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**TRANSFERRING WATER RIGHTS IN THE
WESTERN STATES--A COMPARISON OF
POLICIES AND PROCEDURES**

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February, 1989

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Information provided on state and federal policies is up-to-date as of 1988. New water transfer legislation and administrative policies are being considered in several states and individuals should check with the appropriate agency for changes in transfer policies and procedures. Federal and state agency contacts are listed in Appendices One and Two.

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TRANSFERRING WATER RIGHTS IN THE WESTERN STATES—A COMPARISON OF POLICIES AND PROCEDURES

I. INTRODUCTION

The transfer of water rights is becoming a common event in much of the arid West. Economic development, population growth in urban areas, and changing attitudes about the environment have created pressures for the transfer of water resources from agricultural uses for municipal, industrial, recreational and ecological purposes. Voluntary transfers of water rights enhance flexibility of water use and allow responsiveness to drought, changing economic conditions and new values related to water instream. Water transfers also raise concerns about damage to other water right holders, adverse effects on areas from which the water is taken, impaired water quality, and preservation of fish, wildlife and recreational opportunities. The complexities of the water reallocation process demand innovative responses. Policymakers are struggling to balance the benefits of flexibility and responsiveness that transfers can bring to the water reallocation process against the need to safeguard important but vulnerable interests unprotected by the market mechanism.

Many transfers require approval of a formal application for a change in the purpose and place of use of a water right. Change applications normally are evaluated by an administrative unit — a department of water resources or state engineer's office if the water right is under the jurisdiction of the state, a water district governing board for transfer within district boundaries, or the Bureau of Reclamation for transfers involving changes in use of federal project water.

The procedures involved in obtaining approval for changes in the place or purpose of use of water rights can be complicated and time-consuming. The complexity of these procedures and the uncertainty regarding whether a transfer will be approved can prove costly for parties involved in the water right application. At the same time, formal approval

processes can provide an arena in which concerns regarding proposed transfers may be addressed. Statutes and case law provide criteria by which transfers can be evaluated. Foremost among the potential transfer impacts considered in most approval processes is impairment of other water right holders. In some states, transfer approval procedures provide a forum in which other concerns can be expressed, such as impacts on local economies and effects on recreation, fish and wildlife.

This publication outlines the procedures involved in evaluating water right change applications in the eight western states shown in Figure 1. The purpose of this study is to describe the process and identify the concerns addressed in state water transfer approval procedures. This information should be helpful to those involved in water transfers in the western United States. Key differences among state processes are highlighted in Section IV of this publication and are summarized in Tables 1-5. These comparisons can assist state and federal policymakers and researchers in identifying and implementing lower-cost and more effective water transfer procedures. Ideas for introducing more flexibility and incorporating broader interests into the transfer process are summarized in Section VI of this document.

Transfers that involve water under contract from the U.S. Bureau of Reclamation or that would otherwise use facilities constructed by the Bureau normally need approval of the Bureau's contracting officer. Approval criteria and procedures for such transfers are discussed in Section V of this volume.

This publication focuses on changes in the use of water rights held under state law. Many transfers are not required to go through the state agency approval process. Transfers occurring within the service area of irrigation districts, mutual irrigation companies, and water conservancy districts may not require state administrative approval, especially if the water will be put to a use already authorized for district water. Although there is usually no state approval required, the individual water service organizations often have their own

Figure 1. Transfer Procedures Study Area



administrative procedures. This study does not investigate those procedures, which vary considerably among organizations.

Transfers involving Native American water rights vary a great deal in the type of approval procedures required. Depending on the nature of the tribal rights and pre-existing court decrees or settlements, the Department of Interior and the state water agency may be involved, in addition to the tribal governing body and other water user organizations in the area. This study does not discuss transfers involving Indian water rights. Interested readers may refer to a list of references provided in Appendix Four for material on transfers of Indian water. Interstate transfers of water are not discussed in this document and background materials on these types of transfers are also listed in Appendix Four.

II. OVERVIEW OF STEPS IN THE STATE WATER TRANSFER PROCESS

While the procedures and criteria to transfer a water right are somewhat different in each of the states, some aspects of the process are common to all eight states. This section of the report provides an overview of state water transfer processes. Figure 2 provides an outline of the general steps followed in the processing of transfer applications. In most states, there are four types of changes for which one can apply regarding a water right. These are a change in (1) nature or purpose of use, (2) place of use, (3) point of diversion, and (4) season of use. These types of changes are not mutually exclusive. These four aspects of a water right can be simultaneously changed in any combination. This study focuses primarily on those applications which seek to alter the purpose of use of a water right from irrigated agriculture to a non-irrigation use. Transfers of water out of agricultural uses are generating substantial controversy in many western states. A change from irrigation to non-irrigation can be done in conjunction with a change in place of use, point of diversion, and/or season of use.

Filing Application

The first step in the transfer process is the filing of an application. This filing is

performed through the state agency responsible for handling changes in water rights. The appropriate agencies for each state are listed in Table 1, located in Section IV of this document. The application is usually submitted on a form provided by the agency, along with required supplementary information. Supplementary information requirements vary among the individual states, but normally include such items as maps, surveys, and records indicating historical use of the water right.

Depending on the complexity of the information required, applicants may retain the services of various consultants to aid in preparation of the application. Professionals most often consulted are attorneys, engineers, and surveyors. If consultants are retained at this stage, they typically assume the duties involved in moving the application through the state agency process.

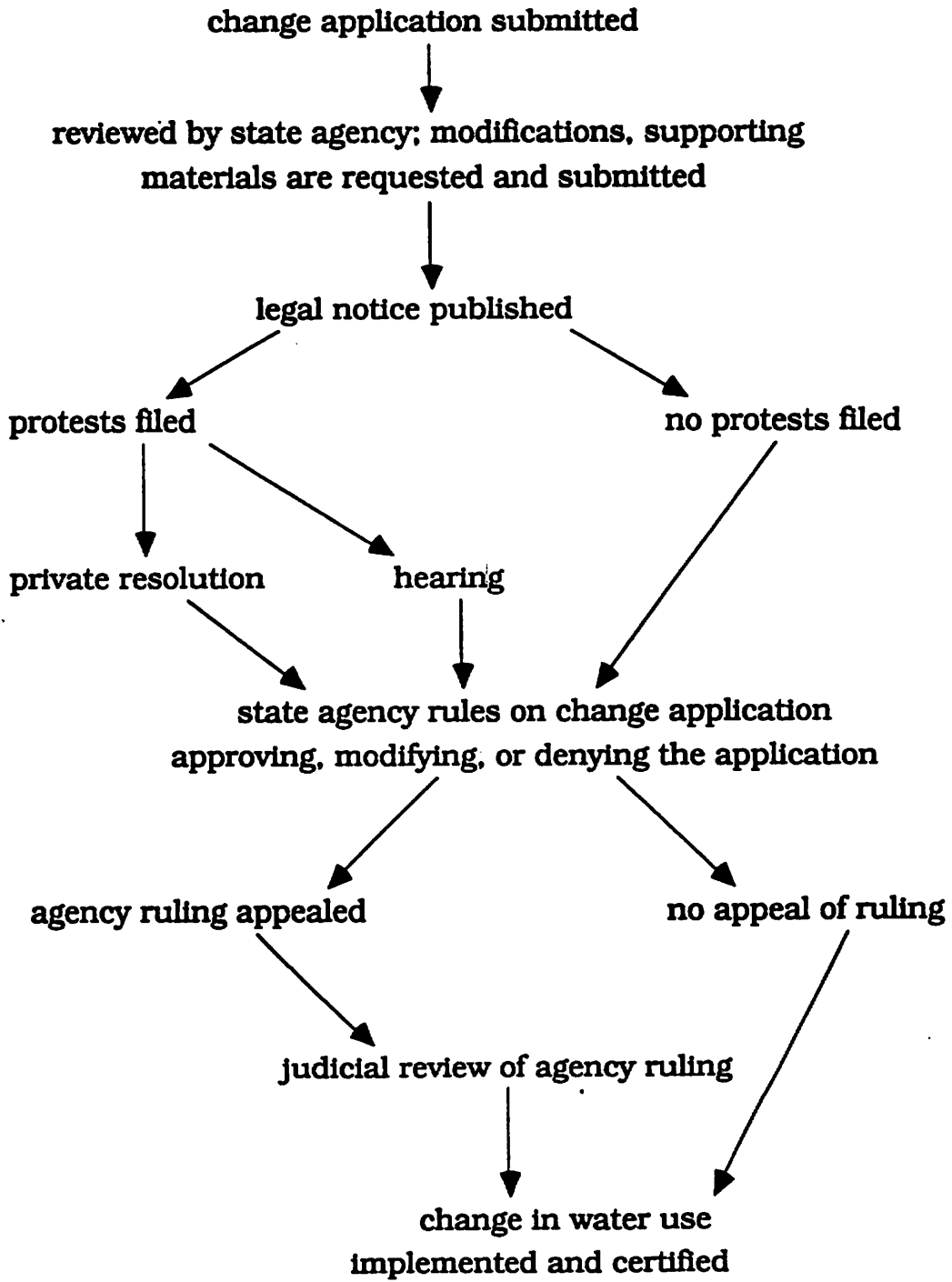
Filing fees typically must be paid when the application is submitted. States set fees as a flat rate or based on the quantity of water involved in the change. Application fees are usually a small portion of the overall costs to applicants for water transfers. These fees vary between states and are summarized in Table 1.

Processing Application

Once submitted, the application is reviewed by the state agency staff. The application and supporting documents are checked for accuracy, completeness, and consistency with the records on the water right maintained by the state agency. This is done either in a local agency field office or at the central agency headquarters. (Regional administrative units within each states' water agency are shown on maps provided in Section III of this document.) Incomplete or inaccurate applications are typically returned to the applicant for revision and resubmission.

Public Notice

All states require some form of public notice that an application has been filed in order to alert those parties who might have an interest in the outcome of the transfer. Typically, this is achieved by publishing a notice in

Figure 2. Change of Water Right Process

a newspaper of general circulation in the counties affected by the transfer. The frequency and duration of publication required vary by state, and are summarized in Table 1.

The cost of publication can be substantial. States vary in how this cost is paid. In some states, the applicant is required to directly pay the cost of publishing. In most states, however, this expense is considered to be included in the filing fee paid by the applicant at the time of submission. In these instances, the state agency pays the newspaper.

In addition to newspaper publication, some states have requirements that specific individuals be notified of the proposed change. These can include county commissioners, holders of adjacent water rights, water service organizations in affected areas, and local water officials. Satisfaction of these public notice statutes is required prior to further processing of the change application.

Filing Protests

There are often individuals and organizations who believe their interests may be adversely affected by the change in water use and who object to its approval. The most common and widely-accepted basis for filing a protest is impairment of existing water rights. However, in some states protests may be filed on other grounds based on public interest provisions stemming from case law or legislation.

Protesting parties can state their objections in a variety of ways. Some states allow for protestants to simply appear at the agency hearing and voice their opinions. It is more common for states to require that objectors file a formal written protest with the agency. Although some states provide a standard form on which protests may be filed, any written protest is generally acceptable.

Protestants may hire attorneys or engineers to assist in the formulation of their protest. In some states, the increasing complexity of the process has made it more common for protestants to hire an attorney and other outside consultants to provide legal,

engineering, and hydrologic expertise substantiating their objection.

Processing Protests

The steps involved in processing a filed protest by the state agency are similar to those involved in processing the initial application. Protests are submitted either to the state agency headquarters or to a local field office.

The protest is checked for accuracy and completeness. In addition, some states impose specific requirements to gain standing to file a valid protest. The most common of these requirements is that the protestant be a holder of water rights in an area affected by the proposed transfer. This precludes filing of protests by interests who do not hold water rights and thus limits the types of concerns which may be expressed through the formal protest mechanism. This requirement is statutory in some states, is a matter of administrative policy in some other states and is not present in others. Table 2, in Section IV of this document, summarizes criteria for standing to file a protest in the various states.

Resolving Protests

The next step in most states is resolution of filed protests. Table 2 compares procedures in the eight states related to filing and resolution of protests. This can be an important and costly part of the transfer process. Progress in obtaining a decision regarding the change in water use application can be significantly delayed during this stage. This is also the stage which can provide a forum for third parties to voice their concerns and influence the state agency review process. Although there are some innovative approaches to resolving disputes between applicants and protestants, there are two primary alternatives in the study states. These are: private resolution among the parties and a hearing by the state agency.

Private Resolution

Private resolution involves some form of negotiation between or on behalf of the

applicant and objecting parties. This can take place either with or without the assistance of the state agency staff. Some states actively facilitate negotiation and agreement among the parties while others simply provide the names and phone numbers of each party involved. In some areas, state agency staff will arrange for an informal meeting between the applicant and protestants.

Informal private resolution of conflicts between applicant and protestants is usually the least expensive and swiftest alternative for resolving protests. While the parties may incur attorney's fees if they retain counsel to negotiate on their behalf, often there is little expense incurred by the parties or the state agency. Should privately negotiated resolution not be successful, the remaining alternative is typically a hearing by the state agency.

Hearing

Agency hearings can be as informal as a meeting with the local agency staffperson and the parties at the site of the proposed transfer, or as formal as a judicial proceeding in which both parties are represented by counsel and witnesses are under oath. The location, formality, and timeliness of the hearing can greatly influence the cumulative expenses incurred by applicant and protestants, as well as the time state agency staff must devote to preparation for and appearance at the hearing.

Agencies in some states have the option of holding the hearing in a formal or informal manner. This flexibility allows the formality of the process to vary with the complexity of the particular case and the number of protestants. Satisfactory resolution is communicated to the state agency by the objectors' formally withdrawing their protest or by submission of the written agreement reached by the parties. If the agreement involves a modification in the change of water use application, the new proposal must be reevaluated by the state agency.

Hearings range in length from a few hours to many weeks. Both the applicant and protestants, or their representatives, typically attend the hearing. Parties are often repre-

sented by legal counsel and supported by expert witnesses prepared to substantiate their claims.

Ruling

Following the conclusion of the hearing, a decision must be rendered by the hearing officer. The hearing officer is usually an official of the state administrative agency. The form of the ruling can vary by state, but the outcome is typically confined to (1) approval of the transfer as requested on the application, (2) approval of the transfer subject to modifications necessary to satisfy concerns brought forward by protestants and agency staff, or (3) denial of the application.

Several states have statutes, administrative policies or case law that specifically define the criteria by which transfer applications shall be judged. Table 3, in Section IV, summarizes criteria considered in each state. These criteria can include such standards as (1) non-impairment of existing water rights, (2) non-enlargement of subject water rights, or (3) consistency with the public interest. "Public interest" is specifically defined in only a few states and is not a recognized criterion by which transfers may be evaluated in some states. The application is evaluated based on applicable criteria using information set forth in the agency hearing, the change application, and protests filed. The ruling is provided in written form to the applicant and protestants. In some states, the state agency must provide a ruling within a specific time period following the hearing on the application, as summarized in Table 3.

Appeal of Ruling

Parties who are dissatisfied with the decision of the state agency have the opportunity to appeal the ruling. Typically, these appeals are handled through the district or appellate levels of the state court system, but sometimes they must be addressed within the administrative agency prior to going to the judicial system. There is normally a statutory time limit within which a party may appeal the decision. These time limits are shown in Table 3. If the individual is not satisfied with the outcome of the initial appeal, a second appeal

is often possible. The highest level of appeal for state agency rulings is usually the state supreme court.

Proving Up/Certifying Change

Upon state agency approval of a transfer application, the applicant must typically take steps to show diligence in pursuit of the change for which they applied and to show compliance with any conditions imposed on the change in purpose or place of use. These steps may include construction of diversion works, modifications in quantity or timing of diversions, and other steps necessary to effect the transfer. Several states have statutory limits on the amount of time within which these steps must be taken and the nature of the inspection necessary to satisfy the administrative agency that the change was implemented as required at the time of approval. These time limitations and rules regarding extensions are summarized in Table 3.

III. SPECIAL PROCEDURAL ASPECTS IN EACH STATE

The preceding section provided a general outline of the state agency transfer evaluation process. This section examines specific procedures and requirements in the eight states surveyed.

In addition to procedural differences and differences in the criteria that must be satisfied for an application to be approved, the terminology used to describe the individual parties and steps in the process also differs among the states. This section will note these differences when they arise. (Terminology is also summarized in Table 1.)

New Mexico

There has been significant water transfer activity in New Mexico for several decades. (See Saliba and Bush, 1987 and Water Market Update Vol. 1-2, 1987-1988 for more information on water marketing in New Mexico). The chief water rights management agency in New Mexico is the State Engineer's Office. The state engineer is responsible for the allocation, distribution, and administration of surface

water and most groundwater within New Mexico. (N.M Stat. Ann. §72-12-1 (1978)) The state engineer can declare a groundwater basin and assume jurisdiction over the appropriation and use of water if he finds their boundaries are reasonably acceptable. (N.M. Stat. Ann. §72-12-1, 72-12-12 (1978)) Presently, about 70% of the state has been declared. District offices of the State Engineer's Office that administer declared groundwater basins are shown in Figure 3. Groundwater basin boundaries indicated in Figure 3 which contain no district office are undeclared basins. The central office which administers all of the state's surface water is located in the capital, Santa Fe.

The terminology used in New Mexico is quite similar to the general language described above. The party filing the application to transfer is termed the applicant. Those filing protests are referred to as protestants.

Filing Application

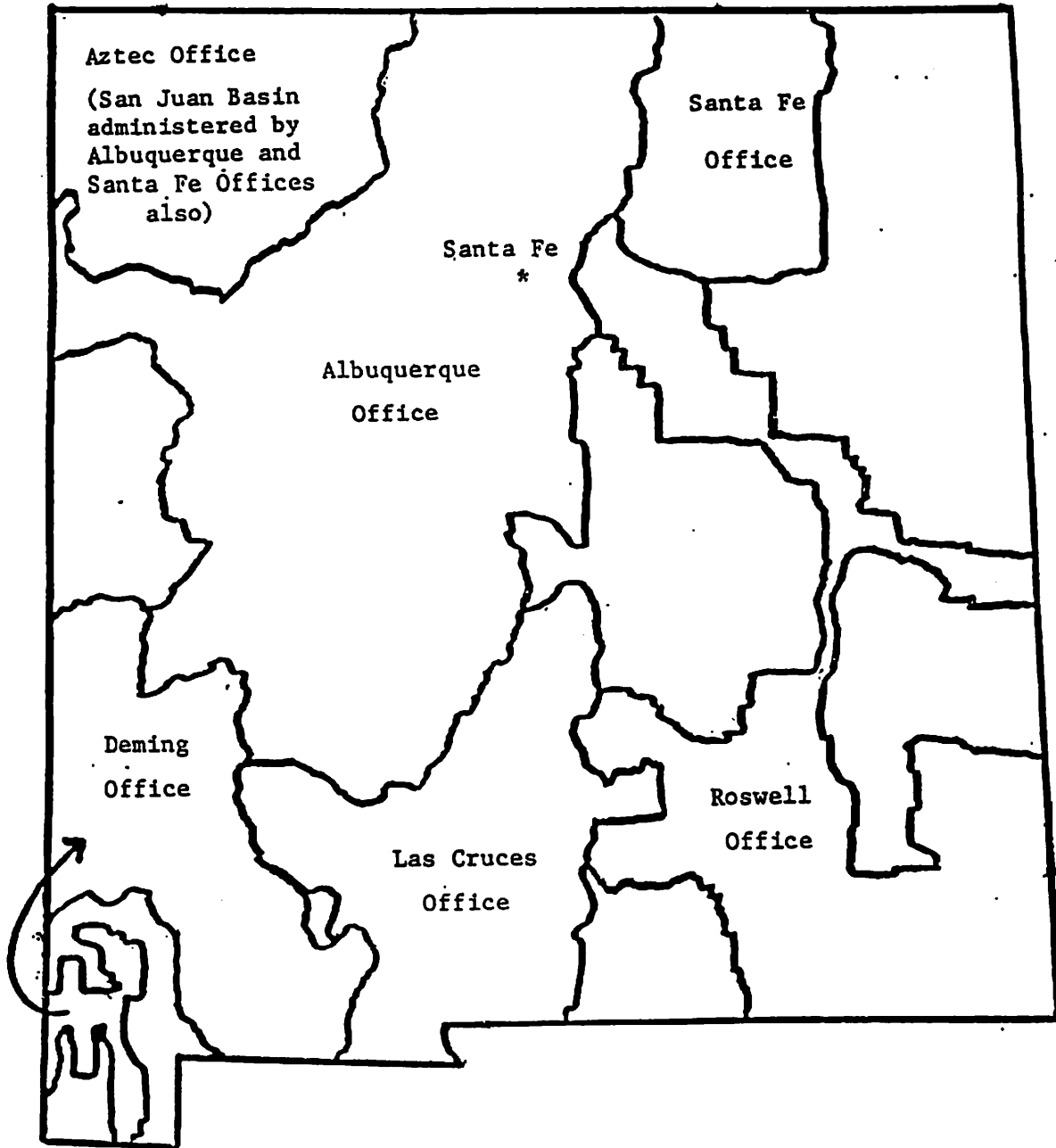
The filing process in New Mexico is relatively simple. The applicant must submit an application form to the State Engineer's Office, along with the required fee. (New Mexico Groundwater Rules and Regulations, Article 2-3 (1966)) The fee for change in point of diversion and place or purpose of use of surface water or groundwater is \$5.

The state engineer sometimes asks for a well-log to support groundwater applications. (Fleming, 1987) Transfer applications are sometimes, but not typically, accompanied by supporting documents such as legal and engineering reports. When submitted, these are usually prepared by hired outside consultants.

Processing Application

The state engineer's staff in the Water Rights Division processes the application by checking the accuracy of information given on the form. This check is focused particularly on the description of the water right as compared to the Division records. The staff may request additional information from the applicant, set up meetings or field inspections to clarify discrepancies, and require modifications and

Figure 3. New Mexico State Engineer District Offices



corrections in the application prior to acceptance for filing and subsequent processing.

Public Notice

After the application is accepted for filing, staff prepares a legal notice for the applicant describing the proposed transfer, based on the information provided on the application. The applicant must then publish this legal notice once a week for three consecutive weeks in a paper "in general circulation" in the county of (1) the proposed appropriation for groundwater or (2) the stream system for surface water. (N.M. Stat. Ann. §75-2-23, 72-12-7 (1978))

The determination of which newspapers are considered "in general circulation" for a particular area is made by the state attorney general, not the state engineer. The Albuquerque Journal is frequently used. There have been situations in which public notice has been made in the Albuquerque newspaper but not in the local paper and local interests have attempted, unsuccessfully, to require that the process begin again with publication in a local paper and the subsequent opportunity to file a protest. The state engineer has never extended the protest period on the basis of insufficient notice. (White, 1987)

Filing Protests

Interested parties then have an opportunity to file protests. A protest must be filed with the state engineer within ten days of the last date of publication. There is no form provided for protests. The protestant simply writes a letter to the state engineer communicating an objection to the transfer and the reason for that objection. There is no fee required to file a protest. (New Mexico Groundwater Rules and Regulations, Article 2-7 (1966))

Processing Protests

The state engineer must determine if the protest is timely. The staff will require an affidavit from the applicant and the newspaper indicating the publication dates. Protests not filed within ten days after the last date of publication are not timely but are made a part of the record.

There are three legally recognized reasons for filing a protest in New Mexico : (1) impairment of protestant's water rights, (2) detriment to the public welfare, and (3) detriment to water conservation within the state. Any person, firm, or corporation has standing to file protest if approval of the application would impair their water right. As a matter of administrative policy, any party whose water right could possibly be impaired has standing. (N.M. Stat. Ann. §72-12-3.D and 7.A (1978); White, 1987) Timely protests filed on the basis of impairment are dismissed on the basis of no standing if the protestant holds no water rights.

A protestant who holds a water right can file a protest on the basis of impairment and violation of conservation and public policy, irrespective of how substantial the impact may be. (New Mexico Groundwater Rules and Regulations, Article 2-8 (1966)) New Mexico law has yet to define how a party who does not hold water rights can gain standing through protest using the public welfare or conservation criteria (Stone, 1988) The state engineer determines whether the protestant demonstrates substantial and specific effects and thus has a valid basis for filing a protest.

If the protest is timely and otherwise in order, the state engineer's staff notifies the applicant and protestant by certified mail that a protest has been filed, providing the names and addresses of the parties involved. This exchange of information is to provide opportunity for negotiation between the applicant and protestant prior to further processing of the application by the state agency.

Resolving Protests

There are three methods available for resolution of protests. These are (1) private resolution between the parties, which is formally communicated by a waiver of impairment filed with the state engineer, (2) a formal hearing, and (3) a denial of the application due to lack of response by the applicant.

1. Private Resolution. In this instance, the parties negotiate privately; the state engineer's office is not involved in the negotiations or enforcement of the resulting agreement. However, if the agreement involves a modifica-

tion in the proposed transfer, this can be incorporated into the transfer process as a condition of application approval. Any agreements not involving water are not under the jurisdiction of the state engineer. (White, 1987)

Upon final agreement, the protestant indicates resolution of the conflict by signing a withdrawal of protest which removes the protest as an impediment to the transfer. The withdrawal of the protest does not prevent the state engineer from denying the application on the basis of impairment of other water rights, even if those parties did not file a protest. (White, 1987)

2. Hearing. If the protest is not privately resolved, the applicant must file a letter with the State Engineer requesting a hearing. (New Mexico Groundwater Rules and Regulations, Article 3-1 (1966)) The state engineer then sends notice to the parties by certified mail that a request for hearing has been filed and a hearing date set. The state engineer is allowed by statute to limit the issues which can be heard at the hearing. If so, a written order must be sent to the parties at least five days prior to the hearing date. This order must outline the issues which will not be heard. (New Mexico Groundwater Rules and Regulations, Article 3-4 (1966))

A \$300 hearing deposit is required from each party, usually within 30 days before the hearing date. Failure to submit this deposit in a timely manner results in denial of the application (if the applicant does not submit deposit) or dismissal of the protest (if the protestant does not submit deposit). This deposit is based on a statutory requirement that the parties must cover "all costs and expenses associated with the hearing". In practice, this has meant that participants must pay the hearing examiner's per-diem and travel costs and court reporter appearance fees.

The hearings are held in the county in which the proposed transfer would occur. A court reporter is normally present, but transcripts are not ordered unless the decision of the state engineer is appealed. A typical hearing lasts one day, but complicated cases may take several weeks. (White, 1987)

The state engineer designates hearing examiners, usually from among agency staff. There are generally three classes of parties present at the hearing: (1) the applicant, (2) the protestants, and (3) the state engineer's staff appointed as expert witnesses by the hearing examiner. The staff witnesses present relevant evidence for fact-finding to ensure a complete record. Until the mid-1980s, attorneys from the state engineer's office were routinely present at hearings. In order to make it clear that the state is not a party to the hearing process state engineer's office attorneys are no longer typically present. The applicant and protestant each present evidence and cross-examine witnesses.

3. No Action by Applicant. If the protest is not privately resolved and the applicant does not request a hearing, the state engineer notifies the applicant that some action must be taken within 30 days after receipt of the protest notification or the application will be denied. However, some unusually complicated or sensitive protested applications are still pending from the 1970's, even though the applicant has not requested a hearing and the protest has not been resolved. In unusual cases, the state engineer is reluctant to deny the application and has allowed the process to remain open. These lingering cases have resulted in some complications. Therefore, it has recently become the state engineer's informal policy that applications are dismissed after two years of no action by the applicant. (White, 1987)

Decision

The state engineer is required to make findings and rule on the transfer application. The ruling is usually prepared by the hearing examiner, if there was a hearing. If no hearing took place, the ruling is prepared by the state engineer and his staff. The decision is sent out to parties of record by certified mail.

The criteria which must be considered are not clearly defined for change applications. There are, however, statutory criteria for new appropriations or changes of existing rights from surface water to groundwater or vice versa. These are: (1) Is water available for the new appropriation or transfer? (2) Would granting the application impair existing rights?

(3) Would granting be contrary to conservation of water in the state? (4) Would granting be detrimental to the public welfare of the state? (N.M. Stat. Ann. §72-12-3 (groundwater) and §72-5-5 (surface water) (1978)) Some applications are denied, even without a protest, on the basis of impairment. Public interest and conservation criteria have not yet been used to deny unprotested applications. (White, 1987)

A crucial issue which must be outlined in the ruling is the quantity of water which the applicant is allowed to transfer. This is determined in various ways. The transferrable quantity in fully-appropriated stream systems is the amount historically available in the stream multiplied by the consumptive use duty. In adjudicated areas, the transferrable quantity has been determined by the court.

