Manuresheds:
Advancing nutrient recycling in US agriculture
May 21, 2021
2:30 pm (eastern), 1:30 pm (central), 12:30 pm (mountain), 11:30 am (pacific)

The Manuresheds initiative seeks to catalyze connections among livestock and crop systems so that manure can be efficiently and sustainably used as fertilizer. With coordinated processing and transport, manure could replace 35% of the Phosphorus and 8% of the Nitrogen applied as fertilizer in the US each year. Accordingly, strategic manure redistribution and recycling provides a solution to some of the greatest production and conservation challenges facing US agriculture while promoting climate change adaptation and mitigation. We envision a nationwide manure system powered by a diversity of actors who collaboratively manage manure resources based on system-level optimization, and who prioritize the removal of barriers to adoption of manure recycling. In this webinar, we discuss the manureshed vision, the geographic barriers to manure recycling, the social networks underlying manure management at multiple scales, and examples of industry-specific manure solutions.

An application for continuing education credit for Certified Crop Advisors (CCAs) and members of the American Registry of Professional Animal Scientists (ARPAS) will be submitted.

Dr. Sheri Spiegal is a Rangeland Management Specialist in southern New Mexico with the United States Department of Agriculture-Agricultural Research Service (USDA-ARS). Sheri compares the effects of agricultural management approaches to understand the tradeoffs of widespread adoption, with a focus on management of the beef supply chains originating from ranches of the Southwest, as well as recycling manure nutrients in the “manure sheds” surrounding animal feeding sites. She has a PhD in Environmental Science, Policy and Management from the University of California, Berkeley. Phone: 575-646-7018, Email: sheri.spiegal@usda.gov

Dr. Colton Flynn is a Research Scientist for the USDA-ARS in Temple, Texas. Bringing his expertise in geography, Dr. Flynn provides support for the manure sheds concept through geospatial analytics and remote sensing applications. Dr. Flynn has contributed to the Long-Term Agroecosystems Research (LTAR)’s manure sheds effort since its beginnings. His degrees come from Oklahoma State University (PhD – Geography) and the University of Arkansas (MA – Geography; BS Earth Science). Email: colton.flynn@usda.gov

Dr. Gwendŵr Meredith is an LTAR Human Dimensions Postdoctoral Fellow based at the University of Idaho. Her research explores the social dimensions of manure sheds management, including mapping social networks of actors engaged in nutrient cycling. She has a PhD in Human Dimensions of Ecosystem Science and Management from Utah State University and a B.A. in Animal Behavior, Ecology, and Conservation from Indiana University. Phone: 940-595-7130, Email: gwendwr@uidaho.edu

Robb Meinen works for Penn State Extension with water and air quality issues as they pertain to animal agriculture and manure nutrient management. One of his main duties is to coordinate educational efforts for the Pennsylvania Commercial Manure Hauler and Broker Certification Program. Robb is a planning committee member for the 2022 Waste to Worth Conference. He has a MS degree in Animal Science and is closing in on a PhD in Soil Science, both from Penn State. Phone: 814-865-5986, Email: rjm134@psu.edu

The LPE Learning Community is a project dedicated to the vision that individuals involved in public policy issues, animal production, and delivery of technical services for confined animal systems should have on-demand access to the nation’s best science-based resources. See our website at: lpecl.org.
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How do I participate?
On the day of the webinar, go to lpelc.org/live to download presentations and connect to the virtual meeting room. First time viewers should follow the steps at lpelc.org/how-do-i-participate-in-a-webcast/.

More Information on the Topic
- Manureshed county-level database: https://agcros-usdaars.opendata.arcgis.com/datasets/881305934d62494bbbeeb5f36b735eb9
- Assessing Remote Sensing Vegetation Index Sensitivities for Tall Fescue (Schedonorus arundinaceus) Plant Health with Varying Endophyte and Fertilizer Types: A Case for Improving Poultry Manuresheds: https://doi.org/10.3390/rs13030521
- Overview of Manureshed research and management in Nature Research Roundup: https://www.nature.com/articles/d41586-020-03449-0

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