United States Department of Agriculture

Natural Resources Conservation Service

National Soil Survey Center

Kellogg Soil Survey Laboratory

Soil Sample Submission Protocol for the Kellogg Soil Survey Laboratory (KSSL)

April 2023

Contents

Cover Photo

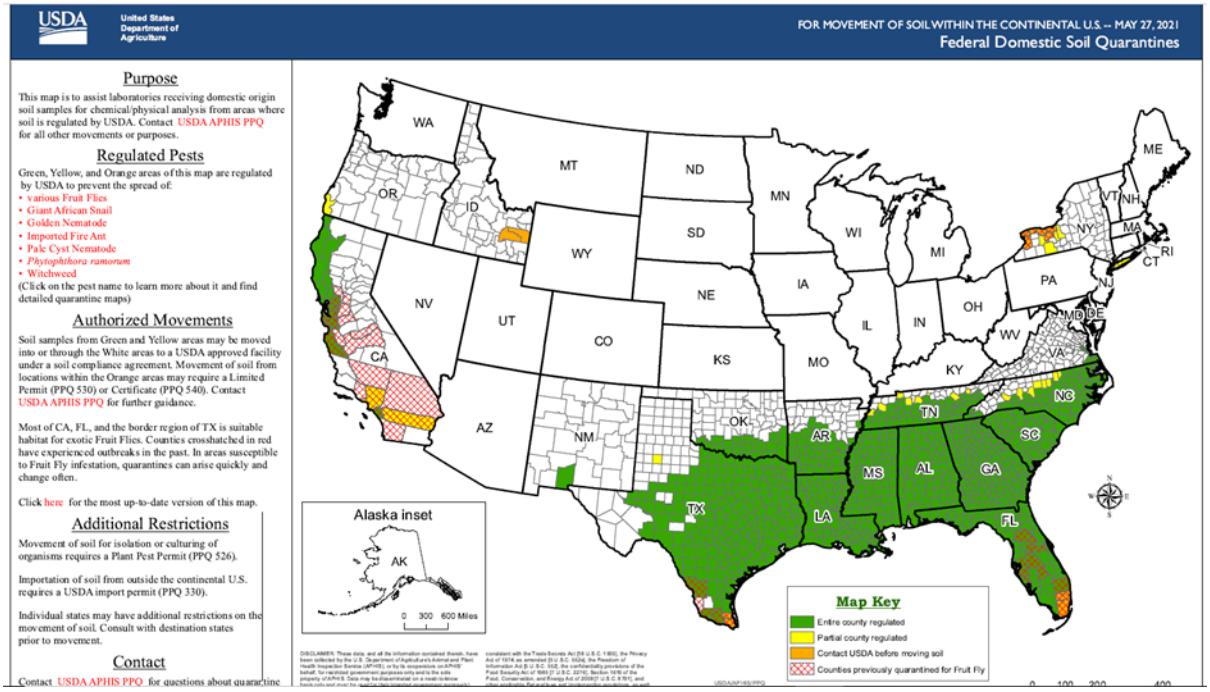
Photo courtesy of Peter Weikle, USDA–NRCS.

Nondiscrimination Policy

PART 1: NSSC Policy for Labeling, Packaging, and Shipping Soil Samples to the Kellogg Soil Survey Laboratory

Definitions

- **Regulated soil sample** - A regulated soil sample is one that was collected within an area quarantined by the Animal and Plant Health Inspection Service (APHIS), the Nebraska Department of Agriculture (NDA), or both. An example of APHIS quarantined areas is shown below:



- **Unregulated soil sample**.- An unregulated soil sample is one that was collected from an area that is not quarantined by either APHIS or NDA.

APHIS shipping protocols

1. Do not package or ship soil samples from areas requiring prior authorization by APHIS, including samples from:

    - Any foreign country
    - U.S. territories (e.g., Puerto Rico, Guam)
    - Contiguous United States (CONUS) counties identified by APHIS as requiring prior authorization for soil movement.

    Consult the APHIS website at the following link for the most current list of counties requiring prior authorization. This list changes frequently with the movement and infestation of various pests:
    https://www.aphis.usda.gov/plant_health/permits/organism/soil/downloads/Fed-SoilRegs.pdf

2. Examples of domestic APHIS-regulated counties requiring prior authorization include:

    a. **Various fruit fly quarantines**:

Los Angeles County, CA	Niagara County, NY
Orange County, CA	Erie County, NY
Riverside County, CA	Monroe County, NY
San Diego County, CA	Orleans County, NY
Cameron County, TX	Wayne County, NY
Hidalgo County, TX	Webb County, TX
Zapata County, TX	Willacy County, TX

    b. **Giant African Snail quarantine:**

Broward County, FL	Miami-Dade County, FL

    c. **Pale Cyst Nematode quarantine:**

Bingham County, ID	Bonneville County, ID

3. For authorization to ship samples to the KSSL from foreign countries, U.S. territories, or counties regulated for specific pests by APHIS, contact the KSSL APHIS Permit Holder or the KSSL APHIS Liaison in writing (via email) for special instructions. At the time of publication Richard Ferguson (Rich.Ferguson@usda.gov) is the current KSSL APHIS Permit Holder, and Amber Kenjar (Amber.Kenjar@usda.gov) is the current KSSL APHIS Liaison. A verbal exchange by phone or online conferencing platform is not considered sufficient documentation.

4. The KSSL will arrange all soil sample shipments. You must always have prior project-specific written approval from the KSSL APHIS Liaison before shipping samples to the KSSL. Do not ship or transport soil samples to the KSSL without this prior project-specific written authorization. APHIS can demand unauthorized samples be destroyed.

Conventions for User Site ID and User Pedon ID

The standard conventions for the User Site ID and User Pedon ID must be followed for all samples submitted to the KSSL. The User Pedon ID must appear on the KSSL Sample Submission Sheet and on the sample tags.

Chapter 23 of the NASIS User Guides website (https://www.nrcs.usda.gov/resources/guides-and-instructions/nasis-user-guides) contains the national standard guidance for creating the User Site ID. The User Pedon ID should always match the User Site ID. For all samples submitted to the KSSL, the letter "S" is added to the beginning of the User Site ID and User Pedon ID. To be consistent with NASIS format, use uppercase letters only, and never use spaces, dashes, or hyphens.

Example of a **correct** User Site ID/User Pedon ID:

S2004WA027009

- S = Indicates a sampled pedon.
- 2004 = Calendar year pedon was sampled. Use a four-digit format.
- WA = Two-character (alphabetic) Federal Information Processing Standards (FIPS) code for State where the pedon was sampled. For non-U.S. samples, use the two-character (alphabetic) Country Code from ISO 3166-1 (e.g., AU for Australia).
- 027 = Three-digit (numeric) FIPS code for county where the pedon was sampled. It is important that this be the actual county where the samples are taken to ensure compliance with APHIS regulations. For non-U.S. samples, use the appropriate three-digit worldwide administrative subdivision code.
- 009 = Three-digit, consecutive pedon number for that county in that calendar year. Use 0 as place holder as necessary (e.g., 9 becomes 009).

Examples of **incorrect** User Site ID/User Pedon ID:

- S2004-WA-027-009 (contains hyphens)
- S04WA027009 (calendar year is only two digits)
- 2004WA027009 (missing S at the beginning)
- S2004WA627009 (used soil survey area code instead of county FIPS code)

Labeling, Packaging, and Shipping Samples to the KSSL

For packaging and shipping soil samples from most areas of the CONUS not listed on the APHIS website, please follow these provided instructions exactly. These procedures are required by APHIS or NDA. If you have questions about the instructions, contact the KSSL APHIS Liaison Amber Kenjar (amber.kenjar@usda.gov) *in writing* (via email) before packaging or shipping the soil samples.