In non-adjudicated areas, the transferrable quantity from agricultural uses is based on consumptive use studies published by New Mexico State University. (Blaney and Hanson, 1965) A 1985 New Mexico Supreme Court case involved an applicant who challenged the use of the agricultural consumptive use presumptions. The applicant argued that his soils, cropping pattern, and hydrologic formations were atypical. However, the court ruled that these consumptive use figures used by the state engineer are reasonable and that right holders may not challenge on the basis that their consumptive use differs from the typical basin irrigation and cropping practices. (State of New Mexico, ex rel. Reynolds, and Pecos Valley Artesian Conservancy District v. Forest Niccum and Rose Ranch, Inc., d.b.a Hondo Ranch, 102 N.M. 330, 695 P.2d 480 (1985))

For non-irrigation uses, consumptive use is determined on a case-by-case basis. The applicant typically presents evidence documenting consumptive use and the agency technical staff checks to see if the applicant's figures are reasonable. If the claim is unreasonable, inadequately documented or disputed by protestants, the state engineer can require additional studies by the applicant. The burden of proof is on the applicant to demonstrate historic consumptive use to the satisfaction of the state engineer. (White, 1987)

Appeal of Decision

Parties have 30 days after receipt of the state engineer's ruling to appeal to the district court that has jurisdiction over the location where the change was intended. The appellant must serve notice of appeal to the state engineer, district court, and to all other parties involved. (Stone, 1987) The state engineer's office is a party to the appeal Proceedings in the role of defending the decision.

If the state engineer denies an application that was never protested, an administrative hearing must be held before the applicant can appeal to district court. This is required because statutes prevent the district courts from examining questions not already examined by the administrative agency. Reversals could occur following presentation of new information, but are very rare. (White, 1987)

Less than half of the decisions of the state engineer are appealed. The appeal process is de novo and involves a repeat of the administrative hearing process in its entirety (i.e. pretrial hearings, discovery, etc.) as well as presentation of any new evidence not previously provided. The length of the appeal process can vary greatly, depending on the complexity of the case and the number of the parties involved. The appeal process itself may take from six months to over two years. (Stone, 1987)

Proving Up/Certifying the Transfer

Following approval of a transfer, the applicant will take steps to affect the change. If, however, the state engineer's approval is being appealed, the applicant takes these steps at his own risk.

To signify final approval of the application, the state engineer issues a permit which authorizes permission to proceed with the transfer. The user usually has four years to apply water to beneficial use under the conditions outlined in the permit and certify such use. Certification involves the filing of a Proof of Application of Water to Beneficial Use on behalf of the permittee. The certificate indicates that water works have been constructed

and use commenced under the terms of the permit. If the permittee fails to certify, the permit may be cancelled for failure to comply in a timely manner with the conditions of approval of the permit and rules and regulations of the state engineer. One year extensions may be filed with the state engineer. (N.M. Stat. Ann. §72-5-14, 72-12-8 (1978))

Once beneficial use is certified, the state engineer issues a license. This is the final document in the transfer process, recognizing beneficial use under the terms of the permit. (White, 1987) Figure 4 summarizes the change of water rights process as it is administered in the State of New Mexico.

Utah

Water transfers in Utah have become quite common. (Water marketing in Utah is described in Water Market Update, Vol.1-2, and Saliba and Bush, 1987) Transfer activity is especially active in the greater Salt Lake City area. The Division of Water Rights is the main governmental entity in Utah involved with the transfer of water rights and is responsible for overseeing the state's water resources. The Division is headed by the state engineer, who is appointed by the Governor. The appropriations section of the Division is most heavily involved in the change process.

The language used in Utah water transfer procedures is similar to that used in New Mexico. The individual seeking a change in purpose of use is termed the applicant. Those objecting to a proposed change are referred to as protestants.

Filing Application

Applicants must file an application with the state engineer. Supporting documentation is sometimes submitted, but is not always required. A person who attempts to change the point of diversion, place, or purpose of use of a water right in Utah without permission of the state engineer obtains no right, and is guilty of a misdemeanor. (Utah Code Ann. §73-3-3(a) (1953); Lasson v. Seely, 120 Utah 697, 238 P.2d 418 (1951)) Fees for all types of changes are based on a charge per

acre-foot requested to be transferred. The scale ranges from \$30 for a transfer involving less than 20 acre-feet to \$450 for any request for greater than 12,000 acre-feet. Information on the application must include (1) the applicant's name, (2) a description of the water right, (3) the quantity of water involved, (4) the water source, (5) the current and proposed point of diversion, place, purpose, extent of use. (USDI Geological Survey, 1988)

Processing Application

All change applications are submitted to the area offices of the Division of Water Rights. There are seven area offices, each with an area engineer, as shown in Figure 5. The area office staff checks the accuracy and completeness of the factual information provided on the application. The application is then forwarded to the appropriations section in Salt Lake City for publishing and further processing. Extremely complicated applications can be routed directly from the area office to the special investigations section in Salt Lake City.

Public Notice

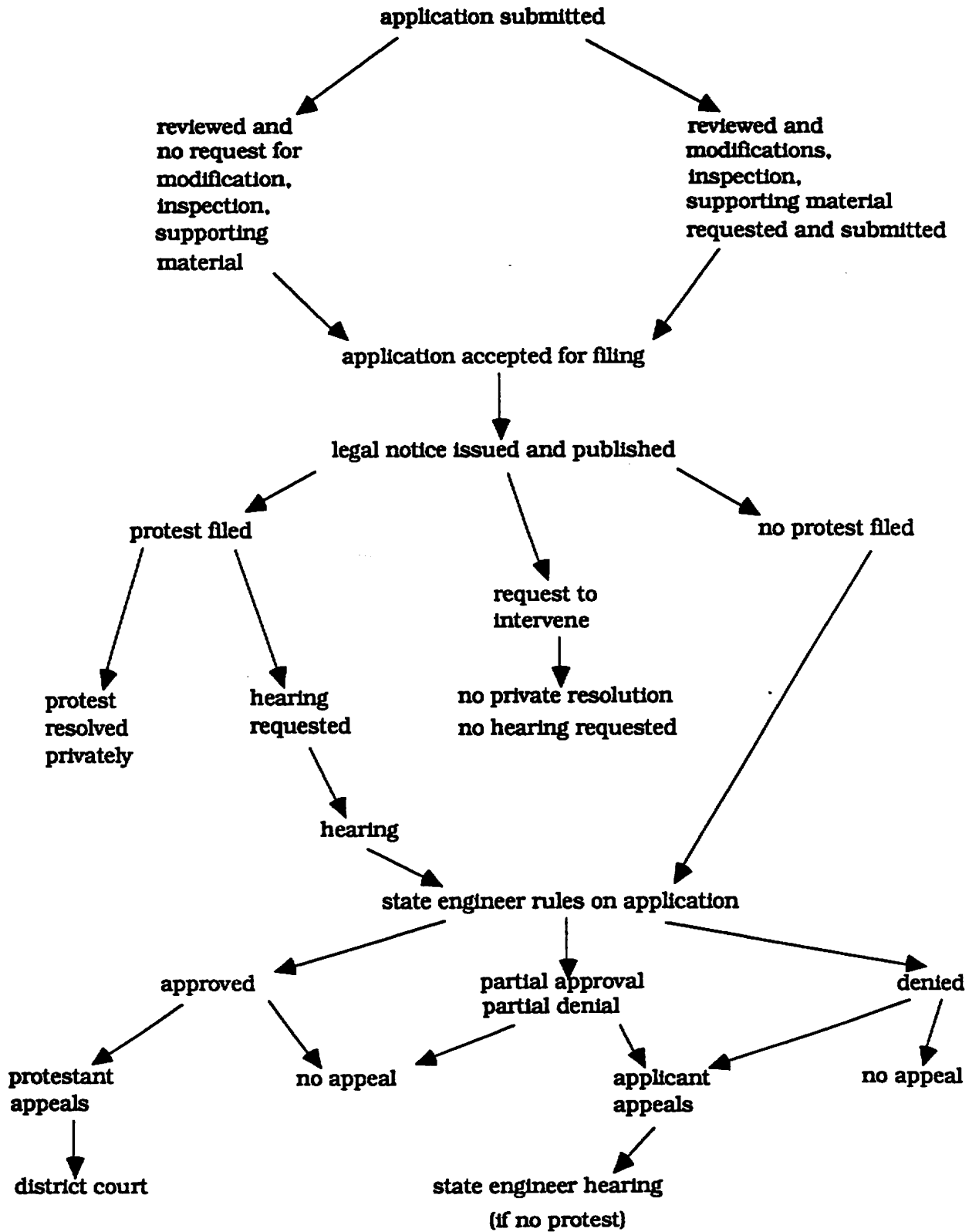
Notice of the proposed change must be published once a week for three weeks in a newspaper published in the county in which the water is to be diverted. (Utah Code Ann. §73-3-3(1) (1953)) In practice, notice is also published in other papers which the state engineer's staff feels are relevant.

The cost of publication varies with the complexity of the change. Costs can range from \$40 to over \$500. The State Engineer's Office does not bill the applicants for the cost of publication. This expense is deemed to be a part of the application fee paid at the time of submission. The fees paid, however, are seldom enough to fully cover even the cost of publication. (Jones, 1988)

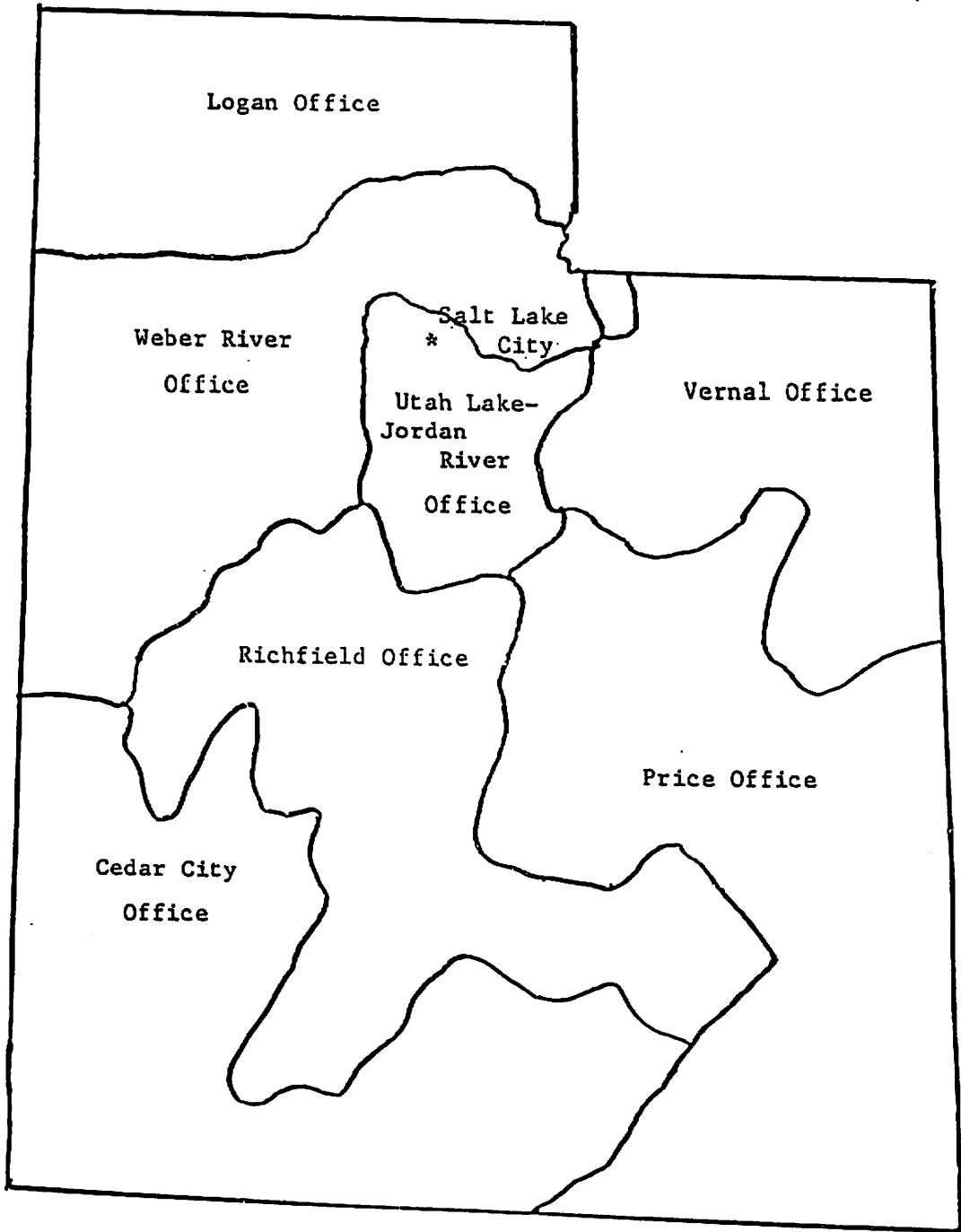
Filing Protests

Protestants have 30 days following the last date of publication in which to file a protest. (Utah Code Ann. §73-3-7(1) (1953)) A standard form is available on which to file a protest, but it is not required that it be used.

Figure 4. New Mexico Change of Water Right Process



**Figure 5. Administrative Areas, Utah
Division of Water Rights**



Most protests are filed as a letter from the protestant to the state engineer.

Processing Protests

The protest is processed by the appropriations staff in Salt Lake City. Copies of the protest are forwarded to the applicant.

Resolving Protests

The applicant has 30 days to respond to the protest. The applicant often contacts the protestant in order to negotiate privately. If the protestant withdraws the protest, there is no hearing. If the protest is not withdrawn, a hearing is held if requested at the end of 30 days. The state engineer may, at his discretion, hold a hearing on applications where there is no protest or a hearing is not requested.

The hearing is generally held in the county in which the proposed change would occur. There are normally two dates per year set aside for hearings in most counties. Hearings are held more often in the Salt Lake City area, due to the larger number of applications. Hearings are typically informal, generally lasting 1-2 hours. While there is not typically a court reporter present, the proceedings are normally taped. (Jones, 1988)

The area engineer or his assistant is generally present along with a representative for the appropriations engineer. No attorney for the Division of Water Rights is present in most cases.

The applicant presents their statement, often accompanied by a statement from the applicant's attorney and engineers. The protestant(s) will then question the applicant and present their objections. The burden of proof regarding non-impairment lies with the applicant.

Ruling

After the hearing, the area engineer and appropriations engineer formulate a recommendation to the state engineer for action. The criteria used for evaluating change applications is limited to whether the proposed

change will impair any vested water right. (Utah Code Ann. §73-3-3(2)(b) (1953))

The application is not necessarily denied if impairment is found. The hearing officer can allow the change and require mitigation conditions or compensation for the aggrieved parties. (Tanner v. Humphrey, 87 Utah 162, 48 P.2d 484 (1985))

A major issue in the ruling is the determination of transferrable quantity. This quantity is evaluated based on an examination of historical diversion records and projected impacts on the stream system. The applicant is not required to submit consumptive use studies. State engineer's staff make the determination, relying on past decisions and their knowledge of the area.

The Utah Division of Wildlife Resources can enter the process as a protestant and make recommendations regarding the proposed transfer. This Division generally negotiates with the applicant for instream flow standards, which may be included as a condition on the change approval. (Utah Code Ann. §73-3-3 (1953); Jensen, 1987) Though Utah statutes recognize public welfare as criterion for State Engineer rulings on water transfers, negotiated settlements have provided a more useful form for incorporation of public welfare issues. (Utah Code Ann. §83-3-8.1; Mabey, 1988) Presently, the Utah Supreme Court is hearing a case involving public interest in water transfers. (Bohan v. Robert L. Morgan Utah State Engineer, No. 880143)

Appeal of Ruling

Parties can request a reconsideration of factual matters by the Division of Water Rights. This must be filed within twenty days of the state engineer's decision. In addition, parties have 30 days after the ruling to file a formal appeal. The appeal goes to the district court in the jurisdiction in which the proposed change would take place. An appeal of the district court decision does not go through the normal appellate process. Appeal goes directly from the district court to the state supreme court.

Formal Process

Pursuant to the 1988 Utah Administrative Procedures Act, applicants or protestants may apply to the state engineer's office to formalize the transfer procedures. (Utah Administrative Procedures Act, Title 63, ch 46b., 1988) The formal hearing is documented by a court recorder. If a decision reached in the formal process is appealed, it goes directly to the Utah State Supreme Court.

The formal process has yet to be used since its inception in January 1988 because there have been no transfers in which this approach has been desired by the parties. It is anticipated that this might become the forum through which the state will hear more complex transfer cases.

Proof of Change

The applicant has three years following final approval to show diligence in making the change. The state agency staff will send the applicant a reminder notice 60 days prior to the termination of this three-year period. To show proof of diligence, the applicant must hire a professional to survey and prepare appropriate maps. The applicant must then issue a statement and submit it to the state engineer.

Rather than filing proof of diligence, the applicant may file an election, whereby he requests the state engineer to make the determination of whether the change has taken place. The costs involved for the applicant under this option are minimal. (Jensen, 1987)

The applicant can also file a request for extension. The first extension is generally routine, except in areas where water use is more tightly scrutinized. In these areas, the division will require proof of need for extension. Extensions can be granted for up to 14 years. Any extension past 14 years requires publication of the extension request. Maximum time allowed for an extension is 50 years. (Utah Code Ann. §73-3-12 (1953); Jensen, 1987)

Figure 6 summarizes the change of water right process as administered within the State of Utah.

Nevada

Water markets in Nevada have been primarily developing in the Truckee Meadows area, near the cities of Reno and Sparks. (See Saliba and Bush, 1987 and Water Market Update, V.1, No. 11; 1987; Water Market Update, V.2, No. 11, 1988 for descriptions of transfer activity in this area.) The waters of the state are overseen by the Nevada Department of Conservation and Natural Resources, Division of Water Resources. Administrative areas within the state are shown in Figure 7. Terminology used in Nevada is similar to that used in New Mexico and Utah.

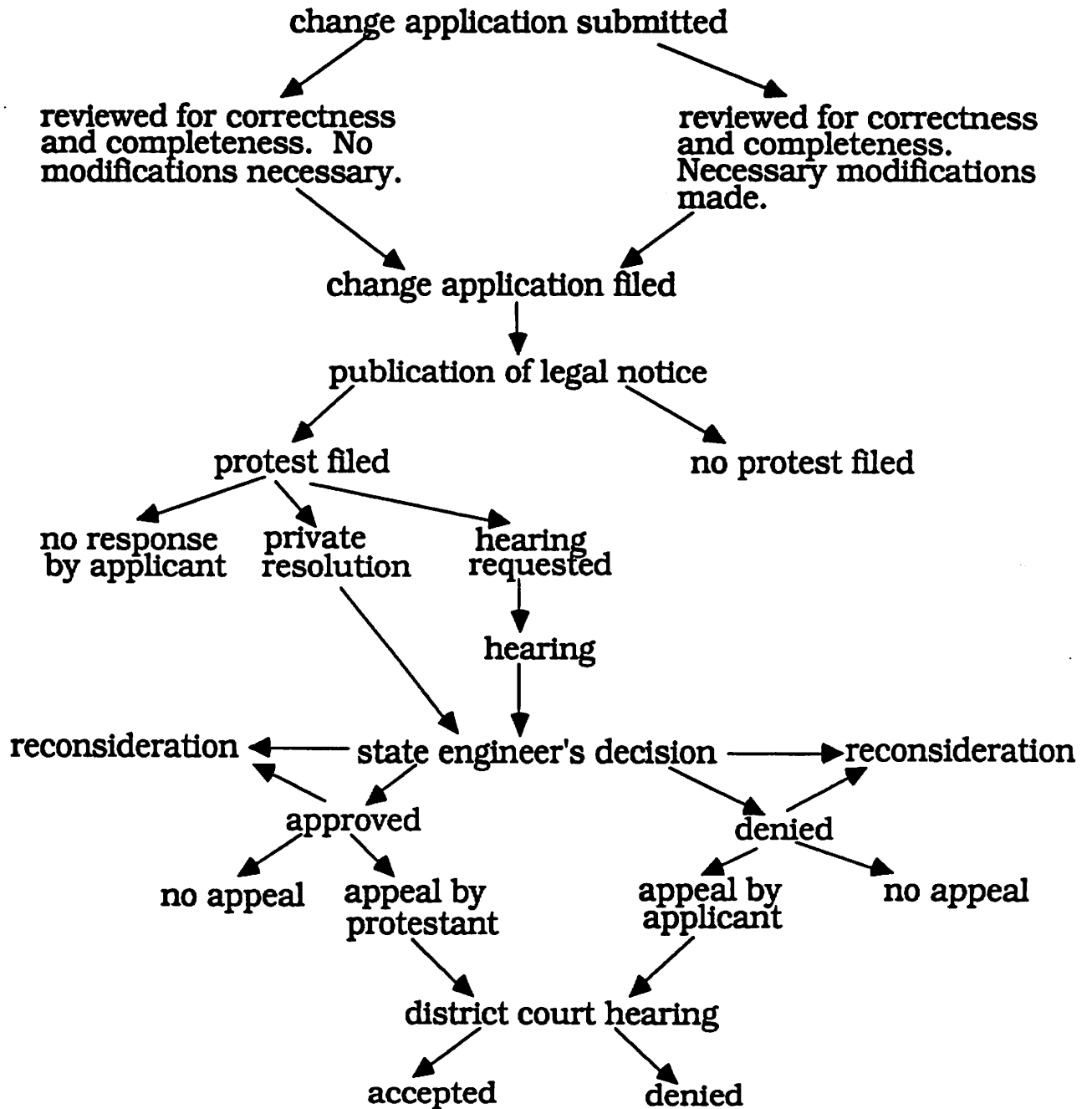
Filing Application

Nevada statutes require that any person desiring to change the point of diversion, manner of use, or place of use of water must obtain a permit from the state engineer. (Nev. Rev. Stat. §533.325 (1987)) A simple, two-page form #0-1583) available from the State Engineer's Office must be filed with each application. A \$40 application fee is required. (Nev. Rev. Stat. §533.435(1) (1987)) In addition, the existing and proposed point of diversion and place of use must be surveyed. This must be done by a licensed water rights surveyor. Surveyor's fees range from \$300-1,500 per transaction. (Foote, 1988; Turnipseed, 1988) Attorneys are sometimes retained for change applications. Often, the applicant is able to complete the process without an attorney, especially in simple cases. Professional services, however, are always required to perform the survey work. (deLipkau, 1988)

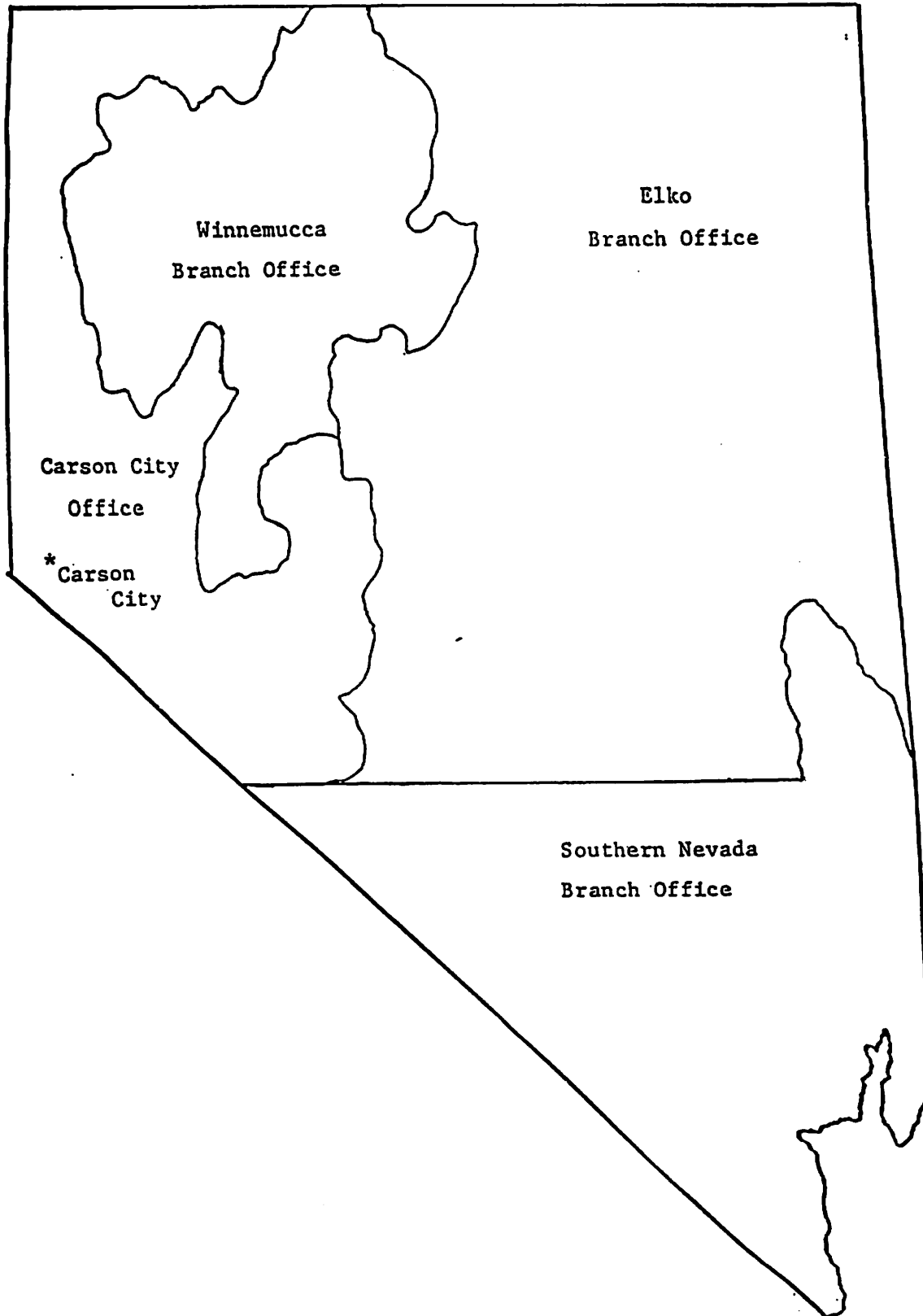
Processing Application

The application is processed by the staff in the Division of Water Resources. If the agency finds the application to be incorrect or incomplete, it is returned to the applicant with instructions as to the required revisions. The application does not lose its priority date, so long as the revised application is resubmitted within 60 days from the date it is returned. If the corrected application is not returned within 60 days, it is cancelled. (Nev. Rev. Stat. §533.355 (2) (1987))

Figure 6. Utah Change of Water Right Process



**Figure 7. Administrative Areas, Nevada
Division of Water Resources**



Public Notice

The state engineer has 30 days to publish notice of the application in a newspaper of general circulation in the county where the change is sought. (Nev. Rev. Stat. §533.360(1) (1987)) Because some counties in Nevada do not have a newspaper, the agency staff has some discretion as to where to publish the notice. Notice must be published once a week for five consecutive weeks. (Turnipseed, 1988)

The publication must include (1) notice that the application has been filed, (2) date of the filing, (3) name and address of the applicant, (4) source from which the change is sought to take place, (5) location of the place of change, and (6) purpose for which the water is to be used. The state engineer pays the cost of publication and the costs are not billed to the applicant because they are considered to be included in the \$40 application fee. (Nev. Rev. Stat. §533.360(1-2) (1987))

The state engineer must also notify the county commissioners in any counties that may be affected by an inter-county transfer. Each county board which receives notice of the change must consider the request at their next regularly scheduled monthly meeting, but not earlier than three weeks after the notice is received. The commissioners must provide public notice of the meeting for three consecutive weeks in a newspaper of general circulation in the county. The notice must state the time, place, and purpose of the meeting. Following the meeting, the commissioners recommend a course of action to the state engineer. Their recommendation is not binding on the state engineer and is one of several factors considered when making a decision regarding a proposed transfer. (Nev. Rev. Stat. §533.363(1,4) (1987); Turnipseed, 1988)

Filing Protests

Any interested person may file a written protest against the proposed change. Protests must be filed within 30 days of the last date of publication. There are two options available in filing a protest: formal and informal. For a formal protest, the party must file

the appropriate form and pay a \$10 filing fee. An informal protest need not be on the required form and there is no filing fee. Unlike a formal protest, an informal protest does not guarantee that a hearing will be set. (Nev. Rev. Stat. §533.365(1) (1987); Turnipseed, 1988)

Processing Protests

Protests are processed by the Division of Water Resources. Although the Division has area offices in Elko and Las Vegas, almost all changes are processed through the Reno office. The state engineer is required to notify the applicant of the protest. This notice must be made by certified or registered mail. (Nev. Rev. Stat. §533.363(2) (1987); Turnipseed, 1988)

Resolving Protests

There are three methods of resolution available: (1) private negotiation, (2) formal field investigation, and (3) formal hearing. The state engineer rarely dismisses a protest without holding either a hearing or a formal field investigation.

Private negotiation is encouraged by the agency staff. Staff provide the names and phone numbers of the respective parties to aid in private resolution of conflict. A more formal attempt at resolution is made in the formal field investigation. In this instance, the parties meet with the agency staff at the site of the proposed change. Each party is allowed to present their case. The agency staff prefers this method, especially in simple cases where no attorneys are involved. This is a much less costly process than a formal hearing.

