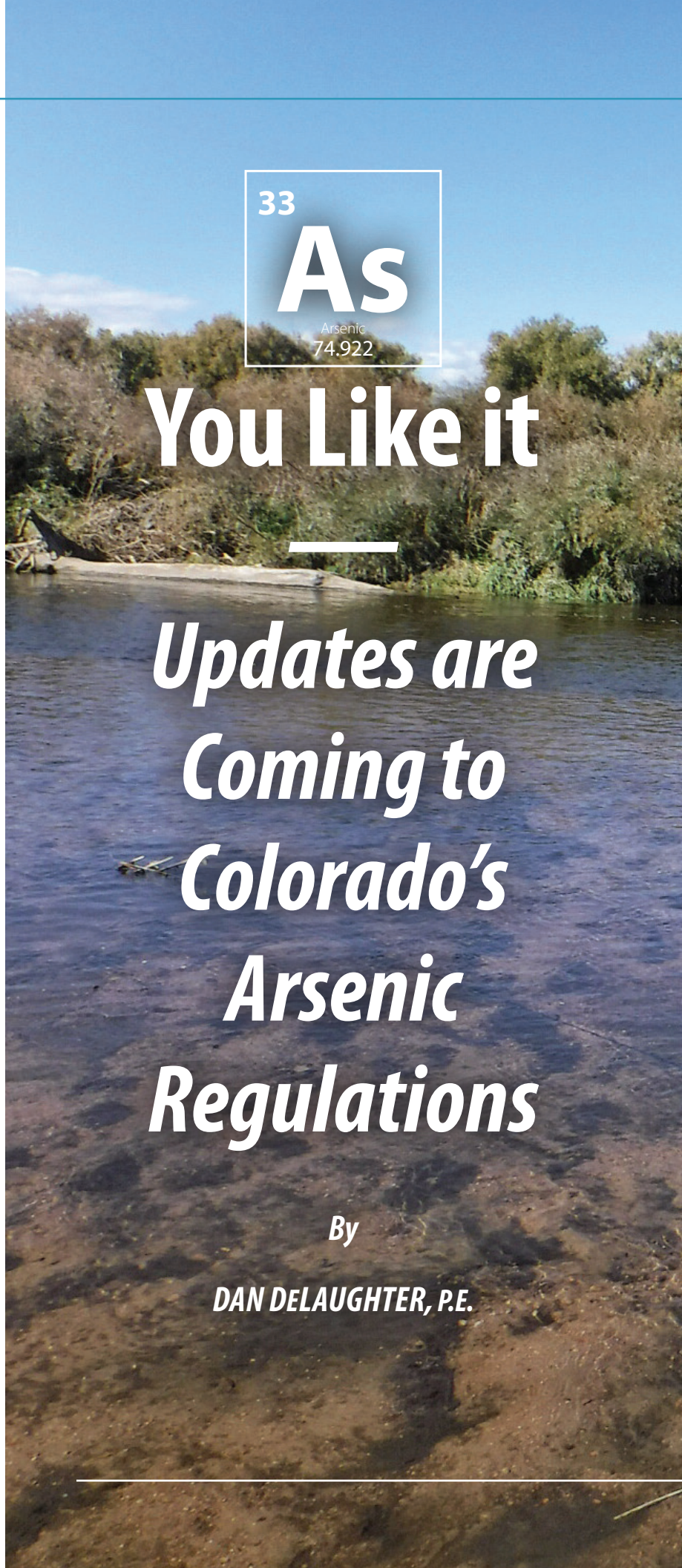
FEATURE




# You Like it

# Updates are Coming to Colorado's Arsenic Regulations

By

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***WHEN YOU THINK OF ARSENIC, what comes to mind? An impatient heir stirring a poison powder into a rich great uncle's tea? Perhaps an alchemist trying to create gold out of thin air?***

***You may be surprised to learn that arsenic is a naturally occurring element, number 33 on the periodic table. It is very common in Colorado due to the shale geology found along the Front Range and other parts of the state. Some areas also contain high background levels of arsenic in the soil as a result of past industrial operations. Arsenic was a metal of concern at the ASARCO Globe Superfund Site near Denver's Globeville Landing development, though much of that source has been mitigated.***

Whether natural or man-made, high levels of arsenic are a concern for public health. Arsenic can lead to an increased cancer risk and skin problems when people are exposed over long periods of time via drinking water or contact with soils. Like mercury, it also bioaccummulates in fish. This can lead to higher doses for people that like to dine on our finned friends.

Water quality criteria for arsenic vary depending on the defined uses for each stream segment. The U.S. Environmental Protection Agency (USEPA) has set the safe drinking water maximum contaminant level at 10 µg/L. State standards range from as high as 150 µg/L to protect aquatic life, to as low as 0.02 µg/L in places where people both drink the water and eat fish from streams. The Colorado Department of Public Health and Environment is currently studying the levels and variability of arsenic found in Colorado's streams. Levels are often 10 to 100 times higher than the most stringent state standard.

In 2013, Colorado implemented a major update to the arsenic water quality standards. These standards have led to some interesting and costly regulatory compliance solutions in Colorado, including trucking water from some public construction projects to stream segments with more relaxed standards. Since the 2013 updates, Colorado has adopted nearly 400 temporary modifications to the standards because many streams would be impaired even under natural conditions. There are no feasible treatment options to meet the current standards on many stream segments.

A state hearing to consider whether to extend the modifications that were adopted in 2013 was held December 9, 2019. Parties to the hearing included the Water Quality Control Division, USEPA, and Colorado Parks and Wildlife. Also present were many large and small publicly owned treatment works (POTWs), which would face impossible treatment requirements if the modifications were not extended.

The Division proposed extending modifications that were scheduled to expire in 2021 until 2024. The Water Quality Control Commission is charged with setting water quality standards in Colorado and adopted the Division's proposal. The Commission paid close attention to the plight of the Upper Blue Sanitation District. Initially, the facility would have had to complete treatment upgrades for arsenic by 2024, despite a lack of any existing technology that can treat to such low levels. Other facilities expressed concern that similar limits would be adopted into more permits if no action was taken.

Since 2013, permits have required dischargers to maintain current conditions for arsenic, coupled with report-only requirements. Facilities had to limit new sources of arsenic, but numeric effluent limits were not placed into permits. The state's new plan will require extra measures to be taken by POTWs that benefit from the relaxed standards. The added conditions will depend on the levels of arsenic discharged at each facility and will range from increased sampling and source controls to feasible treatment controls. Some facilities will also receive numeric effluent limits based on their past concentrations.

POTWs and industries that discharge to segments with low-level arsenic standards should be aware of the changes. Impacts may occur when permits are renewed or modified. Pretreatment programs should also take note as source controls could lead to new or reduced local limits for industry.

Dischargers should also be aware that the Division outlined a broad approach for defining current conditions in permits that goes beyond just arsenic. This change will lead to new effluent limits for other pollutants that were previously report-only. New numeric limits are possible for temperature, chloride, manganese, sulfate, and metals on many stream segments with modifications. A draft implementation policy has been public noticed, and comments and questions can be sent to Meg Parish, meg.parish@state.co.us, until April 1, 2020.

Arsenic is part of the state's 10-year Water Quality Roadmap, and the future of the standards hinges on continued USEPA human health risk assessment work. That work is expected to be completed in time to inform revised water quality standards before the new modifications expire in 2024.

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