RaCA Site Location Guide

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Explanation of Site Location Files

For each soil group and location combination, a target number of sites was assigned based on the mapped extent. At this point, only the sites on private land are being provided. The number of sties assigned have been reduced to account for the expected proportion of federal lands within each group and land use. The location (lat long) of these sites are the center point (1) for each RCA data collection plot. Ideally, you will select the necessary number of sites from the top of the list, secure access to those locations, navigate to the x,y points and collect data. In reality, there are some assignments with inadequate sites in the list and others that will need to be supplemented as locations are rejected due to lack of access, the land use or soil groups present, or to avoid obstacles or dangerous conditions.

The sites assigned, site list and soil group information are provided in an Excel file. The excel file includes an info sheet with descriptions of the other sheets as well as some definitions. Sites_assign_matrix and Sites_assign_list give the target number of locations to be sampled (each site will have 5 sample points/pedons). The list also includes priority land uses for each group as well as how to replace locations if you run out of potential sites. The RaCA_site_list includes potential site locations for all soil groups and land uses. There are extra sites, so that you can replace rejected locations. The group_comp_list has a list of all components in each group with the properties used to group them (see the info tab for definitions). Use the filter function to become familiar with the general properties of each group. Keep in mind that this grouping function groups expected C levels – they are not based on typical taxonomic or genetic criteria so they can't be generally defined.

The locations for all sites in the RaCA_site_list are provided to you in a spatial form (ArcMap shapefile). For ease of importing into a Garmin GPS unit SiteID, IDENT, and COMMENT fields have been populated with the relevant information. For other models, you'll need to set your ID fields manually. The Site ID (the same as RaCA Site ID) has an extra constant on the end. This will need to be removed before you record the actual location of data collection.

How to Use the Site Locations

To achieve the objectives of the RaCA project, collect samples from the number of RCA Sites listed (N) in the sites_assign list. From the RaCA_site_list, select the first N number of locations in the target group and land use, where N = the RaCA_sites_assign. Assess those locations for accessibility, land use and soil group. If any location is rejected, return to the RaCA_site_list and select the next location in the target group and land use. Each MO will need to devise a way to organize the processing of these sites in a way that makes sense to/for them.

Table 1. Example of RCA_assign_matrix for MO 99. The cell used in Table 2 is shaded.

Soil Group	CRP	Forest land	Rangeland
50	3	5	8
51	3	5	5
52		2	
53	3	5	5

Table 2. Example of partial RCA_site_list for MO 99, Soil Group 51, land use F (Forest land). The first 5 sites would be selected initially (from table 1). If any of those are rejected, 9951F06 would be selected next.

RaCA_Site_ID	Location
9951F01	X,Y
9951F02	X,Y
9951F03	X,Y
9951F04	X,Y
9951F05	X,Y
9951F06	X,Y
9951F07	X,Y

It is recommended that you remotely assess these locations during the planning process. You can use aerial photographs or any other available data to assess the locations. Anything that is clearly not in the correct land use or completely inaccessible could be moved or rejected entirely. Use restraint when rejecting points as we could run out of locations for some groups and land uses.

As the points are assessed, record any actions taken. If the point is rejected, mark the RaCA_site_list with an "X" in the appropriate column.

If you do not have enough locations to meet the site assignment, follow the advice in the "replace with" column. For some situations, there are many federal points expected for that group-land use. We will select extra federal locations to replace those sites. CRP locations will be replaced with other CRP locations from other groups within your MO. For other land uses, replace with an extra location from a priority land use (marked with an "X") in the same group. If multiple replacements are needed, alternate between the two priority land uses. When no advice is given, you are not expected to need more locations; however, should you need them, you can use the prior advice or contact skye.wills@lin.usda.gove and have further replacement locations sent to you.