A Report on

IRRIGATION WATER SUPPLY ORGANIZATIONS

Natural Resources Law Center
University of Colorado School of Law

PREFACE

In December, 1990, the Natural Resources Law Center, with the support of a grant by the Ford Foundation, hosted a meeting on irrigation water supply organizations. The purpose of the meeting was to develop an agenda for change in each of four areas: (1) the reallocation of western water; (2) water conservation; (3) water quality; and (4) issues of governance. Discussion papers in each of these areas were provided to meeting participants listed on the next page, in advance of the meeting and presented by the authors at the meeting. This report was prepared by the Natural Resources Law Center based on the discussion at the meeting. Several participants provided comments on the draft report that were incorporated into the final version.

The discussion on these topics was lively and for the most part, no general consensus was reached. In reporting the discussion, care was taken to adequately reflect the numerous ideas offered, while at the same time recognizing that there were differences of opinion among the group.

Generally there was group consensus with the action items set out in Part Five of this report. Hopefully, the December 1990 meeting will help to encourage work in the areas identified.

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December 6-7, 1990

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IRRIGATION DISTRICT MEETING, DECEMBER 6-7, 1990
Sponsored by the Ford Foundation

The purpose of our meeting was to bring together people on the topic of irrigation districts. The irrigation district concept was a radical idea in its time. Legislators supported the idea of a local collective effort initially to develop water systems and levy taxes. Later, the ability to issue tax exempt bonds added to their attractiveness. These were some of many unique ideas that came together to promote irrigated agriculture in an effort to better develop and settle the West. Prior to the development of irrigation districts, there was some experimentation with other types of agricultural organizations, including private ditch companies and mutual ditches. These organizations were, for the most part, not sufficient to carry out the needs of the agricultural community.

Irrigation districts continue to play an important role in the West, but they are also faced with pressures to change.[1] They supply more than 50 percent of the irrigated acreage yet provide only about 35 percent of irrigation water. They control large amounts of the West's water resources. Additionally in some areas they are important local governing structures. Yet the pressures they face today are enormous and the character of many of these organizations is radically changing for a number of reasons, including the following:

- Agricultural production is declining in some areas;

[1] Many in the discussion group recognize that some districts have already faced the issues and pressures presented here as future concerns..

- The West has urbanized, resulting in the conversion of agricultural lands to other uses;
- The growth in demand for municipal and industrial purposes places pressure on agriculture which uses about 80 percent of the developed water in the West; and
- Growing concern for water quality raises issues about agricultural practices that produce pollution.

The focus in the following discussion is on four major issues facing irrigation districts today: (1) reallocation; (2) conservation; (3) water quality; and (4) governance. These issues are not meant to be exhaustive or independent. And while the issues are centered on the problems facing these organizations, the workshop participants as a whole and individually were thinking and talking about both short, or interim, and long term solutions to the problems discussed. The Ford Foundation expressed interest in providing support for activities that might be identified by the group to address problems facing irrigation districts today.

A theme that ran through all discussions was the idea of voluntary versus involuntary solutions. Should we provide the power and incentive to irrigation districts to adapt and change, or should change be mandated through regulation, legislation or court decision. This dichotomy cuts across all issues and is addressed in more detail in Part Five: Action Items.

Despite what, at times, may be phrased as a unified perspective, there was no single group viewpoint or consensus on most issues discussed. Additionally, there were diverse views on what the solutions should be. Most participants agreed that at least some transfers were necessary to meet changing water demands. However, some participants questioned whether

water transfers or reallocation to municipal use should be encouraged. These participants suggested other cost/benefit considerations may warrant the review of proposed transfers not only by the district board but also by some external entity as a safeguard to protect community as well as commodity values. Moreover, it may be that the rural poor do not possess adequate political resources to protect their water.

Some concern was also voiced with respect to the role of transfers in encouraging urban sprawl. We may risk creating more cities like Los Angeles if mechanisms for water transfers encourage urban growth. Should transfers from rural to urban areas be an option of last resort rather than first? Should cities first be required to implement conservation measures? Should all conserved water go to urban growth? Moreover, should water become a growth management tool?

On the idea of transfers as an alternative to new water projects, there is one view that many urban legislators do not want to admit (or agree with environmental groups) that transfer is a viable alternative to new projects because to do so would undermine the need for traditional water projects. In this way, it is argued, urban legislators may be looking at transfers in the same traditional sense as rural legislators; they are a last resort because of mitigation problems.

PART ONE: IRRIGATION DISTRICTS AND THE REALLOCATION OF WESTERN WATER

Traditional patterns of agricultural water use are coming face to face with competition from other water uses over a limited supply. The idea is that at least some water must be reallocated from inefficient or lower valued agricultural use to supply the increasing demand for municipal, environmental, industrial and commercial uses. A number of obstacles to private competition exist such as: third party effects, forfeiture of water rights, the public trust doctrine, Indian rights, "no harm" rules, protection of instream flows, salvaged water disposition, area of origin issues, concepts of beneficial and reasonable use, along with similar issues in state and federal laws that create new standards for the use and protection of water resources. Finally, western urbanization is strengthening the political influences of municipal users and diminishing the clout of agricultural interests.

The main reallocation issue is how have and will irrigation districts adapt as necessary to deal with evolving water supply issues. Will they voluntarily engage in reallocation activities as a result of market mechanisms and the pressures from a changing constituency? Will external incentives and guidance lead them to modify their role and policies or will change require external mandates through legislation, regulation and court order? Each of these broad options raises specific issues, discussed below.

Voluntary Adaptation

The ability of an organization to voluntarily adapt its performance in order to successfully meet changing needs of its constituents and of society will depend on the institutional capacity for the organization to change. This will depend upon two factors: (1) the members' and Board's ability to deal with internal and external issues; and (2) the context and language of individual enabling legislation. Internal issues include the changing role of the district board and the changing trustee relationship between the board and its users. External issues include the ability to address environmental and economic impacts and to deal with pressures to trade.

Capacity of board members to adequately address future issues

Some concern was raised with respect to the ability of water boards to have the prerequisite resources to address the future political, technical, and economic issues they are likely to encounter. The group felt it would be helpful to assist districts to look at the broader picture of western water resources as they tend to be narrow in focus. It was felt that the incorporation of these considerations would augment their ability to govern. Traditionally, boards of irrigations districts are part-time members with primarily farming backgrounds. This type of background was historically well-suited for developing supplies and expanding irrigation systems. To the extent these boards today get involved in activities such as voluntary trading, it may be difficult for them to develop the expertise necessary to make informed decisions on these types of market issues. For some forms of organizations, one solution may be to simply establish an agency that will provide technical assistance.

Not all boards are made up of agricultural interests; some are made up of professionals. For example, members of the Tulare Lake Basin Water Storage District Board come from credit institutions and have technical sophistication and immense political influence. This particular board has a much broader perspective than typically found in agricultural boards, but still may not represent the general community. These professional boards represent many things including (1) demand and the idea that growth prompts demand; (2) the accumulation of capital; and (3) their own political influence. This perspective is very different from the more limited perspective of agricultural boards traditionally found in irrigation districts. Obviously, different boards have different levels of political sophistication.

