MO-03 Technical Note
Date: November, 2006

Subject: PEDON data entry for MLRA 03 Region

In order to maintain consistency and data quality within the PEDON data in NASIS, the following guidelines are to be implemented in the MLRA 03 Region:

1. PEDON data entry
   - All typical pedons, modal pedons and laboratory-sampled pedons in a survey are to be entered in PEDON for ongoing soil surveys.
   - Additional pedons will be entered as time allows. It is our intention that all the pedon descriptions for a survey area be entered. When the survey project members will not be entering the pedons themselves, the correlated name, map unit symbol, and pedon_type shall be recorded on the soil description form, as well as other correlation information that will guide the data entry person in completing the description.

2. PEDON data must have a quality review. Data entry is not an end product; it is intended to make the pedons available for many users and uses. We need to ensure that the data input is complete and adequately reflects the original notes taken in the field.
   - When the data is input in the field or in the office by the soil survey project members, quality review will be implemented by the project leader. He or she will ensure that pedons entered are as complete as the original note allows and that the description agrees with the field documentation.
   - Data to be input by anyone other than the soil survey project members will be given a quality review by the project leader or resource soil scientist responsible for the survey.
     a) Data entry person is responsible to review the Pedon report from NASIS in order to ensure completeness of the data.
     b) After every 20 pedons, the 20 pedon reports should be printed and sent to the responsible soil survey project leader for a quality review of selected pedons. Copies of the original field note or description should be included with the printed reports. Based on the experience of the data entry person, the project leader may increase or decrease the number of pedons to be packaged for quality review.

3. The project leader or resource soil scientist responsible for the survey will ensure that field correlation decisions are recorded in the Pedon database.
   - If the series is correlated, that should be reflected in the pedon_correlated_soil_name field (pedon table).
   - The pedon_type (pedon table) **must be populated**. If data is entered by someone other than the soil mappers, this field may be blank – or may be populated with their best guess. It is the responsibility of the project leader or resource soil scientist to review this field for accuracy. Each pedon_type has a fairly concise definition that can be viewed by clicking the "description" button on the choice list. Please be careful to make the correct choice! [Note: the choice "*within the range of the mapunit*" is for use with broadly defined map units where the components are not series.]
   - The taxon_kind (pedon table) needs to be populated and reviewed by the project leader or resource soil scientist for accuracy.

- Soils descriptions that were made during an investigation of an atypical area that are correlated into the “best fit” existing map unit should be flagged if possible. Use a text note in the pedon table to create this documentation as follows:
    a) Table = pedon_text
    b) Data field pedon_text_kind = “correlation notes”
    c) Data field pedon_text_category = “atypical area”
    d) Data field pedon_text_text = (optional) Enter notes about the location of the area, correlation decisions, etc., that allow users to understand the disposition of the pedon.

Explanation: Populating pedons without adequately recording the field correlation decisions results in the loss of an important component of the mapping process. Without those decisions, users cannot differentiate or weigh the significance of various kinds of pedons. For example, in an extensive unit with well defined soils, there may be two or three descriptions of the main component, including the modal pedon for the series and two others that are within the range of the series. An area that is somewhat atypical may eventually be correlated to the same map unit. During the process of studying the atypical area, the mapper may have described four pedons, none being a very good fit for the main component. Unless that is conveyed to a user of the Pedon data, they can conclude that there are seven pedons and most of them don’t fit the named soil. In the user’s perception, the map unit is not well defined or the map unit purity is very low.

4. The project leader or resource soil scientist will ensure that the pedons are linked and located as accurately as possible. In the case of older survey notes, locations may not be possible. However, if the note has a series name or map unit, it has some value as support documentation for the map unit or series, even though it can’t be located.
    - Pedons, if the location is populated, represent points on the ground. Periodically, the locations should be exported and plotted on the soils layer to verify that they are in the correct map unit. When this is done, a site text note can be used to record that the location has been verified. The standard format for this text note is:
        a) Table = site_text
        b) Data field site_text_kind = “miscellaneous notes”
        c) Data field site_text_category = “location checked”
        d) Data field site_text_text = (optional) Enter any useful information about method used or how precise the location is/is not, etc.
    - The site_mapunit_overlap table should be populated with the mapunit symbol. (Refer to the NASIS 5.1 data entry guide for the MLRA 3 Region for detailed instructions on populating this table and the site_area_overlap table.) It should agree with the map unit that plots on the soils layer (above).
    - Pedons can be linked to datamapunit components in the component_pedon table. Where the pedon_type is
        a) “modal pedon for the mapunit”,
        b) “modal pedon for the series”,
        c) or “typical pedon for the series”, this link should be created. Links for other pedon_types are not required, but are preferred. It is the responsibility of the project leader or resource soil scientist to ensure that the links are created accurately.

Figure 1: Example of using a site_text note to document that a pedon location has been checked on the soils layer.

