonging to another thing as principal and which pass as incident to the principal thing, but which did not belong to it immemorially."[141] The question that Section 8's appurtenancy proviso raises for transfers, then, is whether, if interpreted by reference to contemporaneous concepts, Congress intended to require that, once project water was supplied to a particular tract of land, there really be an "inseparable" link between the water and that land.

Kinney is clear that "appurtenancy" did not connote inseparability in the linkage between water and land. Thus, he states: "Although a water right may be appurtenant to a certain tract of land, it is the subject of property, and may be transferred either with or without the land."[142] This is true, he says, even when legislatures overtly attempted to provide for such inseparability.[143] In this context Kinney addresses the appurtenancy provision of Section 8 as follows:

" . . . there is nothing in the nature and character of a water right acquired under the Arid Region Doctrine of appropriation which makes it, upon any principle of law that can be conceived, an inseparable appurtenance to any particular tract of land, so that a sale or transfer of the right would work an abandonment, and vest no right in the grantee. Upon the other hand, the inherent rights guaranteed under our constitutions and law to own, hold and dispose of all or any portion of our property, either as a whole or in parts, permits the sale and transfer of a water right separate from the land. This principle was undoubtedly recognized by Congress in passing the National Reclamation Act (cite omitted), where, in Section 8, it is provided that the Secretary of the Interior, in carrying out the provisions of the Act, shall proceed in conformity with the laws of the respective States and Territories; and, in the same section is the proviso, "That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated," etc. As will be noticed the proviso does not state what "land irrigated," nor does it attempt to make the water an inseparable appurtenance to any land. It certainly cannot be contended in the face of the whole of this section, that a person in either the states of Wyoming or Idaho, who had fully paid for a water right under the provisions of the Act, and where the law of those States recognize the validity of a sale and transfer of a water right separate and apart for the land to which it was first applied, can not sell his right, or transfer the water claimed thereunder to some other tract of land. The same may be said relative to the water rights acquired under the Act in other States under the principles stated above (cite omitted.)[144]

Thus, Kinney concluded that Congress (whatever Rep. Mondell intended) could not have intended to make project water inseparable from the land because to do so would be inconsistent not only with contemporaneous western water law but also with "our constitutions."

In interpreting "appurtenancy" under Section 8, a court would also likely seek the guidance of the Department of the Interior.[145] While the department has not issued a definition of "appurtenancy," it has acted for many years as if the term has the meaning in Section 8 accorded to it by Kinney.[146] The case studies undertaken for this report show a wide range of transfers of project water, including transfers from irrigation to municipal and industrial uses. Many of these transfers would obviously be unlawful under Rep. Mondell's concept of "appurtenancy". The fact that the department has approved them is indication that the department has not adopted that concept. In addition, a staff attorney in the Office of the Mid-Pacific Regional Solicitor of the Department of the Interior stated informally that "appurtenancy" is not a restriction on the place of use of Central Valley Project water. Rather, it was solely a congressional directive that early federal reclamation contracts be granted only to owners of land that would be irrigated with project water, rather than speculators.[147] This is a reasonable interpretation of Congressional intent in Section 8 and, thus, one entitled to deference by the courts.

One federal court has addressed the meaning of "appurtenancy" in Section 8. In *El Paso County Water District v. City of El Paso,*[148] an issue before the court was whether water provided by the bureau for irrigation could be used for municipal purposes without violating the appurtenancy provision. The court held that this municipal purpose, established under Texas law, overcame the appurtenancy requirement because Section 8's larger purpose was to defer to state control over project water allocation.[149] The problem with this holding is that the "appurtenancy" in Section 8 (whatever it means) seems clearly to be intended to be a condition on the deference to the states.[150]

Finally, a court might determine to review current notions of appurtenancy under state law for guidance as to the meaning of "appurtenancy" in Section 8. The theory under which a court might refer to current state law is that Congress, with knowledge that the investments authorized in the Reclamation Act would have an air of permanence about them, could not have continued to bind future generations to Mr. Mondell's concept of "appurtenancy" or any other concept of "appurtenancy" in 1902 if conditions changed. Thus, a court in the 1990s would feel justified in looking to state notions of appurtenancy for guidance. If it did refer to current state definitions of "appurtenancy", it would find what Kinney found in 1902: With only minor exceptions, state law does not render inseparable any connection of water to land to which it was initially applied.[151]

It is unlikely that Rep. Mondell's concept of "appurtenancy" in Section 8 would be found by a court to be controlling.[152] However, as his remarks cannot be completely assumed away, they may unnecessarily impede transfers of project water. As indicated in Chapter 5, the authors of this report believe that the Department should take affirmative steps to resolve the remaining ambiguity surrounding Section 8 "appurtenancy."

Beneficial use

The second proviso of Section 8 states that "beneficial use shall be the basis, the measure, and the limit of the right [to use project water.]"[153] The beneficial use standard is the law of all reclamation states.[154] Thus, application of the standard found in Section 8 to project water transfers would be required under state law, unless Congress intended "beneficial use" to mean something other than that which is found in state law. It follows that, barring such an intent, the beneficial use proviso of Section 8 does not constitute an impediment to project water transfers beyond any impediment that respective state beneficial use standards might present to these transfers.[155] This section explores the meaning of "beneficial use" in Section 8, a topic that has led to controversy for some projects in the transfer context.[156]

There is no legislative history suggesting that Congress intended the beneficial use standard of Section 8 to mean anything other than what that standard means in the respective western states. One court has addressed the question of congressional intent in the standard. In *Alpine I*, the Court of Appeals for the Ninth Circuit stated that "While there were provisions of federal law which were intended to displace state law . . . beneficial use itself was intended to be governed by state law."[157] In this case the court affirmed a district court *de novo* determination of beneficial use within the Newlands Project under circumstances in which the court had declined to be bound by a Nevada statute defining water duties for irrigation.

However, the court found that the statute may never have applied to Newlands irrigators and, in any event, had been repealed. Thus, the Court of Appeals held that the District Court was authorized to depart from the Nevada statute and to make a *de novo* determination even in the face of the fact that Congress had intended "beneficial use" in Section 8 to be governed by state law. Had Nevada had a "special rule of law" that applied to the Newlands irrigators, the court implied, it would have been proper to have applied that law in the implementation of the Section 8 standard.[158]

While most western states are clear as to what kinds of uses constitute "beneficial use," many states have not defined with precision the quantities of water that can be said to be "beneficially used" in each of these uses. Where there are gaps in the definition of "beneficial use" in state law, the bureau will have a role in providing definition to the term in furtherance of the Section 8 standard. The circuit court opinions in both *Alpine I* and *Alpine II*[159] make it clear that this role is not only authorized under Section 10 of the Reclamation Act but that the Bureau cannot avoid exercising it if state law is silent on a particular aspect of beneficial use.

Reclamation Reform Act

Another set of potential problems for transfers of project water relates to application of the Reclamation Reform Act of 1982.[160] The RRA was intended to modernize the ownership restrictions of reclamation law as well as to apply new, higher repayment requirements to certain classes of growers that are triggered by contract amendments. The RRA does not directly address transfers. However, it may act as a disincentive to a transfer where the transfer requires an amendment to a contract.

Under the RRA, contractors may elect to avail themselves of more liberal land ownership restrictions than those appearing in the Reclamation Act,[161] but, if they do, they must pay charges for project water that recoup, at a minimum, full O&M costs for landholdings less than 960 acres and "full cost" (capital, interest and O&M) for holdings in excess of 960 acres.[162] These rates apply automatically after any water service or repayment contract is renewed.[163] In addition, upon a contract amendment for any purpose which enables a contractor to receive "supplemental or additional benefits," the RRA requires payment of full O&M costs for all project water as a minimum.[164] Thus, if a transfer prior to contract renewal requires a contract amendment and that amendment is deemed to constitute a "supplemental or additional benefit," growers who have not been reimbursing the United States for O&M costs--and the case studies show that some growers, particularly in the CVP, fall into this category--will have to pay charges equal to at least such costs on all project water, not just that which is transferred.

The degree to which these provisions of the RRA are a disincentive to a transfer depends on several factors, including if and when a contractor's contract is to be renewed (and, thus, cost of service charges apply anyway), whether the contractor or individual growers within the contractor's service area have already elected to begin to pay full O&M costs, and how far apart full O&M rates and cost of service rates are from contract-based charges.[165] For example, many Bureau contracts in the CVP executed for the purpose of providing water for irrigation uses only would need amendment to permit transfers to M&I uses. The question is whether these

amendments would constitute a "supplemental or additional benefit." On this matter, Bureau regulations state as follows:

> All contract amendments will be construed as providing supplemental or additional benefits except those amendments which do not require the United States to expend significant funds, to commit significant additional water supplies, or to substantially modify contract payments due the United States.[166]

Under irrigation-only contracts, transfer could occur by one of two means: (1) by amending the irrigation contract to include M&I uses, or (2) by reducing the irrigation deliveries under the original contract and simultaneously executing a new contract with the M&I purchaser of water.[167] The Bureau has not made clear the conditions under which it will consider such amendments as conferring supplemental or additional benefits, particularly if profit is allowed in the transfer.[168]

A policy which construed contract amendments to permit transfers (such as those in category (1) above and in category (2) when profit was allowed) as providing supplemental or additional benefits would clearly discourage transfers. On the other hand, this section of the RRA was aimed at getting districts to pay water rates that covered at least the government's O&M costs for delivering the water. The Bureau will have to weigh the conflicting goals of cost recovery and promoting more efficient water use in administering the RRA regulations. At a minimum, the Department should consider clarifying its policy and, potentially, revising its RRA regulations as well.

Bureau regulations also provide that transfers of water on an annual basis from one contractor-district to another will not be considered to provide supplemental or additional benefits provided that:

> (1) both districts have contracts with the United States, (2) the rate paid by the district receiving the transferred water is the higher of the applicable water rate(s) for either district, and provided that the rate paid does not result in any increased operating losses to the United States above those which would have existed in the absence of the transfer and the rate paid does not result in any decrease in capital repayment to the Untied States below that which would have existed in the absence of the transfer, and (3) the recipients of the transferred water pay a rate for the water which is at least equal to the actual O&M costs or the full-cost rate in those cases where, for whatever reason, the recipients would have been subject to such costs had the water not been considered transferred water.[169]

Thus, under certain circumstances, transfers between contractors (which may include a new M&I contractor) implemented on an annual basis will not be construed to be a "supplemental or additional benefit."

These regulations were written, however, prior to the time that the Department adopted a policy in which profit was to be allowed on transfers. Therefore, it is not clear whether allowing profit would be considered a "supplemental or additional benefit." Also, regardless of the content of the RRA-related regulations on contract amendments, the Bureau can otherwise subject transfers requiring contract

changes to repayment and other requirements as a matter of administrative policy.

Bureau regulations also state that:

> Acquisition of irrigation water from federally financed facilities by exchange shall not subject the users of such water to Federal Reclamation law and these regulations if no material benefit results from the exchange to the recipient from the federally financed facilities.[170]

This regulation is designed to avoid discouraging the transfer of project water by exchange, rather than a one-way transfer, by providing that an entity receiving water by exchange will not be subject to the land and other restrictions of reclamation law. The problem with this regulation is that it is hard to see why an entity would execute an exchange agreement for project water if it did not perceive that it would receive "material benefits" from the exchange.

Finally, the regulations also provide that the Secretary can designate other contract amendments as exceptions to the "supplemental or additional benefit" rule.[171]

Summary

Federal legal interests in transfers are most clearly implicated by transfers requiring some change in the contract arrangement involving the use of federal reclamation facilities. In particular, transfers for water uses not originally contemplated may require federal approval. Transfers affecting project operations are likely to require federal approval. Certainly, transfers requiring modification or addition to facilities will require approval. The federal interest is in protecting and maintaining the viability of the facilities which it has built and continues to own. In addition, the U.S. has an interest in assuring that it can continue to fulfill contract commitments it has made to users who are helping to pay for the facilities.

While there is some uncertainty with respect to water service contracts, it appears that users receiving water under contract from reclamation facilities hold a water right under state law. The transferability of that water right should be governed by state law. Of course, these rights are subject to contracts with the U.S. which may place limitations on transfers. As discussed, these limitations have to do with the federal interests in the project and not in the users' water rights themselves. The need to better define the federal role in transfers led to the 1988 *Principles* statement by the Department of the Interior and the subsequent Bureau *Criteria and Guidance* -- the subject of the next chapter.

CHAPTER 3: Existing Federal Transfer Policy and Guidelines

Although the Bureau of Reclamation had, from time to time, approved voluntary water transfers before 1988, the federal government's principal administrative actions regarding transfers are the issuance of the Department's December 1988 *Principles* and the adoption of the Bureau of Reclamation's *Criteria and Guidance*, issued in March 1989 (reproduced in Appendices I and II respectively to this report). For convenience, we refer to these documents collectively as the Department's water transfer policy or the Bureau's water transfer policy. These policy-related statements, issued in response to the growing interest in the Western states in water transfers and in response to reports and resolutions issued by the Western Governors' Association in 1986 and 1987, represent major steps in facilitating transfers of Bureau-supplied water.

This chapter is intended to provide an overall assessment of the administrative actions of the Bureau of Reclamation related to water transfers. First we address the general content of the Bureau's water transfer policy and some questions that have been raised about it, proceeding from the most general to the more specific. This discussion includes a number of recommendations for clarifications or extensions of the principles, criteria, and guidance (e.g., clarification of repayment terms applicable when water is transferred from irrigation to municipal and industrial use).[172] An assessment of the success of the policy should necessarily consider not only the documents themselves, but the Bureau's track record in implementing the policies contained therein, which is the topic of the final section of this chapter.

Section 1: Content of the Department's Water Transfer Policy

The Department's water transfer policy acknowledges that transactions involving water rights and water supplies are increasing in frequency in the West and that the federal government, as owner of Bureau of Reclamation facilities, can assist in meeting local or regional water needs through voluntary transfers. The policy indicates that the federal government will adopt a role of trying to facilitate voluntary transfers involving federal facilities, provided certain basic conditions are met. Among these conditions are that: (1) the transfer must be in compliance with applicable state and federal law, (2) there are no adverse third-party consequences (or any adverse consequences must have been mitigated to the satisfaction of the affected parties), and (3) the transfer does not adversely affect project operations, contractual obligations, and financial returns to the U.S. The policy also indicates that the Department will work with appropriate authorities to mitigate any adverse environmental effects of a proposed transfer. Although the policy does not explicitly use the term "profit" or "economic incentive," it does state that the Department of the Interior will refrain from burdening the transaction with additional costs, fees, or charges, except those actually incurred in implementing a transfer. The policy also notes that, even on federal projects, changes in type or location of use must be accomplished under state law procedures governing water rights. In fact, the policy emphasizes that "primacy in water allocation and management decisions rests principally with the States." The general stance taken in the policy is one of a facilitator of transfers proposed by other parties, rather than as an

initiator of transfers, although some exceptions are specified in the policy: when a transaction would be part of an Indian water rights settlement or other water rights controversy or when the acquisition of water rights would substitute for some other expenditure of federal funds.

The Bureau of Reclamation *Guidance* provided some additional detail and clarification for each of the principles established in the Department's policies (refer to Appendix II to this report). For example, the *Guidance* mention the authority of the Warren Act for providing storage and transfer of nonfederally supplied water for irrigation, and the authority of the Reclamation Project Act of 1939 for storage and transfer of water for M&I purposes. In particular, the *guidance* document provides clarification on the financial terms and economic incentives for transfers.

We believe that the basic concepts behind the Department's water transfer policy are essentially sound--facilitating voluntary transfers related to federal facilities, providing an income incentive, relying on the underpinnings of state water law, providing for protection of third-party impacts, and assuring appropriate compliance with the National Environment Policy Act. Furthermore, a number of outside parties, such as the Western Governors' Association and the Western States Water Council, were involved either directly or indirectly in the development of the policy, and so there is a wide degree of understanding of its basic thrust.

Section 2: Some Issues

As noted elsewhere in this report and its appendices, however, there are a number of questions that have persisted since the issuance of the policy that deserve clarification, either by changes in wording in the policy itself or by providing more detail in the supplementary guidelines. The lack of clarity on these points has meant both that members of the public that might be interested in transferring water are unclear as to the Bureau's intentions and that staff of Bureau of Reclamation offices themselves are unclear as to the contents of the policy and/or are unwilling to implement it. Among the most persistent general questions asked and the principal uncertainties are the following.

Is the policy still in effect?

The Department of the Interior has not issued or intended any retraction of its principles. Likewise, the Bureau of Reclamation's administrative guidelines, issued through a memorandum from the Commissioner's office, remain in force. Moreover, in a 1990 conference speech, the Department of the Interior's Assistant Secretary for Water and Science, John Sayre, specifically indicated that the 1988 and 1989 policies remain in effect.[173] Given that there has been some uncertainty within the Bureau on the continuing applicability of the water transfer policy, the Bureau could do more to communicate with and train its own staff on the new policy (see section on implementation, below).

Does the policy allow increased income or "profit"?

Principle 6 states that

> Unless required explicitly by existing law, contracts, or regulations, DOI will refrain from burdening the transaction with additional costs, fees or charges, except for those costs actually incurred by DOI in performance

> of its functions in a particular transaction.[174]

This principle indicates that the Department would not seek to "tax" the "profit" from a transaction. Nevertheless, the *Principles* have been criticized as being unnecessarily vague on the profit issue. For example, some have pointed out that whereas Principle 6 indicates that no additional charges will be imposed by the Department, it does not explicitly say that the profit between the seller and the purchaser is allowable -- though such an inference could be drawn from the rest of the document.[175]

The Bureau of Reclamation's *Criteria and Guidance* issued in March 1989 to "assist in the implementation of the December 16, 1988, *Principles*" contains what are perhaps clearer statements regarding the profit question. For example, the guidance under Principle 5 includes the statement that "the fact that [the water] was developed by virtue of a subsidized Federal project or program should not, in and of itself, be a barrier to the transaction." More specifically, the criterion under Principle 6 states that "the financial terms negotiated between entities do not concern the Department of the Interior." Additional guidance is provided that "to the maximum extent possible, financial or economic disincentives to the transfer or exchange are to be avoided . . . The disincentives to be avoided can be characterized as charging a percentage of any 'profit' that might be envisioned as the difference between appropriate costs, and the market value of the water." Taken in concert, these documents appear to make clear that the Bureau of Reclamation will allow profit between transferring parties.

Assistant Secretary Sayre provided additional confirmation of this interpretation of the Department of the Interior's policy on profit from water transfers in his conference presentation, mentioned above: "A . . . question often asked about Interior's water transfer policy is 'Does the policy allow profit to trading parties?' The answer is yes, it does, provided the appropriate Federal costs are paid." His subsequent elaboration on this point reaffirms the clarifications contained in the Bureau of Reclamation's May 1989 *Guidance* document and reiterates that the Bureau of Reclamation

> will not impose any additional costs on the transfer beyond the following: (1) those already required by Reclamation law - such as the removal of the interest subsidy when water is transferred from irrigation to municipal and industrial use; and (2) any new costs imposed by implementing the transfer, such as additional pumping or conveyance costs incurred because the water is delivered to a new location.

The "profits" issue is a complicated one. The U.S. built reclamation facilities using general tax revenues. The direct beneficiaries of these facilities, especially irrigators, have returned only a fraction of the real cost of these facilities to the U.S. Treasury. There is understandable concern about allowing those who have enjoyed substantial subsidized benefits from these facilities to further benefit from transfer of water the facilities provide.

Yet it is widely recognized that financial incentives will be essential to induce transfers in many, perhaps most, situations. Therefore, those who believe transfers are a valuable means of meeting changing water needs in the western states conclude that profits should be permitted.

If profits are to be permitted, should there nevertheless be some kind of tax imposed -- either on the dollars earned or on the water transferred? Congress, in fact, is considering such a tax in connection with transfers from the Central Valley Project. Senate bill 484, The Central Valley Improvement Act, proposes that 25 percent of the "net proceeds" from any transfer shall go into a "Central Valley Project Restoration Fund," to be used for mitigating the adverse effects of the CVP on fish and wildlife resources. Alternatively, 25 percent of the water to be transferred may be dedicated to fish and wildlife purposes.[176]

The July 1987 report of the Western Governors' Association (*WGA*), *Water Efficiency: Opportunities for Action*, discusses the profit question in some detail. It examines various options for imposing additional taxes on the transfer of federally supplied water, including a fixed percentage of the sale price, a fixed percentage of the increase in the value of the water, a fixed rate per acre-foot, taxing a transfer only where the gain is large (exceeding some threshold amount), reallocating project costs based on the transfer, and imposing a municipal and industrial (M&I) rate on water transferred from irrigation to M&I use. The report rejects most of these options as either too cumbersome to implement or as unduly restricting transfers.

Fees that are based on a percentage of net income, while economically efficient in concept, may be impractical to implement because of the difficulty of obtaining all the data to make the net income determination. In addition, collecting such data is likely to result in a good deal of government intervention into the financial matters of the negotiating parties. As a result, the *WGA* report recommended adoption of a policy under which the M&I rate is charged for transfer of water from irrigation to M&I use and study of whether the use of cost reallocation is feasible.

In *Markets for Federal Water*, Richard Wahl examines some of the same options and reaches a similar conclusion. Furthermore, he notes that the "financial gains and losses [from water transfers] are subject to normal tax treatment through income and capital gains taxation" and that the

> transactions that are likely to involve the greatest income gains - transfers of water from irrigation uses to municipal and industrial use -- would be subject to one direct form of surcharge by [Reclamation law]: the payment of interest charges and the removal of "ability to pay" limitations.[177]

Wahl also notes that a good deal of the income gain associated with the federal water supply was granted through the original Bureau contract for irrigation use, rather than from the potential to transfer water. He also cautions that

> additional income arising because water can be transferred to new uses is probably not directly attributable to the original federal subsidy, but rather to population growth or the siting of power plants or other water-using facilities. ... Once one accepts that the value of water in an irrigation use has already resulted in an income gain to the original owner, then there is little basis for distinguishing between federally developed and privately developed water in terms of additional income gains.[178]

In summary, these analyses indicate that there are already two legislated forms of "taxation" on water transfers - (1) income and capital gains taxes on those that ultimately benefit and (2) an increase in rates paid to the Bureau for transfers from irrigation to M&I or hydropower use, which are likely to be the transfers with the greatest income gains. The forgoing discussion also indicates that if there were to be any additional tax levied on water transfers, it would be desirable for it to be small (e.g. a small flat fee per acre-foot, such as $5 per acre-foot or less, or a small percentage of the sale price, say less than 5%), so as not to discourage agricultural-to-agricultural transactions.

In an appendix to this chapter we review a number of transfer examples in relation to the profits issue. Most but not all of the examples are from our case studies. Generally, with the important exception of the Central Valley Project, these examples indicate that the Bureau has allowed profits to be included or, at least, has not prevented such profits.

In addition to the general question of whether profit is allowed on transactions, there are several specific questions as to what formulas the Department would apply in assessing its charges on water converted from irrigation to M&I use.