Except for the packaging tape and packing material such as newspaper or bubble wrap (no packing peanuts, please), the KSSL will furnish all packaging supplies which must be used. To request packaging supplies, contact the KSSL APHIS Liaison (Amber.Kenjar@usda.gov) or the KSSL Sample Processing/Shipping/Receiving Work Leader, Michelle Etmund (Michelle.Etmund@usda.gov).

The KSSL will arrange all soil sample shipments. Please have the following information available when coordinating sample shipments:

- Project name provided with the initial Request for Assistance.
- Written confirmation that samples were packed according to directions provided in this document.
- Weight and dimensions of each box or trunk to be submitted.
- Name, address, phone number of the sample submitter.
- Address of where the samples can be picked up by the bonded carrier (e.g., UPS)
- Preferred day of shipment pick up from office or location.

You must always have prior project-specific written approval before shipping samples to the KSSL. Do not ship or transport soil samples to the KSSL without this prior project-specific written authorization.

Labeling, Packaging, and Shipping Bulk Samples

1. The primary container for each bulk sample must be the plastic bulk sample bag furnished by the KSSL. A bulk sample bag must not be filled beyond 2/3 full.
2. Use an indelible marker to label the tag and sample bag.
3. Fill out the sample tag, which must include the following elements:
   a. Soil series name or equivalent: e.g., SND (series not designated),
   b. Horizon designation,
   c. The User Pedon ID followed by “-1”, “-2”, “-3” etc. to indicate the layer number within the pedon (“1” being the top layer),
   d. Layer top and bottom depths in centimeters, and
   e. Consecutive field layer number. See Figure 1.
      The consecutive field layer number is a running total of all the layers within a sample submission or project. Which means if you are submitting to the KSSL four pedons, each with seven layers, then the field layer numbers should run from 1-28.

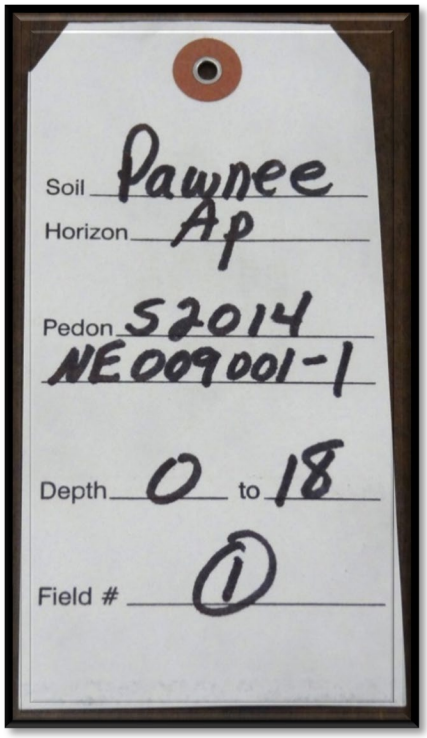


Figure 1.—A correctly labeled sample tag for bulk samples. (Step 7)

Label the bottom half of the sample bag with the same information as the tag (step 7 a-e). See Figure 2.

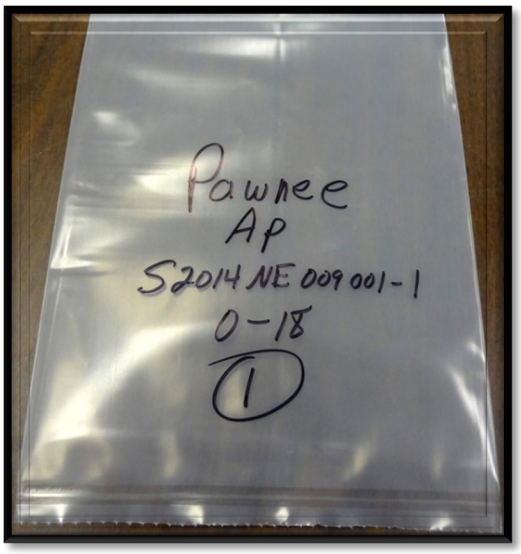


Figure 2.—A correctly labeled sample bag for bulk samples. (Step 8)

4. Fold the top two inches of the sample bag toward the information on the bag. Fold the top inch of the 1st fold again toward the information on the bag. Insert the top of the tag into the center of the second fold, with the tag information facing outward. Using a heavy-duty stapler (not a desk stapler), staple the tag between the two folds. The information from both the tag and bag should be easily readable on the same side of the bag. Next staple the left and right sides of the double fold. Verify that information on sample bags and tags are in agreement. See Figure 3.

Figure 3.—Correctly folded and stapled bulk sample bag and tag. (Step 9)

5. Place multiple sample bags in a secondary, 18" x 36" plastic bag furnished by the KSSL. Do not fill the secondary plastic bag beyond 3/4 full.
6. **Secondary bag should weigh 50 pounds**. Please do not overfill the secondary bag; the KSSL will provide additional shipping boxes if needed.
7. Seal the secondary plastic bag by double folding and stapling. See Figure 4.

Figure 4.—Correctly folded and stapled secondary plastic bag for bulk samples. (Step 11)

8. Place a single secondary plastic bag in an 18" x 18" x 12" cardboard box furnished by the KSSL. One full secondary plastic bag should fit inside a box. See Figure 5.

Figure 5.—A single secondary plastic bag in an 18" x 18" x 12" cardboard box furnished by the KSSL for bulk samples. (Step 12)

9. Add packing material (such as crumpled paper or bubble wrap; no packing peanuts, please) to completely fill voids and minimize shifting. See Figure 6.

Figure 6.—Packing material used to stabilize the bulk sample in the cardboard box. (Step 13)

10. The following hard copies must be included in the box on top the packing material:
    a. "KSSL Project Sheet,"
    b. "KSSL Pedon Field Sheet" worksheet for each pedon,
    c. "Requests for Analyses" worksheet for each pedon, and
    d. Pedon descriptions printed from NASIS for each pedon.
11. Be sure to use only high-quality packing tape and securely close the box. See Figure 7.

Figure 7.—High-quality packing tape used to securely close the bulk sample box. (Step 15)

12. Contact the KSSL APHIS Liaison (Amber.Kenjar@usda.gov) or the KSSL Sample Processing/Shipping/Receiving Work Leader, Michelle Etmund (Michelle.Etmund@usda.gov). Please supply the weight of each box in order to arrange for shipping to the KSSL. Do not ship boxes in any other manner.

Labeling, Packaging, and Shipping Clod Samples

13. Clod samples and natural fabric samples shipped to the KSSL must be placed in "clod boxes" furnished by the KSSL. Clod samples, which are used for bulk density, must be in a separate box from natural fabric samples, which are used for thin sections and storage.
14. Use an indelible marker to label the clod sample boxes.
15. Label the outside cover of the clod sample box with the following elements:
    a. Sample type (clod or natural fabric; a natural fabric sample is an oriented clod), and
    b. User Pedon ID. See Figure 8.

