

FAQ Version 3: Introduction and Updates

Introduction

Welcome to the 2026 Terrestrial AIM Training Season FAQ! This is a living document meant to serve as a repository for frequently asked questions to help the terrestrial AIM team remain consistent in training and standardized in our implementation of the core methods. These questions have been compiled from AIM crews nationally, and all answers were discussed by the National AIM Team. This document is current as of March 2026. All questions are organized by method. Please email Erick Yokomizo (eyokomizo@blm.edu) or Savannah Meadors (srm12014@nmsu.edu), if you have any questions about the answers provided or would like to add a question.

Updates for Version 3:

- LPI
 - Update: the answer for “**what is duff?**” has been updated with improved guidance and a more correct definition of duff after NOC team consideration.
 - Correction: updated answer and question about live vs dead for a basal hit to be consistent.
- Plot Characterization
 - Updated: Language was clarified in the answer for the following question. “**Can we take photos not using the Survey123 app and add them from another device or the tablet camera?**”
- Soil Stability
 - Updated: Language for “**How should one deal with a thick litter layer?**” question was updated with improved duff guidance.

Updates for Version 2:

- LPI
 - Update: The answer for recording mushrooms has changed
 - Can litter be rooted?
- Heights
 - Addition: If the highest point in the cylinder is dead but the highest point is attached to an alive part outside the cylinder, is it now marked as alive?
- Gap
 - Addition: do mosses stop a gap?
- Soil Stability
 - Move: question on measuring rock fragment percentage moved from this section to Plot Characterization
 - Addition: new question on collecting in cheatgrass/ thick litter
 - Addition: new question, how do you use the ‘water’ surface code?
- Species Inventory
 - New question: calibration and species inventory
- Plot Establishment:

- Update: appropriate reference source added for a plot rejection/sampling question.
 - Addition: Can I move a revisit plot?
- Plot Characterization:
 - Move: question on measuring rock fragment percentage moved from Soil Stability to this section
 - Addition: What method should we use to determine % clay in soils?
 - Addition: Should we adjust clay % for when calcium carbonate is present?
- Photos:
 - Addition: Can we take photos not using the Survey123 app and add them from another device or the tablet camera?
 - What if my tablet breaks?

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LPI

- **If we drop the pin flag on the edge of a rock and it touches another soil surface below, for instance “None-Cobble-Soil” or “Cheatgrass-Gravel-Embedded Litter,” do we record as such or do the rocks have to be listed as the surface level, writing just “None-Cobble” and “Cheatgrass-Gravel”?**
 - *When you have multiple options for the soil surface, call the first soil surface option and the more stable object as the soil surface. So, in the given examples, you would record “None-Cobble” and “Cheatgrass-Gravel” because you 1) hit the rock fragment first and 2) the rock fragment is in theory more stable than soil or embedded litter.*
- **If we hit a dead annual plant on our transect, is it recorded as “standing dead” or “alive”?**
 - *If the annual is within its annual growing season, then it is counted as a live hit. If it is from a previous year's growing season and it is still rooted, then it would be standing dead. As the season progresses, we start calling them "dead" when we're seeing annuals starting to germinate from the current year. Helpful hint: last year's "dead" growth tends to be greyish material, while this year's "live" growth tends to be more tan. Pay attention to seasonality. If the plant flowers in the fall (e.g. sagebrush), the inflorescence from the previous fall is still live until the next inflorescence growing season.*
- **We hit a dead yucca stalk lying along our transect. Is it woody litter or herbaceous litter?**
 - *(See page 28 of MMGSSE) Herbaceous litter is recorded as HL when present. Herbaceous litter is defined as detached stems, roots, leaves, haybales, and dung. Record woody WL for detached woody or succulent litter greater than 5mm in diameter. The woody litter definition includes both woody and succulent litter > 5 mm in diameter. Herbaceous plants > 5 mm are still considered herbaceous litter. When you are unsure whether the litter is woody or herbaceous default to size (< 5 mm = "HL"; > 5 mm = "WL"). Leaves are always herbaceous regardless of species.*
- **If the pinflag hits a stump, do we record it as a dead tree or embedded woody litter?**
 - *This can be tricky, but if the stump is rooted, it is considered to be a dead tree, and if the stump is not rooted, it is considered to be embedded woody litter. If the stump is supporting any live vegetation, it is live (i.e. root suckers).*
- **On windy days, vegetation moves around and sometimes hits the pinflag, but sometimes doesn't. How should we decide what to count?**
 - *When you drop the pin flag, take an instant snapshot in your mind of what is touching the pin and what is not. Record exactly what touched the pinflag in that mental snapshot.*
- **What is duff?**
 - *Duff is a gradient of partially to fully decomposed plant litter accumulated at the soil surface over time. Duff is common in forests, where a layer of organic material that is unrecognizable as litter, but distinct from mineral soil, may sit above the soil surface. It's duff when there's a transition zone rather than a clear line between where the litter ends and the soil starts.*