Another suggestion centered upon the creation of a database on irrigation districts. What is our current database on the typology of irrigation districts, and does it allow us to make any generalizations? For example, can we determine the proportion and distribution of sophisticated vs. more traditional boards? Some states including California have a good database, but only on fiscal information. The California State Controller issues annual reports on the financial transactions of the 879 water districts in California. In Arizona, the database is more descriptive of the powers of irrigation organizations. The consensus seems to be that this is all we have, and it seems to be collected only at the state level. Even fiscal data -- normally the only type collected -- frequently is partial, dated, and unreliable due to varying methodologies. This data will often not show many attributes considered important since it excludes political and cultural variables. Maybe we need to come up with attributes for classifying districts such as: (1) groundwater/surface water balances; (2) user fee or ad valorem tax base; (3) elected or appointed boards; (4) type and category of enabling legislation; (5) to

what extent is the board connected to its constituency; (6) to what extent is the board responsive to external influences of statewide concern. This really is directed toward understanding the definition of an irrigation district. In Utah there are seventeen types of organizations and it may not be possible to aggregate the data on these organizations. California organizations may not be typical of other western states.

The evolving trustee relationship

A second issue on whether these organizations can change is the evolving definition of the trustee relationship between the board and its water users. How is this relationship going to be amended, adopted, and changed from a development mode to meet current needs? To many water users, trading may essentially mean less water for their needs. How will the board balance these conflicting interests and what role will they play in the actual trading activity? Will water users negotiate directly with outsiders or will the board act as a middleman between the users and the outsiders?

If western states are to encourage trading, legislation may be required to define this evolving trustee relationship. If the board is to act as a middleman between the users and the parties acquiring the right to use district water, what are the obligations of the board to search for new users and to accept voluntary trades. Additionally, what is the standard of review for any board action. We may eventually end up in the courts in order to translate these obligations and legal concepts to a new era.

One of the major factors in the changing trustee relationship of the district board is the change in the makeup of the underlying land use. In many districts there is a larger percentage of urbanized lands within the district, yet urban people (who are more likely to express environmental concerns) are not getting a voice in district decisions. In a district in which water users are more urban is the district board truly representing the interests of its constituency? The primary goal of most district boards is to maximize the amount of water that can be used, yet this may not reflect the views of the majority of users who are underwriting the costs of district operations. Such a situation seems to exist in the Northern Colorado Water Conservancy District. Most of the residents of the cities of Boulder and Ft. Collins don't realize that they pay taxes to support water policies of a district with which they may not necessarily agree. In contrast, urban water user representatives intervened in the pending Central Utah Project legislation and effected a compromise reflecting environmental concerns. This occurred even though urban users had only two votes (they account for 90% of the revenues of the district) compared to the twelve votes held by agricultural users (who account for 10% of the revenues of the district).

Are there any examples of districts trying to redefine the changing relationship between the board and the users in order to address new issues? Most examples have occurred when a district has confronted a problem that originates in its boundaries such as the drainage problem encountered by Westlands Water District, and may respond to external pressures to change in its own interests (i.e., fear of litigation). Although in the case of Westlands, it has been the Bureau of Reclamation and the State of California, and not the District, that have attempted to solve the drainage problem.

One way to look at new trustee relationships is to focus on services rendered in addition to the traditional delivery of water. For example, the Northern Colorado Water Conservancy District is planning to develop a major new water project to deliver treated water to cities and counties both inside and outside the district boundaries while at the same time restricting the sale of already developed excess water outside of District boundaries. This may be in conflict with the interests of some cities and counties within its boundaries because the district is now infringing on their traditional role of supplying treated water and determining where development should occur. The cities in the district have excess water and they'd like to market this outside the district as well.

The examples here raise the question, "who do these districts serve?" The cities are more and more finding themselves as underwriters of the districts, yet have no real role or control over district activities. The Northern District has diluted the value of its user's interests by bringing in Windy Gap water and then telling the cities that they can't sell their water. Many of the districts seem to be serving this "higher mission" of trying to increase the quantity of the water they acquire and market. Even if this is desireable, it may conflict with their constituents' interest. The districts need to change their focus from acquiring more and more water to better managing their existing supply. An example of this is the Verde Valley Conservation District in Arizona where the district is taking on projects for water management and water conservation.

External environmental and economic concerns

An irrigation district's success in implementing voluntary change will depend on its ability to address the impacts of district activity on the local environment and economy. To the extent we speak of reallocations outside the district, internal governance issues may not be as significant as these external environmental and economic issues. County and state compliance requirements may resolve most of these local concerns. The Inyo County settlement in California is one example of a district's ability to adequately address local environmental concerns. There seems to be less certainty that a board has the ability to address local economic concerns. Should we be empowering irrigation district boards to deal with these types of issues? Some district boards believe they are more qualified to address many concerns of the area than are the local county and city governing bodies, these districts remain bound to the conventional water supply role.

Ability to deal with external pressures

A fourth issue has to do with a board's ability to adapt to increasing external pressures, particularly when it has no policy to address these pressures. For example, there is some concern there may be an evolution towards putting too much pressure on irrigation organizations to trade, creating a "trade it or lose it" atmosphere. The Imperial Irrigation District transfer is such a case. The concept of pressuring irrigation districts to trade presents somewhat of a dilemma, since organizations may need an incentive to encourage water movement from one use to another. However, creating a trade it or lose it atmosphere may affect the market price a potential buyer is willing to offer. There is not unanimous agreement

that this would occur. Some suggested the concept of use it, trade it or lose it exists under current Colorado water law and has not seemed to affect market prices. Maybe the situation with IID in California was unique. Some organizations, like the Northern Colorado Water Conservancy District, have an internal water trading policy. There are many other organizations, however, that have no policy and thus may in the future be vulnerable to external pressures.

The idea of trade it or lose it as affecting the market can be turned around. That is, if voluntary trades were to occur more easily, there may be less likelihood that there will be a trade it or lose it problem because districts will not be holding on to water they are not using. Eventually, we must deal with the technical issues such as consumptive use, waste, etc. For example, there are transactions in which pressures from the state have forced trading activity because the irrigation districts weren't actively using their water. There may be disputes over the meaning of the phrase "actively using their water." States may need to better define concepts such as waste, reasonable use and efficiency.

It seems pressuring districts to trade through a policy of trade it or lose it will work in a narrow class of cases, but may not be the broad solution needed to get irrigation districts into the marketplace on the same basis as private businesses. Currently these organizations are not driven to do so and it is prudent to ask "what can be done to provide incentives to transfer water?" On the local level, the best incentive may be financial. That is, encourage users to through either lower taxes or lower costs. However, at this time the message is not getting to the constituency.

Others suggest that affecting water markets by putting pressure on irrigation districts to make a trade may not be so bad. Shouldn't a buyer have the advantage of maybe making a lower bid if in fact water has been used imprudently, if the acquirer has a higher beneficial use? The issue may be in the nature of what signal we are sending to agricultural users, and what does this do to the strategic choices of the buyer.

