

## NRCS HEL Determination Tool – USER GUIDE

The NRCS HEL Determination Tool (tool) automates the offsite Highly Erodible Land Determination process. The tool was developed in accordance with NRCS policy to produce accurate and efficient results. The tool user is required to have knowledge and understanding of the USDA Highly Erodible Land Compliance Policy as described in the National Food Security Act Manual. The user must be able to evaluate the FSA AD-1026 to decide whether a new HEL Determination is required. The user should also follow guidance provided by the local Tool Administrator or the designated point of contact for GIS support, to obtain, load, or configure any required or supporting data. Results from the tool should be scrutinized for accuracy and consistency.

### ADMINISTRATOR SETUP

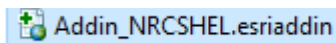
Data requirements and proper installation of the tool are described in the companion Administrator Guide. **The tool is loaded as an “HEL” folder directly to the C:\drive.** Do *NOT* install the “HEL” folder on the Desktop or Network drive.

The tool operates within ArcMap and can be run via ArcToolbox or the “NRCS HEL Determination” toolbar.

### Add the HEL Toolbar

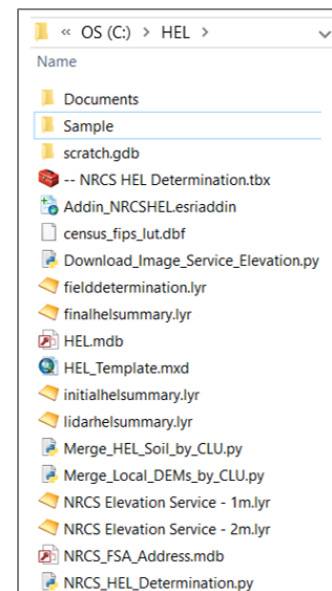
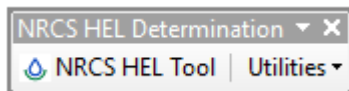
*Before opening ArcMap...*

- Browse to **C:\HEL**.
- Double-click **Addin\_NRCSHEL.esriaddin**.



You only need to do this once.

The Add-in places the NRCS HEL Determination toolbar in ArcMap.



### USER INSTRUCTIONS

#### Open ArcMap

*Option 1* - Use the **HEL\_Template.mxd** template provided and add local customizations. The template is located in the tool's C:\HEL folder. Add local data layers and save the template.

*Option 2* - Use your ArcMap County Template.mxd for conservation planning. Add local data layers required for the tool, including the FSA CLU layer and HEL Frozen Soil layer. Optionally, add a DEM to evaluate the PHEL soil map units.

*Note.* See **Appendix D** of this guide for more details about tool customizations and map template updates that can further streamline use of the tool.

## Run the NRCS HEL Determination Tool

\*\*\* The Tool erases previous outputs every time it is run. Save or print the determination maps and the CPA-026-HELC, transmittal letter and summary reports before running the tool on a new Tract. Consult Appendix A, File Management Recommendations.

In your ArcMap Template,

- **Zoom** to your Tract and **Select** your field(s) as identified in the AD-1026. You can run the tool for one or more fields within the designated Tract.

*Note. Do NOT determine HEL on more than one Tract at a time.*

*Do NOT determine fields that are NOT requested on the AD-1026.*



 Find

The **Definition Query** and the **Find** tool

are two common methods to **Zoom to** and **Select**

field(s) of interest.

- Turn on the HEL Frozen Soil layer and verify that map unit values exist in the selection area.  
*Note. It may be helpful to symbolize the layer by MUHELCL (the HEL class).*
- From the NRCS HEL toolbar, click the **NRCS HEL Tool**.

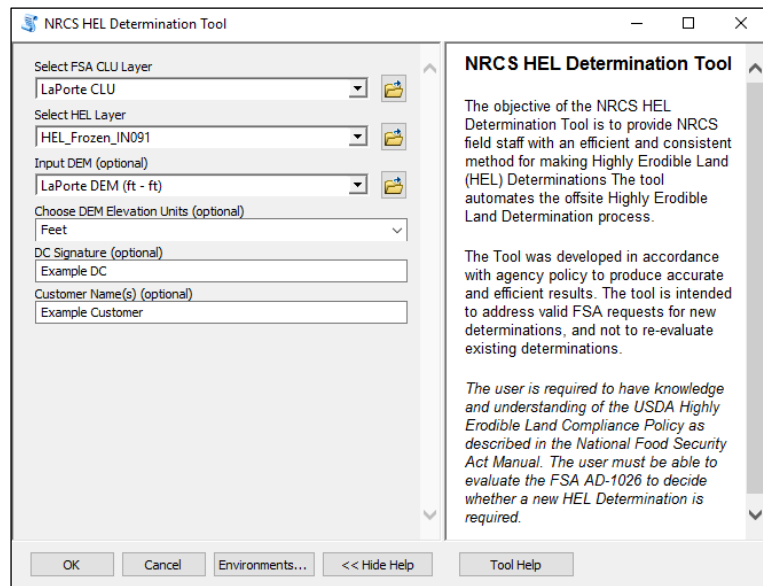


- Use the drop-down boxes to **Select FSA CLU Layer** and **Select HEL Layer**.

*You can also drag and drop the layers from the Table of Contents (TOC).*

*Do NOT browse. The layers MUST already be added in the TOC.*

- Optional: Select the **Input DEM** and **Choose DEM Elevation Units**. These fields are only needed to evaluate PHEL soil map units.
- Optional: Enter the name of the **DC Signature** (Designated Conservationist) to auto-populate the CPA-026-HELCL form and Client Letter.
- Optional: Enter a Customer Name to auto-populate the map layout, the CPA-026-HELCL, and client letter. (Automation of the map layout requires use of the MXD template provided with the tool— see Appendix D for details.)
- Click **OK** to run the tool.



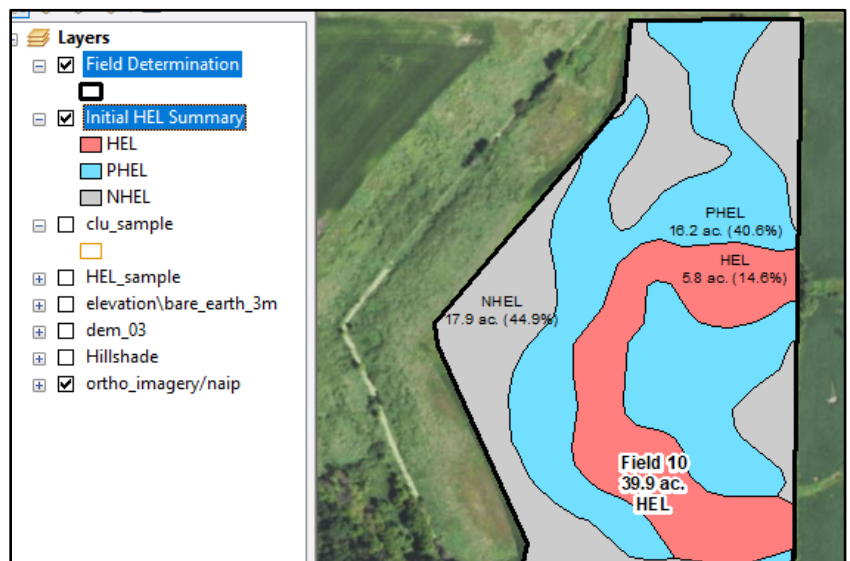
## Create HEL Determination Maps

The tool adds new layers to the ArcMap Table of Contents (TOC) and opens the **Main Switchboard** in *Microsoft Access (Access)*. Minimize *Access* until you are ready to create your CPA-026-HELCL, Client Letter, and Summary Reports. The instructions walk through map creation first.