What formula will be used for the rates charged on transfers from irrigation to municipal and industrial or hydropower uses?

As a matter of reclamation law, when water becomes used for M&I or hydropower purposes instead of irrigation purposes, the interest-free repayment and ability-to-pay subsidies (use of power revenues to pay irrigation costs beyond the irrigator's estimated ability to pay) no longer apply. This requirement is reiterated in the Bureau's criterion under Principle 6 that: "Repayment subsidies of the original use are not transferable to different types of use." Still, there is considerable latitude as to how the Bureau of Reclamation might treat this basic requirement in the context of water transfers. Would it charge interest only from the date of the transfer, or would it also try to recoup past interest (between the time the project was constructed and the date of the transfer)? What interest rate would the Bureau of Reclamation use - historical rates applicable when project repayment was established, or current government borrowing rates, which are probably considerably higher? Would the M&I users be expected to pay a rate based solely upon a pro rata share of the remaining contractual obligation of the irrigation district, or upon the pro rata share of the possibly larger irrigation allocation (in other words, would power users be relieved of their obligation to pay irrigation costs for that portion of the water transferred from irrigation use)?

Answers to these questions would appear important in the water transfer context for two reasons. First, given the number of factors that could vary, the charges payable by M&I purchasers could differ widely if all of these terms were left up to negotiation on a case-by-case basis. Second, markets operate more efficiently when prices are known. Therefore, in order to facilitate the transfer process, it would be desirable for the Bureau to make the M&I rates known (or at least the procedures for calculating them), rather than leaving all of these terms open to negotiation on a case-by-case basis. This is especially true where the increases in dollar values from transferring water are expected to be small, such as in some agriculture-to-agriculture transfers. In these cases, the interested parties may

not be willing or able to spend much time or expense in negotiating prices with the Bureau of Reclamation.

The Bureau of Reclamation *Criteria and Guidance* on water transfers appear to answer many of the above questions on financial terms, but to leave some open. The Bureau's guidance under Principle 6 indicates that "a change in use from irrigation to municipal and industrial purpose would require a change in the repayment of costs to include interest during construction and interest on the investment, but only for the remaining years in the payout period." One can infer from this guidance that interest charges will not accrue for the time period before the water is converted to M&I use (except for the construction period). This interpretation is confirmed by point 2 of the guidance under Principle 6: "It is not the intent of this water transfer policy to recover subsidies originally allocated to that block of transferred water during the time it served the irrigation purpose." Second, one can infer that since the subsidies of the original use are not transferable to the new use, the M&I costs would be based not just upon the irrigator's contractual obligation, but upon a pro rata share of the unpaid costs allocated to irrigation (this can be a much larger amount on projects where hydropower revenues are scheduled to assist in repaying irrigation construction costs). Additional guidance under point 2 of Principle 6 confirms this interpretation: "Any repayment of principal above the level that would have been repaid by the irrigators (i.e., the power assistance amount) should be reflected in a reduction in the amount to be repaid through power assistance."[179] Also, these same provisions of the *Guidance* indicate that interest charges would be amortized over the project's remaining repayment period, which would exclude amortization over longer periods.

Discussions with Bureau personnel indicate that these provisions in the *Guidance* are consistent with reclamation law and prior practice. For example, project costs are normally repayable within a fifty-year period of a project's inservice date.[180] In any event, because transferred water is water already under contract, the project's repayment period would normally have been previously established.[181] Therefore, the costs of any water transferred to M&I use would have to be paid by the already established payout date.

Second, not charging for interest forgone while water was in irrigation use is an established practice. Procedures for calculating M&I rates are well-established on large projects where reallocation of water from irrigation use to municipal and industrial use was contemplated in the original contracts, such as the Central Valley Project in California and the Central Arizona Project.[182] For example, in the Central Arizona Project, it was foreseen that a substantial portion of the project's irrigation water supply would eventually be used for municipal use by Arizona's growing urban areas. The Bureau of Reclamation's procedure for modifying the repayment due for M&I use is based on the outstanding capital balance -- there are no charges for interest forgone. Similarly, in the Central Valley Project in California, several contracts allow water districts to take water as either irrigation or municipal and industrial water. The procedure for calculating water rates for each end-use utilizes the unpaid balance of costs allocated to that function and the projected number of acre-feet of future deliveries. Therefore, the procedure does not result in any charges for interest forgone.[183] On these two projects, transfers of small amounts of water from

irrigation to M&I use would have a nearly imperceptible effect on the project's established M&I rate. Therefore, for small transfers or temporary transfers, the existing project M&I rates would probably be used. For permanent transfers involving larger amounts of water, an appropriate reallocation of costs from irrigation to M&I use would likely take place. This is consistent with established procedures in these two projects that, at periodic intervals, water supply costs and projected deliveries are redetermined for irrigation and municipal and industrial use. The new allocations and projected deliveries are then used to determine the new water rates.

The *Criteria and Guidance* documents are less explicit on guidance as to precisely what interest rates will be used when irrigation water is transferred to municipal and industrial use or on precisely how the interest charges will be calculated on that part of the capital cost previously assigned for repayment from hydropower revenues. Guidance under point 2 of Principle 6 indicates that "[a] current repayment interest rate for the interest bearing obligations will be utilized, unless otherwise provided by law." The meaning of "current repayment interest rate" is not entirely clear. It could be interpreted as the current cost of government borrowing, but, outside of the RRA formula for "full cost," that rate is seldom used for repayment. For example, repayment rates for municipal and industrial water in the Central Valley Project are based on a weighted average of project interest rates during the years of construction. This may well be the meaning of "current repayment interest rate." On projects where M&I water was not being delivered, there may not be any "repayment interest rate" in existence.

The Upper Colorado Regional Office of the Bureau of Reclamation (headquartered in Salt Lake City, Utah) is one that has devoted attention to several of these repayment questions and has used a wide range of formulas for determining interest charges and payments due on conversions of water from irrigation to municipal and industrial use. Examining some of the cases in this region illustrates the range of possible methods and their financial implications.

In the 1987 transfer between irrigation districts in the Emery County Project and the Utah Power and Light Company, the Bureau used a "debt-servicing" concept to calculate the charge for irrigation water converted to municipal and industrial use. Under this approach, the Bureau charged interest on the irrigation allocation from the date of project construction up to the date of the transfer (a practice that would not be undertaken under the current water transfer guidelines). As might be expected, interest computations extending over a long time period resulted in relatively high water charges. The charge to Utah Power and Light was $2.9 million for about 2,600 acre-feet of water transferred, equivalent to about $1,115 per acre-foot as a one-time charge or about $99 per acre-foot annually (amortized at an interest rate of 8% for 30 years). This charge was considerably higher than the annual rate of $20 per acre-foot paid to the Bureau in the earlier 1972 transfer between the same parties.[184]

The interest rates used in the debt-servicing calculation in 1987 were the Treasury borrowing rates applicable each year, but, interestingly enough, the interest charges were not compounded. The Bureau performed an alternative calculation using compounding, which resulted in an outstanding balance of $4.9 million, some 70% more than the $2.9

million that resulted when simple interest was used. When the $4.9 million figure was presented in negotiations with Utah Power and Light, the utility threatened to abandon the transaction. In other words, the charges in this case were more the result of negotiation than a fixed method of calculation. The difference between the two values also indicates that even slight changes in methodology can lead to large differences in the amounts to be charged for conversion to municipal and industrial use.

The debt-servicing concept resulted from a Reagan Administration initiative to seek greater levels of cost recovery for government services. Subsequent events in the Upper Colorado Region indicate that Bureau of Reclamation policy there on the charges for converting water to M&I use has changed. The region has returned to charging for conversions under the "rollover" concept used in the 1972 Emery County exchange. Under this concept, no interest is charged from the project's inservice date to the date of the transfer (consistent with the current water transfer guidelines). Interest is charged after the transfer at the project's authorized interest rate. Also, as is standard Reclamation practice, interest charges during the construction period (which are excluded from irrigation repayment) are considered part of the construction costs upon reallocation to M&I use.

The rollover concept was also applied to recent reallocations of San Juan Chama project water from irrigation to municipal and industrial use:

> In the [San Juan Chama Project case], interest on investment does not accrue on the reimbursable obligation during the period from completion of construction until it is contracted for as M&I water. This determination is based on the fact that the water in storage was intended for irrigation units, which subsequently proved to be infeasible and which were dropped from the construction program. . . . The water allocated to those irrigation units was made available for municipal use.[185]

In this case, water was initially allocated to irrigation, but it had never been placed under contract.

Conversion formulas based on this same basic approach are incorporated into the *Definite Plan Reports for the Dolores and the Dallas Creek Divide Projects*.[186] There is, however, one difference between the rollover formula applied in (1) the San Juan Chama case and (2) the *Definite Plan Reports for the Dolores and Dallas Creek Divide Projects* [hereinafter formulas S and D, respectively]. In formula D, the calculation is performed by amortizing the unpaid capital amounts existing as of the project's inservice date, resulting in a per-acre-foot amount which remains fixed over the life of the project.[187] By contrast, the per-acre-foot charge under formula S generally depends upon the year in which the conversion takes place, with the charge increasing each year until the end of the repayment period. This can be explained by the different way that each method handles power assistance on the project (i.e., that portion of power revenues which are used to pay irrigation costs above the irrigators' ability to pay).[188] Normally power revenues are applied to irrigation repayment in the final years of repayment. Under formula S, the power assistance per acre-foot remains as a fixed amount in the unpaid balance. As a result, conversion to M&I use later in the project's repayment period means that the fixed amount must be repaid over a

shorter time period (by the new M&I water users), resulting in higher charges per acre-foot. In other words, because formula S is based on the unpaid irrigation allocation, it places the entire burden of the unpaid power assistance on the new M&I users. In contrast, formula D makes M&I users responsible for power assistance only for those years that water is in M&I status. For example, if water is converted from irrigation use to M&I use in year 30 of a 40-year repayment period, then three-quarters of the original power assistance is still paid from hydropower revenues, but M&I users become obligated to pick up the remaining one-quarter.

These cases from the Upper Colorado Region illustrate the variability in charges that can result from different formulas for converting water from irrigation to M&I use. However, they also support our previous observation that the provisions of general Reclamation law fairly well circumscribe the rate that will be charged. In particular, there is a strong basis in Reclamation law and practice for basing the charges on the costs allocated to irrigation (rather than just the remaining balance in the irrigation contract), incorporating interest during construction, and amortizing the unpaid balance over the remaining repayment period at the project interest rate. This discussion also indicates that, in the future, the Bureau would not charge interest between the project's inservice date and the date water is converted to M&I use.

To summarize this discussion, there are already precedents in Reclamation policy and procedure for basing the repayment formula for water transferred to M&I use on the cost allocated to irrigation and on the existing repayment period. The Bureau's water transfer policy appears to follow these precedents. The interest rates that would be utilized for conversions to M&I water are already established on large projects, such as the Central Valley Project in California and the Central Arizona Project. However, on smaller projects the interest rates that would be utilized may not be clear to prospective M&I purchasers. We recommend that the Bureau clarify the interest rate determination either through establishing a Bureau-wide procedure in an addendum to its transfer guidelines or by requiring that regional or project offices make a determination of the interest rates to be used and make this information available to interested parties. A still better alternative would be for the Bureau to make available in each region a schedule, by project, of the water rates that would apply to transfers of irrigation water to municipal and industrial or hydropower use. This requirement would not necessarily have to cover all Bureau projects, but should apply to all of those where transfers are occurring or are likely to occur.

With regard to calculating interest charges on irrigation capital costs formerly designated for repayment from hydropower revenues (irrigation assistance), we believe that the formula adopted in the *Definite Plan Reports for the Dolores and Dallas Creek Divide Projects* for conversion from irrigation to M&I use (formula D) has merit and should be considered for wider adoption by the Bureau.[189] As noted, formula D prorates the amount of power assistance that M&I users must assume based upon the years of M&I use, thereby resulting in a charge for M&I conversions that does not vary each year. Not only does this approach appear equitable, but it also results in a procedure that is more easily communicated to outside parties (since the conversion rates do not change each year). Also, as explained in the next section, this approach would lessen the

impact of the anomaly posed by conversions of water to M&I use near the end of the irrigation repayment period.

What payments would be required for water transferred from an irrigation district when the district's contractual obligations have been paid, or when they will be paid within the near future?

One additional question is what payment conditions would apply to conversion of irrigation water to municipal and industrial use (or hydropower use) at or the end of the project repayment period. For example, if an irrigation district's contractual obligation was fully paid and it desired to transfer water to municipal and industrial use, would additional revenues be due to U.S? Secondly, would different conditions, such as prepayment, be allowed in the case of an irrigation-to-M&I transfer taking place shortly before payout? Would the Bureau of Reclamation allow M&I entities to amortize any additional payments required over a period extending beyond the end of the original repayment period? Policy clarification in this area is important given the large number of projects that are nearing completion of their repayment periods.

Although the Bureau *Criteria and Guidance* are not explicit on these questions, one can infer from the guidance under Principle 6 (cited above) that the full balance of capital costs must be repaid by the end of the already established repayment period, no matter how close to the end of that period the conversion took place. Discussions with Bureau personnel indicate that this interpretation would be consistent with standard Bureau of Reclamation practice. As noted in the previous section, the principles guiding project repayment are that irrigation, municipal and industrial, and hydropower payment must be made within 50 years of the project's inservice date. Therefore, the repayment for other project water uses, including any crediting of hydropower revenues to irrigation repayment, would normally be simultaneous with the completion of irrigation repayment. Correspondingly, there is no basis for assessing additional construction charges on irrigation water transferred to M&I use after the project's established repayment period--the project completed its repayment obligation while functioning as authorized by Congress.

Some might make a counterargument that some of the water has now changed use to municipal and industrial use and that even after the standard repayment period is complete, the federal government should recoup interest charges forgone. However, it is unlikely that the Bureau would institute such a policy since, as discussed in the preceding section, there is substantial precedent in existing administrative practice and law for not charging for past interest.

A related question concerns the precise repayment provisions that might apply when an irrigation district transfers water to municipal and industrial use shortly before (say within one to five years) before the irrigation district's contractual obligation is scheduled to be completed. Under the Bureau's *Guidance*, a pro rata share of the district's unpaid contract balance, as well as a portion of scheduled power assistance (see discussion of formulas D and S in the previous section), would become due within a relatively short time period. The unpaid balance on the irrigation contract would be relatively small on an acre-foot basis, even after interest charges were included. However, the power assistance could be considerable, especially if the entire pro rata share had to be paid by M&I users (formula S). The fact that it would be

payable within the original contractual repayment period could result in a sizable financial payment due within a relatively short period of time.

As noted above, under the Bureau's general contracting authorities and policies, there is no basis to further extend the repayment period for the converted water. Of course, potential purchasers would have the opportunity to obtain longer-term borrowing on the private market in order to finance the water purchase. However, potential purchasers of the irrigation district water could avoid these charges completely by merely waiting until the end of the irrigation district's repayment period before acquiring water.

This situation does present a somewhat unfortunate anomaly in economic incentives.[190] Ideally, if an M&I entity needs water, either for current or projected future use, it would like to secure tenure over the water without a waiting period so as to protect against other purchasers that might also approach the selling district. One possible approach is for the M&I entity to try to work out an agreement with the irrigation district that it will receive water at the end of the district's repayment period.

Prepayment of irrigation district charges by an M&I entity, however, appears to be problematic as a vehicle for securing tenure of irrigation water at reduced charges. There does not appear to be any reason why the federal government should agree to prepayment of irrigation charges, because, if the purpose was to transfer water to M&I use before the end of the irrigation repayment period, the government would be forgoing M&I revenues.[191]

This discussion reveals that the two-tier rate structure for irrigation and M&I water in Reclamation law is not an economically efficient one. In some cases it may affect the timing of water transfers, delaying a transfer to M&I use until the lower, irrigation obligation has been satisfied. Where such instances arise, they certainly open up the possibility for negotiation between the Bureau of Reclamation and the buying and selling districts. However, since the Bureau of Reclamation has no existing authorities for transferring water to M&I entities at less than an M&I rate, the result of any negotiations would require legislation and would receive Congressional scrutiny.

Does the policy allow transfer to fish and wildlife and recreational uses and under what financial terms?

The current Bureau of Reclamation *Criteria and Guidance* on water transfers provide that water can be transferred to any beneficial use. They also require that the federal government is to be no worse off financially after a transfer. For example, if water is transferred from irrigation to traditionally nonreimbursable uses, such as maintenance of fish and wildlife habitat, then at least the irrigation rate must be paid. In the words of point 4 of the guidance under Principle 6:

> An exchange in which there would be a change in use from reimbursable function to a nonreimbursable function (e.g., irrigation to anadromous fishery) will require special negotiations. In lieu of special legislation, specific contractual obligations will be identified to ensure that repayment to the Federal Government after the exchange will be no less than the conditions that existed prior to the exchange.

This rule was adopted in the *Guidance* for the sake of simplicity and ease of administration: it was felt that if a transfer was to result in a lower total repayment for a project, it might be necessary to secure Congressional approval on a case-by-case basis.

Now that the Bureau's water transfer policy has been in place for a few years, it is worth re-examining this aspect of the Bureau guidance. For one thing, a case can be made for nonreimbursability of fish and wildlife uses of water, at least in those cases where it is difficult to identify a particular group of beneficiaries. For example, maintenance of habitat for migratory waterfowl may bring some benefits in the locale of the habitat itself, but a significant fraction of the benefits may accrue elsewhere along the flyway. For this reason, the Bureau could indicate its willingness to seek Congressional authorization for allocating conserved or purchased water to fish and wildlife uses, with the costs being borne by the general taxpayer. Such a policy would not rule out cases where state and local governments or private organizations, such as duck clubs or fish and wildlife organizations, would purchase water from existing uses. Rather, the policy would be a supplement to state and local actions.[192] This policy would provide a role for the Bureau of Reclamation in seeking out water conservation and transfer opportunities and opportunities to devote such water to public uses of water. Furthermore, such a role for the Bureau would appear to be consistent with the new water management emphasis set forth in the agency's *Assessment '87* report. One of the principal conclusions of the report was that: "[o]pportunities to address water quality and environmental matters should be included in the reshaping of the Bureau from a construction orientation to a resource management orientation."[193]

We recommend that the Bureau of Reclamation add a principle to its water transfer guidelines indicating that in cases where there are widespread public benefits from enhancing fish and wildlife habitat or instream flow, the Bureau will consider conservation and transfer of water for these purposes, with the costs of such activities divided among federal and non-federal interests in a manner appropriate to the particular circumstances.

Section 3: Relationship Between the Bureau's Water Transfer Policy and Interpretation of Reclamation Law

Among the principal purposes of the water transfer policy were (1) to indicate the Department's willingness to facilitate beneficial transfers and (2) to clarify the criteria that the Department would utilize in reviewing and approving transfers. However, the *Criteria and Guidance* fail to provide direction with regard to Reclamation law in at least two important respects.

First, the *Criteria and Guidance* do not provide any clarity on the meaning and application of the various legal vehicles that may be utilized if a new contract is necessary for effectuating transfers. These vehicles include the Town Sites Act of 1906, the Warren Act of 1911, the Miscellaneous Purposes Act of 1920, and the Reclamation Project Act of 1939.[194] A reference to these vehicles, or a brief summary of each, would be a useful addendum to the transfer policy.[195] In particular, there is a need to state clearly when a new contract will be necessary and to define the considerations that will attach to the contract. The standard for determining impairment to existing irrigation purposes of the project needs to be made more clear.

Second, the interpretation of the Department's water transfer *Guidance* clearly depends, in some cases, upon the Department's interpretations of certain provisions in Reclamation law. A number of these provisions are discussed in Chapter 2 (e.g., appurtenancy and beneficial use). It is probably more appropriate to resolve these legal questions through a detailed Solicitor's opinion than in the *Guidance* themselves. But the lack of legal clarity does reduce the effectiveness of the *Guidance*.

Section 4: Implementation of the Department's Water Transfer Policies

In this section, we take the current content of the Department's *Principles* and the Bureau's *Guidance* as given and ask whether the Bureau has done a good job of putting them into practice. Of course there may be some linkage between the content of the policy and its successful implementation. As suggested above, where details and interpretation of the policy are unclear, the potential result is more complicated implementation, or even a reluctance to implement. Our general assessment of the Bureau's implementation of the water transfer policy presents a mixed picture--the Bureau has done a good job in many of the cases examined in this study, but not in all. In all of the situations we encountered, except the Central Valley Project (CVP) in California, Bureau personnel familiar with the transfer policy appeared willing to implement it, even though not all of them might personally agree with it. In this sense, the *Guidance* are serving their function of standardizing policy within the organization.

Distribution of Bureau guidelines and understanding by Bureau personnel

The Bureau's water transfer *Guidance* was issued by the Commissioner to all of the Bureau's Regional Directors in March of 1989. In the course of our case studies, we generally found that regional staff dealing with contract and transfer matters were aware of the policy documents. However, project offices present a different picture. Although staff in project offices were generally aware of the Department's water transfer principles, some had not received the Bureau's *Guidance*, even though they were located in geographical areas where water transfers involving federal projects were occurring or were under discussion. We believe this indicates a serious shortcoming in the Bureau's internal communications.

To correct this problem, we believe that the Bureau should make certain that all of its project offices have received the *Guidance* and that contracting personnel and others that deal with water transfer matters are familiar with them. In addition, because the policy is relatively new, we believe that it would be appropriate for the Bureau to provide training and discussion sessions dealing with the new policy and its implementation. These sessions could involve not only explanation of the policies and pertinent provisions of Reclamation law, but also discussion of problems in implementation (refer to the section below on "ongoing evaluation and development"). If possible, these training sessions should involve members of the Regional and Washington, D.C., Solicitor's offices, since some of the questions that arise in implementation are matters of Reclamation law. It might also be appropriate to involve local legal experts to provide insight into state water law and its interaction with federal law and policy.

Ongoing evaluation and development

Any policy, no matter how well crafted, is likely to merit review and further development. Specific problems in implementation are likely to arise that were not evident at the time the policy was first drafted. For example, the Bureau's policy documents give no specific guidance as to what to do in cases where a contractor desires to transfer water that is under contract, but that has never been put to beneficial use (such as in the BMI/Henderson transfer in Nevada). In some cases, differing state laws may dictate that the Bureau will apply different interpretations of its policies in different states, but to the extent possible it would be desirable for the Bureau to have a uniform response to unresolved policy questions from one region to another.

Therefore, we recommend that the Bureau hold periodic meetings for review and future development of its water transfer policy. These meetings could also serve the function of sharing experiences from one region to another. As noted above, it might be possible to combine this activity with the training sessions referred to in the previous recommendation.

