

Technical Report on Market-Based Reallocation of Water Resources Element of the Integrated Water Resource Management Alternative

In Support of the Yakima River Basin Storage Feasibility Study

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INTRODUCTION

The primary objective of the Market-Based Reallocation of Water Resources Element of the Integrated Water Resource Management Alternative is to reallocate water resources through a water market and/or water bank to:

- Improve streamflows for anadromous fish,
- Improve water supply for irrigated agriculture, and
- Meet future municipal water supply needs.

Secondary objectives of the element are to:

- Increase the overall value of the goods and services derived from the basin's water resources by reallocating water from low-value to high-value uses;
- Reduce the delay and cost of effecting transactions that reallocate water resources; and
- Ensure that, before transactions are completed, appropriate consideration is given to the potential impacts on third parties.

The primary objective could be met by moving small increments of water to targeted areas, for example specific tributary stream reaches, and/or by moving large blocks of water where required. The large blocks may be transferred from a single water right owner, for example, an irrigation district, or small increments of water may be pooled and transferred as a single block to meet a larger demand.

It is widely recognized that water resources in the Yakima basin are over-allocated in that the total rights to remove water from the basin's streams exceed the available water supply in certain years. This over-allocation has been confirmed by the adjudication of the surface water rights in Yakima Superior Court in the case of *Ecology v. Acquavella*. The over-allocation prompted an order by the court in 2005 ordering water rights with a priority date later than May 10, 1905 to be curtailed because of lack of water (Revised Order Limiting Post-1905 Diversions During Times of Water Shortage entered March 10, 2005). One potential response to the over-allocation, and the focus of this element of the alternative, is to shift the allocation of water and water rights to increase the value of the goods and services produced with the available supply of water for a given year or over a series of years. This element arises from the experience of the American economic system, which broadly relies on markets to allocate resources when the demand for them exceeds the supply. Economists recognize that markets generally can be efficient mechanisms for allocating resources to their highest-value uses.

Water markets and water banks are becoming popular suggestions as tools to resolve water supply problems. Traditional engineering approaches for augmenting water supplies such as new storage reservoirs come with a wider and deeper set of costs than do non-traditional methods (National Research Council, 2004; Howitt and Hansen, 2005). The search for non-traditional means to obtain new supplies of water (as opposed to "new water") points toward conservation in the use of existing supplies and/or reallocation of existing water rights (Howitt and Hansen, 2005). Conservation and reallocation can come with lower costs and provide more

flexibility (Economic and Engineering Services, Inc., 2002; National Research Council, 2004). They can be better for the economy both because of the lower costs and because they move water to the highest and best economic use. They can also result in reduced risk when compared with traditional approaches.

We recommend that market-based reallocation of water resources be pursued in the Yakima River basin through efforts that:

- Reduce the likelihood of triggering disruptive events from water transfers and reduce possible impacts from drought, loss of fish habitat, and other disruptions to water availability;
- Give greater scrutiny to inter-sector and inter-region transfers of water;
- Reduce transaction risks and costs;
- Utilize a reliable tracking or registry system;
- Build on existing institutions; and
- Simplify the process for approving transfers.

This list identifies some of the most important planning considerations, but other characteristics also might prove essential.

DISCUSSION

TERMS: WATER MARKETS, WATER BANKS, TRANSFERS AND TRANSACTIONS

Water markets and water banks are a lively topic of conversation among water managers and are commonly thrown out as *the* answer to water supply problems. Often, however, the terms are used without being defined and without any common understanding of how they are being used in any particular discussion. Authors agree there is no one definition. However, for a meaningful discussion and analysis of water markets and water banks, there must be a common understanding of the use of the terms. Water markets and water banks both are designed to facilitate the transfer of water and share many common attributes. Water markets are commonly part of a water banking system. However, there are important distinctions between the two.

Water Markets

In general, the term “water market” is used to denote voluntary transactions to temporarily or permanently transfer water from one person/entity to another (National Research Council, 2004; Brewer et al., 2007). Some authors distinguish a water market from a water bank by referring to a water market as a situation where a buyer and seller find each other and deal directly with one another (Lepper, undated). For purposes of this discussion, we use the term “water market” to refer to an institutional process designed to facilitate the voluntary transfer of water rights from a willing seller to a willing buyer on a permanent or temporary basis. A water market may be distinguished from a water bank in that a water right posted through the market continues to be used pending a transfer. In contrast, when a water right is deposited into the bank, it will not be used until it is withdrawn from the bank.

Water Banks

The term “water bank” is usually used in one of two ways: 1) physical storage of water for later use, or 2) a process to facilitate the transfer of water rights (Dellapenna, 2000; National Research Council, 2004). Physical storage of water may include storage in reservoirs and storage in underground aquifers. The use of the term to describe a process to facilitate transfer of water rights is broad and covers both a water bank and a water market. For purposes of the Market-based Reallocation of Water Resources element, the term “water bank” means an institution designed 1) to accept deposit of a water use entitlement, which will not be used by the water right owner during the time it is in the bank, and 2) to make the entitlement available for withdrawal by the water right owner/depositor or another entity (Mentor and Morin, 2007). In the Yakima basin the State Trust Water Rights Program (TWRP) has been authorized for use as a water bank (RCW 90.42.110).¹ Option 2C includes a proposal for a water bank for the Yakima River basin in the context of the TWRP and Option 2D proposes a new structure for a water bank outside of the TWRP.

¹ ESSB 5583, passed by the legislature in the 2009 session, expressly authorizes the TWRP to be used for water banking statewide.

Transfers

Reallocation of water involves the permanent transfer of a water right and/or the temporary transfer of the use of water under a water right from one person or entity to another. Such transfers include any associated changes to one or more elements of the transferred water right. The elements of a water right that need to be changed will depend upon the planned use(s) of the water right by the parties undertaking the transfer and may include a change in place of use, purpose of use (including adding a purpose of use to that already authorized under the existing water right), point of diversion or withdrawal, and season of use. For example, a transfer from an agricultural user to a municipality usually involves changes to all the elements of a water right. A change from agriculture to instream flow requires a change in place of use, purpose of use, and elimination of the point of diversion.

Transactions

Reallocation of water from one person or entity to another also involves various forms of transactions. The term transaction refers to the form of the agreement between the owner of the water right and the party receiving the water right. The type of transaction plays a significant role in the willingness of water right owners and those seeking water to participate in a market or bank. The permanent sale of a water right results in the transfer of both the water and the water right. This would also be the ultimate outcome if an option to buy a water right were ultimately exercised. Temporary transfers by lease result in the water being transferred for the term of the lease and the water right being retained by the water right holder. Leases can take the form of a lease for a single season or year, or a long-term lease for multiple seasons or years. Leases can also be for split season where an irrigator uses his or her water right for the first half of the season and a party, usually one seeking water for instream flow, leases the water for the second half of the season during periods of low streamflow.

Transactions can result in immediate transfer of water and possibly water rights, or future secured transfers. The latter can be accomplished through option agreements. An example is a dry-year lease option wherein a party would secure the right to lease water in a future year if the forecasted water supply was below a number agreed to by the parties. This type of agreement may be made between a farmer who grows annual crops and who would be willing to forego planting in a water-short year and a farmer who grows perennial crops that must be watered each and every year.

Transactions also can involve more than just water and water rights. An agency such as Reclamation, for example, might purchase a water right together with the appurtenant land with the expectation that it would sever the water right from the land and leave the water in stream to increase instream flows.² As another example, a downstream landowner (or an irrigation district) might purchase upstream land plus its water right expecting to divert the water for use during dry years on property he or she currently owns.

² Ecology currently does not have statutory authority to purchase land and water together; it is restricted to the purchase of water only.

OVERVIEW OF WATER MARKETS AND WATER BANKS

ELEMENTS OF WATER MARKETS AND WATER BANKS

Organizational Structure/Function

A smoothly operating water market or bank would have one or more of the following components working together to provide distinct but interactive functions aimed toward reducing the cost of executing transactions in a timely manner.

- *Information clearinghouse.* Information is what allows markets to run smoothly. Potential sellers require information about who might be willing to buy water when, where, at what price, and under what conditions. Potential buyers require analogous information about potential sellers. Both require information about the outcomes of previous transactions to serve as reference points they can use to develop expectations and to navigate through the transaction process.
- *Brokerage.* In some cases, buyers and sellers might identify and deal directly with one another to execute a mutually satisfactory transaction. In other cases, though, a broker may help link a potential seller with a potential buyer and/or oversee the execution of mechanics of the transaction. This function is analogous to that of real estate brokers, who help home sellers put their properties on the market, help buyers find homes on the market with the characteristics they seek, and, once a sale is initiated, oversee the execution of all the relevant paperwork.
- *Technical support.* Some of the information needed to effect a transaction will require legal expertise to sort through who has what water right, hydrologic expertise to link the water right to the actual streamflows that would be affected by the transaction, and institutional expertise to fit the transaction into the operations of Reclamation, Ecology, affected irrigation districts, and other entities.
- *Verification and conveyance.* Someone has to verify that the seller relinquished the water, the buyer received it, that both complied fully with the terms of the contract, and that obligations to third parties were not violated.

Choice of Administrator

There are several options for who will administer either a market or a bank. The entity that does so should be one that has the trust of water right holders, the agriculture community, environmental groups, and the resource management agencies. The entity should also have the expertise to provide the structure and functions discussed above. For a water bank under the authority of the TWRP, the law requires that Ecology is the administrator. Ecology could also administer a water market. For a water market or a water bank that operates under authority other than the TWRP, the administrator could be a private, non-profit organization, a private for-profit organization, or Ecology in combination with a private non-profit.