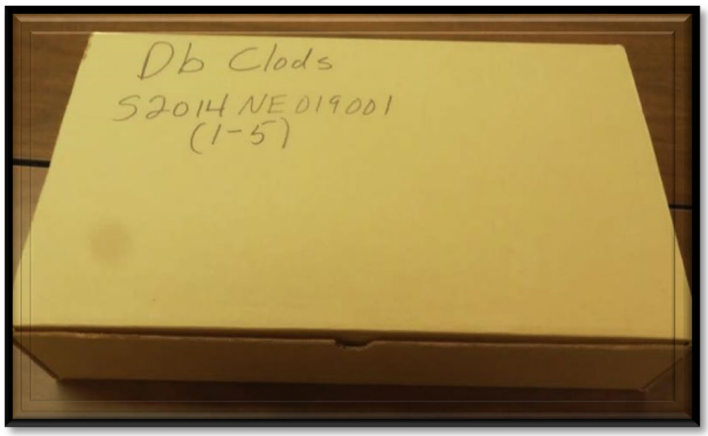


Figure 8.—A clod sample box on which the outside cover has been correctly labeled. (Step 19)

16. On the inside of the clod box lid, and for each box cell, write:
    a. The horizon designation,
    b. Layer top/bottom depths from which the clod was collected. Ordinarily, three fist-sized clods are collected per layer for bulk density, and
    c. Sequence field number. (Also, write the sequence field number on each bag.) See Figure 9.

Figure 9.—The inside of a correctly labeled clod box. Each cell is labeled. (Step 20)

17. The primary container for each clod or natural fabric sample must be a plastic clod-sample bag furnished by the KSSL.
18. Seal each clod bag with a twist tie. See Figure 10.

Figure 10.—Clod bags that have been correctly sealed with a twist tie. (Step 22)

19. Place clod bags in the cells of a clod box.
20. Fill empty cells in the clod box with packing material (such as crumpled paper or bubble wrap) to increase stability. See Figure 11.

Figure 11.—A clod box in which the empty cells have been filled with packing material to increase stability. (Step 24)

21. Place each clod box in its own plastic clod-box bag furnished by the KSSL.
22. Knot each clod bag closed. See Figure 12.

Figure 12.—A clod box in its own plastic clod-box bag. The bag is tied shut. (Step 26)

23. Place the clod boxes in a clod trunk provided by the KSSL. Because the clod trunk is designed to hold six clod boxes, use empty clod boxes (instead of packing material) to fill any void space left by less than six filled clod boxes. Filled clod boxes must always be placed at the bottom of the trunk. See Figure 13.

Figure 13.—Clod boxes in a clod trunk, which is furnished by the KSSL. (Step 27)

24. The following printouts must be included in the trunk on top of the corresponding clod boxes being shipped:
    a. "KSSL Project Sheet,"
    b. "KSSL Pedon Field Sheet" worksheet,
    c. "Requests for Analysis" worksheet, and
    d. The pedon descriptions printed from NASIS.

25. Notify the KSSL APHIS Liaison (Amber.Kenjar@usda.gov) or the KSSL Sample Processing/Shipping/Receiving Work Leader, Michelle Etmund (Michelle.Etmund@usda.gov). Please supply the weight of each trunk in order to arrange for shipping to the KSSL. Do not ship trunks in any other manner.

PART 2: Required Sample Submission Documentation for Shipments to KSSL

All soil sample shipments to the KSSL must include hard copies of the "KSSL Project Sheet.xlsx" and "KSSL Sample Submission Sheet.xlsxm" in the box with the samples. Prior to shipment, these files must also be emailed to the KSSL Laboratory Analyst, Scarlett Murphy (scarlett.murphy@usda.gov), the KSSL Sample Processing/Shipping/Receiving Work Leader, Michelle Etmund (michelle.etmund@usda.gov), and your KSSL Liaison(s) or Project Coordinator.

KSSL must receive all sample submission documents and NASIS profile descriptions must be entered before sample login and processing can begin.

The required sample submission documents can be found under the Soil Sample Submission heading of the KSSL Guidance website at the following link:

https://www.nrcs.usda.gov/resources/guides-and-instructions/kssl-guidance

KSSL Project Sheet

Fill out the “KSSL Project Sheet.xlsx” spreadsheet once for each project you are shipping to KSSL. The ‘Project Name’ entered on this form is what KSSL will enter as the submitted project name in our Laboratory Information Management System (LIMS) for the sample submission. Please limit the Project Name to 60 characters total (including spaces and/or dashes). If you are sending more than one project to KSSL in the same shipment, please clearly indicate which pedons belong to each project in the submission documentation.

KSSL Sample Submission Sheet

Complete a separate “KSSL Sample Submission Sheet.xlsm” for each pedon you are submitting. Name and save each file using the User Pedon ID as the file name (example: S2014WA027009.xlsx). The “KSSL Sample Submission Sheet.xlsm” contains two worksheets that must be populated: 1) KSSL Pedon Field Sheet, and 2) Requests for Analyses. Imbedded explanations are displayed by hovering your mouse over the cells with red triangles. The User Pedon ID, Field #, Horizon Designation, and Depths entered on the ‘KSSL Pedon Field Sheet’ sheet will auto-populate the same fields on the ‘Requests for Analyses’ sheet.

The worksheet ‘Analysis Applicability Guide’ lists the laboratory analyses that are subject to preliminary screening analyses. For certain analyses, KSSL uses the results from another analysis as a screening criterion. For example, layers requested for the analysis “Saturated Paste and Soluble Salts” will only be analyzed if the result of the 1:2 EC Predict analysis is >0.25 ds/m. Other sections of the Analysis Applicability Guide give guidance on which analyses are appropriate for given soil characteristics. For example, if clay content is >35%, XRD/clay

mineralogy is typically more useful and a more applicable analysis request than optical mineralogy.

NASIS Pedon Description Report

NASIS pedon descriptions and site information must be submitted with the samples. Run one of the following NASIS reports (under NSSC Pangea), print the output, and include the hard copies in the box with the samples.

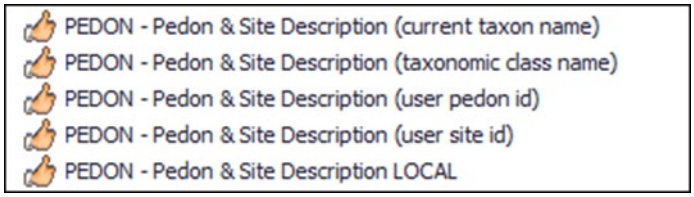


Figure 14.—List of NASIS Reports for printing pedon descriptions.

All five reports generate the same output. The first four have parameters that allow them to be run against the national database. The last report, the one with the word LOCAL in the name, can only be run against your selected set. Some of the same reports can also be run from the Soil and Plant Science Division NASIS Web Reports webpage: (https://nasis.sc.egov.usda.gov/NasisReportsWebSite/limsreport.aspx?report_name=WEB-Masterlist)