The tool generates two new layers: **Field Determination** and **Initial HEL Summary**

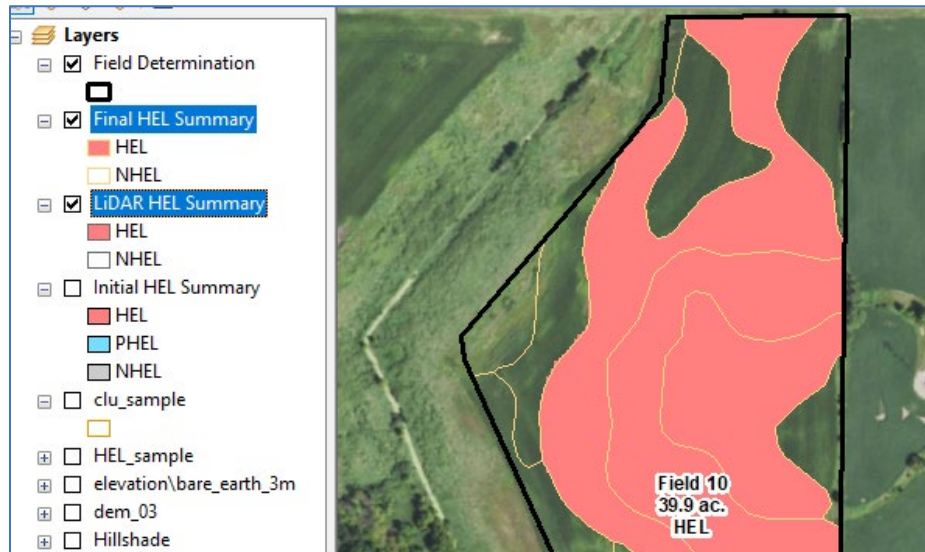
The **Field Determination** layer summarizes the HEL status of a field after calculating whether all the HEL map units (red) account for more than 33.33%, or more than 50 acres of the field.

The **Initial HEL Summary** gives the percentage of HEL, NHEL, and PHEL map units for each field.

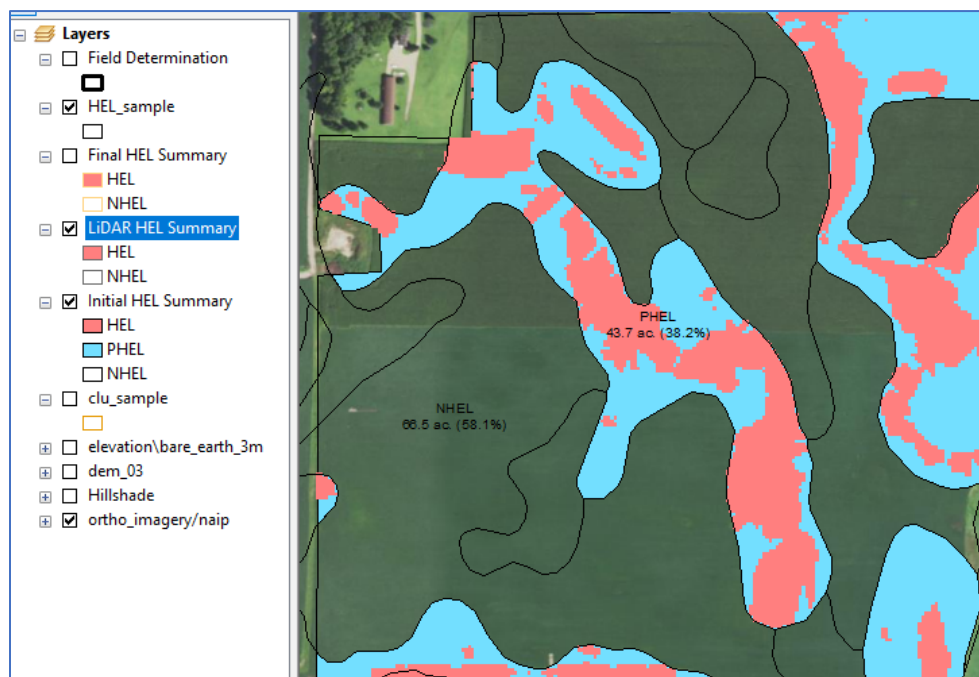


*Note. For the HEL Determination Map, print a map displaying only the **Field Determination** layer.*

If there are PHEL mapunits, the tool generates a total of four layers. The additional two layers are the **LIDAR HEL Summary** and **Final HEL Summary**. These can be printed in separate map layouts for the NRCS case file.

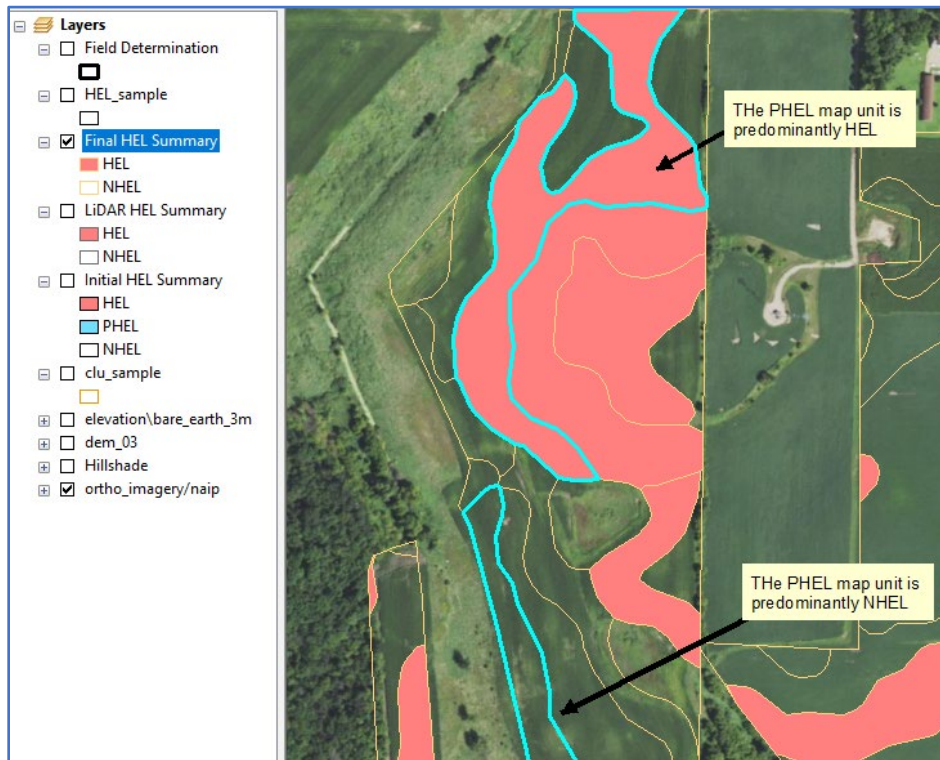


The **LiDAR HEL Summary** displays the HEL (red) portion of the PHEL mapunit. The tool uses the DEM elevation layer to calculate the locations within a PHEL mapunit that meet the HEL criteria  $EI > 8$ . This is an intermediate step in the determination of the PHEL map unit.

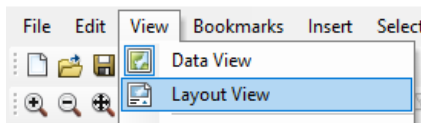




The **Final HEL Summary** shows whether a PHEL map unit is predominantly HEL or NHEL based on the LiDAR HEL summary. If the map unit is predominantly HEL, the entire PHEL map unit displays as red.



- Open layout view and print a map with the **Field Determination** layer displayed. This is the Client's "HEL Determination Map." Repeat to produce additional maps displaying the **Initial HEL Summary**, **LIDAR HEL Summary**, and **Final HEL Summary** layers for the NRCS case file.

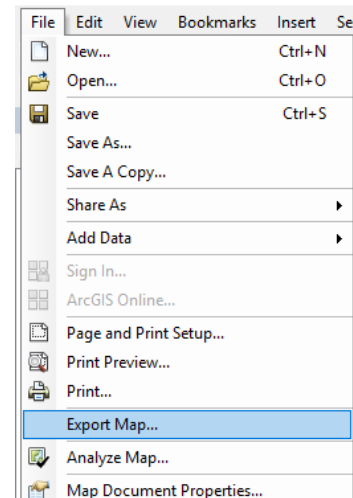


You can **Print to PDF** or use the **File>Export Map** to save a digital copy.