Price

The price of water can be set by the market and for water banks it can alternatively be a fixed price per unit of water (acre-foot, cfs). Table 3 in the Ecology and WestWater report (2004)

summarizes the water banking programs surveyed. Of note is the fact that of the 23 banks listed, six had “high” activity, defined as more than 10 trades per year. All six used the fixed pricing method. Six additional banks had “moderate” activity- between five and 10 trades per year. Two of the six used fixed prices while four of the six relied upon market-based prices (Ecology and WestWater Research LLC, 2004).

Who Can Buy/Lease or Sell/Lease Water?

The answer to this question depends upon the goal of reallocation of water resources. If the goal of reallocation is to meet the demands of those who currently hold water rights but whose water rights are not adequate to meet their demands, the market or bank would be restricted to existing water right owners. In order to provide additional water for instream flow, water rights for instream flow would be considered to be existing water rights. If the goal is to provide water for new or expanded uses, then anyone desiring water should be able to buy or lease water through the market or bank.

REQUIREMENTS FOR SUCCESSFUL MARKETS/BANKS

Water markets and water banks share a number of basic requirements for successful operation. The primary requirements are discussed below. For each requirement, there is a general discussion followed by a discussion specific to the Yakima basin.

Clearly Defined Property Rights

A primary requirement for a successful water market or bank is property rights that are clearly defined, secure, enforceable, and transferable (National Research Council, 2004; Brewer et al., 2007). A corollary requirement is laws that define the property rights of things being bought or sold (Dellapenna, 2000). Water rights present challenges to the extent that water supply is uncertain, the rights have not been adjudicated, and a water right is a usufructuary right (a use right rather than a true ownership right) subject to state oversight (Brewer et al., 2007).

Evaluating water rights prior to posting through a market or deposit into a bank would improve the clarity, security and enforceability of rights being offered through a water market or a bank and improve the efficiency of operation of the market or bank. This would reduce much of the uncertainty in acquiring a water right and would focus the review of an application to transfer or change a water right on any potential impairment from the transfer, not the extent and validity of the right.

Yakima Basin: The requirements that a property right be clearly defined, secure, enforceable and transferable are largely met for surface water rights in the Yakima basin. The adjudication court is confirming the surface water rights for the entire Yakima basin. Proceedings in the trial court are complete, pending any appeal of the Court’s April 15, 2009 Proposed Conditional Final Order in Ahtanum Subbasin and entry of the final decree (see footnote 7). Water rights are most clearly defined and secure immediately after being adjudicated by the superior court. The court’s orders are evidence that the rights are enforceable. Ecology’s continued regulatory oversight after completion of the adjudication should continue the enforceability of the rights.

There is also a solid body of water laws and regulations that define the water rights, including the transferability of such rights.

There is a similar body of law governing ground water rights as for surface water rights. However, ground water rights are not being adjudicated by the court. As a result, ground water rights are less defined and certain and not as well protected by regulatory enforcement. Private parties may bring an action in superior court to protect their ground water rights, but Ecology is more constrained in its ability to regulate. Overall, surface water rights in the Yakima River basin are much better candidates for transfers via a water bank or water market.

Willing Buyers and Sellers

An absolute must for a successful market or a bank is willing sellers and buyers. In concept, a market transaction would involve a potential seller and potential buyer negotiating with one another until they mutually agree on the price and other terms and conditions of the transaction. In practice, such a process sometimes can occur, but things may work differently. Potential sellers may want to sell or lease their water right and buyers may want to obtain them, but their interests do not align close enough for a transaction to become feasible. If a potential seller wants the transaction to last for only a year but the buyer wants access to the water for a longer period, or vice versa, then they may forgo consummating the deal, for example.

Potential sellers and buyers may not know of one another and their respective interest in effecting a transaction. Or, if they do, they may not have enough information to undertake and complete a transaction quickly and at a reasonable cost. Perhaps most important, they may have little or no basis on which to determine the reasonableness of different prices, terms, and conditions. Therefore, one of the important functions of a water market or bank is distribution of information regarding the water available for sale or lease, the price attached to each, and details of prior transactions.

Importantly, sellers must be willing to sell or lease all or part of their water right in a way that meets the demands and preferences of potential buyers/lessees. Additionally, there must be trust between the parties (Myrum, 2003). The trust underlying a given transaction must extend not just between the seller and the buyer, but also between them and the party responsible for conveying the water from the former to the latter. In order to have willing parties, the transactions through the market or bank must be transparent (National Research Council, 2004) and have predictable/consistent process and outcomes. To promote overall confidence in a market or bank, the terms, conditions, and outcomes of each transaction must be visible to all who might be affected by it and to those who might subsequently desire to effect their own transactions.

Yakima Basin: In the Yakima basin, the likely parties that may be willing to sell or lease water rights are those holding irrigation rights—individuals, irrigation districts, or canal or ditch companies. These same people and entities are potential buyers/lessees, along with municipalities and developers who wish to acquire water for municipal growth, and Ecology, Reclamation, and non-profit organizations such as Washington Rivers Conservancy (WRC) and Washington Water Trust (WWT) who wish to acquire water for instream flow. At least in concept, more than one party could combine their interests as either a seller or buyer. For

example, Ecology and a downstream irrigation district could jointly purchase an option on water from an upstream water right holder with the understanding that, during a dry year, they would take control of the water available under the water right and allocate it, in a prearranged manner, between instream flow and irrigation demands.

Information is key to access to the market or bank and to price setting (Myrum, 2003). Outreach and education conducted by a trusted entity, and widely available information are key to bringing willing buyers and sellers to the transactions. The necessity for trust extends to the entity doing the outreach.

Reasonable Transaction Costs

Transaction costs can keep a water market or water bank from reaching its full potential, or even kill it before it gets started. Potential sellers or buyers may not even consider participating in a transaction if they perceive that it will take too much time or be too complicated to get the deal done. Or, if they are potentially interested in effecting a transaction, they may back out if they find that the costs of completing the deal are too high.

Yakima Basin: By lowering the transaction costs Ecology (and/or others) potentially can provide a significant stimulus to the development and growth of a water market or water bank in the Yakima River basin. Ecology (and/or others) could lower transaction costs in several ways. When it seeks to buy water, it could publicize this fact widely and on a sustained basis, so that potential buyers and sellers can acclimatize themselves to the notion of water transactions and learn more about how transactions work, and how they might benefit from buying or selling water. If it should attempt to promote transactions by others, it may make similar information available to give individuals a better understanding of how the market works and might benefit them.

Ecology (and/or others) could lower the costs of negotiating an agreement between a seller and buyer by publicizing information about actual past transactions, or about hypothetical future transactions, giving individuals better reference points for developing a better understanding of the process. It also might implement a process aimed at making it easier for buyers and sellers to find one another. When it is seeking to buy water, Ecology may publicize the price(s) at which it is prepared to purchase water, or it may initiate a reverse auction process aimed at making it easier for potential sellers of water to make this interest known.

The Yakima Transfer Working Group has been successful at reducing many aspects of the regulatory costs associated with water transactions. Established in 2001, it is a voluntary team of agencies and water users that provide technical review of proposed transactions, helping applicants identify those types of water right changes and transfers that can quickly and easily gain approval from the state. The role of this group could be expanded to help streamline the water transaction process, if appropriate.

Simplified and Improved Processes for Transferring Water Rights

At the top of the list of recommendations for successful markets and banks (and any type of reallocation of water rights) is to simplify and improve the process for approving water right transfers. Authors stress not just the need to remove impediments from existing laws, but to

create a system that facilitates voluntary reallocation. The legal and institutional changes to facilitate reallocation of water should not just remove impediments, but should create a process specifically designed to manage voluntary reallocation (MacDonnell, 1995; Howitt and Hansen, 2005.) The transfer process should encourage flexibility and provide for many methods for trading water (Ecology and WestWater Research LLC, 2004). While emphasizing the need for fundamental changes in the transfer process, these same authors also stress that it is critical that changes to the system do not come at the cost of existing water right users, their communities, or natural systems (MacDonnell, 1995). There is a fine balance here.

An important difference among states is found in the set of criteria used by the water authority in approving, amending, or denying a transfer. The more extensive the list of criteria, the more studies will have to be carried out, and the greater the room for disagreement. At the same time, a greater set of values is being safeguarded from damage by the transfer. We cannot, therefore, judge the desirability of alternative administrative systems simply by monetary transaction costs per acre-foot transferred. The range of public values being protected by the system must be assessed simultaneously (Howe et al., 1990).

Government approval of water right transfers is repeatedly identified as one of the most serious impediments to successful water markets and water banks. The approval processes are described as slow, costly and burdensome (Landry and Anderson, undated; Libecap, 2005; Brewer et al, 2007; MacDonnell, 1995). The literature identifies specific factors that contribute to the problems including the burden on an applicant who wishes to transfer a water right to prove a negative—no impairment of existing rights (Dellapenna, 2000; MacDonnell, 1995); a consumptive use determination that is complex and costly (National Research Council, 2004); and the fact that transfers of an individual’s water right out of an irrigation district require district board approval (Myrum, 2003). While simply the time required for the government to act on a transfer request can discourage parties from requesting a transfer of water, one of the biggest obstacles is the level of scrutiny applied to a water right to be transferred and the lack of trust in the government to approve a reasonable quantity for transfer.