APPENDIX TO CHAPTER 3: TRANSFERS AND PROFITS: SOME EXAMPLES

Historical Examples

Water rentals in the system of federal storage reservoirs on the Upper Snake River in Idaho stretch back to the 1930s and were explicitly recognized in the Bureau of Reclamation's contracts with water users. There is a district-administered cap on the price that can be charged for selling water from the bank, but a modest mark-up is allowed. In 1987, the second of two transactions between irrigation companies in the federal Emery County project and the Utah Power and Light Company was finalized (an earlier exchange occurred in 1972). This transaction involved payments of about $600 per acre-foot to individual farmers to acquire 2,576 acre-feet of water and the associated lands. In the same transfer, the Bureau of Reclamation received increased payments of over $1000 per acre-foot for converting the water contract to municipal and industrial use. The City of Casper, Wyoming, paid off the nearby Casper-Alcova Irrigation District's repayment obligation and is paying for canal lining on portions of the district's fifty-nine-mile canal and 190-mile lateral system in order to reduce seepage. The transaction is intended to provide the city with 7,000 acre-feet of water. During the 1976-77 drought in California, the Bureau of Reclamation operated a water bank in which some 45,000 acre-feet of water changed hands for total payments of $2.2 million. Procedures for administering the bank allowed water users not only to recover their costs, but also the value of their lost crop production and certain other revenues forgone. In the Ft. Collins area, there is a highly organized market operating in the Northern Colorado Water Conservancy District, in which water from the Colorado Big Thompson Project is transaction at market value.[196]

In the Central Valley Project in California, the Bureau has allowed transfers, but not at a profit. This policy is an administrative one in the sense that the prohibition is not contained in Bureau contracts with water users. By contrast, the contracts themselves in the Central Arizona Project (CAP) place a limit on the profitability of water transfers. The principal contract in the CAP is with the Central Arizona Water Conservancy District (CAWCD), which in turn subcontracts with about 70 municipalities and 20 irrigation districts. Each of the subcontracts contains a provision under which water can be transferred, but any revenues received "in excess of that [amount] which the subcontractor is obligated to pay" under its contract with CAWCD must be paid to CAWCD for application against CAWCD's contractual obligation to the U.S. Presumably this would allow profit after that contractual obligation is fulfilled, but under the current arrangements the profit incentive would be greatly reduced.

More Recent Examples

In the following discussion, we examine some more recent transfers where profit was allowed, and some examples where transactions were modified, probably for legitimate reasons. Finally, we look at one project (the Central Valley Project in California) where there has been little progress in implementing the Department's *Principles* or the Bureau's guidance.

Transfers between Imperial Irrigation District and the Metropolitan Water District of Southern California.

Perhaps the most dramatic recent examples of water transfers are the agreements reached between the Imperial Irrigation District and the Metropolitan Water District of Southern California. Imperial diverts about 3 million acre-feet of Colorado River water annually, which represents more than 20% of the total diversions from the river. Both Imperial and Metropolitan sought to involve the Department in rendering a legal opinion against the other dealing with the "profit" issue. At issue was the price that Imperial could charge for its conserved water, over and above the cost of conservation. Although the Department was in the process of examining the legal issues, it never did render a formal opinion, but encouraged the parties to work out an agreement. In the fall of 1988, Metropolitan and Imperial reached an agreement under which Metropolitan will pay Imperial to fund conservation measures within the irrigation district with the goal of salvaging 100,000 acre-feet of water annually for diversion to Metropolitan's service area. Metropolitan will pay Imperial $92 million for construction of the conservation facilities, $3.1 million annually for operation and maintenance, and $23 million in five annual installments for indirect costs. These "indirect costs" could well leave some profit to Imperial.

The 1988 water transfer agreement in the El Paso area. In November 1988, the El Paso County Water Improvement District No. 1 entered into an agreement to respond to the increasing amount of land being subdivided both inside and outside the city limits of El Paso. For this purpose a new authority was created, the El Paso County Lower Valley Water District Authority, with the power to sell water outside the El Paso city limits, as well as to El Paso. This water transfer agreement is signed by the irrigation district, the newly created authority, the city of El Paso, and the Bureau of Reclamation. Under this agreement, the Authority will seek assignment of rights to project water from individual landowners. The initial term of the assignments will be for 75 years, and they will be irrevocable during that term. The assignments are automatically renewable after that time, unless notice is given six months prior to expiration. So far, the Authority has obtained about 2,400 acres of assignments. Under each assignment, the owner is relieved of the responsibility of paying water charges assessed against the land by the district, and these become the responsibility of the authority. Recently, the Authority initiated a program in which it will also pay back-taxes on parcels in exchange for the assignment. To date, there have been no assignments with income gains over and above the benefits of tax-relief. The Authority does not have to pay the Bureau of Reclamation any higher rate for the water transferred from the irrigation district because the irrigation district has already paid off its entire repayment obligation.

Salt River Settlement. In some cases, the Department is an actual participant in the market for water rights, particularly in Indian water rights settlements. The Salt River Pima Maricopa Indian Water Rights Settlement Act of 1988 authorized the Secretary to acquire 22,000 acre-feet of water from Colorado River contractors whose contracts predate the Central Arizona Project. This water is being purchased on behalf of Phoenix, Scottsdale, Mesa, Tempe, Glendale, Chandler, and Gilbert. The Wellton-Mohawk Irrigation District in Arizona agreed to provide the federal government with this quantity of water. The water is

to be obtained by the purchase of 2,000 acres of land and certain other measures, such as a reduction in deliveries to other portions of the district and reduced application rates. The Bureau intends to pay market value for the land retired, which would include the agricultural value of the water. As of March 1991, the Bureau of Reclamation had signed option contracts for the water and the municipalities had placed $9 million in escrow for the Bureau of Reclamation to make the purchases.[197] In addition, the 1988 legislation provided the district an exemption from the acreage limitation and "full cost" pricing provisions of the Reclamation Reform Act of 1982, an exemption which would be of financial benefit to some owners in the district.

Proposed Harquahala Irrigation District buyout. Another proposed transfer in Arizona, also associated with an Indian water settlement, is the purchase of water deliveries by the United States from the Harquahala Irrigation District, southwest of Phoenix, Arizona. Under the proposal discussed in the summer of 1990, the U.S. would pay a market price for reacquiring the Central Arizona Project water deliveries, and the water would be permanently reassigned to Indian uses for settling the water claims of the Ft. McDowell tribe or other tribes in the Phoenix area.[198]

Reallocation of Water to the City of Henderson, Nevada. The transfer in southern Nevada between Basic Management, Incorporated (BMI) and the city of Henderson, discussed in Chapter 2, is an example in which the Bureau of Reclamation modified the original proposal of the transferring district. The Bureau disallowed BMI's proposed contract for additional water with Henderson, as well as a request from BMI to be authorized to purvey its remaining unused water to other entities in southern Nevada. In BMI's case, the Bureau did not believe that allowing an entity to become the contractor for reselling water never put to use was consistent with the goals of the Department's *Principles*.[199] The Bureau believed that BMI had ample time since the initiation of its 1969 contract (as had previous permittees since the initiation of diversions in 1942) to place its full entitlement to beneficial use.

However, the Bureau did allow a reassignment of water to Henderson to take place. This was accomplished by (1) reducing the contractual entitlement of BMI, (2) executing an "assignment and transfer of entitlement to delivery" from BMI to Henderson, and (3) executing a new Bureau contract with Henderson. In effectuating the assignment, BMI permanently relinquished any control over the assigned water, as they had sought under their original proposal. One of the benefits to Henderson of the agreement is that it preserves the 1942 priority date for the water, based on the original state permits.

Under the agreements, Henderson pays about $6 per acre-foot to the Bureau for the water. The amount paid by the city to BMI for the assignment and delivery through the BMI pipeline is $110 per acre-foot, increasing by $10 per acre-foot for every two years until the year 2000. There is an additional escalator clause indexed to water rates in Clark County. These price terms are subject to renegotiation in 2015. Reportedly, these financial terms are the same as those in the original, disallowed sales agreement.[200]

Depending upon what future transactions take place, the distinction between BMI's original request for subcontracting and the approved reassignment may be more of form than of substance. For example, if BMI is allowed to reassign all of the remaining

unused water under its contract and to negotiate its own financial terms for doing so, then its financial returns may be nearly the same as if it had been allowed to subcontract the unused water. Under the reassignment procedure, however, BMI appears to lose some control over subsequent use of the water and payments for it after the term of the new Reclamation contract with the transferee. In the case of the Henderson assignment, though, given that BMI owns the delivery pipeline, it can have considerable influence over the new financial terms when contracts for the reassigned water expire.[201]

A Special Look at the Central Valley Project in California

The cases in this study indicate that the Bureau of Reclamation has been willing to allow parties to realize some form of income gains from transfer activities under a wide variety of circumstances and in many locations, including southern California. However the Central Valley Project in California is a large exception. Traditionally, the Bureau of Reclamation has allowed transfers of water between districts in the project, but only at the current contract rates, not at a profit.[202]

In May 1990, the Mid-Pacific Regional Office of the Bureau of Reclamation took some steps to implement the December 16, 1988, voluntary water transactions policy directive of the Department of the Interior and the Commissioner of Reclamation's March 1989 *Criteria and Guidance*. It developed a *Draft CVP Water Transfer Policy Option Paper* for discussion with districts receiving CVP water. The policy option paper acknowledged that the current transfer policy of the Mid-Pacific Region was not in conformance because of the Region's "restriction on districts transferring water out receiving more revenues than the costs of the transaction." The draft also acknowledged that: "Both the Secretary's policy and new California water law envision the permanent transfer of water from one user and from one function or use to another and that money, in an amount sufficient to generate the transfer, would be exchanged in the transfer process." The draft went on to propose a policy under which the Bureau would "not limit the price a transferring district can charge for its water supply."

According to regional Bureau of Reclamation staff, this proposed policy was not finalized. The draft policy paper was issued during a drought year and after the time when most districts had already made decisions about what crops they would grow and how they would allocate their limited supplies of water. Because of these factors, the districts asked the Bureau to postpone any further discussion of the draft policy paper until the end of the growing season when they would have more time to consider its implications. The Bureau agreed to this request.

In May of 1990, estimates of water availability in the Sacramento River basin were revised upward. Under the agreements about allocation of CVP water in times of shortage, Sacramento River water rights contractors stood to have their supplies increased. It was also realized that since many of these contractors had already made their planting decisions, they might have extra water available to transfer to other contractors to reduce the impacts of the drought. In light of this, on June 8, 1990, the Bureau issued a set of *1990 Water Transfer Guidelines*, applicable only to Sacramento River water rights contractors desiring to transfer water. Although the guidelines do not state so specifically, Bureau personnel confirm that they were

meant to operate under the existing "no profit" policy.

We know of no other regional office that has made an attempt to issue guidance specific to its region. Also to its credit, this region has allowed a number of transfers, although not at a profit. The Bureau's Sacramento staff indicated that they intended to further revise its May 1990 policy option document and to discuss it with Bureau contractors in the winter of 1990/91, possibly soliciting formal comments before finalizing the policy. In any event, this means that the water transfer policy remains unimplemented in one of the Bureau's major projects more than two years after the Department issued its water transfer principles and more than one and a half years after the Bureau issued its *Guidance* memorandum.

We recommend that the Mid-Pacific regional office carry through with its intention of finalizing its water transfer policy. We also recommend that the Commissioner's office monitor this activity and provide assistance where needed.

An additional issue concerns the repayment provisions that would apply to districts transferring water within the Central Valley Project (CVP) of California. Bureau contracts require the permission of the contracting officer to assign a portion of the water.[203] A unique question arises in the CVP because many of the current contracts there fail to cover operation and maintenance expenses, let alone contribute to the repayment of capital. Therefore, in granting permission to transfer water (particularly transfer at a profit), it would be reasonable for the Bureau to require that a district bring its repayment up to current standards. However, the implications of such a policy are that even if a district desired to transfer a small percentage of its water, it might face a strong disincentive because it would have to pay higher costs on the water it did not transfer, as well.

According to the Department of the Interior's Regional Solicitor in Sacramento, the Bureau has considerable discretion as to the conditions it could impose to secure the approval of the contracting officer to transfer water. In establishing a long-term policy, the Bureau would have discretion to select one of several pricing options as a condition to transfer water, including (1) requiring the transferring district to pay cost of service (O&M plus capital) on just the transferred water, (2) requiring the district to pay operation and maintenance costs on all of the district's water, or (3) requiring the district to pay cost of service on all water supplied to the district. The rationale for any of these options would be that if a district is to receive increased income on water provided at federal expense, the district should at least be paying its share of federal expenses. Option (1) would not provide much of a disincentive for transfers because the current cost of service rates are relatively low, and the value of the transferred water to the purchaser would likely exceed this rate. Option (3) could be a strong disincentive to transfer water. For example, if a district wanted to transfer only 2% of its water, it would have to raise its payments to cost of service on all of its water. Only a small number of contractors currently pay cost of service, although most will have their contracts renewed at this rates during the 1990s. It would be a policy judgment by the Bureau as to whether it believed so strongly about the need to bring contracts up to current standards, that it would impose this restriction. As discussed above, because of the O&M repayment requirements of P.L. 99-546, Option (2) would not impose a strong disincentive.[204]

Another alternative would be for the Bureau to apply a different requirement to cases where it allowed profit on a transfer. For example, if a district transferred water at no profit, then it might be required to pay O&M costs on all of its water, but if it transferred water at a profit, then it might be required to pay cost of service on all of its contract water (or on just the transferred water).

Conclusions on Implementation of Bureau Policy

One would like to know if the issuance of the Department of the Interior's transfer policy has made any difference: whether as a result of the policy, the Bureau of Reclamation is allowing profit as an incentive to transfer water and whether the amount of transfer activity has increased. Unfortunately, such a before-and-after analysis may not be so simple. For one, even before the policy was issued or under development, one can point to some water transfers where profit was allowed (discussed above).[205] More importantly, however, starting about three years before the Department issued its transfer policy, Departmental officials indicated in addresses to water marketing conferences (and elsewhere) their willingness to facilitate transfers on a case-by-case basis. Within the Bureau of Reclamation during this same period, several drafts of the water transfer *Guidance* were circulated to the Regional Directors for comments. Therefore, Bureau of Reclamation practice in facilitating water transfers is probably best interpreted as evolutionary over this period, rather than as having a distinct change in December of 1988. Furthermore, many water transfers take some time to negotiate, so it may be some years before the full impact of the transfer policy can be observed.

However, as the above cases illustrate, the implementation the Department's policy presents a mixed picture. One can point to many cases where the Bureau of Reclamation has facilitated transfers and has allowed increased income, including cases where the Department has participated as a purchaser of water to complete an Indian water settlement. However, it is not clear that all field offices of the Bureau understand the policy well, especially given that some of the offices visited in this study had not received the Bureau's own internal guidelines which clarify some of the questions commonly raised concerning "profit" and other matters. Furthermore, although they have taken some preparatory steps to do so, the administrators of the Central Valley Project, one of the Bureau's major projects, have not implemented the transfer policy, even though more than two years have elapsed since the principles were adopted.

CHAPTER 4: Recommendations

The federal reclamation system has developed over a period of nearly 90 years. A substantial body of statutory law also has developed during the period in support of the reclamation program. In a real sense each of the 189 projects that the U.S. has built around the West is unique, governed by its own body of authorizations, contracts, operating plans, and other arrangements. The complexity and individuality represented in this reclamation system make general recommendations problematic.

Nevertheless, we believe our research indicates a clear need for actions to be taken to clarify and improve federal policy and procedure regarding voluntary transfers of Bureau-supplied water. The Interior Department's 1988 *Principles* statement and the subsequent Bureau *Criteria and Guidance* represent an important first step in this direction. The following recommendations call for certain changes and additions to this policy as well as improvements in its implementation. Several broader recommendations are aimed at the Department of the Interior and at Congress.

Section 1: Bureau of Reclamation

1. Develop criteria for determining when transfers require a new or amended contract.

Involvement by the U.S. in transfers appears to depend on whether the contract under which water from federal reclamation facilities is provided must be amended or whether a new contract is necessary. The Bureau should provide general guidance concerning the factors likely to cause the need for such contract changes. Factors will include whether the transfer involves a use of water not presently authorized in connection with the facilities and whether the transfer requires a change in the payment obligation associated with the use of the water.

2. Clarify when Congressional authorization is required for transfers.

Generally the case studies suggest that the Secretary of the Interior can authorize new uses of project facilities by issuing a new contract for the use under the 1939 Reclamation Project Act or the 1920 Miscellaneous Purposes Act. However, the first of the Department's *Principles* states that Congressional authorization may be required. There is no explanation of when Congress must get involved and when the Secretary may act under existing authority. We recommend that the Bureau provide clarification of the factors that require Congressional involvement.

3. Clarify the considerations that will apply in determining whether a proposed transfer can occur without diminution of service to existing users of water from a project.

New contracts for uses of water under the 1920 and 1939 Acts referred to above may not be issued if they will be detrimental to water service (1920 Act) or impair the project's efficiency for irrigation purposes (the 1939 Act). The second of the Department's *Principles* limits transfers that it will facilitate to those that will not cause "diminution of service." Neither the Bureau's *Criteria and Guidance* nor the case studies provide much help in determining the meaning of these phrases. It appears that Bureau practice has been to seek approval of the transactions from the entity holding the original contract for water delivery from the project. Such a *de facto* policy appears to give the

contractor a veto power over any such transactions. We recommend that the Bureau provide clarification concerning what constitutes diminution of service and what will be required to insure that such diminution does not occur.

4. Clarify the formulas to be applied for changes in payment requirements.

The cases reviewed in our report illustrate the variability in charges that can result from different formulas for converting water from irrigation to M&I use. However, they also support our observation that the provisions of general Reclamation law fairly well circumscribe the rate that will be charged. In particular, there is a strong basis in Reclamation law and practice for basing the charges on the costs allocated to irrigation (rather than just the remaining balance in the irrigation contact), incorporating interest during construction, and amortizing the unpaid balance over the remaining repayment period at the project interest rate. This discussion also indicates that, in the future, the Bureau would not charge interest between the project's inservice date and the date water is converted to M&I use.

We recommend that the Bureau clarify the interest rate determination either through establishing a Bureau-wide procedure in an addendum to its transfer *Guidance* or by requiring that regional or project offices make a determination of the interest rates to be used and make this information available to interested parties. An alternative would be for the Bureau to make available in each region a schedule, by project, of the water rates that would apply to transfers of irrigation water to municipal and industrial use. This requirement would not necessarily have to cover all Bureau projects, but should apply to all of those where transfers are occurring or are likely to occur.

With regard to calculating interest charges on irrigation capital costs formerly designated for repayment from hydropower revenues (irrigation assistance), we believe that the formula adopted in the Definite Plan Reports for the Dolores and Dallas Creek Divide Projects For Conversion from Irrigation to M&I use (formula D) has merit and should be considered for wider adoption by the Bureau. As noted, formula D prorates the amount of power assistance that M&I users must assume based upon the years of M&I use, thereby resulting in a charge for M&I conversions that does not vary each year. Not only does this approach appear equitable, but it also results in a procedure that is more easily communicated to outside parties (since the conversion rates do not change each year).

5. Clarify the formulas to be used for paid-out projects.

An increasing number of Bureau of Reclamation projects will be completing their repayment obligations in the next two decades. Therefore, it is important to clarify what formulas are to be used for transfers on projects that are near the end of their repayment periods.

Although the Bureau *Criteria and Guidance* are not explicit on these questions, one can infer from the guidance under Principle 6 that the full balance of capital costs must be repaid by the end of the already established repayment period, no matter how close to the end of that period the conversion took place. Correspondingly, there is no basis for assessing additional construction charges on irrigation water transferred to M&I use after the project's established repayment period -- the project completed

its repayment obligation while functioning as authorized by Congress.

6. Clarify the federal role in assessing third-party effects associated with transfers.

The Department *Principles* assert broadly that the Department will facilitate transactions only when they involve no adverse third party effects or when third party issues are addressed in a state forum or are otherwise mitigated. Beyond effects on other users of water from the project, it is not clear what kinds of third party effects are to be considered. There is a suggestion that these are effects that would be considered under the water right transfer process in the state where the transaction would occur. However, there is also the suggestion in the *Guidance* that there are third party issues as a matter of federal law or policy. Moreover, the *Principles* state that third party effects are to be mitigated "to the satisfaction of the affected parties."

Clearly the U.S. has a responsibility to insure that transfers involving its facilities not adversely affect others who have a federally protected interest in the use of these facilities. This includes those who are receiving water from the project, those with legal rights to generate hydroelectricity from the project, and federally protected environmental interests. We recommend that the Bureau provide additional guidance in identifying these third-party interests and in establishing standards and procedures for addressing possible adverse consequences.

The guidance document acknowledges the need for the Bureau to comply with federal law including the National Environmental Policy Act. Beyond this obvious fact, there is no guidance concerning the federal requirements that might apply in considering the environmental effects of proposed transfers. Do federal considerations apply only to changes in the facilities that might be associated with the transfer or do they extend to the effects of changes in the water use itself? If they apply to water use, how do these considerations relate to state transfer review requirements?

7. Clarify the effect of the Reclamation Reform Act (RRA) on transfers.

The RRA aims at controlling the use of water supplied from reclamation facilities on large farms. Changes in existing contracts necessitated by transfers can trigger certain RRA requirements. Additional guidance is needed to clarify when the RRA will apply to contract changes associated with transfers, particularly concerning the question of "supplemental or additional benefits."

8. Develop programs aimed at facilitating transfers to fish and wildlife purposes.

Bureau guidance provides for transfers to any purpose but requires that the federal government be "no worse off financially" as a result. This suggests that payments associated with Bureau-provided water which might be transferred from irrigation to fish and wildlife uses would have to stay at the same level. In cases where there are particularized benefits, interested private or public entities may be willing to make these payments. In other situations, especially where the benefits are more diffuse or general, such an option may not be available. We recommend consideration of at least partly Bureau-funded programs to facilitate transfers of water to fish and wildlife purposes. For example, water saved through conservation activities within Bureau projects could go to these uses. As mentioned, Congress is considering a "tax" on transfers involving

water from the Central Valley Project to enhance instream flows.

9. Improve staff awareness and understanding of federal water transfer policy.

The Department's water transfer policy has been in place more than two years. Yet the policy seems not to have imprinted itself very clearly on the Bureau. We found Bureau personnel who asked if the policy was still in effect and had only a vague idea of its content.

To this point the Bureau has not given transfers much attention as a program area. We believe the Bureau should more actively embrace its role in water transfers and should communicate the importance of this role to its personnel. We further recommend the use of special training sessions for Bureau personnel who may be associated with transfers, especially those in the contracting area and in field offices.

10. Initiate a process for evaluation and development of Bureau guidance.

This report suggests a number of areas in which we believe Bureau guidance concerning transfers could be improved. We urge the Bureau to establish a process by which its guidance document can be reviewed in light of experience to date and in relation to the conclusions of this report. In particular, we believe there would be much value for Bureau personnel from different regions to compare approaches and experience in an effort to develop greater consistency. This process should provide for ongoing review and evaluation and a mechanism to make necessary changes.