Follow statewide instructions for naming and saving documents. Files should be uploaded regularly on a designated server, Toolkit or Conservation Desktop.

*Note. The map layouts may have some text boxes that need to be double-clicked to update customer or site-specific information after running the tool but before printing or exporting any maps.*

*For more information, consult Appendix A, File Management Recommendations and Appendix B, Sample Map Layouts.*



## FORMS, REPORTS and LETTER

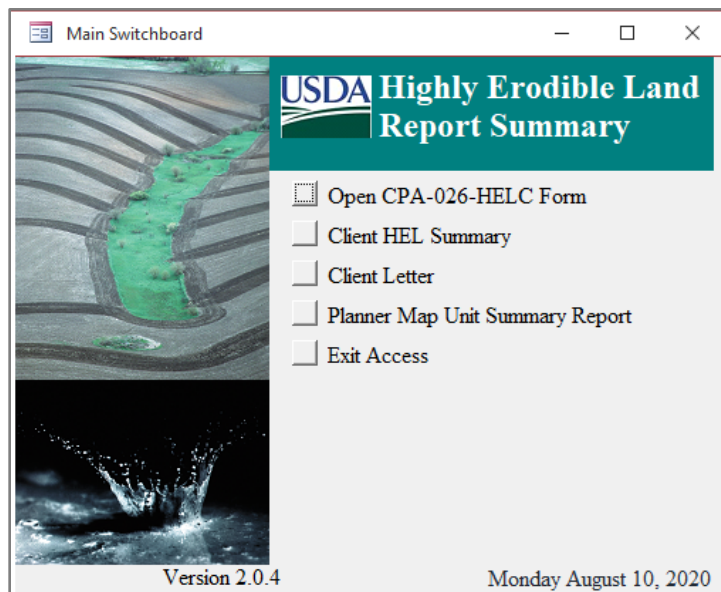
- Once Maps are saved or printed, maximize Access.




*Note: If you accidentally close Access, you can open it again. Browse to C:\HEL\ and open the HEL.mdb*

The **Main Switchboard** allows you to produce Forms, Letters and Report.

The first time that you open Access you may need to click the **Enable all macros** button. Ask your Administrator for assistance changing this setting.



## Generate the CPA-026-HELC using the Main Switchboard

- Select the  **Open CPA-026-HELC Form** button.
- Populate all the fields in the **Data Entry** form, including checkboxes for whether or not HEL map units are present on the tract and for whether the determination was done in the office or field.
- For **Client Name**, enter a name. Refer to the AD-1026 provided by FSA and the SCIMS Producer Data Report.

Request

**NRCS-CPA-026-HEL**  
**Data Entry**

Save and Open CPA-026-HEL (File is saved in S:\PUB\HEL\_Determination)

Save and Open CPA-026-HEL (Choose Location for File Saving)

Close Form

Client name: Test Name

Address: 1234 Test St

City: Indianapolis IN Zip: 45678

Request Form: FSA

Request Date: 8/6/2020

Location County: LaPorte, IN

Admin County: LaPorte, IN

Farm Number: 8201

Tract Number: 12564

Are there highly erodible soil map units on this Tract? ☒ Yes ☐ No

This Determination was completed in: ☒ Office ☐ Field

Remarks:

This Highly Erodible Land determination was conducted offsite using the soil survey. If PHEL soil map units were present, they may have been evaluated using elevation data.

Designated Conservationist:

Field	Sodbust	HEL	Acres
1	No	NHEL	9.27
2	No	NHEL	1.11
3	No	HEL	13.69
4	No	NHEL	13.58
7	No	NHEL	1.77

Record: 1 of 19 No Filter Search

You can edit add or remove records in this table instead of using ArcMap. This will populate the letters or NRCS-CPA-026-HEL with information provided.

Record: 1 of 19 No Filter Search

- Under **Agency or Person Requesting Determination**, select "FSA."

**Agency or Person Requesting Determination:** FSA

- For **Request Date**, enter the date NRCS received the AD-1026 from FSA.
- Enter the **Remarks** and the **Designated Conservationist**.  
Optionally, leave the Designated Conservationist line blank for space for a digital signature in the PDF document.

Request Date: 6/5/2019

Are there highly erodible soil map units on this Tract? ☒ Yes ☐ No

Is a soil survey available? ☒ Yes ☐ No

This Determination was completed in: ☒ Office ☐ Field

It was determined that the land is: ☒ HEL ☐ NHEL

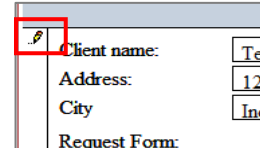
Remarks:

Today

- The **Data Entry table** displays the fields that will appear on the NRCS-CPA-026-HEL. You may edit or delete rows and manually set **Sodbust** to "Yes" or "No", as needed. Such refinements should be made before generating the form.

COUNTYCD	FARM	TRACT	Field	Sodbust	HEL	Acres	Date
161	567	1234	23	No	HEL	21.3	6/21/2019
161	567	1234	10	No	HEL	39.9	6/21/2019
161	567	1234	19	No	NHEL	21.6	6/21/2019
*							

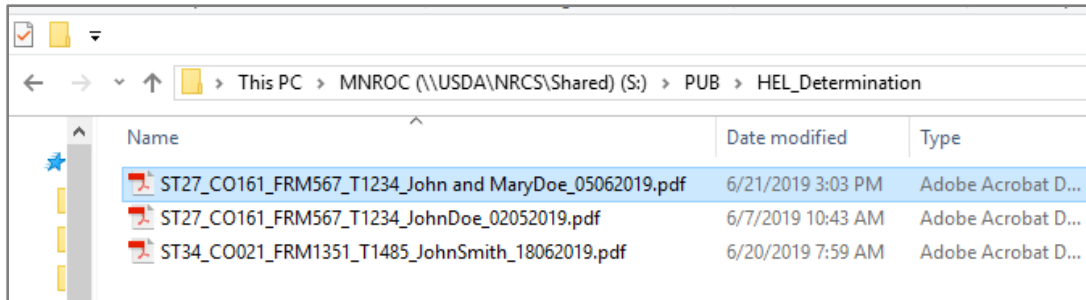
- If you make any changes on the data entry form, you may need to click the “Pencil” icon that appears on the left-side of the window before generating your form, otherwise the changes won’t save and appear on your products.



Client name: Te  
Address: 12  
City: Inc  
Request Form:

- Click one of the **Save and Open...** buttons to generate the completed NRCS-CPA-026-HELC. The user will either accept the default file name and location or navigate to a different directory and enter a new name for the output file.

**Save and Open CPA-026-HELC  
(Choose Location for File  
Saving)**



*Consult Appendix A for File Management Recommendations.*

Print the NRCS-CPA-026-HELC and click the **Close Form** button.

**Close Form**


United States Department of Agriculture Natural Resources Conservation Service		NRCS-CPA-026-HELC 2020	
<b>HIGHLY ERODIBLE LAND (HEL) DETERMINATION</b>			
1. Name:	Test Names		3. Location County: LaPorte, IN
2. Address:	1234 Test St Indianapolis, IN 45678		4. Admin County: LaPorte, IN
5. Request Form:	FSA	7. Farm Number:	8201
6. Request Date:	8/6/2020	8. Tract Number:	12564
9. Are there HEL soil map units on this Tract? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If a field is not listed, no determination was made at this time. Contact the Farm Service Agency for previously determined HEL status of fields not listed below. In order to be eligible for most USDA program benefits, a person must be implementing a conservation plan or using an approved conservation system on all HEL fields. Fields that are not highly erodible (NHEL) do not require implementation of an approved conservation system.			
Field(s)	HEL/NHEL	Sodbust (Y/N)	Field Acreage
30	HEL	No	1.30
22	NHEL	No	0.06

