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CHAPTER NINE

Determining the Quantity of Water Available for Transfer

Water that is available for transfer has its origins in consumptive use, return flows, or conservation (all defined below). In some cases, the quantity of water in each of these categories will be easy to determine. However, in certain cases, the complexity of a right and its transfer may require that you consult an expert to determine the true quantity of water available for transfer.¹

CONSUMPTIVELY USED WATER



Consumptive use makes water unavailable for other uses, usually by permanently removing it from local surface or groundwater systems as the result of evapotranspiration (ET),² percolation underground to an unusable source of water, or any other way by which the water might be removed from the system.³ Consumptive use is determined by calculating the ET of applied water for the crop or crops on the land. Evapotranspiration of applied water (ETAW) is calculated by measuring the applied water transpired by plants,

retained in the plants, and evaporated from adjacent soil surfaces over a specified period of time.⁴ In determining the historical consumptive use, you should acquire as much information as possible regarding the historic uses of the property, particularly the types of crops grown and the total acreage served.

RETURN FLOWS



Return flows, or return waters, refers to a portion of water diverted for use that returns to a watercourse via a drainage ditch, percolation to groundwater, or by some other means. Return flows are subject to use by downstream riparian users if the return flows are native to the stream and are subject to appropriation.⁵ Return flows that end up in a watercourse other than the original source are considered “foreign waters” and are not available for diversion and use by downstream riparian users.

The amount of water available for transfer under a particular water right may be limited by the amount of return flow relied on by downstream water users. For example, if a water right holder has a permit to divert 10 cfs and a downstream water user relies on return flows of 4 cfs, the amount available for transfer may be reduced by 4 cfs because a transfer of the return flows would injure that downstream legal user of water.

CONSERVED WATER



The term “water conservation” refers to the use of a lesser quantity of water to accomplish the same purpose or purposes that are allowed under the existing appropriative right. A water right holder may be able to conserve water through a change in diversion, conveyance, or irrigation practices. Documenting these changes and measuring the change in use can help the water right holder to transfer the conserved water.

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When a water right holder takes deliberate action to conserve water, Water Code section 1011 preserves and protects the appropriative water right from loss or forfeiture.⁶ In other words, if water appropriated for irrigation

purposes is not fully used—due to land fallowing, crop rotation, or other means—the reduced usage is considered to be conserved water. Conserved water may be sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights.⁷ Thus, the Water Code treats conserved water as though it has been put to a reasonable and beneficial use. This eliminates the historic disincentive to conserve water that was created by the forfeiture doctrine, which reduced or eliminated a water right when all or a part of the water rights were not put to a reasonable and beneficial use for a period of five years.



DOCUMENTING CONSERVED WATER UNDER WATER CODE SECTION 1011

Since 1999, the SWRCB has maintained a database that identifies permittees and licensees who report that they have conserved water. If the water right holder seeks credit for the conserved water, he must file reports every three years declaring the extent and amount of the reduction in water use due to water conservation efforts.⁸ Thus, the potential purchaser of conserved water may review the SWRCB database and the physical file for the water right to determine whether these steps have been completed.

The key to utilizing the Water Code’s protections regarding conserved water is in documenting actual water conservation efforts with detailed record keeping. In one instance, the SWRCB actually excused a water right holder’s failure to include water conservation information on SWRCB’s forms because the right holder previously had maintained excellent records regarding water use and conservation savings.⁹

Finally, when pursuing the acquisition of conserved water, the potential purchaser should not rely exclusively on documentation, but should confirm that the water right holder has identified and quantified the conserved water on the Statements of Water Diversion and Use and/or the Reports of Permittee and Licensees. If the reporting requirements have not been met, the SWRCB may not approve an application to transfer the conserved water.



1. The SWRCB Web site provides lists of consultants experienced in water rights. See California State Water Resources Control Board Web site, <http://www.waterrights.ca.gov>.
2. Evapotranspiration is the sum of evaporation and transpiration, which is the process by which water that is absorbed by plants, usually through the roots, is evaporated into the atmosphere from the plant surface, such as leaf pores.
3. CAL. WATER CODE § 1725 (Deering 2003).
4. See Department of Water Resources California Irrigation Management Information System (CIMIS) Web site, <http://www.cimis.water.ca.gov>.
5. CAL. WATER CODE § 1202(d).
6. *Id.* § 1011. The Water Code states that “[w]hen any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of the appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of the cessation or reduction in use. No forfeiture of the appropriative right to the water conserved shall occur upon the lapse of the forfeiture period applicable to water appropriated pursuant to the Water Commission Act or this code or the forfeiture period applicable to water appropriated prior to December 19, 1914.”
7. *Id.* § 1011(a).
8. CAL. WATER CODE § 1011.
9. See *In the Matter of License 1050* (Application 534), No. WR 99-012, 1999 Cal. ENV LEXIS 30 (State Water Res. Control Bd. Dec. 28, 1999); see also Appendix B, State Water Resources Control Board Forms, *infra*.