- **Is calling a hit with Herbaceous Litter and Duff repetitive or necessary? I.e. "JUMO, HL, Duff" v/s "JUMO, Duff"?**
 - *Necessary. While duff is made of decomposing litter, if there is obvious, non-decomposed litter on top of the duff layer you should still call it on the hit. "JUMO, HL, Duff".*
- **How can I tell if the tree branch above me is in line with my pinflag drop?**
 - *The best way to determine whether a tree is in on a pin drop is with a densiometer or a laser. Crews who encounter trees often should have dedicated tools along these lines. If the crew does not have a densiometer or a laser but does have an avalanche pole, lift it straight up above the pin flag to see if it touches. Use a spotter to prevent parallax. Without proper tools, crews should do their best to mentally extend the pin flag.*
- **If the pinflag hits a dead branch of a plant, and then the live base of the same individual plant or another individual of the same species, how do we record the hit? What happens if different species of plants touch the pin between live and dead hits of the same species?**
 - *If the pinflag makes contact with both a live and dead section of the same species, regardless of whether it is the same individual, record the hit as **live** (see pg 28 of MMGSSE). This applies to basal hits as well.*
- **If the pinflag hits a dead branch of a plant, and then a live branch of the same species, with other plants in-between the live and dead branches, how do we record the hit? Example raw hit: "ARTR2 (dead), BAMU, ARTR2 (live), Gravel"**
 - *Live trumps dead, so you will record the double hit as one live hit. Additionally, you want to record the plant species in the order you hit them first. The correct way to enter this hit would be "ARTR2 (live), BAMU, Gravel"*
- **The pinflag hits a lichen growing on a tree branch. How do I record the lichen? Raw hit: "JUMO, Lichen, BOGR2, HL, Soil"**
 - *If the lichen is attached to the tree branch, it is neither Vagrant or a Soil Surface so do not record the lichen: "JUMO, BOGR2, HL, Soil". If the lichen is Vagrant and just happens to be resting on the tree branch, record it as a lower canopy code: "JUMO, Vagrant Lichen, BOGR2, HL, Soil". However, if your project is recording lichen to species, treat it as canopy like any other plant species.*
- **What is the difference between a Lichen Crust and Vagrant Lichen?**
 - *For the purposes of AIM, unless your project is identifying lichen to species, if the lichen is attached to the soil surface, it is recorded as LC, if it is attached to a tree branch or a rock it is not recorded. If it is a Vagrant Lichen (i.e. not attached to any surface) it is recorded as a lower canopy Vagrant Lichen "VL".*
- **The pinflag hits lichen or moss growing on top of a rock. Which do I record as the surface hit?**
 - *Record the rock. Lichen/Moss hits in the soil surface layer are referring to types of cryptobiotic soil crusts. When moss or lichen are growing on top of a rock, they are not the primary contributing factor to the soil surface, the rock is. If the lichen is not growing on the rock, but rather a free-floating lichen, you can use "Vagrant Lichen" code in a lower canopy layer.*
- **Is carnivore feces considered to be herbaceous litter or other litter? - I was told at the last training that herbivore scat is considered herbaceous litter since it contains plant material, while carnivore feces is considered to be "other litter" since it contains animal material. I had never heard that before, so wanted to make sure, and thought it would be useful on this list.**