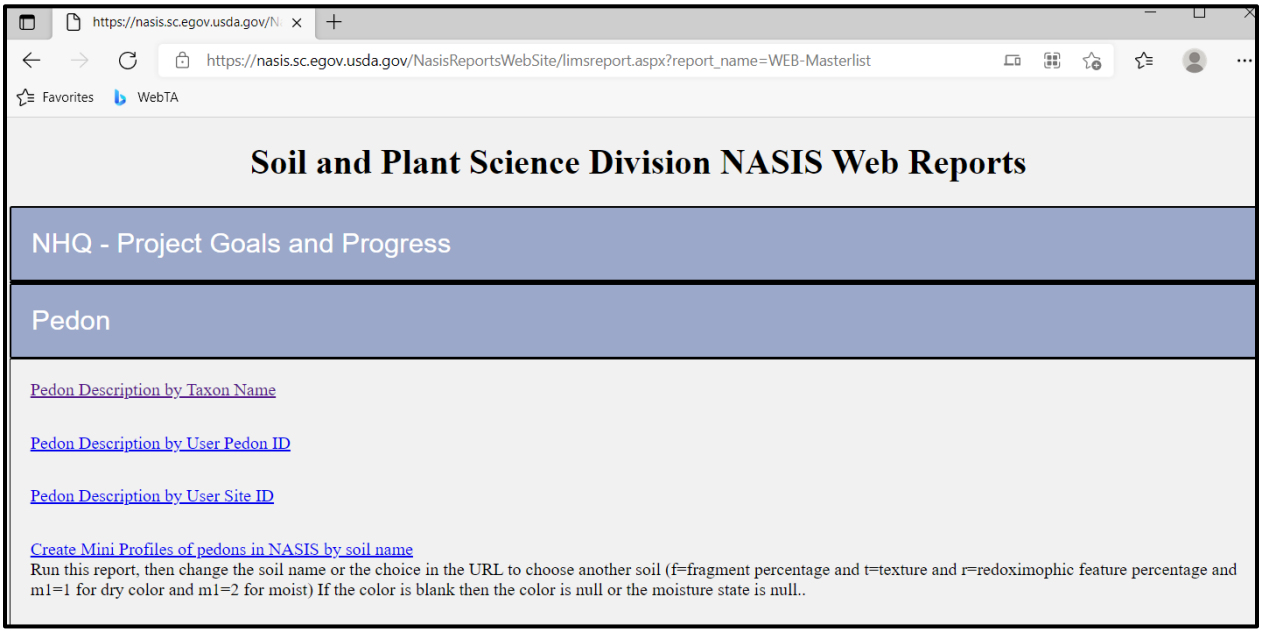


Figure 15.—Soil and Plant Science Division NASIS Web Reports screenshot.

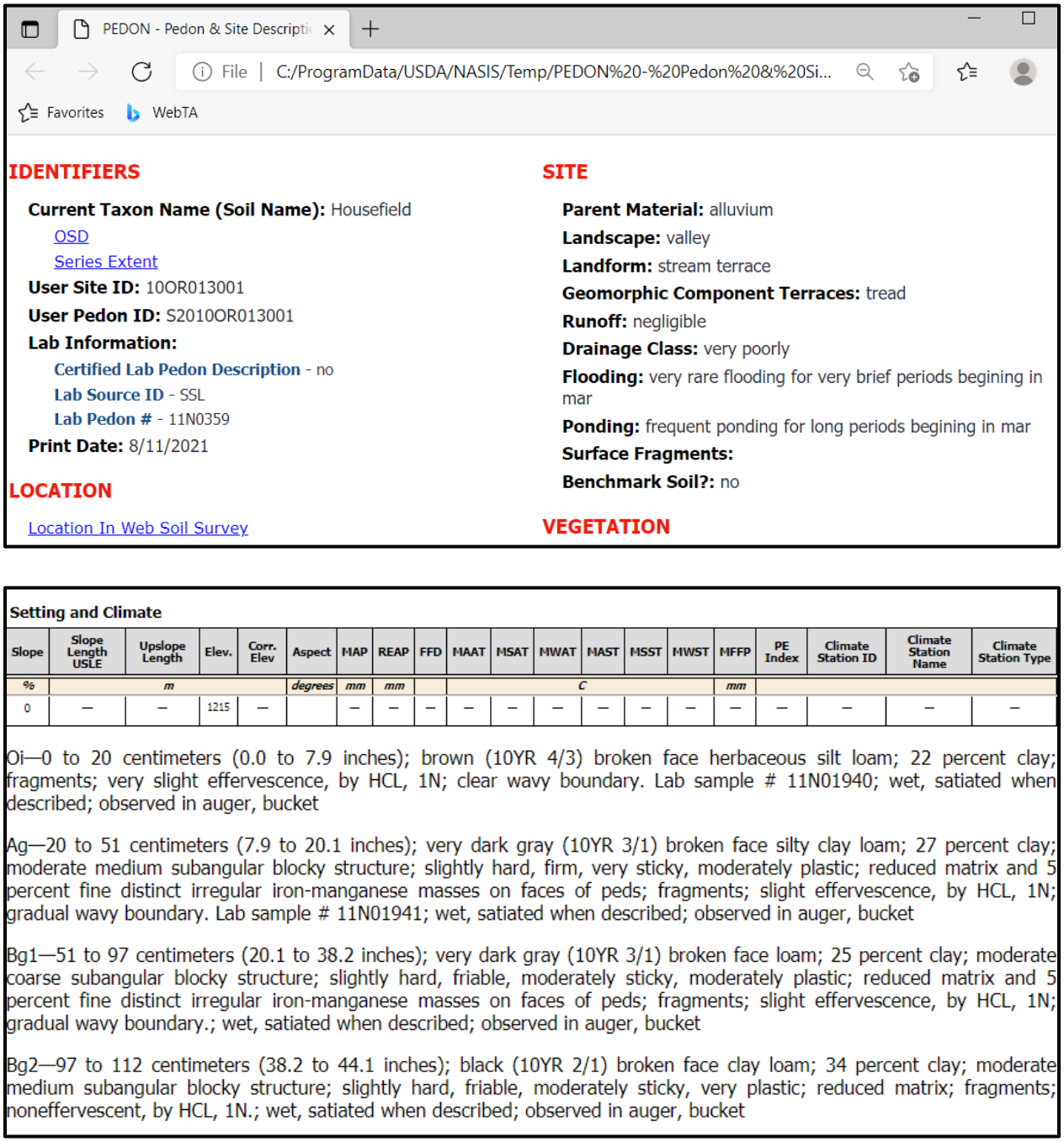


Figure 16.—NASIS Pedon Description Report example.

Edits and updates to the site and pedon information that is associated and displayed with sampled pedons will be managed through NASIS (formerly done through the 'SOI-8' process). Site and pedon information in NASIS will be linked with the corresponding information in the KSSL Laboratory Information Management System (LIMS). Regional Offices will have control of those sites and pedons and can edit them in NASIS as needed. Refer to Part 3 of this document, "NASIS Procedures for Sample Submission and Pedon and Site Information," for detailed instructions.

Summary of Documentation Requirements for Submitting Samples

1. Fill out a copy of "KSSL Project Sheet.xlsx" for each project.

2. For each pedon, fill out a copy of the "KSSL Sample Submission Sheet.xlsm" and save with the name of the User Pedon ID. Refer to the User Pedon ID naming convention in Part 1. In the 'Reason for Sampling/Notes" section at the bottom of the KSSL Pedon Field Sheet, include any notes about the project objective and the preferred deadline to receive the data, if applicable.

3. Print hard copies of each:

   a. KSSL Project Sheet.xlsx
   b. KSSL Sample Submission Sheet.xlsm – print both tabs:
      i. KSSL Pedon Field Sheet
      ii. Request for Analyses
   c. Pedon Description report from NASIS

4. Verify that ownership of the Site and Pedon record in NASIS have been transferred to the correct NASIS Group and NASIS Site (see Part 3 of this document for NASIS procedures)

5. Email electronic copies of the files in step 3 (KSSL Project Sheet, KSSL Sample Submission Sheet, NASIS Description reports) to:

- Scarlett Murphy (scarlett.murphy@usda.gov), Laboratory Analyst
- Michelle Etmund (michelle.etmund@usda.gov), KSSL Sample Processing/Shipping/Receiving Work Leader
- Your KSSL Liaison(s) or Project Coordinator

If you are not sure who the KSSL Liaison is for your area, please refer to the following link:

https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soil/national-soil-survey-center#liaisons

PART 3: NASIS Procedures for Sample Submission and Management of Pedon and Site Records for Sampled Pedon

Pedon descriptions must be entered into NASIS before samples are submitted to the KSSL. The login, processing, and analysis of samples will only begin after the NASIS descriptions have been entered. Please refer to PART 1 of this document for the mandatory conventions for the "User Site ID" and "User Pedon ID."