Yakima Basin: Transfers of water rights are subject to statutory requirements, primarily RCW 90.03.380. Transfers of water into and out of the TWRP have additional requirements under RCW 90.38, 90.42, and Ecology’s Trust Water Rights Guidelines and Trust Water Rights Guidance. The time required to process water right changes has been seen as an impediment to a successful market. Any proposal to streamline the transfer process should address possible legislative changes as well as changes in agency rules, policies and procedures.

A significant barrier to efficient and timely transfers of water is the waiting time for Ecology to consider the application. Ecology is required to process applications in the order in which they are received. Historically, applications for new water rights and change applications were all put into a single line to await processing, which could take several years to be completed. The time required for Ecology to review and decide on a change application has been reduced by legislation that established two lines of applications, one for new water right applications and one for changes (RCW 90.03.380(5)(b)). Additionally, certain change applications can be processed before earlier filed applications if they meet criteria in WAC 173-152-050 (referred to as the “Hillis Rule”). Priority processing could also be established by creating a new line for

applications for transfers through a water market or for transfers to and from a water bank. Under priority processing the time is generally reduced from years to months.

Under the current system, Ecology is the entity that evaluates a water right transfer. The primary constraint on a water right transfer is that it must be made “without detriment or injury to existing rights” (junior or senior to the right being transferred). Because of that requirement, a transfer may not result in an increase in the consumptive use of the right.

Ecology interprets the statutory standard of no impairment as requiring that Ecology make a tentative determination of the validity and extent of the water right. This is required to ensure that there is valid legal authority for the right and that only the amount of the water right that has been continuously used and not relinquished is approved for transfer. If the application is to transfer water from one irrigation district to another, Ecology must receive concurrence from both districts before it may approve the transfer, while if the transfer is a change of place of use within a district, only the district board’s approval is required and Ecology has no approval role (RCW 90.03.380(2)(3)).

In the Yakima basin, permanent transfers are under Ecology’s jurisdiction. During the pendency of the adjudication, temporary transfers are under the jurisdiction of Yakima Superior Court. Federal laws and Reclamation water delivery contracts add a layer of complexity. The Water Transfer Working Group (WTWG) reviews all requests for transfer and makes recommendations to Ecology and the Court. The WTWG has improved the speed and operation of the transfer process. However, there remains room for improvement in the underlying transfer process.

The fact that Ecology conducts an analysis of the extent and validity of the right is viewed by many applicants as an impediment to water right owners applying to transfer their water rights. A system within a water market or water bank that provides for an initial confidential analysis of extent and validity of the right would encourage water right holders to participate. The confidential analysis could be done by the market administrator if it is a private entity and not subject to the laws of public disclosure or by an entity that works in conjunction with the market administrator for the express purpose of water rights evaluation.

In the Yakima basin, irrigation districts hold large water rights and the reallocation of any significant blocks of water will likely involve an irrigation district. By statute, irrigation districts may change the place of use of water within the district without approval by Ecology (RCW 90.03.380(3)). Efficient reallocation of water within adjoining irrigation districts may also be accomplished under existing state law. Two or more irrigation districts may also form a Board of Joint Control (BOJC). By doing so, the districts can change the place of use of water rights within the area of jurisdiction of the BOJC, i.e., the combined boundaries of the districts, simply by notifying Ecology and any Indian tribe requesting such notice (RCW 87.80.13092)(c), (d)). The Roza Irrigation District and the Sunnyside Division formed the Roza-Sunnyside Board of Joint Control (RSBOJC) on August 13, 1996. Among other long-term actions and benefits cited by Roza and Sunnyside for formation of the RSBOJC is internal management and potential joint projects for water distribution facilities and water management activities of adopted water conservation programs.

An identified barrier to water right transfers outside of an irrigation district is the authority of the district to prevent such transfers. RCW 90.03.380(2) requires that when water is proposed to be transferred from one district to another, Ecology must receive concurrence from the districts that the transfer “will not adversely affect the ability to deliver water to other landowners or impair the financial integrity of the districts.” A proposed solution is to clarify transferability of water rights held by members of irrigation districts by specifying the conditions under which the organization could deny the transfer. If in the Yakima basin the authority of the districts to prevent out-of-district transfers is preventing otherwise desirable transfers, Ecology could seek a legislative change to shift the burden to the districts to show that such a transfer would adversely affect the delivery of water or the financial integrity of the districts.

Consideration of Third-Party Interests

Third-party impacts raise concerns not about how a proposed transaction would affect the water right of a third party, but about how it would affect public values, the viability of a particular industry, and/or the prosperity of a community. Many are concerned about how transactions will affect the quantity, timing, and quality of instream flows and habitat for salmon, steelhead, and other aquatic species. Those whose livelihoods are linked to irrigated agriculture can be concerned that shifting the pattern of irrigation from one part of the basin to another, or diverting water away from irrigation all together, will undermine the viability of irrigation districts, and weaken the overall agricultural industry. Members of local communities can be concerned that changes in the allocation and use of water can affect their quality of life and economic outlook. Some in the farming community as well as others fear that a fully functional market would accelerate the flow of water away from irrigation and stimulate urban development across the landscape.

One author has stated that third-party impacts may be the greatest impediment to successful water right transfers, which are at the heart of any successful water market or bank (MacDonnell, 1995). The fact that third-party impacts are a very real concern is evidenced by a resolution passed by the Okanogan County Commissioners that “prohibits” water for irrigation being transferred out of the county. Most recently the Commission passed a Resolution requesting the legislature enact a law entitled the Rural County Water Protection Act. Under the requested Act, when a water right is proposed to be transferred out of Okanogan County, or any county east of the Cascades, the county and any resident of the county would be given a first right of refusal to match the selling price within 60 days of notice of the proposed sale and allow the water to be kept in the county. The resolutions adopted reflect a serious concern about the potential impact of water transfers on the agricultural section and the local economy.

In a 2008 Report to the Legislature, Lawrence MacDonnell examined impacts to local economies from out-of-county water transfers (MacDonnell, 2008). The author offered three recommendations to address such impacts, all of which would require statutory changes. The first is a requirement that the formerly irrigated land be restored or re-vegetated. Second, any lost property tax revenues in the originating county should be offset by annual payments to the local government for a period of up to 20 years. In the alternative, a requirement that a fee per acre-foot of water transferred out of the county is paid to the originating county. And third, a statutory provision that provides for a general public interest review for proposed water right changes.

Yakima Basin: As discussed above, RCW 90.03.380 requires that a transfer may not impair other existing water rights. Ecology has the authority and duty to consider impacts on the public interest when it issues a new water right (RCW 90.03.290). The Supreme Court has ruled that Ecology may not consider the public interest when making decisions on applications to transfer surface water rights although it may do so when making such decisions regarding ground water rights (*Pend Oreille Co. PUD No. 1 v. Ecology*, 146 Wn.2d 778, 797(2002)). (Because the Legislature omitted consideration of the public interest from RCW 90.03.380 where it included such a requirement in other closely related statutes, we conclude that Legislative intent is clear that a "public interest" test is not a proper consideration when Ecology acts on a change application under RCW 90.03.380). If an inability to consider third-party impacts is impeding the transfer process because of the concerns of local communities and other interest groups, Ecology could seek legislative changes to the transfer statute.³

Trust

Significantly, in the Yakima basin some landowners have stated concerns about a lack of trust in Ecology and the agency has acknowledged that fact (Ecology, 2006). It has been difficult for Ecology to establish and maintain trust with water right owners because of its regulatory role and its position as plaintiff in the adjudication where the agency's responsibility has been to ensure that the court received properly supported claims for water rights. Specifically, with respect to the transfer of water rights, Ecology is charged with the responsibility to conduct a tentative determination of the extent and validity of a water right sought to be transferred, which often puts the agency at odds with water right owners. Some water right owners have expressed a concern that if they subject their water rights to an evaluation by Ecology, Ecology will relinquish part of their right.

Based on successful experiences in other areas, there is a need for an entity or entities, who are non-regulatory and perceived to be neutral, to work in the Yakima basin to do outreach and educate water right owners about the potential opportunities they may have to sell, lease or donate their water rights. There is also a need for an entity or entities to conduct an initial, confidential evaluation of the water right of a person or entity that intends to transfer all or a portion of the right. Private, non-profit or for-profit organizations can conduct confidential evaluations and keep them confidential because they are not subject to the public disclosure laws as are all public agencies, including Ecology. Furthermore, such organizations do not pose any threat to the water right owner because they have no regulatory role and do not relinquish water rights.

INFLUENCE OF MARKET CONDITIONS

In addition to consideration of the requirements for a successful water market or bank, the evolution of the proposed alternative for market-based reallocation of water resources will be influenced by the underlying market conditions, i.e., the interaction of the demand for and the supply of water within the context of the existing distribution of water rights. This influence

³ The statewide trust water rights statute does require that before a trust water right is exercised Ecology must first determine "that neither water rights existing at the time the trust water right is established, nor the public interest will be impaired" (RCW 90.42.040(4)).

already exists, insofar as some demands for water exceed the supply available through existing water rights, and, absent a transaction, higher-value demands can go unmet while lower-value demands are satisfied.

