Litter amount is indicator number 14 and litter as we've talked before is any dead plant material that is detached from a plant and is lying in contact with the surface of the soil. We mentioned this earlier in the litter movement indicator. We can have too much or too little litter and in some situations in the prairie grassland regions of the Central United States, grazing was a normal expected process from buffalo and other wild animals as was fire and these tended to then reduce the amount of litter and if you have neither grazing nor fires, then, you can have so much litter buildup in these grassland systems that they begin to choke out the plants. So, it's important to realize that we're talking about the potential of departure from reference of both too little and too much litter. Now, the slide you see in front of you, which I believe is from Mongolia if I remember what Jeff Herrick said that provided us this slide. It's kind of an extreme example of where you have very little amount of litter and most if you were to walk across that entire landscape out away from the canals, you would not find a large amount of litter accumulating on this site than you do have in the lower part of the middle slide, you have the dung, that is obviously the manure from the animals that provides, you know, cover and ultimately will break down to organic matter, but, when we're measuring litter, we would not record the dung as litter, we would record it as manure and only use plant dead material as it's in contact with the surface of the soil as litter. This shows our side-by-side comparison, you can, I think see on the left-hand side litter underneath the sagebrush; you can see litter in the interspaces between plants as compared to the situation that you see on the right-hand picture, you see what litter there is under the sagebrush

plant, the brush plants that are in this picture, you see that's much, much more concentrated right around the stem and not beginning to flow out into the interspaces between plants and then the interspaces between plants are largely barren of litter in this particular slide. The attributes that this relates to are hydrologic function because litter is very important in helping maintain the watershed condition of the ecosystem, but, also biotic integrity because the organic matter provided by the litter is important to soil development.