If a formal hearing is to take place, both parties must be notified by registered or certified mail at least 15 days prior to the hearing date. (Nev. Rev. Stat. §533.366(3) (1987)) The agency staff tries to hold the hearing in the particular county affected by the change, but this is not required by statute and is not always feasible. Most hearings take place a year or more after the application is filed. This is in contrast to the formal field investigation, which can normally be completed within six months. (Turnipseed, 1988)

Hearing proceedings are transcribed by a court reporter. Individual parties are billed for the transcripts. Bills are calculated on a pro-rata share — "the more you talk, the more you pay." The applicants and protestants are typically present at the hearing and often bring engineers and attorneys. (Turnipseed, 1988)

Appeals of these administrative hearings are not de novo. Therefore, the original hearing must fully develop the record. The applicant and protestant are both allowed to present their case, bring witnesses, and cross-examine. Hearings generally last from one to six days, depending on the complexity of the case.

Ruling

The state engineer is required by statute to rule on the application within one year of the final date for filing protests. In practice, this time limit is sometimes violated. Rejection or approval is endorsed on a copy of the original application. A record of the ruling is kept by the state engineer. (Nev. Rev. Stat. §533.370(2,4) (1987); Turnipseed, 1988)

Appeal of the Ruling

Parties have 30 days to appeal the ruling. Appeal must be filed both in court and with the state engineer. The appeal goes to one of two courts. Generally, appeals go to the district court in the county of the point of diversion. Those in the Truckee and Carson Rivers go to the federal district courts due to the jurisdiction of the federal watermaster on these stream systems. (Turnipseed, 1988)

Only about six appeals of change in water rights rulings occur each year. There are really only a few bases on which to overturn a ruling of the state engineer: mistake in law, abuse of discretion, or inconsistencies with other decisions. Normally, an appeal judge will not reverse the decision on matters of fact. (deLipkau, 1988)

Intervention by other parties is also possible at the appeal stage. Interveners must petition the court with a legal document. The decision can be remanded upon intervention

to allow for the presentation of additional evidence. This happens very rarely. (Turnipseed, 1988)

Proving Up/ Certifying Change

Upon his approval of the application, the state engineer will set a time limit for the completion of any construction required to make the change. This time limit must be less than five years from the date of approval. The applicant is required to file notice of completion when the change is actually completed. (Nev. Rev. Stat. §533.380, 533.390(1) (1987))

The change in water rights process as administered in Nevada is shown in Figure 8.

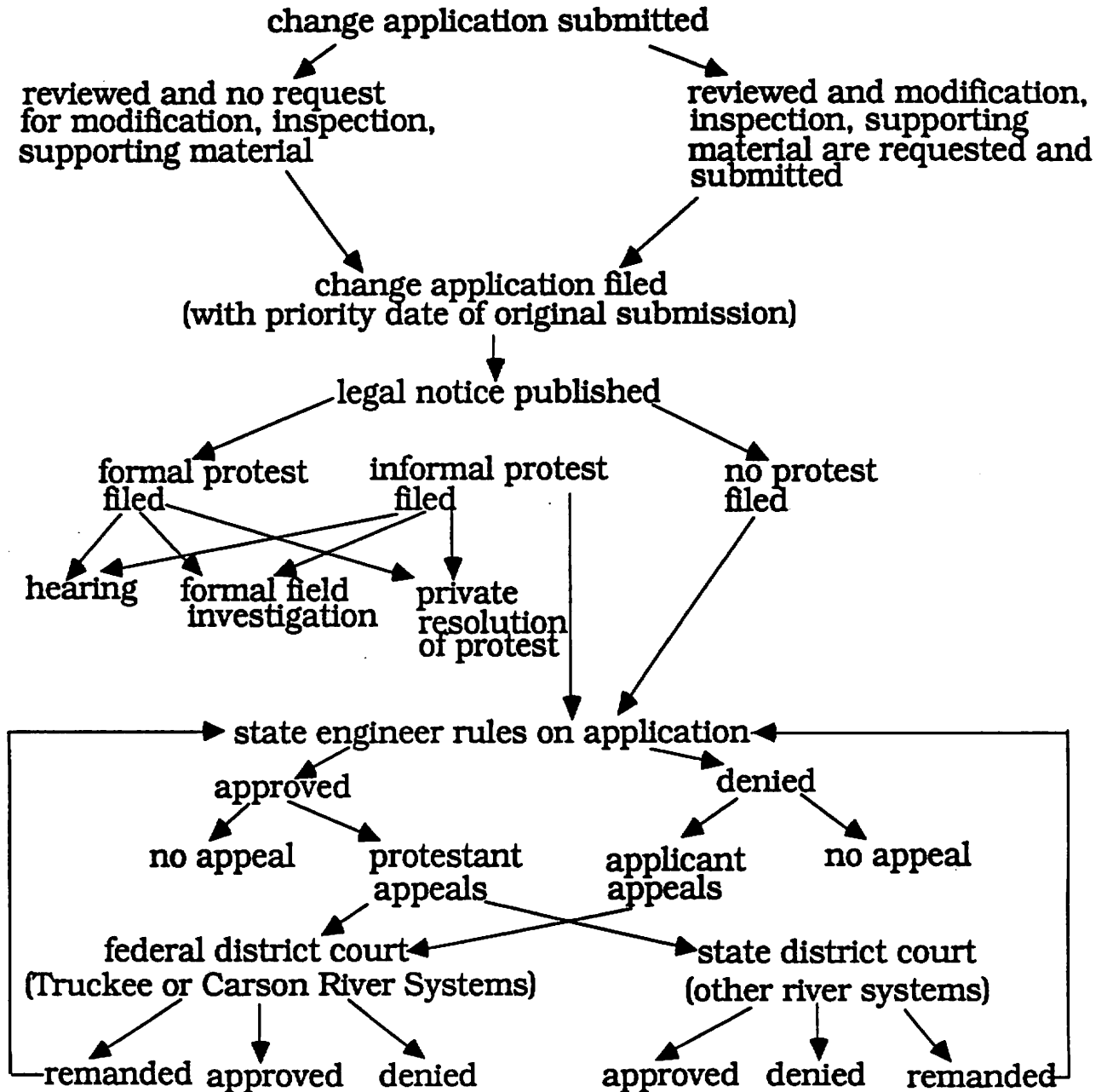
Colorado

Colorado change in water right procedures are somewhat different from those in the other western states. The process in Colorado is administered by both administrative agencies and water courts. The Division of Water Resources of Colorado Department of Natural Resources is the chief administrative agency with jurisdiction over water rights in the state. This Department is headed by the state engineer, who is appointed by the Governor. The state engineer has the overall responsibility for administration of all water rights. (MacDonnell, 1987)

Many areas of Colorado have an active record of water transfers and, of the western states, Colorado probably has the most sophisticated and well-developed water markets. (For a description of water transfer activity in Colorado see Water Market Update Vol.1-2, 1987-1988; Howe, Schurmeier and Shaw, 1986 and Saliba and Bush, 1987.)

Colorado is divided into seven water divisions organized by river basins, as shown in Figure 9. Each division has its own water court and division engineer. The water court and the division engineer are entirely separate organizations. The water court is part of the state district court system and the division engineer is employed by the state engineer and the Division of Water Resources. Each court includes a judge, referee, and clerk. The judge is a district court judge who is designated to

Figure 8. Nevada Change of Water Right Process



handle water cases. The referee carries out investigations and makes rulings on the amount and priority of water rights. The division engineer issues well permits, enforces court decrees, and consults with the water court when technical information is requested. (Colo. Rev. Stat. §37-92-202 (1973))

The terminology used in Colorado is also different from that in the other states. The individual who seeks the change of water rights is termed the "applicant". However, the party who would file a protest in other states files a Statement of Opposition in Colorado. This individual is, therefore, referred to as the "opposer". The term "protest" as used in Colorado refers not to an objection to the change in use application, but to the initial appeal of a water court referee's decision.

Filing Application

The initial step in the change process is filing an application for change. This is filed with the clerk of the division water court in the area in which the change would take place. The application for a change of water right must include (1) a description of the water rights from which the change is sought, (2) a map showing the approximate location of the historic use of the rights, and (3) records of actual diversions for each right relied on for this change. The month in which the application is filed is considered the filing period; no distinction is made between applications filed earlier or later in the same month. (Colo. Rev. Stat. §37-92-302 and §37-92-306 (1973); MacDonnell, 1987)

Filing fees are reviewed and adjusted periodically. The rate for 1988 was \$159. (Dalby, 1988) Applicants also typically incur legal and engineering consulting costs in preparing their applications. Approximately ninety percent of applicants have an attorney assist them with the application. About fifty percent obtain technical support. (Stenzel, 1987)

Statutes direct the court to consider abandonment of water rights involved in change applications. Therefore, the applicant must evaluate the recent use of the rights and the risk of abandonment proceedings. The division engineer is required to keep an aban-

donment list and present it to the water court every ten years. The inclusion of a particular right on the abandonment list may be protested in court. The party arguing that abandonment is not an appropriate finding must show a history of beneficial use. (Colo. Rev. Stat. §37-92-401(5) (1973))

Processing Application

The applications are processed by the division water court, with the assistance of the division engineer. Applications are checked for accuracy and analyzed for potential injury to other water rights holders. (Dalby, 1988)

Public Notice

Not later than the 15th of each month, the clerk of the division water court must compile a resume of all change applications filed during the previous month. (Colo. Rev. Stat. §37-92-302(b,c) (1973)) The resumes are mailed to all who request them for a fee of \$12 per year. There are between 100 and 200 subscribers in each water court division.

The division clerk also must publish the resume in the newspaper. This publication must occur before the end of month in which the applications are filed. The notice must be published at least once in the newspaper with the largest circulation in the county in which the change would occur. The clerk bills the applicant for the costs of publication. This costs varies from about \$100 for simple changes to over \$600 for more complex applications. (Berriman, 1987)

Filing Statement of Opposition

Those parties which object to the approval of the change application can file a statement of opposition stating their objection. "Any person" has standing to file. The opposer need not be a holder of water rights. Standing to file is, however, only on the basis of injury to vested water rights. (Colo. Rev. Stat. §37-92-305(3) (1973)) The state engineer also has standing to file.

Statements must be filed before the last day of the second month following the close of the application period. The statement

must be filed on a form provided for this purpose. The opposer is also required to send a copy of the filed statement of opposition to the applicant by certified mail. (Colo. Rev. Stat. §37-92-302(1)(c) (1973))

The fee for filing a statement of opposition is \$40. The form is relatively simple, so opposers seldom obtain attorneys to assist in the filing. Eight to ten statements are typically filed on each change application in the most active water court division, Division 1. (Martz, 1987) Opposers have little to lose; costs of filing are low and they can hope to get a ruling against the application or a modification of the application with little expense incurred. The filing of a statement of opposition puts the burden on the applicant of defending the application and bearing the costs of demonstrating no impairment of other right holders. (Martz, 1987)

Processing Statements of Opposition

Statements are processed by the division water court and the state engineer. The chief administrative representative involved at this point is the division referee. The applicant is required to respond to the correspondence sent by the opposer. If the applicant does not respond, the referee can and usually does rule for dismissal of the application. The applicant has 20 days to protest this dismissal. (Stenzel, 1988)

Resolving Statements of Opposition

One response available to the applicant is private resolution. If the applicant and opposer come to an agreement, the opposer can withdraw the statement of opposition with a formal statement to the division water court. The parties can then come to the referee for a stipulated ruling. Any agreements placed in the stipulated ruling must be practically administrable and must not impair other water users in the area.

If the dispute is not resolved privately, either the applicant or the opposer can request a hearing. The referee can also set a hearing date at his own discretion without a request. While statutes do require that a formal hearing be held, even if a statement of opposition has

been filed, there is almost always a hearing if a statement has been filed and not resolved privately. (Stenzel, 1988)

The division engineer's staff routinely raises legal and technical questions that are related to the change application. The participation of division engineer's staff serves to prevent the availability (or lack thereof) of applicant's and opposer's technical expertise from entirely determining the depth and nature of evidence presented. The attorney general's water unit staff, who normally review resumes for all divisions, meet with the state engineer to identify cases that need to be investigated further on legal grounds. If the division engineer files a statement of opposition, he may request the attorney general's office to represent him. (Angel and Atencio, 1987)

The referee can send a controversial case straight to the water court judge. However, this does not happen often in practice. Change applications can also proceed straight to the judge if the applicant or opposer indicates that they will protest any adverse ruling of the referee. If this occurs, a copy of the order of the referee which refers the matter to the judge must be sent to the applicant, the opposer(s), the state engineer, and the division engineer. (Colo. Rev. Stat. §37-92-303(2) (1973))

Ruling

Statutes give the referee sixty days from the last day on which a statement of opposition could have been filed to make a ruling. (Colo. Rev. Stat. §37-92-303) (1973)) In practice, this deadline is routinely extended. The referee consults with the division engineer on whether a particular ruling is administrable. The referee's ruling is not published in the newspapers, but is sent by certified mail to all parties involved, and to the division engineer and state engineer.

One issue which the referee must address is the consumptive use of the water right involved and, therefore, the transferrable quantity. The applicant must show that no injury will occur to any other right holders on the stream system. In some areas of Colorado,

it is not enough to determine the annual consumptive use; one must also provide evidence regarding seasonal use patterns and variations in streamflow depletions. (DeOreo, 1988)

Filing a Protest of Ruling

Parties who disagree with the referee's ruling may file a protest. Protests must be filed within 20 days of the date on which the ruling is made. (Colo. Rev. Stat. §37-92-304(2) (1973)) It is notable that while the statement of opposition is filed against the application, the protest is filed against the referee's ruling on the application. The term "protest" in Colorado refers to the initial administrative appeal process, unlike most other states.

Any person who may be affected by the granting of the application may file either a protest or a support of the referee's ruling in water court. This includes the state engineer. If the protesting party did not previously file a statement of opposition, there is a \$40 fee. In addition, protestors must pay the costs of mailing notice of the protest to the other parties involved. If the party previously filed a statement regarding the application in question, the mailing costs are the only required expense. (Stenzel, 1987)

Applicants and opposers are all notified of protests by certified mail. Both the court and the protestor are required to notify all parties. The protestor may notify by regular mail; the court must notify by certified mail. Parties may settle the protest privately by agreeing on conditions for the change and getting a stipulated decree from the judge. Otherwise, the protest goes to the division water court.

Protest Proceedings

Protest proceedings involve trial de novo. This includes the entire process of discovery, pretrial hearings, and motions. (Colo. Rev. Stat. §37-92-304(3) (1973)) The judge does not review the referee's decision and enters the trial without previous investigation or discussion of the case with the referee.

If the trial is scheduled for more than one day, a pre-trial conference is required. Participants must present a trial data certificate. This certificate outlines the case and names the expert witnesses each side intends to call.

If the applicant or protestor requests, the hearing must be conducted in the district court in the county in which the change would take place. (Colo. Rev. Stat. §37-92-304(3) (1973)) Hearings are normally tape recorded. Witnesses are sworn in. The length of the trial depends on the complexity of the case and the number of parties involved. The division engineer or his representative is normally present.

Other parties may move to intervene in the trial proceedings. Parties may intervene either to support a referee's ruling or to support the protest of the ruling. (Colo. Rev. Stat. §37-92-304(3) (1973)) These individuals must file a motion 30 days before the pretrial conferences, in order to intervene. Intervening parties must show mistake, inadvertence, or excusable neglect in order to participate in the trial. Intervention is normally allowed if the intervening party has some valid legal interest in the outcome of the trial. The judge allows an intervening party to enter at whatever stage the process is currently in, and generally does not allow them to set the process back to earlier steps in the proceedings.

Court Decree

The division water court judge rules on the protest. If the referee's ruling is not protested, the judge affirms the ruling in a short statement of affirmation, as a court decree.

The court retains jurisdiction for 5 to 10 years following the decree to allow for consideration of impairment. The case can be reopened at any time during this period. At the time of the decree, the judge sets the number of years to allow reconsideration on the question of injury. The judge can also make the decree conditional on the applicant returning to the court and showing how the plan was implemented. Reopening for clerical errors

can be done at any time. The case can be reopened for three years for substantive error at the request of the party whose right is adversely affected. (Colo. Rev. Stat. §37-92-304(5) and §37-92-309(10) (1973))

Appeals

Appeals of division water court decrees go to the Colorado Supreme Court. This appeal process bypasses the state appellate court. Under Colorado statutes, appellate courts do not hear cases on either constitutional or water matters. (Angel and Atencio, 1987)

The supreme court investigates the division court records and takes briefs from all parties. It rules on whether the division court interpreted the statutes and applied concepts of law properly in its decision. The supreme court will affirm or overturn and remand the division court decree or portions thereof. (Angel and Atencio, 1987)

Proving Up/Certifying Change

The court decree is the evidence of a water right change. These conditional water rights are perfected by demonstrating due diligence in implementing the approved change. There is no separate certification or licensing process. The applicant does, however, risk abandonment of the right if due diligence in implementing the approved change cannot be demonstrated every four years. (Dalby, 1988)

The change of water right process for Colorado is summarized in Figure 10.

Arizona

Arizona water law was altered significantly with the passage of the 1980 Groundwater Management Act. This legislation created the Arizona Department of Water Resources (ADWR), which is primarily responsible for administration of the state's waters (Ariz. Rev. Stat. Ann. §45-103 (1987)). The 1980 Act provided for the creation of geographic areas known as Active Management Areas (AMAs). There are currently four such AMAs (Phoenix, Tucson, Prescott, and Pinal), as shown in Figure 11. An AMA is defined as

"a geographical area which has been designated ... as requiring the active management of groundwater." (Ariz. Rev. Stat. Ann. §45-402.2 (1987)) The Department's central office is located in Phoenix. There are AMA offices in Tucson, Prescott, and Casa Grande.

Comprehensive management guidelines have been developed for groundwater use within each AMA. Among these management guidelines is a requirement for "reductions in per capita use and such other conservation measures as may be appropriate for individual users" for all municipal water users. (Ariz. Rev. Stat. Ann. §45-564.A.2 (1987)) In addition, the irrigation water duty is gradually decreased between the years 1980 and 2025 in order to reduce the quantity of water that can be applied per acre of irrigated land.

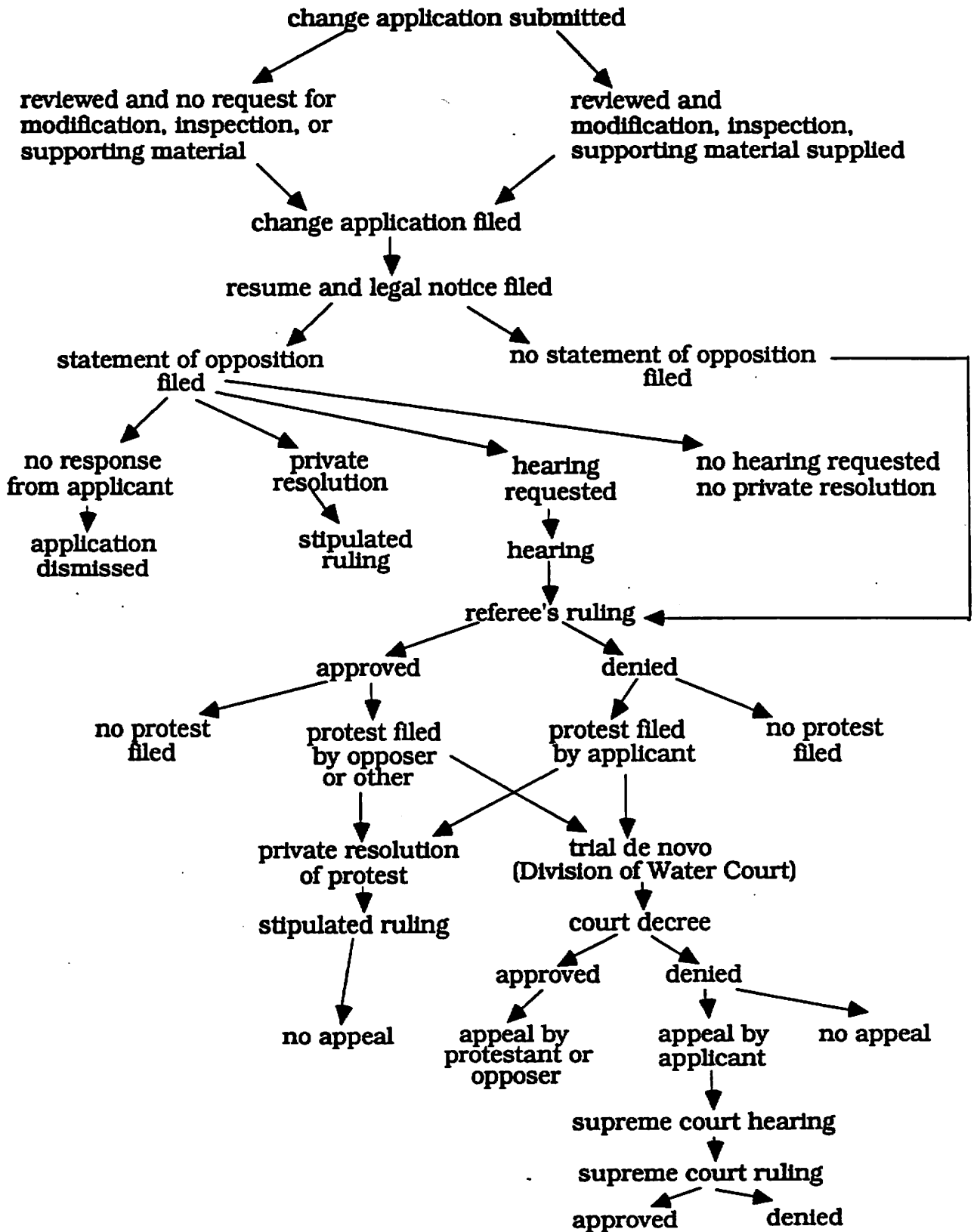
Another requirement imposed by these management guidelines is that all new developments located within an AMA must demonstrate an Assured Water Supply (AWS). (Ariz. Rev. Stat. Ann. §45-576 (1987)) Developers must apply to ADWR for a Certificate of Assured Water Supply. Requirements for an AWS are as follows: 1) sufficient water of adequate quality must be continuously available to satisfy water needs for at least the next one hundred years, 2) the projected water use must be consistent with the management plan of the AMA, and 3) the applicant must demonstrate the financial ability to construct the delivery system and any necessary treatment facilities. (Ariz. Rev. Stat. Ann. §45-576.L (1987))

To apply for an AWS, the applicant must submit: 1) a completed application, 2) a copy of the plan or master plan for the proposed development, 3) a required fee, and 4) a detailed hydrologic report. (Filleman, 1986) ADWR collects both an application and a review fee. The application fee is \$50. The review fee is based on a graduated schedule determined by the number of lots in the subdivision, as shown below:

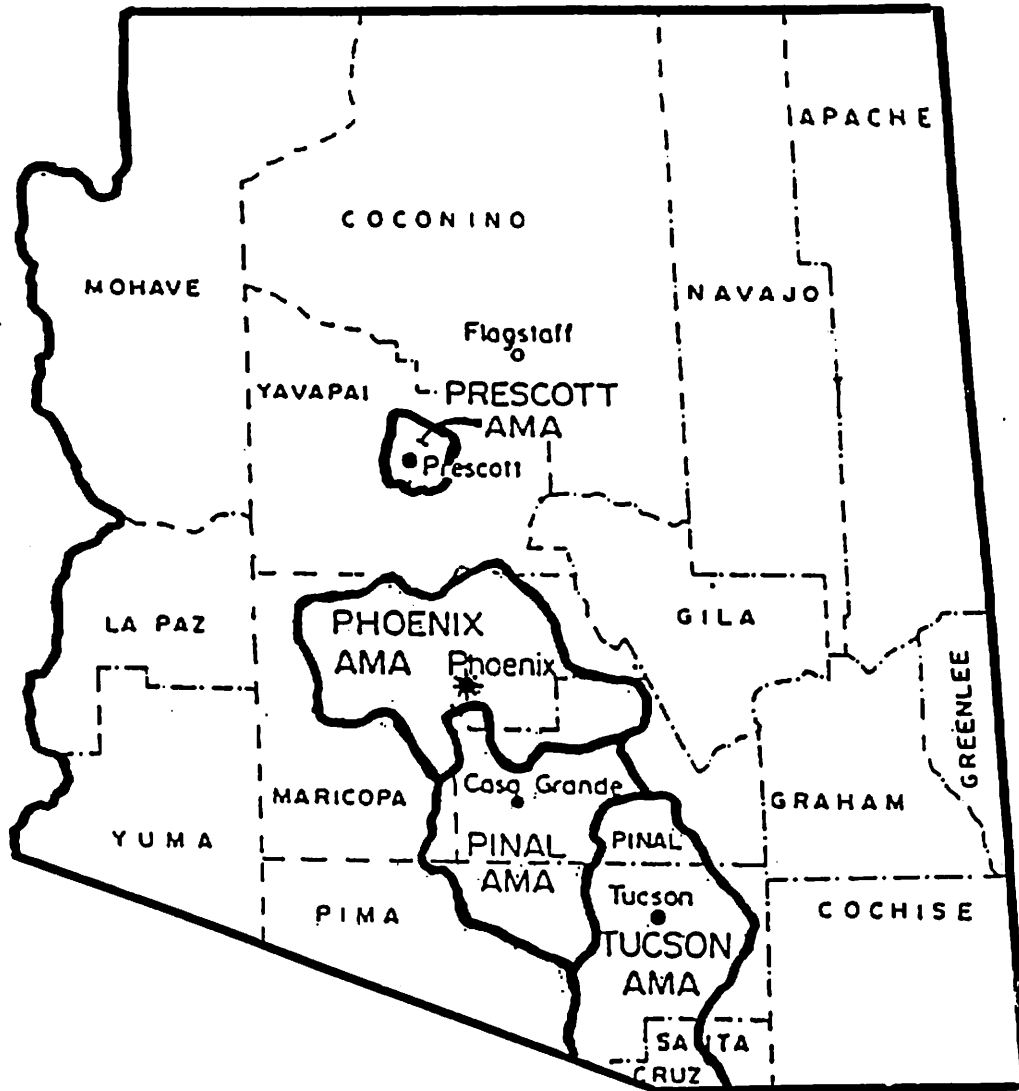
| | |
|-------------------|----------------|
| First 20 lots: | \$0.00 per lot |
| Next 80 lots: | 1.00 per lot |
| Next 900 lots: | 0.50 per lot |
| Next 9,000 lots: | 0.25 per lot |
| Over 10,000 lots: | 0.10 per lot |

More significantly, the cost of compiling the

Figure 10. Colorado Change of Water Right Process



**Figure 11. Arizona Department of Water Resources
Active Management Areas**



necessary information to apply for an AWS has run as high as \$800,000 for some developments. (McCarthy, 1988)

The requirement of proving a 100-year assured supply has given municipalities and private developers incentive to acquire new water sources and import the water to augment existing supplies in the area of the development. An AWS can be obtained using surface water, groundwater, or some combination thereof. A number of entities in the Phoenix AMA and the Tucson AMA have gone outside their local area to obtain verifiable water supplies. In most cases, these entities have purchased irrigated farmland to obtain water rights for later use in obtaining Assured Water Supplies. Properties purchased with these intentions are known as "water farms" or "water ranches". For a discussion of this type of water transfer activity in Arizona see Woodard et al, 1988.

Arizona statutes divide water into two broad categories: surface water and groundwater. Changes in use of these two types of water rights are governed by different statutes and administered under differing procedures, in contrast to some other western states where groundwater and surface water are administered under an integrated legal framework. Surface water is allocated under the prior appropriations doctrine. Holders of surface water rights may: 1) change the point of diversion, 2) change the place of use, or 3) change the purpose of use. Groundwater within AMAs is administered under the provisions of the 1980 Groundwater Management Act. There are few guidelines, either in case law or statutes, indicating how transfers of groundwater located outside of AMAs will be administered.

Arizona Surface Water

Due to the state's heavy reliance on groundwater, applications for changes in purpose of use for surface water are quite rare. Only two applications for change in purpose of use have been approved to date. (Markham, 1988) There are no statutorily defined procedures explicitly for change in purpose of use. (Markham, 1988) There are no filing fees, application forms, public notice, or protest procedures required for a change only in

purpose of use. A more common surface water procedure is a change in place of use, also known as a "severance and transfer". Subject to certain conditions, a surface water right may be severed from the land to which it is appurtenant and transferred without losing its priority (Ariz. Rev. Stat. Ann. §45-172 (1987)). A sever and transfer does not always include a change in purpose of use. Surface water transfers from "water farms" to urban areas will, however, involve both a change in place and purpose of use. As of 1988, no formal applications for severance and transfer have been filed in connection with water ranch purchases. The procedures involved in the sever and transfer process are outlined below, in anticipation of this becoming a more common proceeding as cities and developers seek to bring surface water from remote water ranches to their own service areas.