Procedure in NASIS for Sampled Pedons Submitted to KSSL

1. **Enter the pedon description for the sampled pedon into NASIS. Verify that the "User Site ID" and "User Pedon ID" conform to national standards.** As a reminder, the User Pedon ID and User Site ID should always match and should start with "S" for sampled pedons submitted to KSSL. The image below is an example of the correct User Site ID and User Pedon ID conventions. Populate all Site, Pedon, and Vegetation Plot tables and columns in accordance with Chapter 23 of the NASIS Training Materials.

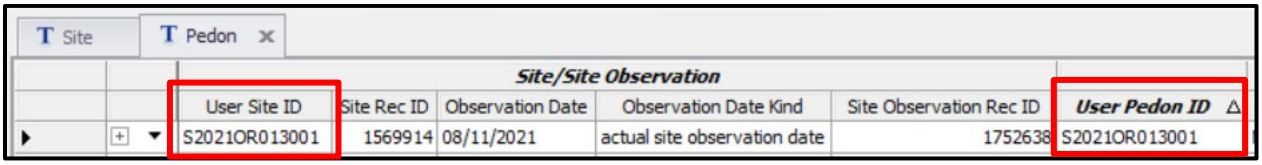


Figure 17.—Screenshot from NASIS showing proper User Site ID and User Pedon ID nomenclature.

2. **Change ownership of the Site record to the appropriate "*KSSL_Sites_RO#*" group**. Each Regional Office NASIS Site contains a NASIS Group that begins with *KSSL_Sites_RO*. These KSSL_Sites_RO# groups were created specifically for the site records of sampled pedons. They are designed to group all site records linked to sampled pedons and restrict edit permissions on the site records to only authorized users. Membership in these groups is determined by the Regional Office, but they are typically restricted to Regional Office staff. Other NASIS users can be given access as needed.

   If State staff are submitting samples, they will need to select the appropriate KSSL_Sites_RO# group for their site records, which will be the Regional Office that has responsibility for the area where the samples were collected.

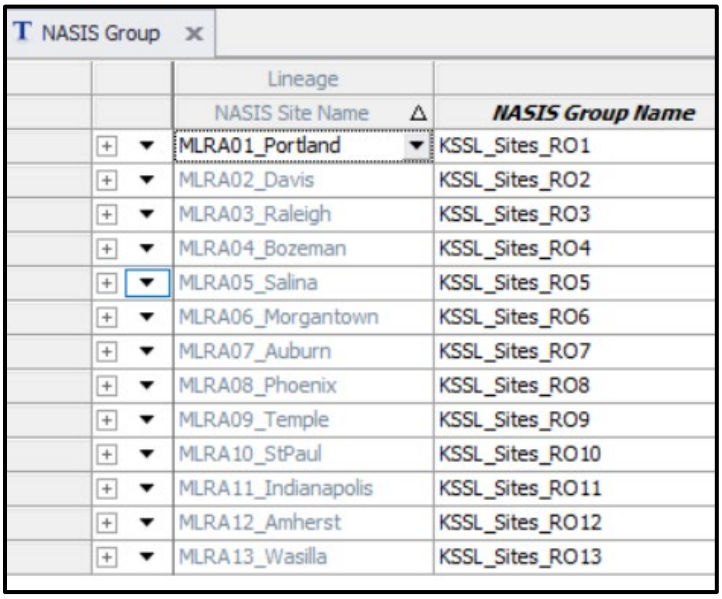


Figure 18.—Screenshot of NASIS Groups to use for transferring ownership of site records.

After the pedon description has been fully populated in NASIS, follow these steps to change ownership of the site record in NASIS. First confirm the site(s) is loaded into your selected set and is checked out for editing. Click on the row(s) you wish to update. With the rows selected, click on the "Table Editor" menu, and choose "Change Owner of Selected Rows…"

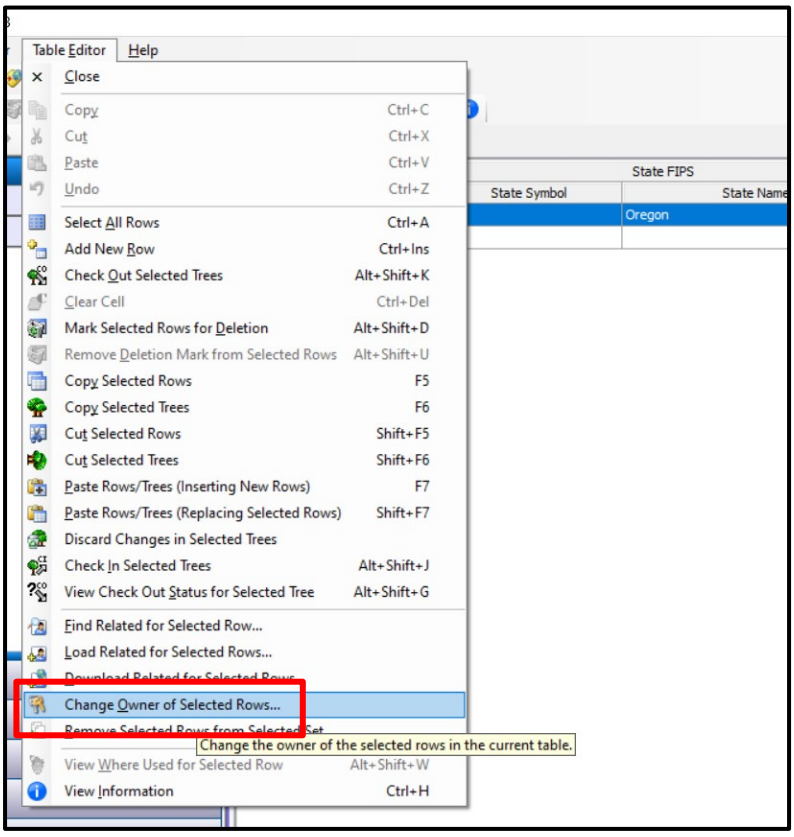


Figure 19.—Screenshot of NASIS Table Editor menu selection to change ownership of rows.

Use the dropdown menus to select the correct NASIS Site and NASIS Group for ownership:

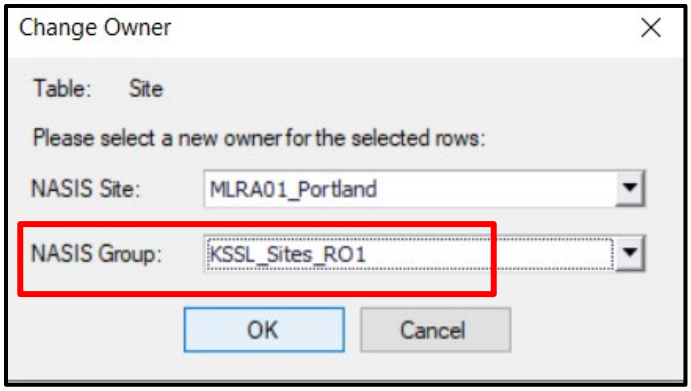


Figure 20.—Screenshot showing a site from Regional Office 1 being transferred to the appropriate NASIS Group, KSSL_Sites_RO1.

3. **Change ownership of the Pedon record to the appropriate "*KSSL_Pedons#*" group.** The NASIS Site 'KSSL' contains a *KSSL_Pedons#* NASIS group for each Region. When a pedon is transferred into one of these KSSL groups, ownership of the pedon record goes to the KSSL staff, and the Regional Office will be restricted from further editing the record. This process creates a static archive copy of the "sampled as" pedon description. Transferring ownership to KSSL also ensures that KSSL staff can add the necessary laboratory identifiers to the Pedon and Horizon records to create the linkage between the NASIS description and KSSL analytical results.

