

Research Priorities Discussion

Stormwater

1. Outreach from UNH Stormwater Center research and UNH Technology Transfer Center
2. What are the proper maintenance practices for stormwater management infrastructure including pervious surfaces?
3. Green Roofs – need an economic analysis that incorporates savings in stormwater infrastructure, energy use and water quality implications including combined sewer overflow (CSO) reduction vs. potential nutrients leaching from soils on roofs.

Road Salt

1. What is the runoff from stockpiles....especially near rivers?
2. What are the drivers of stockpile management?
 - e.g. Exeter dock piles removed snow off site – is it stored and managed appropriately?

Nitrogen

1. Lawn Care
 - Land care can often result in stockpiling of clippings/leaves, are they managed correctly?
 - Turf grass – what is the N and C budget?
2. Septic Systems
 - Site specific studies of septic systems and how much N from septic moves to groundwater and surface water?
 - Use human tracers such as caffeine, boron and optical brighteners to identify sources of septic systems in surface waters.
 - Can we reduce the delivery of N from septic to groundwater and surface water?
 - George Loomis at URI has information on septic system management, and different management systems.
3. Agriculture
 - How does Ag management impact N delivery? e.g. Pasture (receiving manure, sludge etc) compared to corn (or other row crops) and orchards?
 - Is highest yield really the best goal for a farm to have? This typically results in more N imported (e.g. food for dairy cows) than the farm land can retain.
 - What innovative alternatives can we employ to reuse farm waste and encourage local farming?
4. Nitrogen retention
 - USGS SPARROW – sorts out the sources of non-point N load, but what is the retention rate (or range of retention rates) of each N source?
 - Current N retention in forests is high, but will this change over time as forests age and with different forest management practices (e.g. greater dependence on biofuels)?
 - N removal by oysters and commercial algae production to generate biofuel.
5. Community N index
 - What is a community's current N index and what should it be?
 - Can we connect N sources (e.g. septic systems) to specific communities or neighborhoods?
 - Need social science input to build "community index of N use".

Social science

1. Can play vital role in septic system management, lawn care etc. Need to identify stakeholder values to implement change.
2. Can social science help determine which environmentally friendly/natural ground covers are possible alternatives to traditional turf?
3. Connect with business schools to generate innovative business solutions. e.g. business that capture manure for fertilizers and lawn care management that measures on-site N needs to determine application.

Clearing house for water resources information

1. Would support SWA, PREP, extension, NERR etc. in ways that are useful for management.
2. Communities need consistent information that is easy to understand and have difficulty making decisions when information is not consistent
3. Need social science input to transfer information appropriately.
4. Need one-stop shopping that's user driven.
5. PREP has communication plan which includes collaborative approach instead of one entity in charge of clearinghouse. Please review the management plan and provide feedback. Do the current science needs match the PREP management plan?

Other

1. Quantify ecosystem service to put the economic value on watersheds. Include N retention of forests and wetlands in their unimpacted state.
2. Need to link water quality and C footprint.