Section 2: Department of the Interior

1. Initiate a broad-based review of existing and potential future uses of reclamation facilities.

Reclamation facilities provide opportunities across the West to meet emerging water needs. We recommend that the Department initiate a study of the existing uses of these facilities and opportunities for meeting present commitments while making water available for additional uses. We suggest consideration of opportunities with respect to the water already committed as well as for water not presently committed. As a general matter we believe that water presently in consumptive use should be available for new uses primarily according to decisions made by the water users themselves. In this regard, federal interests and concerns need to be made clear -- a task that can be better done by considering the full potential of the reclamation system. Existing commitments may be able to be better met through innovative approaches that give the users the incentive to better manage their water supply (for example, the use of storage rights instead of fixed delivery rights). In addition, there are opportunities for using conservation improvements that could make water available for other uses.

As noted under recommendation 6 of Section 1 (Bureau of Reclamation), there is a rationale for Bureau-funded transfers of water to fish and wildlife programs, where the benefits are often diffuse and there is no easily identifiable group of beneficiaries to charge. Conservation improvements could also be a source of water for such public purposes. An even more immediate and less expensive means of providing water for these public purposes, as well as environmental

mitigation and enhancement, would be the use of uncontracted water from federal reclamation facilities. To that end, we recommend that the Department and the Bureau undertake an assessment of the option for the use of water stored in reclamation facilities, but not committed to consumptive uses.

2. Seek clarification of certain legal issues.

The report has identified a number of areas where federal reclamation law may affect transfers. We recommend that the Department request clarifying opinions from the Solicitor's Office or seek clarification from Congress if necessary. These include the effect of the appurtenancy and the beneficial use language in Section 8 of the 1902 Reclamation Act, the meaning of "detrimental to the water service for such irrigation project" and "not impair the efficiency of the project for irrigation purposes" in the two laws authorizing contracts for non-irrigation uses of reclamation facilities, and whether the *Ickes* decision regarding the water rights position of those applying Bureau-supplied water to beneficial use applies to all projects and contracts or whether service contracts imply a different kind of status for water users affecting their ability to initiate transfers.

Section 3: Congress

1. Consider enactment of a systemwide water transfer policy for transfers involving reclamation facilities.

Congress has begun to consider water transfer issues in the context of individual reclamation projects. Specialized considerations may make it necessary for Congress to continue to address transfer issues on a project-by-project basis. In addition, Congress should consider establishing a general framework within which transfers may occur which clarifies areas of uncertainty addressed in this report and defines federal interests to be satisfied in relation to any such transfers.

As an initial step, Congress could request a report from the Department of the Interior regarding its water transfer policy, the background to this policy, an evaluation of its implementation, and other specific matters. Alternatively, or in addition, Congress could initiate its own study of these matters. The issues identified in this report could provide much of the agenda for those studies.

2. Provide a mechanism by which transfers of project water to fish and wildlife purposes can be made nonreimbursable.

Congress should make it clear that all reclamation facilities may be used for fish and wildlife-related purposes regardless of the specific purposes for which they were originally authorized. In addition, Congress should make transfers of project water to fish and wildlife purposes free of the obligation to pay the related cost of the facilities where the benefits are general in nature.

3. Extend the Warren Act to M&I and other purposes.

In some cases, transfers may be facilitated by use of reclamation facilities for transfer of nonproject water where there is surplus capacity. The Warren Act provides a mechanism for utilization of these facilities in connection with a water supply for irrigation. Congress should amend the Warren Act to extend utilization of reclamation facilities, where feasible, for storage and conveyance of nonproject water for M&I use and other purposes.

ENDNOTES

1. **Bureau of Reclamation, U.S. Dept. of the Interior, Summary Statistics** 1-2 (1988) [hereinafter **1988 Statistics**]. Of the 609 dams, 355 are classified as storage facilities and 251 as diversion facilities. An additional nearly $6 billion has been invested in facilities that are considered still under construction. *Id.* at 17 (Table 1).

2. *Id.* at 17 (Table 1).

3. *Id.* at 1.

4. **Bureau of Reclamation, Assessment '87 . . . A New Direction for the Bureau of Reclamation** (1987). Additional discussion is contained in a companion report, **Bureau of Reclamation, Implementation Plan . . . A New Direction for the Bureau of Reclamation** (1987).

5. About 10 million acres of land are irrigated with this water, approximately 22 percent of the irrigated acreage in the 17 western states. **1988 Statistics**, *supra* note 1, at 2; **Economic Research Serv., U.S. Dept. of Agriculture, Agriculture Information Bulletin No. 532, Agricultural Irrigation Water Supply**, October 1987. In some cases the water supply from Bureau facilities provides only a "supplemental" water supply. *See* **R. Wahl, Markets for Federal Water** 24 (Table 1-3) (1989).

6. Prominent among these studies are the books by **Richard Wahl, Markets for Federal Water** (1989) [hereinafter **Wahl**] and by **Mark Reisner and Sarah Bates, Overtapped Oasis** (1990) [hereinafter **Reisner and Bates**], the article by Roos-Collins, *Voluntary Conveyance of the Right to Receive a Water Supply from the United States Bureau of Reclamation*, 13 ECOLOGY L. Q. 773 (1987) [hereinafter Roos-Collins], and the report by the **W. Governors' Ass'n, Water Efficiency: Opportunities for Action** (1987) [hereinafter **WGA Report**].

7. *See, e.g.* **C. Meyers & R. Posner, Market Transfers of Water Rights** (National Water Comm'n Publication No. 202 620, 1971). **Wahl**, *supra* note 6, at 143-144, 147-93; Driver, *The Effect of Reclamation Law on Voluntary Water Transfers*, 33 **Rocky Mt. Min. L. Inst.** 26-1 (1987).

8. Since Bureau facilities store up to 134 million acre-feet of water annually, their uses related to the second and third categories appear to be considerable. A different set of issues relate to changing the water use functions of these facilities. Because the water involved is not presently being used for consumptive purposes this water may be especially well suited to help mitigate the effects of the storage facilities on instream flow values. We believe the Department of the Interior should undertake a broad environmental review of the effects of Bureau of Reclamation facilities before committing the category two function to new uses or the category three functions to different uses.

9. We encountered much confusion regarding the interpretation of "transfers" in this project. In this report we use "transfers" for transactions involving voluntarily made changes in existing water uses. We distinguish "transfers" which are initiated by the present users or potential purchasers of the water from "reallocations" which, by our definition, are administratively or judicially initiated.

In the Bureau of Reclamation context, an example of a reallocation was the decision by the Secretary of the Interior to dedicate the full use of Stampede Reservoir in the Washoe Project to protection of the endangered cui-ui fish in Pyramid Lake. Carson-Truckee Water Conservancy Dist. v. Watt, 549 F. Supp. 704 (D. Nev. 1982), *aff'd in part and vacated in part sub nom.* Carson-Truckee Water Conservancy Dist. v. Clark, 741 F.2d 257 (9th Cir. 1984), *cert. denied sub nom.* Nevada v. Hodel, 470 U.S. 1083, 105 S. Ct. 1842 (1985). As originally planned and built, this project was to provide

municipal and industrial water. Since water from this project never was actually supplied for these purposes, the reallocation did not effect existing uses -- only anticipated uses. The attempt by the U.S. to reallocate water that it had been providing from the Yakima Project to an irrigation district was struck down by the U.S. Supreme Court in Ickes v. Fox, 300 U.S. 82 (1937).

10. Reclamation Act of 1902, § 8 (Current version at 43 U.S.C. § 372, 383 (1988).

11. 438 U.S. 645 (1978).

12. The exception to this general conclusion is the Lower Colorado River where federal law directly governs the allocation of water from federal reclamation projects. Consequently, transfers of water entitlements for these projects also are governed by federal rules. The Bureau of Reclamation is in the process of promulgating regulations for administering water entitlements in the Lower Colorado River Basin which include provisions regarding transfers.

13. Hereinafter cited as *DOI Principles* or *Principles*. These *Principles* are reproduced in Appendix 1 of this volume.

14. The *Criteria and Guidance* are reproduced in Appendix 2 of this report.

15. The case studies did not attempt to investigate transfer activity in the Pecos River basin.

16. 43 U.S.C. §§ 411, 419, 461 (1988). Under the 1939 Act, the proposed project must be found by the Secretary to "have engineering feasibility" and the reimbursable and nonreimbursable benefits must equal the total estimated costs of construction. 43 U.S.C. § 485h (a) (1988). The 1924 Fact Finders' Act required the Secretary to examine "the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States." 43 U.S.C. § 412 (1988). Under the 1902 Act the Secretary could directly authorize projects. Subsequently, presidential approval was required. Increasingly, Congress itself got involved in authorizing specific projects. The 1939 Act required congressional approval of any project whose "allocations" (meaning expected payments from irrigation, power, or municipal users plus benefits from flood control or navigation) do not equal total estimated costs. 43 U.S.C. § 485h (a) (1988).

17. This provision -- perhaps the most contentious aspect of Reclamation law -- has been modified. *See* 43 U.S.C. § 423(e) (1988).

18. 43 U.S.C. § 498 (1988). Congress may subsequently dispose of the works.

19. 43 U.S.C. § 383 (1988). A proviso requires that any such state-based water rights must be "appurtenant" to the land irrigated and that "beneficial use" is to be "the basis , the measure, and the limit of the right." 43 U.S.C. § 372 (1988).

20. 43 U.S.C. § 373 (1988).

21. 43 U.S.C. § 475 (1988).

22. 43 U.S.C. § 423d (1988).

23. 43 U.S.C. § 485h (d)(1) (1988).

24. 43 U.S.C. § 462 (1988). The Secretary was to determine the "productive value" of irrigable lands and establish different construction charges based on different classes of lands.

25. 43 U.S.C. § 485h (d)(2) (1988). The repayment organization was authorized to "vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction: . . . . "

26. 43 U.S.C. § 567 (1988). The town must have a water right from the same water source as the project.

27. 43 U.S.C. § 521 (1988). Contracts issued under this authority must be approved by the irrigation water supply entity receiving water from the project. There must be a showing that there is no other practicable source of water supply available. And there must be a finding that the delivery of this water will not be detrimental to the water service for irrigation or to the rights of any prior appropriator.

28. 43 U.S.C. § 617 (1988). 43 U.S.C. § 617e states that Hoover Dam is to be used first for river regulation, navigation, and flood control; second, for irrigation and domestic uses of water and satisfaction of uses provided for by the 1922 Colorado River Compact; and third, for hydropower.

29. 43 U.S.C. § 485h (a) (1988).

30. 16 U.S.C. § 662 (b) (1988).

31. 16 U.S.C. § 460*l*-12 (1988).

32. 43 U.S.C. § 511 (1988).

33. 43 U.S.C. §423d (1988).

34. 43 U.S.C. § 423e (1988).

35. Solicitor's Memorandum Opinion, M-28771 (October 10, 1936), "In Re the Public Irrigation District for the Pine River Project, Colorado," cited in 1 **U.S. Dep't of Interior, Federal Reclamation and Related Laws Annotated**, at 379 (1972).

36. 43 U.S.C. § 485h (d) (1988).

37. 43 U.S.C. § 485h (e) (1988).

38. 43 U.S.C. § 485h (d)-(e) (1988).

39. A. Golzé, **Reclamation in the United States** 247 (1961) [hereinafter **Golzé**].

40. 43 U.S.C. § 485h(c) (1988).

41. 43 U.S.C. § 523 (1988).

42. 43 U.S.C. § 524 (1988).

43. Memorandum from Associate Solicitor, Division of Energy and Resources, to Commissioner, Bureau of Reclamation, "Application of the Reclamation Reform Act of 1982 to Contracts Executed Pursuant to the Warren Act of 1911" (Aug. 28, 1985). More than 400 contracts have been issued under the

apparent authority of the Warren Act. According to this memorandum, many of these contracts should not have been based on the Warren Act and some are probably outside the authority of reclamation law.

44. **Wahl**, *supra* note 6, at 156.

45. Richard Wahl reviewed a sampling of 34 contracts and identified similarities and differences found in a number of provisions. *Id.* at 156-73.

46. Ex post analysis has shown that, in most cases, the increase in land value has fallen short of project costs. *See* **Wahl**, pp. 30 and 41.

47. 1866 Mining Act, 43 U.S.C. § 661 (1988); Desert Land Acts, 43 U.S.C. § 321 (1988).

48. 43 U.S.C. § 383 (1988).

49. 438 U.S. 645 (1978).

50. 300 U.S. 82 (1937).

51. *Id.* at 90.

52. *Id.* at 95.

53. *Id.* at 94-95.

54. 296 F. 536, 545 (D.N.M. 1923), *aff'd* 5 F.2d 908 (8th Cir. 1925).

55. *Id.* at 545.

56. *See* **R. Dunbar, Forging New Rights in Western Water** 23-38 (1983).

57. As Arthur Maass points out, land developers often sought to get out of the water supply business as quickly as possible. In California, these private water companies commonly evolved into irrigation districts. Maass, *Water Law and Institutions in the Western United States: Comparison with Early Developments in California and Australia, Contemporary Developments in Australia, And Recent Legislation Worldwide*, **Western Water Policy Project Discussion Paper Series, Paper No. 7** at 8-9 (Natural Resources Law Center 1990).

58. 10 Colo. 582, 588, 17 P. 487, 490 (1887).

59. 38 Colo. 420, 431, 88 P. 396, 399-400 (1907).

60. Pioneer Irr. Co. v. Board of Comm'rs of Yuma County, Colo., 236 F. 790, 792 (D. Colo. 1916), *aff'd* 251 F. 264 (8th Cir. 1918).

61. *See* City and County of Denver v. Brown, 56 Colo. 216, 138 P. 44 (1913): "A consumer supplied with water by contract from a ditch owned and operated by a carrier company in a sense is an appropriator from the stream supplying the ditch, but does not occupy the exact status of an independent appropriator directly from the stream, as his rights are limited by the terms of his contract, so far as valid, with the ditch company, as well as other limitations which the law, from the nature of

the relation between the carrier company and a contract consumer from its ditch company, inspires." *Id.*, 138 P. at 47 (citations omitted).

62. Wright v. Platte Valley Irr. Co., 27 Colo. 322, 61 P. 603 (1900).

63. *Id.*, 61 P. at 606.

64. City and County of Denver v. Brown, 138 P. at 47: "On the expiration of his contract, he may be entitled to have it renewed, unless inhibited by a valid provision therein; but, if a legal demand for that purpose is not made, he is in the same position as though he had never taken water from the ditch."

65. *Id.*

66. 37 Nev. 154, 140 P. 720 (1914).

67. *Id.*, 140 P. at 723 quoting from Slosser v. Salt River Valley Canal Co., 7 Ariz. 376, 65 P. 332 (1901): "A corporation thus organized for the purpose of furnishing water for agricultural purposes, to be used by others in priority of contract with it, becomes the mere agent of the latter, and, under the statute, may divert from a public stream water which the latter may acquire and use for purposes of irrigation."

68. *Slosser*, 65 P. at 338: "We hold that the ownership and possession of arable and irrigable land are essential, under the statutes, for the acquisition of the right of appropriation of water from a public stream for purposes of irrigation."

69. Wilterding v. Green, 4 Idaho 773, 45 P. 134, 135 (1896).

70. Hard v. Boise City Irr. Co., 9 Idaho 589, 76 P. 331 (1904).

71. Farmers Co-Operative Ditch Co. v. Riverside Irr. Co. 14 Idaho 450, 94 P. 761, 763 (1908).

72. *Id.*

73. In *Nebraska v. Wyoming*, 324 U.S. 589 (1945) -- an interstate apportionment action involving the North Platte River -- the Court simply affirmed that deliveries of water from federal reclamation facilities for which the U.S. held the state-granted water storage right was based on state water rights held by the water users.

74. 463 U.S. 110 (1983).

75. *Id.* at 126.

76. 43 U.S.C. § 521 (1988).

77. 43 U.S.C. § 567 (1988).

78. 43 U.S.C. § 485h(c) (1988). Interestingly, in each case the language speaks in terms of providing water (or water rights) for these different purposes rather than allowing the use of reclamation facilities for these purposes. The argument here is that this reference was simply a shorthand statement and was not intended to create a water-supply function different from that established under the 1902 Act.

79. 43 U.S.C. § 521 (1988).

80. 43 U.S.C. § 567 (1988).

81. 43 U.S.C. § 485h(c) (1988).

82. The Warren Act has been described above in Chapter 2, Section 1. It is codified at 43 U.S.C. §§ 523-524 (1988). The Water Supply Act of 1958 is codified at 43 U.S.C. § 390(b) (1988).

83. 43 U.S.C. § 390b(d) (1988).

84. *See* "Facilitating Voluntary Transfers of Bureau of Reclamation-Supplied Water Vol. II," (Natural Resources Law Center 1991) [hereinafter Bureau of Reclamation, Vol. II], "New Mexico Case Studies."

85. *See Id.* "Emery County Project, Utah."

86. *See Id.*, "Kendrick Project, Wyoming."

87. *See Id.*, "Newlands Project, Nevada."

88. *See Id.*,"Strawberry Valley Project, Utah."

89. *See Id.*, "Provo River Project, Utah."

90. **Wahl**, *supra* note 6, at 42.

91. Examples include the contract for the Central Arizona Project (*see* **Bureau of Reclamation Vol. II**, *supra* note 80, "Arizona Case Studies") and the contract for the Dolores Project in Colorado. These and other examples are discussed in some detail below in Chapter 3.

92. *See id.* "Emery County Project, Utah."

93. According to the contract, this charge is to help repay the capital costs of the Kendrick Project allocated to its irrigation function. The contract states that the service charge "is based on amortizing the pro rata share of the allocated cost of the Kendrick Project to irrigation over a 32 year repayment period with interest at 9.352 percent." Water Service Contract Among the United States, The Casper-Alcova Irrigation District, and the City of Casper, Wyoming, § 9b (April 15, 1982).

94. Pub. L. No. 101-618, § 206(a)(3)(A), 104 Stat. 3294, 3308-09.

95. At the time the original contract for repayment was established (1936), the inclusion of interest charges for municipal water was not yet part of reclamation law. This distinction in treatment between repayment charges for irrigators and for municipal users was included in the Reclamation Project Act of 1939. *See* 43 U.S.C. § 485h (c)-(d) (1988).

96. Ch. 1093, 32 Stat. 390 (1902) (Codified at 43 U.S.C. §§ 372, 383 (1988)).

97. 438 U.S. 645 (1978).

98. *Id.* at 665-667.

99. According to Wahl, the U.S. holds the storage rights to about 84% of the water in reclamation projects in the West. **Wahl**, *supra* note 6, Table 6-2 at 174. Only in Oregon, Oklahoma, Colorado, Texas, and Kansas is the percentage of storage rights held by the U.S. less than 50%.

100. 300 U.S. 82 (1937).

101. Trelease, *Reclamation Water Rights*, 32 **Rocky Mt. L. Rev.** 464, 476 (1960) [hereinafter Trelease].

102. Trelease argues that this view should not necessarily be extended to Warren Act contracts or to Section 9(e) contracts under the 1939 Reclamation Project Act. *Id.* at 478-81.

103. *See* MacDonnell, *Transferring Water Uses in the West*, 43 **Okla. L. Rev.** 119 (1990).

104. United States v. Alpine Land and Res. Co., 503 F. Supp. 877 (D. Nev. 1980) ("Alpine I") *aff'd as modified* in U.S. v. Alpine Land and Res. Co., 697 F. 2d 851 (9th Cir. 1983).

105. Alpine I, 503 F. Supp. at 884.

106. *Id.* at 892-93.

107. Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F. Supp. 252, 265 (D.D.C. Supplemental Opinion 360 F. Supp 669 (1973)).

108. U.S. v. Alpine Land & Res. Co., 878 F. 2d 1217, 1223-24 (9th Cir. 1989).

109. U.S. v. Alpine Land and Res. Co., 697 F. 2d 851, 858 (9th Cir. 1983). Direct review of the State Engineer's decision by a federal court is, of course, not the usual procedure. It applies here because of the decree of the district court which allows for appeal of change applications to the federal district court for the District of Nevada. This provision is not contested by any appellee. *Id.*

110. As mentioned in the preceding section, the transfer may be limited by contract provisions restricting the type of use, place of use, and repayment obligations.

111. Provo River Project Proof of Appropriation for Water Rights Application No. 12230, at 39 (filed June 25, 1936).

112. Originally, BMI held certificates of appropriation from the state of Nevada to divert 45 cubic feet per second (cfs) of water out of Lake Mead for industrial purposes and 12 cfs for municipal use. Under Section 5 of the Boulder Canyon Project Act, ch. 42, 45 Stat. 1060 (1928) Congress transformed this appropriation into a service contract for up to 41,266 acre-feet of water.

113. Boulder Canyon Project, Contract to Amend Contract No. 14-06-300-2083, Contract for Delivery of Water to Basic Management, Inc., Section 3(c) (May 22, 1990).

114. Boulder Canyon Project, Assignment and Transfer of Entitlement to Delivery of Colorado River Water from Basic Management, Inc., to the City of Henderson, Nevada (May 22, 1990).

115. Boulder Canyon Project, Contract with the City of Henderson, Nevada, for Delivery of Colorado River Water (May 22, 1990).

116. Water Delivery Contract Between the City of Henderson and Basic Management, Inc. (May 22, 1990).

117. *See* **Bureau of Reclamation Vol. II**, *supra* note 80, "CAID case study."

118. 325 U.S. 589 (1945).

119. Gray, *Water Transfers in California*, 1981-1989, in **The Water Transfer Process**, Vol. II, Ch. 2 at 23-24 (Natural Resources Law Center 1990). An average of about 375,000 acre-feet of water per year moved among users in the CVP on this basis. *Id.*

120. This involved the Lindsay-Strathmore Irrigation District and the city of Lindsay.

121. In 1956, Congress directed the Secretary of the Interior to include in 9(e) contracts a provision for renewal "under stated terms and conditions mutually agreeable to the parties." 43 U.S.C. § 485h-l(1). The 1956 law also authorized the Secretary to provide for conversion of 9(e) contracts to 9(d) contracts if he determines that the remaining reimbursable construction costs can probably be repaid within the contract term. 43 U.S.C. § 485h-l(2) (1988).

122. 357 U.S. 275 (1958).

123. *See, e.g.*, Trelease, *supra* note 97, at 479-81(Section 9(e) contracts may be "utility" supply arrangements under which the irrigator does not get a water right).

124. *See* discussion in Fresno Canal & Irr. Co. v. Park, 129 Cal. 437, 62 P. 87 (1900).

125. Hildreth v. Montecito Creek Water Co., 139 Cal. 22, 72 P. 395, 398 (1903).

126. Leavitt v. Lassen Irr. Co., 157 Cal. 82, 106 P. 404 (1909).

127. 75 Cal. App. 57, 242 P. 494 (1925)

128. *Id.*, 242 P. at 499.