- *The manual says HL includes dung but decomposing animals are NL. If the scat CLEARLY has decomposing animal parts in it, classify as NL. If it is indeterminate, unable to tell for sure, default to HL.*
- **How do we record cryptobiotic crust?**
 - *Please reference Page 30 of the manual. Also consider the stage of development of the biocrust. Generally speaking, weakly developed cryptobiotic crusts are likely to be exclusively cyanobacterial or algal. We currently don't distinguish those in the manual yet. More well developed cryptobiotic crusts will usually include mosses and lichens. You can record those if you hit a moss or lichen, not if you hit a cryptobiotic crust that has just moss or lichens in the matrix.*
- **What should I record if my pin hits a mushroom?**
 - *Mushrooms are very ephemeral. Record them as herbaceous litter.*
- **Can litter be rooted?**
 - No.
 - Herbaceous litter is defined as detached stems, roots, leaves, haybales, and dung. Record "WL" for detached woody or succulent litter that is greater than 5 mm (or ~1 in) in diameter. Record "NL" for non-vegetative litter (e.g., plastic, metal, decomposing animal matter). Distinguishing dead vs. live plant parts is important for many objectives. A pin intercept is a standing dead hit if the pin touches a dead plant part. • Vegetation which grew in the current growing season is alive while rooted vegetation from the previous growing season is dead."

Height

- **Are succulents woody or herbaceous for the purposes of measuring vegetation height?**
 - *In general succulents are woody. There are a few succulent annual forbs. This should be attributed in the species list. When in doubt, type in the plant code in the woody heights section of the datasheet. If it is selectable, the plant is woody. If it is not selectable, the plant is herbaceous and should come up in the respective category.*
- **I hit a perennial forb or subshrub and I'm not sure if it is a woody or herbaceous vegetation height. How do I record it?**
 - *When in doubt, type in the plant code in the woody heights section of the datasheet. If it is selectable, the plant is woody. If it is not selectable, the plant is herbaceous and should come up in the respective category.*
- **I hit an unknown perennial forb or subshrub and I'm not sure if it is a woody or herbaceous vegetation height. How do I record it?**
 - *Assign an unknown an herbaceous or woody code to the best of your ability. In the unknown plant form, note that you were unsure if the unknown was woody or herbaceous in the comments field.*
- **If the highest point in the cylinder is dead but the highest point is attached to an alive part outside the cylinder, is it now marked as alive?**
 - *Follow the dead vs. live rule on page 28 of the MMGSS. If the plant part that you encounter is alive further up the branch, then the plant should be considered alive. If nutrients are passing through the part of the plant being measured, it is alive.*

Gap

- **Should we count last year's annuals as a gap or as vegetation cover?**
 - *Yes. All rooted plant material is counted as canopy. The distinction between this year's growth and last year's growth only applies to whether or not you check "standing dead" box in the Line-point intercept form in the database.*
- **Why are the gap size classes set at 0-24, 25-50, 51-100, 101-200, and 201+ when the minimum standard gap is 20 cm? Shouldn't the size classes read 0-19, 20-50, 51-100, 101-200, and 201+?**
 - *These breaks are commonly used in rangeland indicator calcs because they have been used as ecologically significant thresholds.*
- **Do large dead centers of grasses count as canopy?**
 - *Use the rules for LPI regarding basal hits. If it would be a basal hit in LPI, then it would count as canopy. If it would not be a basal hit, then it would not count as canopy. See LPI rule 4.10 in the Monitoring Manual for details.*
- **How can I tell if the tree branch above me breaks the gap?**
 - *The best way to determine whether a tree breaks the gap is with a densiometer or a laser. Crews who encounter trees often should have dedicated tools along these lines. If the crew does not have a densiometer or a laser but does have an avalanche pole, lift it straight up above the pinflag to see if it touches. Use a spotter to prevent parallax. Without proper tools, crews should do their best to mentally extend the pin flag.*
- **Does a tree stump break a gap?**
 - *This can be tricky, but if the stump is rooted, it is considered to be a dead tree, and the stump will break the gap. However, if the stump is not rooted, it is considered to be embedded woody litter, and it will not break the gap.*
- **On windy days, vegetation moves around and sometimes hits the transect, but sometimes doesn't. How should we decide what to count?**
 - *When you are recording gap intercept, take an instant snapshot in your mind of what is touching the pin and what is not. Record exactly what touched the transect in that mental snapshot.*
- **Why is it specifically "50% of 3cm" of vegetation that stops a gap and not "1.5cm"?**
 - *This specific language is used to emphasize the distinction between a solid 1.5cm of canopy and a not-quite-solid-but-mostly-covered 3cm of canopy. The canopy to break a gap does not need to be completely continuous within 3cm but does need to cover at least 50% of a 3cm space.*
- **Do mosses stop a gap? what about vascular mosses i.e. club mosses**
 - *Mosses do not stop a gap. Lycophytes (club mosses, spike mosses, etc.) are not mosses, so they can stop a gap. They are vascular plants so should be recorded similarly to other vascular plant hits. Refer to spp. lists for clarification.*