Changes in this influence will materialize through a mixture of climatic, hydrologic, and economic forces, including these:

- An increase in the price of one irrigated crop, relative to the prices of others, will, all else equal, increase the demand for water by the farmers that grow it, relative to the demands of those who do not.
- Climatic changes that increase the supply of water in streams in the winter and spring and decrease the supply in the summer and fall will, all else equal, decrease and increase the value of water during the two periods, respectively.
- Climatic changes that increase temperatures and rates of evapotranspiration will, all else equal, reduce and warm stream flows, and increase the demand for water to provide fish and wildlife habitat. Higher temperatures and faster evapotranspiration also will, all else equal, increase the irrigation demand for water and some municipal-industrial demands for water.
- Climatic changes that increase temperatures may, all else equal, make it possible for frost-sensitive, high-value crops to be grown at higher elevations in the basin, and increase the demand for water in these areas relative to the demand elsewhere.
- An increase in the basin's population will, all else equal, increase the municipal-industrial demand for water.
- A continuation of recent trends will, all else equal, increase the demand for recreational opportunities, scenic vistas, healthy fish habitat, and other water-related services, relative to the demand for most water-related commodities.

Within the context established by the market conditions in the Yakima River basin, the evolution of this alternative will be shaped by the legal, institutional, economic and operational characteristics of the water-trading marketplace.

POTENTIAL IMPEDIMENTS TO WATER MARKETS AND WATER BANKS

There are a number of reasons why water markets are not more widespread, especially for intra-sector trades, i.e., trades from one type of use and sector of the economy to another. In many instances, the most important reasons are:

- *Information and transaction costs.* Market transactions typically require that the participants have enough information to understand, trust, and participate in the market. Acquiring this information can be difficult and expensive. These costs tend to be greater for transactions between sectors than for those within a sector. If courts become involved to approve a transaction or to resolve a complaint about a pending transaction, these costs can potentially increase. The increased cost may be offset by the shorter time required for approval of a transfer by the court versus the administrative process.

- *Technical and spatial constraints.* If potential buyers and sellers do not draw water from the same source and at the same time and place, trades are either impossible or in some cases achievable only with additional third-party transactions or conveyance structures, both of which increase costs. Potential buyers situated upstream of sellers might be prohibited from reducing flows on the reach between, or also consider conveyance structures so that withdrawals are from the same point as or below the seller. Potential sellers who irrigate perennial crops may not be willing to participate in a short-term transaction.
- *Liability risk.* A water transaction can generate liability risk for the participants in several ways. A water-right holder who leases water to another may face risk that the state will reduce or relinquish the water right proposed for transfer. The buyer in a transaction may risk having the water at issue fail to materialize as promised under the terms of the transaction and, conversely, the seller may risk having the buyer claim the water at issue was not delivered according to the terms of the transaction. Both parties to a transaction may face risk that third parties will claim they were injured by execution of the transaction.
- *Complicated governmental approval process.* Government approval of water-right transfers is repeatedly identified as one of the most serious impediments to successful water markets and water banks. The approval processes are described as slow, costly and burdensome (Brewer et al., 2007; Landry and Anderson, no date; Libecap, 2005; and MacDonnell, 1995). The literature identifies specific factors that contribute to the problems including the burden on an applicant who wishes to transfer a water right to prove a negative—no impairment of existing rights (Dellapenna, 2000, and MacDonnell, 1995); a consumptive use determination that is complex and costly (NRC, 2004); and the fact that transfers of an individual’s water right out of an irrigation district require district board approval (Myrum, 2003). Simply the time required for the government to act on a transfer request can discourage parties from requesting a transfer of water. One of the biggest obstacles is the level of scrutiny applied to a water right to be transferred and the lack of trust in the government to approve a reasonable quantity for transfer.
- *Third-party effects.* Communities with a history of economic activity revolving around certain water uses, such as agriculture or recreation, might feel they would be injured by transactions that would divert water away from that sector. Additional third-party effects might materialize if, for example, a water transaction resulted in fallowing of land that previously had been used for growing irrigated crops, and the fallowed land produced weeds or other pests that caused higher costs for neighbors.

Concern about third-party effects typically addresses effects that are local to the place where a water transfer would curtail historical uses. Often, the concern arises when a transfer would curtail agricultural production and, hence, have ripple effects through sectors of the economy that have been linked to that production. Sometimes, though, concern can have the opposite focus: a transfer that would improve stream flows might signal households and businesses alike that the area will be less likely to face emergency changes in water uses to forestall an environmental disaster if a drought should materialize in the future. Such an outcome could have third-party effects throughout the economy.

Some third-party concerns have a broader focus, as when a transfer would have environmental consequences, such as reduced salmon populations, hundreds of miles

away. Distant concerns also might arise in other ways. For example, a transfer that would enable expansion of food production might help feed hungry people on another continent.

- *System-operation effects.* Conversion of agricultural land to hobby farms or urban development can disrupt the operation and management of the physical and administrative systems providing water to the land. The new land uses often have different water-use patterns than those of commercial agriculture. New landowners may no longer undertake activities that contribute to maintenance of the water-delivery system, and they may have different willingness to pay for system-maintenance by others.
- *Environmental constraints.* Water transactions may significantly affect the functioning of water-related ecosystems by altering the location, timing, and quality of water flows. They may be subject to review and regulation by environmental regulators. Even if they are not, they likely will be important to somebody, insofar as all water uses can be ecologically, economically, and culturally important.

Environmental impacts based on instream flows have been addressed in the Yakima River basin by the Instream Flow Technical Advisory Group. Minimum flow requirements identified by this group can be a constraint on trades, in that no trades are allowed that would reduce flows in any stretch below them. Other constraints might require that withdrawals remain on the same temporal schedule.

Uncertainties regarding natural system-processes can cause difficulties or potentially unintended consequences. For example, because interactions between surface water and groundwater are poorly understood, transfers of surface water that seem straightforward might lead to unforeseen changes in both groundwater and surface water. If an individual has surface water rights he or she can sell and additionally has exempt well access to ground water, there may be an incentive to sell surface water and replace it by increasing ground water withdrawals. It is, therefore, important that markets set appropriate bounds—in this case including ground water constraints—and address important system uncertainties either through research or programmatic safeguards.

SURVEY OF WATER MARKETS AND WATER BANKS

Ecology and WestWater Research, LLC published an extensive review of water banks in the western United States (Ecology and WestWater Research, LLC., 2004). The report was briefly summarized in Clifford (2003). The report surveyed 18 states west of the Mississippi River and found that, excluding Washington, nine states had state-operated banks in some stage of development. Significantly, the authors found that the details of water banking vary greatly from state to state.

Idaho, California, Texas, New Mexico, Arizona

Idaho operates three separate rental pools as banks used to manage water stored in reservoirs. Idaho also has a water supply bank to deal with natural flow water rights and groundwater. California's water banks are primarily designed to meet drought year demands. The water "bank" in Texas actually functions more as a water market with an on-line bulletin board posting water rights for lease by river basin. One interesting aspect of the Texas bank is the fact it has two categories of water rights listed: one is for water rights that have been researched (validated) and then banked, and the second is for rights that are offered on a "buyer beware basis." The bank was authorized in 1995. As of 2003 there had been only one transaction through the bank (Clifford, 2003).

In New Mexico, a water bank was authorized to include groundwater, stored surface water and "native/direct flow surface water." New Mexico's Interstate Stream Commission (ISC) is to be a major water right purchaser and administrator of the bank. Significantly, the state legislature has mandated that the ISC purchase land with water rights, fallow the land and offer the water rights for lease. The ISC is to lease water rights through the bank to water right owners whose right is curtailed during dry years (Clifford, 2003).

Arizona has developed a water banking system through the joint efforts of the Central Arizona Project (CAP) and the Arizona Water Banking Authority (AWBA). The AWBA was "created specifically to facilitate underground storage of any Colorado River water not needed for direct use in any year" (Dozier, 2005). The Colorado River is over-allocated, just as is the Yakima River. Because CAP has a junior priority to water on the Lower Colorado River, it needs to protect its water source for water-short years. Through the banking, Arizona diverts water not demanded in a given year and stores it underground through a variety of recharge facilities. According to Dozier, "Banking is Arizona's way of protecting against the CAP junior priority status. It is not a new supply for future growth. It provides for firming our Colorado River M&I [municipal and industrial] allocations to a reliable supply" (Dozier, 2005).

Oregon

Two notable programs in Oregon apply market-based activities to influence water management in the eastern region of the state. The Deschutes River Conservancy (DRC) is comprised of representatives from private and public interests in the Deschutes River Basin. In collaboration with landowners, agencies, and other organizations, the DRC employs auctions and other market-based tools to promote ecological restoration and support growing communities. Through temporary leases, permanent transfers, and conservation projects, it restored more than

100 cfs of flow to the Middle Deschutes River downstream of Bend in 2006. Although it has received federal funding, it currently relies on contributions from individuals, businesses, corporations, philanthropic foundations, and government agencies.

In the Upper Klamath Basin in Oregon, Reclamation has annually purchased water for instream flows since 2002 as part of its efforts to meet its obligations under the Endangered Species Act to assist threatened coho salmon. Under the program Reclamation originally offered a fixed price for water, but now solicits bids from individuals and entities willing to fallow land and forgo diverting surface water, or willing to pump groundwater to substitute for surface water.⁴ Its maximum purchases occurred in 2005 when it paid \$4.6 million to secure 27,471 acre-feet from fallowing land and paid \$2.3 million to construct wells and infrastructure to allow water users to change from surface diversions to withdrawal of groundwater. The program, originally called the Klamath Basin Pilot Water Bank, is now called the Water Supply Enhancement Study.