129. **J. Castleberry, R. Davis, R. Hornsberger & R. Swenson, Waters and Water Rights** § 343.1 (R. Clark ed. 1970) (citation omitted) [hereinafter **Clark**].

130. Willis v. Neches Canal Co., 16 S.W. 2d 266, 269 (Tex. Comm. App. 1929).

131. **Clark**, *supra* note 131, at 408 n. 73.

132. In *Ivanhoe Irr. Dist. v. McCracken*, 357 U.S. 275 (1958), the U.S. Supreme Court upheld the validity of 9(e) contracts and noted that Congress, in 1956, had provided for the indefinite extension of such contracts thereby providing a potentially permanent commitment of water service.

133. 43 U.S.C. § 485h-l(2) (1988).

134. 43 U.S.C. § 372 (1988).

135. *See* 4 **G. Sands, Sutherland, Statutory Construction**, (4th edition, 1984).

136. **H.R. No. 1468**, 57th Cong., 1st Sess. 7 (1902).

137. **35 Cong. Rec. 6679** (daily ed. June 2, 1902) (statement of Rep. Mondell).

138. Chrysler v. Brown, 441 U.S. 281, 311 (1979). However, notwithstanding this general rule, the Circuit Court's opinion in United States v. Alpine Land & Reservoir Co. cites Mr. Mondell's remarks with favor:

As described by Rep, Mondell, a water right under the Reclamation Act "only extends to the use of water on and for the tract originally irrigated"; there is no general "property right in water with power to sell and dispose of the same elsewhere and for other purposes than originally intended."

35 Cong. Rec. 6679 (1902). 697 F.2d 851, 858 (9th Cir. 1983), *cert. denied sub nom.* Pyramid Lake Paiute Tribe of Indians v. Truckee Carson Irr. Dist., 464 U.S. 863 (1983), *later proceeding*, 878 F.2d 1217 (9th Cir. 1989), *later proceeding* 887 F.2d 207 (9th Cir. 1989), *cert. denied sub nom.* Truckee-Carson Irr. Dist. v. United States, 111 S. Ct. 60 (1990). [hereinafter Alpine II].

139. 35 Cong. Rec., 6677 (daily ed. June 3, 1902) (Statement of Rep. Mondell).

140. **Q. C. Kinney, A Treatise on the Law of Irrigation and Water Rights and the Arid Region Doctrine of Appropriation of Waters** (2nd ed. 1912).

141. *Id.*, § 1005 at 1786.

142. *Id.*, § 1006 at 1789.

143. *Id.*, § 1005 at 1786.

144. *Id.*

145. The U.S. Supreme Court has held that when a statute is silent or ambiguous on an issue, an interpretation by they agency charged with its administration is entitled to great deference. Chevron U.S.A. v. Natural Resources Defense Council Inc., 467 U.S. 837 at 843 (1984).

146. One exception to the Bureau's implicit position on "appurtenancy" is in Arizona where, as the case study shows, the Bureau appears confused regarding whether water from Bureau projects in this state may be severed and transferred from the land. However, the confusion does not derive from any ambiguity in "appurtenancy" under Section 8 of the Reclamation Act but from concern whether Arizona's version of appurtenancy, which under certain situations can make water appurtenant to lands in the basin in which it arises, should govern transfers under the notion of state primacy.

147. Interview with James Turner, Office of the Mid-Pacific Regional Solicitor of the Department of the Interior (June 21, 1990).

148. El Paso County Water Imp. Dist. No. 1 v. City of El Paso, 133 F. Supp. 894 (W.D. Tex. 1955) *aff'd in part and rev'd in part*, 243 F.2d 927 (5th Cir. 1957), *cert. denied*, 355 U.S. 820 (1957).

149. *Id.*, at 904.

150. Another argument offered to remove the cloud of Rep. Mondell's concept of appurtenancy from transfers is that Congress has impliedly repealed the appurtenancy provision of Section 8, in particular, in the Reclamation Project Act of 1939. In this statute Congress authorized the Secretary of the Interior to contract for the supply of water to M&I users. Thus, in expressly authorizing the allocation of water to uses other than irrigation, Congress is said to have repealed Section 8's appurtenancy requirement. The problem with this argument is that it does not address the substance of Rep. Mondell's remarks. His remarks only express a policy against an original farmer effectuating a reallocation of project water by voluntary transfer. They do not infer that the Secretary cannot effectuate a reallocation administratively. Thus, the Secretary may, himself, reallocate water from irrigation to other uses without being at cross purposes with Rep. Mondell's remarks. In other words, reallocation of project water from irrigation to municipal and industrial uses may be effectuated without

transfers. Finally, courts prefer to avoid holding that a statute has been repealed by implication. Rather, they try to find a way in which two facially contrary statutes may be reconciled harmoniously without repeal. In this instance, the policy of permissive reallocation embodied in the Reclamation Project Act may be implemented through administrative reallocation without repealing a restrictive concept of appurtenancy.

151. *See* **W. Governors' Ass'n Water Efficiency Working Group, Water Efficiency: Opportunities for Action**, app. A (July 6, 1987).

152. For another analysis of the effect of the appurtenancy provision of Section 8 on transfers that comes to the same conclusion as this analysis, *see Roos-Collins, Voluntary Conveyance of the Right to Receive a Water Supply from the United States Bureau of Reclamation*, **13 Ecology L. Q. 4** (1987).

153. 43 U.S.C. § 372 (1988).

154. A portion of the water used in some reclamation states, notably California, Oregon and Washington, is allocated according to old riparian rights and the "reasonable use" standard that applies to these rights. However, the reasonable use standard does not appear to apply to significant quantities of project water.

155. Some concepts of beneficial use could impede project water transfers. For example, if conservation of project water is not a beneficial use of that water under state law and, instead, a contractor or grower would be deemed to have abandoned water that had been conserved, transfers of conserved project water would be discouraged. Some western states (notably California and Oregon) have clarified their laws to include conservation as a beneficial use of water. Others have not done so.

156. Transfers of CVP water have been impeded by confusion over whether California or federal law governs beneficial use. Confusion also exists regarding whether there is a federal definition of beneficial use attending water supplied from the Colorado River under the Boulder Canyon Project Act.

157. *U.S. v. Alpine Land & Res. Co.*, 697 F.2d 851, 854 (9th Cir. 1983).

158. *Id.* An important exception to the deference to state definitions of beneficial use under Section 8 probably exists in the case of water provided by the Bureau from the Colorado River under the Boulder Canyon Project Act. Distribution of water from the Colorado River is governed by the "Law of the River", which permits the Secretary of the Interior to condition use of river water notwithstanding provisions of state law to the contrary. But even here the Bureau might choose to use the appropriate state definition of beneficial use as a matter of comity.

159. 697 F.2d 851 (9th Cir. 1983); 887 F.2d 207 (9th Cir. 1989).

160. Reclamation Act of 1982, Pub. L. No. 97-293, title II, § 201, 96 Stat. 1263 (1982) (codified as amended at 43 U.S.C. § 390aa (1988)). [Hereinafter RRA].

161. Section 5 of the Reclamation Act, among other things, restricts the provision of project water for irrigation to tracts not exceeding 160 acres owned by any one landowner who must reside on or in the neighborhood of such land. Reclamation Act of 1902, Ch. 1093, § 5, 32 Stat. 389 (1902) (codified as amended at 43 U.S.C. § 392 (1988). The RRA deleted the residency requirement.

162. 43 U.S.C. 390ee (1982). For a complete explanation of the provisions of the RRA that may create disincentives to transfers see pp. 84-102 of "The transferability of water provided by the State Water Project and the Central Valley Project: A report to the San Joaquin Valley Drainage Program",

Brian E. Gray, Bruce C. Driver and Richard W. Wahl, July 26, 1990. The material in this section on the RRA is taken from those pages.

163. 43 U.S.C. 390cc (1988).

164. 43 U.S.C. § 390ee (1988).

165. Construction of Small Projects, Pub. L. No. 99-546, title III, § 302, 100 Stat. 3053 (1956) (codified as amended at 43 U.S.C. § 422(a) (1988)). Pub. L. No. 99-546 is special legislation that applies only the Central Valley Project. It requires the accrual of interest on contractor O&M deficits incurred after October 1, 1985. As a result, growers not already paying full O&M rates under the RRA are faced with the financial equivalent thereof for O&M deficits incurred since 1985. This fact materially reduces the disincentive to transfers of the "supplemental and additional benefits" proscription of the RRA, provided that the Bureau avoids imposing rates that exceed full O&M charges.

166. Rules And Regulations for Projects Governed by Federal Reclamation Law, 43 C.F.R. § 426, 426.5(a)(3)(ii) (1990).

167. This was the method used in the transfer between the Lindsay-Strathmore Irrigation District and the City of Lindsay.

168. In the Lindsay-Strathmore transfer, no profit was allowed. The Bureau did not consider the amendment to the irrigation contract to constitute a supplemental or additional benefit because, even though the district payments were changed, the district was receiving a reduced amount of water.

169. *Id.* § 426.5(a)(3)(ii)(F).

170. *Id.* § 426.18(b)(1)(B)(2).

171. *Id.* § 426.

172. There is a more detailed discussion of the need to clarify the repayment terms because this topic, unlike the legal issues, is not discussed elsewhere in the report. The legal issues are treated in detail in Chapter 2.

173. John Sayre, remarks at the Conference "Water Marketing 1990: Moving from Theory to Practice," at the University of Denver (Nov. 15, 1990). (This speech is reproduced in Appendix III to this report.

174. First, its preamble begins with references to the increasing frequency of water transfers, including "direct sales" and "lease" of water rights. These are terms commonly understood to involve profit or increased income. Although this language is applied to water transfer activity in general, the preamble goes on to place transactions involving Departmental water facilities within this overall transfer environment. In fact, Principle 5 states that "the fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction." This principle is restated in the press release accompanying the principles as "water transfers involving federally developed water will be treated no differently than any other proposed transfer."

This press release language and the language of Principle 5 suggests that transfers of Reclamation water can avail themselves of the same lease and sale institutions as privately developed water. Furthermore, Departmental staff involved in the drafting the principles indicate that Principle 5 was intended to specifically address the fact that just because federal

subsidies were used to develop the water, this fact should not remove the water from the category of water that is transferred, leased, or sold. Finally, the preamble indicates that the principles were designed to be responsive the Western Governor's Association request for a policy to facilitate transfers. One key feature of the WGA report was a recommendation that profit be allowed.

175. First, its preamble begins with references to the increasing frequency of water transfers, including "direct sales" and "lease" of water rights. These are terms commonly understood to involve profit or increased income. Although this language is applied to water transfer activity in general, the preamble goes on to place transactions involving Departmental water facilities within this overall transfer environment. In fact, Principle 5 states that "the fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction."

176. *Drought in California: Arousal of the Market?* Vol. 5 **Water Strategist** at 11 (April 1991).

177. **Wahl** at 185.

178. *Id.* at 183.

179. Presumably "the reduction in the amount to be repaid through power assistance" would imply an equal increase in the amount to be paid by M&I users for the transferred water.

180. The inservice date may vary for different units of a larger project (such as the Central Valley Project in California) or for blocks of water placed under contract at different time periods (such as in the Columbia Basin Project in Washington).

181. The repayment period for the project is not always established by contract. For example, the CVP contracts run for 40 years, but the repayment period extends much longer, until 2030. The CVP repayment period was established through a ratemaking policy adopted by the Secretary in 1988. The contracts will be renewed based upon rates calculated to achieve repayment of capital costs by that date.

182. In smaller projects, projects supplying only a few water districts, or projects not delivering M&I water, there are not likely to be well-established procedures for determining what rate should be charged for water converted from irrigation to municipal and industrial use.

183. In addition, there is one legislative situation that is somewhat analogous. The RRA of 1982 had the goal of removing federal subsidies from irrigation water delivered to land in a farm over 960 acres. The "full cost" formula in the act makes no assessment for past interest charges: it is based on the unpaid capital balance. Also, neither the interest or ability-to-pay subsidies apply to such land.

184. The charge in 1987 was higher even though the outstanding balance for irrigation repayment was lower than in 1972.

185. Memorandum from Acting Comm'r, Bureau of Reclamation, Washington, D.C., to Regional Director, Bureau of Reclamation, Salt Lake City, Utah (Nov. 13, 1989) (discussing resolution of interest charge issues on the basis of negotiation for repayment contracts for the San Juan Chama Project water supplies).

186. The irrigation contracts on these projects do not incorporate these formulas. Rather, in each contract a specific dollar amount is established for conversions from irrigation use to M&I use ($150 per acre-foot in the Dolores Project and $82.50 per acre-foot in the Dallas Creek Divide Project). However, the contracts indicate that these values are subject to adjustment by the Bureau at the time when the

actual conversion to M&I water takes place, and regional Bureau of Reclamation staff indicate that their current intention would be to apply the rollover calculation contained in the **Definite Plan Reports.**

187. If there is additional construction at some later date, then a separate increment would be added based on the same formula.

188. The charges under formulas S and D would be the same if there were no power assistance.

189. We realize, however, that the Bureau may want to draw a distinction between cases where irrigation water is contracted and under use (such as envisioned in formula D) and the cases where the water never was put to use in irrigation, such as in the San Juan Chama case. In the San Juan Chama reallocation, there may be a good rationale for charging M&I users for all of the interest costs, since no irrigators actually received benefits from the water.

190. Adoption of formula D would go some distance toward decreasing the anomaly.

191. The RRA indicates that prepayment of irrigation costs is not a method by which an irrigation district can avoid acreage limitation. Therefore, even if a prepayment agreement was worked out under which all of an irrigation district's charges were paid, the district would presumably still be subject to acreage limitation until the end of its original repayment period.

192. For additional discussion of public and private roles in acquisitions of water for instream flow, *see* Wahl, *Acquisition of Water to Maintain Instream Flows*, 1 **Rivers** 195 (1990).

193. **Assessment '87**, *supra* note 4, at 2.

194. The case studies in this report indicate that a number of transfers have utilized either the Miscellaneous Purposes Act (e.g. El Paso County Improvement District No. 1 to Lower Valley Water Authority) or the Reclamation Project Act of 1939 (Casper-Alcova Irrigation District to City of Casper Wyoming). Chapter 2 contains a more complete discussion of Reclamation law.

195. More complicated legal questions surrounding the applicability of each of these laws to different situations or the precise distinctions among these authorities might suitably be treated in a Solicitor's opinion.

196. These historical examples also point up the difficulty of defining "profit." Was it profit if water users in California were paid an amount exceeding their water cost, intended to reflect the agricultural and other income they gave up? Was it a profit to users in the Casper-Alcova District to have an outside entity pay for their canal lining? Would the fees paid to water lawyers and water brokers to implement a transaction in the Northern Colorado Water Conservancy District be considered profit, or expenses?

197. *Az: BuRec Signs Options for 22,000 af for the Salt River Pima - Maricopa Indian Settlement* 3, **Water Intelligence Monthly** 2 (March 1991).

198. The project lands will be acquired in a separate, but parallel transaction by Phoenix-area cities. These cities plan to eventually use the underlying groundwater to support urban growth.

199. The Bureau of Reclamation's position in this case was evidently based, in part, on the Bureau's interpretations of Colorado River Law and Nevada law. The results might have been different in other locations. For example, New Mexico law provides a forty-year period for proving up municipal and industrial water rights.

200. *Interior's Policy of Voluntary Water Transactions: The Two-Year Record*," 4 **Water Strategist** 1 (Jan. 1991).

201. This example illustrates the more general difficulty of separating out the price for the use of delivery facilities from the price for the underlying water entitlements.

202. More specifically, the Bureau used to require that the higher of the contract rate of the two districts be paid to the Bureau. However, in some cases this meant a revenue loss to the Bureau. This situation can arise because many contract rates currently fail to cover operation and maintenance costs. If the purchaser had the higher of the two contract rates, but that rate was farther below the actual cost of delivering water than in the selling district, then the transfer would result in a net loss of federal revenue. For that reason, in writing the regulations to implement the Reclamation Reform Act of 1982, the Bureau requires that a transfer not result in any additional revenue losses to the U.S.

203. As noted in the discussion of applicability of the Reclamation Reform Act of 1982 in Chapter 2 (and the case study in volume II on the Central Valley Project), some water transfers might require contract amendments. Many such amendments could be considered as providing supplemental or additional benefits and thereby requiring repayment of O&M costs on all contract water. Probably the principal type of amendment that might be required would be amendment of an irrigation-only contract in which the contractor wanted to transfer some of its water to a non-irrigation use. How many contracts would fall into this category was not investigated in this study. Even on these contracts, however, it might be possible for water transactions to be executed by implementing (1) a reduction in deliveries under the irrigation-only contract and (2) a new contract with the M&I entity. If the transfers were executed in this manner, it is not certain whether they would be considered to provide supplement or additional benefits. In effect, however, the requirement to increase repayment levels to cover operation and maintenance costs is already imposed, regardless of amendment, by P.L. 99-546. Therefore the disincentives for transfers requiring contract amendments in the RRA itself may be small. Because of the repayment problems on many CVP contracts, the Bureau would likely want to increase the repayment requirements whether a contract amendment was required or not.

204. For a more detailed discussion of these points, and the applicability of the RRA to water transfers in the Central Valley Project, *see* **Gray, Driver, and Wahl, The Transferability of Water Provided by the State Water Project and the Central Valley Project: A Report to the San Joaquin Valley Drainage Program** at 84-104 (1990).

205. However, this practice was by no means universal, as indicated by the administrative prohibition on profit within the Central Valley Project and the contractual restrictions on profit in the Central Arizona Project.

VOLUME I

APPENDIX I

DEPARTMENT OF THE INTERIOR

WATER TRANSFER PRINCIPLES

DEPARTMENT of the INTERIOR
news release

Office of the Secretary
For Release December 16, 1988 Contact: Mitch Snow (202) 343-4811

INTERIOR RELEASES POLICY ON WESTERN WATER MARKETING

The Department of the Interior will serve as a facilitator for water marketing proposals between willing buyers and sellers under a new policy released today by Assistant Secretary for Water and Science, James W. Ziglar.

"Although the Bureau of Reclamation will continue to have a role in building water projects with state and local partners, water transfers are an increasingly important means of meeting western water needs," Ziglar said in announcing the policy. "Transfers have the potential for improving the efficiency of already developed water projects, which is a major goal of the Bureau."

Ziglar noted that the Western Governor's Association, a recent management assessment of the Bureau of Reclamation, and many private parties involved in potential transfers of water have called for the development of such a policy. "The Department, through the Bureau of Reclamation and Bureau of Indian Affairs, operates one of the largest water supply systems in the world. Because an increasing number of proposed transfers would involve federal facilities under the control of the Department, we have developed a set of guidelines to promote consistency in dealing with such proposed transfers."

The Department's policy is based on seven basic principles:

- Primacy in water allocation and management decisions lies with the States.
- The Department will become involved only in water transfers which potentially affect federal projects or federally owned water rights.
- Departmental approval is contingent upon mitigating or avoiding adverse third-party effects.
- The Department will not suggest specific transactions unless such transactions would be involved in an Indian water rights settlement, solution of other water rights controversies, or could provide a dependable supply that otherwise would involve the expenditure of federal funds.

(more)

- Water transfers involving federally developed water will be treated no differently than any other proposed transfer.

- The Department will not burden proposed transactions with costs exceeding those actually incurred. Interior will ensure that the government is financially, operationally, and contractually in the same or better position once a transfer is made.

- The Department will consider necessary measures to mitigate any adverse environmental impacts that may be created by a proposed transfer.

"These principles provide the basic policy framework we need to deal with the increasing number of requests for assistance in facilitating water transfers. They also allow the flexibility we will need to consider the individual circumstances of each proposed transfer," Ziglar said.

The policy will go into effect immediately.

-DOI-

Note to editors: A complete copy of the Department of the Interior Principles Governing Voluntary Water Transactions is attached.

December 16, 1988

DEPARTMENT OF THE INTERIOR

PRINCIPLES GOVERNING VOLUNTARY WATER TRANSACTIONS THAT INVOLVE OR AFFECT FACILITIES OWNED OR OPERATED BY THE DEPARTMENT OF THE INTERIOR

PREAMBLE:

Transactions that involve water rights and supplies are occurring pursuant to State law with increasing frequency in the Nation, particularly in the Western United States. Such transactions include direct sale of water rights; lease of water rights; dry-year options on water rights; sale of land with associated water rights; and conservation investments with subsequent assignment of conserved water.

The Federal Government, as owner of a significant portion of the Nation's water storage and conveyance facilities, can assist State, Tribal, and local authorities in meeting local or regional water needs by improving or facilitating the improvement of management practices with respect to existing water supplies. Exchanges in type, location or priority of use that are accomplished according to State law can allow water to be used more efficiently to meet changing water demands, and also can protect and enhance the Federal investment in existing facilities. In addition, water exchanges can serve to improve many local and Indian reservation economies.

DOI's interest in voluntary water transactions proposed by others derives from an expectation that, to an increasing degree, DOI will be asked to approve, facilitate, or otherwise accommodate such transactions that involve or affect facilities owned or operated by its agencies. The DOI also wishes to be responsive to the July 7, 1987, resolution of the Western Governors' Association, which was reaffirmed at the Association's July 12, 1988, meeting, that the DOI "develop and issue a policy to facilitate water transfers which involve water and/or facilities provided by the Bureau of Reclamation."

The following principles are intended to afford maximum flexibility to State, Tribal, and local entities to arrive at mutually agreeable solutions to their water resource problems and demands. At the same time, these principles are intended to be clear as to the legal, contractual, and regulatory concerns that DOI must consider in its evaluation of proposed transactions.

For the purpose of this statement of principles, all proposed transactions must be between willing parties to the transaction and must be in accordance with applicable State and Federal law. Presentation of a proposal by one party, seeking Federal support or action against other parties, will not be considered in the absence of substantial support for the proposal among affected non-Federal parties.

December 16, 1988

VOLUNTARY WATER TRANSACTION PRINCIPLES

1. Primacy in water allocation and management decisions rests principally with the States. Voluntary water transactions under this policy must be in accordance with applicable State and Federal laws.

2. The Department of the Interior (DOI) will become involved in facilitating a proposed voluntary water transaction only when it can be accomplished without diminution of service to those parties otherwise being served by such Federal resources, and when:

   (a) there is an existing Federal contractual or other legal obligation associated with the water supply; or

   (b) there is an existing water right held by the Federal government that may be affected by the transaction; or

   (c) it is proposed to use Federally-owned storage or conveyance capacity to facilitate the transaction; or

   (d) the proposed transaction will affect Federal project operations; and

   (e) the appropriate State, Tribal, or other non-Federal political authorities or subdivisions request DOI's active involvement.

3. DOI will participate in or approve transactions when there are no adverse third-party consequences, or when such third-party consequences will be heard and adjudicated in appropriate State forums, or when such consequences will be mitigated to the satisfaction of the affected parties.