Filing Application

ADWR provides a form which applicants for sever and transfer must complete and submit. There is a \$50 application fee. Most cases do not require private engineering studies. Sometimes the Department conducts its own field investigation. As a general rule, ADWR performs the engineering studies on simple cases, while the applicant must provide technical data for more complex applications. (Markham, 1988) For most cases, an individual who can legally describe and quantify water rights can complete the application form. Outside legal and technical assistance is seldom required. (Gessner, 1988)

Processing Application

The ADWR operations staff reviews application information such as quantities, amounts, uses, and locations of diversions and use. Staff does not routinely check for abandonment and forfeiture, although the subject might arise in the hearing phase. Department staff may ask for more documentation to clarify or complete the information necessary to make a decision. (Gessner, 1988)

Public Notice

Legal notice of the application must be given once a week for three weeks in a "newspaper of general circulation in the county or

counties in which the watershed or drainage area is located". (Ariz. Rev. Stat. Ann. §45-172.7 (1987)) The Arizona Republic, published in Phoenix, is most often used for this purpose and is considered to be in general circulation in all Arizona counties. Sometimes, notice is also published in a local paper in the individual county. (Markham, 1988)

The cost of publishing is paid by ADWR and is considered to be included in the \$50 application fee. Arrangements for publication are made by the Department legal staff.

Filing and Processing a Protest

Protests can be filed either in writing or verbally at the hearing. "Any interested person may appear and show cause why the proposed application for severance and transfer should not be granted." (Ariz. Rev. Stat. Ann. §45-172.7 (1987)) There is no required form for protests, nor is there a filing fee. Protests are processed by the Department staff. (Markham, 1988)

Resolving a Filed Protest

Most conflicts arising from sever and transfer applications are privately resolved. ADWR provides only minimal informal assistance for resolution prior to a hearing. There will sometimes be a pre-hearing conference to narrow the factual issues prior to the formal hearing. (Markham, 1988)

Statutes require that a hearing take place, even if there are no protests or if they are privately resolved. Therefore, the hearing sometimes consists of only the hearing officer and an ADWR representative. More often, applicants and protestants are present at the hearing. There is typically not an attorney present for either party. (Markham, 1988)

The hearing usually takes place either in the Department of Water Resources' Phoenix office or in the county in which the transfer will occur. There is no statutory requirement that the hearing must take place in the county in question. ADWR has offices in Tucson, Casa Grande, and Prescott where hearings are sometimes held. There is no time limit within which a hearing must be held. Hearings are

normally held in a timely manner, but this varies depending on the Department's caseload. (Markham, 1988)

The hearings are formal—witnesses are sworn in and general rules of judicial procedure are followed. (Arizona Administrative Code, (ACC), R12-15-219.A.3) Proceedings are transcribed by a court reporter. This cost is paid by ADWR and is not billed to the parties. (AAC, R12-15-220) The hearing officer is generally not Department staff, but is typically a private attorney paid on a contract basis to conduct the hearing. (Markham, Gessner, 1988) Hearings generally last between thirty minutes for extremely simple cases to two days for complex ones. The typical hearing runs 2-4 hours.

Ruling

Under the hearing officer's contract, a proposed decision is required within 30 days. This requirement is not statutory and is subject to waiver by the Department's general counsel. The time required for a final decision varies with the caseload. The decision of the hearing officer is a recommendation only. The director has the final responsibility for interpreting the evidence and making the decision. (AAC, R12-15-222)

Criteria for approval of a sever and transfer application is as follows: 1) non-injury to existing water rights, 2) non-enlargement of the subject rights, 3) rights to be transferred must have been legally perfected and not lost to forfeiture and abandonment, and 4) sever and transfer from within an irrigation district, agricultural improvement district, or water users' association is not permitted without the prior written consent of the individual district or association or failure of that individual district or association to respond within a given period of time. (Ariz. Rev. Stat. Ann. §45-172 (1987))

Transferrable quantity for sever and transfer applications was historically the diversion amount. However, current policy is to allow transfer of only the consumptive use of the water right. (Markham, 1988) ADWR has compiled a range of reasonable consumptive use figures for common uses in the state. (Gessner, 1988)

Appeal of Ruling

The initial appeal process is to request a rehearing or review by the Department. This request must be made within 15 days of receipt of the initial ruling. Appellants must have been a party to the original dispute. (AAC, R12-15-208 and 222) Appeal requests are examined by ADWR staff.

There are two bases for administrative appeal: 1) review of law — in which the director reexamines the principles of law used to decide the case, and 2) rehearing on facts — in which another hearing is held to allow for additional evidence. Generally, if the information to be presented in a rehearing was previously available and the party simply failed to obtain and present it, there is no basis for rehearing. (AAC, R12-15-222) Few sever and transfer applications go to rehearing. (Markham, 1988)

After an appeal hearing, the director issues a final ruling. This ruling can be appealed for judicial review within 35 days. (Ariz. Rev. Stat. Ann. §12-904 (1987)) An appeal cannot go to the courts without there having first been an administrative appeal. The first judicial step is to superior court. The court cannot overrule on facts, unless it finds that the director was "arbitrary, capricious, or in abuse of discretion." (Ariz. Rev. Stat. Ann. §12-901-914 (1987)) The chain of appeal then goes to the Arizona Court of Appeals, the Arizona Supreme Court, and the United States Supreme Court. (Markham, 1988)

Proving Up/Certifying Change

There is no "proving-up" process for sever and transfer of surface water rights. The rights are, however, subject to a 5-year forfeiture and abandonment statute. (Ariz. Rev. Stat. Ann. §45-188,189 (1987)) Figure 12 summarizes the sever and transfer process for surface water rights in Arizona.

Arizona Groundwater Rights

The 1980 Groundwater Management Act created a number of conditions for the use and transfer of groundwater inside an Active Management Area (AMA). The only substan-

tive restrictions on the use of groundwater located outside an AMA are that: 1) it must be withdrawn for "reasonable and beneficial" use (Ariz. Rev. Stat. Ann. §45-453 (1987)), and 2) transportation across basin or sub-basin boundaries is subject to payment of damages (Ariz. Rev. Stat. Ann. §45-544 (1987)). The relative absence of regulations regarding groundwater withdrawals and transfers outside of AMAs has contributed to the large-scale acquisition of irrigated land located outside of AMAs by Arizona cities. Readers interested in learning more about the water ranching phenomena and the policy issues it raises in Arizona may refer to Checchio, 1988.

Groundwater withdrawals and use within AMA's are much more regulated. Within the AMA's there are three basic types of groundwater rights which have been involved in water transfers:

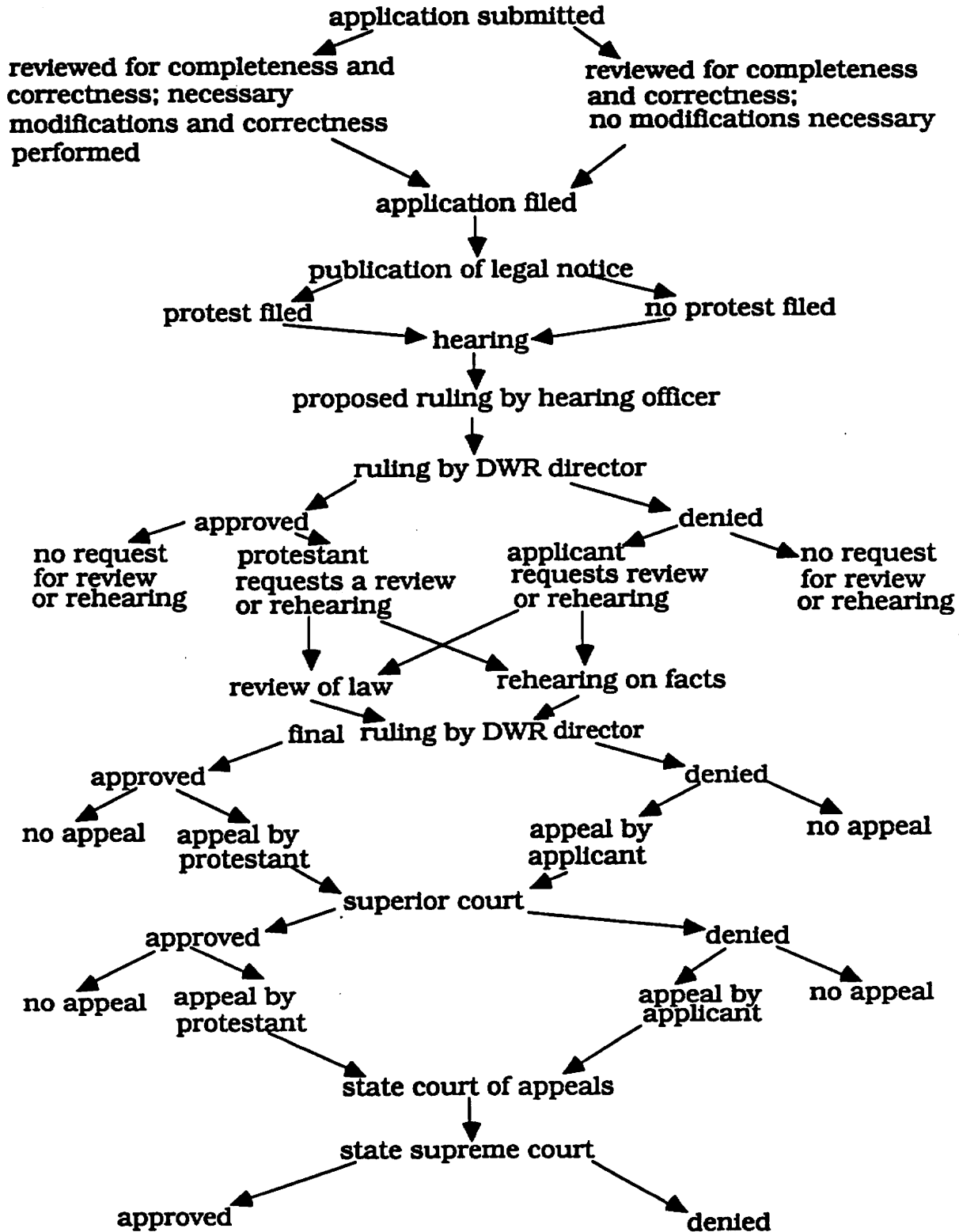
1) Irrigation Grandfathered Rights [IGER] - These rights are given to individuals who own land within an AMA which was legally irrigated with groundwater at any time during the five years preceding January 1, 1980, which is now capable of being irrigated and not been retired for non-irrigation use (Ariz. Rev. Stat. Ann. §45-462.A (1987)). These rights are deemed appurtenant to the land which they irrigate. They can, however, be converted to a Type I Non-irrigation Right (see below).

2) Type I Non-irrigation Grandfathered Rights - A person who owns land in an AMA which was legally entitled to be irrigated with groundwater and who retired land from irrigation after January 1, 1965, has the right to withdraw or receive for this land three acre-feet per "eligible" acre or less, subject to certain conditions (Ariz. Rev. Stat. Ann. §45-463.A and §45-469 (1987)) Type I rights can never be transferred back to an irrigation use. (Snow, 1987)

3) Type II Non-irrigation Grandfathered Rights - A person who owns land in an AMA from which water was legally being withdrawn and used for a non-irrigation purpose as of the date of the designation of the AMA is given a Type II right to pump groundwater (Ariz. Rev. Stat. Ann. §45-464 (1987)) Holders

Figure 12. Arizona Sever and Transfer Process for Surface Water

Groundwater—Conversion of IGFRs to Type I Rights



of these rights can: 1) change the ownership, and/or 2) change the location of pumpage. (Snow, 1987) These rights cannot be used for irrigation purposes. Furthermore, Type II rights which were originally granted for use in mining operations cannot be transferred to other purposes of use. (Ariz. Rev. Stat. Ann. §45-474.A.1 (1987)) Type II rights may only be transferred in the amounts originally granted. A Type II right may not be subdivided and one portion sold while the other portion is retained. (Larmore, 1988).

Market transfers of groundwater rights within AMAs have increased over the past few years. The primary market activity involves: 1) sales and leases of Type II rights, and 2) purchases of irrigated farmland within an AMA with the intent of retiring the farmland and converting the appurtenant IGFRs to Type I rights for non-irrigation use, and 3) purchases of desert land outside of an AMA. Since Type II transactions do not require a change in purpose of use of the water and are used only for non-irrigation purposes, they do not fall within the scope of this study and will not be discussed in more detail. Readers interested in learning more about the market for Type II rights may refer to Saliba and Bush, 1987. The transfer of groundwater rights outside of an AMA requires no formal approval process. The following overview of groundwater transfer procedures, therefore, focuses on the steps involved in converting IGFRs to Type I rights.

Filing Application

In order to initiate the conversion of an existing IGFR to a Type I right, the applicant must submit the required form. There is a \$30 filing fee. (Gessner, 1988) The amount of supporting information required varies with each individual case. Applicants sometimes retain attorneys and hydrologists to help in the process. (Larmore, 1988)

Processing Application

The application is reviewed by the Department staff for completeness and correctness. This is done in the AMA office. (Larmore, 1988)

Public Notice

No public notice is required for the conversion of a groundwater right. (Larmore, 1988)

Filing and Processing Protests

There is no protest process for conversions. (Larmore, 1988) No hearing is required. However, there is sometimes a hearing in complex or controversial cases.

Ruling

A ruling is given by the director of the Department of Water Resources. Statutory criteria for approval are as follows: 1) the appurtenant land in question must be outside the exterior boundaries of a water service area, 2) the applicant must file a development plan with the Department, 3) the development plan must call for non-irrigation use of the appurtenant land, and 4) either the applicant must have irrigated the land, or the party from whom the applicant purchased must have irrigated the land (Ariz. Rev. Stat. Ann. §45-469 (1987); Larmore, 1988)

Appeal of Ruling

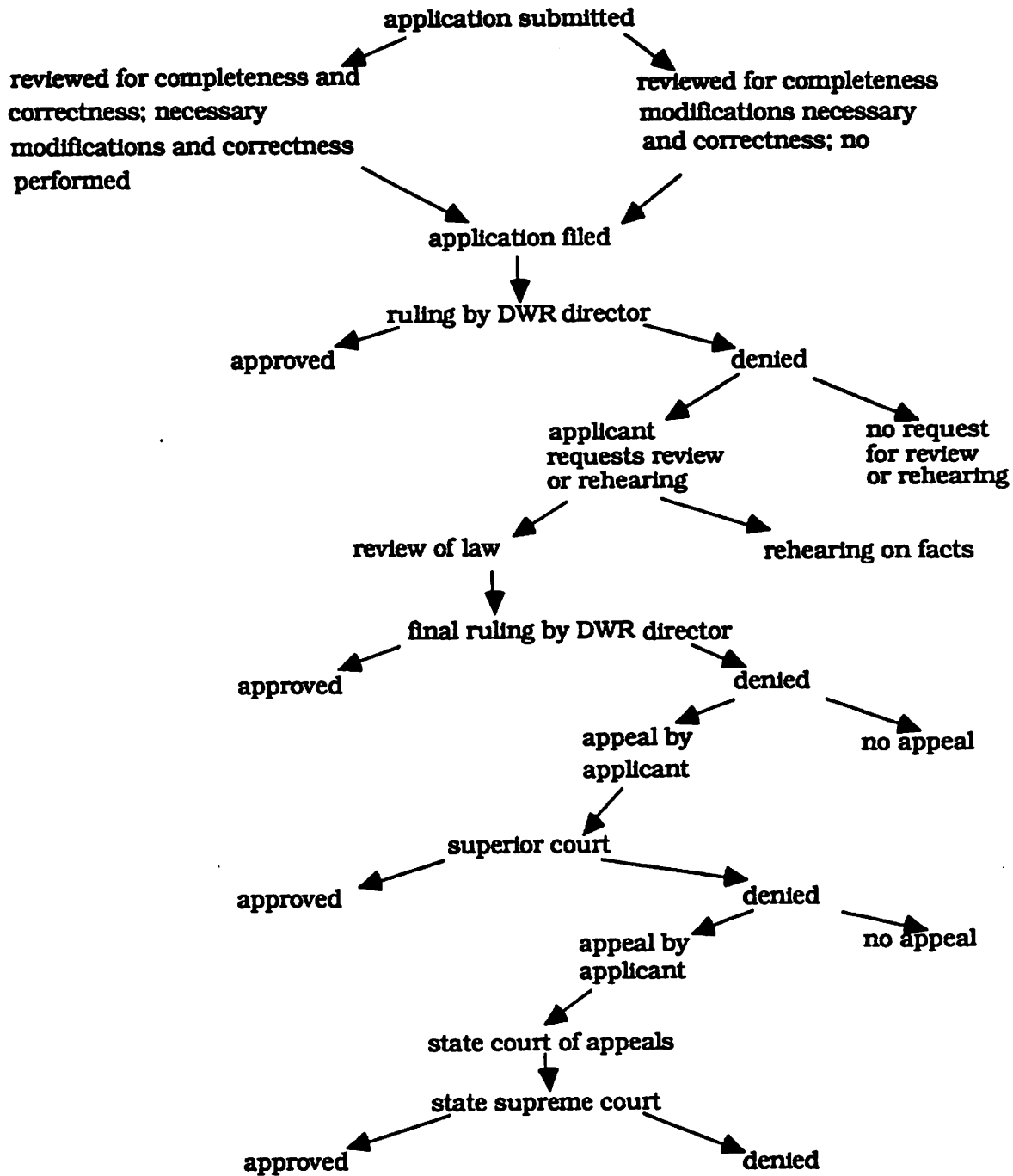
Appeal of the director's initial ruling consists of either a rehearing or review within the Department. A hearing on appeal is not statutorily required, but one is usually held. If the case goes to a judicial appeal without an agency hearing, the court will return it to the Department for a hearing. There are three judges in Arizona who specialize in water matters and they handle most of the water-related appeals. (Larmore, 1988)

Proving Up/Certifying Change

There is no "proving-up" process required for transfers of irrigation grandfathered rights to non-irrigation uses.

Figure 13 summarizes the process for converting IGFR's to Type I rights.

Figure 13. Arizona Process to Transfer IGFR to Type 1 Right



Montana

Water transfers and changes have been less common in Montana than in the four states previously discussed. The Montana Department of Natural Resources and Conservation has general authority over changes of water rights in the state. The Department has four bureaus that specifically work on water resource issues: (1) engineering, (2) water development, (3) water management, and (4) water rights. The Water Rights Bureau most closely oversees issues relating to changes. Regional administrative divisions within the state are shown in Figure 14. (Holman, 1987)

The terminology used in Montana is different from that in the other states. One who files for a change of a water right is called the applicant. One who opposes approval of the application is termed the objector.

Filing Application

The initial step in the change process in Montana is the filing of Form 606, "Application for Change of Appropriation Water Right" and Form 608, "Water Right Transfer Certificate". The filing of form 606 requires an application fee of \$50. In addition, the applicant must submit a map clearly showing the change and a copy of the relevant water right permit. Applicants generally do not have an attorney assist them with the preparation of the application. However, in recent years more legal and technical advice is being sought by applicants as transfers become more complicated and as the agency requires more concrete evidence that the transfer will not impair other right holders. (Holman, 1987)

Processing Application

All applications are initially reviewed by the appropriate field office. The field office staff checks the application for correctness and completeness. The staff also checks for impacts on other water rights. This helps to determine which other parties should receive notice of the change. The water rights specialist in each field office is responsible for noting the modifications that may need to be made to applications in order to protect other water users. (Reynolds, 1987; Holman, 1987)

Public Notice

Public notice of the proposed change must be published in a newspaper of general circulation in the area of the source for one week. Before the date of publication, notice must also be sent to all other water users in the area which may be affected by the change. This must be done by certified mail. The notice must state the date by which objections must be filed. (Mont. Code Ann. §85-2-307(1)(1985); Reynolds, 1987)

Publication costs are not billed to the applicant. These are deemed to be included in the filing fee. (Mont. Admin. R. 36.12.103 (1985))

Filing Objections

Parties which object to a proposed change can file an objection. The objection must state the name and address of the objector and facts demonstrating why the application should not be approved. (Mont. Code Ann. §85-2-308(2)(1985)) Objections are filed on approximately 15 percent of all change applications. (Holman, 1987)

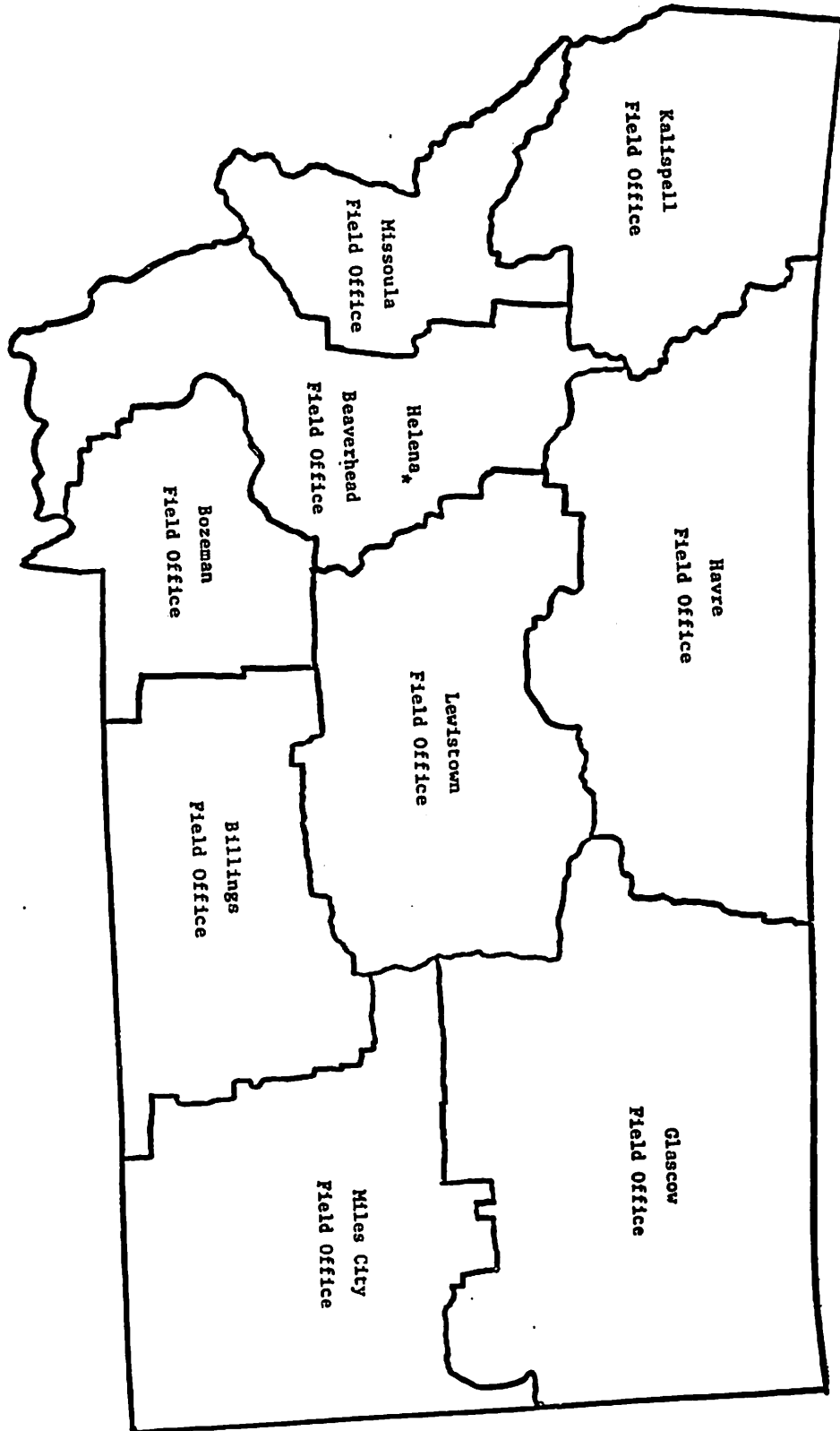
Objections must be made by the time set forth in the public notice. Statutes require that this be "...not less than 15 days or more than 60 days after the date of publication..." (Mont. Code Ann. §85-2-307 (1985)) Objections are mailed directly to the appropriate field office. Late objections are not ignored. They are investigated and put in the file with the timely objections, if any. However, late objectors do not have the right to participate in the hearing process. (Reynolds, 1987; Holman, 1987)

Objections can only be filed by water rights holders. Objections are deemed invalid and are dismissed if objectors do not hold water rights. (Fritz, 1987)

Processing Objections

Objections are channeled through the field offices to the main office of the Water Rights Bureau. They are logged in at the main office. The office verifies to the objector that the objection has been received and also notifies the applicant. The objections are then

Figure 14. Montana Water Rights Bureau Field Offices



returned to the field office for review. (Holman, 1987)

Resolving Objections

The field office will first try to settle the dispute informally. This is initially done by correspondence, and then by bringing the parties together for a meeting. If an agreement comes from this meeting, two things can happen: (1) the applicant can modify the application to recognize the agreement and satisfy the objector, and (2) the objector can request a waiver of the objection. If informal negotiation does not resolve the dispute, the case goes to a hearing officer. (Holman, 1987; Fritz, 1987; Reynolds, 1987)

Once it is decided that a hearing is in order, the hearing examiner will study the case and issue a proposed order rendering an opinion on how the application should be modified in response to the objectors' concerns. The proposed order is sent out to the parties involved. The applicant has 30 days to respond to the statement of opinion. The applicant must either request a formal hearing or agree to the conditions set forth. If there is no response from the applicant, the application is dropped. (Reynolds, 1987)

The proposed order is then sent to all parties. Parties have 20 days to comment, file an exception, and/or request a hearing. The final order is issued if no exception has been taken to the hearing officer's findings. If an exception is taken, there must be a formal hearing. (Reynolds, 1987)

No formal hearing is held on an application unless objections are filed. The hearing must take place within 60 days from the deadline for filing objections. (Mont. Code Ann. §85-2-309(1) (1985)) A court reporter is not present at the hearings. However, the proceedings are taped. Transcripts are available if requested and paid for by the parties.

Hearings usually last 3-4 hours. The manager of the appropriate field office normally serves as the hearing officer, except in particularly sensitive or complex cases. In these cases, hearings are conducted by the Division legal staff. There is usually no attor-

ney for the state agency present at the hearing. (MacIntyre, 1987; Reynolds, 1987)

If the applicant does not appear at the hearing, the application is terminated. If the objector does not appear, the objection is withdrawn. Applicants and objectors have attorneys present at the hearing on their behalf in approximately 25% of the cases. The presence of attorneys is becoming more common. (Reynolds, 1987; Holman, 1987)

Ruling

After the hearing, the examiner prepares a proposal for decision. The proposal is reviewed by the Division and Bureau staff. A final ruling is then issued. Statutes require that a ruling must be made within 180 days of the hearing date. (Mont. Code Ann. §85-2-310(1) (1985)) The ruling is given by the administrator of the Department of Natural Resources and Conservation. The original of the change approval is sent to the applicant. A duplicate is kept at the Department office in Helena. (Mont. Code Ann. §85-2-402(9) (1985))

Criteria for approval are as follows: (1) the proposed use must not adversely affect the rights of other users, (2) the proposed means of diversion, construction, and operation of the appropriation works must be adequate, and (3) the proposed use of water must be a beneficial use. (Mont. Code Ann. §85-2-402(2) (1985))

The transferrable quantity is determined on a case-by-case basis. The applicant can move the entire diversion right if there are no objectors. However, objectors typically object on the basis of their reliance on return flows. The burden is on the applicant to demonstrate what quantity can be transferred without impairing other water right holders. (Holman, 1987; Reynolds, 1987)

Changes which will involve more than 4,000 acre-feet per year or 5.5 cubic-feet per second of water must be affirmed by the State Legislature. This requirement exists to provide more stringent requirements for coal slurry pipelines and electric generation, which are both large quantity water users. (Fritz, 1987)

Appeal of Ruling

The first appeal of the ruling goes to the district court. Appeal of the district court's decision goes to the state Supreme Court. There is no appellate-level court in Montana. (Fritz, 1987)

Proving Up/Certifying Change

If the ruling stands, the applicant must make the changes within a reasonable time and then file a notice of completion. Upon filing, the project is inspected by the Division of Water Rights to verify that the change has been made. (Holman, 1987)

If the change is not completed within a reasonable time, the agency may require the applicant to show cause why the change should not be revoked. If the applicant fails to show sufficient cause, the agency may modify or revoke the change approval. (Mont. Code Ann. §85-2-402(7) (1985))

Figure 15 summarizes the water right change process in Montana.

