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Researcher details issues that could hamper production growth

By Mella McEwen, MRT.com/Midland Reporter-Telegram

Updated 10:21 am CST, Monday, February 25, 2019

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Water from wells flows into a retention pond at Layne Christensen's water pumping, retention and pipeline operations Tuesday, July 18, 2017 in Pecos.

Water issues could cause headwinds for Permian Basin operators' activity plans, according to one speaker at the Permian Basin Water in Energy Conference, which was last week at the Horseshoe Pavilion.

Bridget Scanlon is Fisher Endowed Chair in Geological Sciences, senior research scientist with the Bureau of Economic Geology, Jackson School of Geosciences at the University of Texas. She listed several questions that could impact the Permian's oil production growth.

"Could increasing demand for water for hydraulic fracturing exceed water supplies?" she said. Noting
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high," Scanlon said.

In the Delaware Basin, produced water volumes are so high, it limits the potential for reuse, she said. Solving that issue will mean thinking beyond oilfield use, treating the water for discharge so it can be discharged back into the Pecos River or used in other fields such as agriculture or industrial use.

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The data on demand for water for hydraulic fracturing underscores the need to address those concerns, she said. Cumulative hydraulic fracturing volumes among all shale plays were the highest in the Permian Basin at 130 billion gallons from 2009 to 2017, reflecting rising drilling activity and rising fracturing intensity. Per foot of lateral in a horizontal well, hydraulic fracturing use rose 300 percent between 2011 and 2017.

Produced water management has mostly consisted of saltwater disposal wells, of

which there are 1,750 in the Permian Basin, second to the Bakken with 740 wells. Scanlon said that seismicity has been increasing in both the Permian Basin and Eagle Ford.

Strategies are needed to mitigate the risks, she said.