Colorado

In Colorado where water markets have flourished, a water bank formally established in the Arkansas River Valley was not successful. “Colorado has one of the most active water markets in the world, with tens of thousands of acre-feet of water traded each year through private, voluntary transactions” (Lepper, undated). Much of the success in trading through the water market may be attributed to the water court system. In Colorado water courts are district courts, analogous to superior courts in Washington State, which conduct general business of the district court but also specialize in water cases. Whereas Ecology has both the responsibility of reviewing water right transfers and regulating the use of water rights, in Colorado the water court reviews transfers and the state engineer regulates the use of water and enforces orders of the court.⁵

Under the Colorado system, an application to transfer a water right is submitted to the court, which assigns it to the water referee. The referee investigates the truth of the statements in the application and any statements in opposition. The referee also consults with the division engineer for the region where the court operates. Approximately 95 percent of the applications are settled at the referee level without a court hearing (O’Leary, 2003).

Just as is the case in the Yakima basin, virtually every water right in Colorado has been adjudicated. The property interest is well defined, which has promoted stability of water markets in Colorado.⁶ Colorado has favored the impartial court forum for water right decisions: “A separation of powers concept is at the heart of the plan” (O’Leary, 2003). The consistency of one judge making decisions and the impartiality of the process has made it very successful.

In contrast to the success of water markets in Colorado, a water bank program has struggled. The Colorado legislature passed a law authorizing a pilot water banking program in the Arkansas

⁴ The process of soliciting bids to sell water is called a reverse auction.

⁵ Water courts also adjudicate new water rights, which in Colorado is done one water right at a time. This is in contrast to Washington adjudications in which all the water rights in a prescribed area are adjudicated at one time.

⁶ In addition to the basic elements of a water right, Colorado also confirms a consumptive use quantity of a water right, which provides better definition of the water right.

River Basin in 2001 (Sections 37-80.5-101 et seq., C.R.S. (2001)). Regulations to implement the program were adopted in 2002. The rules defined “water banking” to mean “temporarily placing legally stored water into an account within the Water Bank whereby that water is then leased, loaned, optioned or exchanged to another water user” (Rule 3, Definitions, paragraph 11). The rule defined “water bank operator” to mean “the State Engineer, a delegated public entity or a delegated public-private partnership who administers the water bank and is entitled to charge a transaction fee for deposits, withdrawals, or both, sufficient to cover the bank’s administrative costs” (Rule 3, Definitions, paragraph 12). The bank was operated by the Southeastern Colorado Water Activity Enterprise (SECWAE).

Detailed rules and procedures were developed for putting water into the bank, listing and bidding procedures, transaction procedures and quantification procedures. By 2004, with few deposits and no withdrawals, the bank was abandoned by the SECWAE. Another group, the Upper Arkansas River Water Conservancy District has indicated it may try to revive the bank.

A lesson learned from the Colorado experience is that even when water markets are successful in a state, water banks operating in the same state may have varying levels of success.

Three Recent Innovations

We examined three efforts to stimulate the development of water markets: an agreement between the Imperial Irrigation District (IID) and the San Diego County Water Authority (SDCWA); an agreement between the Palo Verde Irrigation district (PVID) and the Metropolitan Water District (MWD) of southern California; and the formation of the Super Ditch Company as an instrument to facilitate the transfer of water from agricultural to urban use in southeastern Colorado. We describe each of these innovations and their efforts to overcome factors that have impeded the development of markets elsewhere.

Imperial Irrigation District

The Imperial Irrigation District (IID) receives water from the Colorado River via the All-American Canal and distributes it to irrigators in southern California’s Imperial Valley. The San Diego County Water Authority (SDCWA) has negotiated a plan to receive a portion of IID’s Colorado River water. SDCWA is connected to water from the Colorado River via the All-American Canal and the Colorado River Aqueduct, managed by the Metropolitan Water District.

SDCWA is in the process of investing in water conservation on farms and in canals linked to IID, with the intent of reducing local consumption of Colorado River water, so that it can claim and capture the water that is saved. Until the investment is fully completed and functional, IID, the responsible party representing Imperial Valley irrigators in this contract, has established a market to purchase water from farmers in the district. IID offers farmers \$85/acre-foot, and uses the water it purchases to satisfy IID’s downstream flow requirements and the water transfer agreement with SDCWA. The downstream flow requirements are largely driven by environmental flows necessary for the Salton Sea, an important stopover for migratory birds (MacDonnell, 2008).

The Water Transfer Agreement entered into by IID and SDCWA involves creation of conserved water by fallowing until 2017. *An Agreement for Fallowing Land in the Imperial Irrigation*

District is entered into between IID and a landowner for a term of 1-2 years. The following agreement includes a provision for determining the yield of conserved water.

To help mitigate potential community impacts of reduced economic activity, \$100 annually per acre fallowed is placed in a community-benefits escrow account, intended to assist with job training programs and infrastructure needs. A separate environmental mitigation fund was also endowed to offset or mitigate any unforeseen environmental impacts.

Palo Verde Irrigation District

The Metropolitan Water District (MWD) serves the coastal communities of southern California, brokering water from multiple sources, including the Colorado River water transported via the Colorado River Aqueduct. The Palo Verde Irrigation District (PVID), in Imperial and Riverside Counties, California, directly diverts and distributes water from the Colorado River. In response to drought conditions, PVID agreed in 1992 to serve as a broker between individual irrigators in the district and MWD for a Test Land Fallowing Program. Under the agreement, PVID reaches agreements with irrigators to fallow, on a rotating basis, up to 25 percent of the land within its service territory and it then transfers to MWD the water that otherwise would be consumed for \$135 per acre-foot (MacDonnell, 2008). A more lasting agreement, signed in 2004, establishes the maximum acreage to be fallowed in PVID at 28 percent of the total, and establishes the long-term price at \$602/acre-foot (annually adjusted for inflation). Participating irrigators also receive an initial sign-up payment of \$3,170/acre.

The program is based on a series of agreements, including a Landowner Agreement for Fallowing in the Palo Verde Irrigation District (Landowner Agreement), which is entered into between MWD, PVID and a landowner in the district; a Fallowing Easement Deed, which authorizes MWD and PVID to fallow the land under the Landowner Agreement in the event of landowner default; a Tenant Subordination agreement, which subordinates any agreement to lease the land to the Landowner Agreement; and an Encumbrance Subordination Agreement, which subordinates any other liens or encumbrances on the land to the Fallowing Easement. The Landowner Agreement is subject to “fallowing calls” by MWD for 35 years.

Super Ditch Company

Six irrigation companies incorporated the Lower Arkansas Valley Super Ditch Company to facilitate leasing water rights from irrigators to municipalities and water agencies in Colorado. In May 2008, 40 landowners signed a contract to form the company, providing the company with up to 45,000 acre-feet of water per year that it can broker for lease to others (Water Information Program, 2008). No ownership of water rights is transferred away from irrigators. This arrangement arose, in part, from concerns about past, “buy-and-dry” practices, whereby farmers sold their lands to cities, which often left the land fallow and transferred the water for urban uses. Under these practices, about 60,000 acres of irrigated agriculture have gone out of production in the Arkansas River Valley since 1960 (Woodka, 2009). Areas permanently fallowed in the Arkansas River Valley tend to become weed-infested—and there is a belief this contributes to fire risk—and spreads weeds and pests to neighboring farms still in production.

Arkansas Valley irrigators visited Palo Verde in southern California to learn from their program. Both regions see their programs as a means to satiate urban demand. Local irrigators would

rather lease water than have land and water purchased and the land permanently removed from agriculture (Lower Arkansas Valley Water Conservancy District, 2008). Palo Verde reportedly conveyed the importance to rural water users of joining forces to negotiate with municipalities (Woodka, 2009).

The Super Ditch idea was, in part, instigated by water leases the City of Aurora, Colorado purchased from the Southeastern Colorado Water Conservancy District. There are growing concerns that cities outside of the Arkansas River Valley, such as Aurora, will attempt to purchase water from the Super Ditch Company as well. To counteract such attempts, the irrigator-lessors hold a durable right of first refusal if an irrigator wants to sell his shares outright. Arkansas River Valley residents are much more concerned about water transfers out of the basin than transfers within the basin.

The Super Ditch anticipates yearly leases of water from fallowed land to cities, the state and other water users and long-term leases to entities that would need to add infrastructure to use water from the Super Ditch companies.

Similar to the Palo Verde program, the Super Ditch Company plans to pay farmers to temporarily fallow a portion of their land, on a rotational basis. As of this writing, no trades have occurred and some specifics of the program are still being determined.

As evidenced by Ecology's survey of water banks in the western states and this discussion of water markets and water banks, there is no set formula to follow in designing a water market or a water bank. They should be structured to meet the demands and take advantage of the opportunities in the specific area where they will operate (MacDonnell, 1995). Consequently, rather than discuss the particulars of any one market or bank, the following sections discuss the elements that make up a market or bank and identify requirements for successful markets and banks. They also include a discussion of the specific challenges in the Yakima basin to satisfying the requirements for success. The proposed options for market-based reallocation are comprised of different combinations of the elements discussed here.

SOME KEY LESSONS

This section draws on the description of the three innovative programs in the preceding section and the description of water markets in the Draft Planning Report and Environmental Impact Statement (Reclamation and Ecology, 2008). Together, this information offers lessons potentially applicable as the state develops the water-market element of its proposed Integrated Water Resource Management Alternative for the Final EIS.