Use of brokers as facilitators

As an alternative to or in addition to a trade it or lose it policy, the use of brokers would facilitate voluntary trading. This may also, in some cases, be an alternative to forcing district boards to consider the position of other interest groups. Brokers with broader interests may be able to develop relationships between district boards and other interest groups such as cities, tribes, and environmental organizations. EDF has acted as a broker in these types of transactions.

External incentives to transfer

Many participants suggested the role of money and additional water as an incentive, or carrot, to voluntarily change or to transfer water. One view expressed was that profits from transfers of water may be limited within Bureau of Reclamation projects. The Bureau is in a revenue-enhancing position at this time and may take any profits reaped from project water transfers. This would provide less incentive for irrigators to want to transfer their project water. The Bureau may not be playing a very active role in transfer activity, at least in Arizona. Bureau projects' plumbing, however, is important to water reallocations.

Involuntary Change: External Regulation

Some participants felt there is a need to have state statutes encouraging reallocations and other desireable change, and at the same time recognize the importance of giving society a say in whether and how reallocation or transfers should occur. The statutes could be broadly worded; not overly regulatory. Legislation should be drafted to provide incentives and general guidelines, to be enabling rather than prescriptive. Examples of this type of legislation are Oregon's transfer laws protecting minimum streamflows and basins of origin.

Along these same lines, there was the comment that we should not promote legislation that would set specific criteria for districts to consider in effecting transfers; this is really a local matter. And legislators are often reluctant to set specific criteria. In existing legislation that pertains to general water transfers, criteria enacted by legislators has been very general. The best way to deal with local concerns may be in the form of a broader reallocation scheme or regional planning process. This is going on in New Mexico and in Montana. A group that is representative of local concerns is organized to participate in a regional planning process; to look at needs, supplies, and alternatives to water transfers. To reiterate, legislators do not want to be specific and in most cases will not enact legislation with specific criteria. Specific criteria that must be considered by districts in effecting transfers may need to come from the courts ten years after general legislation is enacted.

Other participants, while agreeing that generally this seems to be a good approach, have seen problems with the effectiveness of external pressure. For example, in the area of water

conservation there are problems with developing uniform standards. What is the standard for conservation -- or for reasonable use? The concept of reasonable use scares an economist. With so many standards and concepts, there is great variation from region to region. Rather than legislate it may be better to let the local people and local markets decide what reasonable use is. However, water quality issues are different and local people and local market forces may not work as well to protect water quality as they do to protect water quantity.[2]

There was further support for legislative coercion. With few exceptions, coercion and regulation is a fact of life and the districts will respond to this pressure. Of course we can't go too far with this idea. We can't define water duty per acre for every farm in the West. This has not and will not work. If we want to modify internal makeup and operation of irrigation districts and their ability to respond to change, this can be done by pressures from the outside. We are not talking about a large quantity of water, since a ten percent reduction in agricultural use would supply an abundance of water for other uses.

An example of a case where legislation was proposed in order to force a change on a district board is the recent proposed amendment to the Water Rights Settlement Act (S. 1554) that tried to force the Truckee-Carson Irrigation District Board to bring members with other interests including environmental interests onto the board. Although the legislation did not pass

[2] There is another problem with the concept of conservation. Most municipalities don't plan conservatively. They optimistically predict their growth and they over-acquire water supplies. If cities carefully analyze their future needs and buy options rather than water rights, a lot of water would be freed up for other uses. Conservation is more fully discussed in a later section of this paper.

with this amendment, it is an example of one way in which the boards' interests could be expanded through external pressure.

California provides an example of no legislative mandate to conserve and the state has operated under years of voluntary conservation and reallocation. Yet California has the most extensive enabling legislation for water transfers to occur and none have taken place as a result of the legislation. Regulation to force change may not be appropriate in all areas. In some districts unregulated irrigators may conserve and/or reallocate their water more than regulated irrigators. If we're going to talk about efficiency solutions, it may be better in some districts to leave people alone.

In addition to legislation intended to encourage change including reallocation and transfer, we need legislative constraints in order to protect social values and unnecessary costs during the water transfer process. Rather than talk about this type of regulation as barriers or impediments to transfer it may be better to call these socio-economic protection devices.. For example, in Colorado the costs incurred in order to protect third parties during transfers is very high compared to the costs in New Mexico where the state engineer has historically considered third party impacts. In New Mexico the costs are lower and we get nearly the same effect. Let's make sure that we use less costly ways to reach the same level of worthwhile protections.

PART TWO: IRRIGATION DISTRICTS AND WATER CONSERVATION

In this part of our workshop, we looked at some of the issues posed by the objective conserving water used or managed by irrigation districts. While the focus here is on the role of

irrigation districts in implementing conservation programs, it seemed necessary to first (1) define what we mean by conservation in this context, and (2) describe what kinds of conservation we would like to encourage. Beyond the role of the irrigation districts, there may be roles for state and federal government, and for the private sector, in achieving the objective of conserving water that is used or managed by irrigation districts. Finally, we identify barriers to conservation and make recommendations for overcoming these barriers.

What do we mean by "conservation"?

We discovered that we had different views of the meaning of water conservation. Ultimately there was general agreement on the need for a simplified definition: conservation means a reduction in water diverted or withdrawn. However, several other definitions were discussed, as follows:

• Reducing the amount of water that is applied to the land by irrigation districts without reducing their net income. This would not include storage unless storage is a component of a conservation measure. But maybe this is not a good definition because it ignores recharge: water applied and not used goes to recharge groundwater aquifers in the form of return flows. Maybe only the amount of water otherwise lost to deep percolation should be considered water saved because this is irretrievable water.

• Reducing water consumption in a manner that does not reduce the intended end use, with no significant adverse third party impacts. For example, leaving water in the main stream for a longer distance and taking it further downstream could be a form of conservation.

• A reduction in net diversionary right per unit acre of land irrigated, or the "net reduction in water per acre without a change in crop yields." This may not necessarily be a good working definition because statistics have shown that the total yield or output in crops has sometimes been highest in years of low precipitation.

• In terms of the life history of water, water should be run through as many uses as possible before it is totally consumed.

We ultimately must arbitrarily limit the definition of conservation because it means several different things in different contexts. For the purposes of this discussion, the term conservation will be limited to conservation that is relative to the application of water.

What Kinds of Conservation Do We Want to Encourage?

What is the purpose of coming up with a definition for conservation? Maybe we first need to describe what we are talking about; maybe we need to limit the definition so that we can get on to the topic of defining what it is that we want to encourage.

Generally, we are trying to encourage (1) cost-effective conservation; (2) environmentally beneficial conservation; and (3) conservation that is equitable to existing users. More specifically, we want to encourage conservation that:

- results in net income that stays the same or increases;
- results in no significant adverse third party impacts;

- is cost effective;
- considers environmental consequences; and
- is equitable to existing users.

As an example, recent California legislation concerning water transfers, by dampening the effects of "reasonable" use, tend to focus only on economics and not on the environment. However, this term could possibly be the basis for an argument that environmental considerations should be included.

