Describing Water Rights with Storage Components

There are a number of storage right scenarios. The following diagrams illustrate the most common storage scenarios. While reviewing each diagram, please bear in mind that each canal or ditch could also be a pipeline or some other kind of conduit, and each offstream reservoir could be a storage tank such as those often associated with municipal and domestic water uses. For a more detailed discussion of storage rights, see Application Processing Admin. Memo #14.

Onstream Storage -- No Offstream Diversion



In this scenario, a dam impounds water to create a reservoir, but no water is diverted away from the stream and reservoir. Storage uses often associated with this situation include recreation, wildlife, aesthetics, and stock watering. A development of this kind should nearly always be described as storage only. No flow rate or "diversion to storage" rate should be included because issuing a right that shows a flow rate associated with this scenario would create a de facto minimum stream flow. (There are two exceptions -- a minimum stream flow appropriation made by the Water Resource Board and an instream stockwater right.) This scenario may show a "from storage" volume if water is intended to be released to serve an instream beneficial use, such as fish habitat. See right 63-03618 for an example of water released from storage for an instream purpose.

Onstream Storage with an Offstream Diversion

Appropriations in this category can be of three types. The first type is where high flows early in the year are stored in a reservoir and then released downstream for late-season diversions.



Appropriations of this type should show a storage component and a "diversion from storage" component. This kind of appropriation may also include or be associated with a right to divert the live flow of the stream at the canal heading when flows are sufficient. This kind of appropriation is commonly associated with irrigation.

The second kind of onstream storage associated with an offstream diversion is where the stream flow is impounded in a reservoir and diverted directly from the reservoir.



This is very similar to the scenario where the offstream diversion is downstream, and the two should be described in the same way.

The third kind of onstream storage associated with an offstream diversion is where the offstream diversion completely bypasses the reservoir.



This scenario is rare and is usually associated with small appropriations for aesthetic, recreation, and wildlife purposes. This scenario can be described as though it were two separate appropriations -- one for a diversion of natural flow and one for onstream storage. Thus, there will be no "diversion to storage" or "diversion from storage" component to this type of appropriation.

Offstream Storage

There are two common types of offstream storage. The first type is where the natural flow of a stream is diverted, impounded in a reservoir, and then redirected to a consumptive use, usually irrigation.



A storage right of this kind will always have a "diversion to storage" component and a "use from storage" component. Note, however, that if the reservoir is a "wide spot in the ditch", filling in less than 24 hours and serving as a temporary holding tank or "re-regulation pond" for a live flow right, it can be viewed as a detail of the conveyance system, and it will not have to be described as storage.

The second kind of offstream storage is where water is diverted away from the source, through a

reservoir, and back into the natural channel. The end use of the water is relatively nonconsumptive; however, significant evaporation from the reservoir surface may cause the appropriation to be seen as a consumptive use of water.



This scenario usually requires a storage component, a "diversion to storage" component to cover the initial filling of the reservoir, and a live flow component to cover the continuous diversion through the reservoir. As in the previous scenario, however, if the pond would fill in less than 24 hours under the live flow component of the appropriation, the reservoir can be viewed as a "wide spot in the ditch", which does not need to be described as storage. This scenario is usually associated with small appropriations for aesthetic, wildlife, and recreation purposes.