Summary: Town of Silverton Water Rights Case and Decree

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In 2004, the Town of Silverton filed an application with the district court for the right to transfer and store 113 acre feet (about 37 million gallons) of water at Molas Lake for municipal, commercial, irrigation, exchange, and augmentation uses.

The natural level of Molas Lake is 10,500'.[1] The water rights case, if approved, gives the town permission to store 113 acre feet above the natural level of the lake.[2] Furthermore, the water rights case gives the Town permission to fill the lake above its natural level by using surface water transferred via Molas Ditch.

The decree continues by describing the water rights currently held by the town for municipal water use. The case states that water stored in Molas Lake can augment the town's existing water rights. Therefore if the owners of senior water rights require the town to release water for senior uses, the Town no longer has to release this water from local creeks (used for the town water supply) but can instead release water from Molas Lake into the Animas Watershed.

The decree continues by stating that the town must install and maintain apparatuses and structures that allow for the measurements and control of water flowing through Molas ditch into Molas lake.

Please note that the full decree is available for public inspection by request at Town Hall, 1360 Greene Street, Silverton, CO 81433.

[1] The decree states that natural level of the lake is 10,500 feet according to the 1983 North American Datum (NAD83). If one were to use a precision GPS unit at Molas Lake set to the NAD83, one would see the spillway of the Molas Dam (the spillway is built at the natural lake level) is at exactly 10,500 feet. However it should be noted that a second datum exists that provides different results. This datum is called the 1927 North American Datum (NAD27). If one were to use a precision GPS unit at Molas Lake set to NAD27, one would realize the same spillway is at exactly 10,495 feet. The reason for the variation is because any attempt to measure one's locale is merely an imperfect representation of reality based on the surveying standard being used. The representation of reality is imperfect because the earth is not perfectly elliptical in shape. This means surveyors must devise methods that best approximate its shape. NAD83 and NAD27 are the two such methods that are in widespread use today.

Back to the Molas Project, further complicating matters is the fact that the dam is exactly five feet high and the difference between the NAD83 and NAD27 measurement of the natural lake level is also exactly five feet. Therefore, if one were to look at a map created using NAD27, which shows the natural lake level at 10,495, it would seem that dam, which raises the water level five feet, merely brings the water level to that which the decree states is the natural level of the lake. However, a review of the decree shows that NAD83 is the standard being used in the decree, and that NAD83 shows the natural level of Molas Lake at exactly 10,500' (therefore the five feet of water storage raise the lake to 10,505')

[2] The Town has long been storing water above the natural lake level using an earthen dam at Molas Lake. The dam raises the lake level by five feet. Part of this decree, however, requires the town to measure and control water flow in and out of the lake. To accomplish this, the town began construction of a new dam in 2008 and began working on the ditch feeding the dam in 2009. This system will be fully operational in 2010.