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ENVIRONMENTAL ISSUE:

Water at Small Surface Mines

Dear all,

Water:

Quarry operations need it. Municipalities protect it. Community members worry about it. Manufacturers devise ways to utilize it to the benefit of everyone. The balance between too much and not enough is often difficult to achieve.

Every time you turn around there are new reports of water shortages, droughts, extreme heat and restrictions.

Some issues:

- Researchers often say there is a megadrought across the country. Conditions are considered a megadrought when "a drought that is at least 19 years in length that's below a given magnitude relative to historic records". Another report stated that 72% of the region is in "severe" drought, 26% is in exceptional drought, and yet populations are booming, increasing the need for more water.
- The water crisis has gone from dire to catastrophic as regulators shut off irrigation water to farmers from a critical reservoir and said they would not send extra water to a half-dozen wildlife refuges that harbour millions of migrating birds each year. It was announced that hundreds of irrigators would get dramatically less water than usual, but a worsening drought picture means water will be completely shut off instead.



The conclusion:

The past two decades has been the driest, posing existential questions about how to secure a livable future in the region, and viable business conditions for companies like aggregates operations that depend on water.

Surface Mines Take Action:

While there is now a concerted effort to conserve water resources, small surface operations have been on the forefront of that effort for many years says **ASPASA**.

ASPASA also says that an estimated 70% of the surface mining operations recycle water and it has a compliance rate with permitted discharge limits:

“We are committed to the protection and preservation of water resources, including surface water, groundwater and wetlands.”



Smaller mine sites have water treatment systems, consisting of settling ponds or mechanical filtration equipment such as clarifiers and filter presses, all for the treatment of water from the processing operation. Water used in the processing operation is treated to reduce total suspended solids (TSS) levels, so the water can be recycled, or in cases where excess water is present, the treated water is discharged. Small surface mining and processing operations collect stormwater that falls within the facility boundaries and store it in pond systems or mined-out quarry pits. The water is then used in place of pumped groundwater.

This combination of recycling treated water and collected stormwater runoff reduces the need for extracted groundwater to supply the operation.

ASPASA says that water management projects and initiatives include:

- Capturing and recycling water throughout the production process, including closed-loop systems that recycle water that remains following material washing.
- Using settling ponds or mechanical filtration equipment to reduce total suspended solids levels so water may recycle or discharged.
- Collecting stormwater that falls within facility boundaries and storing it in holding ponds for use in place of pump groundwater, further reducing the need for extracting groundwater.
- Partnering with government agencies on municipal water management projects to protect and improve the supply of water to the communities in which we operate, and to support infrastructure projects related to stormwater a wastewater management.

We use water for production, maintenance activities, environmental controls and reclamation, **ASPASA** say "We recognize that water availability is critical to the future of our communities and our operations. We also recognize that our diversion and discharge of water into the environment impacts our communities and the ecosystem. We are committed to responsible and efficient water management and continuously seek opportunities to use renewable and recycled sources.

ASPASA says that not only do we focus on ensuring that our discharges do not diminish the quality of local water resources, we are also committed to being responsible users of the available in the communities in which we operate.

Kind regards,


Nico Pienaar
DIRECTOR - ASPASA