The Role of Irrigation Districts in Water Conservation

There may be several roles for irrigation districts in carrying out water conservation. In order to describe these roles, it may help to distinguish the different types of irrigation districts because different types of districts may play different roles in conservation efforts depending on their traditional functions. For example, there are some districts that have been acting as wholesalers and not as distributors of water like the more traditional irrigation districts.

There is also a need to provide incentives to districts, or to employ coercive techniques in order to get the districts to agree to take on roles not traditionally assumed. Incentives may include allowing the districts to sell or make alternative use of conserved water to achieve rural development or make improvements within the district.

There is no agreement that simply providing incentives will be enough. Districts may engage in conservation efforts only if they have some higher external authority telling them that

they must do so. Additionally, having an outside agency require action will relieve the district of potential liability to constituents for engaging in activities that may conflict with the interests of their water users.

Information disseminator

The dissemination of information role for districts assumes we need to change behavior on the farm by providing both technical information and public education.

Capital investment

Districts could invest in water saving devices or improvements to the system that would save water. Or districts could take advantage of state and federal assistance programs. One example of the latter is the California program that provided low flow shower devices to the water districts for distribution to their constituents. Although the state was providing these devices, the role of the districts was critical in whether the devices were ultimately used by individual water users. One district made the devices available to each participant but did not make any effort to distribute the devices. In this case, not many participants took advantage of the use of the new devices. In contrast, the district in Marin County went door to door distributing the devices, and used its own funds to do so. In Marin County, a much higher percentage of users installed the water saving devices. An irrigation example is the arrangement between MWD and IID in California. MWD provides capital in exchange for IID's saved water.

A district's willingness to make investments in water conservation practices may be tied to the district's perception of a water shortage. For example, Marin County efforts to distribute the low flow shower devices was likely tied to the fact the district was facing a potentially severe water shortage. There was a definite coercive environment because the voters had recently turned down a bond issue and gave a strong message to the district that the district could not keep increasing its water supply.

The district could apply for federal or state grants for the purpose of making system improvements for the conservation of water. A related role involves conducting technical research for the purpose of conserving water within the district.

Providing incentives to users

There are both monetary and nonmonetary incentives the District could provide to its users in an effort to conserve water. The following suggestions are illustrative:

- District representatives could be given the authority or direction to act as middlemen in the transfer of conserved water, brokers or transfer agents between their constituent users and potential transferees within and without district boundaries.

- Districts could adopt an inverted block rate structure for the sale of water to their constituent users; in this way a farmer would not be penalized if he used only the "duty of water" or the objective quantity needed to grow his particular crops;

however, use beyond this amount would be subject to an increasingly escalated price per acre-foot.

- Districts could be empowered to modify the traditional use-it-or-lose-it policy in the allocation of water so that their constituent users will not apply more water than really needed in order to avoid losing the water, as has occurred under the traditional appropriation doctrine.

- Districts could offer to repurchase conserved water from constituent users. This water could then be managed by the district to make internal improvements, to achieve rural development, and to move water within the district from boggy, unproductive lands to lands capable to sustainable agricultural production.

Monitoring and enforcement of water use

The districts could improve water conservation by installing water measuring devices and following up on excessive uses. This would require some district capital investment but also requires a more proactive posture in ensuring beneficial use of its water.

The Role of State and Federal Agencies

In addition to the district role in providing incentives to its users, state and/or federal agencies may need to provide incentives to, or impose requirements on the districts so they undertake roles that are definitely new to many districts. In some cases, incentives may not be

as effective as regulatory requirements. State or federal regulation may relieve the districts o a potential conflict with the interests of their constituents. For example, if district boards were to undertake conservation measures in the absence of a state mandate, they could be acting contrary to a constituent's interest and subject to liability.

Barriers to Conservation

There are several barriers to conservation. They are based on many things including existing state and federal law, agency practices, and a general lack of information and agreement as to what should be done.

The concept of use it or lose it

There is a fear of loss of water rights if conservation efforts are undertaken. A variant on this theme is a situation occurring in California. As existing Bureau of Reclamation contracts expire and are thus up for renewal, there is a fear among districts that the Bureau will examine the quantity of water needed. If the districts have been practicing conservation measures, their contracts may not be renewed for the amount of water previously received.

Revenue based financing

Bond holders have traditionally based their investment decisions on the unit sale of water. This translates to the rate of the water times the amount of water going through the

pipes. If you reduce the quantity of water going through the pipes in the name of conservation, the security of the bonds may be jeopardized in the view of the bond holder.

Lack of a market

There appears to be a commonly held view that there is currently no place to sell conserved water and that, even if there were a demand, there are institutional barriers to out of district transfers.

Bureau of Reclamation obstacles

There are several Bureau-based disincentives to conserving water in addition to the contract renewal concerns mentioned above. Many Bureau projects operate under a take or pay procedure which provides no incentive to conserve. This is because the user must pay the same amount whether or not he uses his full amount of water allocation. Additionally there are Bureau practices and policies that tend to inhibit the conservation and transfer of water by making it difficult to understand the rules and procedures for transferring conserved water.

Lack of technical and other types of information

Frequently the smaller irrigation districts do not possess adequate engineering or consulting staff to assess the alternatives. Moreover, the provision of technical support can open new vistas to water conservation in smaller districts. Some examples of technology that

might help districts are accounting techniques for tracking water use, return flows and water savings, and techniques for the delivery of salvaged and conserved water.

Unclear, adverse or conflicting state laws

For example the surplus requirement under California state law works to discourage conservation because it requires that only surplus waters can be sold.

Third party effects

In some cases the side effects of conservation efforts, such as the drying up of wetlands, reduction of return flows, and diminishment of the economic infrastructure supporting agriculture will act as negative externalities. These unanticipated costs to downstream users are frequently overlooked in water trades.

Overcoming the Barriers

There are different approaches that could be initiated to overcome some of these barriers to conservation. Some focus on providing incentives to conserve and to spark interest in the districts. Other approaches focus on educating legislators and district board members so they feel more capable to address, regulate and take on new roles. Both incentives and education could work together to create a better environment so when the conservation opportunities arise, there will be people to act as catalysts. Alternatively or in addition, the

enactment of coercive regulation could force change onto irrigation institutions. Some specific suggestions for change follow.

Successful demonstrations that conservation efforts can be achieved

By facilitating some district's efforts to undertake successful conservation programs, examples could be set that might encourage other districts to undertake similar programs. Well known examples include the City of Casper's agreement with the Casper-Alcova Irrigation District and the MWD-IID agreement.

Broaden the market opportunity

Providing successful examples is one way to do this. We need to follow through on some of the opportunities available to districts in order to demonstrate that the conservation efforts can work and can produce desirable benefits for all parties involved. Water banks, including Kern County, California and Snake River in Idaho, are examples of successful conservation efforts.

Change state law

For example, there are some municipalities in Utah that are willing to buy water rights to keep in their parks and condominium organizations but under state law this is not a beneficial use of water. In addition to amendments to existing water law, there should be a new state law enacted that would expand the authority of irrigation districts, allow them to take

on some of the roles discussed above to encourage conservation, and recognize rights in conserved water.