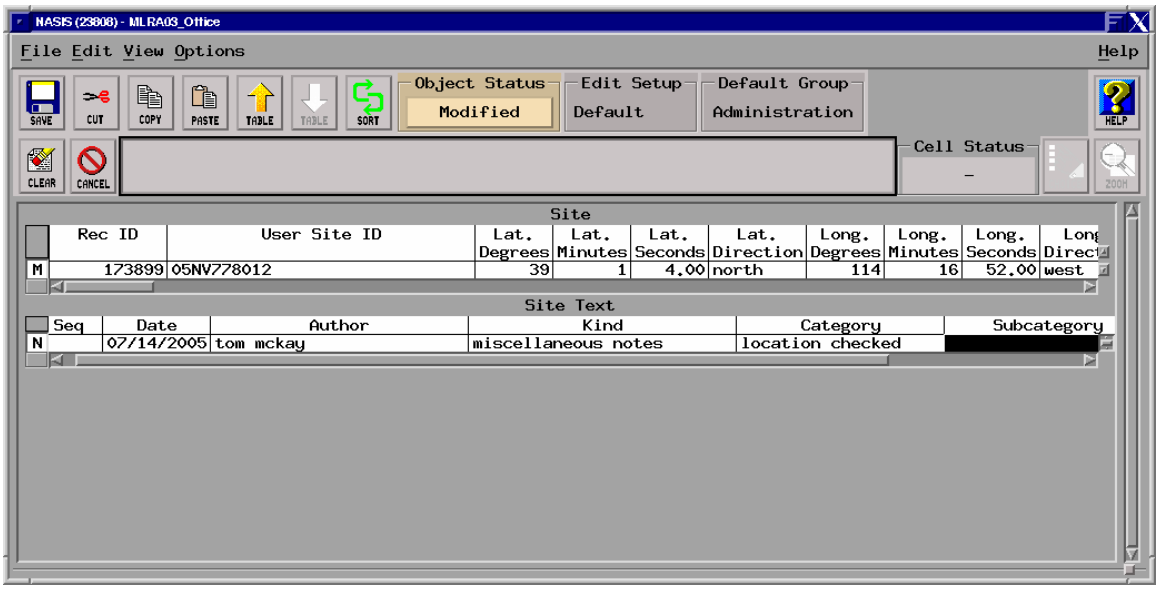
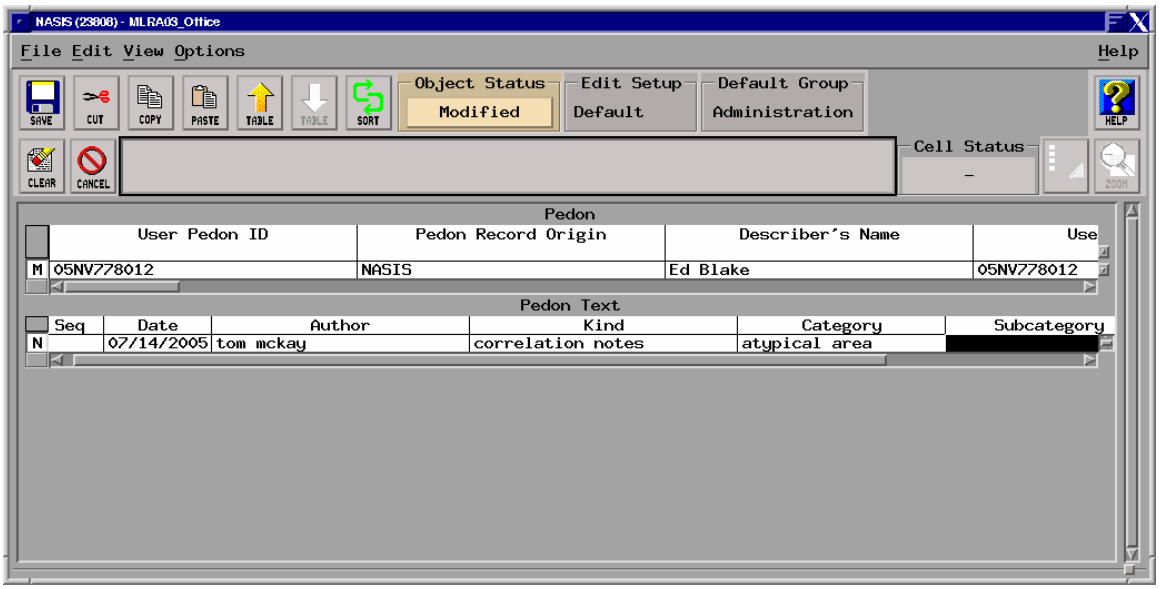
Figure 2: Example of using a pedon_text note to flag a pedon as being in an “atypical” area that is correlated to a map unit that is the best fit for use and management.