

M08C_Homework

Module 8C continues the discussion of the homework assignment from the April 2006 broadcast.

The next example that we want to show this morning if we go back to the overhead talks about on indicator number two presence of water flow patterns, says flow patterns limited to overland sheet flow due to high clay content with occasional rilling after high flow events. Rilling increases on slopes 20 to 40% and that's really good information and we didn't ask for a description of the indicator on rilling, but, hopefully that information on rilling would go into that indicator. It's good that it talks about the flow pattern limited to sheet flow due to the content of the soil, the clay content of the soil, the texture of the soil with occasional rilling and that's fine, but understand that this indicator is flow pattern, not rills and that they are different. We talked a little bit about that yesterday and just to reiterate that somewhat there is some redundancy built in between rills, water flow patterns and gullies and where one ends and another begins is perhaps not quite as important as making sure that when you do the assessments that you are capturing that concentrated water flow and the effect of that concentrated water flow. Again, rills will always be caused by an erosional event, that's what they are and that's what causes them. Water flow patterns not necessarily occurs an erosional event, there may or may not be erosion taking place, so, keep that in mind as you continue to work on reference sheet development. Bare ground, on this one, if we go back to the overhead says 10 to 20% levels of bare ground increased with extended drought periods,

M08C_Homework

extensive over grazing and juniper invasion. Again, remember that the reference sheet deals with the reference state and the reference condition, does excessive over grazing and juniper invasion occur in the reference state, probably not, that's not information that goes in the reference sheet on bare ground, certainly, that's information you need to understand and you need to know, it's information that's somewhere whether it be in the interpretation section of the site description or in some other technical information that we have as we're doing our job you need to have and understand, but, that's not part of the reference condition, it doesn't go on the reference sheet. Functional / structural groups on this example talks about deep rooted perennial grasses, evergreen shrubs, shallow rooted perennial grasses, perennial forbs, evergreen trees, other shrubs and annual forbs, good breakdown of functional and structural groups and then again it says excessive over grazing, extended drought periods, and wildfire will reduce production, areas with higher levels of surface stone will have lower overall production levels. Again, part of that discussion needs to go in the next indicator 15, annual production and part of that information doesn't belong in the reference sheet, excessive over grazing is not part of the reference state for this ecological site, extended drought certainly may be and how extended drought interacts with the functional / structural groups is good information to put in there to help describe and define that range of variability.

Yes, Dave, something to add here?

M08C_Homework

Yes, I'd like to add just a little bit more on this. One of the things that is apparent in this particular write-up is that the individual has actually included some of the information that actually would be more associated with the evaluation than just the reference sheet and these are great comments and these are the kinds of comments that you might want to include on the evaluation sheet itself to begin to go along with the observations that one has seen on a site in those kinds of situations, so, that would probably be a more appropriate location for it, associated more with the evaluation sheet to have the supporting comments that might go along with an observation of some sign of departure from what is expected.

Yes, good.

Good.

OK, if we could go to the next one, I think this one was a review or a critique of an existing reference sheet, if we can go to the overhead on this, it'll show that what was on the original reference sheet said water flow patterns are rare, you can read that, I won't read that, I'll read what they wrote. They said water flow pattern frequency is not quantified, it's just listed as rare; this is a common problem with indicator number two in most field office reference sheets. The discussion does not include an explanation of the events that might cause water flow patterns on an otherwise healthy site. However, this happens throughout

M08C_Homework

the area on an annual basis to some degree or another. So, this description really does not help in determining if the presence of water flow pattern is inappropriate for the site and I think that's a very good critique of what's written on that reference sheet and in fact, that's very much the same kind of things that we have been saying all morning. Make sure that you describe and put on these reference sheets the information that you need so when you go to the field to do an assessment you can read that reference sheet and make a judgement, make an assessment on the degree of departure for each of the 17 indicators that you're seeing on the ground. Bare ground, the next indicator, if we go back to the overhead, there's what's written, it says good information not just cover, but, type of cover, so, it talks about as you can see bare ground being about 50%, surface rock fragment, so it lists more than just the bare ground, it says that there is a wide variety of normal surface rock for this site according to the site description, so, in the soil portion of the site description it would talk about the surface rock and undoubtedly says that there is a wide variety, or a wide variability in how much surface rock occurs on this site with the different soils that have been correlated to it. So, to say that rock fragment is about 35% is not really all that helpful. So, what didn't occur on this indicator was something that talks about, that's spacial distribution within the range of the site relative to rock cover on the site. So, another good piece of information to put in there is rock cover may be about 35% or it may range from 5% to 50% depending on the soil at that location that's correlated within that ecological site. Back to the overhead to look at the annual production indicator and it says that the production is

quantified for a normal year, it could include the normal range of potential production, gives a heads up to pay close attention to spring moisture as a major impact for production on the site, though the same can be said for most sites in the northern great basin and I suppose that's probably true, that could be said for most sites in the northern great basin, but, I think this is the kind of information that you want to put in and make sure that it gets in there. Some sites may be more sensitive to spring moisture or may be more sensitive to April moisture, may be more sensitive to snow fall as of a certain date in February or March, those kinds of things and where we know that information where we have that information that's a good thing to put in there for the indicators that it does affect.