Enforce existing federal law

One example is the Reclamation Reform Act's conservation requirements and how ineffective they have been to date.

Facilitate negotiations and memoranda of understanding between urban and environmental interests

Some things are already going on in this area. For example, in Utah urban groups are meeting with environmental groups and trying to develop conservation memoranda of understanding as to management practices. The idea is that once an agreement is reached they will meet with the agricultural interests. Another example given was urban groups working with environment groups on bills that aim to restore fish in the Central Valley Project. Even though the bill is not likely to succeed, the parties were willing to work together.

Sponsor a forum or conference on district innovation

It would be important to invite urban leaders, agricultural interests, district•board members and possibly state legislators.

Bring together local interests

This local group should include representatives from the irrigation district as well as representatives from outside of the district in order to draft regulations and rules to encourage conservation.

Infiltrate district boards

An example was given of the increasing environmental membership on water district boards in California; the East Bay Municipal Utility District Board now has a majority of environmental members.

In summary, removal of these barriers to conservation should focus on: (1) informal arrangements to encourage people to work together for a common objective, (2) changes in state or federal law that would encourage or require irrigation districts to take on new roles; (3) infiltration into district boards by catalysts who would work within to effect some changes within the district's operations; and (4) other types of governmental and private external incentives to encourage district boards to expand their roles. Merely removing barriers may not effect the desired change; we need to have a carrot, a stick or a take-over to ensure that change will occur.

PART THREE: IRRIGATION DISTRICTS AND WATER QUALITY

The role of irrigation districts in implementing agricultural-related water quality programs has not yet been well defined. While Congress has taken a hands off approach to the regulation of agricultural practices under the Clean Water Act, today's irrigation districts may not have the expertise, the power or the incentive to address water quality concerns. And it may be that they are not appropriate vehicles for handling water quality clean up and control. The following discussion considers whether or not irrigation districts should be responsible for meeting water quality objectives, and if so, what steps should be taken to ensure that the districts have the ability and the incentive to do so.

Irrigation District Responsibility for Agricultural Pollution Control

Historically, irrigation districts have stayed away from the regulation of irrigation practices. Instead, they have relied on the federal government to step in when irrigation-induced pollution reached a level that required clean up. There are several reasons, however, for making these institutions responsible for water quality: (1) they control a major portion of water that is used in agricultural practices that collectively are a principal source of water pollution; (2) they are organized locally and along lines of natural watersheds; (3) they bring years of experience with water management on district lands; (4) they can bring economies of scale to pollution control; (5) they could develop system-wide plans as they have done with water distribution systems; (6) the costs of cleanup can be distributed equitably among users within the district; and (7) districts can qualify for grants and other types of governmental aid to assist them in carrying out their pollution control programs.

The sources of agriculturally caused pollution are directly related to (1) the amount of water applied; and (2) the specific types of irrigation practices employed, such as pesticide application. Districts could develop the ability to work with both of these aspects of pollution sources. The first order of business is to facilitate the irrigation districts' acceptance of the idea that they need to be a part of any water quality solution.

One way to start this acceptance process is through legislative expansion of the power and authority delegated to districts. But merely giving them the power to address pollution control is unlikely to result in districts voluntarily taking on this new responsibility, even if their own water supply is polluted. In addition, there needs to be either governmental incentives provided or requirements imposed.

The success of any of these approaches may depend on what type of irrigation district is involved. It is therefore important to keep in mind the differences between (1) large corporate districts; (2) large exurban districts; (3) BOR districts; (4) districts involved with Indian water rights; and (5) traditional or actual irrigation districts. Despite the expected differences, all of these types of districts are considered public entities although they operate solely for the benefit of their members.

Perhaps in the context of pollution control, districts should be treated the same as private corporations or private entities and should be responsible for the pollution that enters the water through canals and ditches within their boundaries. Part of the reason for excluding irrigation from the Clean Water Act was because the return flows were considered diffuse. But

when a district has a drainage system in place to collect the runoff and return flows, maybe this system should be regulated as a point source. Also, it makes sense to some participants to make districts responsible entities because they can spread the costs over all users much as they've done with distribution works. There was a concern expressed by some participants that treating districts like private entities for purposes of pollution control may financially destroy some irrigation districts.

Expansion of district authority

Giving additional authority to districts is a positive approach that is unlikely to meet with district board resistance. It is possible that this step alone will provide the necessary incentive to make some districts take on pollution control responsibilities. More specific delegation of pollution control authority is more likely to provide this incentive. For example, the idea of tradable emission permits could be borrowed from federal air quality programs and applied to waste allocation levels. The districts could be delegated the authority to trade their waste discharge permits. This concept was tried in Colorado at Cherry Creek Reservoir and at Dillon Reservoir. The program at Cherry Creek was not effective however, and ultimately user fees were raised to provide the necessary clean up funds.

Providing incentives to districts

Subsidy programs. There is a down side to government subsidies to districts for pollution control. While they may encourage some districts to implement pollution control programs, some well-intentioned subsidy programs may actually compound the agriculture

pollution problem. An example is federal funding of improvements to local domestic water supply systems in the midwest that has actually reduced the level of concern with protecting the quality of the groundwater supplies.

Banking conserved water. Irrigation districts could be permitted to bank any water they conserve as is done in the case of the Snake River in Idaho. As with the regulatory requirements discussed below, a banking allowance would create a comfort factor for those district board members who may want to implement water conservation measures but do not want to take action contrary to the interests of their constituency. Unlike regulatory requirements, a banking allowance is a positive approach that may be more favorable to legislators.

Imposition of a fee schedule. This really functions as an economic disincentive, because it would impose a tax or fee based on the level of irrigation practices that contribute to water quality degradation. However, it is an idea that legislators are beginning to choose over specific practice regulation. Iowa recently adopted a fee structure, along with establishing a center to conduct research in this area. The Iowa fee structure increases taxes on fertilizer and pesticide use. There was a specific legislative policy decision not to regulate, not to take any action except to impose financial disincentives on the use of fertilizers and pesticides, a tax on their use. Essentially this tax works to focus funds on farmers who are creating runoff problems.

Internal incentives. Several irrigation districts are attempting to deal with internal problems that may be addressed through measures that could improve water quality. Examples are the drainage problems in some California irrigation districts that may be corrected through

water conservation efforts. Another example is districts with urban constituents whose domestic water supply is threatened by pollution caused by local agricultural practices.

Imposing regulatory requirements

It may be that most irrigation districts will not regulate their own uses absent an external stick or requirement that forces them to be responsible for achieving water quality objectives. This type of external control could come from the federal or state levels.

Regulation under the Clean Water Act. In the early days of the 1972 Clean Water Act, Congress seemed comfortable with regulating agricultural practices as a point source. The Bureau of Reclamation then exerted influence on Congress for fear that point source regulation would have a devastating impact on Bureau project irrigation users. The result has been a 15 year Congressional reprieve from regulation. The 1987 amendments to the Clean Water Act require each state to submit an assessment report and management plan for nonpoint source pollution, and most western states have complied. However, there is no requirement that these plans be implemented.