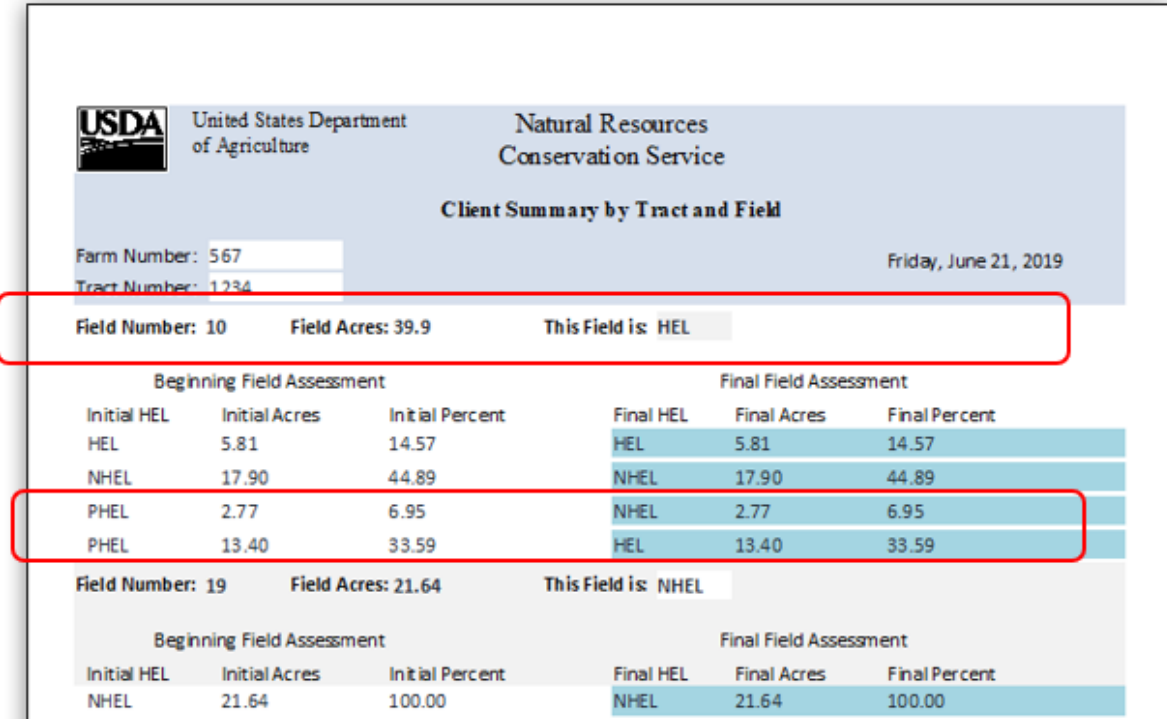


## Generate the Client HEL Summary using the Main Switchboard

The **Client HEL Summary** provides a breakdown of the **Initial HEL** and **Final HEL** map unit values for each field evaluated by the tool. The Initial and Final HEL values will be the same unless there were PHEL map units in the fields.

- Click the **Client HEL Summary** button.  
Print a copy to include with the Client's copy of the HEL Determination Letter.

 **Client HEL Summary**



**USDA** United States Department of Agriculture  
Natural Resources Conservation Service

**Client Summary by Tract and Field**

Farm Number: 567  
Tract Number: 1234  
Friday, June 21, 2019

**Field Number: 10      Field Acres: 39.9      This Field is: HEL**

Beginning Field Assessment			Final Field Assessment		
Initial HEL	Initial Acres	Initial Percent	Final HEL	Final Acres	Final Percent
HEL	5.81	14.57	HEL	5.81	14.57
NHEL	17.90	44.89	NHEL	17.90	44.89
PHEL	2.77	6.95	NHEL	2.77	6.95
PHEL	13.40	33.59	HEL	13.40	33.59

**Field Number: 19      Field Acres: 21.64      This Field is: NHEL**

Beginning Field Assessment			Final Field Assessment		
Initial HEL	Initial Acres	Initial Percent	Final HEL	Final Acres	Final Percent
NHEL	21.64	100.00	NHEL	21.64	100.00

*In this example, the PHEL map unit of 2.77 ac. changed following the LiDAR analysis to a predominantly NHEL mapunit. The PHEL map unit of 13.40 ac. changed to predominantly HEL.*


## Generate the Client Letter using the Main Switchboard

**The Client Letter meets the National Standard and should not be altered.** This official transmittal letter was written to communicate Adverse and Non-adverse information and simplifies the Appeals language. The letter only needs certified mail if HEL is present on the determination.

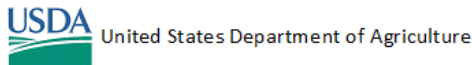
- Click the **Client Letter** button.

 **Client Letter**

*Note. If the NRCS or FSA Service Center mailing address is incorrect, open the*

*C:\HEL\NRCS\_FSA\_Address.mdb.  NRCS\_FSA\_Address.mdb Make corrections as needed. Contact the state Tool Administrator to inform them of the changes.*

Page one of the Client Letter.



Natural Resources Conservation Service  
100 LEGACY PLAZA W,  
LaPorte, IN 46350-5298  
Telephone: (219) 362-2820  
Fax: (855) 458-8773

Friday, August 7, 2020

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
(When HEL Present)**

Test Names  
1234 Test St  
Indianapolis, IN 45678

**SUBJECT: Highly Erodible Land (HEL) Determination**

**Tract: 12564**

This is to notify you that as of the date of this letter, the Natural Resources Conservation Service (NRCS) has made a preliminary technical determination on the tract(s) listed above.

Fields designated as Highly Erodible Land (HEL) are identified on the attached NRCS-CPA-026-HEL C form. HEL fields are highly erodible because the highly erodible soil map units constitute 33.3 percent or more of the acreage in those fields or contain highly erodible soils equal to 50 or more acres per field. Fields not meeting this criteria are not highly erodible land (NHEL). The attached map and summary report provide the basis for this determination.

This determination is part of the conservation provisions of the Food Security Act of 1985, as amended, and was made in response to our receipt of the Farm Service Agency (FSA) form AD-1026, Highly Erodible Land Conservation (HEL C) and Wetland Conservation (WC) Certification. In order to maintain USDA program eligibility, you will need to operate HEL fields in accordance with an approved conservation system. You may contact the NRCS for assistance with the development and implementation of an approved conservation plan which meets this requirement. NHEL fields do not require implementation of an approved conservation system.

The 2014 Farm Bill connected producer eligibility for Federal crop insurance premium subsidy to compliance with the HEL provisions. Previous USDA participants who are currently not in compliance with the HEL provisions have two reinsurance years to develop and comply with an NRCS-approved conservation plan to remain eligible for Federal crop insurance premium subsidy. Producers who are subject to HEL compliance for the first time due to the 2014 Farm Bill have five reinsurance years to develop and comply with an NRCS-approved conservation plan when producing an agricultural commodity on HEL. If you are unsure about your status as a previous USDA participant, please inquire at your local FSA office.

If you made a request for a wetland determination, it will be issued separately. If you plan to conduct any activities that may disturb a wetland, please contact this office well in advance so the impacts may be evaluated along with the potential effect on your USDA program eligibility.

**If you agree with this preliminary technical determination, it will become final 30 calendar days after you receive this notification, and no further action is required.**

If you do not agree with this preliminary technical determination, you may request a field visit or mediation within thirty days of receipt of this letter. Your request should be made in writing to the above office address and should state clearly what you are appealing and why you believe the determination is erroneous. For further information on the appeals process, please see the attached information sheet. If no reconsideration field visit or mediation is requested within thirty days of receipt of this letter, this preliminary technical determination will become a final technical determination.

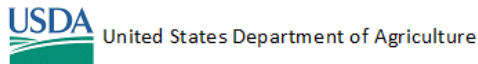
If you are the owner of this tract of land and have a tenant, I urge you to discuss this letter and the accompanying NRCS-CPA-026-HEL C with the tenant. Likewise, if you are the tenant of this tract of land, I urge you to discuss this letter with the owner.

Sincerely,

Designated Conservationist

NRCS-CPA-026-HEL C  
HEL Determination Map  
HEL Determination Summary Report  
Cc: Farm Service Agency

Page two contains official Appeals language.



