

Long-Term Watershed Monitoring-Do's and Don'ts

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Abstract:

The USDA-ARS National Soil Erosion Research Laboratory initiated a watershed monitoring network in NE Indiana in 2002. This network has expanded from three ditch sites monitoring/sampling flow, to nine stream/ditch sites and five surface/subsurface edge-of-field monitoring locations monitoring flow, turbidity, soil moisture, and weather, along with four weather-station/soil moisture locations, all networked wirelessly and accessible via the internet. This work has also allowed for the study and development of an NRCS approved alternative drainage system, the blind inlet. Cooperator interaction is critical and an ongoing process, requiring face to face interaction and sharing of pertinent data. This poster will describe the lessons learned while developing a network such as this, which is now part of the Conservation Effects Assessment Project (CEAP) and the Long-Term Agro-ecosystem Research network(LTAR) , and the Soil Moisture Active/Passive (SMAP) satellite calibration/validation project.

Do

- LISTEN!
- Develop a multidisciplinary team (try to include ecologists, sociologists and economists if possible)
- Appoint a liaison who will be the point of contact between the scientists and the farmers/landowners and visa versa
- Establish a local connection that will be the face of the project on a daily basis. Be sure the individual that does this is accepted by the farmers/landowners.
- Wave to everyone you see
- Plan to spend more than you estimate
 - ✓ unforeseen costs
 - ✓ roadblocks
 - ✓ every site is different
 - ✓ you cannot carry everything you need at all times.
- Collaborate with others within as well as with external organizations
 - ✓ NRCS, ARS, USGS, State, SWCD, University, TNC, industry, local
- Follow through on all promises
 - ✓ do what you say you will do
 - ✓ let the cooperator know why you didn't get it done.
- Include the cooperator in planning sessions
 - ✓ gives a sense of ownership
 - ✓ you will learn something from them
 - ✓ more likely to get further cooperation down the road
- Provide relevant data to the cooperators
 - ✓ must be useful
 - ✓ present it in common terms
- Expect setbacks and have contingency plans
- Protect your relationships with your farmers/landowners insofar as possible.
- Respect cooperators privacy (PII)
 - ✓ keep your mouth shut regarding other cooperators
 - ✓ get permission prior to releasing PII
- Respect cooperators land
 - ✓ leave the field better than you found it
 - ✓ clean up your trash
- Accept and encourage suggestions
 - ✓ pride will get you in trouble every time
 - ✓ everyone has an opinion
- Maintain sites as if there will be an inspection the next day
- Use a level and square
- Communicate well and often with the landowners
- Build as if it will be there for 10 years minimum
- Go in to the project with an open mind
 - ✓ compromise
 - ✓ change course
 - ✓ be flexible
- Give honest and correct answers to questions
 - ✓ don't make something up, find out and get back to them with a correct answer
- BE SAFE

Don't

- Ever start a project without letting the locals (landowners and SWCD) know what you are doing and why
- Underestimate the power of one voice
 - ✓ either good or bad, farmers talk, and what you say and do will be broadcast to everyone at the coffee shop
- Underestimate the capabilities of any farmer
 - ✓ massive amounts of experience
 - ✓ very resourceful
 - ✓ will help you in any way possible
 - ✓ know when to ask for help
- Underestimate the memory of anyone
- Say you are going to do something and then not follow through (see previous bullet)
- Think you know everything about a piece of land
 - ✓ even the farmer is not all seeing
 - ✓ use all available resources
 - ✓ ask around
- Expect any two fields to react exactly the same way to the same treatments
- Cut corners on instrumentation or site preparation.
- Assume management strategies and conditions will remain constant
- Assume complete acceptance by all within your target watershed
- Forget to acknowledge all contributors, local/state/national



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