Idaho

Like Montana, there have not been many changes in the purpose of use for water rights in Idaho. Idaho's primary water transfer activity has involved temporary exchanges through the water banks operating in two areas of the state. (See Water Market Update, V.2, No.9, 1988 for information on Idaho's water banks) The authority to consider change applications in the state of Idaho is vested in the director of the Department of Water Resources. (Idaho Code §42-108 and 42-222 (Supp. 1988)). The Department has four regional offices. Regional boundaries are shown on Figure 16.

The terminology used in the water rights transfer process in Idaho is similar to that used in New Mexico, Utah, and Nevada. The individual desiring the change is called the "applicant". Those who object to the approval of the application are referred to as "protestants".

Filing Application

Any party desiring to change the point of diversion, nature, place, or period of use of a water right in Idaho must file an application with the Department of Water Resources.

Application must be made on form 222, "Application for Transfer of Water Right", furnished by the Department and must describe the right to be changed and the changes proposed. (Idaho Code §42-222 (Supp. 1988)) Detailed instructions for completing the form are provided on Form I-222. The application consists of three parts: (1) Part 1 describes the right as it will exist after the change, (2) Part 2 describes the water right as it is presently recorded with the state, and (3) Part 3 includes a grid for drawing a plan map or attaching a copy of a U.S.G.S. map to illustrate the locations for the point(s) of diversion and place(s) of use. The applicant must also submit data regarding the possible effects on other water users.

Historically, attorneys have seldom been involved in the change process. Recently, however, more applicants have retained attorneys. In addition, applicants often hire engineers for technical assistance. (Rassier, 1988)

Processing Application

The application is submitted to one of the four regional offices in Coeur d'Alene, Idaho Falls, Twin Falls, or Boise. The Department staff is required by statute to check for completeness and accuracy. (Idaho Code §42-222 (Supp. 1988)) This is done at the regional office. If further information is required, the regional staff requests it from the applicant. Once the application is complete, it is forwarded to the state office in Boise. (Rassier, 1988)

Public Notice

Public notice of the application must be made once a week for two consecutive weeks in a newspaper of general circulation in

Figure 15. Montana Change in Water Right Process

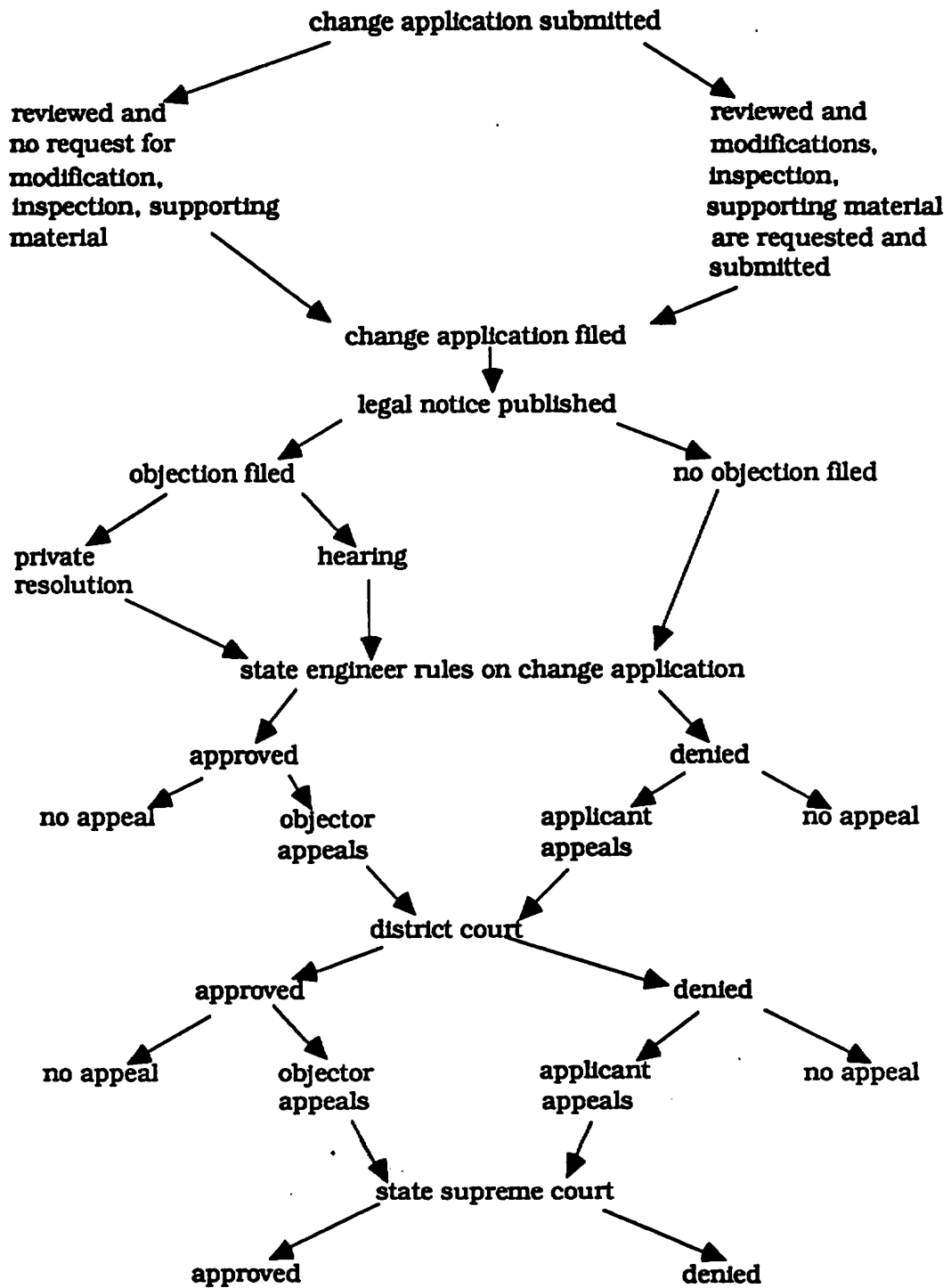
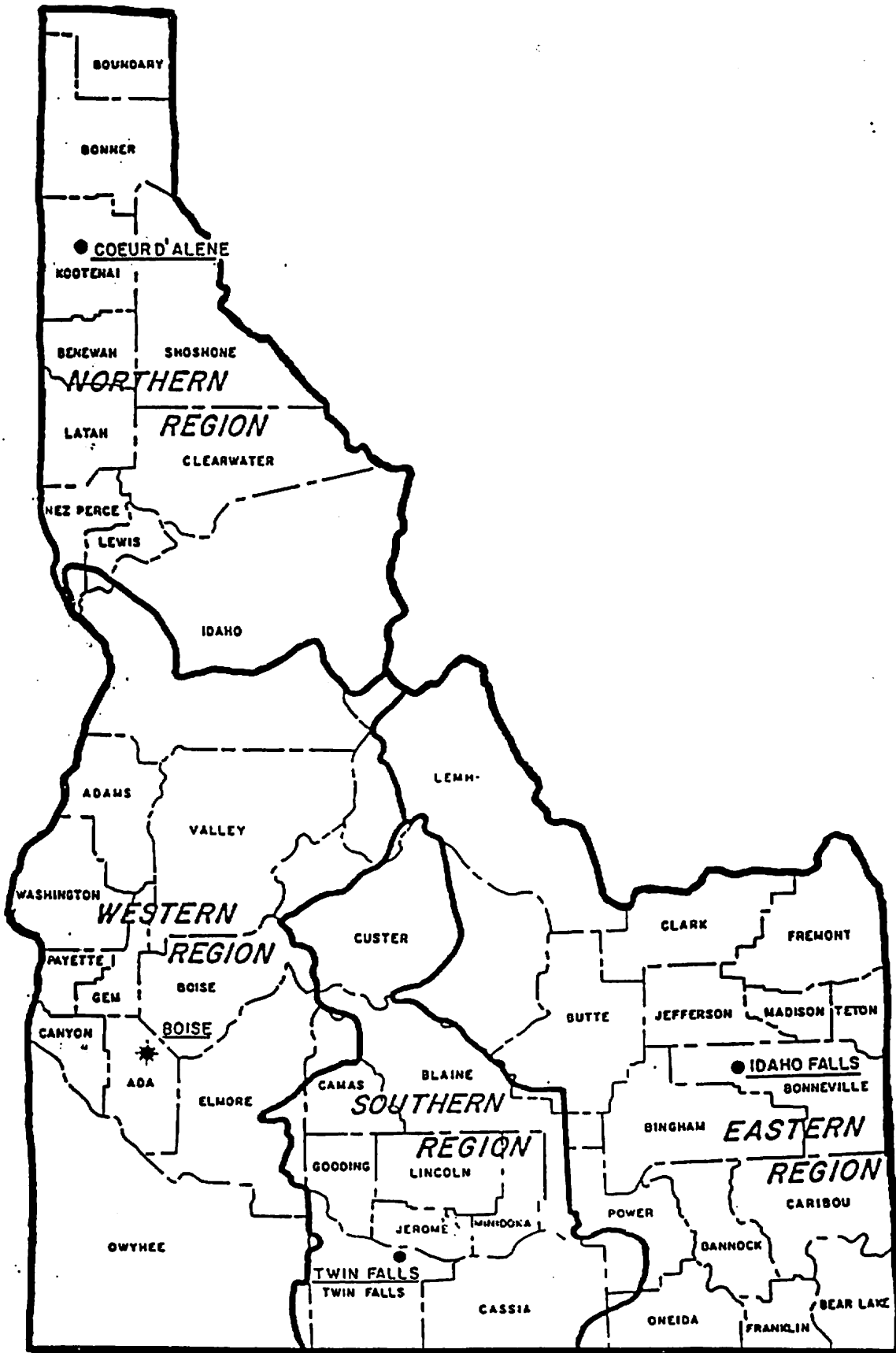


Figure 16. Regional Divisions, Idaho Department of Water Resources



the county where the water is diverted. (Idaho Code §42-222 (Supp. 1988)) The director of the Department is also required to advise the watermaster of the district in which the water is used of the proposed change. The watermaster must respond with his recommendation on the application. The receipt of this recommendation is required before the application can be approved. (Idaho Code §42-222 (Supp. 1988))

Filing Protests

Those parties objecting to the application may file a protest with the Department. There is no standard form for protests. Filing is usually done in the form of (1) pleadings by an attorney or (2) a letter written by an individual. (Rassier, 1988) Protests must be filed within ten days of the last date of publication. (Idaho Code §42-108 (Supp. 1988)) Late protests are not considered. "Any person" has standing to file a protest to a change application, providing he can show damage. In addition to injury to other water rights holders, adverse impacts on the public interest are considered valid grounds for filing a protest, based on legislation passed in 1978. (Rassier, 1988; Idaho Code §42-203A (Supp. 1988)) General statements of protest (so called "blanket protests") against changes of a particular type or from a particular source of water are not considered valid. (Water Appropriation Rules and Regulations, No. 4.3.1.3 (1986))

Processing Protests

Statutes require the Department to investigate all filed protests. (Idaho Code §42-222 (Supp. 1988)) Protests are submitted to the appropriate regional office. The regional staff forwards them to the state office. While the protestant is required to notify the applicant of the protest, the Department routinely sends notice of the protest to the applicant by certified mail. (Rassier, 1988)

Resolving Protests

The applicant is not required to respond to protests. Two methods of conflict resolution are available: (1) conference, and (2) formal hearing. The Department staff will

generally set a date for both a conference and a hearing. Often, these are set on the same day. (Rassier, 1988)

The function of a pre-hearing conference is to allow for private resolution between the parties prior to the formal hearing. The applicant, protestant, and members of the agency staff attend the conference. If this conference does not result in an agreement, there is a formal hearing. (Rassier, 1988)

There is no time limit within which the hearing date must be set. Hearings are normally held in the region affected by the change. This is a matter of convenience for the parties involved, and is not required by statute. There is no standard location for hearings in each given area and the choice of a specific location is at the discretion of Department staff. (Rassier, 1988)

Proceedings are not transcribed by a court reporter, but are tape recorded. Copies of the tapes are available to interested parties. In addition, the parties are allowed to provide their own court reporter to transcribe the proceedings. Hearings typically range in length from four hours to three days. (Rassier, 1988)

There is generally no department attorney present. The hearing officer is normally the only state agency staff member present. Although not required by statute, both the applicant and protestant are almost always present. Often, both parties are represented by attorneys at the hearing. (Rassier, 1988)

Ruling

There is no statutory time limit within which a ruling is required, but the Department director is required to rule on every application submitted. Statutes require legislative approval for transfers in excess of 5,000 acre-feet. (Idaho Code §42-108 (Supp. 1988))

Criteria for approval of a change application are: (1) non-injury to other rights holders, (2) non-enlargement of the existing right, and (3) consistency with the local public interest. (Idaho Code §42-222 (Supp. 1988)) The public interest criterion has been recently added to this list. A 1985 Idaho Supreme

Court has delineated some of the factors to be considered in the public interest. *Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441 (1985)

There is one other statutory restriction on changes. First, the director may not approve a change in the nature of use from agriculture, where such a change would significantly affect the agricultural base of the local area. (Idaho Code §42-222 (Supp. 1988)) Previously, the director also could not approve a change in the nature of use if a change has been previously allowed, except where the change is back to the original use. (Idaho Code §42-222 (Supp. 1988)) However, this restriction was struck down by the Idaho Legislature in 1986. (1986 Idaho Sess. Laws, ch. 313, S 5, p. 763)

The hearing officer may initially issue a proposed ruling. Upon issuance of a proposed decision, the parties are given 15 days from the date of service to file exceptions to it. Following the exceptions period, the director can confirm the hearing officer's ruling or issue a revised ruling. Any party to the proceeding may petition the director for rehearing of the final decision within 20 days of the date of issuance. (Rassier, 1988)

Appeal of Ruling

There are two methods available for appeal of a final administrative ruling: (1) petition for rehearing by the director, and (2) appeal to the state district court. (Rassier, 1988)

The parties involved have 20 days following the final ruling to petition for a rehearing by the director. If granted, this rehearing provides an additional opportunity for the parties to present their cases. (Idaho Code §42-1701A(3) (Supp. 1988))

Any party also may appeal the decision to the state district court within 30 days after the service of the final decision or, if a rehearing is requested, within 30 days of the decision thereon. (Idaho Code §42-1701(a) and §67-5215(b) (Supp. 1988)) A district court appeal does not result in de novo review. The judicial

appeals procedure is based on the record developed in the original hearing only. (Rassier, 1988)

Proving Up/Certifying Change

Once final approval has been issued, a copy of the approved application is returned to the applicant. The applicant is then authorized to make the change and the water right is presumed to have been amended. (Idaho Code §42-222 (Supp. 1988))

The change of water right process, as administered in Idaho, is summarized in Figure 17.

Wyoming

Few transfers of water rights have taken place in Wyoming, relative to other western states. The chief water rights administrative agency in Wyoming is the Board of Control. This body is composed of the state engineer and the superintendents of the Water Divisions. The Divisions are indicated in Figure 18. The group has the general supervision of all of the water of the state. (Wyoming Water and Irrigation Laws, 1982)

The state engineer is appointed by the governor and confirmed by the senate. His term of office is six years. The state engineer is president of the Board of Control and is the primary individual responsible for the consideration of change applications. (Wyoming Water and Irrigation Laws, 1982)

The terminology used in Wyoming differs somewhat from that of most other states. In order to secure a change in a water right, one must file a petition. Therefore, those individuals desiring a change are referred to as "petitioners". A person who objects to the granting of a petition is termed a "protestant", as in most other states.

Filing Petition

The first step in the Wyoming transfer process is the filing of a petition with the Board of Control. The petition is a notarized legal document which includes all information

Figure 17. Idaho Change of Water Right Process

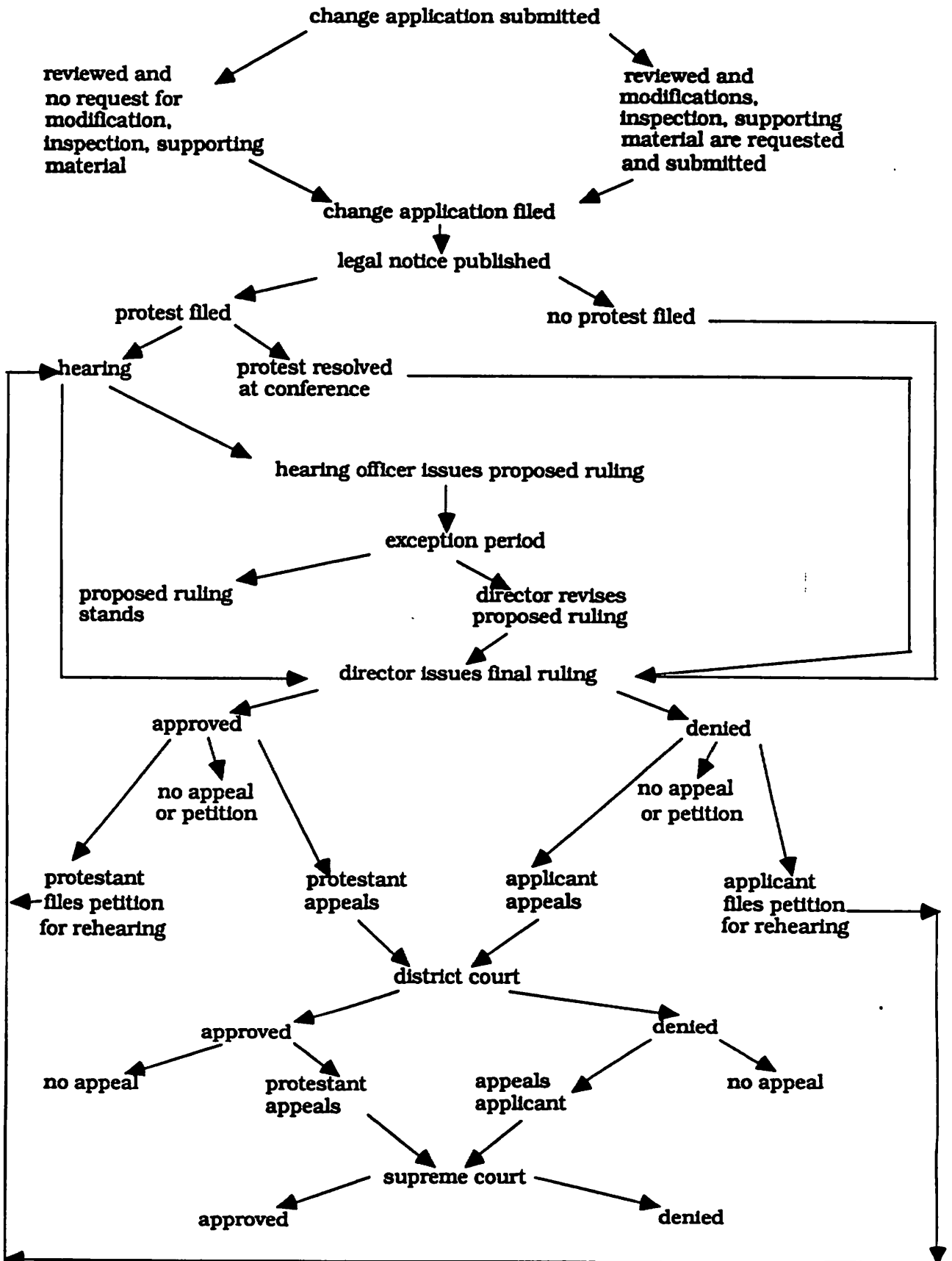
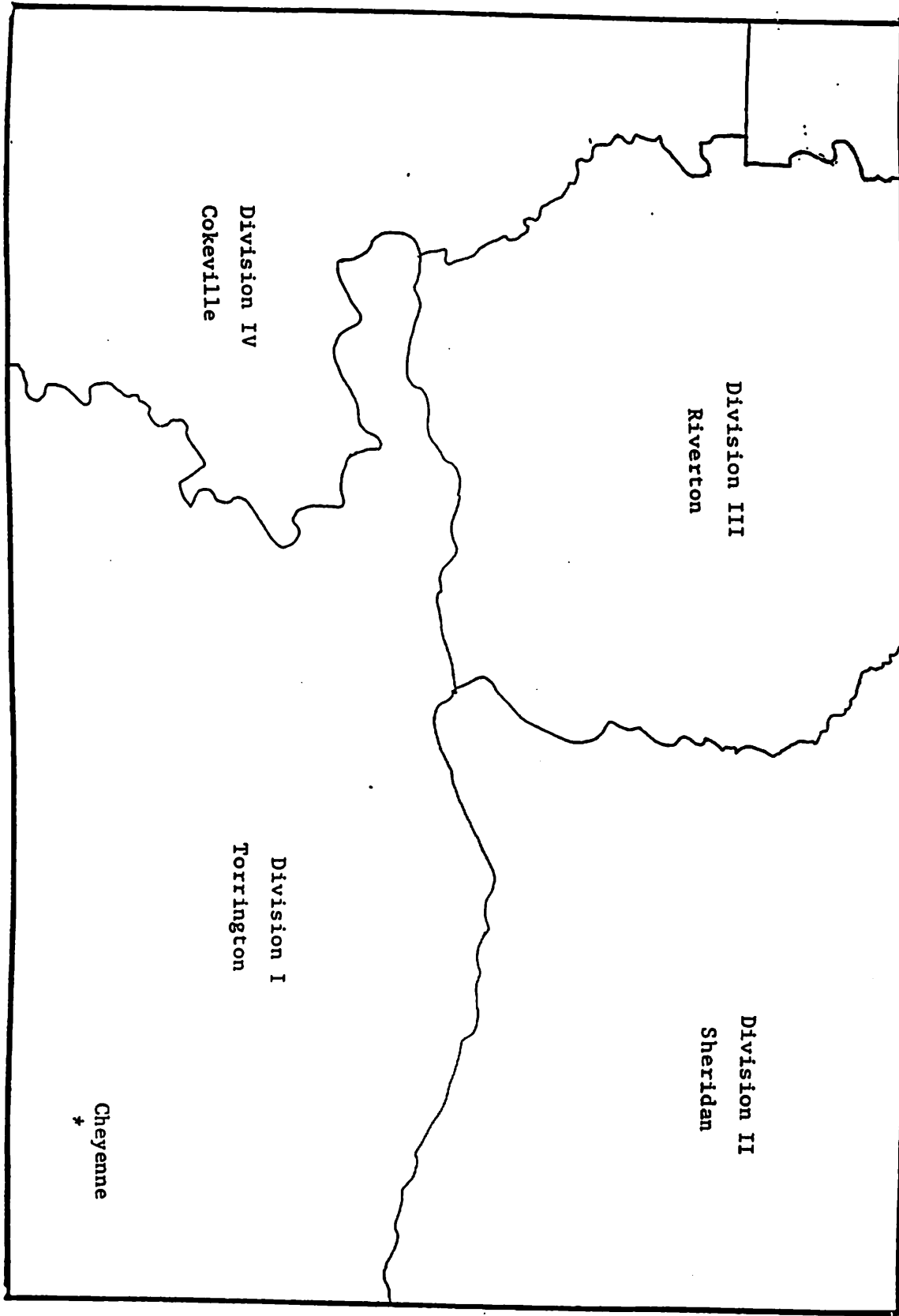


Figure 18. Wyoming Water Divisions



pertaining to the proposed change. It is not a form provided by the state agency. (Carr, 1988)

Maps provided by a licensed professional engineer or land surveyor must accompany all petitions. Drafting standards and size requirements for the maps are specified by rule. (Regulations and Instructions, Part I, Chapter IX, Sec. 2(b))

The fee for filing a petition is \$30 and is due when the petition is submitted. (Regulations and Instructions, Part I, Chapter IX, Sec. 1(d)) Petitioners usually retain an attorney and an engineer to assist in drafting the petition. (Carr, 1988)

Processing Petition

The Board of Control staff checks the information provided by the petitioner for completeness and correctness. Staff may request additional information if the petition is incomplete. The petition cannot be heard by the Board of Control until all information is complete. (Carr, 1988)

Public Notice

Public notice that the petition has been filed must be given for a period of 30 days. This notice must be published in a newspaper of general circulation in the county in which the proposed change would take place. The cost of publishing is billed to the petitioner. The Board of Control also notifies those parties who might be affected by certified letter. (Carr, 1988)

Filing Protests

Statutes provide that "any person" has standing to file a protest to a change petition. Protestants must, however, be able to show injury to existing water rights and protests filed by those individuals who are not right-holders do not receive consideration. The time limit within which protests must be filed is given in the public notice. This is normally 20 days from the date of publication. There is no standard form for these protests. They can be filed either in writing, verbally at the hearing itself, or both. (Carr, 1988)

Processing Protests

The protest is reviewed by Board of Control staff. The Board will notify the petitioner of the protest by regular mail. They will also enclose a copy of the protest. (Carr, 1988)

Resolving Protests

Statutes require that a formal hearing be held on all petitions. Opportunities for private resolution must be created by the parties themselves as there is no official mechanism to bring the parties together before the hearing. The Board of Control generally feels that all valid protestants should have their "day in court". The board will often work to facilitate private resolution after the protestant has been given an opportunity to state their objections at the hearing. (Carr, 1988)

The division superintendent and a Board of Control staff member will normally conduct a complete field investigation prior to the hearing to gather facts. This investigation typically takes from 1-3 days. (Carr, 1988)

There is no statutory time limit within which the hearing must take place. Hearings are generally held in a timely manner. The hearings are held before the superintendent of the water division in which the proposed change would take place. The petitioner can request that the case be heard in front of the entire Board of Control, but must then pay the travel expenses for each of the board members. The Board can also decide that the case should be heard before the entire body. In this case, the petitioner is not liable for the travel expenses. (Carr, 1988; Trelease, 1988)

The only requirement for the location of the hearing is that it be in the same county that the proposed change would take place. There is no set place within the counties at which to hold hearings. Agency staff usually tries to schedule a location that is most convenient to all parties involved.

The hearing proceedings are transcribed by a court reporter. Transcription costs average approximately \$750 for each full day of the hearing, at \$3.50 per page, and are

paid directly by the petitioner. The petitioner must also pay for the hearing room, about \$25 per day. The Board will not render a decision until all fees are paid. (Carr, 1988)

Parties are not required to attend the hearings, but are present on almost all occasions. In the case of unprotested petitions, the petitioner might not attend, but will send a representative. Generally, both the petitioner and the protestant are represented by attorneys. The Board prefers that the petitioner formally present a case for the change in water right, even when there is no protest. This allows for development of the record in the event that the ruling is later appealed. (Carr, 1988)

Ruling

Following the hearing, the superintendent will issue a ruling on the application. There is no statutory time limit in which this ruling must be filed. The ruling is issued in three parts: (1) findings of fact, (2) conclusions of law, and (3) order. The order will delineate the approval, modification, or denial of the application.

To be approved, the proposed change must not (1) exceed the amount of water historically diverted, (2) exceed the historical rate of diversion, (3) increase the amount of water historically and beneficially consumed, (4) decrease the amount of historic return flow, or (5) injure other lawful appropriators. (Wyo. Stat. §41-30-104 (1986))

Appeal of Ruling

Parties have 30 days from the time of the ruling to appeal. The first appeal is to the Wyoming District Court. A second appeal goes to the State Supreme Court. There have been cases in which the district court has referred directly to the Supreme Court without a ruling. (Trelease, 1988)

Proving Up/Certifying Change

There is no time limit for certification in Wyoming statutes. The ruling can, however, stipulate the steps required to implement the change and impose time limits for each step. Board of Control staff will review the case

to assure that the appropriate steps have been taken. In addition, the water rights are subject to forfeiture and abandonment proceedings following five consecutive years of non-use. (Trelease, 1988; Carr, 1988)

Figure 19 summarizes the change of water right process in Wyoming.

IV. COMPARATIVE ANALYSIS OF STATE PROCEDURES

As evident in this analysis, the administrative procedures involved in a change in the purpose of a water right in these eight western states are similar in many aspects. Some differences between the states are more of style and terminology than of substance. There are, however, distinctions in the change of water right process which have important implications for water users, protestants, administrative agencies and the public.

Ideally, water transfer procedures should distinguish between desirable and undesirable changes in water use, while minimizing costs incurred by applicants and protestants and administrative costs incurred by the state agency. Since all proposed changes in the purpose of use of a water right are not necessarily in the best interests of the state and its citizenry as a whole, state water agencies serve a vital role in regulating changes, settling disputes among parties, and protecting broader interests. The following section highlights procedures in various states which appear to lead toward effective administration of the change in water use process.

Filing Application

The process for filing applications for a change in the purpose of use of a water right is relatively consistent between states. Key features of the process are compared in Table 1. The requirement of a standard form for applications is an effective way to standardize the process, while adding only minimally to the transactions costs incurred by the applicant. Virtually all states require filing of some standard application form.