4. As a general rule, DOI's role will be to facilitate transactions that are in accordance with applicable State and Federal law and proposed by others. In doing so, DOI will consider the positions of the affected State, Tribal, and local authorities. DOI will not suggest a specific transaction except when it is part of an Indian water rights settlement, a solution to a water rights controversy, or when it may provide a dependable water supply the provision of which otherwise would involve the expenditure of Federal funds. Such a suggestion would not be carried out without the concurrence of all affected non-Federal parties.

5. The fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction.

6. One of DOI's objectives will be to ensure that the Federal government is in an acceptable financial, operational, and contractual position following accomplishment of a transaction under this policy. Unless required explicitly by existing law, contracts, or regulations, DOI will refrain from burdening the transaction with additional costs, fees or charges, except for those costs actually incurred by DOI in performance of its functions in a particular transaction.

7. DOI will consider, in cooperation with appropriate State, Tribal and local authorities, necessary measures that may be required to mitigate any adverse environmental effects that may arise as a result of the proposed transaction.

VOLUME I

APPENDIX II

BUREAU OF RECLAMATION

CRITERIA AND GUIDANCE

December 16, 1988

DEPARTMENT OF THE INTERIOR

PRINCIPLES GOVERNING VOLUNTARY WATER TRANSACTIONS
THAT INVOLVE OR AFFECT FACILITIES
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DOI's interest in voluntary water transactions proposed by others derives from an expectation that, to an increasing degree, DOI will be asked to approve, facilitate, or otherwise accommodate such transactions that involve or affect facilities owned or operated by its agencies. The DOI also wishes to be responsive to the July 7, 1987, resolution of the Western Governors' Association, which was reaffirmed at the Association's July 12, 1988, meeting, that the DOI "develop and issue a policy to facilitate water transfers which involve water and/or facilities provided by the Bureau of Reclamation."

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For the purpose of this statement of principles, all proposed transactions must be between willing parties to the transaction and must be in accordance with applicable State and Federal law. Presentation of a proposal by one party, seeking Federal support or action against other parties, will not be considered in the absence of substantial support for the proposal among affected non-Federal parties.

December 16, 1988

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   (a) there is an existing Federal contractual or other legal obligation associated with the water supply; or

   (b) there is an existing water right held by the Federal government that may be affected by the transaction; or

   (c) it is proposed to use Federally-owned storage or conveyance capacity to facilitate the transaction; or

   (d) the proposed transaction will affect Federal project operations; and

   (e) the appropriate State, Tribal, or other non-Federal political authorities or subdivisions request DOI's active involvement.

3. DOI will participate in or approve transactions when there are no adverse third-party consequences, or when such third-party consequences will be heard and adjudicated in appropriate State forums, or when such consequences will be mitigated to the satisfaction of the affected parties.

4. As a general rule, DOI's role will be to facilitate transactions that are in accordance with applicable State and Federal law and proposed by others. In doing so, DOI will consider the positions of the affected State, Tribal, and local authorities. DOI will not suggest a specific transaction except when it is part of an Indian water rights settlement, a solution to a water rights controversy, or when it may provide a dependable water supply the provision of which otherwise would involve the expenditure of Federal funds. Such a suggestion would not be carried out without the concurrence of all affected non-Federal parties.

5. The fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction.

6. One of DOI's objectives will be to ensure that the Federal government is in an acceptable financial, operational, and contractual position following accomplishment of a transaction under this policy. Unless required explicitly by existing law, contracts, or regulations, DOI will refrain from burdening the transaction with additional costs, fees or charges, except for those costs actually incurred by DOI in performance of its functions in a particular transaction.

7. DOI will consider, in cooperation with appropriate State, Tribal and local authorities, necessary measures that may be required to mitigate any adverse environmental effects that may arise as a result of the proposed transaction.

United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO:

D-5140

MAR 10 1989

Memorandum

To: Regional Director, PN, MP, LC, UC, GP
Attention: 100

From: Commissioner C. DALE DUVALL

Subject: Principles Governing Voluntary Water Transactions That Involve or Affect Facilities Owned or Operated by the Department of the Interior (Water Policy)

The subject principles were issued by Assistant Secretary Ziglar on December 16, 1988. A copy of the principles is enclosed.

Criteria and guidance for the principles are also enclosed for your use in evaluating specific proposals that may be presented to you for consideration. The principles and the accompanying criteria and guidance are being provided to ensure that Reclamation evaluate each individual proposal on its own merits.

These principles identify and promote a policy of resource management that is consistent with the Administration's theme of stewardship. Existing procedures and authorities for contract negotiation, renegotiation, evaluation of water rates, or other items addressed in the criteria and guidance are to be used in the evaluation and execution of the documents necessary to facilitate the proposed exchanges.

Enclosures

cc: Commissioner, Attention: W-1000 (7654-MIB) (w/encl),
W-5120 (7456-MIB) (w/encl)
Deputy Commissioner, Attention: D-1000
(w/encl)
Assistant Commissioner - Resources Management, Attention: D-5000
(w/encl)

VOLUNTARY WATER TRANSACTIONS

CRITERIA AND GUIDANCE

To assist in the implementation of the December 16, 1988, principles, the following criteria and guidance are provided. It is anticipated that each specific proposed voluntary water exchange will be unique, and that it should be evaluated on its own merits under the overall guidance of this policy statement.

Principle 1. Primacy in water allocation and management decisions rests principally with the States. Voluntary water transactions under this policy must be in accordance with applicable State and Federal laws.

Criterion: Does the proposed exchange comply with applicable State and Federal laws?

Guidance: Apparent conflicts with State laws or water rights will be reconciled with the appropriate State agency. State laws generally provide procedures for transferring water rights, and should be the primary mechanism for protecting the sellers/ lessors of water, as well as third parties.

Proposed transactions that involve a new use not specifically authorized as a Federal project purpose, or that propose a place of use not within the Federal project service area, may require authorizing legislation. The primary responsibility for such legislation will rest with those entities proposing the transaction.

Principle 2. The Department of the Interior (DOI) will become involved in facilitating a proposed voluntary water transaction only when it can be accomplished without diminution of service to those parties otherwise being served by such Federal resources, and when:

1. There is an existing Federal contractual or other legal obligation associated with the water supply; or
2. There is an existing water right held by the Federal Government that may be affected by the transaction; or
3. It is proposed to use federally-owned storage or conveyance capacity to facilitate the transaction; or
4. The proposed transaction will affect Federal project operations; and
5. The appropriate State, tribal, or other non-Federal political authorities or subdivisions request DOI's active involvement.

Criterion: Does the proposed action involve water that is encumbered by an existing Federal contractual obligation?

Guidance: If revision of existing water service or repayment contracts is required to facilitate an otherwise desirable water exchange

proposal, negotiations for those changes will be initiated expeditiously under the guidance of these principles and the appropriate legal authorities pertaining to the subject water.

Criterion: Does the proposed action potentially affect a Federal water right?

Guidance: In those instances where the United States' water rights may be be affected by a water transaction, DOI will work to facilitate the transfer so long as its rights or the rights of its contractors are protected or adequately compensated. In the evaluation of a proposed action, effects on existing water rights should be an initial consideration. If the proposed action would appear to involve lengthy and costly legal procedures in either the State or Federal courts, this information should be provided to the proposing parties. The policy does not provide for the avoidance of State and Federal laws and procedures in the establishment of water allocations and water rights.

Criterion: Does the proposed action propose the use of Federal storage/conveyance capacity?

Guidance: Federal facilities may be used to store/transfer both federally and nonfederally supplied water. The Warren Act provides the basis for storage/transfer of nonfederally supplied water for irrigation. Storage/transfer of nonfederally supplied water for municipal and industrial (M&I) purposes can be accomplished generally under the authority of section 9(c) of the Reclamation Project Act of 1939.

Except by mutual consent of affected parties, contracts for additional storage/conveyance will take into account existing Federal contracts, conveyance capacity and project obligations which must be honored as a first priority.

Approval to transfer water cannot obligate the Federal Government to incur extra nonreimbursed expense to store water or to convey it to a new location.

Approval to transfer water will not establish any right to future transfers beyond those expressly provided for in negotiated agreements.

Use of storage/conveyance will require a supporting contract to use federally built storage/conveyance systems.

Charges will be set to recover normally allocable storage, delivery, or extra costs incurred by the U. S.

If any additional pumping power is needed to effect a given transfer, the transfer entities must provide or pay for such power, and may have to secure it from non-Federal sources.

Proposals may involve the Corps of Engineers' facilities or projects. In these cases, consideration of their concerns will be included in the evaluation of the specific proposal.

Criterion: Does the proposed action affect existing Federal project operations?

Guidance: With a change in type, location, or priority of use, the potential for effects on the authorized purposes and project operations must be investigated. For example, such effects could result from changes in operation of a reservoir or delivery system, that might change minimum stream flow or power generation. If these potential effects are identified, avoidance of these consequences, or mitigation of such consequences to the satisfaction of the affected party, is necessary.

As stated in the guidance area 2.(b), DOI will work to facilitate the proposed transfer so long as its (water) rights or the (water) rights of its contractors are protected or adequately compensated; and in guidance area 2.(c), except by mutual consent of affected parties, contracts for additional storage/conveyance will take into account existing Federal contracts and project obligations.

Power interference charges or similar compensation measures will be the responsibility of those entities proposing the transaction.

In addition to the evaluation of effects on existing project operations, and authorized project beneficiaries, the following general issues must also be addressed:

1. Third party effects. See Principle 3.

2. Documentation for compliance with NEPA. See Principle 7.

3. Land Classification.

If the proposed action is a change in location of use for irrigation water, land classification is necessary to ensure that the land is capable of sustaining irrigation activities without damage to the land or water resource. Demonstration that sufficient payment capacity exists during the term of the transfer may also be required. The level of detail, amount of original work, and depth of analysis, will be determined on the merits of each situation.

4. Reclamation Reform Act of 1982.

If the existing contract must be changed to allow the proposed exchange, the discretionary provisions of the Reclamation Reform Act of 1982, must be considered. For futher guidance on supplemental or additional benefits and the amendments to existing contracts, refer to the

Solicitor's memorandum dated May 20, 1988, "Interpretation of Section 203(a) of the Reclamation Reform Act of 1982 and Sections 105 and 106 of Public Law 99-546." Additional guidance is contained in the Acreage Limitation Rules and Regulations on contracts, additional and supplemental benefits, and water transfers.

Criterion: Does the proposed action stem from a request by a State, tribe or non-Federal agency?

Guidance: DOI will continue its policy of providing technical assistance to State, tribal or local agencies. A positive and expeditious technical assistance/consultation program will continue within available budget resources.

The specific involvement of DOI necessary to accommodate the requested exchange will determine the type of Reclamation involvement. Existing procedures for approving new or amendatory contracts should be followed.

Principle 3. DOI will participate in or approve transactions when there are no adverse third-party consequences, or when such third-party consequences will be heard and adjudicated in appropriate State forums, or when such consequences will be mitigated to the satisfaction of the affected parties.

Criterion: Concerns for third party effects must be addressed from both the State and the Federal perspective. Any consideration of the "public trust doctrine" is left to the State.

Guidance: Concerns for authorized project functions and operations were addressed in Principle 2. This principle addresses the concerns for "third party" effects. Third parties are identified as those entities who may have some identifiable interest in the exchange, and would have a legal standing in an adjudication process in an appropriate State forum. The identification of these entities, the validity of their concerns, and the appropriate satisfaction of their concerns rests with the States and their adjudication process.

Principle 4. As a general rule, DOI's role will be to facilitate transactions that are in accordance with applicable State and Federal law and proposed by others. In doing so, DOI will consider the positions of the affected State, tribal, and local authorities. DOI will not suggest a specific transaction except when it is part of an Indian water rights settlement, a solution to a water rights controversy, or when it may provide a dependable water supply, the provision of which otherwise would involve the expenditure of Federal funds. Such a suggestion would not be carried out without the concurrence of all affected non-Federal parties.

Criterion: Does the proposed action displace the need for expenditure of Federal funds?

Guidance: Within Reclamation's resource management program, opportunities will be explored to achieve management objectives through the use of voluntary exchanges of water. The intent of this policy is to ensure that voluntary exchanges of water are considered as alternatives in water resource management within Reclamation's planning, operation, and other resource development programs. For example, a water exchange may be considered as an alternative to construction of a storage or delivery facility that otherwise would or could require Federal investment.

Criterion: Does the proposed action provide for an opportunity for the Indian tribe or community to benefit economically from the lease or transfer of water rights that may be secured under a settlement with the Federal Government or with non-Federal parties?

Guidance: It is a common situation that the water rights available to Indian tribes represent a significant portion of their resource base. It also is a common situation that the use of those water resources for agricultural purposes is marginally feasible, and that local water demands by non-Indians are such that the lease or transfer of the tribal water resources can be a mutually beneficial transaction.

DOI will facilitate transfers, in its capacity as a trustee, for an Indian tribe to the extent that it results in assisting local water users in resolving their water resource management problems within appropriate State law. The specific authorities involved will be determined on a case specific evaluation of the water rights, Federal and State laws, and the specific nature of the proposed transaction.

Principle 5. The fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during the evaluation of a proposed transaction.

Criterion: Is the water to be transferred, exchanged, leased, sold, etc. available by virtue of a Federal Reclamation project?

Guidance: If the Federal Government is not made worse off financially by the transaction, if the proposed transaction has been approved by the State and local authorities, and if the proposed transaction complies with Federal and State law; then it may be in the public interest to allow federally developed water to be employed. The fact that it was developed by virtue of a subsidized Federal project or program should not, in and of itself, be a barrier to the transaction.

On the other hand, DOI should seek the most appropriate source for water to be transferred, exchanged, leased, or sold without regard to presently available supplies from Federal projects.

Principle 6. One of DOI's objectives will be to ensure that the Federal Government is in an acceptable financial, operational, and contractual position following accomplishment of a transaction under this policy. Unless required explicitly by existing law, contracts, or regulations, DOI will refrain from burdening the transaction with additional costs, fees, or charges, except for those costs actually incurred by DOI in performance of its functions in a particular transaction.

Criterion: The financial terms negotiated between entities do not concern DOI.

Repayment subsidies associated with the original type of use of the water are not transferable to a different type of use of the water.

Exchanges cannot result in a reduction in the present worth of the outstanding obligations remaining to be repaid to the Federal Government.

If the proposed exchange would involve the execution of a contract with a "new" entity, that entity must have sufficient legal authority to enter into such a contract and be able to perform all functions required by the contract.

Any additional costs associated with the transfer shall be advanced or repaid in a manner negotiated by the entities involved.

Guidance: A distinction must be made between financial terms between the entities proposing the exchange and Federal repayment considerations associated with the water. Financial terms between the non-Federal entities are extraneous to the repayment considerations discussed herein.

1. The costs or subsidies associated with the original use are not transferable to a different use of the water.

2. A change in use from irrigation to municipal and industrial purpose would require a change in the repayment of costs to include interest during construction and interest on investment, but only to the extent of the remaining years in the payout period. It is not the intent of this water transfer policy to recover subsidies originally allocated to that block of transferred water during the time it served the irrigation purpose.

A short-term transfer should recognize the repayment of the appropriate cost, with the repayment interest rate, calculated for the year of the transfer, after which the irrigation rate would be reestablished.

A current repayment interest rate for the interest bearing obligations will be utilized, unless otherwise provided by law.

Any repayment of principal above the level that would have been repaid by the irrigators (i.e., the power assistance amount) should be reflected in a reduction in the amount to be repaid through power assistance.

3. An exchange involving change in location and contracting entities, but not a change in use (i.e., irrigation to irrigation) could involve the continuation of the repayment subsidies.

4. An exchange in which there would be a change in use from reimbursable function to a nonreimbursable function (e.g., irrigation to anadromous fishery) will require special negotiations. In lieu of special legislation, specific contractual obligations will be identified to ensure that repayment to the Federal Government after the exchange will be no less than the conditions that existed prior to the exchange.

5. To the maximum extent possible, financial or economic disincentives to the transfer or exchange are to be avoided. The additional costs to the water users, as discussed in these principles, (i.e., NEPA documentation, power interference charges, recalculation of water rates, or incremental pumping costs) are all required by existing law, contracts, or regulations. While these are costs to the water user, they are not the disincentives that are to be avoided.

The disincentives to be avoided can be characterized as charging a percentage of any "profit" that might be envisioned as the difference between appropriate costs, and the market value of the water.

Principle 7. DOI will consider, in cooperation with appropriate State, tribal and local authorities, necessary measures that may be required to mitigte any adverse environmental effects that may arise as a result of the proposed transaction.

Criterion: Is approval of the transaction subject to NEPA requirements?

Guidance: Documentation for compliance with NEPA could range from a categorical exclusion to an environmental impact statement. The type of documentation required will be a function of the specific action being proposed. Any Federal NEPA compliance costs associated with the transfer shall be advanced or repaid in a manner negotiated by DOI and the entities involved.

VOLUME I

APPENDIX III

SPEECH BY JOHN M. SAYRE,

ASSISTANT SECRETARY FOR WATER AND SCIENCE

NOVEMBER 15, 1990

Water Marketing 1990: Moving from Theory to Practice
Fifth Annual Conference
University of Denver
Denver, Colorado
November 15, 1990
Remarks by
Assistant Secretary John M. Sayre

- Thank you for the kind introduction and the invitation to speak. I'm always glad to be back home in Denver.

- In keeping with the theme of this conference, I want to talk to you today about the "theory" behind our water transfer policy at the Department of the Interior, as well as what we have done to implement it. In short, I will focus on four items:

1. The history of how we got to where we are today, and why;

2. An overview of the Interior Department's current water transfer policy;

3. Examples of water transfers involving the Department; and

4. What additional steps the Department might take in this area in the future.

- As you are aware, since 1902 the Bureau of Reclamation has played a significant role in settling and developing the arid Western States. The Bureau's role underwent internal reassessment and revision in 1987 - about which I will have more to say later.

- Today, Reclamation controls major storage and conveyance facilities in the Western States. Each year these facilities supply about 30 million acre-feet of irrigation water, 3 million acre-feet of water for municipal and industrial uses, and another million acre-feet for additional uses.

- The Bureau also operates 51 hydroelectric facilities which generate 48 billion kilowatts of electricity each year.

- Reclamation delivers irrigation water to about 10 million acres of farmland. Although this represents only about 20 percent of the irrigated acreage in the West, it may under-represent the potential importance of the Bureau of Reclamation in water transfers.

- This is because the Bureau controls major storage and conveyance facilities in several States, such as the Central Valley Project in California and the Central Arizona Project.

- Let me turn to a discussion of how our water transfer policy evolved.

- Work on the Department's policy formulation began informally in the mid-1980's. Given the growing interest in the West in water transfers, we started the groundwork for understanding these developments and responding to them. Concurrently, the Western Governors' Association was working on the same subject, and our two organizations eventually got together.

- In 1985, the Western Governors' Association established a Water Efficiency Task Force.

- This Task Force held a series of forums with water resources experts and practicing professionals. The result of this process was a report entitled, "Western Water: Tuning the System." In July 1986, the WGA adopted a resolution endorsing the report and its recommendations.

- Among the findings and recommendations of the report were the following:

1. "Water use efficiency may be enhanced either through water marketing or through government administration of reallocation. Marketing is the preferable choice of procedures because it is voluntary, is flexible, generates much of its own data and automatically communicates the value of alternative uses."

2. "Transfers of water, exchanges, and salvage and conservation of water can help meet western water needs cost-effectively and add new wealth to the region."

3. "The Bureau of Reclamation must make a transition from an agency whose workload has been constructing large water projects to an agency that assists the West to make better use of the waters the Bureau already provides. It can facilitate this transition by providing support for voluntary transfers of Bureau-provided water."

- These recommendations resulted in the establishment of a Water Efficiency Working Group in the fall of 1986 with representatives from the Governors' offices, the Interior Department, and the Western States Water Council.

- Their deliberations produced a second WGA report, entitled, "Water Efficiency: Opportunities for Action." It contains a detailed review of Federal Reclamation law regarding the transfer of federally supplied water. This report was adopted by the Governors at their annual meeting in July 1987.

- An important recommendation in this second WGA report was:

- "The Department of Interior should develop and issue a policy statement facilitating voluntary transfers, that is, those transfers which involve water and/or facilities provided by the Bureau of Reclamation."

- In December 1988, Interior responded. It issued a set of principles designed to guide Bureau of Reclamation review and approval of proposed transfers.

- The issuance of a policy statement was considered important because it clarified the transfer process.

- Two points of the policy are key. The first is that water transfers are an increasingly important means of meeting western water needs. Second, the Department of the Interior will serve as a facilitator for water marketing proposals between willing buyers and sellers.

• Keeping in mind these basic tenets, Interior set out seven principles in its 1988 water transfer policy. Let me go through them here.

1. Primacy in water allocation and management decisions lies with the States.

2. The Department will become involved only in water transfers which potentially affect Federal projects or federally-owned water rights.

3. Departmental approval is contingent upon mitigating or avoiding adverse third-party effects.

4. The Department will not suggest specific transactions unless such transactions would be involved in an Indian water rights settlement, solution of other water rights controversies, or could provide a dependable supply that otherwise would involve the expenditure of Federal funds.

5. Water transfers involving federally developed water will be treated no differently than any other proposed transfer.

6. The Department will not burden proposed transactions with costs exceeding those actually incurred. Interior will ensure that the government is financially, operationally, and contractually in the same or better position once a transfer is made.

7. The Department will consider necessary measures to mitigate any adverse environmental impacts that may be created by a proposed transfer.

• Let me pause at this point to make two clarifications - points about which we are sometimes asked at the Department regarding our water transfer policy. The first question is "Is the policy still in effect?"

• Yes it is. The basic Departmental principles were issued in 1988, and the Bureau of Reclamation's more detailed "criteria and guidance" to implement them followed in 1989. These transfer principles are consistent with the new water management mission set out in the Bureau of Reclamation's Assessment '87 report.

• A second question often asked about Interior's water transfer policy: "Does the policy allow profit to trading parties?"

• The answer is, yes, it does, provided the appropriate Federal costs are paid. Let me elaborate on this important point, because the December 1988 Principles addressed the profit question somewhat obliquely. Principle 6 states that:

"Unless required explicitly by existing law, contracts, or regulations, Interior will refrain from burdening the transaction with additional costs, fees or charges, except for those costs actually incurred by Interior in performance of its functions in a particular transaction."

- This principle indicates that the Department would not seek to "tax" the "profit" from a transaction. Principle 6 does not use the term "profit" directly, because, from a strictly legal perspective, most water districts are not profit-making entities.

- Therefore, the use of the word "profit," while being a popularly understood term, might not be technically defensible.

- The Bureau of Reclamation's "Criteria and Guidance" was issued in May 1989 to assist in the implementation of the December 16, 1988, policy. The guidance contains clearer statements regarding the profit question.

- It makes clear that the Bureau of Reclamation will allow profit between transferring parties, and will not impose any additional costs on the transfer beyond the following: (1) those already required by Reclamation law - such as the removal of the interest subsidy when water is transferred from irrigation to municipal and industrial use; and (2) any new costs incurred by implementing the transfer, such as additional pumping or conveyance costs incurred because the water is delivered to a new location.

