

Impediments to Temporary Water Transfers

by Martha H. Lennihan

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My topic this afternoon is temporary water transfers. By way of introduction, I note that there is frequent reference to the theory of water transfers, the advantages of converting the water supply system to a market system, and the potential benefits that would result from a more efficient allocation of our water resources. In addition, there are numerous laws which favor water transfers. In the Water Code there are over 10 provisions that in one way or another advocate water transfers. During our fifth dry year there is also increasing reference to the difficulty of obtaining a water transfer. However, it is rare to hear discussion of the mechanics of water transfers or the impediments to the success of those transfers. I therefore hope in this presentation to outline the mechanics of, and some of the impediments to, temporary water transfers.

I represent the City and County of San Francisco in its efforts to augment water supplies to meet the needs of 2.5 million people in the Bay Area. What I say to you today are my own views, and not necessarily those of San Francisco. It is nonetheless important for you to know that my perspective is primarily that of a water purchaser.

Given our present water allocation scheme, there are inadequate supplies readily available to meet growing needs. During this fifth year of the drought, the inadequacy of those supplies has become painfully clear. "Miracle March" has been very helpful in reducing the acute edge of the drought, but it has not changed this year from a critically dry year in many areas. The differences in the adequacy of water supplies from region to region testify to the fact that water use and availability differs substantially by geographic location.

Our current water rights system has historically required users to pay only for conveyance, pumping, treatment, and similar costs. People are now beginning to realize that payment for the actual commodity -- the water itself -- may be necessary. This represents a significant evolution from water rights which have traditionally been obtained either by the location of property traditionally been obtained either by the location of property adjacent to a watercourse or by acquiring rights by appropriation.

Not to the search for water available for sale and transfer to the needy service area. The purchaser must evaluate how much water is needed, how much can be purchased, at what cost, what kind of conveyance capacity is

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available, who owns that conveyance capacity, the cost of using that capacity, and when conveyance is feasible given the other demands on the system. The water identified for transfer may be lost if the various agreements cannot be reached in short time frames, particularly where conveyance through the Delta is required.

A contract for purchase of the water must be negotiated with the seller. If the seller has collateral agreements for the use of this water, whether for consumptive or nonconsumptive uses such as power, negotiations with those third parties must proceed. The seller must determine that it has surplus water for sale and what price it can command. Other issues addressed by the purchase-sale contract include who will pay for engineering, environmental review and regulatory costs, and who will be responsible for the actions necessary to achieve agreement amongst the various parties, obtain regulatory approvals, and comply with the California Environmental Quality Act or other applicable laws.

Meetings with all of the affected agencies are required, not only because of their regulatory jurisdiction, but also because of the need for cooperation should the transfer have any effect on the SWRCB D1485 water quality standards, the Coordinated Operations Agreement, or related interests. Meetings with the fish and wildlife agencies and concerned environmentalists are often also necessary. If the water must be transferred through the Delta, a wheeling agreement to transport the water through either the Tracy or the Banks pumping plant must be negotiated with the U.S. Bureau of Reclamation or the Department of Water Resources. Additional transportation agreements may be necessary in order to deliver the water to the intended services area. There are a number of questions bearing upon the legality of conveyance of water through other parties' facilities, the charges which may be levied for that conveyance, and the priority of use. The primary statute in this respect is the Katz Bill -- Water Code Sections 1810 - 1814.

The State Water Resources Control Board has jurisdiction over many temporary water transfers. A petition must be filed with the Board where applicable. To process a temporary water transfer through the Board has taken anywhere from two to four months between the date of filing and the actual release of water. There is now an exemption from CEQA in the Water Code for temporary transfers, provided that the State Water Resources Control Board can make certain findings regarding the environmental impacts of the project. Negotiations with fish and wildlife agencies can become mired in the lack of knowledge regarding the hydrology of the Delta, the needs of the affected species, and the consequences (if any) of a change in flow rate, level, direction, or pumping on those species. Quantifying and addressing the environmental impacts in the context of a very high degree uncertainty, such as that surrounding the Delta system, is extremely difficult. Time consuming and expensive studies may be required, and sometimes result in little additional factual information. We simply do not know enough about the Delta to be able to make fully informed decisions.

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It is clear that increases in pumping may be correlated to decreases in populations of fish such as the Delta smelt and the winter run salmon. Such broad observations do not always assist in the task of determining in good faith whether a particular transfer will have any adverse impact on the resources.