Filing fees are similar among the states. 1988 application fees ranged from \$30 (Wyoming and Arizona) to \$159 (Colorado). One

Figure 19. Wyoming Change of Water Right Process

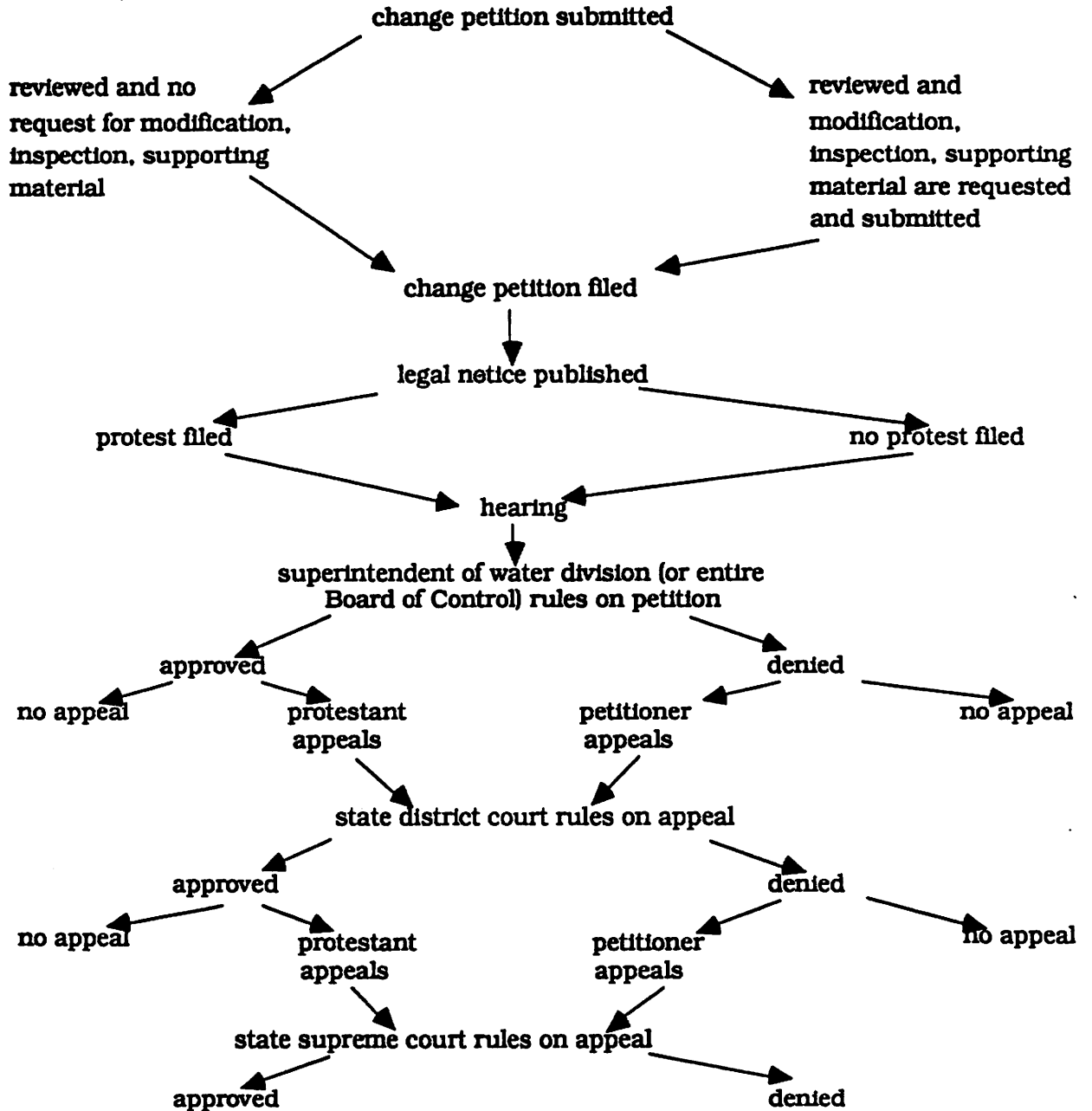


TABLE 1: TERMINOLOGY, FILING AND PUBLIC NOTICE POLICIES

| STATE: | NEW MEXICO | UTAH | NEVADA | COLORADO | ARIZONA Groundwater (1) | ARIZONA Surface Water (2) | MONTANA | IDAHO | WYOMING |
|--|-------------------------|--------------------------|--|-----------------------------|-------------------------------|-------------------------------|--|---------------------------------|------------------------|
| State Agency Administering Changes in Water Rights | State Engineer | Division of Water Rights | Department of Conservation and Natural Resources | Division of Water Resources | Department of Water Resources | Department of Water Resources | Department of Natural Resources and Conservation | Department of Water Resources | Board of Control |
| Term for person desiring change: | Applicant | Applicant | Applicant | Applicant | Applicant | Applicant | Applicant | Applicant | Petitioner |
| Term for person opposed to change: | Protestant | Protestant | Protestant | Opposer | Protestant | Protestant | Objector | Protestant | Protestant |
| Filing fee: applicant to change purpose of use: | \$5 | \$30-\$450 | \$40 | \$159 | \$30 | \$50 | \$50 | \$50; \$30 if less than 0.2 cfs | \$30 |
| Standard form available for filing application? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No, affidavit |
| Application submitted to: | SE district office | Area office | Division SE central office | Water Court | AMA office | ADWR | Field office | Regional office | State Board of Control |
| Time required for public notice: | Once a week for 3 weeks | Once a week for 3 weeks | Once a week for 5 weeks | Once | No public notice | Once a week for 3 weeks | Once | Once a week for 2 weeks | Once during 30 days |

NOTES:

- (1) Groundwater data for Arizona reflects a conversion of IGFRs to Type I rights.
- (2) Surface water data for Arizona reflects a severance and transfer.

exception, however, is Utah's graduated scale based upon the number of acre-feet the applicant requests to be transferred. This fee schedule requires those involved in larger transfers to pay more than those who seek smaller transfers. Since agency staff time required may often be related to the quantity of water being transferred, a graduated fee schedule can be a reasonable means of allocating state agency costs among water transfer applicants.

The amount of supporting documentation and work performed by outside consultants during the application stage is a function of the complexity of subsequent stages of the approval process. For example, changes of use in Colorado's most active water court divisions tend to be heavily adversarial. The large number of statements of opposition typically filed, the judicial nature of the procedures, and the de novo appeal process are some of the factors which combine to make the system highly litigious. Therefore, attorneys and technical consultants are typically retained at an early stage. In contrast, the change of use process in Idaho and Wyoming is much less formal and complicated, partly because there has been less demand for water transfers in these states. Appropriable water is still available in many basins. In areas where water sources are not yet fully appropriated, changes in use generate less conflict among water users, the transfer process tends to be less adversarial, and legal counsel and technical consultants are less frequently required.

Processing Application

The application is checked by the central office of the state agency in roughly half of the states, and at local branches in the others. Local review appears to be a better way of obtaining technical input from the local agency staff at an early stage in the application process. The local staff presumably is more knowledgeable regarding potential water use conflicts in their particular area. Local staff processes applications in Colorado, Arizona, Utah, Montana, and Idaho.

Complicated transfer applications may require state agency legal and technical expertise available only at the central office. Utah

has a process which accommodates either local or central review. The application is initially submitted to the area office. The area office staff forwards more complex cases directly to the special investigations office at the state level. Other states such as Colorado and Arizona also allow for varying degrees of interaction between the state and local levels.

Public Notice

Public notice is required for change of water right applications in all eight states, with the exception of conversions of groundwater rights in Arizona. The amount of public notice is relatively similar and involves newspaper publication. Time required ranges from one week (Montana) to five weeks (Nevada). Public notice procedures are summarized in Table 1.

One interesting variation in public notice practices is Colorado's resume process. In addition to publication in a newspaper, notice of all applications in a given month is compiled and sent to a list of regular subscribers. The costs of the resume publication are paid by the individual subscribers. In Colorado, as in many western states, there are individuals who are actively involved in water issues and who wish to be kept informed of current developments. With the resume, the Colorado Division of Water Resources provides this additional public notice.

Another difference between the states lies in how and by whom the cost of publishing is paid. In Arizona, Idaho, Nevada, Utah, and Montana, the state agency submits the information to the newspaper and pays the associated fees. Application fees are rarely large enough to fully defray the costs of publishing, so taxpayers (through the state agency budget) bear a portion of these costs. In Colorado and Wyoming, the state agency submits the notice to the newspaper and bills the applicant for the cost. New Mexico applicants pay publishing fees directly to the newspaper.

Objections to the Change Application

Formal objections to change applications are allowed in all study states. These are the primary means through which other water right holders can express their concerns and,

in some states, through which the public interest can be protected. Protest procedures should be designed for individuals to voice legitimate concerns regarding changes in water rights at minimal expense. At the same time, protest procedures need to minimize unnecessary expenses incurred by the state agency and applicants in responding to protests based on irrelevant and insubstantial issues. Table 2 compares aspects of the protest process in the eight study states.

Nevada has developed an innovative process whereby a protest may be filed either formally or informally. For a formal protest, the individual must file a required form and pay a filing fee. An informal protest need not be entered on the form and there is no filing fee. Formal protests automatically require a hearing; informal protests do not. However, both formal and informal protestants can participate in a hearing. The availability of both options allows protestants greater flexibility in expressing their views on the proposed change.

Another important aspect of the protest process involves the requirements for standing to file. In Montana, objections are limited to downstream water rights holders. Colorado opposers need not be water rights holders, but statements of opposition can be filed only on the basis of injury to water rights. Wyoming, Nevada, Idaho, Utah, and Arizona have no statutory requirement that protestants must hold water rights, but in practice less credence has been given to protestants who do not hold water rights that could be affected by the change.

New Mexico statutes outline the bases on which protests can be filed. These include: 1) impairment of the protestant's own water rights, 2) detriment to the public welfare, or 3) detriment to water conservation in the state. This statute provides for a broader range of concerns to be expressed through the protest process. Careful administration of these guidelines is required to screen out insubstantial and extraneous protests.

States differ in requirements that the applicant formally respond to the protest. In Colorado and New Mexico, the applicant must respond or face possible dismissal of the appli-

cation. Both these states set a 30-day time limit for response. The other states do not require that the applicant formally respond to protests.

Resolving Protests

Protest resolution is perhaps the most important step in the administrative process. This is often the phase in which the most time and money are spent by applicants, protestants, and the state agency. It is also the stage in the change of water use process that third-party concerns can be most directly addressed. All eight study states provide the option of either privately negotiated resolution or a formal hearing.

State agencies generally attempt to facilitate private negotiations and resolution of conflicts. The different states pursue private resolution to varying degrees. For example, the Idaho Department of Water Resources staff often holds a pre-hearing conference in which the applicant and protestant are brought together to attempt private negotiation. Other states provide addresses and phone numbers of protestants to the applicants, and most will schedule an informal meeting if the parties so request.

Nevada has an option known as a formal field investigation. Here, the parties meet with the agency staff personnel at the site of the proposed change. This allows for a more complete understanding of the details of the case and also lends a less formal atmosphere to the proceedings. Reports from the state engineer's staff in Nevada indicate that this method often produces a settlement.

All states provide for a formal hearing process and some require a hearing for change of use applications, even if no protests have been filed. Table 2 compares hearings procedures across states.

Ruling

Once the hearing has been held, a ruling on the change application must be made. Some states have a time limit within which a ruling must be issued. These are noted in Table 3. Some states' statutes define

TABLE 2: PROTEST AND HEARING POLICIES

| STATE: | NEW MEXICO | UTAH | NEVADA | COLORADO | ARIZONA | ARIZONA | MONTANA | IDAHO | WYOMING |
|--|--------------------------------|-------------------------------|---|--------------------------------|--------------------|-------------------------------|---|-----------------------|-------------------------------|
| | | | | | Groundwater (1) | Surface Water (2) | | | |
| Standard form for protests? | No, usually letter | Yes, but not required | Yes, but not required | Yes | No protest process | None required | No | No | No, written or verbal |
| Time limit to file protests from last date of publication: | 10 days | 30 days | 30 days | 30 days | N/A | None | 2 weeks | 10 days | Specified in public notice |
| Must protestant be right holder? | No | Yes | No | No | N/A | No | Yes | No | No |
| Methods of resolution available | Private resolution or hearing | Private resolution or hearing | Private resolution, field investigation, or hearing | Private resolution or hearing | N/A | Private resolution or hearing | Private resolution or hearing | Conference or hearing | Private resolution or hearing |
| Must applicant respond? | Yes, within 30 days of hearing | No | No | Yes, within 20 days of protest | N/A | No | Yes, within 30 days of Statement of Opinion | No | No |
| Hearing deposit required? | Yes, \$300 | No | No | No | N/A | No | No | No | No |
| Typical length of hearing: | 1 day—2 weeks | 1—2 hours | 1—6 days | 1 day to a few weeks | N/A | 2—4 hours | 3—4 hours | 4 hrs—3 days | 2 hrs—6 days |
| Attorneys usually present? | Yes | Yes | Yes | Yes | N/A | No | Yes | Yes | Yes |

NOTES:

- (1) Groundwater data for Arizona reflects a conversion of IGFRs to Type I rights.
- (2) Surface water data for Arizona reflects a severance and transfer.

TABLE 3: CRITERIA APPLIED IN ADMINISTRATIVE RULINGS AND RULING POLICIES

| STATE: | NEW MEXICO | UTAH | NEVADA | COLORADO | ARIZONA | ARIZONA | MONTANA | IDAHO | WYOMING |
|---|--|--------------------------------|---|--|--|--|---|--|---|
| | | | | | Groundwater (1) | Surface Water (2) | | | |
| State Agency Evaluation Criteria: | 1) Impairment of existing rights; 2) contrary to water conserv.; 3. detrimental to public interest | 1) Impairment of vested rights | 1) Impairment; adverse to public interest | 1) non-injury; 2) non-encroachment; 3) maintain historic returns | 1) land outside service area; 2) development plan filed; 3) non-irrig. use; 4) land previously irrig. | 1) non-injury; 2) non-encroachment of subject rights; 3) consent from district or assoc.; perfected rights | 1) non-impairment; 2) means of approp. works must be adeq.; 3) proposed use is beneficial | 1) non-injury; 2) non-encroachment; 3) consistent with local public interest | 1) non-encroachment of diversion, historically and beneficially consumed; 2) non-impairment of return flows; 3) non-injury |
| Time limit from end of protest period in which to rule: | None | None | One year | 60 days | None | 30 days | 180 days | None | None |

NOTES:
 (1) Groundwater data for Arizona reflects a conversion of IGFRs to Type I rights.
 (2) Surface water data for Arizona reflects a severance and transfer.

specific criteria upon which the ruling must be based. These are listed in Table 3. Substantive criteria for approval of a change in water use application are desirable because they provide guidelines to potential applicants and reduce uncertainty regarding approval.

New Mexico does not have clear statutory criteria for ruling on change applications. The state engineer's staff normally uses those criteria set forth for new appropriations. Non-impairment of other water rights and non-enlargement of the subject water rights are statutory criteria in Utah, Nevada, Arizona, Montana, Idaho, and Wyoming.

Protection of the "public interest" or "public welfare" is designated as a basis for denying an application in Utah and Idaho, and has been utilized in New Mexico. Public interest provisions are discussed in more detail in Section VI of this document and are summarized in Table 6.

Appeal of Ruling

An appeal process is normally available for applicants or protestants dissatisfied with the initial administrative ruling. Table 4 compares appeals procedures across states. The appeal process differs between states on two counts: 1) the opportunity for appeal at the administrative level, and 2) the degree to which the legal process in the appeal duplicates that of the original hearing.

An administrative appeal can be less costly and time-consuming than a judicial procedure. Appellants in Arizona are required to go through an administrative appeal process. Judicial appeal is allowed only after administrative remedies have first been exhausted. In New Mexico, appeals of state engineer rulings go to district court unless there was no hearing at the agency level. In that case, the appeal goes to administrative review. In Utah, Wyoming and Idaho, the initial appeal goes directly to district court. Initial hearings on change applications in Colorado involve the district water court and appeals go directly to the Colorado Supreme Court, bypassing the appellate courts.

The appeal process is de novo in New Mexico and Colorado. Therefore, the entire

process of submitting evidence, cross-examining experts and so on is repeated for the appeal hearing. Appeals in the other states are generally not de novo. The appeal is based on the record developed in the original hearing. New issues of fact are not introduced at the appeal stage.

New fact-finding procedures at an appeal stage can be both costly and productive. A balance must be reached between obtaining accurate and complete information and minimizing the costs of the appeal process. In general the duplicative nature of a trial de novo seems overly burdensome to the parties involved in a change of water right proceeding.

Implementing and Certifying the Change

Requirements for eventual certification of the approved change application summarized in Table 4. Montana, Arizona, and Idaho have no specific statutory time limit within which the change must be implemented. All these states, however, require that the applicant must "show due diligence" or must complete the change "within a reasonable time". Utah requires that the change be completed within three years of final approval. The limit is four years in New Mexico.

In Nevada, Colorado and Wyoming, a time limit and any special implementation conditions are determined on a case-by-case basis. This allows the hearing officer to consider extenuating circumstances while still providing for substantive time restrictions.

In Nevada, Montana, and New Mexico, the applicant must file notice of completion when the project is finished. The state agency then inspects the site to verify that the change has taken place as approved. Persons completing changes in Utah can either hire a professional surveyor to document the change or request that the state engineer determine if the change has been properly implemented.

V. TRANSFER OF WATER INVOLVING BUREAU OF RECLAMATION PROJECTS

Although the U.S. Bureau of Reclamation supplies only about 20% of the irrigated

TABLE 4: POLICIES REGARDING APPEALS AND CERTIFICATION OF WATER RIGHT CHANGES

| STATE: | NEW MEXICO | UTAH | NEVADA | COLORADO | ARIZONA Groundwater (1) | ARIZONA Surface Water (2) | MONTANA | IDAHO | WYOMING |
|---|----------------------|----------------------|--|---|--|---|----------------------|--|------------------------|
| Time limit to appeal ruling: | 30 days | 30 days | 30 days | 20 days | 15 days | 15 days (3) 35 days (4) | --- | 30 days | 30 days |
| Forum for Appeal: | State District Court | State District Court | State District Court; appeals involving Carson and Truckee Rivers go to Federal District Court | Division Water Court or State District Court upon request | administrative review of law or rehearing on facts | administrative review of law or rehearing on facts | State District Court | petition for rehearing or State District Court | State District Court |
| Typical time period from application filing to administrative ruling: | 6mos - 2yrs | 6mos - 2yrs | 5mos - 1yr | 6mos - 1yr | 6 months or less | 6mos - 1yr | 6mos - 1yr | 8 months | 6-8 months |
| Time period for applicant to demonstrate implementation of approved change: | 4 years | 3 years | variable, but less than 5 years | court decree is evidence; subject to abandonment | no process | no process; subject to forfeiture and abandonment statute | variable | no process | up to 5 years |
| Extensions available on this time period? | yes; 1 year | yes; up to 50 years | yes; 1 year | not applicable | not applicable | not applicable | up to 10 years | not applicable | variable up to 5 years |

NOTES:
 (1) Groundwater data for Arizona reflects a conversion of IGFRs to Type I rights.
 (2) Surface water data for Arizona reflects a severance and transfer.
 (3) For administrative appeal.
 (4) For judicial appeal.

acreage in the 17 western states in which the agency operates, transfer of Bureau water may be important for several reasons. First, the Bureau controls some of the major storage facilities throughout the West that can provide carryover storage from one year to the next. Second, the Bureau controls major conveyance facilities in some states, the excess capacity of which can be utilized for conveyance of both project and nonproject water. Third, much of the Bureau's water is presently devoted to agricultural uses, some of which might provide the least costly sources for expanded municipal, industrial and recreational uses. Water can potentially be freed from agricultural uses by implementing more effective agricultural water conservation practices, by selecting lower water use crops, or by retiring some of the least productive irrigated land from production.

As a general rule, transfer of Bureau project water would be subject to the state procedures already discussed in this volume. The water rights for Bureau projects were obtained under state law and any change in place of use, point of diversion, type of use, or season of use would have to comply with state procedures. In addition, however, transfers involving project water would normally have to be approved by the contracting officer for the Bureau of Reclamation project. The criteria for such approval is the principal topic of this section. For transfers of water among growers within a single irrigation district, neither state nor federal approval is normally required because these transfers do not require changing the water right obtained from the state, nor do they require a significant change in the federal operation of Bureau facilities. Districts have established a variety of means for facilitating such within-district transfers. (For example, see the description of the Arvin-Edison exchange pool in Wahl and Osterhoudt, 1986.)

Voluntary transfers of water between districts in a Bureau of Reclamation project would normally not be actual sales of water rights. It is common that the water rights associated with a Bureau project are held by the Bureau. The Bureau in turn contracts with water districts for water delivery from its storage and conveyance facilities. Therefore, transfers of water involving Bureau projects

would most often be leases or sales of contractual deliveries, without the actual water rights changing hands. Such assignments of contractual deliveries can be either short-term leases, annual rentals, long-term leases, dry-year option agreements, or permanent sales.

Voluntary transfers of water from Bureau of Reclamation facilities are not new. 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. In 1980, the Idaho legislature gave further backing to such arrangements by authorizing the state to operate water banks. In 1972, the Utah Power and Light Company obtained 6,000 acre-feet of water from two irrigation companies in the federal Emery County project for power plant cooling. The City of Casper, Wyoming, is paying the nearby Casper-Alcova Irrigation District for canal lining on portions of the district's fifty-nine-mile canal and 190-mile lateral system in order to reduce seepage. The exchange 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. In the Fort 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 exchanged at market value. The Metropolitan Water District of Southern California (MWD) has struck an agreement with the Imperial Irrigation District (IID) of Southern California to fund conservation measures that would salvage 100,000 acre-feet of water annually for municipal and industrial uses in the MWD service area. Under the agreement, MWD will pay IID \$92 million for the construction of conservation facilities, \$3.1 million annually for operation and maintenance, and \$23 million in five annual installments for indirect costs. These examples illustrate the diversity of transfers involving federal projects and their widespread geographic locations. For additional discussion concerning these and other past examples, see Wahl and Osterhoudt, 1986; Engels, 1986; Wahl and Davis, 1986; and Water Market Update, Vol.2, No.12, 1988.

Initiating a Water Transfer

Normally, the Bureau of Reclamation does not and would not initiate a transfer, but will work with interested parties that bring a transfer proposal to the organization. The normal point of contact is the contracting officer for the Bureau project. Requests can also be initiated at the office of the Regional Director. (See Appendix Two for addresses and phone numbers.) Bureau approval is normally required because most Bureau contracts provide that no assignment of rights under the contract can be made without the approval of the Secretary of the Interior or his contracting officer. Figure 20 shows Bureau of Reclamation regions.

Criteria for Approval

In response to the increasing number of transfer requests, in December, 1988, the Department of the Interior issued a set of principles to govern transfer approvals. (These principles are reproduced in Appendix Three.) In addition, the Bureau of Reclamation is developing more detailed guidance to interested water users. Unlike state procedures, these principles apply to transfer of contractual deliveries of project water, rather than title to the water rights. The general points on which Bureau review will turn are the following:

1. Does the transfer comply with applicable state law?
2. Does the transfer comply with applicable federal law?
3. Has the transfer been arranged so that it will not adversely affect water users both inside and outside the project, as well as other water uses authorized by the project? Other authorized uses vary among projects and may include recreational use, international treaty obligations or hydropower production.
4. Will the transfer maintain the financial interests of the United States and comply with applicable repayment provisions?

The first point merely reiterates the fact that any transfers involving changes in

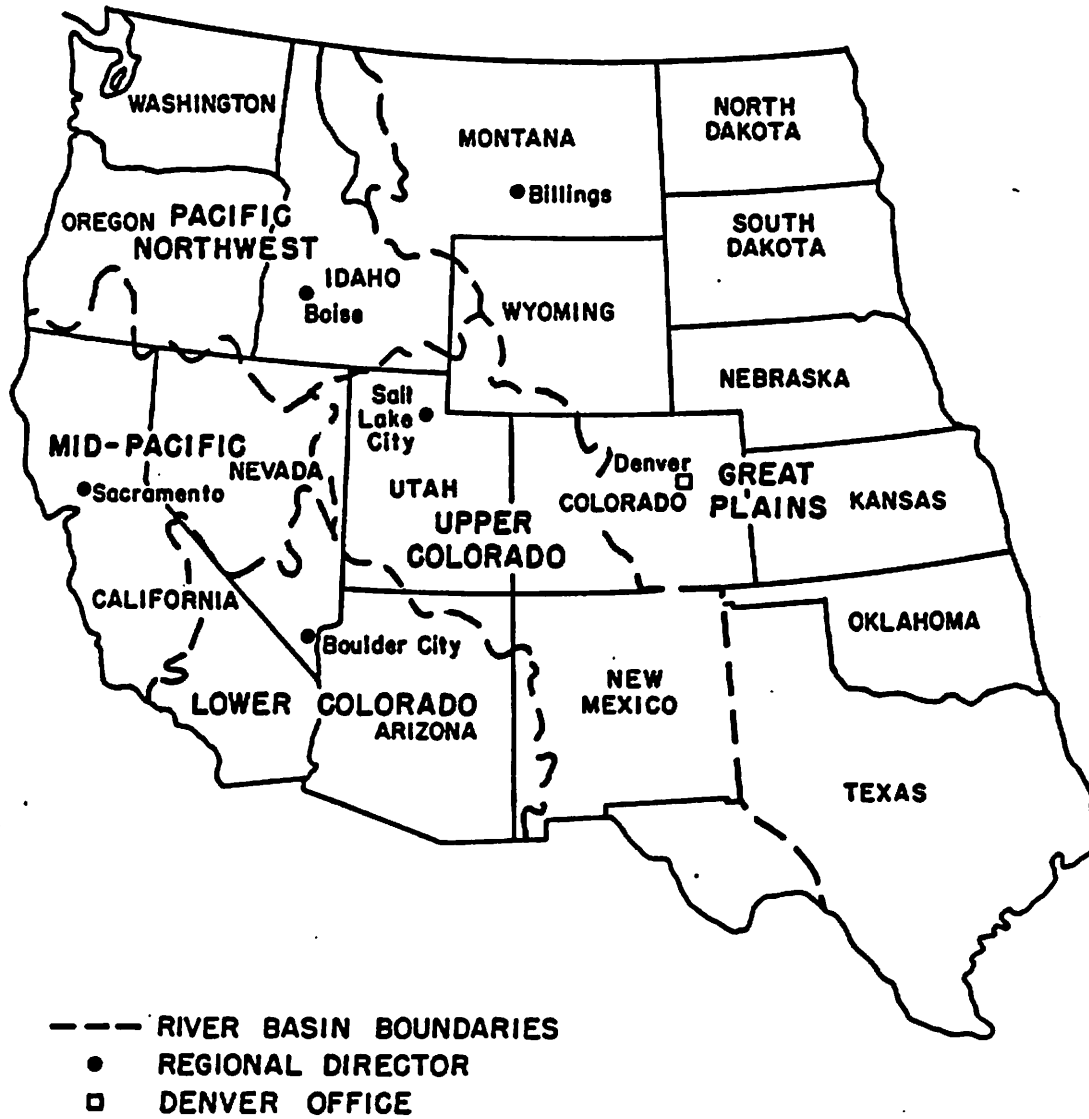
state water rights must simultaneously comply with state approval procedures. The other points refer to matters of federal law—such as the authorized end-uses of the water, place of use, repayment, and compliance with environmental requirements. Because these transfer requirements differ from those applying to water rights acquired under state law, they are discussed briefly here. For additional detail concerning the provisions of federal law with which transfers must comply, see Wahl, 1987; Western Governors' Association, 1987; Wahl, 1989.

End-uses of the water. Most projects are authorized by Congress for specified uses (such as irrigation, municipal and industrial water supply, hydropower, fish and wildlife, etc.) in a designated project service area. Consequently, the easiest transfers to implement are those that fall within the originally authorized purposes and service areas — perhaps between irrigation contractors, or from irrigation contractors to municipal contractors. However, absence of a desired use from the original authorization does not necessarily preclude a transaction. One approach is to seek an amendment to the original authorization. A second approach, used in the Casper-Alcova transaction, is to utilize the flexibility in the Secretary of the Interior's contracting authority. For example, under the authority of the Reclamation Project Act of 1939 (43 U.S.C. 485), the Department of the Interior may write contracts for new hydropower or municipal and industrial uses, provided the project's irrigation uses are protected. In the Casper-Alcova case, the irrigation district agreed to allow the salvaged water to be contracted by the Bureau to the city of Casper.

Location of use. The restrictions in project authorizations on place of use are, in general, more loosely defined than those on type of use. The authorizations often legislatively designate the general geographic area of use, rather than delineating specific boundaries. Even where specific acreages are legislatively designated in authorizing legislation, a 1986 Department of the Interior Solicitor's opinion (Opinion No. M-36901, Supp. I) holds that such acreages are not to be taken as definite upper limits on a project's irrigable acreage. The flexibility of the Bureau's contracting authority with respect to place of use

Figure 20.

REGIONAL ORGANIZATION—BUREAU OF RECLAMATION



under the Reclamation Project Act of 1939 is also illustrated by the Casper-Alcova case; the city of Casper lies outside the original project service area.