Soil Stability

- **If the soil clump falls apart while we're cutting it down for the soil stability test, we just get another one. Does this bias the sampling effort?**
 - *If the soil ped broke because the structure was weak, follow rule 3.6 of MMGSSE ""3.6. If the soil sample is too weakly structured to sample (falls through the sieve), mist it lightly with deionized water (use an atomizer or equivalent) and then take a sample. Perfume and plastic hair spray bottles work well for this. If the sample still will not hold together, record a "1" on the data sheet. Do not assume that a soil is unstable before spraying. Coarse textured soils and disturbed surfaces may appear unstable when dry but could be stable when wet. If the soil ped broke because of user error, move 15 cm down the line and take a new sample.*
- **During the soil stability test, if a soil floats initially and then sinks before 5 minutes is up but also stays solid, we would consider it a class 6. But is it considered hydrophobic also?**
 - *Soil Stability rule 7.8: Hydrophobic samples (float in water after attempting to push under) are rated 6 and circled on the data sheet.*
- **What if soil sample area is directly in middle of a spiny shrub (e.g. shortspine horsebrush or cholla) or bunch grass?**
 - *MMGSSE rule 3.8: If the sample mark falls on a plant base, collect the sample from within the plant base when feasible, otherwise sample as close as possible to the plant base.*
- **If we are surveying in a rocky area and our soil sampling points along the transect mostly fall on rock but there's soil near the sample points, do we just sample that soil?**
 - *Try to sample the soil that is on the plot. If no soil is at your sample point, move a standard distance of 15 cm down the transect and attempt a sample. Continue to move down the transect until a sample is obtained. If there is absolutely no soil is captured along the transects, record all samples as "unable to sample" as normal. See rule 3.4 of the Soil stability method in the Monitoring Manual for more information.*
- **How do we sample soils when there's continuous embedded litter?**
 - *Rule 3.4 in the soil stability section of the Monitoring Manual states that you treat embedded litter like rocks. So, move down the transect a standard distance until you are able to collect a soil ped.*
- **Does a dead shrub count as canopy for the soil stability sampling form?**
 - *Yes, as long as the shrub is perennial, rooted and covering at least 50% of the soil sample*
- **How do we sample properly in the rain or when the soil is wet?**
 - *Collect the samples as best you can without disturbing the surface structure. Allow the samples to dry in your vehicle or another protected area before running the soil stability test.*
- **Can we move rocks to collect soil underneath them?**
 - *No. Soil stability is determined for the soil surface that raindrops would fall upon. Rocks (> 5 mm as in the LPI definition) should not be moved.*