Where the water must be conveyed through the Delta to reach the new service area, an initial question is whether or not the water is "real" water. A "real" water determination requires recognition not only by the State Water Resources Control Board, but also by the Department of Water Resources and the Bureau of Reclamation. This issue arises with many water transfers, including the recent statewide Drought Emergency Water Bank efforts. Payments made to farmers to fallow agricultural acreage in the Delta are one example. If the payment is made up front to the farmer, the farmer then relinquishes his or her right to pump water to irrigate crops. The water that would have been pumped by the farmer would have been released from an upstream reservoir in recognition of the farmer's prior rights. If the farmer does not pump, the reservoir owner can retain the water in storage and allocate it to another use. Where the farmer obtains water from sources other than upstream project releases, the upstream projects would have been able to retain that water in storage regardless of the payment to fallow. One effect of the March rains was to reduce the quantity of water which the Water Bank participants expected to receive as a result of fallowing contracts. Those contracts were reached early in the year in recognition of the farmers' need to know whether to proceed with planting and other agricultural activities. The following is a quote from an article by Jim Mayer from the Sacramento Bee:

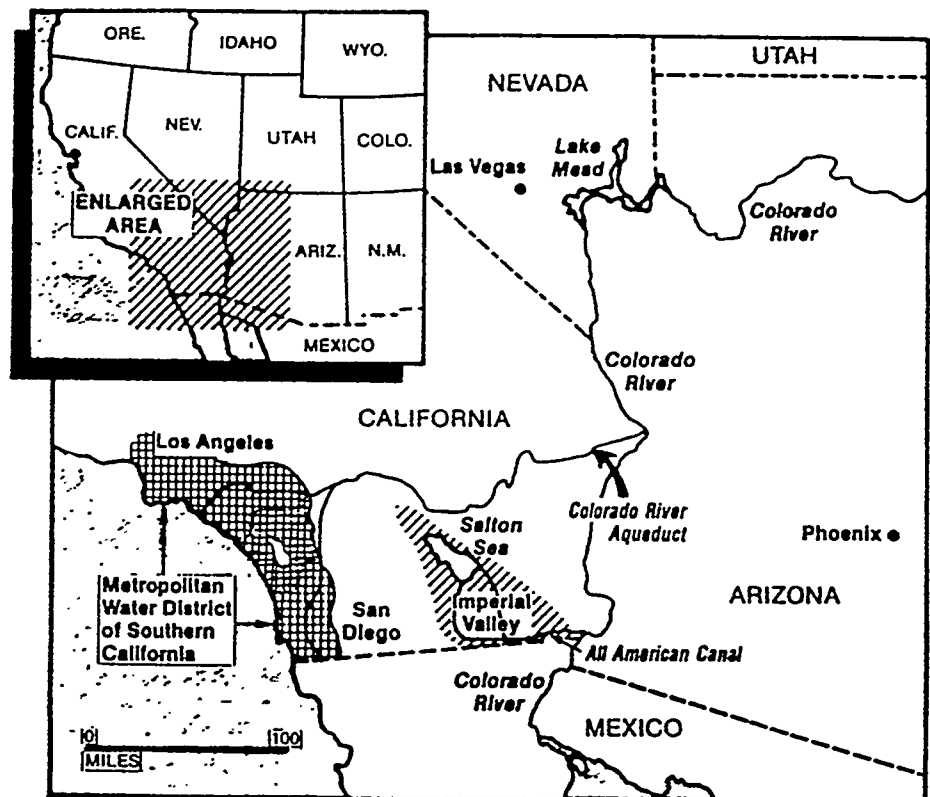
When federal authorities reviewed the first 260,000 acre feet of water acquired for transfer by the State bank, they could only confirm that about 200,000 of those acre feet was [sic] actually freed up by the money that had already been paid for the water to be transferred.

From the purchaser's perspective, this determination translates into a potentially substantial increase in the price of water which can be purchased, and thus the purchaser's ability to redress the water supply shortage. The amount of the price increase depends upon the ratio of "real" water that can be transferred to payments made on a belief that the payment would free up water for transfer. On the other hand, the risk undertaken by early action to acquire water supplies may be considered a necessary one under the circumstances.

Another cost of water transfers is the "refill" issue. Refill is somewhat difficult to explain, but I will make an attempt. If there is a reservoir upstream of the Delta that has surplus water for transfer downstream of the Delta, the refill issue is likely to arise. Water flows through the reservoir and into the Delta. The water that is thus bypassed contributes to the flow necessary to maintain water quality standards required by statute. If there is not sufficient

water flowing through the Delta, the Central Valley Project and State Water Project are required to make up the difference. To the extent that water is transferred out of the reservoir to a new user, the amount of water which flows through to the Delta may be decreased. It will take more inflow to fill the "hole" left in the reservoir by the transfer. That inflow might otherwise have flowed through the reservoir and to the Delta.

Depending upon whether the reservoir is located in the federal or the state system, the Bureau of Reclamation or the Department of Water Resources will ask "who is going to have to fill the hole that is left in the reservoir?" If the water seller or purchaser is required to fill that hole, there is a double payment from the point of view of the transfer. In other words, for each acre foot of water that the purchaser obtains, as much as one additional acre foot will have to be put back into the reservoir to address the refill issue. The actual quantity of the refill requirement depends upon a variety of factors, including the amount of unregulated inflow in the reservoir during the following water year. The purchaser could end up paying for two acre feet of water and receiving one. The surplus water available for transfer may have to be double what the purchaser originally planned, in light of the



REGIONAL MAP

Source: IID Draft EIR: Proposed Water Conservation Program and Initial Water Transfer. April 1986. Figure 2-1.

fact that often only water, not dollars, can satisfy the refill requirement. The allocation of the burden of resolving the refill issue varies from transfer to transfer.