Repayment. It is the general goal of the Bureau not to burden a water transfer by imposing additional costs on those seeking to transfer water. However, the Bureau must comply with existing Reclamation law. In general, the Bureau must be in the same or better position financially as a result of the transfer. The Bureau must also want to ascertain that the party to whom the water is transferred could make good on repayment. Prepayment or accelerated repayment of the remaining repayment obligation, as was done in the Casper-Alcova case, are options.

In transfers from irrigation to municipal and industrial water use or to hydropower use, Reclamation law requires that repayment be shifted from an irrigation rate (under which no interest is collected) to repayment with interest. In cases where water is purchased from irrigation use for recreational or fish and wildlife uses, the Bureau would collect the irrigation rate. To declare some project costs nonreimbursable or to reduce the established terms of project repayment would normally require Congressional reauthorization. In an irrigation-to-irrigation transfer, an interest-free irrigation rate would prevail. However, in those cases where existing repayment terms are insufficient to repay the federally mandated costs, such as in the Central Valley Project in California, permission for districts to sell water at a profit would only be granted if the federal repayment terms were raised to the proper irrigation rate. Beyond the legal requirements for repayment to the U.S. and covering administrative costs, the nonfederal parties would be free to work out their own financial terms.

Environmental requirements. In addition to protecting other authorized project water uses, instream rights, and other established water rights, water transfers involving Bureau of Reclamation facilities would have to comply with the National Environmental Policy Act. For small, local transfers (for example, those that did not involve a change in the point of diversion) this might result in an Environ-

mental Assessment. On larger transfers, a full Environmental Impact Statement might be required, such as is being prepared on the Imperial Irrigation District/Metropolitan Water District proposal. This process would provide one vehicle for other affected parties to protest a proposed transfer.

Acquiring Title to Project Water Rights

The principles and legal provisions discussed above apply to the transfer of contractual rights to water deliveries, without the actual water rights being reassigned. Of course, outright ownership of the water rights would enhance a district's ability to sell or lease water. On most, but by no means all, Bureau projects, the Bureau holds the water rights which are obtained and recognized under state law. In other cases, especially on projects in Colorado, Texas, and Oklahoma, the Bureau had the local water districts file for the water rights. Table 5 summarizes Bureau water rights holdings by state (for additional discussion, see Wahl, 1987; Wahl, 1989). Regardless of who owns the rights initially, when project repayment is completed, water rights reside permanently with the water users (see 43 U.S.C. 485-h-1). In fact, some Supreme Court decisions indicate that the water users are, in effect the owners of the water even before project in repayment is complete, provided they comply with their contractual obligations (*Ickes v. Fox*, 300 U.S. 82 (1937); and *Nevada v. U.S.*, 463 U.S. 110 (1982)). In the words of the Court in *Ickes v. Fox*:

"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 contract... the water-rights became the property of the land owners, wholly distinct from the property right of the government in the irrigation works."

The water users, rather than the Bureau, put the water to beneficial use as required to satisfy state laws. The Bureau owns the storage and delivery facilities, but is merely acting as a lienholder in retaining the water rights. To our knowledge there have as yet been no instances where the Bureau has formally transferred water rights to a district which has completed its repayment obliga-

Table 5: Water Storage Rights Held by the United States and by Nonfederal Interests on Bureau of Reclamation Projects^a

(thousand acre-feet)

| State | United States | Non-U.S. | Total ^b | Percent U.S. |
|--------------------|---------------|----------|--------------------|--------------|
| Montana | 33,385 | 0 | 33,385 | 100.0 |
| North Dakota | 683 | 0 | 683 | 100.0 |
| South Dakota | 1,087 | 0 | 1,087 | 100.0 |
| Washington | 16,569 | 24 | 16,593 | 99.9 |
| Idaho | 8,975 | 16 | 8,990 | 99.8 |
| Utah | 6,551 | 215 | 6,765 | 96.8 |
| California | 47,313 | 2,994 | 50,257 | 94.1 |
| Wyoming | 7,256 | 691 | 7,947 | 91.3 |
| Nevada | 836 | 300 | 1,136 | 73.6 |
| New Mexico | 3,508 | 1,910 | 5,419 | 64.7 |
| Arizona | 6,456 | 3,531 | 9,987 | 64.6 |
| Nebraska | 2,041 | 1,480 | 3,521 | 58.0 |
| Oregon | 4,337 | 4,811 | 9,147 | 47.4 |
| Oklahoma | 91 | 272 | 362 | 25.0 |
| Colorado | 2,209 | 6,663 | 8,872 | 24.9 |
| Texas | 1,018 | 3,627 | 4,645 | 21.9 |
| Kansas | 11 | 795 | 806 | 1.4 |
| Total ^b | 142,324 | 27,278 | 169,602 | 83.9 |

Source: Wahl, Richard. Markets for Federal Water: Subsidies, Property Rights, and the Bureau of Reclamation (Washington, D.C.: Resources for the Future, 1989, forthcoming).

^a There are also flow rights associated with the water rights on Bureau of Reclamation facilities. These are not reflected in the table.

^b Totals may not agree due to rounding.

tion. However, as a growing number of districts reach this status, there is likely to be increased interest in acquiring project water rights.

Acquiring Title to Project Facilities

Ownership of storage and delivery facilities would also enhance a district's ability to transfer water. For example, a district might want to modify its facilities to conserve water or to retire marginal lands from production. As a general rule, title to federal project facilities remains with the U.S. even after a district has fulfilled its repayment obligations. Only by an act of Congress can title be transferred (for exceptions and for additional discussion of transfer of title, see Wahl and Simon, 1988). A number of Reclamation districts either have reached or are near to fulfilling their repayment obligations and others have expressed some interest in prepaying their repayment obligations as a condition to receiving title to facilities. For example, districts in two projects in California — the Solano Irrigation District and districts in the Sly Park Unit of the Central Valley Project — have had legislation introduced in Congress allowing them to prepay their repayment obligation in exchange for acquiring title to facilities. In both cases, the local water agencies feel that they will have more security in managing future water demands if they have title. As of December, 1988 Congress had not completed action on this pending legislation. However, it is likely that an increasing number of districts will make similar requests.

Use of Bureau Conveyance Facilities

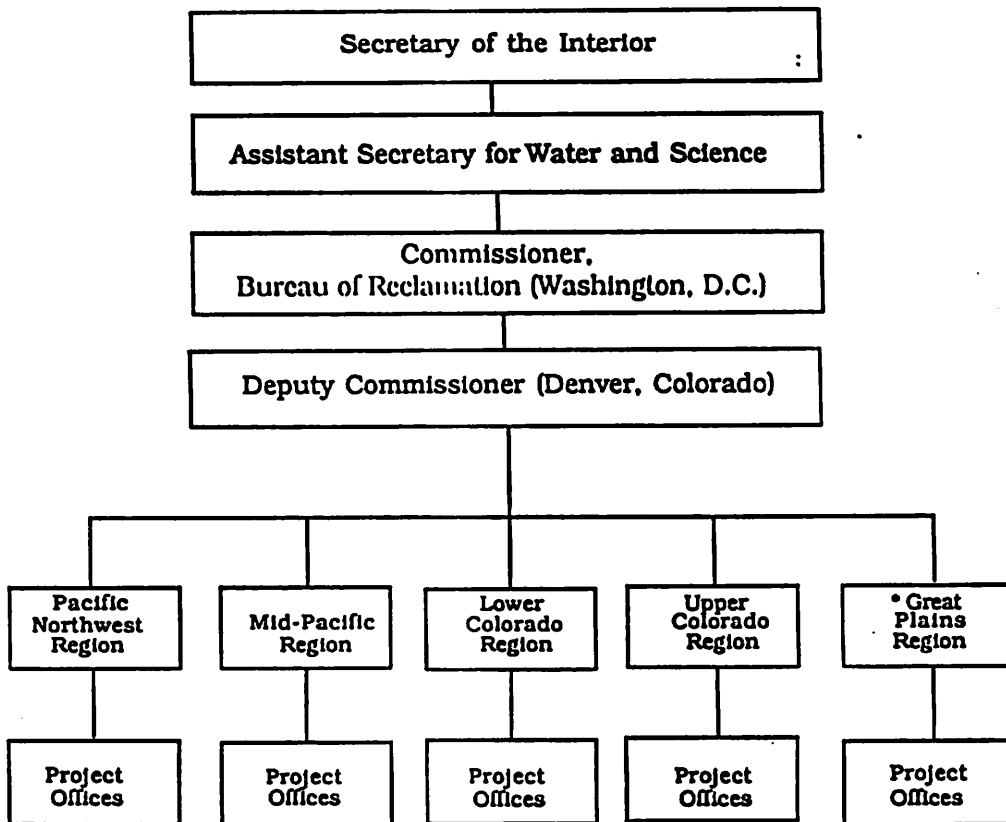
Where there is surplus capacity, the conveyance facilities operated by the Bureau of Reclamation may facilitate transfers on nonproject water. Bureau facilities may be particularly important in such states as California and Arizona, where they link major areas of the state. Since the Warren Act of 1911 (36 Stat. 925), Reclamation law has explicitly allowed for the Secretary of the Interior to contract for the excess storage and conveyance capacity in Bureau projects. The Act has been repeatedly used to facilitate the

conveyance and storage of privately owned water supplies. The Bureau has approximately 400 Warren Act contracts, concentrated mostly in the Klamath Project in the Mid-Pacific Region and the Boise, Minidoka, and Yakima Projects in the Pacific Northwest Region. In addition to ascertaining the extent of surplus capacity, the Bureau needs to assure that an allocable share of operation and maintenance and administrative costs (and in some cases construction charges) is borne by the new contracting entity.

Administrative Review and Appeal

Although the Bureau has been involved in several past transfers, these have taken place in a number of different states and regions. As a result, and because the Bureau is only now responding to the recently issued principles to guide water transfers, it does not presently have a formalized process for appeals of approval decisions or established time limits for protests or appeals. Normally, the extent to which administrative approvals are sent up the chain of command is a function of how important or nonroutine they appear to Bureau staff. Therefore, routine transfers will probably be handled at the district or project office level. Larger or more difficult transfer requests would certainly be reviewed by the staff of a Regional Director, while those of major importance or special policy questions would make their way through review by the Bureau's Engineering and Research Center in Denver to the level of the Commissioner and possibly the Department in Washington, D.C. Figure 21 provides an organization chart of the Bureau of Reclamation. Normally, the Bureau would work informally with the interested parties at the level of the Regional Director or below to facilitate a transfer request. Decisions could be appealed by writing to the next higher administrative official (the Regional Director, the Commissioner, the Assistant Secretary for Water and Science, or the Secretary of the Interior), although the Bureau's internal review sometimes tries to anticipate the appropriate level of review in making its original decision. Once administrative appeal options have been exhausted, departmental decisions would be appealable in federal district court.

Figure 21. Organization Chart: Bureau of Reclamation



Addresses are provided in Appendix Two

* Combines former Southwest Region and Missouri Basin Region

Conclusions

In summary, although transfers of water involving Bureau of Reclamation facilities have occurred in the past, the restrictions placed on such transfers have varied considerably from one Bureau of Reclamation region and project to another. For example, in the Central Valley Project in California, districts are not allowed to receive additional income from a transfer, whereas water has been traded at market value in the Northern Colorado Water Conservancy District for a number of years. In December, 1988, the Department of the Interior issued a policy statement designed to standardize the Bureau of Reclamation's policy with respect to transfer approvals and to otherwise facilitate transfer requests. Among other things, this policy is intended to provide an economic incentive for transfers by not imposing any additional federal charges on transfers, other than those already required by federal law. As the Bureau continues to process transfer requests, it will undoubtedly move to provide more detailed guidance to water users interested in transfers.

As the Bureau moves away from an emphasis on new construction and as an increasing number of districts near the completion of their repayment obligations, more districts are likely to express interest in acquiring project water rights and in taking title to project facilities. However, the Bureau has not yet defined its policies in these related areas. As a matter of Reclamation law, water rights can transfer to districts upon completion of their repayment obligations, but we know of no case where the Bureau has formally made such a transfer. Some districts have resorted to court action to defend their rights. Normally, title to Bureau facilities does not transfer to a district, even after it has completed its repayment obligation; only Congress may transfer title. Legislation is currently pending to allow some California districts to prepay their remaining repayment obligation in order to acquire title. The outcome of these bills is likely to set a precedent for future transfer of title provisions. These cases also raise the possibility that Congress might develop generic legislation specifying the conditions under which title to facilities would transfer, without the need for congressional intervention in each case.

VI. INNOVATION AND FLEXIBILITY IN THE TRANSFER PROCESS

In addition to a permanent change in use of water rights there are a number of other ways in which transfers of water to new uses can occur. State policymakers and the U.S. Department of the Interior may want to provide more flexibility in the water transfer process. Innovative and flexible procedures can promote efficient water use, address a broader array of concerns regarding third-party impacts, satisfy temporary needs for changes in use, and encourage water conservation. Temporary or conditional changes in water use can often accommodate the need for flexibility in water allocation with less environmental and economic impacts on areas from which water is exported than would be experienced with a permanent transfer of water to a new area and use.

Political and economic pressures to incorporate broader interests and more flexibility into water transfer processes are intensifying for several reasons. Environmental organizations increasingly scrutinize the impacts that water transfers may have on fish, wildlife, recreation, and the riparian environment. In some states, these types of impacts can be considered when a transfer proposal is evaluated. In many states, however, there is no provision in the administrative process for addressing potential environmental impacts of a water transfer. Rural areas also express concern that change in water right procedures do not address economic and social impacts transfers may have on the area from which water is transferred. Rural communities and agricultural interests in several states are lobbying for policies that routinely consider area-of-origin impacts when a change in water use application involves export of water.

Urban interests who have been active in acquiring water rights and changing their place and purpose of use also benefit from innovation and flexibility in water transfer processes. Water acquisitions by municipal water providers, developers and industry are motivated not only by the desire for increased quantities of water, but by the desire for more reliable water supplies. Recent dry years in much of the West have heightened awareness of the need for drought planning, and have

stimulated water users to explore ways in which stable water supplies could be assured even during dry years.

This section outlines ways in which broader interests can be incorporated into the change in water use process, discusses transfer arrangements that provide flexibility for dry year needs and examines policies that encourage water conservation.

Incorporating Broader Interests in the Transfer Process

Public interest provisions, arising through statutes or case law, are one avenue for broadening the concerns that can be addressed when change in water use proposals are evaluated. State policies protecting instream flows provide another means to consider environmental impacts of proposed transfers. Procedures that require consideration of transfer effects on the region from which water is exported can protect areas of origin from potential adverse impacts of water transfers. These three issues are discussed below, and state policies on public interest and instream flow issues are compared in Table 6.

Public Interest Considerations

The public interest in western water is a largely undefined concept referring to the consideration of public values affected by water allocation and transfer. Some western states explicitly include a public interest or public welfare clause in their statutes referring to changes in water rights. Other states incorporate these concepts based on court decisions. Many observers believe, based on recent court decisions and policy initiatives, that public interest considerations will play a key role in water transfer approval procedures. (Wilkinson, 1986)

Arizona includes public interest language in its statutes regarding appropriation of water but the terms "public interest" and "welfare" are not defined statutorily. (Ariz. Rev. Stat. Ann. §45-143 (1987)) Case law and administrative policy have interpreted public interest provisions as a basis for regulating groundwater pumping in Active Management Areas, where groundwater overdraft is a central policy concern. (Arizona Game and Fish

Dept. v. Arizona State Land Dept., 1975; and Reinhard v. Arizona Dept. of Water Resources, 1986)

In Colorado, public interest language is not explicitly included in statutes related to appropriation or transfer of water rights. State appropriation of water rights, through the Colorado Water Conservation Board, for maintaining instream flows is one expression of public values in Colorado water policy.

The most complete and precise definition of the public interest in water right change applications has developed in Idaho (Shokal v. Dunn, 1985). The Idaho Supreme Court specifically noted twelve factors which should be considered in determining the effect of a change in water use upon public welfare. Among these are the assurance of minimum stream flows, conservation, public health and safety, aesthetics and environmental ramifications, and fish and wildlife. The decision also held that the economic effects on the local area and benefits to the applicant should be considered. As a result of this court decision, Idaho statutes require that public interest considerations be considered in approving the transfer of water rights. (Idaho Code §42-222. (Supp. 1988)) Statutory public interest considerations include the following (Idaho Department of Water Resources, 1986):

- 1) impact on local economies,
- 2) impact on recreation, fish and wildlife resources
- 3) compliance with air, water, and hazardous substance standards.

Public interest provisions have played a crucial role in Idaho's management and protection of instream flows.

Montana does not routinely consider public interest criteria in evaluating changes in water use. However, the public interest may be considered based on Montana's reasonable use provisions which apply to appropriations of more than 4,000 acre-feet, and include the following considerations (Mont. Code Ann. §85-2-311 (1985)):

- 1) existing and future demands, including instream flow,

TABLE 6 : COMPARISON OF PUBLIC WELFARE AND INSTREAM FLOW PROVISIONS

| STATE: | NEW MEXICO | UTAH | NEVADA | COLORADO | ARIZONA Groundwater (1) | ARIZONA Surface Water (2) | MONTANA | IDAHO | WYOMING |
|--|---|--|--------------------------------|--|---------------------------------------|------------------------------|--|--|---|
| Public interest/ public welfare apply to water transfers? | yes; statutory | yes; statutory | yes; statutory | no | yes; case law | no | yes (limited); statutory | yes; statutory | no |
| Specific public interest/public welfare criteria? | consistent with conservation in the state | impacts on public recreation or natural stream environment | none | none | impacts on groundwater recharge | none | transfers of more than 4,000 acre-feet to consider impacts on existing and future demands, instream flow, and the environment | impact on local economy, fish recreation, and compliance with air, water, and hazardous substance standards | none |
| Basis of Instream Flow Law: | none | statute | case law | statutes | N/A | case law | statute | statutes | statute |
| Who may apply for instream flow permit? | no precedent | Division of Wildlife Resources | Federal Government Agencies | Colorado Water Conservation Board; U.S. Dept. Agric.; U.S. Dept. Int. | N/A | anyone | any state or political subdivision | Idaho Water Resources Board | Wyo. Water Dev. Comm.; Water Div. of Econ. and Stab. Board |

- 2) benefits to the applicant and the state,
- 3) effects on other water uses,
- 4) availability and feasibility of using lower-quality water,
- 5) effects on private property rights by the creation or contribution to saline seep, and
- 6) probable adverse environmental impacts.

The application of these criteria to changes in use in Montana has thus far been limited to proposed out-of-state transfers. They have not been applied to changes of use within Montana because no applications have involved more than 4,000 acre-feet. (McKinney et al., 1988)

Nevada statutes require rejection of transfer applications if the transfer is detrimental to the public interest. (Nev. Rev. Stat. §533.370(3) (1987)) Public interest criteria are not statutorily defined. The public interest is applied to transfer applications by the state engineer on a case-by-case basis.

New Mexico statutes for surface water have always contained a public interest clause, and the groundwater code passed in the 1930s was amended in 1983 to include public interest considerations for groundwater use. (N. M. Stat. Ann. §72-12-3 (1978)) 1985 amendments to the surface and groundwater codes explicitly extended to public welfare consideration to changes in water rights. (amendments to N. M. Stat. Ann. §72-5-23 and §72-12-7 (1978)) Public welfare, while not statutorily defined, is one of the criteria the state engineer must consider in evaluating transfer applications. The New Mexico Supreme Court ruled as early as 1910 that the state engineer (then a territorial engineer) must consider the benefits to the public in weighing the merits of alternative water allocations. (Young and Norton v. Hinderlider, 1910) The state engineer determines the relevancy of public interest considerations on a case-by-case basis.

Utah statutes allow the state engineer to consider the public interest or public welfare in evaluating applications to appropriate water. (Utah Code Ann. §73-3-8.1 (1953)) The public interest provision is not applied routinely in evaluating applications for appropri-

ation or transfer. Early Utah case law establishes that water appropriations must be in the best interest of the public. (Canner v. Bacon, 1943) Utah statutes require the state engineer to reject applications for water rights appropriations which will "unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare." (Utah Code Ann. §73-3-8.1 (1953))

Although Wyoming water law refers to "public interest" and "public welfare," there are no specific requirements that these be considered in evaluating changes in water rights. Application of public interest considerations is at the discretion of the state engineer. (Carr, 1988)

State Instream Flow Policies

Instream flow policies, based on statutes or case law, provide another avenue by which broader concerns can be incorporated in the water transfer process. The ability to appropriate water or to change the purpose of use of an existing water right to maintain stream flows gives environmental interests access to water rights and a basis for participating as applicants and protestants in the change of use process. The western states differ a great deal in their approaches to instream flow protection. Differences are notable both in the legal basis for establishing water rights to maintain flow levels and the extent to which state agency programs are directed towards protecting free-flowing waters. Table 6 summarizes the approaches of the states in this study.

While Arizona statutes do not explicitly recognize appropriations for instream flow maintenance, a 1976 court case held that surface water may be appropriated for instream recreation and fishing. (McClellan v. Jantzen, 1976) The Arizona Department of Water Resources (ADWR) granted two permits in 1983 to the Nature Conservancy and about forty applications from various public and private entities are pending. (Arizona Department of Water Resources, 1988) An instream flow task force has been appointed to assist ADWR in developing criteria and procedures for granting permits.

In Colorado, the Colorado Water Conservation Board (CWCB) may appropriate water for instream flow and lake level maintenance. Private entities are not authorized to appropriate water for instream flow protection but may dedicate water rights to the CWCB for instream flow maintenance. The CWCB is also responsible for filing objections to water transfers which may impair instream flow rights. (Colo. Rev. Stat. §37-92-102(3), §37-29-103(4) (1973))

Idaho's instream flow program, enacted in 1978, authorizes the Idaho Water Resources Board (IWRB) to apply for and hold instream flow rights. State statutes specifying that public interest concepts apply to recreation, fish, and wildlife provide another mechanism for protecting flow levels. (Beeman and Arment, 1988; Idaho Code §42-222 (Supp. 1988))

Montana's instream flow program operates under the 1973 Montana Water Use Act which provides that any state or political subdivision of the state may apply to the Board of Natural Resources and Conservation to reserve water for instream uses. (Mont. Code Ann. §85-2-316(1) (1985)) Water reservations in some basins have already been substantive and the state is preparing a more comprehensive strategy for instream flow protection.

Appropriations for instream flow and storage in lakes without a physical diversion have been granted in Nevada in specific instances. Instream flow appropriations must be acquired through the same process as any other appropriation. (Turnipseed, 1989) A 1988 Supreme Court decision held that federal agencies can hold rights for wildlife, and affirmed that there is no absolute diversion required precluding the granting of an in-situ water right. (The State of Nevada, Nevada State Board of Agriculture v. Peter G. Morros, State Engineer, et al., 1988)

New Mexico statutes do not provide for appropriation and changes in use of water rights for instream flow maintenance, though recognition of instream flow rights has been considered in recent legislative sessions. Case law and decisions by the state engineer imply that diversion structures are necessary for

water right appropriation. (Reynolds v. Miranda, 1972) There is, as of yet, no case law and no administrative precedent for considering impacts on instream flow levels (other than those which affect existing water rights) in evaluating change in water use proposals. (Stone, 1987)

A Utah statute enacted in 1986 allows the State Division of Wildlife Resources to acquire established water rights to maintain flows for fish habitat. The division must have legislative approval to acquire a right for instream flows. (1986 amendments to Utah Code Ann. §73-3-3 (1953))

Wyoming instituted a program in 1986 to maintain flows in order to protect the states' fisheries. Based upon information provided by the state's Game and Fish Commission, the Wyoming Water Development Commission and Water Division of the Economic Development and Stabilization Board may file applications with the state engineer for appropriation of flow in identified stream segments. (Wyoming Sess. Laws 41-3-1003, 1986) In addition, the state may acquire any existing water right by transfer or gift. (Wyoming Sess. Laws, 41-3-1007, 1986)

Area of Origin Protection

Local governments in the area of origin and residents who do not hold water rights typically cannot obtain standing to enter the change in water right process as a protestant; thus, their interests frequently are not taken into account. However, awareness of the environmental and economic impacts of water exports is growing and there is increased pressure in some states to consider area of origin impacts in the change of water right process.

Negative effects tend to be most serious when transfers involve moving water from one region to another. Fiscal impacts include loss of property tax base and local government bonding capacity, tighter spending limitations, and reduced revenue sharing. Transfers that involve surface waters may lead to degradation of water quality and loss of riparian habitat. Where surface water and groundwater are interrelated, the export of groundwater also can alter surface flows with potential adverse

effects on vegetation and wetlands. Other environmental effects are associated with the retirement of irrigated land. Environmental consequences include soil erosion, blowing dust, and tumbleweeds that arise after crop production ceases.

When farmland is retired from agriculture, loss of farm sector jobs and income often follows. Businesses that provide goods and services to farmers are affected and future economic growth in the area of origin can be inhibited. As the tax base shrinks and local services decline, the area of origin becomes less attractive to new businesses. Also, water and land resources needed by new local development may become unavailable as a result of water exports. Economic losses suffered by areas of origin may be insignificant in the context of a state-wide economy and may appear inconsequential relative to the benefits of additional water supplies which accrue to the new users of the water. Area of origin losses, however, can seriously impair the viability of small, rural communities which may lack the economic strength and diversity to recover.

In most western states, local government units are not involved formally in the change of water right process and consideration of area-of-origin impacts generally is not incorporated into transfer approval procedures. However, area-of-origin concerns are receiving more attention from state policy makers. Area-of-origin issues have the potential of affecting the conditions under which water transfers will be approved and the costs of implementing such transfers.

Recent Arizona legislative activity indicates a growing concern with the impact on rural areas of agricultural-to-urban water transfers. Legislation passed in 1986 allows payments in lieu of property taxes by cities who purchase and retire farmland to taxing jurisdictions in the area of origin. (Arizona House Bill 2264, 1986) 1987 legislation allows for municipally-held lands to be included in a county's net assessed valuation for the purpose of distributing state sales tax revenues to counties. This legislation also permits municipal holdings to be counted in assessed valuation for determining county levy limits, but

only if the municipality agrees, through an intergovernmental agreement, to pay in-lieu taxes to the county. (Arizona House Bill 2462, 1987) Years of conflict and litigation over dust storms and tumbleweeds generated by municipally-owned water farms culminated in legislation requiring owners of "water farms" to maintain the retired agricultural acreage free of dust and noxious weeds. (Jarvis v. Dept. State Land, 1970; Arizona House Bill 2264, 1986)

Arizona statutes provide that "no right to the use of water on or from any watershed or drainage area which supplies or contributes water for the irrigation of lands within an irrigation district, agricultural improvement district or water user association shall be severed or transferred without the consent of the governing body of such." (Ariz. Rev. Stat. Ann. §45-172(5) (1987)) Transfer applicants routinely provide evidence to the Arizona Department of Water Resources that water organizations in the watershed of origin have consented to the proposed transfer, as a condition for transfer approval. Those wishing to transfer water out of a basin also have some incentive to consider impacts because exporters of groundwater from one basin to another are potentially liable for damages to affected individuals in the basin of origin. (Ariz. Rev. Stat. Ann. §45-544 and §45-545 (1987)) This statute has not yet been invoked to obtain compensation for damages resulting from water exports.

Colorado law requires that conservancy district projects which transfer water out of a basin must protect current and future consumptive water users in the basin of origin and must not increase their cost of obtaining water in the future. (MacDonnell and Howe, 1986) In practice this has caused importing conservancy districts to build "compensatory storage" facilities in the basin of origin. Although affording significant protection to exporting communities, this provision applies only to conservancy districts and so does not protect rural areas from transfers by other entities, such as municipalities.

Colorado statutes also provide that when an action of statewide concern is proposed in a county, county commissioners may

hold hearings on the proposed action and issue or deny a permit to allow the proposal to be implemented. (Colorado House Bill 1041, 1973) Eagle County commissioners have invoked this statute in order to obtain permitting authority over the Homestake II trans-mountain diversion project which would provide water for the cities of Aurora and Colorado Springs.

Colorado water court proceedings generally are not a forum in which area-of-origin concerns can be addressed because harm to existing water rights is the only criterion that water courts are required to consider in evaluating transfer proposals.

In Idaho, district watermasters must be advised of transfer proposals and must submit a recommendation to be considered by the Idaho Department of Water Resources when they evaluate a proposed change in use. The consent of irrigation districts or corporations is required for approval of proposals that would transfer water out of their service areas. (Idaho Code, §42-108 (Supp. 1988)) Some area of origin considerations are formally incorporated into Idaho Department of Water Resources transfer approval policies. These include: "direct and indirect economic impacts" and "the affairs of people in the area." (Idaho Code, §42-222; 42-203(a) (Supp. 1988))

In 1985, Montana enacted legislation that prohibits any entity other than the Montana Department of Natural Resources and Conservation from engaging in out-of-basin transfers. Organizations wishing to use water imported from another basin must negotiate with the state agency and may lease up to 50,000 acre feet for a period of fifty years from the state. (Mont. Code Ann. §85-2-141 (1985)) The designation of a state agency as the sole applicant for interbasin water right transfers facilitates public scrutiny of such transfers and allows for incorporation of area of origin concerns.