- **If there are multiple types of Vegetation Cover, what do we record?**
 - *See rule 2 and table 23 for soil stability. Record the dominant perennial vegetation canopy cover. Remember that we only consider perennial cover in terms of Soil Stability. When a perennial graminoid (grass, sedge, or rush) is involved (including if the cover is provided by both perennial graminoid and shrub), always record it as the cover unless there is a tree- record the tree. Otherwise, record whatever perennial plant is providing the most cover to your soil ped.*
- **How do you collect soil peds in areas with extremely thick cheatgrass litter and cover?**
 - *This can be challenging but annual grasses are not canopy cover for soil stability so try to collect a sample. In thick cheatgrass cut a 1" cube of soil and cheatgrass root, and then try to carve it down to a ped. If the roots are too dense to cut it down with the tool in the test kit, give it a 6 as root mat. A 6 should only be assigned when the cheatgrass is too dense to collect an appropriately sized ped.*
- **How do you use the 'water' surface code for soil stability?**
 - *The soil stability method is a measurement of resistance of the soil surface to water erosion. For the other options in that box on table 23 in the manual, root mats and moss are cases where we can reasonably assume soil stability would be a "6". This is also true of duff, at least most of the time. Think of deep litter under junipers, it accumulates in microsites that are protected from water erosion, and once it's accumulated it protects the soil pretty well. It's reasonable to assume that there is essentially zero water erosion happening on that soil surface. (The exception is more ephemeral accumulations of litter from thickly growing annual vegetation—alas, it is not a perfect world.) So, why is water in that list? If it's permanent water, does it make any sense to measure resistance to water erosion? The surface is water. If it rains on a pond, you don't get soil erosion, you get ripples. On the other hand, if it just rained and there's sheet flow across the plot, does it make sense to measure the resistance of the soil surface to water erosion? This isn't evidence that the soil surface is effectively protected from water erosion (as with root mats, moss, duff), nor is it evidence that resistance to water erosion isn't an applicable concept (permanent water). It is, instead, evidence that the resistance of the soil surface to water erosion is an extremely relevant concept at the particular moment you are visiting the plot.*
- **How should one deal with a thick litter layer?**
 - *Start by attempting to gently move the litter aside to reveal the soil or relevant soil surface code beneath. If you are able to move the litter aside and see the soil surface, collect a ped. If this is difficult because the layer is very thick and there is no clear discernable boundary between the litter and soil—you can't easily tell where the soil begins and the decomposed litter ends— you have a duff soil surface code. This would result in an automatic 6 stability rating, and does not require sampling. Please see table 23 on pg 48 of the manual for more details.*

Species Inventory

- **After Species Inventory has been conducted, we noticed some more species that we missed. Do we add them to our list?**
 - *If you find a new species on another method or while simply on the plot after you've completed your inventory, always add them to your list. All species collected in any method need to be accounted for on the Species inventory form.*
- **Is there a set time for calibration of species inventory?**
 - *The minimum time for calibration should be 5 minutes. Calibration should reflect the method. If you are still detecting new species, add 2 minutes until you are no longer detecting new species (popcorn method). Pause the timer while you are attempting to identify plants.*

Plot Establishment

- **Is it okay to visit all points within a stratum, and then visit all plots in another stratum? For example, could we do all the Alkaline sites first and then all the Piñon-Juniper sites next?**
 - *No, you should attempt a proportional sampling distribution among strata each season. There may be reasons to sample non-proportionally (in the short term), but only do so with consultation with the project lead and National Operations Center.*
- **After rejecting a point, what is the next step in terms of choosing a backup? For example, while in the field today we rejected CL-12 because a new road has been constructed through the plot. Do we wait to get through all of the other accepted CL points before starting on the oversample points?**
 - *Yes. Continue through the primary points. Once you get through CL-13, CL-14, CL-15, for example, then you would visit the oversample plot CL-16 to replace the rejected plot CL-12. Refer to the [Data Management Protocol V7](#)*
- **If a plot was previously established using a 50 m transect length but current protocols call for a 25 m transect, which length do we use when revisiting plots?**
 - *Consult with your project lead, but the default assumption is to use the plots' original transect layout at repeat plots. This includes maintaining consistent transect lengths, transect azimuths, photographs, and methods. Compare form parameters (e.g., line length) with revisit reports and if they do not match, do not sample the plot for now and inform your project lead. Maintaining consistency over time enables you to detect actual ecosystem changes—if any—rather than wondering if the differences over time are due to changed protocols.*
- **If we visit a plot that has previously been monumented, and now there is a road running through it, should we sample it or reject it?**
 - *Consult the revisit report and your project lead to confirm that the road was or was not previously present. If it was present and the plot was sampled, continue with sampling. Otherwise, consult the definitions of roads in the rejection criteria and sample or reject as appropriate. Either way, take pictures to document the road.*