### - Appeals Information -

This preliminary technical determination will become final 30 days after your receipt of this letter, unless you request either of the following options:

1. You may request a reconsideration field visit for NRCS to review the basis for the preliminary technical determination with you and gather additional information concerning the preliminary determination. This request must be in writing and addressed to the Designated Conservationist who made this determination.
2. Mediation may be used to assist you and NRCS in trying to reach a mutually agreeable resolution or settlement regarding this preliminary technical determination. Through mediation, the parties have the opportunity to work together with the assistance of the mediator to improve communications, understand the relevant issues, develop and explore alternatives, and reach a mutually satisfactory resolution. In order to request mediation, the request must be in writing and addressed to the Designated Conservationist who made this determination.

If you choose a reconsideration field visit or mediation, a final technical determination will be issued at the conclusion of either process. If an appeal is not requested, this preliminary determination becomes a final technical determination 30 days after your receipt of this letter.

The final technical determination, whether as a result of the expiration of the 30 day period following receipt of this preliminary technical determination or receipt of a final determination after reconsideration or mediation, may be appealed to the Farm Service Agency County Committee or the National Appeals Division within 30 days of receipt at the address below.

LaPorte FSA County Committee  
100 LEGACY PLAZA W,  
LaPorte, Indiana 46350-5298

Telephone: (219) 362-2820  
Fax: (855) 381-1776

Or

National Appeals Division  
Box 68806  
Indianapolis, Indiana 46268-0806


Toll Free Phone: (800) 541- 0457  
TTY: (800) 791-3222  
Fax: (317) 875-9674


A request for any of the above appeal options must be in writing and should state clearly what you are appealing and why you believe the determination is erroneous.

## Generate the Planner Map Unit Summary Report using the Main Switchboard

The Planner Map Unit Summary Report shows the final HEL rating for each frozen map within each field. This detailed report is for the NRCS case file only.

- Click the **Planner Map Unit Summary Report** button.

 **Planner Map Unit Summary Report**



United States Department  
of Agriculture

Natural Resources  
Conservation Service

Map Unit Summary Report by Tract and Field

Farm Numbe 5518

Tract Number: 1763

Wednesday, July 24, 2019

Field Number: 5

Field Acres: 5.13

This Field is: NHEL

Historical Rating	Map Unit Symbol	Map Unit Final HEL Rating	Acres in Field	Percent of Field
HEL	MaD2	HEL	0.90	17.51
NHEL	MuB	NHEL	0.02	0.44
NHEL	Hx	NHEL	4.21	82.05

Field Number: 6

Field Acres: 0.20


This Field is: NHEL

Historical Rating	Map Unit Symbol	Map Unit Final HEL Rating	Acres in Field	Percent of Field
NHEL	Hx	NHEL	0.03	16.13
NHEL	MuB	NHEL	0.17	83.87

The HEL Determination is complete.

- Click the **Exit Access** button.

 **Exit Access**

To Begin a new HEL Determination, simply Zoom  to your next Tract, select the field(s) as identified in the AD-1026, and run the tool again.

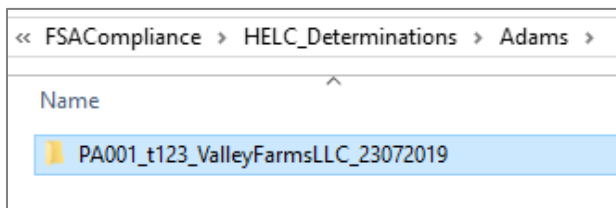
## Appendix A – File Management Recommendations

The HEL Determination Tool overwrites itself every time the tool runs. The user must print or save maps, letters and reports before running a determination on a new tract.

It is recommended to follow a statewide file management system for naming and saving the HEL determination documents. This is just one suggested setup for the HEL Determination directory structure.

Create a folder hierarchy by county to organize completed determinations by tract. Individual project folders and files should contain county, tract, client name, and date information. Example, ***countyFIPS\_tractnumbr\_clientName\_date***.

Tip. Incorporating dates into file names results in those files being sortable actual calendar order if you use the format <yyyy-mm-dd>, such as “2019-08-23” or “20190823”.



Files may be uploaded to individual Document Management System (DMS) archives associated with clients and plans in Conservation Desktop.

Files should also be uploaded regularly in accordance with any digital filing systems that may be implemented at your Local, Team, Area, or State Office levels.



## Appendix B – Sample Map Layouts

The Map with the **Field Determination** Layer is the **only map given to the Client**, along with forms and reports. The labels include Tract, Field, Total Field Acres, and a fields HEL/NHEL status. These would be the same as labels found on official FSA maps. The map layout format should conform to the Conservation Desktop map templates as shown below.

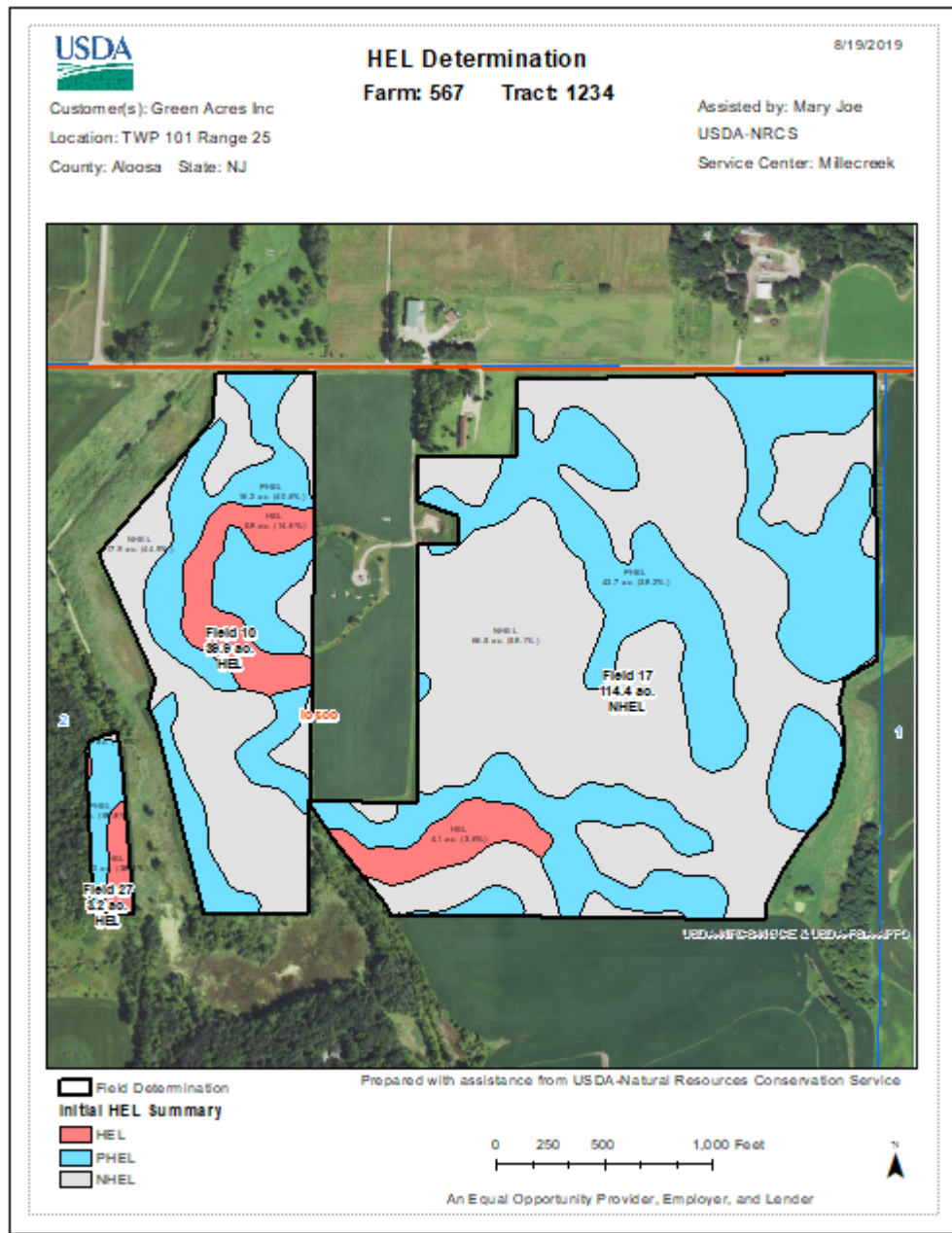


*Preferred Map Layout format for the HEL Determination Map.*

## Appendix B – Sample Map Layouts (continued)

The following sample map layouts serve as supporting documentation for how the determination was made and they should be maintained in the NRCS case file. Save separate maps to display each layer created by the tool.