While the likelihood of future regulation under the point source provisions of the Clean Water Act is unlikely, the policy reasons for the previous exclusion of agriculture from point source regulation are not so strong today as they were in 1972. This is because concepts such as "best management practices" are well developed today and agencies, including the U.S. Department of Agriculture and the EPA, are more comfortable with applying these concepts.

Additionally, there is authority under the Act for the imposition of a permit process to control agricultural pollution, although the Act lacks enforcement authority. If a permit program is developed, consideration should be given to the potential difficulty in monitoring discharges and enforcing regulations for agricultural pollution.

Use of Soil Conservation Service. One alternative suggested to regulation under the Clean Water Act was the use of Soil Conservation Service (SCS) employees who are currently located in every county across the country. They are able to work with individual farmers and could develop plans. Although the SCS has little funding today, they were originally a well-funded agency with the capability to deal with issues such as conservation and water quality. In a limited, low-key way, the agency is making progress today and still has expertise on these issues.

The challenge may be in developing a way to bring together the SCS people together with the irrigation district boards to develop management plans. Generally, these two groups hold different ideologies. The state of Oregon specifically gives the SCS greater influence in irrigation district matters.

The drafters of the 1991 farm bill affirmed that the U.S. Department of Agriculture (not the EPA) will have primacy over agricultural ground water quality. The bill may not lead to actual changes, however, because it mandates research rather than implementation. The drafters considered requiring farms with highly erodible lands to implement a plan. Unfortunately, the current standards, developed by the Soil Conservation Service, are thought by many to be too low to ensure protection of the water quality. Additionally, the SCS model

permits consideration of economic ability. The use of management practices and stricter standards would ensure a more successful pollution control program.

State imposed requirements. Some states are beginning to address agricultural pollution but there is more that could be done to ensure that irrigation districts accept a share of the responsibility for agricultural pollution control. States could be very specific, and require that the districts implement best management practices in areas identified with water quality degradation. The State of Nebraska has enacted legislation that gives the State Board of Agriculture the authority (not the mandate) to require districts in designated areas to implement best management practices. The program developed under this legislation also provides for education and financial assistance.[3] Although the concept is good, progress is slow because the State Board has been reluctant to impose requirements on the districts. The program could benefit from the development of standards that must be followed by the Board in deciding whether to impose the requirements on a district, and from the setting of specific deadlines that must be followed by districts in carrying out the requirements.

Other forms of specific legislation to force district action include: (1) the authorization of a new category of special district that would be required to carry out agricultural pollution control objectives; or (2) the designation of certain geographic areas as nonpoint source problem areas, with the requirement that certain actions must be taken or practices modified

[3] One participant commenting on this draft report added that, in a recent visit to Nebraska, members of the University of Nebraska involved in the extension program were trying to come up with a way to undo their earlier oversell of the use of chemical fertilizers and pesticides. They are hoping to "retrain" farmers. Perhaps Districts could help with this effort.

within these areas. This idea is similar to existing state programs designating certain geographic areas because of a threat to the quantity of water supply. Generally, these programs vest much authority in state agencies to limit water diversions or withdrawals in these areas.

Some eastern states have created special agricultural protection areas where the land may not be bought for conversion to nonagricultural uses. This provides additional security to the district but there are strings attached to the designation. Once so designated, the state may regulate and control land use practices. Although the incentive for those states that have implemented this protection area program may be something other than pollution control, the concept may be transferable to this objective.

As an alternative to specific state laws that require district action or restraint, states could impose a more general mandate that irrigation districts develop water management plans to address water quality concerns. This approach has the advantage of meeting less legislative resistance because it requires no corrective action, and imposes little cost on the district.

The Role of Individual Farmers in Controlling Agricultural Pollution

Maybe we should consider making individual farmers responsible for pollution clean up. Maybe the $5,000 grant to individual farmers under the 1985 federal farm bill makes sense. It particularly makes sense when one considers this payment together with allowing any waters saved from conservation efforts to be banked within the districts. Another improvement to this model could be the financing of the $5,000 grant with a tax on the farmer who is actually adding to the pollution problem. This model may be offensive, however, particularly in parts of

the west where this money would be a third level of agricultural subsidy (subsidy for water; subsidy for crops; subsidy for water quality plans). The environmental community has been split on the idea of subsidies. This became particularly evident when Congress tried to put a limit on subsidies. Is this $5,000 grant really a subsidy or just the cost of economic planning?

Municipal members of irrigation districts are beginning to invest in programs aimed at improving the quality of their water supply. In fact, municipal water users may prove to be a major source of funding for the clean up of agriculturally induced water pollution. The city of Boulder is considering zoning sections of a creek in order to improve water quality and maintain the physical integrity of the riparian habitat. In Utah municipalities are buying out sheep and cattle operations high in the watershed in order to eliminate or control this land use activity and thus protect the quality of their water supply In the Utah example, the ultimate user will pay the price of cleaner water. Similar efforts could be undertaken by municipal users in the Bay-Delta area of California. It would likely be cheaper to buy out and retire the agricultural lands causing the pollution rather than build new water diversion/development projects in more pristine areas higher up the stream so as to capture water above the area of use and pollution, as is presently planned. However, this type of option has negative consequences for instream flows and may not be politically popular in California or in other states.

PART FOUR: IRRIGATION DISTRICTS AND ISSUES OF GOVERNANCE

What are the current procedures by which district board members are chosen? How effective are these procedures in ensuring a continuing board that is knowledgeable about issues

confronting districts today and is representative of its constituency? The following discussion focuses on these questions. But the central issue here is what potential changes are needed to affect a board's performance so that it is better qualified to address the evolving roles of irrigation districts and is more representative of its current constituency.

Appointed Boards vs. Elected Boards

Democratic election procedures have traditionally been employed in most irrigation districts (i.e. one vote per acre owned, or one vote for every $100 assessed valuation, or one person - one vote). But the process has not resulted in the election of a truly representative board in most districts. Voter turnout has been lower than turnout in other types of elections, and many elections are uncontested.

The 1982 Reclamation Reform Act removed residency requirements. All property owners within the district are now eligible to vote for board members, yet few are doing so. It may be at least in part due to lack of controversy and thus lack of interest. Maybe future controversies will mobilize eligible voters to participate in the election process.

Effectiveness of selection system

Is the current selection system producing board members who can work together and get things accomplished. In New Mexico there is the example of a board that had discharged every manager after a very short time of employment. But is a board's degree of deference to management a good metric for its effectiveness? Another variable that should be considered

relevant is the relationship between a board and the manager of the district. Indeed, this may be a key variable in understanding the performance of the irrigation district.

Another way to measure the success or failure of the existing selection system may be a board's deference to not only the district manager but also to outside professional consultants such as attorneys and engineers. Some boards members are pro-active and some are re-active. Many merely rubber stamp the suggestions or recommendations of the managers and consultants. Are we just interested in keeping the board members out of trouble? That is, do we want to have a board that will merely rubber stamp the suggestions of the managers and consultants with no controversy. From a social and regional perspective board members that merely go along with recommendations and do not advocate reform may not be as desireable.