- **There is a piece of a road running through the plot, but not crossing a transect. Should we move the plot?**
 - *Provided that you feel safe sampling the plot, sample as normal.*
- **A transect runs over large boulders and through a deep wash, which has resulted in portions of the transect being suspended in the air. What should we do?**
 - *Use rocks or chaining pins to hold the transect down as close to the ground as possible. Prioritize keeping your transect as close to the ground as possible, even if that means that it rises or falls nearly vertically over non-vegetation obstacles. The actual angle of the transect tape should be approximately 45 degrees where possible. The tape should never run truly vertically (but may run nearly vertically) and should always be making forward progress.*
- **When we are revisiting a plot that has already been sampled, but notice that the plot clearly crosses an ecological site boundary, do we still reject it?**
 - *Do not reject, sample plot. We do not reject plots that cross ecological site boundaries for our protocol, this can still provide us with valuable data collection and insight to the geographic location. On the BLM Data Management Protocol, concerning ecological site boundaries, our default and recommended protocol is: do not reject plots that may cross an ecological site boundary. If you observe a possible ecological site boundary, note the location on the transect where you think the boundary is, so the information is preserved.*
- **Can I move a revisit plot?**
 - *Talk to the project lead. If this is the first visit to a revisit plot, it can be moved. If the point was previously sampled as part of a different sample design, consider whether moving the plot is really necessary. If the plot is moved, it will be treated as a new point and a new soil pit should be completed.*

Plot Characterization

- **From where should slope and aspect be measured on the plot?**
 - *Slope and aspect should be measured from the highest point on the edge of your plot to the lowest point on the edge of your plot that follows where water would flow across your plot. When taking slope and aspect, you should ignore microtopography, and instead pay attention to the overall average form of the plot. If your plot falls inside a wash with steep sides, your slope and aspect would be taken from the top of the wash to the bottom of the wash, rather than taking the slope of its steep sides.*
- **When determining rock fragment percentage in soil layers, should crews measure the volume of rocks fragments or sieved soil once the sample has been sieved?**
 - *Measure the sieved soils since rock fragments will appear to have a greater volume than they actually do because of the air gaps that will inevitably exist between rocks, whereas sieved soil particles will compress and give a more accurate volume. Then crews should determine the rock fragment percent based on the volume of sieved soil.*
- **My soil pit is horrible solid clay and is really hard to dig, can I stop digging before 70 cm?**
 - *No, you must get to 70 cm unless you reach a claypan, petrocalcic layer, or bedrock. A good indicator that you've encountered one of these is if the layer is root-restrictive (i.e., roots*

start spreading horizontally instead of continuing vertically). Also, you need to make sure to dig deep enough to reach soil layers necessary for identifying the ecological site.

- **From what scale should I determine what landscape unit the plot falls upon?**
 - *To determine your landscape unit, you should use the broadest scale possible. Where are you in relation to a mountain range? Use the landscape unit diagram on the plot characterization form or the more detailed version on page 20 of the Monitoring Manual to compare your position to the landscape as a whole. Note the scale of the landscape units: some span multiple kilometers. Review rule 4.3 on page 19 of the MMGSSE for additional resources. Your project lead may have more locally relevant resources they can provide.*
- **The majority of times the ecological site listed in the description of the soil series simply does not exist in EDIT or is occasionally a draft where details are unable to be viewed. When this happens what would the National AIM team prefer?**
 - *We suggest, attempt to make a best effort to identify the MLRA. If you have no information about an MLRA or are unable to make determination of an MLRA please utilize the "000X-Unknown or Unmapped" option in the MLRA drop down. In the case for the ESD designation please make your best effort to identify the most appropriate ESD then answer the ESD justification questions to explain why the ESD was selected. The ESD Justification section and the soil map unit information should all be filled in to the best of your ability. This is still the case for Drafts and ESD with minimal details. If the ESD determination is an older ESD that fits the plot, record it in the appropriate ESD field and provide a justification as you can. Notes and Text boxes should be used for explanations not the ESD or MLRA determinations. If the soil pit description aligns with the a Soil Series or Map Unit Component and there is a Ecological Site correlated to that series or component, but the ESD lacks details it may still be designated as the ESD for the plot (please describe this conclusion in the ESD Justification section of Plot Characterization form).*
- **What method should crews use to determine percent clay in soils? - Crews in different areas/trainings receive different guidance or no guidance on how clay percentage should be evaluated. I learned to evaluate clay percentage according to the "worm method", while others have used the "tootsie roll method". I think that some official guidance, and some instructional documentation would be really helpful for crews.**
 - *There are several methods that may be taught to determine this. We recommend following the "wire method." Please see the [Alternative Soil Flow Chart](#) for more information.*
- **High calcium carbonate content in soils can cause soils to stick together better and act like clay. We determine relative calcium carbonate percentage by looking at soil effervescence. If a soil is determined to be highly effervescent, should crews estimate a lower clay percentage in their soil sample? If so how much? - I have attended four trainings now and have gotten very different guidance from different soil scientists. I think it might be useful to have official guidance on this, because this is being implemented differently depending on which soil scientists are involved in the local training.**
 - *We recommend that crews do not attempt to adjust for calcium carbonate. Record it as you feel it. Make notes about the effervescence and the presence of calcium carbonates. When attempting to identify the ecological site, consider potential sites with lower clay content, especially if your clay percentage is near the edge for the clay texture class*