- Let me turn to how Interior is implementing the policy. One step the Bureau of Reclamation took was developing and issuing the more detailed criteria and guidance I mentioned.

- These criteria and guidance are intended to provide field-level assistance to Bureau personnel involved in water transfer activity. I have brought a few copies of the guidance document, as well as the Department's principles, for those who may not have seen them, or copies can also be obtained by contacting the contracting personnel in any of our Bureau of Reclamation offices.

- Before continuing, let me address one other question. Has the water transfer policy made any difference? The answer is yes.

- Examples are water rentals from the Idaho water bank and Utah Power and Light acquisition of 6,000 acre-feet of water for cooling purposes.

- However, there is a reason why one would not expect to see December 1988 as a stark turning point in water transfer activity. It is only a beginning.

- Bureau of Reclamation practice in facilitating water transfers is probably best interpreted as evolutionary, rather than as having a distinct change in December of 1988.

- Furthermore, many water transfers take a long time to negotiate, so it may be some years before the full impact of the transfer policy can be observed.

- Let me turn in detail to some recent cases where the Department has implemented or facilitated transfers.

- Perhaps the most dramatic is the agreements reached between the Imperial Irrigation District and the Metropolitan Water District of Southern California.

- Imperial diverts about 3 million acre-feet annually of Colorado River water, which represents nearly 25 percent of the total diversions from the river.

- Both parties sought to involve the Department in rendering a legal opinion against the other. As many of you know, the issues had to do with the price that Imperial could charge, over and above the cost of conservation.

- Although the Department was in the process of examining the legal issues, it chose to facilitate the process.

- It did this by encouraging the parties to work out an agreement in the advance of any necessity of rendering an opinion which might have tied up the issue in court for several years.

- As you know, Metropolitan and Imperial reached an agreement under which Metropolitan will pay Imperial to fund conservation measures within the irrigation district that would salvage 100,000 acre-feet of water annually for diversion to Metropolitan's service area.

- Metropolitan will pay Imperial $92 million for construction of the conservation facilities, $3.1 million annually for operation and maintenance, and $23 million in five annual installments for indirect costs.

- The same two entities reached a separate agreement under which Metropolitan can fund lining of the earthen All-American Canal in exchange for the conserved water. Both State and Federal studies indicate that there is potential for at least another 100,000 acre-feet of conservation within Imperial -- which may provide the basis for future agreements between the two entities.

- I mentioned that transfers of project water can take several forms. The Imperial-Metropolitan transfer could be described as a renewable, long-term lease under which the water rights themselves stay with Imperial and the same amount of land stays in production.

- The Casper-Alcova to Casper transfer is similar in concept--conservation measures are utilized and the same amount of land will stay in production, but in the Casper-Alcova case, the underlying water rights are to change hands permanently.

- In some cases, the Department is an actual participant in the market for water rights, particularly in Indian water rights settlements. This activity in the market is consistent with the December 1988 principles.

- The Salt River Pima Maricopa Indian Water Rights Settlement Act of 1988 authorized the Secretary to acquire 22,000 acre-feet of water from pre-CAP Colorado River contractors.

- The Wellton-Mohawk Irrigation District in Arizona agreed to provide the Federal Government this quantity of water. The water is to be obtained by the purchase of 2,000 acres of land and certain other measures, such as a reduction in deliveries to other portions of the district and reduced application rates.

- One of the principal attractions of the transaction to the district is that the legislation provided them with an exemption from acreage limitation.

- This transfer represents a permanent reassignment of water deliveries under contract from the Department.

- Another proposed transfer in Arizona, also associated with an Indian water settlement, is the purchase of water deliveries by the United States from the Harquahala Irrigation District, southwest of Phoenix, Arizona. This transfer is unique because a large percentage of the district - more than 25,000 acres of the 33,000 acres - will eventually be retired from production.

- The U.S. would pay a negotiated price for reacquiring the Central Arizona Project water deliveries. The water would be permanently reassigned to Indian uses for settling the water claims of the Ft. McDowell tribe or other tribes in the Phoenix area.

- Another interesting aspect of this transfer is that the project lands will be acquired in a separate, but parallel transaction by Phoenix-area cities, who desire to eventually use the underlying groundwater to support urban growth.

- I hope these examples illustrate that the Department is actively involved in voluntary water marketing in many areas of the West, and that there are a variety of forms that water transfers can take. There are leases vs. permanent sales; transfers where the underlying water rights change hands and ones where the original owner retains control of the water rights; ones where lands are retired from production and ones where only the salvaged water is transferred; and ones in which the Department is merely a facilitator, and also transfers in which the Department is an active participant in the market.

- It would also be informative, I think, to describe cases in which proposed transfers were either substantially modified or disallowed by the Bureau.

- A proposed transfer in southern Nevada between Basic Management, Incorporated, and the city of Henderson is a good example.

- In 1942, the Defense Plant Corporation, a federally chartered organization for the purpose of building and expanding facilities to produce war materials, constructed facilities near Henderson, Nevada.

- Henderson lies about 13 miles southeast of Las Vegas. The facilities draw water from Lake Mead on the Colorado River.

- After World War II, the plant was sold into private ownership and Basic Management acquired the water rights in the amounts of about 33,000 acre-feet for milling and metallurgical use and 9,000 acre-feet for municipal use in Henderson.

- This additional water was to come from BMI's unused industrial entitlement. BMI's maximum industrial use occurred in 1969 and was only 18,000 acre-feet out of its 33,000 acre-feet entitlement. Over the past 11 years, the average annual use for industrial purposes has been only 7,500 acre-feet.

- The Bureau disallowed the contract for additional water with Henderson, as well as the authority to purvey additional unused water to other entities, in southern Nevada. The Bureau did not believe that allowing an entity to sell water never put to use was consistent with the goals of the Department's principles.

- Reclamation believed that Basic Management had ample time since its 1969 contract to place its full entitlement to beneficial use.

- However, the Bureau did allow a reassignment of water to Henderson to take place. This was accomplished by reducing the contractual entitlement of BMI; executing an "assignment and transfer of entitlement to delivery" from BMI to Henderson; and executing a new Bureau contract with Henderson.

- In effectuating the assignment, BMI permanently relinquished any control over the assigned water, as they had sought under their original proposal.

- There is a point I wish to underscore. Differing State water laws make it absolutely necessary for the Federal role in water transfers to be that of facilitator. There is really no place for a sweeping Federal edict in water marketing, since water rights and transfers are mostly matters of State law and procedure.

- An additional case in which a proposed transfer was disallowed is illustrative because it has been misunderstood by some in the water community.

- This involved the proposed temporary transfer during the 1989 drought from reservoirs in the Kendrick Project, operated for the Casper-Alcova Irrigation District in Wyoming, to the Goshen Irrigation District, a contractor under the North Platte Project.

- As is normal when we deliver water, the Department sought to require that a contract be written with Goshen for the transfer. Goshen resisted and the case went to court.

- In this case, the Casper-Alcova Irrigation District's claim to the water to be provided to Goshen was even more tenuous than in the BMI/Henderson case. In this case, the storage water to be transferred was not even under contract to the Casper-Alcova Irrigation District. Hence, the District held no transferrable interest.

- Other districts along the North Platte River that were offered the same temporary transfer arrangement did sign contracts.

- So we do not say "yes" to every transfer proposed. Sometimes we can't "facilitate." Finally, here is what I see the future holding for the Department's water transfer activities.

- Interior is a willing participant in the West's emerging water transfer activities. We will remain flexible and considerate of the unique situation of every transfer. The success of water transfers depends on multiple factors: the individual district, State water law, and the specific details of every transaction.

- Issues will arise in the case of particular water transfers that will need to be resolved - such as in the BMI/Henderson transfer. Furthermore, one of our major projects, the Central Valley Project in California, is still grappling with procedures for implementing the 1988 principles and the 1989 Bureau of Reclamation guidance.

- The Mid-Pacific region issued a draft set of implementation procedures for informal public comment last spring.

- However, the water districts had made most of their planting and allocation decisions for the year, and asked that procedures be reconsidered this fall and winter. The Bureau of Reclamation is currently in the process of adhering to this request.

- In the Central Valley, a large number of irrigation districts in the same project and a number of contracts are not up to current repayment standards. The Interior Department wants to ensure that, during any transfer activity, the water deliveries of other districts are protected, and that an equitable formula if found to increase repayment from districts desiring to transfer water at a profit.

- An important point is that we are moving ahead with the new management directions set forth in the Bureau of Reclamation's Assessment '87 report. These new directions may have bearing on water transfers.

- In particular, there have been some discussions within the Bureau of taking a more active role in voluntary water conservation efforts.

- Also, there may be some role for devoting some federally- conserved water to public uses, such as fish and wildlife and recreation.

- We welcome your comments to the appropriate Bureau and Departmental officials on our activities as we seek to fulfill our new role for the Bureau. We hope to assist the West in meeting its future challenges, particularly in the area of water marketing.

- Thank you for your attention.

ENDNOTES

1. **Bureau of Reclamation, U.S. Dept. of the Interior, Summary Statistics** 1-2 (1988) [hereinafter **1988 Statistics**]. Of the 609 dams, 355 are classified as storage facilities and 251 as diversion facilities. An additional nearly $6 billion has been invested in facilities that are considered still under construction. *Id.* at 17 (Table 1).

2. *Id.* at 17 (Table 1).

3. *Id.* at 1.

4. **Bureau of Reclamation, Assessment '87 . . . A New Direction for the Bureau of Reclamation** (1987). Additional discussion is contained in a companion report, **Bureau of Reclamation, Implementation Plan . . . A New Direction for the Bureau of Reclamation** (1987).

5. About 10 million acres of land are irrigated with this water, approximately 22 percent of the irrigated acreage in the 17 western states. **1988 Statistics**, *supra* note 1, at 2; **Economic Research Serv., U.S. Dept. of Agriculture, Agriculture Information Bulletin No. 532, Agricultural Irrigation Water Supply**, October 1987. In some cases the water supply from Bureau facilities provides only a "supplemental" water supply. *See* **R. Wahl, Markets for Federal Water** 24 (Table 1-3) (1989).

6. Prominent among these studies are the books by **Richard Wahl, Markets for Federal Water** (1989) [hereinafter **Wahl**] and by **Mark Reisner and Sarah Bates, Overtapped Oasis** (1990) [hereinafter **Reisner and Bates**], the article by Roos-Collins, *Voluntary Conveyance of the Right to Receive a Water Supply from the United States Bureau of Reclamation*, 13 ECOLOGY L. Q. 773 (1987) [hereinafter Roos-Collins], and the report by the **W. Governors' Ass'n, Water Efficiency: Opportunities for Action** (1987) [hereinafter **WGA Report**].

7. *See, e.g.* **C. Meyers & R. Posner, Market Transfers of Water Rights** (National Water Comm'n Publication No. 202 620, 1971). **Wahl**, *supra* note 6, at 143-144, 147-93; Driver, *The Effect of Reclamation Law on Voluntary Water Transfers*, 33 **Rocky Mt. Min. L. Inst.** 26-1 (1987).

8. Since Bureau facilities store up to 134 million acre-feet of water annually, their uses related to the second and third categories appear to be considerable. A different set of issues relate to changing the water use functions of these facilities. Because the water involved is not presently being used for consumptive purposes this water may be especially well suited to help mitigate the effects of the storage facilities on instream flow values. We believe the Department of the Interior should undertake a broad environmental review of the effects of Bureau of Reclamation facilities before committing the category two function to new uses or the category three functions to different uses.

9. We encountered much confusion regarding the interpretation of "transfers" in this project. In this report we use "transfers" for transactions involving voluntarily made changes in existing water uses. We distinguish "transfers" which are initiated by the present users or potential purchasers of the water from "reallocations" which, by our definition, are administratively or judicially initiated.

In the Bureau of Reclamation context, an example of a reallocation was the decision by the Secretary of the Interior to dedicate the full use of Stampede Reservoir in the Washoe Project to protection of the endangered cui-ui fish in Pyramid Lake. Carson-Truckee Water Conservancy Dist. v. Watt, 549 F. Supp. 704 (D. Nev. 1982), *aff'd in part and vacated in part sub nom.* Carson-Truckee Water Conservancy Dist. v. Clark, 741 F.2d 257 (9th Cir. 1984), *cert. denied sub nom.* Nevada v. Hodel, 470 U.S. 1083, 105 S. Ct. 1842 (1985). As originally planned and built, this project was to provide

municipal and industrial water. Since water from this project never was actually supplied for these purposes, the reallocation did not effect existing uses -- only anticipated uses. The attempt by the U.S. to reallocate water that it had been providing from the Yakima Project to an irrigation district was struck down by the U.S. Supreme Court in Ickes v. Fox, 300 U.S. 82 (1937).

10. Reclamation Act of 1902, § 8 (Current version at 43 U.S.C. § 372, 383 (1988).

11. 438 U.S. 645 (1978).

12. The exception to this general conclusion is the Lower Colorado River where federal law directly governs the allocation of water from federal reclamation projects. Consequently, transfers of water entitlements for these projects also are governed by federal rules. The Bureau of Reclamation is in the process of promulgating regulations for administering water entitlements in the Lower Colorado River Basin which include provisions regarding transfers.

13. Hereinafter cited as *DOI Principles* or *Principles*. These *Principles* are reproduced in Appendix 1 of this volume.

14. The *Criteria and Guidance* are reproduced in Appendix 2 of this report.

15. The case studies did not attempt to investigate transfer activity in the Pecos River basin.

16. 43 U.S.C. §§ 411, 419, 461 (1988). Under the 1939 Act, the proposed project must be found by the Secretary to "have engineering feasibility" and the reimbursable and nonreimbursable benefits must equal the total estimated costs of construction. 43 U.S.C. § 485h (a) (1988). The 1924 Fact Finders' Act required the Secretary to examine "the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States." 43 U.S.C. § 412 (1988). Under the 1902 Act the Secretary could directly authorize projects. Subsequently, presidential approval was required. Increasingly, Congress itself got involved in authorizing specific projects. The 1939 Act required congressional approval of any project whose "allocations" (meaning expected payments from irrigation, power, or municipal users plus benefits from flood control or navigation) do not equal total estimated costs. 43 U.S.C. § 485h (a) (1988).

17. This provision -- perhaps the most contentious aspect of Reclamation law -- has been modified. *See* 43 U.S.C. § 423(e) (1988).

18. 43 U.S.C. § 498 (1988). Congress may subsequently dispose of the works.

19. 43 U.S.C. § 383 (1988). A proviso requires that any such state-based water rights must be "appurtenant" to the land irrigated and that "beneficial use" is to be "the basis , the measure, and the limit of the right." 43 U.S.C. § 372 (1988).

20. 43 U.S.C. § 373 (1988).

21. 43 U.S.C. § 475 (1988).

22. 43 U.S.C. § 423d (1988).

23. 43 U.S.C. § 485h (d)(1) (1988).

24. 43 U.S.C. § 462 (1988). The Secretary was to determine the "productive value" of irrigable lands and establish different construction charges based on different classes of lands.

25. 43 U.S.C. § 485h (d)(2) (1988). The repayment organization was authorized to "vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction: . . . . "

26. 43 U.S.C. § 567 (1988). The town must have a water right from the same water source as the project.

27. 43 U.S.C. § 521 (1988). Contracts issued under this authority must be approved by the irrigation water supply entity receiving water from the project. There must be a showing that there is no other practicable source of water supply available. And there must be a finding that the delivery of this water will not be detrimental to the water service for irrigation or to the rights of any prior appropriator.

28. 43 U.S.C. § 617 (1988). 43 U.S.C. § 617e states that Hoover Dam is to be used first for river regulation, navigation, and flood control; second, for irrigation and domestic uses of water and satisfaction of uses provided for by the 1922 Colorado River Compact; and third, for hydropower.

29. 43 U.S.C. § 485h (a) (1988).

30. 16 U.S.C. § 662 (b) (1988).

31. 16 U.S.C. § 460*l*-12 (1988).

32. 43 U.S.C. § 511 (1988).

33. 43 U.S.C. §423d (1988).

34. 43 U.S.C. § 423e (1988).

35. Solicitor's Memorandum Opinion, M-28771 (October 10, 1936), "In Re the Public Irrigation District for the Pine River Project, Colorado," cited in 1 **U.S. Dep't of Interior, Federal Reclamation and Related Laws Annotated**, at 379 (1972).

36. 43 U.S.C. § 485h (d) (1988).

37. 43 U.S.C. § 485h (e) (1988).

38. 43 U.S.C. § 485h (d)-(e) (1988).

39. **A. Golzé, Reclamation in the United States** 247 (1961) [hereinafter Golzé].

40. 43 U.S.C. § 485h(c) (1988).

41. 43 U.S.C. § 523 (1988).

42. 43 U.S.C. § 524 (1988).

43. Memorandum from Associate Solicitor, Division of Energy and Resources, to Commissioner, Bureau of Reclamation, "Application of the Reclamation Reform Act of 1982 to Contracts Executed Pursuant to the Warren Act of 1911" (Aug. 28, 1985). More than 400 contracts have been issued under the

apparent authority of the Warren Act. According to this memorandum, many of these contracts should not have been based on the Warren Act and some are probably outside the authority of reclamation law.

44. **Wahl,** *supra* note 6, at 156.

45. Richard Wahl reviewed a sampling of 34 contracts and identified similarities and differences found in a number of provisions. *Id.* at 156-73.

46. Ex post analysis has shown that, in most cases, the increase in land value has fallen short of project costs. *See* **Wahl,** pp. 30 and 41.

47. 1866 Mining Act, 43 U.S.C. § 661 (1988); Desert Land Acts, 43 U.S.C. § 321 (1988).

48. 43 U.S.C. § 383 (1988).

49. 438 U.S. 645 (1978).

50. 300 U.S. 82 (1937).

51. *Id.* at 90.

52. *Id.* at 95.

53. *Id.* at 94-95.

54. 296 F. 536, 545 (D.N.M. 1923), *aff'd* 5 F.2d 908 (8th Cir. 1925).

55. *Id.* at 545.

56. *See* **R. Dunbar, Forging New Rights in Western Water** 23-38 (1983).

57. As Arthur Maass points out, land developers often sought to get out of the water supply business as quickly as possible. In California, these private water companies commonly evolved into irrigation districts. Maass, *Water Law and Institutions in the Western United States: Comparison with Early Developments in California and Australia, Contemporary Developments in Australia, And Recent Legislation Worldwide*, **Western Water Policy Project Discussion Paper Series, Paper No. 7** at 8-9 (Natural Resources Law Center 1990).

58. 10 Colo. 582, 588, 17 P. 487, 490 (1887).

59. 38 Colo. 420, 431, 88 P. 396, 399-400 (1907).

60. Pioneer Irr. Co. v. Board of Comm'rs of Yuma County, Colo., 236 F. 790, 792 (D. Colo. 1916), *aff'd* 251 F. 264 (8th Cir. 1918).

61. *See* City and County of Denver v. Brown, 56 Colo. 216, 138 P. 44 (1913): "A consumer supplied with water by contract from a ditch owned and operated by a carrier company in a sense is an appropriator from the stream supplying the ditch, but does not occupy the exact status of an independent appropriator directly from the stream, as his rights are limited by the terms of his contract, so far as valid, with the ditch company, as well as other limitations which the law, from the nature of

the relation between the carrier company and a contract consumer from its ditch company, inspires." *Id.*, 138 P. at 47 (citations omitted).

62. Wright v. Platte Valley Irr. Co., 27 Colo. 322, 61 P. 603 (1900).

63. *Id.*, 61 P. at 606.

64. City and County of Denver v. Brown, 138 P. at 47: "On the expiration of his contract, he may be entitled to have it renewed, unless inhibited by a valid provision therein; but, if a legal demand for that purpose is not made, he is in the same position as though he had never taken water from the ditch."

65. *Id.*

66. 37 Nev. 154, 140 P. 720 (1914).

67. *Id.*, 140 P. at 723 quoting from Slosser v. Salt River Valley Canal Co., 7 Ariz. 376, 65 P. 332 (1901): "A corporation thus organized for the purpose of furnishing water for agricultural purposes, to be used by others in priority of contract with it, becomes the mere agent of the latter, and, under the statute, may divert from a public stream water which the latter may acquire and use for purposes of irrigation."

68. *Slosser*, 65 P. at 338: "We hold that the ownership and possession of arable and irrigable land are essential, under the statutes, for the acquisition of the right of appropriation of water from a public stream for purposes of irrigation."

69. Wilterding v. Green, 4 Idaho 773, 45 P. 134, 135 (1896).

70. Hard v. Boise City Irr. Co., 9 Idaho 589, 76 P. 331 (1904).

71. Farmers Co-Operative Ditch Co. v. Riverside Irr. Co. 14 Idaho 450, 94 P. 761, 763 (1908).

72. *Id.*

73. In *Nebraska v. Wyoming*, 324 U.S. 589 (1945) -- an interstate apportionment action involving the North Platte River -- the Court simply affirmed that deliveries of water from federal reclamation facilities for which the U.S. held the state-granted water storage right was based on state water rights held by the water users.

74. 463 U.S. 110 (1983).

75. *Id.* at 126.

76. 43 U.S.C. § 521 (1988).

77. 43 U.S.C. § 567 (1988).

78. 43 U.S.C. § 485h(c) (1988). Interestingly, in each case the language speaks in terms of providing water (or water rights) for these different purposes rather than allowing the use of reclamation facilities for these purposes. The argument here is that this reference was simply a shorthand statement and was not intended to create a water-supply function different from that established under the 1902 Act.

79. 43 U.S.C. § 521 (1988).

80. 43 U.S.C. § 567 (1988).

81. 43 U.S.C. § 485h(c) (1988).

82. The Warren Act has been described above in Chapter 2, Section 1. It is codified at 43 U.S.C. §§ 523-524 (1988). The Water Supply Act of 1958 is codified at 43 U.S.C. § 390(b) (1988).

83. 43 U.S.C. § 390b(d) (1988).

84. *See* "Facilitating Voluntary Transfers of Bureau of Reclamation-Supplied Water Vol. II," (Natural Resources Law Center 1991) [hereinafter Bureau of Reclamation, Vol. II], "New Mexico Case Studies."

85. *See Id.* "Emery County Project, Utah."

86. *See Id.*, "Kendrick Project, Wyoming."

87. *See Id.*, "Newlands Project, Nevada."

88. *See Id.*,"Strawberry Valley Project, Utah."

89. *See Id.*, "Provo River Project, Utah."

90. **Wahl**, *supra* note 6, at 42.

91. Examples include the contract for the Central Arizona Project (*see* **Bureau of Reclamation Vol. II**, *supra* note 80, "Arizona Case Studies") and the contract for the Dolores Project in Colorado. These and other examples are discussed in some detail below in Chapter 3.

92. *See id.* "Emery County Project, Utah."