NASIS Group

	Lineage	
	NASIS Site Name	***NASIS Group Name***
	KSSL	KSSL_Pedons1
	KSSL	KSSL_Pedons10
	KSSL	KSSL_Pedons11
	KSSL	KSSL_Pedons12
	KSSL	KSSL_Pedons13
	KSSL	KSSL_Pedons2
	KSSL	KSSL_Pedons3
	KSSL	KSSL_Pedons4
	KSSL	KSSL_Pedons5
	KSSL	KSSL_pedons6
	KSSL	KSSL_pedons7
	KSSL	KSSL_Pedons8
	KSSL	KSSL_Pedons9

Figure 21.—Screenshot of NASIS Groups under NASIS Site 'KSSL' to use for transferring ownership of pedon records.

In the following example, the Pedon record for the sampled pedon belongs to a Region 01 MLRA SSO and the pedon record was assigned to the '1-RED Edit' group when it was initially created. After the pedon record was fully populated, the ownership of the record is changed to the 'KSSL_Pedons1' NASIS Group under the 'KSSL' NASIS Site.

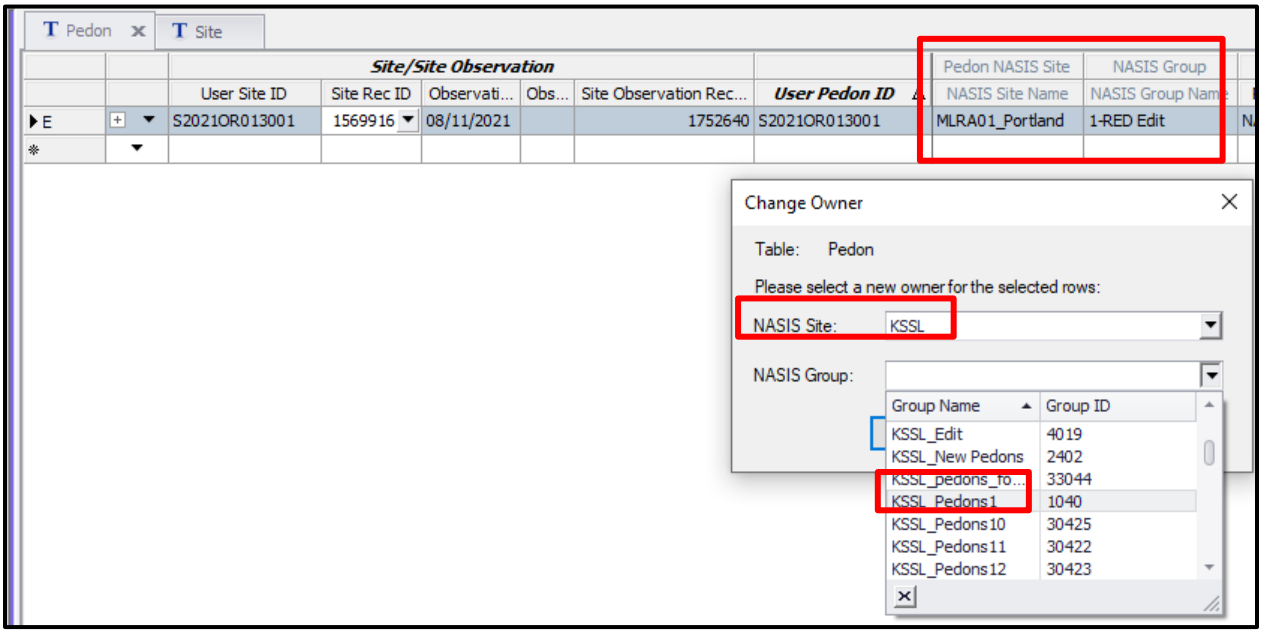


Figure 22.—Screenshot showing transferring ownership of a pedon to the appropriate NASIS Group.

Linking Sampled Pedons to KSSL Lab Data and Procedure for Updating NASIS Records

Once the sampled pedons have been received at KSSL, and logged into the LIMS, and the laboratory identifiers are assigned, KSSL staff will fill in the Lab Source ID and Lab Pedon # fields in the Pedon table and the Lab Sample # field in the Pedon Horizon Sample table. After KSSL staff has entered the Lab Source ID, Lab Pedon #, and Lab Sample #, submitters can make a copy of the pedon into their own NASIS Site and NASIS group.

It's essential the Lab Source ID, Lab Pedon #, and Lab Sample # have been populated in the Pedon and Pedon Horizon Sample tables ***before*** the pedon record is copied. The reason is these fields on both the KSSL- and Regional Office-owned versions of the pedon records must match to ensure the correct pedon description is presented to the customer on the Lab Data Mart webpage. The goal is to present the dynamic Regional Office version of the pedon and coding requires that these identifiers match.

1. To copy a KSSL-owned Pedon record into your own ownership group for editing, select the Pedon record and Copy Selected Trees.

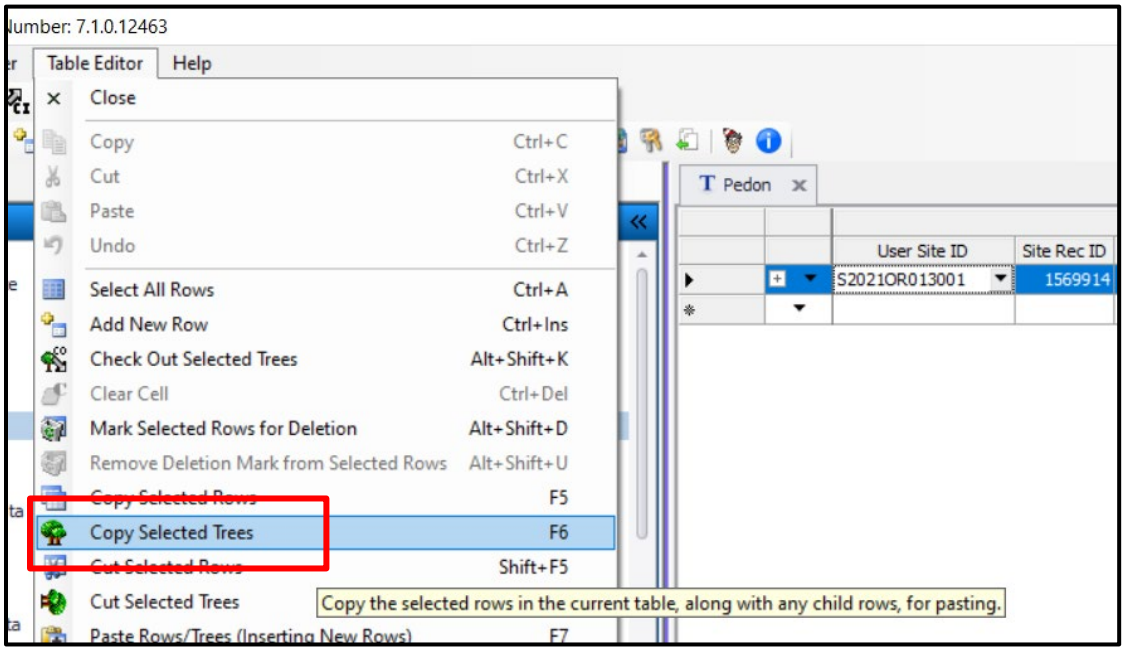


Figure 23.—Screenshot of NASIS Table Editor menu selection to copy a selected pedon.

