

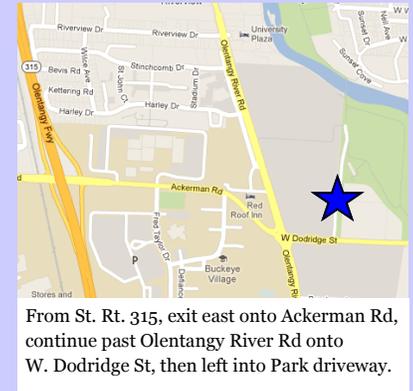
# A Water Luncheon Seminar



Presented by:  
The Water Management Association of Ohio  
and  
The Ohio Water Resources Center

**April 15, 2015; 11:30 a.m. - 1:00 p.m.**

Wilma H. Schiermeier Olentangy River Wetland Research Park,  
The Heffner Building, 352 Dodridge St. Columbus, OH 43202



From St. Rt. 315, exit east onto Ackerman Rd, continue past Olentangy River Rd onto W. Dodridge St, then left into Park driveway.

## Unpaved rural roads and stream water quality

**Elizabeth Myers Toman, PhD**, Visiting Assistant Professor,  
Ohio State University, School of Environment and Natural Resources

The development of shale oil and gas from deep reserves such as the Utica--Point Pleasant formation in eastern Ohio will require the construction and heavy traffic use of rural roads. A single well may require more than 2,000 trucks to move the equipment, water and constitutes required for hydraulic fracturing. Unpaved aggregate (gravel) roads have shown to produce and transport sediment to surface water bodies, especially with high volumes of traffic. Research at the OSU OARDC Eastern Agricultural Research Station (EARS) in Noble County, Ohio suggests that a road network with normal farm use could contribute more than 25 % of the sediment load in the watershed. Sediments carry metals, chemicals, and nutrients that when released may disrupt aquatic microbial communities and encourage the growth of toxic microbes. Stream water samples at EARS show an increase in E. coli bacteria counts with increased turbidity. The studies at EARS suggest that the increased use of rural roads by traffic for the development of shale oil and gas may have detrimental impacts to human and ecosystem health.

**Please register by April 10, 2015.** Late or on-site registrations cost \$5 extra and are not guaranteed a meal. For registered engineers who need Professional Development Hours (PDHs), this presentation offers 1 PDH.

WMAO Member (\$15)  Nonmember (\$18)  Student (\$7) Special meal? \_\_\_\_\_

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Please send form and check to: WMAO-Luncheon, 8440 E. Washington St. #206, Chagrin Falls OH 44023.

OR, register online with a credit card at: [www.wmao.org](http://www.wmao.org).