Voluntary Participation by Landowners

The foundation of all three innovative programs is the willingness of farmers to dry up acres so the water that otherwise would be applied to them can be transferred. Their willingness to do so typically reflects the fact that the farmers in those areas grow annual crops rather than perennial crops. A farmer with orchards, vineyards, or other perennials may be willing to fallow land, but the costs of doing so typically would be greater than for annual crops. The 2007 agricultural census indicates that perennial crops were produced on about 98 percent of all irrigated

croplands in Kittitas County (U.S. Department of Agriculture. 2009). Most of this involved the production of hay (and related) crops, however. Farmers might be more willing to transfer water from this land on a short-term basis than would be the case if they produced apples, wine grapes or other perennial crops where water stress could lead to higher crop losses and re-establishment costs. In Yakima County, the census found that about 25 percent of the irrigated land produced annual crops, and one-third of the land that produced perennial crops involved the production of hay. In Benton County (all of it, not just the portion in the Yakima basin), more than 60 percent of the irrigated land produced annual crops, and one-quarter of the land that produced perennial crops produced hay.

These numbers do not directly measure the potential for farmers to voluntarily fallow their lands for a year and transfer the water to other uses or locations, because they do not account for the seniority of water rights, the location of individual parcels, and other factors likely to affect the willingness to fallow their lands. The numbers do, however, generally indicate that the overall willingness to participate in annual-fallowing programs probably would be lower in the Yakima basin than in the three innovative programs, where water is predominately used to irrigate annual crops. Farmers producing irrigated hay may, however, be willing to reduce the amount of irrigation and transfer water to other uses or locations.

Downstream Buyers

The transfer of a water right is simplified when the point of diversion and new place of use are downstream from the historic locations.⁷ A market will be more feasible if those likely to buy or lease water for use at a new place are located downstream from those likely to sell or lease water. In the Yakima River basin, likely buyers are municipalities and proratable water users. The largest proratable districts are the Kittitas Reclamation District (KRD), located in the upper basin and the Roza Irrigation District, located in the mid-basin. Several municipalities are located in the lower basin.

System Operator Integrated into the Market

With each of the three illustrative programs, the irrigation district or company that operates the irrigation system act as a participant in and an integral element of the market. In the Yakima River basin, a major system operator is the Bureau of Reclamation (Reclamation). The experience elsewhere indicates that future marketing efforts in the basin likely will be more effective if they similarly draw Reclamation in as an integral element of the market. Whatever Reclamation's role(s), it must be involved to ensure that transfers and programs do not adversely affect operation of its system or have a negative impact on the Total Water Supply Available (TWSA) in the basin.

⁷ While it is sometimes possible to provide mitigation for upstream transfers this always creates delays and adds complexity to a water right transfer.

Standardized Agreements

The Yakima River basin is in a unique situation because of the ongoing adjudication, which is close to completion at the trial court level.⁸ When the adjudication becomes final, Ecology will issue an adjudicated certificate of water right to every person or entity holding a surface water right that has been confirmed by the court. This certificate will provide a high degree of certainty for each of the rights. The adjudicated certificates should reassure participants in water trades that sellers/lessor of certificated water have the right to do so. They also should help quantify the amount of water associated with fallowing a particular parcel, so that verification of trades can be accomplished by monitoring the status of the land rather than the movement of the water.

Also unique to the Yakima basin is the system established for reviewing requests water right transfer requests for water rights in the adjudication. Continuation of this system after the adjudication is complete probably would expedite subsequent market transfers.

⁸ On April 15, 2009 the Court entered a Memorandum Opinion and Proposed Conditional Final Order for the Ahtanum Subbasin. The Court certified the CFO for appeal to the Washington Supreme Court. If no appeal is taken, the final step at the trial court is entry of a final decree for the entire adjudication. If an appeal is taken the entry of the final decree must await the Supreme Court's ruling.

POTENTIAL IMPLICATIONS FOR THE YAKIMA RIVER BASIN

PROPOSED MARKET-BASED REALLOCATION ALTERNATIVES

It is important to design a water market or water bank to fit the particular characteristics and needs of the location where it will operate. Perhaps the most significant characteristic of the Yakima basin is that all surface water rights in the basin have been adjudicated by the Yakima County Superior Court and it is anticipated the Court will enter the final decree in mid to late 2010. This means a higher degree of certainty regarding surface water rights and a reduced need to investigate historic use of the right for purposes of transferring and reallocating water. It also means that there is a tremendous amount of information readily available about water use distribution in the basin: who has water, who needs water—how much and when.

The following discussion presents six options with combinations of characteristics that could comprise a future water market or water bank in the Yakima River basin. The options derive from the discussion and analysis above, taking into account characteristics of the Yakima basin's water rights, water supply, and water demand. One group of options for a water market (Option 1A) and a water bank (Option 1C) is based on existing laws and structures with some suggestions for streamlining and efficiency. Another group (Options 1B and 1D) calls for substantial changes to the laws and structures currently in existence. The final two options (1E and 1F) are specific to irrigation districts. Implementing any one of these options, or some combination of them, would require overcoming potential impediments, such as those described above. Current understanding, however, indicates that, although the impediments might prove insurmountable for a specific effort to establish a water market or water bank, such an outcome would not be inevitable, and each of these options is potentially feasible.

Options 1A: Water Market Using Existing Authority

The Water Market Using Existing Authority Option is a market that would bring sellers and buyers together and operate under existing laws and regulations regarding water right transfers with minor changes to improve efficiency. The market would be administered by a private non-profit entity that would operate solely as a clearinghouse. The administrator would post information about the water rights of willing sellers and information about water rights willing buyers are seeking. Information would include the location of the water right, the elements of the right including quantity (Q_i and Q_a), point of diversion, place of use, purpose of use, season of use, and priority date.

The market would accept a water right for posting based on evidence of confirmation by the adjudication court. If more than five years has passed since entry of the Conditional Final Order for the water right, a water right evaluated by a Certified Water Rights Examiner would be accepted for posting. Certified Water Rights Examiners would work with water right owners to provide a confidential evaluation of the water rights and calculate the consumptive use portion eligible for change. The state would certify such examiners through training and testing. A presumption would be established that documentation provided by a Certified Water Rights Examiner in support of a water right transfer is valid. When an application is filed to transfer a water right that is signed by such an examiner, Ecology would conduct an abbreviated evaluation. Thus, the examiner's findings would be relied upon by the water right owner and

also by Ecology thereby improving the speed and efficiency of water right transfers. This option would require legislation to authorize the certification of water rights examiners.

The administrator would conduct outreach and education regarding the existence of the market and opportunities it provides. The administrator would also track all transactions carried out through the market to provide others with information about previous transactions. In order to facilitate the reallocation of water, the market would be restricted to buyers/lessees who hold current water rights and to those acquiring water for instream flow. Prices would be determined by market forces and by negotiations between buyers and sellers. A transaction fee would be charged to help fund the administration of the market.

When a sale or lease of a water right occurred through the market, the water right transfer process would be based on existing statutes, implemented in slightly different ways from Ecology's current practices. The primary statutory requirement is that a transfer may not impair any existing water rights. Translated into actual practice, Ecology's focus is the validity and extent of the right being transferred and the consumptive use of the current and proposed use. The extent and validity of the rights have been determined by the Yakima Superior Court in the adjudication and for those rights five or more years after a Conditional Final Order, would be validated by a Certified Water Rights Examiner. The determination of potential injury from the transfer would thus come down to the consumptive use analysis. This analysis needs to be simplified and more transparent.

A suggested approach is to use a table that shows the consumptive use and return flow expected from the different types of applications systems (center-pivot; sprinklers; drip, etc.) for the various crops grown in the Yakima basin.⁹ This table should be made readily available to the public. Most importantly, it should be applied uniformly without variation. The fact that there may be more site-specific information that could be used to determine consumptive use more precisely is acknowledged. However, the trade-off here is efficiency, transparency and confidence in the transfer process, which should outweigh any perceived benefit from a more complex, specific analysis. This suggestion would not require any legislative or rule amendments. Rather it would simplify Ecology's policies and procedures.

As part of this market option, Ecology could amend its rule to create a separate line for processing applications to transfer water rights that are being acquired through the market. This would provide an incentive to conduct transactions through the market. Given the review of the extent and validity of the water right prior to posting in the market, it would be appropriate to provide a separate line for processing these transfer requests.

Option 1B: Open Water Market

This option provides the framework for a more wide-open and active market. The market would offer more services to sellers and buyers, and the transfer approval process would require legislative changes. The administrator of this market would operate not only as an information clearinghouse like it would under Option 2A, but it would also function as a broker that would

⁹ For Washington, the *Washington Irrigation Guide* commonly referred to as *WIG*, provides the necessary data on crop water requirements.

oversee the mechanics of the transaction. This function is analogous to a real estate broker in that the administrator would help sellers post and price water for sale or lease and help buyers find water on the market that meets their needs. The administrator would offer technical support to move the transfer through the regulatory process. The administrator would also offer verification services to confirm the seller no longer uses the right, the buyer received it, and both parties complied with the contract.

As with Option 1A, the administrator would be a private, non-profit organization. The operation of the market would be funded by transaction fees. Another option is for a private, for-profit entity to administer the market and charge commissions as well as fees on transactions, including perhaps a use fee for water transferred through the market. The price for water would be market-driven, and anyone could buy or lease water through the market regardless of whether they currently have water rights.

The most significant difference from the Water Market Using Existing Authority would be the process for review and approval of the water right transfer. The challenges for the water right transfer process are to make the process more efficient, flexible and “user friendly,” so that it does not discourage people from entering a water market or water bank, but actually gives impetus to the market or bank. At the same time the process must protect existing water rights from injury. The positive and unique situation in the Yakima basin makes it possible to create a water market that goes well beyond the current water right transfer process.