2. To paste, choose Paste Rows/Trees (Inserting New Rows)

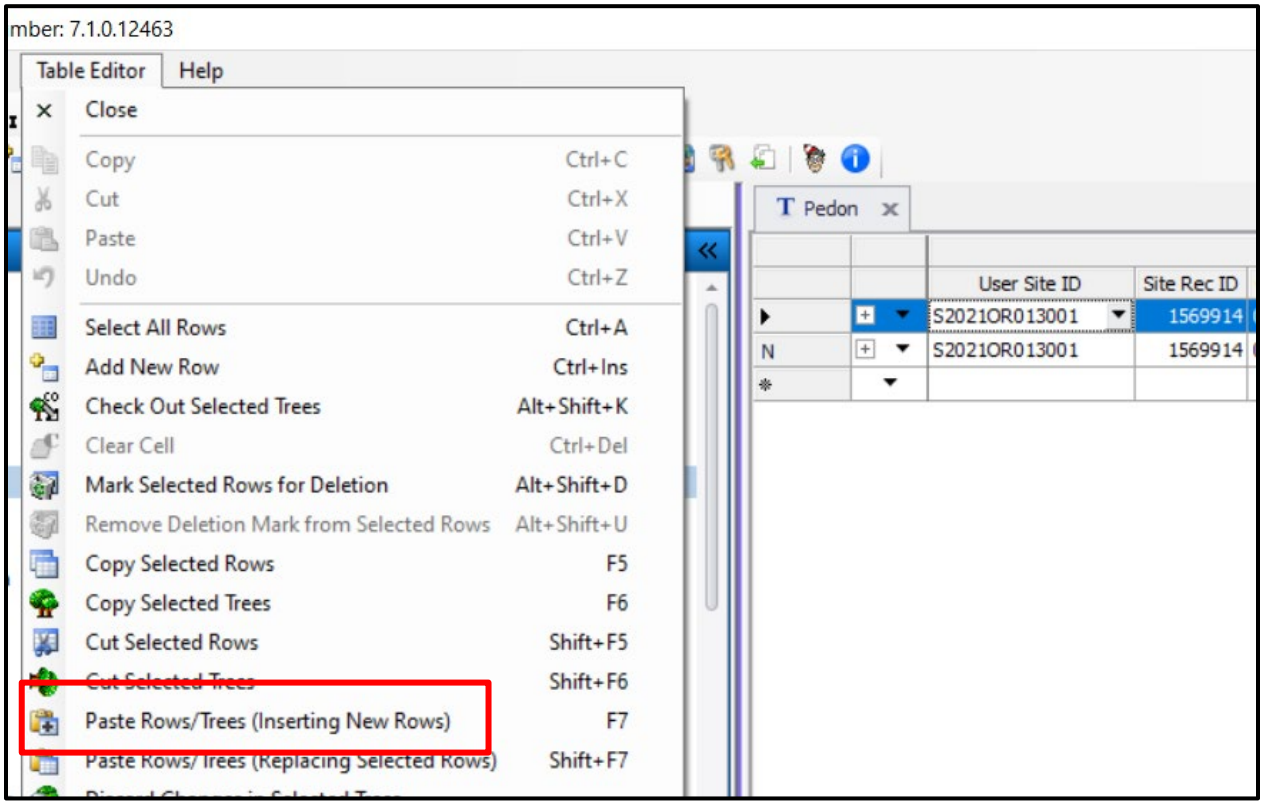


Figure 24.—Screenshot of NASIS Table Editor menu selection to paste rows/trees as new rows.

Verify that the new pedon record is assigned to the correct Regional Office group.

This copy-and-paste process results in the creation of two pedon records for the sampled pedon. The KSSL-owned pedon record serves as a static archival record of the pedon description when it was sampled and cannot be edited. The Regional Office-owned pedon is a dynamic pedon description that can be updated to ensure compliance with changes in taxonomic and other pedon description standards in the future.

In the example below, note that both pedons are linked to the same site record. Both pedons are linked to the same site, Site Record ID 1566614.

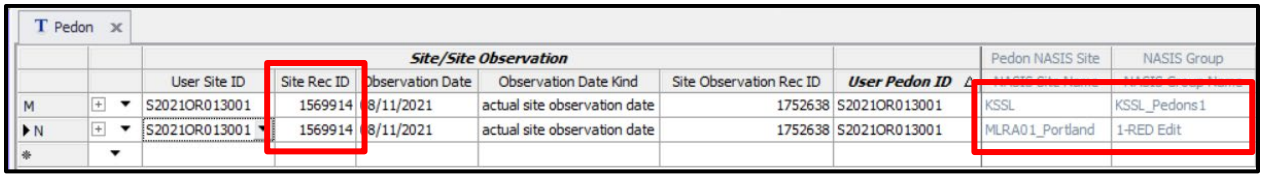


Figure 25.—Screenshot showing a KSSL-owned pedon and a MLRA-owned pedon linked to the same site record.

Any updates or changes, such as the Correlated Soil Name, Taxonomic Classification, or Location are to be made on the Regional Office-owned pedon record and the common site.

The pedon description report delivered to customers of the Lab Data Mart webpage will be based on the Regional Office version of the pedon record, which ensures that our customers will receive the most up-to-date pedon description.

Procedure for Updating KSSL Sampled Pedon Data in NASIS

Historically, KSSL created copies of both the site and pedon records to create KSSL-owned versions of each. This resulted in two pedon records and two site records for each sampled pedon: one Site/Pedon combination owned by KSSL and another Site/Pedon combination owned by the Regional Office. Numerous instances of this scenario exist in the NASIS database. When this is encountered, users should update the records to follow the current procedure of one site record and two pedon records.

Below is what this historical scenario looks likes in NASIS. Note that there are two records in each table with identical user site ids and user pedon ids. The KSSL owns one site/pedon pair and the MLRA01_Portland Regional Office owns the other site/pedon pair.

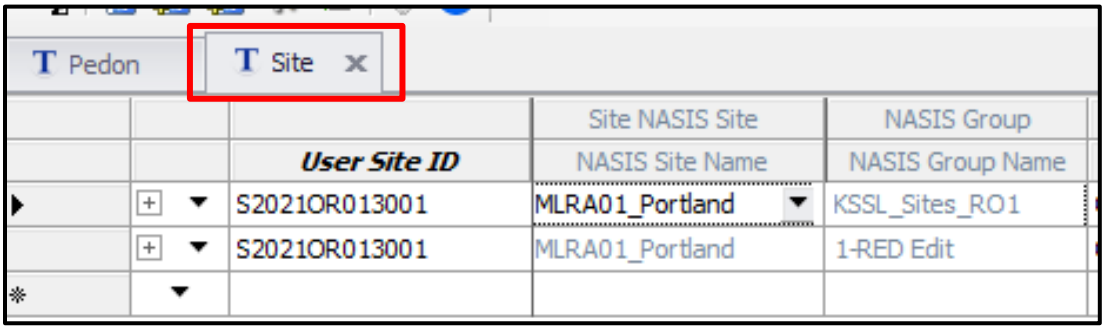


Figure 26.— Screenshot showing duplicate site records in different ownership groups Screenshot showing duplicate site records in different ownership groups.

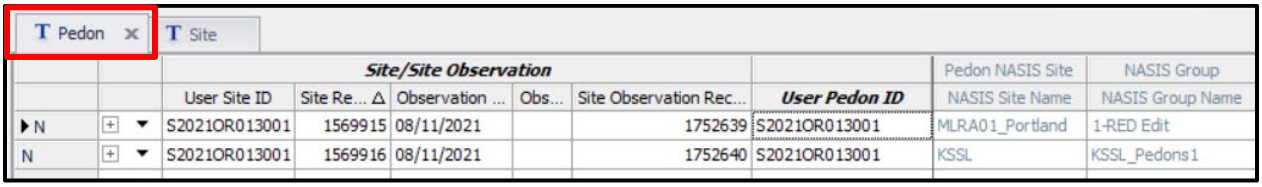


Figure 27.—Screenshot showing duplicate pedon records in different ownership groups.