Plot Observation

- **What is the difference between a Water Flow Pattern, a Rill, and a Gully?**
 - *Check out the definitions and photos in DIRH (TechRef 1734-9), "Using the definition provided by Selby (1993), rills are less than 1 ft (30 cm) wide and 2 ft (61 cm) deep, whereas gullies exceed these limits." All three are signs of fluvial erosion, but essentially at different degrees of extremity. Water Flow Patterns are the least extreme, and do not have hard-cut sides. Rills are similar but do have hard-cut sides. Often a long Rill will go in and out of being a Water Flow Pattern. Gullies are the largest and most extreme. They usually have a "headcut"- a large obvious beginning where soil has caved in. A fun way to distinguish a Rill vs a Gully is that you could drive across a Rill in a Volkswagen Bug, but not a Gully. (Selby M.J. 1993. Hillslope Materials and Processes. Oxford: Oxford University Press.)*
- **How can I tell if my plot has signs of sheet erosion?**
 - *Sheet erosion is no longer data collected on the AIM plots. If you need to collect sheet erosion information, your project lead can point you to appropriate references.*

Photos

- **There is a giant tree blocking the view of the transect from the center of the plot. How can we take the transect photo?**
 - *Take the photo as normal, even though the transect is not visible. Then move your photoboard and photographer forward along the transect, maintaining 5m of distance between the photoboard and the photographer, until you reach a point at which your photoboard is visible from 5m distance. Take an additional photo of your transect here, recording the point along the transect that the photo was taken from. This is a minimum requirement, your project lead may have additional photo requirements.*
- **Our photos forms aren't sending when we're sending the rest of our data in the office. How can I upload the data to AGOL?**
 - *There are many potential solutions to this problem that may depend on the tablet you are using. For trouble shooting, consult your project lead who can escalate the question to the NOC data team for solutions if needed.*
- **After we got back to the office, we noticed that in some of our photos, the photoboards are not legible. What should we do?**
 - *In Geoplatform, you can download the illegible photos to your computer. You should use image editing software to insert a white text box into the bottom left corner of your photo, and type the headings from the photoboard into this textbox. Upload the edited photo with the next available misc. photo label back into Geoplatform. Do not replace original photo taken in the field with edited photo. To prevent this, remember to check how your photos came out immediately after you take them in the field and retake them if necessary.*

- **Can we take photos not using the Survey123 app and add them from another device or the tablet camera?**
 - *It is possible to take photos outside of the Survey123 app and upload them. However, we require photos be submitted in the field through the Photos form while on plot. This is an important part of QA as it ensures the photo is tied to the correct location and named properly.*
- **What if my Tablet breaks?**
 - *If electronic data collection is impossible (e.g., Tablet breaks), record all data on paper datasheets and then enter into Survey123 and Field Maps as soon as possible, no later than 30 days. All data must be entered into Field Maps and Survey123 for the Data Team to ingest it into the National Terrestrial AIM database. Additionally, photos or scans should be taken of paper datasheets and uploaded to the AIM Contractors SharePoint.*