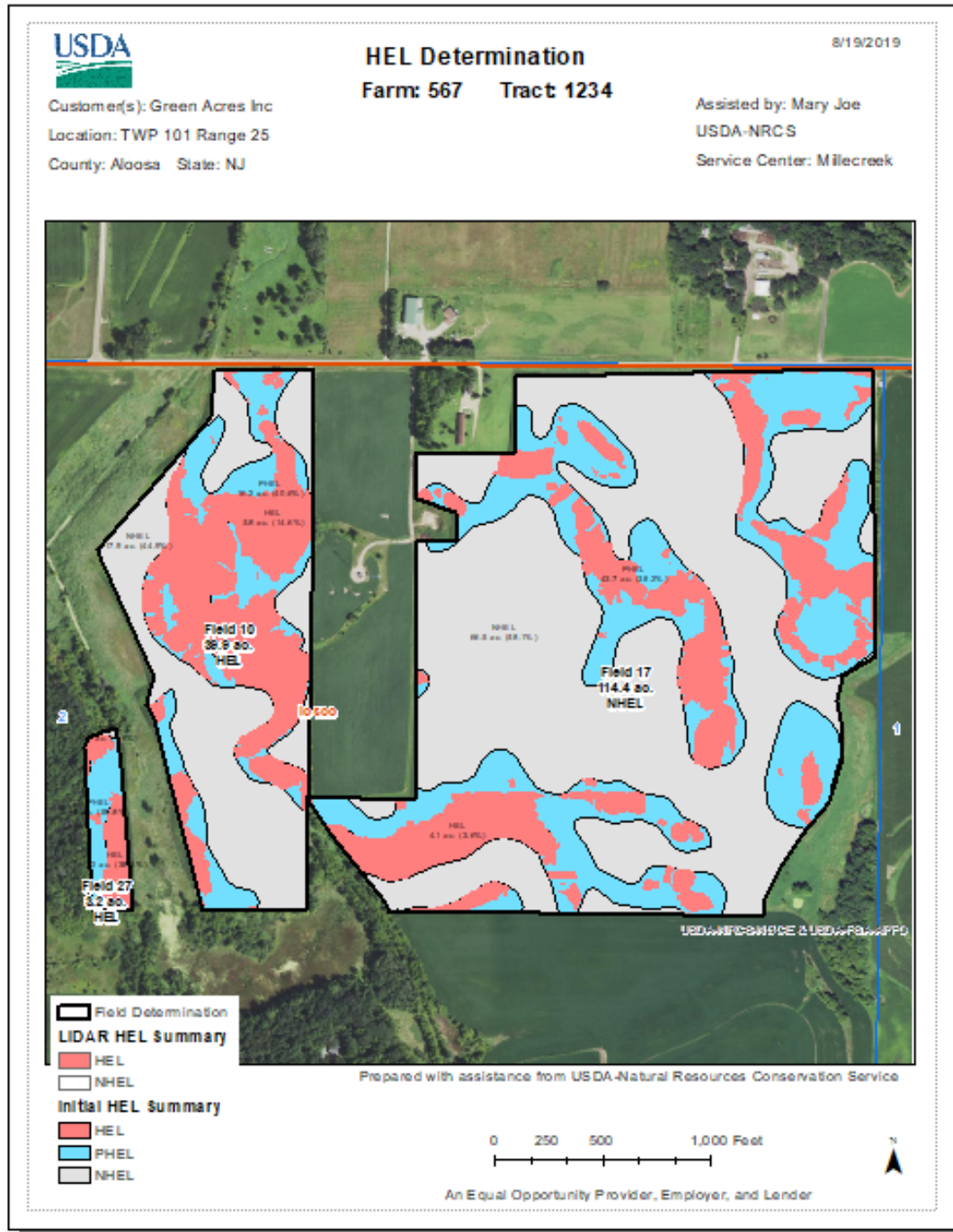
### Initial HEL Summary Map



*This layer displays the initial map unit HEL class (MUHELCL) for each frozen map units.*

## Appendix B – Sample Map Layouts (continued)

### LIDAR HEL Summary Map



*This layer displays the HEL (red) portion of the PHEL map unit. The tool uses the DEM elevation layer provided by the user to calculate the locations within a PHEL mapunit that meet the HEL criteria  $EI > 8$ .*



## Appendix B – Sample Map Layouts (continued)

### Final HEL Summary Map



*This layer shows each PHEL map unit is predominantly HEL or NHEL based on the LiDAR HEL Summary. If the map unit is predominantly HEL, the entire PHEL map unit displays as red. The map labels are for the Frozen soils map units, and not the current SSURGO.*

## Appendix C – Utilities

### Download DEM from NRCS Service

*This is an optional tool to obtain a DEM for use in the HEL Tool from the NRCS elevation web services.*

NRCS hosts elevation web service data suitable for use with this tool at:

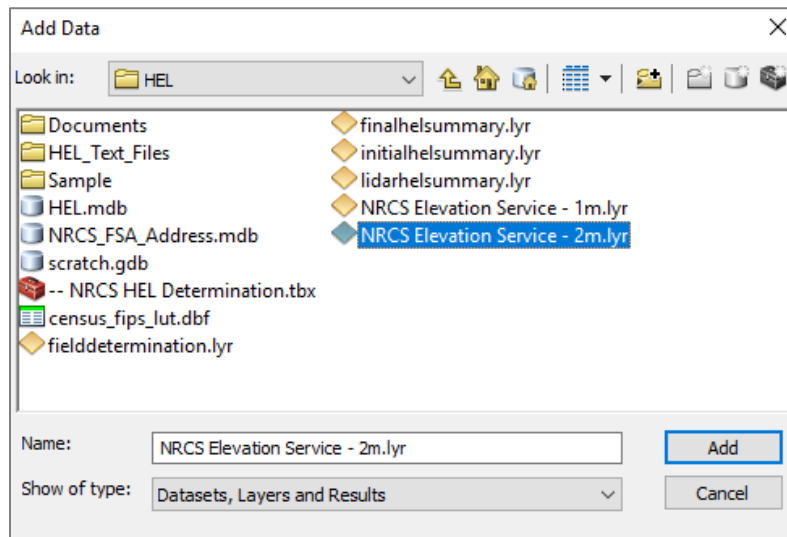
<https://geodata.sc.egov.usda.gov/arcgis/services>

*Note. This link is not a web page, but an ArcMap server address.*

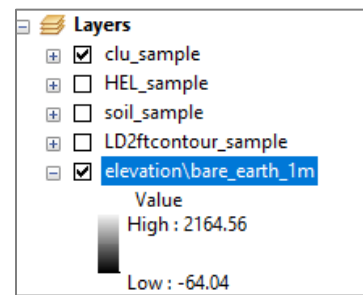
The recommended NRCS elevation web service layers are the Bare Earth 1m and Bare Earth 2m, both of which store vertical data values in meters. Layer files have been created and deployed within the tool for users to easily add either of these services directly to any map.

To add this data:

- Click Add Data. 
- Navigate to C:\HEL.
- Select and add the NRCS Elevation Service – 1m (or 2m or 3m) layer file.



- Turn on the layer and view it to see if it has coverage for your area. Remove it and try the other one if it does not. If neither layer has coverage of your site, you will need to seek out local elevation data options from your GIS support staff.
- Save your map.