Elections may be useful in districts that perform important functions for communities. Some elections are stepping stones for budding politicians in more broad or general districts. In this case the board member may advocate reform. The example was given of attempts to endorse candidates for school boards in southern California. It may be possible in some types of districts such as municipal and public utility districts where there are diverse interests to endorse certain candidates as board members. If the electorate system is to be used as a stepping stone or as a political plum for party members, then we might want to encourage elections; we may not want to use board elections for this purpose.

In order to judge the effectiveness of the current selection process, it may be important to look at how municipal entities relate to today's district boards. Are municipal interests adequately represented? In Utah, a study of conservancy districts demonstrated that the

interests of suburban municipal constituents are having more and more influence on district activities.

In summary, participants agreed that it may be more important to look at board performance than at the process by which board members are selected. However, there does not seem to be general agreement on the criteria for measuring the success of board members.

District Type and Its Relationship to Method of Selection

Participants seemed to agree that we cannot ignore the differences between the various types of irrigation districts. What may be an appropriate method of selection for one district may not fit another. District type is one variable in our formula for governance that influences district performance (see x_2 in the formula for governance, state below).

There are two general types of irrigation districts: (1) special interest districts that represent a narrow constituency -- that of the developer; and (2) community districts that represent all diverse interests in that community -- New Mexico's acequias are one example. We must use caution in labeling districts. Labels may help us determine how a district is functioning at a particular time but districts evolve over time. Therefore, we need to consider the stage of the irrigation district as a separate variable in our formula (represented by, e.g., x_3). Not all districts stay the same and not all survive.

For the purpose of identifying those districts most likely to change their method of governance, it may be more helpful to group or classify districts by the way they function. For

example, in certain stable agricultural areas, districts face little or no pressure to change and they are likely to continue to operate satisfactorily under a one person, one vote election system of governance. At the other end of the spectrum are diverse districts such as the Metropolitan Water District in California wherein the district board is making major decisions that impact many people, both rural and urban. It is in these latter types of districts that reform in their method of governance may be necessary to make them more accountable to their nonagricultural constituents.

We must use caution, however, when we classify districts in this way. We are saying that there are (1) unimportant districts -- those located in rural areas not subject to intense pressures to change as in more diverse districts; and (2) districts in urban areas subject to greater pressures to change. While the unimportant districts are not evolving at this time, they are still performing many functions that may affect those outside of their narrow constituency. They collect taxes, they manage water rights, they oppose environmental legislation, etc. Therefore, we should not underestimate their role because they are an important part of the system.

Potential Changes Affecting Methods of Governance

Maybe our focus should not be on the method of selection of district board members but rather how do we find a mechanism by which the board will be responsive to extra-agricultural interests. That is, what variables do we need to change in order to affect district board performance to make the board more responsive to these other interests.

Here we can refer to our formula for governance: $Y = a + x_1 + x_2 + x_3 + x_4 \ldots x_z$. The Y is district performance. All x's are variables that affect performance. For example, x_1 may represent the form of governance. The form of governance, in turn, can be broken down as follows:

1. Voting
    a. one person, one vote
    b. one landowner, one vote
    c. weighted voting
2. Appointment
    a. judicial
    b. county commissioners
    c. state officials (e.g., Florida, Utah)

So the method of selection of board members is just one of the variables affecting a board's performance. Other variables include the type of irrigation district, external regulation, etc.

Changes in the method of selection: appointment of district boards

If the broad question of the 1990s is how to make districts responsive to members of the intergovernmental community, the method of selection question becomes "Is election the best way to make board members responsible members of the intergovernmental community?".

The preferred method of selection of board members depends on what one is trying to accomplish. One the one hand, it is desireable to have a stable board so they can become educated and be accountable to their constituents, while on the other hand, there is some merit

to periodic change. Property-weighted voting, for example, may not lead to a representative board. Where there is concentrated land ownership, the large owners may become the dominant members of the local political system, and may be the named representative of the local district in state-wide organizations.

If accountability is important then we should consider allowing elected officials to appoint board members in the same manner as the historic appointment of conservancy district board members by elected judges. One problem of elections in multi-purpose districts is that district functions are often obscure to most of the electorate particularly in the urban areas.

It is possible one reason appointments may work is there has not been much need for change, but this situation may be changing. It is too early to tell if the current system of governance is going to work in light of the current climate of change. For example, the marketing of water by rural districts to cities will be a good test as to whether or not the system of appointments in the Northern Colorado Conservancy District is working.

The Missouri Plan also provides an alternative for some irrigation districts. It has previously been used in judicial systems whereby judges are appointed and then must stand for re-election. This suggestion has been made in agricultural coops in the midwest, and public irrigation districts are really just an offshoot of agricultural coops. It is important to consider this analogy because the coop movement understood governance. They had principles of governance; the same principles that informed irrigation districts. These principles spell out the duties of the board members. And it is interesting to note the movement away from one

person / one vote was seen by the agricultural coops as a serious breach to the historical way of cooperative governance.

Not all agree irrigation districts developed out of the agricultural coop movement. While some districts did have several members and formed from communities similar to the coops, some districts developed from special interests groups independent of a community. In these latter districts weighted voting was the preferred method of board member selection.

While there is some uncertainty about the constitutionality of appointment systems, it seemed to be the general consensus there is no problem as long as elected officials make the appointments. A 1925 court case suggests there may be constitutional problems with unelected officials making the appointment. Unelected officials making an appointment does not necessarily present a constitutional problem; it may depend on each state constitution.

There has never been a study undertaken to compare the turnover rate of elected vs. appointed boards, and this might be extracted from the current body of data. Turnover may occur equally with both election and appointment systems. The key factor may be the relationship between the board and the district managers and not the board selection method.

The use of external pressure to change the method of governance

There is not a consensus on the value of relying on external pressures, such as legislation or litigation, to force districts into governance reform. One view envisions the process of board selection and make-up as the driving variables in whether any change,

internally or externally coerced, will be carried out. Another view contends external requirements can force even reluctant boards to achieve desired results. Many believe the ideal solution would be a combination of the two.

The make-up of the board and the process by which they became board members may be a decisive factor in whether the district carries out any state or federal policy and rule. Although the term "make-up" was not clearly defined by the group, it seems to include such attributes as education, attitudes, and social background. To focus only on external pressure may be short-sighted. The problem with the board will continue to surface. Assuming what we want is an expanded mission in areas such as conservation and water quality, the ability of outside institutions to drive this behavior is limited. Many external pressures require voluntary action to some degree, so to this extent we do need to be concerned with district boards. Additionally, once legislation is in place, it will be helpful to determine how the districts think about these issues. Unless the district board can be convinced it is in their interest to do something (i.e. conserve water, clean up the water), they will not do it. The board's perspective can not be divorced from state imposed or external pressures, and local effort is needed to be sure some of the programs are put into effect.