Under this option, Washington would adopt the “Colorado process” for use in the Yakima River basin. The water court, which would be part of the Yakima County Superior Court, would conduct the general business of the superior court but would also specialize in water cases and the water court would review water right transfers and Ecology would regulate the use of water and enforce orders of the court.

An application to transfer a water right would be submitted to the court, which would assign it to the water referee. The referee would investigate the truth of the statements in the application and any statements in opposition. The referee would also consult with the Central Regional Office of Ecology.

The infrastructure for such a system is already in place in the Yakima basin. The Yakima County Superior Court has conducted the adjudication and is extremely knowledgeable about water rights and Reclamation systems operation in the basin. The Referee’s Office has worked closely with the court and has similar knowledge. To implement this option would require legislative action to fund the court and referee and to transfer the authority to decide water right transfer applications from Ecology to the court.

Option 1C: Water Banking Using Existing Trust Water Rights Program

As defined for this document, a water bank means an institution designed to accept the temporary or permanent deposit of a water right, which 1) will not be used by the water right owner while it is in the bank, and 2) will be made available for withdrawal by another water user on a temporary or permanent basis. The primary differences between a water market and a water bank are that in a water market a water right holder is seeking a direct transaction with someone

who wants to buy or lease their water. In a bank, a water right holder deposits their water right into the bank on a permanent or temporary basis, and the bank makes the water available to a third party. The transactions are between the water-right holder and the bank on the one hand, and the bank and the third party on the other hand. The bank may pool water rights deposited by multiple water right holders to make larger blocks of water available for sale or lease. Another important distinction is that because water rights deposited to a bank are not being beneficially used while they are on deposit they must be protected from relinquishment.

Under this option, the existing TWRP would function as the bank. Water rights can be temporarily or permanently transferred to trust.¹⁰ Those water rights that are temporarily transferred to trust may be withdrawn by the depositor for their own use or be transferred to another person or entity. Those water rights permanently transferred to trust are either to be used according to the terms of the transfer or may be used by Ecology for any recognized beneficial use. Significantly, a water right is protected from relinquishment as long as it is in trust (RCW 90.38.040(6)).

RCW 90.42.100 specifically authorizes Ecology to use the TWRP for water banking purposes.¹¹ The statute does not define “water banking,” but does list several purposes:

¹⁰ For purposes of the TWRP in the Yakima basin, a “trust water right” is defined as “[t]hat portion of an existing water right, constituting net water savings, that is no longer required to be diverted for beneficial use due to installation of a water conservation project that improves an existing system. The term ‘trust water right’ also applies to any other water right acquired by the department under this chapter for management in the Yakima River basin trust water rights program” (RCW 90.38.010(3)). Trust water rights may be held by the department for instream flows, irrigation use, or other beneficial use” (RCW 90.38.040(3)).

¹¹ The statute previously provided express authority to use the TWRP for water banking only in the Yakima basin. ESSB 5583 passed by the 2009 legislature and signed by the Governor on April 29, 2009 now authorizes the TWRP to be used for water banking statewide. In the bill the legislature made findings that many watershed groups and programs have considered using the state trust water rights program for water banking purposes. The intent of the legislation is “to provide clear authority for water banking throughout the state and to improve the effectiveness of the state trust water rights program.” Section 1, ESSB 5583.

In an effort to increase the effectiveness of water banks, the legislature amended the trust water right statute, RCW 90.42. The significant changes include the following:

- Express authority to use the trust water rights program for water banking purposes statewide. Section 2(1).
- Protects return flows as part of the total water supply available. Section 2 (2)(a)
- Prohibits the use of water banking for carryover of stored water if that would negatively affect the total water supply available. Section 2(3)(d).
- Express authority for the state to acquire groundwater rights, as well as surface water rights, to be placed into trust. Section 4(1).
- A requirement that Ecology “shall exercise its authorities under the law” to protect trust water rights. Section 4(1).
- Establishing that the consumptive quantity of a trust water right is equal to the consumptive quantity of the right prior to the transfer into trust. Section 4(4)(d), 5(5), (9).
- Authorizing water rights leased or donated that have not been used for the previous 5 years before transfer to trust for which there is a sufficient cause for nonuse, to be placed into trust in a quantity used prior to the period of nonuse. Section 5(10).

(2) Water banking may be used for one or more of the following purposes:

(a) To authorize the use of trust water rights to mitigate for water resource impacts, future water supply needs, or any beneficial use under chapter 90.03, 90.44, or 90.54 RCW, consistent with any terms and conditions established by the transferor, except that return flows from water rights authorized in whole or in part for any purpose shall remain available as part of the Yakima basin's total water supply available and to satisfy existing rights for other downstream uses and users;

(b) To document transfers of water rights to and from the trust water rights program; and

(c) To provide a source of water rights the department can make available to third parties on a temporary or permanent basis for any beneficial use under chapter 90.03, 90.44, or 90.54 RCW.

Ecology is authorized to acquire water rights, including storage rights, by purchase, lease, donation or other means, except condemnation, on a temporary or permanent basis. RCW 90.38.020(1)(a), (3). When the TWRP is used as a bank, Ecology is the banker and can use the water itself or make it directly available to third parties.

The use of the TWRP suffers from some of the problems that have reduced the success of other banks. In particular the requirements for approval of water right transfers can be complex and time consuming. The statute requires that when a water right is transferred to the TWRP for administration for water banking purposes that the water right is reviewed under RCW 90.03.380 1) at the time it is transferred into trust, and 2) in some situations, when the right is transferred out of trust (RCW 90.42.110). The application for the transfer into trust "must indicate the reach or reaches of the stream where the trust water right will be established before the transfer of the water right to the TWRP and "identify any reasonably foreseeable future temporary or permanent beneficial uses for which the water right may be used by a third party upon transfer from the TWRP." If the future place of use or other elements of the right are not identified when the right goes into trust, "another review under RCW 90.03.380 will be necessary at the time of a proposed transfer from the trust water [rights] program" (RCW 90.42.110).

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- Authorizing water rights leased or donated where nonuse is exempt because the right is for power production or municipal supply purposes to be transferred to trust in a quantity based on the historical use of the right. Section 5(11).

The legislative changes will provide increased incentive for people to transfer their rights to trust; increase the number of water rights eligible to be transferred to trust, and in the Yakima basin allow Ecology to carry water over from the irrigation season into the fall and winter, expanding the water bank's ability to provide mitigation for negative impacts to existing water rights and fisheries.

The amendments that established use of the TWRP for banking purposes paid particular attention to any possible impairment of other rights, including water rights specific to Reclamation's Yakima Project (RCW 90.42.110(3)(4)). Similar provisions were included in two other sections of the amendments and provide insight into concerns that may be raised to use of the TWRP as a water bank (RCW 90.42.135; 90.42.138).¹²

Option 1D: Non-Regulatory Water Bank

Under this option, a bank would be formed outside of the TWRP. The bank could be administered by a private, non-governmental entity, which could either be a non-profit or for-profit organization, or by a non-regulatory governmental agency. The bank could offer a standing price for the purchase of water rights and for temporary deposits of water rights to be made available for lease, or negotiate on a case-by-case basis. The water right holder would be compensated regardless of whether the bank was able to sell or lease the rights and regardless of the price the bank received. Because the water rights would not be used while on deposit with the bank, changes to statute would be required to protect the rights from relinquishment.

The extent and validity of the right would be established prior to deposit in the bank. As with Option 1 A, a water right confirmed in the adjudication within five years of deposit would be accepted as confirmed by the court. If more than five years had passed, the right could be certified by a Certified Water Rights Examiner.

The transfer of the water right would be reviewed at the time the water right is sold or leased from the bank. Because the extent and validity of the right would be established prior to deposit with the bank, the review of the transfer would be limited to the issue of impairment. The review could be conducted by Ecology as explained for Option 1A Alternative A or through a water court as recommended in Option 1 B. Whichever approach is chosen, the goal should be to simplify the transfer process and create certainty and trust. Just as suggested for the market options, water right transfers from the bank to a third party would be processed through a separate line that would allow priority processing.

Option 1E: Drought Year Transfers Outside of Irrigation Districts

This alternative is intended to free up transfers of water outside of an irrigation district during drought years. As discussed above, under current law, Ecology must receive the concurrence of an irrigation district where water is proposed to be transferred outside of the district. RCW 90.03.380(2). Under this option, irrigation districts would be required to allow transfer of up to 30 percent of the total water supply allotted to the district in years when the state declares a drought under RCW 43.83B.405. A system would be established to allow a member of the district to petition for the temporary transfer of water under their water right to Reclamation to be managed as part of its Total Water Supply Available (TWSA). The member would follow the acres associated with the transferred water. The member would be paid by Reclamation,

¹² Other concerns raised by various groups regarding use of the TWRP as a water bank include the following: use of the TWRP as a bank will lead to increased use of water if the water right had only been partially used prior to the transfer; use of the TWRP as a bank will possibly lead to speculation- bank a water right until the demand and price go up; use of the TWRP will lead to a public resource becoming more privatized; and environmental groups will acquire a disproportionate share of the water because they are well funded (Ecology, 2006).

Ecology or a water bank established for that purpose, which would in turn be paid by the recipient of the transferred water. Prices would be set by a process, yet to be determined, that may have Reclamation, Ecology or a water bank setting fixed prices or the different parties negotiating prices specific to individual transactions.