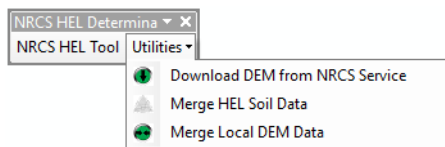


## Appendix C – Utilities (continued)

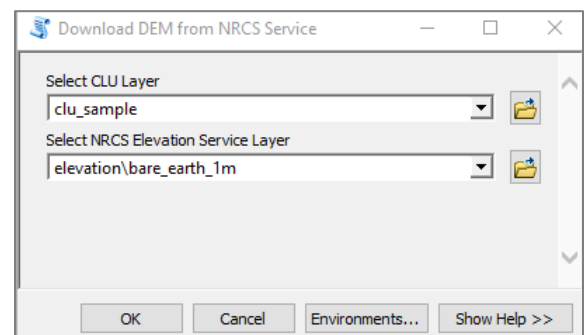
### Download DEM from NRCS Service

Once the Elevation Service is loaded in the ArcMap Table of Contents you are ready to use the Utility Tool.

- In the NRCS HEL Determination Toolbar, expand **Utilities** and select **Download DEM from NRCS Service**.

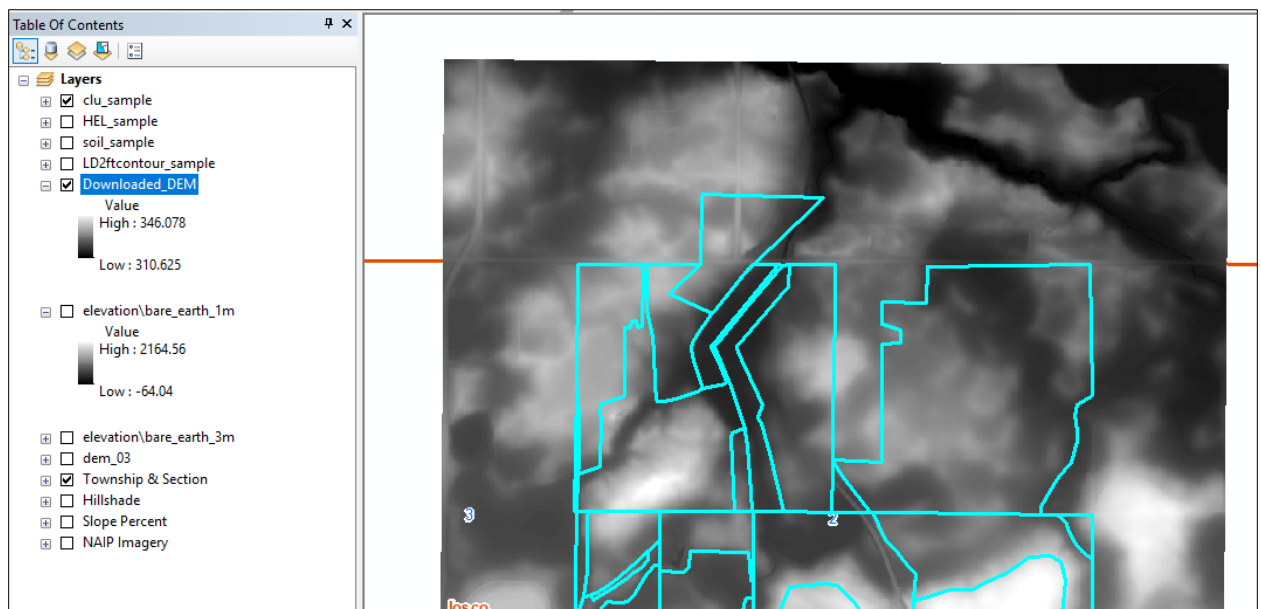


- Make sure the desired tracts are selected in ArcMap and then **Select CLU layer** from the drop-down list.
- Select the DEM from the web service.
- Click **OK** to run the utility.



*The clipped elevation dataset should display in under 2 minutes. Larger tracts or slower network performance may increase the processing time. Cancel and seek other data options if it takes more than 5 minutes.*

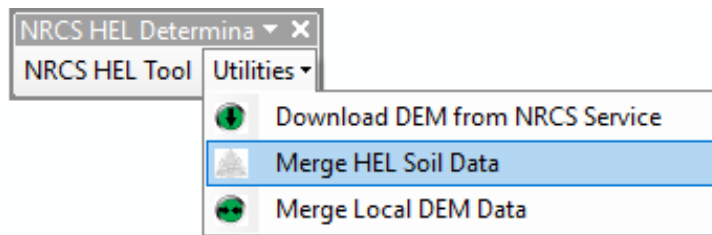
The tool verifies the DEM resolution and, if necessary, converts the output to 3-meters. The resulting **Downloaded\_DEM** can be now selected as the input layer for the HEL Determination Tool on the site.



## Appendix C – Utilities (continued)

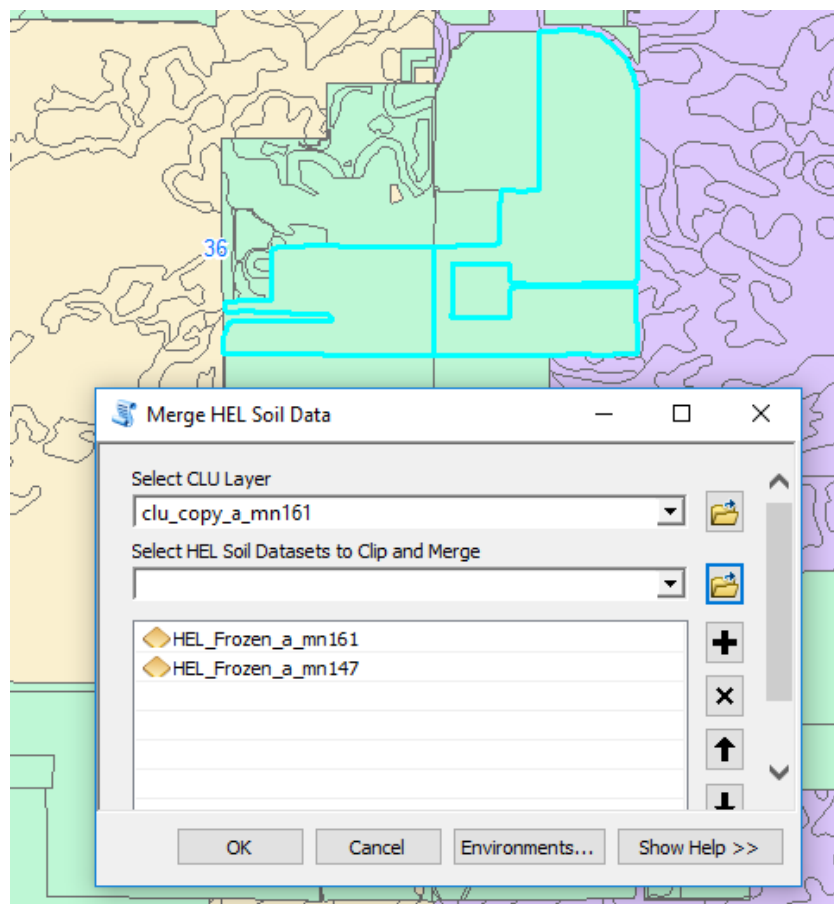
### Merge HEL Soil Data

*Use this Utility when the tract boundary extends across multiple county HEL layers. Combine the HEL layers prior to running the HEL Determination tool.*



- Select the CLU layer from the drop-down list.  
(Fields within the tract must be selected.)
- Select multiple HEL frozen layers.  
(The layers must be in the ArcMap Table of Contents.)
- Click **OK** to run the utility.