The following process describes the steps to link the two pedons to a single site.

1. **Load sites and pedons into NASIS selected set and identify the site record owned by a KSSL group.**

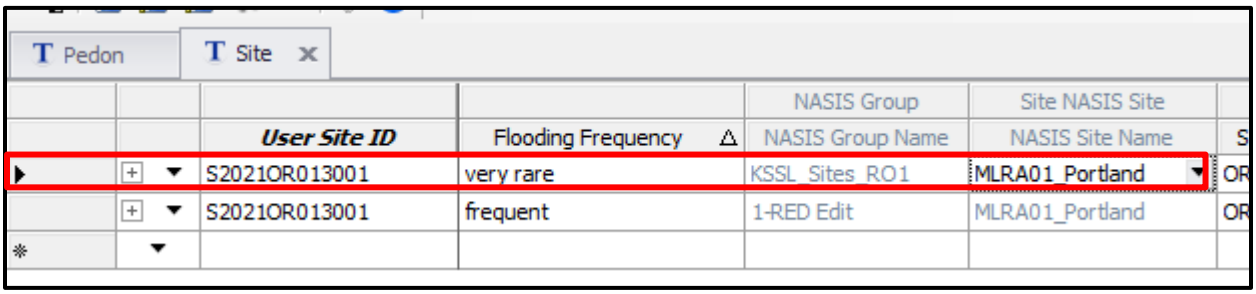


Figure 28.—Screenshot showing duplicate site records in different ownership groups.

In some instances, the site may not be assigned to a KSSL group and you will need to determine which site is supposed to be the official KSSL site. In other instances, you may have to request that another Region or the KSSL change ownership of the site, so you are able to make edits. In the end, the official KSSL Site must always be assigned to the appropriate KSSL_Sites_RO## NASIS group.

2. **Update the official KSSL site record.** Make any necessary additions, corrections, or updates to the various data fields on the official KSSL site record. Compare all columns in the site table and child tables and reconcile any differences between the two site records. In the example

image (Figure 28), note that the Flooding Frequency is different on the official KSSL site record (the one in KSSL_Sites_RO1) versus the non-KSSL owned site record (the one in 1-RED Edit).

If the non-KSSL-owned site has been extensively updated, it is better to make this updated site the official site record instead by relinking the Regional Office-owned pedon record to this new site record and marking the original KSSL-owned site record for deletion. First, reconcile any differences between the updated, non-KSSL-owned site record and the original KSSL-owned site. Verify that the Regional Office-owned pedon is linked to this new site record (described in step 3). Change ownership of the original KSSL-owned site to the 'KSSL_sites_and pedons_to_delete' NASIS Group under the 'KSSL' NASIS Site. Change ownership of the site record that will become the official KSSL site record to the appropriate KSSL_Sites_RO## NASIS Group for the Regional Office.

3. **Update the Regional Office-owned Pedon record.** There will be two pedons records. One will be owned by the KSSL NASIS Site and will be protected. The other will be owned by the Regional Office and can be checked out for editing.

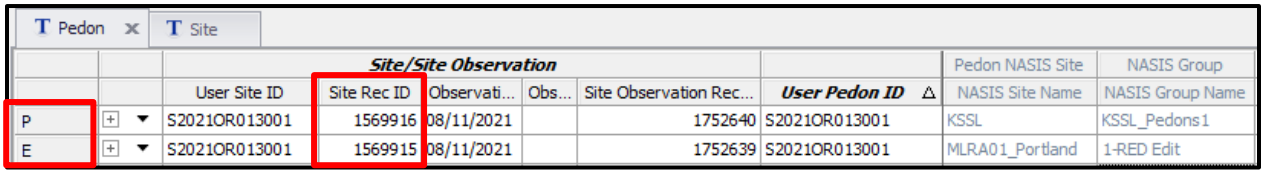


Figure 29.—Screenshot showing two pedon records linked to two different site records.

Verify that the Lab Pedon # field is populated on the Regional Office-owned pedon record. Without this linkage, the Regional Office-owned pedon will not be distributed on the Lab Data Mart website with the official data.

Make any necessary additions, corrections, or updates to the various data fields and child tables. Once updated, this pedon record should be linked to the official KSSL Site. In Figure 29, there are two distinct site records. One has a Site Record ID of 1569915 and the other has a Site Record ID of 1536616. The pedon record owned by the 1-RED Edit will be linked to the 1569916 Site Record ID, resulting in two distinct pedon records linked to single site record.

Note: the pedon records are linked to the site observation record and not directly to the site record. This means if more than one site observation record has been created for this site, you will need to select the correct site observation record when linking the pedon record.

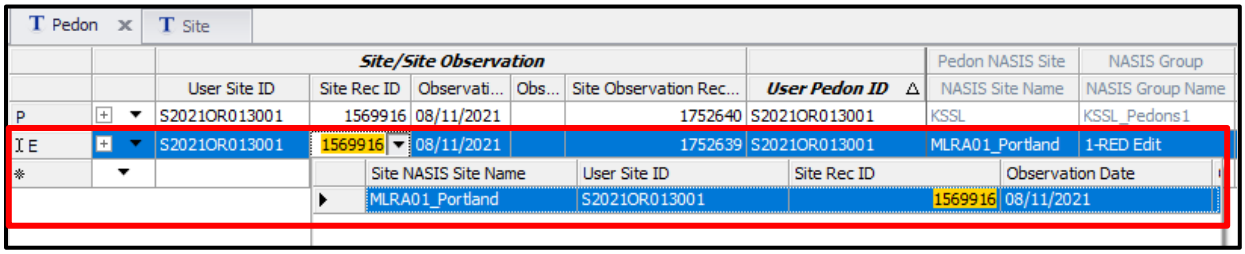


Figure 30.—Screenshot showing a pedon being linked to a different site record with the Site Record ID field highlighted.

In some instances, the pedons may not be owned by the correct NASIS Sites and NASIS Groups. Review the NASIS Sites and NASIS Groups and ensure the pedons are assigned to correct ownership. You may need to reach out to other Regions or staff at the KSSL for assistance.

4. **Delete the non-KSSL site record.** After you have updated the KSSL site in step 2 and removed the connection between the Regional Office pedon and non-KSSL site in step 3, you can open the Site table and delete the extra site record. In Figure 31, Site Record 1569915 is being deleted.

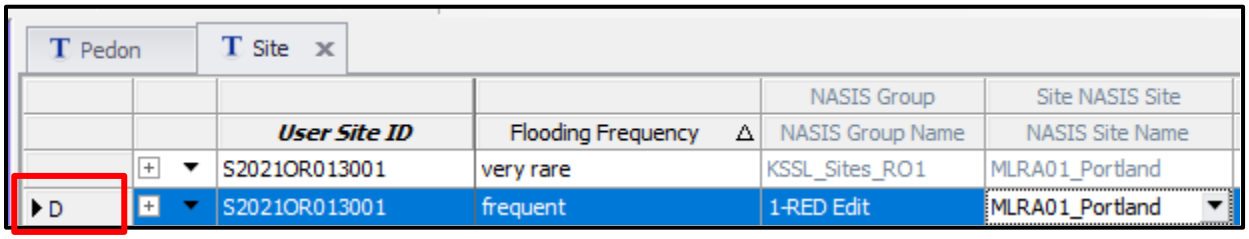


Figure 31.—Screenshot showing a site marked for deletion in NASIS.

If other pedons are linked to the non-KSSL site, the site should NOT BE DELETED. As a reminder, before deleting the non-KSSL site it should be compared to the official KSSL site to make sure all the necessary changes were captured on the official site record.