Option 1F: Irrigation District Bank

Under this option, an irrigation district would act as a bank during both good water years and years of drought. The difference from Option 1E is that the district would act as the bank rather than Reclamation or Ecology. A district would send out a call for water to their members at a fixed price. Water right holders within the district would decide to fallow all or a portion of their land for all or a portion of the irrigation season and bank their water with the district. The district could pool the banked water and identify blocks of water that they are willing to sell to junior districts or others. By selling large blocks, the districts would have more pricing power. The districts would take a portion of the selling price and manage water use.

RECOMMENDATIONS FOR A PREFERRED WATER MARKET OPTION

Water markets, while intended and designed to reduce constraints on water allocation, require substantial and careful planning and implementation if they are to accomplish their objectives successfully. The recommendations described below for such a program in the Yakima River basin address some of the most important planning considerations, but are not a complete list of essential elements.

Reduce the Likelihood of Triggering Highly Disruptive Events

This recommendation has two major elements. One entails designing market activities so they are unlikely to bring about a proposal for a transaction, or for a set of transactions, that would trigger widespread ecological, economic, or social disruption. The three innovative examples we describe above address this concern by limiting the amount of agricultural land that can be taken out of production at any given time. We anticipate that a similar arrangement with local irrigation districts—individually or acting together—would lessen anxieties that a water market in the Yakima basin might emasculate the agricultural elements of the local economy and culture.

Advocates of water markets also should take care to avoid unintended consequences, such as those that might occur if transfer of surface water rights should trigger increased ground water withdrawals from exempt wells. Avoiding these consequences may require restricting those with access to exempt wells from selling or leasing their surface water, or by managing surface and ground water in conjunction with one another.

The other element concerns using water markets to reduce the probability of disruptive events from other sources. Experience in this region and elsewhere indicates that farmers, businesses, households, and communities generally can anticipate and plan for disruptive events, such as occasional droughts, with which they are familiar. They are less successful with respect to less familiar, and especially unknown disruptions. Notable disruptions of this type have occurred in the past, as deteriorating environmental conditions triggered severe regulatory restrictions

associated with federal laws and regulations, such as the Clean Water Act and the Endangered Species Act. Past applications of these laws make it clear that they can trump most other concerns and, when they are triggered, they can have wide-ranging impacts on economic activities and social relationships. Therefore, water markets, to the extent they can be oriented to reduce the probability of future disruptions from drought or a requirement for increased instream flows, offer wide-ranging economic and social benefits.

The prospect of changes in climate that bring about significant changes in the supply and quality of water in the Yakima River basin raises the likelihood that highly disruptive events will occur in the future. In particular, droughts likely will occur more frequently, and rising water temperatures will reduce habitat for salmon and other aquatic species. Successfully employing water markets to anticipate these changes could do much to dampen the overall disruptive effects of climate change on the basin's natural and human systems. One strategy for addressing these concerns is to focus on trades that would not reduce instream flows and may increase instream flows in stream reaches where flow has been identified as a limiting factor.

Give Inter-Sector and Inter-Region Transfers Greater Scrutiny

Trades within a given type of land use and immediate drainage basin have fewer potential direct and indirect negative impacts than trades across greater distances, differing land uses or differing river branches. Inter-sector and inter-region trades might require more, in-depth assessment of their potential social, economic, and environmental impacts.

To address concerns about inter-sector and inter-region transfers, and to lessen the costs of addressing them, the state might consider developing mechanisms that define benchmark requirements. For example, it might require that a portion of the water involved in such transfers would be retired to an instream or other environmental designation, or, if storage is possible, that some portion be held in storage to offset potential impacts if they should materialize.

Reduce Transaction Risks and Costs

At least initially, water-market transfers will be impeded because both potential buyers and potential sellers will face high risks and costs associated with completing transactions. The innovative efforts we describe address these barriers in several ways. They rely on an institution familiar to and trusted by irrigators (irrigation district) to broker and enforce the transactions. In some instances, they provide irrigators with initial payments aimed at covering their costs and reducing their fears. This responsibility is made less onerous by allowing the entity to measure an irrigator's participation in the transfer program by focusing on acres-fallowed rather than on the more difficult to measure acre-feet of water not used. They all focus on short-term leases rather than permanent sales of water, reducing the risk that the transactions will permanently retire land and water from agricultural production. In each instance, the buyer diverts water at or near where the water is diverted for irrigation use, so water transfers will have little, if any, impact on streamflows.

Utilize a Reliable Tracking or Registry System.

All markets function well only when both sellers and buyers have confidence that the good or service being traded is actually delivered, and the promised payment is actually made. It will be

necessary to have a centralized accounting system to be sure that the same water is not sold to more than one buyer, and that sold water actually results in reduced consumption. Enforcement will likely require some form of penalties. Therefore, whether the brokerage or accounting system is public or private, some form of public institution will likely be necessary for enforcement of contracts.

Build on Existing Institutions

The three innovative examples we describe above emphasize the importance of relying on existing irrigation districts (or a new company created by existing districts) to play key roles in brokering and enforcing transfers. If they are so inclined, districts in the Yakima River basin likely could play similar key roles here, with commensurate success.

Simplify the Process for Approving Transfers

Perhaps the most important recommendation for promoting further reallocation of water rights in the basin is to simplify and improve the process for approving water right transfers. Authors stress the need for legal and institutional changes to facilitate reallocation of water, not just remove impediments, and to create a process specifically designed to manage voluntary reallocation (MacDonnell, 1995; Howitt and Hansen, 2005.)

The Yakima River basin adjudication entails a system whereby the court has jurisdiction over temporary water right changes during the pendency of the adjudication. A party wishing to make a temporary change must file a motion with the court and note a motion for hearing in a relatively short timeframe. Both Ecology and the WTWG review the application and provide a recommendation to the court for approval or denial of the change request. Ecology and the water conservancy boards retain jurisdiction over requests for permanent water-right changes.

This system has worked well and is much more efficient than a normal change application through Ecology. Given the number of change applications Ecology receives, the applications are often in process for months or, at times, years. Besides the efficiency factor, using the court process and WTWG review brings into play numerous entities and individuals knowledgeable in the intricacies of the water rights in the Yakima River basin, including the Yakama Nation's rights and the potential effects of water right changes on the operation of Reclamation's project in the Basin.

Rather than trying to invent a new system, Ecology would build on the existing system. This would include expanding the purview of the superior court to permanent as well as temporary water right changes to surface water in the Yakima Basin requested through the water market. In general, the same process currently used for temporary changes can apply. A water right owner who wishes to change their water right on a permanent or temporary basis would file a motion with the court. The party would also submit its change request to Ecology and the WTWG for review and comment before the court hears the motion.

Ecology would seek legislation to provide the Yakima County Superior Court with jurisdiction over all water right change requests for surface water in the Yakima Basin under RCW 90.03.380(1), which are brought to the court through the Yakima Basin Water Market. Ecology would also seek legislative funding for this expanded function of the Yakima County Superior

Court. If successful in these legislative changes, Ecology would seek an order from the court that establishes the process for bringing a motion for a water right change, establishes Ecology's responsibility with respect to motions filed, and describes the appeal process from such motions.¹³ ¹⁴

In addition to the process for reviewing water right transfers through the market, the standards for reviewing applications are important. Ecology's primary standard for approving a water-right transfer is that it may not adversely impact other existing water rights. The WTWG has established a checklist of seven categories of questions to be answered with respect to each transfer. This has helped those seeking a transfer to identify what they must show for WTWG to recommend to the court that the transfer be approved. Because many anticipate that there will be applications to transfer a seasonal water right for irrigation to a municipality for year-round domestic use, it would make the transfer process more efficient if there were a framework or set of criteria adopted for determining whether such transfers would adversely affect other water rights and if so, standardized types of mitigation available to prevent such impacts.

¹³ The procedures for water right changes established by the Court for purposes of the adjudication are included in Pretrial Order No. 12, *Re: Procedures Relating to Changes of Use and Transfers of Surface Water Rights Subject to this Adjudication, Ecology v. Acquavella*, Yakima Superior Court Cause No. 77-2-01484-5, entered January 22, 2002; Pretrial Order No. 6 *Re: Procedures Relating to Order Pendente Lite*, entered February 18, 1987; and Pre-Trial Order No. 17 *Regarding Disposition of Final Decisions Approving Transfer (Changes) of Water Rights Pursuant to RWC 90.03.380(1)*, entered June 20, 2003.

¹⁴ For transfers occurring outside of a fallowing program within a participating district, we anticipate that the water markets likely would involve smaller quantities of water but a wider variety of water rights. Opportunities for transferring such water rights are anticipated to be less frequent. What is essential is that, when opportunities do arise there is a process available to help those water right transfers be accomplished. To meet this goal it does not make sense to create an elaborate system that may or may not be called into action very often. Rather, the goals of this water market may be met by modifying the existing system for water right transfers through the Water Transfer Working Group ("WTWG") and the Yakima County Superior Court.

CONCLUSION

Water markets and water banks have the potential to increase the economic and ecological benefits derived from the water resources of the Yakima River basin. Attempts to develop water markets and water banks have exhibited mixed success in Washington and elsewhere in the western United States. The Yakima basin has elements and infrastructure in place that may increase the chances for a successful water market. The guiding principle in creating a market or bank is to take advantage of the characteristics of the local situation and design the process to meet the specific needs of the area. The guiding words are creativity and patience. Water markets and water banks do not develop quickly, even under the best of circumstances. With careful planning and coordination, however, there are significant steps the legislature, Ecology, irrigation districts, Reclamation, and other entities can take to expedite the process.

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