

Water Use Report Comments

February 21, 2011

Actual Report	Comment	By
<p>In the middle of 2009, we undertook a study of water use in the so-called mining industry in Texas, both current and projected for the next 50 years. The study concerned the upstream segment of the oil and gas industry (that is, water used to extract the commodity until it leaves the wellhead), the aggregate industry (sand and gravel and crushed rock operations, washing included but no further processing), the coal industry (mostly pit dewatering and aquifer depressurizing), and other substances mined in a fashion very similar to that of aggregates (industrial sand, lime, etc.), as well as through solution mining. In general we followed the definition of mining according to SIC/NAICS codes. It follows that cement facilities, despite their large quarries, are considered to belong to the manufacturing, not mining, category. The objective of the study, that was essentially prompted by the sudden increase in shale-gas production, was to help in the next cycle of water planning by the state agency in charge of such planning, the Texas Water Development Board (TWDB).</p>	<p>Para1, Pg 1. The use of the term "so-called" is not productive. I understand the sentiments behind it, but the word choice is incorrect. Every facility has an MSHA mine number, which makes it a legitimate mining operation, and not "so-called." This is a less than positive word choice and should be corrected, not just in this first sentence, but in all other locations.</p>	<p>Rich Szecsy TACA</p>
<p>Results from the surveys were useful but not as extensive as hoped for us to assemble a representative sample of the hundreds of mining facilities in the state, with the exception of the coal industry (a significant water user) and the uranium industry (a minor water user). We were also able to gather relatively accurate data from the stimulation stage when a well is being readied for production (the so-called fracing process),</p>	<p>Para3, Pg 1. The use of the phrase, "...not as extensive as hoped for..." invalidates the entire study. Do not use this phrase as it undermines the credibility of the study.</p>	<p>Rich Szecsy TACA</p>

Water Use Report Comments

February 21, 2011

<p>but we are more uncertain about water use for drilling wells and waterfloods. Results of current water use for the aggregate industry relied on previous information somewhat calibrated and updated by survey results. Overall, in 2008 (latest year with complete information), we estimate that the state used ~139 thousand acre-feet (AF) in the mining industry (Figure ES1), including 35.8 thousand AF for fracing wells (mostly in the Barnett Shale/Fort Worth area) and ~21.0 thousand AF for other purposes in the oil and gas industry, although more spread out across the state, with a higher demand in the Permian Basin area in West Texas. The coal industry used 26.7 thousand AF along the lignite belt from Central to East Texas. The 43.0 thousand AF used by the aggregate industry is distributed over most of the state, but with a clear concentration around major metropolitan areas. The remainder amounts to 12.2 thousand AF and is dominated by industrial sand production (~80% of total).</p>		
<p>Water is used mostly for drilling wells, stimulating/fracing wells, and secondary and tertiary recovery processes (oil and gas industry); for dewatering and depressurizing pits, with a small amount used for dust control (coal industry); and for dust control and washing (aggregate industry and industrial sand). Reuse/recycling has been accounted for in water-use figures, as well as opportunity usages, such as stormwater collection (aggregates). As such, the numbers represent mostly consumption. Only some of the coal-water use could be construed as</p>	<p>Para 1, Pg2. The use of the phrase, "Reuse/recycling has been accounted for in the water figures..." This needs to be shown in Figure ES1. This is critically important information for all four segments in that graph, but vital to show for the aggregate industry. Possibly as a stack graph or percentage. To make that statement up front, without showing the data is misleading.</p>	<p>Rich Szecsy TACA</p>

Water Use Report Comments

February 21, 2011

<p>nonconsumed withdrawal when groundwater extracted for depressurization purposes is discharged into streams (40–50% of total). The split between surface water and groundwater is difficult to assess, short of having information directly from facilities (such as for coal and some aggregate facilities), especially for exempt use in the oil and gas industry.</p>		
<p>Furthermore, we recognized that although most aggregate operations recycle or reuse a large proportion of the water used in their processes, water-use data sometimes reflect the full volumes used and do not account for the recycled volumes. Such an uncertainty may result in inappropriate inflation of the values used for planning purposes. This report also attempts to assess the availability of additional information that may differentiate between water used in aggregate mining and that actually consumed or lost in these processes. A significant effort was made to conduct a survey in coordination with TMRA and TACA to obtain water-use and water consumption data for a sampling of representative member companies and facilities across the state (survey questionnaires in Appendix D). Despite the cooperation of the two associations and multiple attempts to encourage participation, only seven companies of the many companies contacted responded to the survey request. They provided information for 27 separate facilities with information on location, production, water use, recycling rate, and source water.</p>	<p>Para2, Pg 27. The use of the phrase, " ...we recognized that although most aggregate operations recycle or reuse a large proportion of the water used in their processes, water-use data sometimes reflect the full volumes used and do not account for the recycled volumes..." On pg2, and in Figure 1, it stated that recycling was taken into account, but here it makes the statement that they DO NOT take into account the recycled. Which is it?</p>	<p>Rich Szecsy TACA</p>