93. According to the contract, this charge is to help repay the capital costs of the Kendrick Project allocated to its irrigation function. The contract states that the service charge "is based on amortizing the pro rata share of the allocated cost of the Kendrick Project to irrigation over a 32 year repayment period with interest at 9.352 percent." Water Service Contract Among the United States, The Casper-Alcova Irrigation District, and the City of Casper, Wyoming, § 9b (April 15, 1982).

94. Pub. L. No. 101-618, § 206(a)(3)(A), 104 Stat. 3294, 3308-09.

95. At the time the original contract for repayment was established (1936), the inclusion of interest charges for municipal water was not yet part of reclamation law. This distinction in treatment between repayment charges for irrigators and for municipal users was included in the Reclamation Project Act of 1939. *See* 43 U.S.C. § 485h (c)-(d) (1988).

96. Ch. 1093, 32 Stat. 390 (1902) (Codified at 43 U.S.C. §§ 372, 383 (1988)).

97. 438 U.S. 645 (1978).

98. *Id.* at 665-667.

99. According to Wahl, the U.S. holds the storage rights to about 84% of the water in reclamation projects in the West. **Wahl**, *supra* note 6, Table 6-2 at 174. Only in Oregon, Oklahoma, Colorado, Texas, and Kansas is the percentage of storage rights held by the U.S. less than 50%.

100. 300 U.S. 82 (1937).

101. Trelease, *Reclamation Water Rights*, 32 **Rocky Mt. L. Rev.** 464, 476 (1960) [hereinafter Trelease].

102. Trelease argues that this view should not necessarily be extended to Warren Act contracts or to Section 9(e) contracts under the 1939 Reclamation Project Act. *Id.* at 478-81.

103. *See* MacDonnell, *Transferring Water Uses in the West*, 43 **Okla. L. Rev.** 119 (1990).

104. United States v. Alpine Land and Res. Co., 503 F. Supp. 877 (D. Nev. 1980) ("Alpine I") *aff'd as modified* in U.S. v. Alpine Land and Res. Co., 697 F. 2d 851 (9th Cir. 1983).

105. Alpine I, 503 F. Supp. at 884.

106. *Id.* at 892-93.

107. Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F. Supp. 252, 265 (D.D.C. Supplemental Opinion 360 F. Supp 669 (1973)).

108. U.S. v. Alpine Land & Res. Co., 878 F. 2d 1217, 1223-24 (9th Cir. 1989).

109. U.S. v. Alpine Land and Res. Co., 697 F. 2d 851, 858 (9th Cir. 1983). Direct review of the State Engineer's decision by a federal court is, of course, not the usual procedure. It applies here because of the decree of the district court which allows for appeal of change applications to the federal district court for the District of Nevada. This provision is not contested by any appellee. *Id.*

110. As mentioned in the preceding section, the transfer may be limited by contract provisions restricting the type of use, place of use, and repayment obligations.

111. Provo River Project Proof of Appropriation for Water Rights Application No. 12230, at 39 (filed June 25, 1936).

112. Originally, BMI held certificates of appropriation from the state of Nevada to divert 45 cubic feet per second (cfs) of water out of Lake Mead for industrial purposes and 12 cfs for municipal use. Under Section 5 of the Boulder Canyon Project Act, ch. 42, 45 Stat. 1060 (1928) Congress transformed this appropriation into a service contract for up to 41,266 acre-feet of water.

113. Boulder Canyon Project, Contract to Amend Contract No. 14-06-300-2083, Contract for Delivery of Water to Basic Management, Inc., Section 3(c) (May 22, 1990).

114. Boulder Canyon Project, Assignment and Transfer of Entitlement to Delivery of Colorado River Water from Basic Management, Inc., to the City of Henderson, Nevada (May 22, 1990).

115. Boulder Canyon Project, Contract with the City of Henderson, Nevada, for Delivery of Colorado River Water (May 22, 1990).

116. Water Delivery Contract Between the City of Henderson and Basic Management, Inc. (May 22, 1990).

117. *See* **Bureau of Reclamation Vol. II**, *supra* note 80, "CAID case study."

118. 325 U.S. 589 (1945).

119. Gray, *Water Transfers in California*, 1981-1989, in **The Water Transfer Process**, Vol. II, Ch. 2 at 23-24 (Natural Resources Law Center 1990). An average of about 375,000 acre-feet of water per year moved among users in the CVP on this basis. *Id.*

120. This involved the Lindsay-Strathmore Irrigation District and the city of Lindsay.

121. In 1956, Congress directed the Secretary of the Interior to include in 9(e) contracts a provision for renewal "under stated terms and conditions mutually agreeable to the parties." 43 U.S.C. § 485h-l(1). The 1956 law also authorized the Secretary to provide for conversion of 9(e) contracts to 9(d) contracts if he determines that the remaining reimbursable construction costs can probably be repaid within the contract term. 43 U.S.C. § 485h-l(2) (1988).

122. 357 U.S. 275 (1958).

123. *See, e.g.*, Trelease, *supra* note 97, at 479-81(Section 9(e) contracts may be "utility" supply arrangements under which the irrigator does not get a water right).

124. *See* discussion in Fresno Canal & Irr. Co. v. Park, 129 Cal. 437, 62 P. 87 (1900).

125. Hildreth v. Montecito Creek Water Co., 139 Cal. 22, 72 P. 395, 398 (1903).

126. Leavitt v. Lassen Irr. Co., 157 Cal. 82, 106 P. 404 (1909).

127. 75 Cal. App. 57, 242 P. 494 (1925)

128. *Id.*, 242 P. at 499.

129. **J. Castleberry, R. Davis, R. Hornsberger & R. Swenson, Waters and Water Rights** § 343.1 (R. Clark ed. 1970) (citation omitted) [hereinafter **Clark**].

130. Willis v. Neches Canal Co., 16 S.W. 2d 266, 269 (Tex. Comm. App. 1929).

131. **Clark**, *supra* note 131, at 408 n. 73.

132. In *Ivanhoe Irr. Dist. v. McCracken*, 357 U.S. 275 (1958), the U.S. Supreme Court upheld the validity of 9(e) contracts and noted that Congress, in 1956, had provided for the indefinite extension of such contracts thereby providing a potentially permanent commitment of water service.

133. 43 U.S.C. § 485h-l(2) (1988).

134. 43 U.S.C. § 372 (1988).

135. *See* 4 **G. Sands, Sutherland, Statutory Construction**, (4th edition, 1984).

136. **H.R. No. 1468**, 57th Cong., 1st Sess. 7 (1902).

137. **35 Cong. Rec. 6679** (daily ed. June 2, 1902) (statement of Rep. Mondell).

138. Chrysler v. Brown, 441 U.S. 281, 311 (1979). However, notwithstanding this general rule, the Circuit Court's opinion in United States v. Alpine Land & Reservoir Co. cites Mr. Mondell's remarks with favor:

> As described by Rep, Mondell, a water right under the Reclamation Act "only extends to the use of water on and for the tract originally irrigated"; there is no general "property right in water with power to sell and dispose of the same elsewhere and for other purposes than originally intended."

35 Cong. Rec. 6679 (1902). 697 F.2d 851, 858 (9th Cir. 1983), *cert. denied sub nom.* Pyramid Lake Paiute Tribe of Indians v. Truckee Carson Irr. Dist., 464 U.S. 863 (1983), *later proceeding*, 878 F.2d 1217 (9th Cir. 1989), *later proceeding* 887 F.2d 207 (9th Cir. 1989), *cert. denied sub nom.* Truckee-Carson Irr. Dist. v. United States, 111 S. Ct. 60 (1990). [hereinafter Alpine II].

139. **35 Cong. Rec.**, 6677 (daily ed. June 3, 1902) (Statement of Rep. Mondell).

140. **Q. C. Kinney, A Treatise on the Law of Irrigation and Water Rights and the Arid Region Doctrine of Appropriation of Waters** (2nd ed. 1912).

141. *Id.*, § 1005 at 1786.

142. *Id.*, § 1006 at 1789.

143. *Id.*, § 1005 at 1786.

144. *Id.*

145. The U.S. Supreme Court has held that when a statute is silent or ambiguous on an issue, an interpretation by they agency charged with its administration is entitled to great deference. Chevron U.S.A. v. Natural Resources Defense Council Inc., 467 U.S. 837 at 843 (1984).

146. One exception to the Bureau's implicit position on "appurtenancy" is in Arizona where, as the case study shows, the Bureau appears confused regarding whether water from Bureau projects in this state may be severed and transferred from the land. However, the confusion does not derive from any ambiguity in "appurtenancy" under Section 8 of the Reclamation Act but from concern whether Arizona's version of appurtenancy, which under certain situations can make water appurtenant to lands in the basin in which it arises, should govern transfers under the notion of state primacy.

147. Interview with James Turner, Office of the Mid-Pacific Regional Solicitor of the Department of the Interior (June 21, 1990).

148. El Paso County Water Imp. Dist. No. 1 v. City of El Paso, 133 F. Supp. 894 (W.D. Tex. 1955) *aff'd in part and rev'd in part*, 243 F.2d 927 (5th Cir. 1957), *cert. denied*, 355 U.S. 820 (1957).

149. *Id.*, at 904.

150. Another argument offered to remove the cloud of Rep. Mondell's concept of appurtenancy from transfers is that Congress has impliedly repealed the appurtenancy provision of Section 8, in particular, in the Reclamation Project Act of 1939. In this statute Congress authorized the Secretary of the Interior to contract for the supply of water to M&I users. Thus, in expressly authorizing the allocation of water to uses other than irrigation, Congress is said to have repealed Section 8's appurtenancy requirement. The problem with this argument is that it does not address the substance of Rep. Mondell's remarks. His remarks only express a policy against an original farmer effectuating a reallocation of project water by voluntary transfer. They do not infer that the Secretary cannot effectuate a reallocation administratively. Thus, the Secretary may, himself, reallocate water from irrigation to other uses without being at cross purposes with Rep. Mondell's remarks. In other words, reallocation of project water from irrigation to municipal and industrial uses may be effectuated without

transfers. Finally, courts prefer to avoid holding that a statute has been repealed by implication. Rather, they try to find a way in which two facially contrary statutes may be reconciled harmoniously without repeal. In this instance, the policy of permissive reallocation embodied in the Reclamation Project Act may be implemented through administrative reallocation without repealing a restrictive concept of appurtenancy.

151. *See* **W. Governors' Ass'n Water Efficiency Working Group, Water Efficiency: Opportunities for Action**, app. A (July 6, 1987).

152. For another analysis of the effect of the appurtenancy provision of Section 8 on transfers that comes to the same conclusion as this analysis, *see Roos-Collins, Voluntary Conveyance of the Right to Receive a Water Supply from the United States Bureau of Reclamation*, **13 Ecology L. Q. 4** (1987).

153. 43 U.S.C. § 372 (1988).

154. A portion of the water used in some reclamation states, notably California, Oregon and Washington, is allocated according to old riparian rights and the "reasonable use" standard that applies to these rights. However, the reasonable use standard does not appear to apply to significant quantities of project water.

155. Some concepts of beneficial use could impede project water transfers. For example, if conservation of project water is not a beneficial use of that water under state law and, instead, a contractor or grower would be deemed to have abandoned water that had been conserved, transfers of conserved project water would be discouraged. Some western states (notably California and Oregon) have clarified their laws to include conservation as a beneficial use of water. Others have not done so.

156. Transfers of CVP water have been impeded by confusion over whether California or federal law governs beneficial use. Confusion also exists regarding whether there is a federal definition of beneficial use attending water supplied from the Colorado River under the Boulder Canyon Project Act.

157. *U.S. v. Alpine Land & Res. Co.*, 697 F.2d 851, 854 (9th Cir. 1983).

158. *Id.* An important exception to the deference to state definitions of beneficial use under Section 8 probably exists in the case of water provided by the Bureau from the Colorado River under the Boulder Canyon Project Act. Distribution of water from the Colorado River is governed by the "Law of the River", which permits the Secretary of the Interior to condition use of river water notwithstanding provisions of state law to the contrary. But even here the Bureau might choose to use the appropriate state definition of beneficial use as a matter of comity.

159. 697 F.2d 851 (9th Cir. 1983); 887 F.2d 207 (9th Cir. 1989).

160. Reclamation Act of 1982, Pub. L. No. 97-293, title II, § 201, 96 Stat. 1263 (1982) (codified as amended at 43 U.S.C. § 390aa (1988)). [Hereinafter RRA].

161. Section 5 of the Reclamation Act, among other things, restricts the provision of project water for irrigation to tracts not exceeding 160 acres owned by any one landowner who must reside on or in the neighborhood of such land. Reclamation Act of 1902, Ch. 1093, § 5, 32 Stat. 389 (1902) (codified as amended at 43 U.S.C. § 392 (1988). The RRA deleted the residency requirement.

162. 43 U.S.C. 390ee (1982). For a complete explanation of the provisions of the RRA that may create disincentives to transfers see pp. 84-102 of "The transferability of water provided by the State Water Project and the Central Valley Project: A report to the San Joaquin Valley Drainage Program",

Brian E. Gray, Bruce C. Driver and Richard W. Wahl, July 26, 1990. The material in this section on the RRA is taken from those pages.

163. 43 U.S.C. 390cc (1988).

164. 43 U.S.C. § 390ee (1988).

165. Construction of Small Projects, Pub. L. No. 99-546, title III, § 302, 100 Stat. 3053 (1956) (codified as amended at 43 U.S.C. § 422(a) (1988)). Pub. L. No. 99-546 is special legislation that applies only the Central Valley Project. It requires the accrual of interest on contractor O&M deficits incurred after October 1, 1985. As a result, growers not already paying full O&M rates under the RRA are faced with the financial equivalent thereof for O&M deficits incurred since 1985. This fact materially reduces the disincentive to transfers of the "supplemental and additional benefits" proscription of the RRA, provided that the Bureau avoids imposing rates that exceed full O&M charges.

166. Rules And Regulations for Projects Governed by Federal Reclamation Law, 43 C.F.R. § 426, 426.5(a)(3)(ii) (1990).

167. This was the method used in the transfer between the Lindsay-Strathmore Irrigation District and the City of Lindsay.

168. In the Lindsay-Strathmore transfer, no profit was allowed. The Bureau did not consider the amendment to the irrigation contract to constitute a supplemental or additional benefit because, even though the district payments were changed, the district was receiving a reduced amount of water.

169. *Id.* § 426.5(a)(3)(ii)(F).

170. *Id.* § 426.18(b)(1)(B)(2).

171. *Id.* § 426.

172. There is a more detailed discussion of the need to clarify the repayment terms because this topic, unlike the legal issues, is not discussed elsewhere in the report. The legal issues are treated in detail in Chapter 2.

173. John Sayre, remarks at the Conference "Water Marketing 1990: Moving from Theory to Practice," at the University of Denver (Nov. 15, 1990). (This speech is reproduced in Appendix III to this report.

174. First, its preamble begins with references to the increasing frequency of water transfers, including "direct sales" and "lease" of water rights. These are terms commonly understood to involve profit or increased income. Although this language is applied to water transfer activity in general, the preamble goes on to place transactions involving Departmental water facilities within this overall transfer environment. In fact, Principle 5 states that "the fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction." This principle is restated in the press release accompanying the principles as "water transfers involving federally developed water will be treated no differently than any other proposed transfer."

This press release language and the language of Principle 5 suggests that transfers of Reclamation water can avail themselves of the same lease and sale institutions as privately developed water. Furthermore, Departmental staff involved in the drafting the principles indicate that Principle 5 was intended to specifically address the fact that just because federal

subsidies were used to develop the water, this fact should not remove the water from the category of water that is transferred, leased, or sold. Finally, the preamble indicates that the principles were designed to be responsive the Western Governor's Association request for a policy to facilitate transfers. One key feature of the WGA report was a recommendation that profit be allowed.

175. First, its preamble begins with references to the increasing frequency of water transfers, including "direct sales" and "lease" of water rights. These are terms commonly understood to involve profit or increased income. Although this language is applied to water transfer activity in general, the preamble goes on to place transactions involving Departmental water facilities within this overall transfer environment. In fact, Principle 5 states that "the fact that the transaction may involve the use of water supplies developed by Federal water resource projects shall not be considered during evaluation of a proposed transaction."

176. *Drought in California: Arousal of the Market?* Vol. 5 **Water Strategist** at 11 (April 1991).

177. **Wahl** at 185.

178. *Id.* at 183.

179. Presumably "the reduction in the amount to be repaid through power assistance" would imply an equal increase in the amount to be paid by M&I users for the transferred water.

180. The inservice date may vary for different units of a larger project (such as the Central Valley Project in California) or for blocks of water placed under contract at different time periods (such as in the Columbia Basin Project in Washington).

181. The repayment period for the project is not always established by contract. For example, the CVP contracts run for 40 years, but the repayment period extends much longer, until 2030. The CVP repayment period was established through a ratemaking policy adopted by the Secretary in 1988. The contracts will be renewed based upon rates calculated to achieve repayment of capital costs by that date.

182. In smaller projects, projects supplying only a few water districts, or projects not delivering M&I water, there are not likely to be well-established procedures for determining what rate should be charged for water converted from irrigation to municipal and industrial use.

183. In addition, there is one legislative situation that is somewhat analogous. The RRA of 1982 had the goal of removing federal subsidies from irrigation water delivered to land in a farm over 960 acres. The "full cost" formula in the act makes no assessment for past interest charges: it is based on the unpaid capital balance. Also, neither the interest or ability-to-pay subsidies apply to such land.

184. The charge in 1987 was higher even though the outstanding balance for irrigation repayment was lower than in 1972.

185. Memorandum from Acting Comm'r, Bureau of Reclamation, Washington, D.C., to Regional Director, Bureau of Reclamation, Salt Lake City, Utah (Nov. 13, 1989) (discussing resolution of interest charge issues on the basis of negotiation for repayment contracts for the San Juan Chama Project water supplies).

186. The irrigation contracts on these projects do not incorporate these formulas. Rather, in each contract a specific dollar amount is established for conversions from irrigation use to M&I use ($150 per acre-foot in the Dolores Project and $82.50 per acre-foot in the Dallas Creek Divide Project). However, the contracts indicate that these values are subject to adjustment by the Bureau at the time when the

actual conversion to M&I water takes place, and regional Bureau of Reclamation staff indicate that their current intention would be to apply the rollover calculation contained in the **Definite Plan Reports.**

187. If there is additional construction at some later date, then a separate increment would be added based on the same formula.

188. The charges under formulas S and D would be the same if there were no power assistance.

189. We realize, however, that the Bureau may want to draw a distinction between cases where irrigation water is contracted and under use (such as envisioned in formula D) and the cases where the water never was put to use in irrigation, such as in the San Juan Chama case. In the San Juan Chama reallocation, there may be a good rationale for charging M&I users for all of the interest costs, since no irrigators actually received benefits from the water.

190. Adoption of formula D would go some distance toward decreasing the anomaly.

191. The RRA indicates that prepayment of irrigation costs is not a method by which an irrigation district can avoid acreage limitation. Therefore, even if a prepayment agreement was worked out under which all of an irrigation district's charges were paid, the district would presumably still be subject to acreage limitation until the end of its original repayment period.

192. For additional discussion of public and private roles in acquisitions of water for instream flow, *see* Wahl, *Acquisition of Water to Maintain Instream Flows*, 1 **Rivers** 195 (1990).

193. **Assessment '87**, *supra* note 4, at 2.

194. The case studies in this report indicate that a number of transfers have utilized either the Miscellaneous Purposes Act (e.g. El Paso County Improvement District No. 1 to Lower Valley Water Authority) or the Reclamation Project Act of 1939 (Casper-Alcova Irrigation District to City of Casper Wyoming). Chapter 2 contains a more complete discussion of Reclamation law.

195. More complicated legal questions surrounding the applicability of each of these laws to different situations or the precise distinctions among these authorities might suitably be treated in a Solicitor's opinion.

196. These historical examples also point up the difficulty of defining "profit." Was it profit if water users in California were paid an amount exceeding their water cost, intended to reflect the agricultural and other income they gave up? Was it a profit to users in the Casper-Alcova District to have an outside entity pay for their canal lining? Would the fees paid to water lawyers and water brokers to implement a transaction in the Northern Colorado Water Conservancy District be considered profit, or expenses?

197. *Az: BuRec Signs Options for 22,000 af for the Salt River Pima - Maricopa Indian Settlement* 3, **Water Intelligence Monthly** 2 (March 1991).

198. The project lands will be acquired in a separate, but parallel transaction by Phoenix-area cities. These cities plan to eventually use the underlying groundwater to support urban growth.

199. The Bureau of Reclamation's position in this case was evidently based, in part, on the Bureau's interpretations of Colorado River Law and Nevada law. The results might have been different in other locations. For example, New Mexico law provides a forty-year period for proving up municipal and industrial water rights.

200. *Interior's Policy of Voluntary Water Transactions: The Two-Year Record*," 4 **Water Strategist** 1 (Jan. 1991).

201. This example illustrates the more general difficulty of separating out the price for the use of delivery facilities from the price for the underlying water entitlements.

202. More specifically, the Bureau used to require that the higher of the contract rate of the two districts be paid to the Bureau. However, in some cases this meant a revenue loss to the Bureau. This situation can arise because many contract rates currently fail to cover operation and maintenance costs. If the purchaser had the higher of the two contract rates, but that rate was farther below the actual cost of delivering water than in the selling district, then the transfer would result in a net loss of federal revenue. For that reason, in writing the regulations to implement the Reclamation Reform Act of 1982, the Bureau requires that a transfer not result in any additional revenue losses to the U.S.

203. As noted in the discussion of applicability of the Reclamation Reform Act of 1982 in Chapter 2 (and the case study in volume II on the Central Valley Project), some water transfers might require contract amendments. Many such amendments could be considered as providing supplemental or additional benefits and thereby requiring repayment of O&M costs on all contract water. Probably the principal type of amendment that might be required would be amendment of an irrigation-only contract in which the contractor wanted to transfer some of its water to a non-irrigation use. How many contracts would fall into this category was not investigated in this study. Even on these contracts, however, it might be possible for water transactions to be executed by implementing (1) a reduction in deliveries under the irrigation-only contract and (2) a new contract with the M&I entity. If the transfers were executed in this manner, it is not certain whether they would be considered to provide supplement or additional benefits. In effect, however, the requirement to increase repayment levels to cover operation and maintenance costs is already imposed, regardless of amendment, by P.L. 99-546. Therefore the disincentives for transfers requiring contract amendments in the RRA itself may be small. Because of the repayment problems on many CVP contracts, the Bureau would likely want to increase the repayment requirements whether a contract amendment was required or not.

204. For a more detailed discussion of these points, and the applicability of the RRA to water transfers in the Central Valley Project, *see* **Gray, Driver, and Wahl, The Transferability of Water Provided by the State Water Project and the Central Valley Project: A Report to the San Joaquin Valley Drainage Program** at 84-104 (1990).

205. However, this practice was by no means universal, as indicated by the administrative prohibition on profit within the Central Valley Project and the contractual restrictions on profit in the Central Arizona Project.