Now, Pat, we've probably got a few minutes left and then need about five minutes for a summary, so, iff you want to maybe quickly go through one more or whatever, if you have one last good one, I'm kind of like Jay Leno with _____ what's that last good one you want to put up in front before we go to a summary?

Well, we do have one more and that's all we had was one more, specific ones that we had listed, I'm not sure if we saved the best for last, but, it certainly is not the least either, so, we'll look at it and go to the overhead. This again was a critique of an existing site for an existing reference sheet and if you looked on the overhead, it lists what was written on the reference sheet that they critiqued and the critique says for water flow pattern, that it should be quantitative, it should quantify the numbered length and shape, linear versus nonlinear and continuous

M08C_Homework

versus discontinuous and that's a good comment. The comment about the linearity, the continuity, the connectivity of the water flow pattern is certainly something that needs to be in that descriptor. Again, use quantitative data as much as possible, but, make sure that that quantitative data has something behind it; it's not just a number that came out of a group discussion or consensus. Indicator four, bare ground, if you go back to the overhead and look at that, it says it should quantify bare patch size and that's certainly true where we can put as much of that kind of information as is available and can be supported. Indicator 12, okay, it says bare patch size should be small is what that says and what is small, what does that mean? Small to me and small to the person that wrote that may be something that's very different. Indicator number 12, it says for the functional / structural groups, should be changed to reflect functional / structural groups steer away from individual species lists and we've said that all morning and that's a common theme throughout many of these that needs to be repeated, stay away from species lists, use functional / structural groups. More explanation of the range of communities found in the reference state, separate list into dominant, subdominant and other by those different plant communities that may occur in the reference state and certainly that is a viable thing to do. I know the sheet that's used doesn't lend itself to that, but, that doesn't mean that that's all you can do, you can put the information in there that you need. Annual production, it says, mostly okay, maybe should change favorable and unfavorable to high and low precip year and include the relative or representative value expected for the site and I guess the comment that I'd like to

M08C_Homework

make on that comment is that rather than change favorable and unfavorable to high or low precipitation, we probably need to define what we mean when we say favorable and unfavorable, not always just precipitation, is that precipitation temperature relationship, it may be a timing of precipitation, what do we mean when we talk about favorable growing seasons versus a nonfavorable growing season?

We're probably at a point, we do have time to take maybe a question or two push to talk, we also just received a fax I think that's relevant to this discussion and give Pat and maybe Jeff there a chance to take a quick look at that, but, also, please, if there is a question or two that we can do a push to talk right now, let's do that and then we'll maybe address the fax that came in with a question and then go to Pat's summary.

_____ in developing our reference sheet, we looked at the (NRCS) reference guide that has been developed and we also looked at the ecological site descriptions and there's a couple of problems that we would like to have your comments on: 1. A lot of the (NRCS) info on these guides is not complete and the site descriptions that are locally, a site team, we come up with data and try to, would like to modify some of these site descriptions, so, do we just work through the local (NRCS) and try to get changes made in these descriptions?

M08C_Homework

Yes, I want to address that and in fact, I'm glad you all are on the broadcast this morning, when everyone was checking in we were standing in the back of the studio listening to who was checking in, I didn't hear you check in this morning and I'm glad you're here because, yes, your comments and the page of questions that you provided us yesterday I'm saving for some of the last draft of material. So, yes, we are going to address that and very soon, I'd like to let Jeff address the question that was just faxed in and then I'll get to some general items and then I want to finish off with those questions that you faxed in yesterday.

We've got a question from the _____ Office of the (BLM). For our homework, we followed the format of the functional / structural groups on the sample reference sheet on page 73, it also has mixed plant names and structural categories, so, if you'll turn to page 73, you'll find that what they said is true, I believe them, I didn't actually have to look and in fact, if you then go to the top of this page on page 73 it says basic example and down on the bottom and I don't know if you can read that, I'm going to zoom in on it, there is an asterisk, it said this example includes the absolute minimum information required. That probably should have been corrected to state that this example includes the absolute minimum information required and is not entirely correct and we, we wanted to put a basic example in and we should've put one in that was basic and correct. If you then turn to page 74, you have the standard example and that's the one that we would like you to follow. So, if we could go back to the, go back to the overhead and we'll go to

functional / structural groups if I can zoom this around and there you'll find that we do have one that is based entirely on functional / structural groups and one of the differences you'll find when you go to these two reference sheets is one was developed in 2002, the other one was developed in 2005, the standard example was developed in 2005. This was an evolutionary process and I think many of you discovered this. Most of the critiques that came in were critiques on older reference sheets whereas the newer ones that came in were obviously ones that had been developed recently and many of those included and addressed many of the issues that we've been discussing today.

Yes, thanks Jeff. I think that's an important point, we really encourage you to look at that standard example. The other thing that it does is provides a good example of incorporating some of the spacial temporal variability that you'll see out there, how do droughts affect the indicators, how do, let's say, wildfires or fire affect those indicators, so, yes, I would agree. Let's look at the standard example and use that one as much as possible.