Nevada requires that county commissions be notified of changes in the place of use for water rights that will move water across county lines. The commissioners then hold public hearings to solicit input before making a recommendation to the state engineer re-

garding approval of the change application. Even though the state engineer is not bound by the county's recommendation, hearings involving rural and agricultural interests may increase the transferrors sensitivity to local concerns. (Nev. Rev. Stat. §533.363 (1987)).

Area-of-origin issues have been raised in New Mexico in response to a number of proposed transfers. The impacts on local culture of water transfers out of traditional acequia-based irrigation systems to nonagricultural uses were a key issue in the Sleeper decision in Rio Arriba County. In Sleeper, a state district court found that a proposed transfer of agricultural water rights to a resort project not only impaired the rights of other agricultural water users but also was contrary to the public interest because it undermined local cultural traditions based on irrigated agriculture. (In the matter of Howard Sleeper, et al., Rio Arriba County Court Case No. RA 84-53(c)) A higher court reversed the district court finding in 1988. (Abramowitz, 1988)

In New Mexico, transfers of water rights that were initiated as a result of the formation of a district and held in the name of the district require approval by district authorities. (N.M. Stat. Ann. §72-5-1; 72-12-1 (1978)) The state engineer takes the position that rights perfected prior to the creation of an irrigation district may be transferred without the approval of the district although case law has been unclear regarding this issue. (Middle Rio Grande Conservancy District v. Cox (under appeal in 1988)) New Mexico state codes provide for reserving a share of a basin's water supply for use in the basin of origin. However, water users in areas dependent upon imported water resist recapture by the area of origin and the conditions under which recapture would be permitted were never clearly spelled out. (MacDonnell, et al., 1985))

Neither Utah statutory law nor case law addresses directly the impact of water transfers on the area of origin. Utah has an active and viable farm economy dating from the early years of Mormon settlement. Concern with the impact of transfers on the agricultural sector have arisen in the context of energy development. (Brown, et al., 1982) Area-of-origin concerns in Utah appear to have

been addressed through negotiation and litigation on a case-by-case basis rather than through legislation.

In Wyoming, water rights may not be transferred out of their basin of origin although "wet water" associated with water rights may be transported for use out of the basin of origin. (Wyo. Stat. §41-3-104 (1986))

Summary

Western states, whose primary concern in change of water right procedures has been protection of other water right holders, have begun to incorporate broader concerns into their water transfer approval processes. They have done so through public interest statutes and case law, through permitting water appropriations or reservations for in-stream flow maintenance, and through a variety of provisions that give local governments and water districts a voice in the transfer approval process and allow consideration of area-of-origin impacts. Morandi (1988) provides specific suggestions and statutory language useful to state policymakers considering how they might address broader concerns regarding water transfers.

B. Transfers for Dry Year Needs

As water users become more aware of the need for drought planning, there is increased demand for water transfers that specifically accommodate dry year needs for reliable water supplies. This section reviews a number of arrangements which increase flexibility so that water can be readily transferred during dry years.

Dry Year Options

Under a dry year option, ownership of the water right remains with the original water user. The new water user, usually a city or state agency, enters into an agreement with an irrigator allowing them to use the water under specific conditions. For water users who need highly reliable supplies, this type of arrangement provides a back-up source of water for dry years. Because irrigators retain title to the water rights, control primarily remains in the area of origin. Even when the buyer intends to permanently transfer water out of an area,

leasing water back to area farmers for several years gives the local economy some time to adapt to changing economic conditions.

Dry-year options have been implemented in some areas of the West. For example, a central Utah city paid a nearby farmer \$25,000 up front for a 25-year dry year option and agreed to pay, in any year the option was exercised, \$1,000 and 300 tons of hay. The option was exercised three out of the first 25 years the option was in place. (Clyde, 1986)

Though promising, dry year options can be unattractive to farmers who desire more certainty when planning their farming operations. The following example illustrates this point. In 1987 the Metropolitan Water District (MWD) of Southern California offered Palo Verde Irrigation District (PVID) farmers \$200 per acre at the time they register acreage in a dry year option program and then \$400 an acre for each year that MWD exercised the option to retire land from irrigation. (Water Market Update, Vol. 1, No. 4, 1987) MWD expected to call that acreage into retirement once in about every seven years in order to firm up municipal supplies. Palo Verde Irrigation District farmers rejected the proposal because they would have been unable to make long range farming plans. Under such arrangements, farmers face substantial uncertainty in planning their crop rotations, their marketing strategies, equipment leases, and purchases of inputs. This uncertainty must be addressed if dry year options are to become attractive to farmers.

In 1988, PVID considered an alternative offer from MWD which reduced farmers' planning uncertainty. Under this alternative, PVID farmers would agree to retire a certain number of acres for at least seven years. MWD offered farmers \$500 for each acre they enroll in the leasing program plus \$400/acre annually for as long as the acreage remains in the program. The proposal also allows farmers to rotate the specific acres retired each year so long as their total acreage in the program remains constant. (Water Market Update, Vol. 2, No. 2, 1988) This alternative proposal appears to be more attractive for the flexibility it provides the farmers but no final agreements have been reached.

A number of issues need to be addressed when dry-year options are considered. One of these is to formally establish the conditions under which the option will be exercised. If these conditions are based on regional reservoir and streamflow levels, it will be clear to all parties when the option can be exercised. Additionally, it is necessary to assure that farmers are compensated for the actual losses they incur. These losses include crop revenues foregone due to fallow while the option is exercised, disruption of farm planning and land use patterns, and input and marketing expenses incurred prior to being notified that land would be dried up for that season.

Lease-backs

Under lease-back arrangements, land and water rights are purchased by the entity desiring long-term control of the water, most often a municipal water provider, and are leased back to the farmer so that farming can continue for a certain period. While most lease-backs have been implemented for the purpose of augmenting water supplies to support urban growth, the lessor could also be a state agency, and the lease-back conditioned on the need for water to support instream flows for public uses such as recreation, fish, and wildlife during dry seasons and years.

There have been several lease-back arrangements implemented by municipalities in Arizona. In 1985 the City of Mesa purchased 11,606 acres of farmland in Pinal County. Mesa plans eventually to convert the irrigation groundwater rights associated with those lands to nonirrigation groundwater rights which will be used to supply water to the city's expanding service area. Meanwhile the city is leasing the land back to the farmers and land continues to be irrigated. (Kolhoff, 1988)

The City of Phoenix purchased 14,000 acres of farmland in western Arizona's McMullen Valley in 1986. The city plans to retire the land and transfer the associated groundwater to urban uses. Phoenix has kept the farmland in production, at least for the short term, through a two year lease which employs at least twenty-five local farmers and postpones some of the impact on local businesses of the

eventual retirement of that acreage. (Water Market Update, Vol.1, No. 7, 1987)

Exchanges of Priority

Exchanging priority among water right holders is another way of securing highly reliable supplies in drought years. Such exchanges of priority have substantial potential with Indian reserved rights, since the priority date of most tribal rights goes back to the date the reservation was established. There have been some agreements to defer tribal seniority in drought years so that junior right holders have more reliable water supplies. One arrangement involves the Navajo Nation, which has a senior claim on the San Juan River. The Nation agreed to defer its seniority during dry years so that downstream users in the Rio Grande Basin (served by the San Juan/Chama project that diverts water from the San Juan Basin to the Rio Grande Basin) have a greater certainty of receiving water. (Price and Weatherford, 1976) The City of Albuquerque is the primary junior right holder who benefits from that agreement.

Possibilities also exist for exchanging priorities in the Colorado River Basin where several Indian tribes have very high priority rights to the Colorado River. Phoenix area municipalities which receive water from the Central Arizona Project, the Metropolitan Water District of Southern California, and the City of San Diego each have considered negotiating deferment of tribes' senior appropriative rights to the Colorado River so that cities would have more reliable dry year supplies. Discussions regarding an exchange of priorities are still in the early exploratory stages. (Water Market Update, Vol. 1, No. 9, 1987)

Water Banks

Water banking involves storing excess water available during high flow years in reservoirs or underground and maintaining savings accounts to keep track of stored water. In dry years, withdrawals are made from stored supplies and the accounts are debited accordingly.

Idaho's water banking program has provided much needed flexibility during re-

cent dry years. (Water Market Update, Vol. 2, No. 6 and No. 9, 1988) Idaho water banks operate to give irrigators the opportunity to rent annual excesses of contracted water from federal Snake River basin projects. The Upper Snake Bank was created in the 1930s and, in 1988, the Boise River Bank was formed to facilitate transfers amongst users in that basin. (Idaho Code §42-17-61 through 42-17-67 (Supp. 1988))

California's Kern County Water Agency has utilized a water banking approach to retain control over area water supplies. The Agency contracts for water supplies with the State Water Project, who plans to recharge excess supplies in the County and sell banked supplies during dry periods. The Kern County Agency levies taxes on citizens within the district to generate revenues which will be used for purchasing local retired agricultural rights, either for resale to other users within the district or to alleviate the impacts of groundwater overdraft. This arrangement benefits both the local communities desiring to protect their supplies and remote interests interested in storing their allotments for dry years. (Water Market Update, Vol. 1, No. 10, 1987)

In 1988, the California Department of Water Resources purchased 19,000 acres of land for a recharge and water banking project. Plans include conveying one million acre-feet of water to the site (which has a total storage capacity of five million acre-feet) through the State Water Project. In dry years, the State Water Project will pump out 140,000 acre-feet annually to offset low flows. (Water Market Update, Vol. 2, No. 10, 1988)

The Metropolitan Water District (MWD) of Southern California has an arrangement with Coachella Valley Irrigation District which has allowed MWD to store over 450,000 acre-feet underground for MWD's use during dry years. MWD also has negotiated agreements to store water in other area groundwater basins for drought needs. (Metropolitan Water District, 1987)

Temporary and Conditional Transfers

Statutory provisions for temporary and conditional transfers allow quick responses to

droughts and other critical situations. A change of water use can occur more rapidly through a conditional process than through ordinary procedures so urgent needs can be more quickly met. The temporary nature of these transfers helps protect third parties from long term impairment since the applicant eventually has to satisfy the usual state criteria if the transfer is to become permanent. Colorado and Wyoming have statutes that provide an alternative process for getting a temporary or conditional change of water right approved under certain circumstances. (Regulations and Instructions Part IV Wyoming State Board of Controls; Ch. 1 sec. 14(b), June 1986; Col. Rev. Stat. §37-92-103 (1973)) Utah statutes provide for changes in the place or purpose of use or point of diversion for water rights on a temporary basis of up to one year. (Utah Code Ann. §73-3-3 (1878)) Temporary transfers are allowed in New Mexico for periods of up to ten years, following which the water must revert to its original place and purpose of use. (N.M. Stat. Ann. §72-6-1 through §72-6-7 (1978))

Idaho statutes establish that any water rights holder may enter into a leasing agreement with any in-state hydroelectric generating facility for up to one year. (Idaho Code §42-108(a) (Supp. 1988)) Similarly, leases of project water authorized under the Carey Act may be approved through the normal procedures of the Idaho Department of Water Resources and consent of the Carey Act operating companies. Such leases do not affect the appurtenancy of the water right. (Idaho Code §42-25-01 through §42-25-09 (Supp. 1988))

Exchanges Among Water Sources

Procedures that allow exchanges among water sources provide incentives to use surface water in years it is available, saving groundwater supplies for times when streamflow is low. In Colorado, Wyoming, New Mexico, and Utah it is very common to exchange native streamflow for reservoir storage in order to ensure water availability in the late summer season. It is also common to exchange surface water for groundwater. (Colo. Rev. Stat. §37-83-101 through §37-83-104 (1973); Wyo. Stat. §41-3-106 (1986); N.M. Stat. Ann. §72-12-24 (1978); Utah Code Ann. §73-3-20 (1953))

In Utah, 1988 legislation promotes exchanges along the Bear River system that would allow water to flow from an underutilized area along the Bear River through a complicated system of interbasin exchanges into the Salt Lake City area. These potential exchanges involve different river basins and different storage reservoirs along several inter-related river systems. While these exchanges have been made possible by the new legislation, their implementation may take years of negotiations among water users. A number of municipal and agricultural water districts will have to consent to proposed exchanges, and interstate transfer issues may arise as the Bear River passes through portions of Idaho and Wyoming. (Water Market Update, Vol. 1, No. 2, 1988)

In Arizona, recipients of Colorado River water delivered through the Central Arizona Project (CAP) must give up an acre-foot of groundwater use for each acre foot of CAP water received. This exchange program mandates the use of Colorado River water in order to reduce overdrafting of groundwater supplies. (U.S. Department of the Interior, 8.8(b)(ii))

Summary

There are many different types of water transfer arrangement that can increase the reliability of dry year water supplies. These innovative transfers are attractive not only because they reduce the risk of drought-related shortages but because they often pose less of a threat to third party water users, environmental interests, and areas of origin than permanent changes in water use.

C. Water Conservation

Most western states historically have taken a position against new uses and transfer of conserved water, arguing that portions of a water right "salvaged" through conservation measures become available to new or junior appropriators rather than to those taking the conserving action. California and Oregon are exceptions, having passed statutes encouraging transfer of conserved water. (Cal. Water Code §1070 and 1001; Oregon Senate Bill 24, 1987) There are a number of policy approaches a state can take to facilitate the transfer of

conserved water. (Morandi, 1988) A first step is to provide the statutory incentive and authority by explicitly allowing transfer of conserved water and by protecting water rights not being exercised due to conservation from loss through forfeiture and abandonment proceedings.

Even after enabling statutes are in place, a number of difficult technical and hydrologic issues remain in determining the quantity of salvaged water that actually can be transferred. 1987 Oregon legislation states that the only salvaged water that may be transferred is that which in the absence of the conservation measure otherwise would have been irretrievably lost to the system and so unavailable to other water users. (Oregon Senate Bill 24, 1987) Substantial irretrievable losses probably will not come from improvements in irrigation efficiency, however, since most salvaged water previously re-entered the system as return flows. Transferrable water could potentially come from switching from a higher to a lower consumptive use crop. Other measures which decrease the amount of water irretrievably lost through evaporation and deep percolation include lining earthen canals, better field drainage, and improved on-field water management.

Allowing credit for conservation can be difficult from a legal perspective, as many states have a fairly strong appurtenancy doctrine stating that a water right is associated with a specific parcel of land and that unless there is a formal change of water right through the state agency, the appurtenant water cannot be applied to other lands. Relaxing the appurtenancy criterion would allow a farmer who reduced consumptive use, perhaps through new crop rotations, to spread the additional water onto other land, or to sell or lease the water—thus providing a strong conservation incentive. Laws in the western states on use and transfer of salvaged or conserved water vary considerably, with protection of other right holders being the primary constraint on new uses and transfers.

In Arizona, while there are no specific statutes on the issue of transferring conserved water, case law establishing the appurtenancy of water rights to land appears to preclude

transfers of salvaged or conserved water to lands other than those to which the water right was originally assigned. In Salt River User's Association v. Kavocovich (1966), the Arizona Court of Appeals ruled that irrigators who lined their ditches could not apply "saved" water to irrigate adjacent land.

Credits for the retirement of irrigated acreage are being proposed in Arizona, where recent statutes limit municipal water use to curtail groundwater overdraft. The City of Tucson is seeking credit for water it has "conserved" through the purchase and retirement of 16,000 irrigated acres in a valley adjacent to the city. Tucson maintains that hundreds of thousands of acre feet of water were saved that otherwise would have been used over the 10-20 years that land has been retired. (McLain, 1988)

In Colorado, legislation allowing use of salvaged water has been introduced several times but has not been passed. An individual who reduces the quantity of water needed for a beneficial use may apply to water court seeking permission to use or sell salvaged water. Court approval is required even when salvaged water will be used on the same land to which the water right is applicable. The applicant bears the burden of demonstrating that existing rights will not be impaired, and proceedings are costly and impractical for small amounts of water. A water user who delays in applying for permission risks having the quantity of the water right diminished to the post-conservation consumptive use quantity. (Stenzel, 1987; Southeastern Colorado Conservancy District v. Shelton Farms, Inc. 1974)

Idaho case law has established that rights to seepage may be retained by the appropriator who carries out improvements to maximize efficiencies, but only on the lands to which the right is appurtenant. (Thompson v. Bingham, 1956) In Basinger v. Taylor (1922) and Reno v. Richards (1918) right holders were allowed to retain and use waters "saved" through elimination of carriage losses and improved stream channelization.

Montana has yet to formulate a policy regarding rights to salvaged waters. (Guse,

1989) No case law or statute directly addresses this issue.

Nevada law takes the position that beneficial use is the limit and extent of a right, and a water user has no right to his inefficiencies. Conserved water is considered unappropriated and any applicant may file to appropriate it. While Nevada statutes declare that water transfers are a valid course of action when it becomes impracticable or uneconomical to use the water beneficially on the land to which it is appurtenant, this has not been interpreted as allowing transfer of conserved water and the state engineer has consistently denied applications to transfer conserved water. (Benesch, 1987; Nev. Rev. Stat. §533.040, 1987)

In New Mexico, salvaged water may be transferred only if the applicant can demonstrate to the satisfaction of the state engineer that there is no impairment to other water right holders and this burden of proof generally precludes such transfers from being approved. (Stone, 1987)

In Utah, use of conserved or salvaged water cannot result in extension of a water right to other land or in increased consumptive use. Conserved water may be considered unappropriated, as in Nevada. As in most other western states, Utah case law implies that the primary consideration in determining whether transfer of conserved water shall be allowed is injury to other perfected rights. (Jensen, 1988; East Bench Irrig. Co. v. Desert Irrig. Co., 1954)

In Wyoming, the measure of the right is the beneficial use of the water. Applications to use excess water elsewhere would have to be approved by the state engineer's office in a manner similar to approval of new appropriations. (Fusf v. Franks, 1980; Binning v. Miller, 1940; Bower v. Big Horn Canal Assoc., 1957)

Summary

Only a few western states have deliberately acted to allow transfers of conserved or salvaged water in order to encourage water conservation. Policies that create conservation incentives through facilitating such trans-

fers have important advantages. They can provide conserved water to satisfy growing water demands outside the agricultural sector. Since agricultural conservation measures need not include retirement of irrigated land or reduced crop yields, transfers of conserved water will not result in the same degree of area-of-origin impacts that arise when transfers rely on retirement of irrigated lands.

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APPENDIX ONE**Listing of State Agency Regional Offices****Arizona**

Arizona Department of Water Resources
15 South 15th Street
Phoenix, AZ 85007
(602) 542-1550

Phoenix Active Management Area
15 South 15th Street
Phoenix, AZ 85007
(602) 542-1512

Pinal Active Management Area
901 East Cottonwood Lane
Suite B
Casa Grande, AZ 85222
(602) 836-4857

Prescott Active Management Area
1316 Iron Springs Road
Ponderosa Plaza, Suite A
Prescott, AZ 86301
(602) 778-7202

Tucson Active Management Area
310 South Meyer
Tucson, AZ 85701
(602) 628-5858

Colorado

Office of the State Engineer
Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203
(303) 866-3581

Water Division No. 1

Alan D. Berryman
Division Engineer
Water Rights Division No. 1
800 8th Avenue, Room 209
Greely, CO 80631

Clerk, Water Court
Water Division No. 1
P. O. Box C
(303) 356-4000 X4550

Water Division No. 2

Robert W. Jesse
Division Engineer
Water Division No. 2
P. O. Box 5728
Colorado National Bank
219 West 5th Street
Pueblo, CO 81003
(303) 542-3368

Clerk, Water Court
Water Division No. 2
308 Judicial Building
Pueblo, CO 81003
(303) 546-5048

Water Division No. 3

Steven E. Vandiver
Division Engineer
Water Division No. 3
P. O. Box 269
Alamosa, CO 81101
(719) 589-6683

Clerk, Water Court
Water Division No. 3
Alamosa County Courthouse
4th and San Juan
Alamosa, CO 81101
(719) 589-9107

Water Division No. 4

Thomas A. Kelly
Division Engineer
Water Division No. 4
Montrose, CO 81402
(303) 249-6622

Clerk, Water Court
Water Division No. 4
P. O. Box 368
Montrose, CO 81402
(303) 249-2859

Water Division No. 5

Orlyn J. Ball
Division Engineer
Water Division No. 5
P. O. Box 396
Glenwood Springs, CO 81601
(303) 945-5665

Clerk, Water Court
Water Division No. 5
109 8th Street, Suite 104
Glenwood Springs, CO 81601
(303) 945-5075

Water Division No. 6

Steven J. Witte
Division Engineer
Water Division No. 6
P. O. Box 773450
Steamboat Springs, CO 80477
(303) 879-0272

Clerk, Water Court
Water Division No. 6
P. O. Box 773117
Steamboat Springs, CO 80477
(303) 879-5020

Water Division No. 7

Daries C. Lile
Division Engineer
Water Division No. 7
P. O. Drawer 1880
Durango, CO 81301
(303) 247-1845

Clerk, Water Court
Water Division No. 7
P. O. Box 3340
Durango, CO 81301
(303) 247-2304

Idaho**Northern Region:**

**Idaho Department of Water Resources
4055 Government Way #9
Coeur d'Alene, ID 83814
(208) 765-4639**

Eastern Region:

**Idaho Department of Water Resources
150 Shoup Avenue, Suite 15
Idaho Falls, ID 83401
(208) 734-3578**

Southern Region:

**Idaho Department of Water Resources
2148 4th Avenue, East
Twin Falls, ID 83301
(208) 734-3578**

Western Region:

**Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705
(208) 334-2190**

Nevada

**State Engineer's Office
Division of Water Resources
201 South Fall Street
Carson City, NV 89710
(702) 885-4380**

**Division of Water Resources
Southern Nevada Branch Office
1515 East Tropicana, Suite 375
Las Vegas, NV 89109
(702) 486-7052**

**Division of Water Resources
Elko Branch Office
P. O. Box 911
Elko, NV 89801
(702) 738-7211**

Division of Water Resources
 Humboldt R. Water Commissioner
 P. O. Box 121
 Winnemucca, NV 89445
 (702) 623-2695

New Mexico

Santa Fe Office

State Engineer's Office
 Bataan Memorial Building
 Santa Fe, NM 87503
 (505) 827-6120

Roswell Office

State Engineer's Office
 P. O. Box 1717
 Roswell, NM 88201
 (505) 622-6521

Las Cruces Office

State Engineer's Office
 530 South Melendres
 Las Cruces, NM 88005
 (505) 524-6161

Montana

Billings Field Office
 1537 Avenue D, Suite 105
 Billings, MT 59102
 (406) 657-2105

Lewistown Field Office
 204 South Daws
 P. O. Box 438
 Lewistown, MT 59457
 (406) 538-7459

Helena Field Office
 1520 East 6th Avenue
 Helena, MT 59620
 (406) 444-6695

Albuquerque Office

State Engineer's Office
 3311 Candelaria, NE
 Suite A
 Albuquerque, NM 87101
 (505) 841-6323

Deming Office

State Engineer's Office
 P. O. Box 844
 Deming, NM 88031
 (505) 546-2851

Aztec Office

State Engineer's Office
 112 South Mesa Verde
 Aztec, NM 87410
 (505) 334-9481

Havre Field Office
 1708 West 2nd Street
 P. O. Box 1828
 Havre, MT 59501
 (406) 265-5516

Bozeman Field Office
 1201 East Main
 Bozeman, MT 59715
 (406) 586-3136

Miles City Field Office
 5 North Prairie
 P. O. Box 276
 Miles City, MT 59301
 (406) 232-6359

Glasgow Field Office
 839 1st Avenue South
 P. O. Box 1269
 Glasgow, MT 59230
 (406) 228-2561

Missoula Field Office
 Holiday Village Professional Plaza
 Suite 105
 P. O. Box 5004
 Missoula, MT 59801
 (406) 721-4284

Utah

Cedar City Office

Gerald Stoker
 585 North Main
 P. O. Box 506
 Cedar City, UT 84720
 (801) 586-4231

Price Office

Mark Page
 453 South Carbon Avenue
 P. O. Box 718
 Price, UT 84501
 (801) 637-1301

Utah Lake & Jordan River

Ed Feldt
 1636 West North Temple
 Salt Lake City, UT 84116
 (801) 533-6071

Vernal Office

Bob Leake
 147 East Main & County Building
 P. O. Box 879
 Vernal, UT 84078
 (801) 781-0770 X328

Wyoming

State Engineer's Office
 State Board of Control
 Herschler Building, 4th East
 Cheyenne, WY 82002
 (307) 777, 7354

Kalispell Field Office
 3220 Highway 93 South
 P. O. Box 860
 Kalispell, MT 59903
 (406) 752-2288

Logan Office

Bob Fotheringham
 55 East 1st North
 P. O. Box 381
 Logan, UT 84321
 (801) 752-8755

Richfield Office

Stan Adams
 147 North Main
 P. O. Box 542
 Richfield, UT 84701
 (801) 896-4429

Weber River & Tooele

Jess Anderson
 1636 West North Temple
 Salt Lake City, UT 84116
 (801) 533-6071

William Jones
Superintendent, Division I
511 West 27th Street
Torrington, WY 82240
(307) 532-2248

Michael Whitaker
Superintendent, Division II
P. O. Box 6103
Sheridan, WY 82801
(307) 672-9207

Craig Cooper
Superintendent, Division III
715 East Roosevelt
Riverton, WY 82501
(307) 856-0747

John Teichart
Superintendent, Division IV
P. O. Box 190
Cokeville, WY 83114
(307) 279-3441

APPENDIX TWO**Contacts for Transfers Involving U.S. Bureau of Reclamation Facilities**

Contact: Regional Director, Bureau of Reclamation at the following locations:

Pacific Northwest Region: Federal Building, U.S. Court House, Box 043, Boise, ID 83724, 550 West Fort Street, (208) 334-2908

Mid-Pacific Region: Federal Office Building, 2800 Cottage Way, Sacramento, CA 95825, (916) 978-5135

Lower Colorado Region: P. O. Box 427, Boulder City, NV 89005, Nevada Highway and Park Street, (702) 392-8411

Upper Colorado Region: P. O. Box 11568, Salt Lake City, UT 84147, 125 South State Street, (801) 524-5592

Great Plains Region: P. O. Box 36900, Federal Office Building, Billings, MT 59107-6900, 316 North 26th Street, (406) 657-6214

Each of the above offices would have contracts and repayment specialists familiar with the Bureau's water transfer policies.

Central Bureau Offices at Denver Engineering and Research Center: The Bureau's staff coordinator on water transfer policy matters is:

Tom Phillips, Coordinator, Operations Services, Bureau of Reclamation, Denver Office, P. O. Box 25007, Denver Federal Center, Denver, CO 80225, (303) 236-1058

Secretary of the Interior, 18th and C Streets, Washington, DC, 20240.

Deputy Commissioner, Bureau of Reclamation, P.O. Box 25007, Denver Federal Center, Denver, Co, 80225.

APPENDIX THREE**DEPARTMENT OF THE INTERIOR****PRINCIPLES GOVERNING VOLUNTARY WATER TRANSACTIONS
THAT INVOLVE OR AFFECT FACILITIES
OWNED OR OPERATED BY THE DEPARTMENT OF THE INTERIOR
Issued December 16, 1988****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.

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.**

APPENDIX FOUR**References on Transfers of Indian Water**

Readers interested in the development of Indian water transfers should refer to Water Market Update, Vols. 1 and 2, S.J. Shupe, editor. Published by Shupe and Associates, Santa Fe, New Mexico, 1987-1988.

Salt River Pima-Maricopa Settlement Act (H.R. 4102 and 5.2153), 1988.

Fort Peck Compact (Montana S.B. 467).

L.H. Storey, 1988. Leasing Indian Water off the Reservation: A Use Consistent with the Reservation's Purpose," 76 California Law Review, pp. 174-220.

References on Interstate Transfers

102 S. Ct. 3456 (1982).

458 U.S. 941 (1982).

These decisions are from the early 1980s Sporhase v. Nebraska case in which a Nebraska farmer sought to transfer water from adjacent landholdings located in Colorado.

A.B. Rodgers, 1986. "The Limits of State Activity in the Interstate Water Market," 21 Land and Water Review, No. 2, University of Wyoming, College of Law, pp. 357-380.

F. Trelease, 1987. "Interstate Use of Water—"Sporhase v. El Paso, Pike v. Vermejo", " 22 Land and Water Review, No. 2, University of Wyoming, College of Law, pp. 315-346.

Water Law Study Committee, 1984. "The Impact of Recent Court Decisions Concerning Water and Interstate Commerce on Water Resources of the State on N.M.," 24 Natural Resources Journal, No. 3, pp. 689-744.