On the other hand, maybe external political pressures are the most important variable in creating a mechanism whereby the board will become more responsive to nonagricultural interests or to statewide water policy (especially that related to conservation and transfer). If this is the accepted view, we should focus not so much on the structure of governance within the district or the make-up of the board but instead on legislation that will in turn put pressure on the district to achieve the desired results. The structure of the board may not make much

difference in achieving results. The structure of the board may be irrelevant to the types of policies we would like to see carried out by the board. One example is Kern County where the county policy against transfer seemed to have more impact on district behavior than did the structure of the board. Perhaps board make-up should be considered secondary to external efforts to create opportunities or broaden existing opportunities for irrigation districts.

Maybe the first step in determining whether external pressure would facilitate change is to identify the source of pressures for district change. If the pressures for change are coming from constituents within the district, then legislation may not be necessary and issues of governance (trustee relationship) will be more important. If the pressures are coming from outsiders who want the board to change, then legislation is definitely needed.

A fundamental element of any water policy is what the districts are to do with the water. Enabling legislation should be examined to determine how legislative bodies deal with the powers granted to or reserved from districts. To what extent do legislators dictate the behavior of the districts, and do they understand they can control the districts.

The concept of ratchet legislation may be adaptable to irrigation districts. As institutions or corporations get larger a greater responsibility is generally imposed by the public. This is done now with cities where responsibilities are imposed without the cities taking any affirmative action. At the same time, the cities are given more power as they get larger and perhaps this idea could be applied to irrigation districts. There could be some process whereby districts would be subject to greater external control as they grow larger or as they assume more responsibility. One form of control may be authorizing a state representative to appoint a

board member. An example of ratchet legislation applied to water districts is California, where water districts are subject to a weighted vote change once they reach a constituency level of 50,000 people.

Other external devices to effect a change in governance

In addition to legislation directly mandating change within districts, there are some types of legislation that might indirectly encourage or foster reform.

Consolidation of districts. Maybe smaller districts should be encouraged to merge into larger multipurpose districts. Because the 1982 Reclamation Reform Act changed the Bureau's previous policy so that the 160 acre limit was applied nationally, it now makes sense to combine districts in a couple of states. However many districts may now feel they have a vested power over land and water they do not want to voluntarily relinquish or dilute. The suggestion was not for the abolition of irrigation districts but rather for consolidation for multiple purpose management. This is another place where it may be important to compare irrigation districts with the historical agricultural co-op. Co-ops have been faced with similar types of issues. At what point does a private cooperative lose its relevance in light of change, or does independence lose its importance in light of change. At what point does a free-standing irrigation district lose its relevance and therefore should be forced to merge into a larger, multiple purpose organization?

Another layer of districts. Some participants felt a likely way to improve the governance function of existing irrigation districts may be to create another layer of special districts rather

Education

In the context of the four topics presented at the workshop, we have talked about the need to educate several different groups. These include legislators, municipal leaders, district boards, district managers, water users and the general public. Some participants felt that the following discussion on educating these groups was too presumptuous on our part and preferred a more general approach that would encourage the sharing of research results with some of these groups by invitation.

1. Legislators. Legislators need to be educated on district functions, district funding sources, and the nature and concept of an irrigation district. Additionally we need to provide legislators with information on a district's role in state water planning and environmental policy. One potential format for assisting legislators is an interstate meeting of about 25 legislators with no more than six legislators from any one state. Another format might be a series of sessions on water policy with irrigation districts as a major component of the program. To elicit legislative interest, such a meeting, may have to be broadened to address the roll of state and local governments in fashioning a coherent state water policy.

2. Municipal officials and irrigation district boards. These two groups should probably be educated together. They could be brought together to share information as well as be educated by a third party. They should be educated primarily about the function and role of each other. The format should be organized meetings set up for the purpose of a sharing of information.

3. District managers and district boards. There was no concluding consensus on the content of district manager/board education. Generally, we need to provide the education or expertise needed to knowledgeably address emerging issues. Earlier discussions focused on educating the board about external political pressures. It was not clear whether the group reached a consensus as to whether district managers and board members should be educated about internal pressures as well. The suggested format is through reading materials, through infiltration of district meetings, and through contact with district consulting engineers. Board members and district managers are more likely to listen to suggestions made through or with the approval of their consulting engineers. In the area of conservation, it was suggested that regional workshops or conferences be held for the benefit of irrigation district management staff with an agenda covering conservation issues.

4. The public. We need to consider public education because we cannot overlook the long term effect of public awareness. Maybe special institutes should be set up to make people more aware of the issues and the problem. Some districts are doing this now and it could be expanded.[4] Public education may be promoted at various levels. We should incorporate this type of education into schools at a very early grade level.

Although the public does not yet seem concerned about what irrigation districts can be doing, we need to get through to the public on what the irrigations *should* be doing before we get to the issue of improving district accountability. There is a public stirring on some of these issues and maybe it doesn't matter whether those within the district or outside the district care

[4] There is a district in Julesburg, Colorado that could provide an example.

at this time. Even in community districts where water is close to the day to day lives of the people, apathy is prevalent. Regardless, we should be reaching the public in terms of education on these issues.

Legislation

The type of legislation needed will depend on the identified objective. We first need to agree on what districts should be doing; we need to define this more specifically. We probably could agree on some basic goals such as districts should comply with environmental laws. Assuming the following types of legislation are consistent with our objectives, the state could adopt laws to force change such as: (1) require that districts within x number of years, will consider conservation, etc., or hold hearings, etc., on these issues; (2) create a presumption that irrigation districts can conserve water and require them to report back to the state if they determine that corrective action is not needed; (3) broaden the authority of irrigation districts to require them to consider issues such as conservation, water quality, etc., while not necessarily requiring them to take any specific action on these issues; (4) require broader representation on the district board; (5) empower district to decide if it wants an elected or an appointed board; and (6) use financing powers as an incentive to effect change, and address the issue of profits from water transfers.

Aside from legislation directed at the irrigation districts, a state should clarify concepts to help put changes into effect. For example, changing the definition of beneficial use and permitting the transferability of salvaged water; since districts in some states (e.g., California and Colorado) control much water use, such legislation will, in effect, be aimed at them.. And in

furtherance of our objective of public awareness, legislation would be enacted to require education in schools on water issues, environmental education, etc. Finally, the state should consider creating statewide superdistricts to address conservation, regional planning and other issues, and possibly a statewide irrigation efficiency commission.

Work at the Local Level

Local initiatives could be undertaken to facilitate an exchange of information among diverse interest groups, to educate, and to provide technical assistance and financial incentives to irrigation districts. The following ideas are illustrative.

- coordinate local leader meetings to bring together mayors, city leaders and district board members for an exchange of information and to define their respective duties, responsibilities and concerns;
- sponsor a series of discussions between the local groups and the irrigation district;
- form a group to provide assistance to reform candidates who want to run for district boards;
- initiate litigation to force irrigation districts to accomplish change and to provide the impetus for change (it was also suggested that this could be done through administrative appeals); and
- provide financial assistance to irrigation districts in the way of loans or grants in order to give them the incentive to implement some conservation measures, water quality cleanup, etc.

- facilitate or broker water transfers between rural, urban, and environmental interests to create "success stories" on the ground, flesh out potential barriers to transfers and conservation through this process.

- [END] -