Once the transfer water has been released from its source, and is to be transferred to the Delta, there is also a carriage water component. The amount of carriage water required to address evaporation and other losses varies, and that amount is deducted from the gross amount of the transfer. In the brief history of substantial temporary transfers, the carriage water component through the Delta has been assessed at thirty percent. In other words, a purchase of 100,000 acre feet results in a delivery of two-thirds of that amount. This and the refill component described above compound the loss of water to the transferee.

The cost of transferring water, once real water, refill, carriage water, fish and wildlife conditions, other regulatory conditions, and transaction costs are imposed, may be very high. The purchaser needs to constantly reevaluate the value and economic feasibility of the transfer. The luxury of such reevaluation depends upon how dire the purchaser's need is for water.

This year there is no break-even issue for most purchasers, resulting in little bargaining power because of the desperate need for water. It is interesting to note that the commodity cost -- which you now realize is only one portion of the cost of the transfer -- used to be \$45 an acre foot. This year the commodity cost has risen significantly, with the Drought Emergency Water Bank paying approximately \$125 per acre foot. Some sellers requested upward of \$300 an acre foot for their water.

One of the transfer issues that has not yet been addressed is the impact of fallowing agricultural lands on third parties. There is a legitimate concern regarding economic and other impacts to businesses, which support agricultural production. While the farmer may receive payment for the water, the farmer is no longer purchasing seed, fertilizer, chemicals, and other normal necessities of agricultural production. The farm community may suffer economic decline. Such declines have also occurred in response to agricultural support programs such as the federal Payment In Kind program and the direct results of drought. In fact, one of the problems this year is that the drought itself has caused so many acres to be fallowed, it may be difficult to tell what third-party impacts are fairly attributable to the transfers. Is anyone responsible for paying community impacts? If so, who? The farmer? The transferee? The public?

One effort to address a third-party impact occurred here in Yolo County. Yolo County levied a two percent tax on the Conoway Conservancy transfer to the Emergency Water Bank. Yolo County intends to use those funds for water resource planning in the community. The Department of Water Resources and the purchasers from the Drought Emergency Water Bank are now gathering data regarding third-party impacts in order to begin the process of identifying and quantifying those impacts.

I would like to give you an idea of the nature of recent pre-Drought Emergency Water Bank transfers. This year there were approximately 17 transfers of which I am aware, which amounted to a total of 300,000 acre feet.

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Thirty percent of that transfer water was dedicated to Delta outflow. About half of those transfers had refill conditions. Five of the transfers were done by the Department of Water Resources on behalf of the State Water Project. Approximately 13 of the transfers were less than 10,000 acre feet -- relatively small transfers -- which probably incurred all of the same transactional costs as major transfers. The commodity costs are reduced for a small transfer, but the transactional costs are generally the same.

These non-Bank temporary transfers were discouraged when, in early February, the Governor announced that the statewide Drought Emergency Water Bank was "the only game in town". Some say that the Governor expressed his intent to avoid price gouging and ensure fair treatment of all those needing water. This action facilitated the establishment of the Statewide Water Bank. The Water Bank concept was already being discussed amongst some purchasers. A joint powers authority was one mechanism that could have been used. With the establishment of the Governor's Drought Emergency Task Force, the Department of Water Resources became the facilitator and operator of the Bank.

The Water Bank purchased water only from willing sellers. Current estimates of water purchased on behalf of the Bank range between 300,000 and 500,000 acre feet with an expected total purchase well in excess of those figures. There are numerous contracts with sellers. The process of drafting standard contracts and amending each contract to fit the circumstances of the individual seller involves an enormous amount of work. The Water Purchase Committee and Department of Water Resources staff met frequently and worked intensively during February and March. Purchasers include both agricultural and urban interests. A substantial effort has been made to store and transport this water in a manner which will help to alleviate the drought impacts on our fisheries. The additional costs of this approach are being borne by the purchasers. No transfer is complete until the water has been delivered to the new place of use. The Water Bank itself is not yet complete. Issues regarding the quantity of "real water", obtaining the State Water Resources Control Board's approval for the water subject to its jurisdiction, and transportation of the water to the various service areas are yet to be resolved.

The Water Bank has, I believe, effected a significant change in our attitudes and knowledge regarding the feasibility and desirability of water transfers. Significant tasks remain in order to facilitate water transfers, effectively evaluate their impacts, prioritize desirable water uses, and determine better ways to ensure reliable water supply resources without significant environmental impacts.



Martha Lennihan is an attorney with the firm of Grueneich, Ellison & Schneider specializing in water law.