*The merged HEL layer should display in under a minute. Merging many datasets and slower network performance may increase the processing time.*

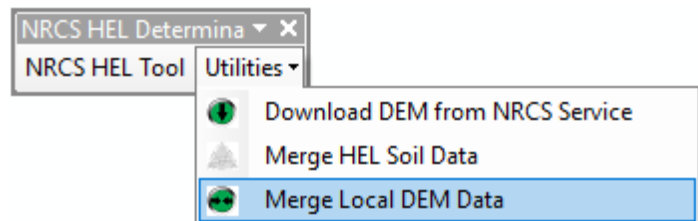


## Appendix C – Utilities (continued)

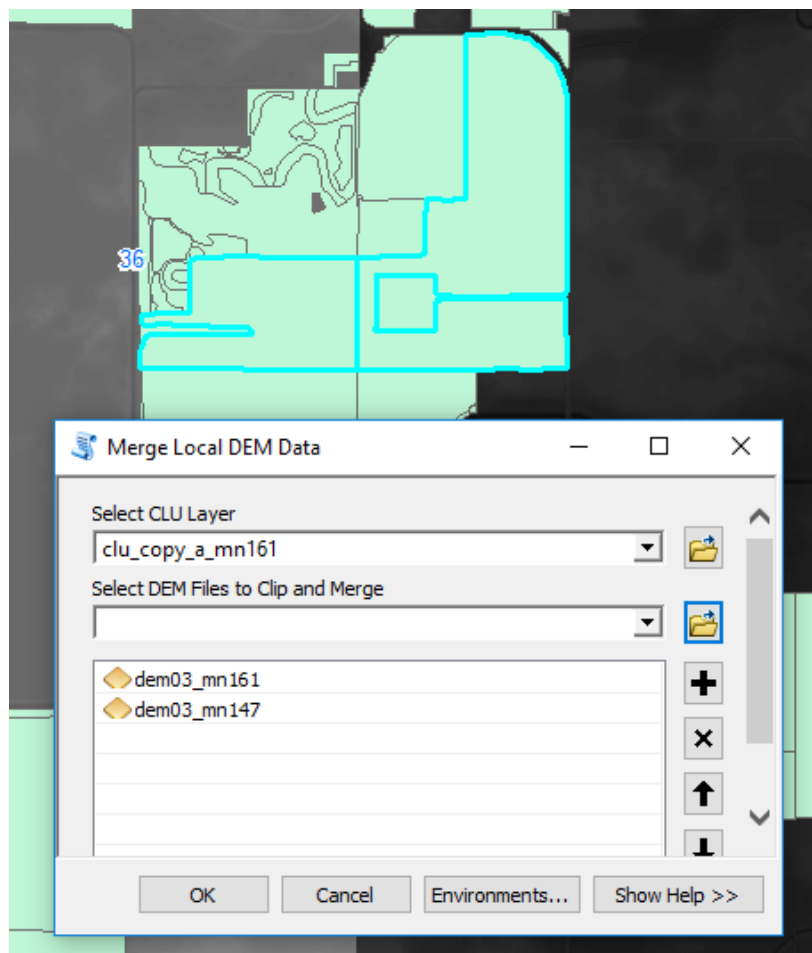
### Merge Local DEM Data

*Use this Utility when there are PHEL map units and the tract boundary crosses multiple DEM layers. Combine the DEM layers prior to running the HEL Determination Tool.*

- Select the CLU layer from the drop-down list.  
(Fields within the tract must be selected.)
- Select multiple DEM layers.  
(The layers must be in the ArcMap Table of Contents.)
- Click **OK** to run the utility.



*The time required to run the merge will vary based on the number of layers to merge and the network performance. In most cases, it will take less than a minute to finish.*



## Appendix D – Customizing Templates and Tools

Tool users have the ability to customize some of the tool parameters and map templates to achieve more efficient use at the local or county level. The tool will run without these additional customizations, but they can be helpful features to enable.

### Creating a Custom Map Template

The tool comes with a blank template in the **C:\HEL** installation folder, named **HEL\_Template.mxd**. It has a simple map layout that is formatted and ready for use with the tool. The tool will automatically populate the *Farm Number*, *Tract Number*, *County and State of the Tract*, and the *Customer Name* in the map layout header.

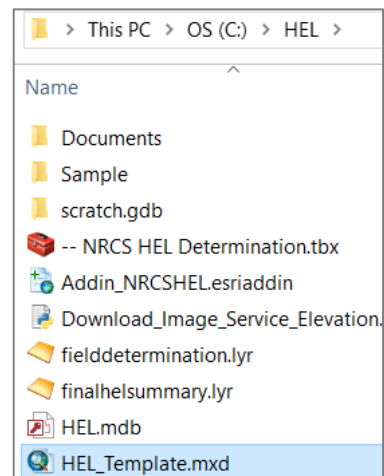
*Note. If you don't use or import this template, fields will not auto-populate in the map layout. If your state provides a different template, you should modify that template instead of the HEL\_Template.mxd. Some of the instructions may not be applicable to your state's template.*

The following sub-sections describe three ways you can use map templates with the tool – 1) Build a Template, 2) Import the Blank Template, or 3) Run with Any Template.

### Build a Template

This section provides instructions to build a local county template for the tool using the **HEL\_Template.mxd** file provided with the download.

- Close any active ArcMap projects.
- Browse to **C:\HEL** and double-click the **HEL\_Template.mxd** file (or your state's customized HEL mxd file) to open it.

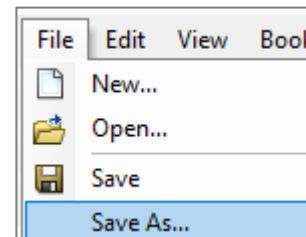


Tool

- Click the **File** menu, and then click **Save As...**

Browse to a location and name the template. (Example: "LaPorte County HEL Template").

*Tip. For optimal performance, the ArcMap templates should be saved to a designated location on your C:\drive.*

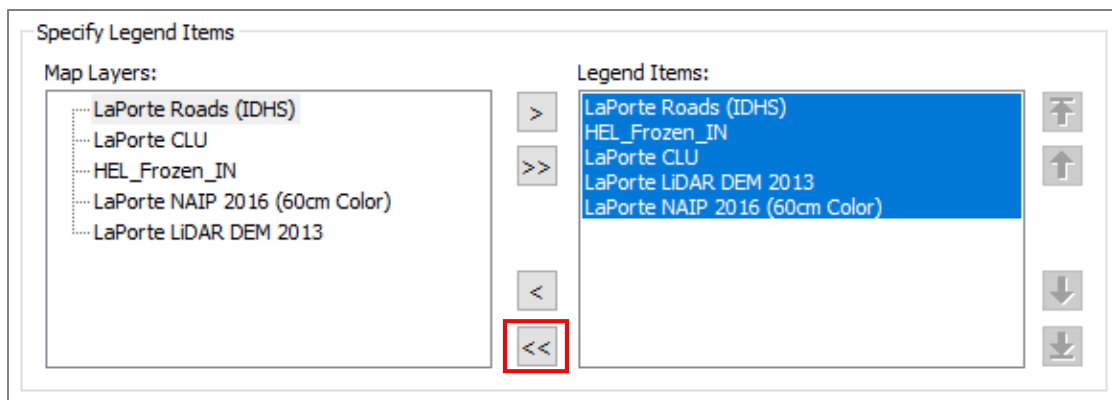


- Add local layers to the template. Use the Add Data button in ArcMap. It is recommended to add the following layers in the order listed below:
  - CLU Layer
  - HEL Frozen Soils Layer (provided by state GIS support staff)
  - DEM (optional – only needed if you work with PHEL frozen soils)
  - Other Optional Layers (Imagery, Roads, PLSS, etc.)



Turn layers on or off, as needed.

- **Go to Layout View**
- **Set the Legend Properties**
  - **Double-click** on the Legend.
  - Click the **General** tab of the Legend Properties window. Under **Legend Items**, select and remove all the items from the list on the right side of the window.
  - Then click **Apply** and **OK** to close the window.



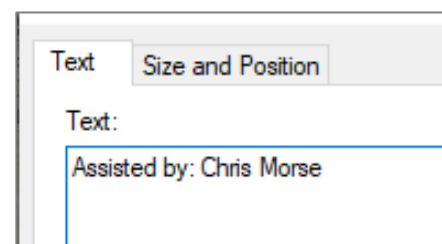
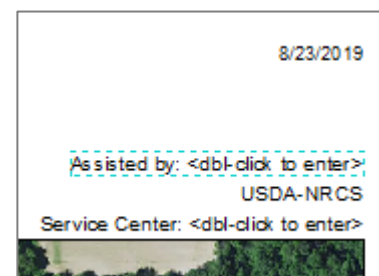
- **Set the “Assisted by: text box”** at the top-right of the map.

**Double-click** the “Assisted by: text box” (if you started with the *HEL\_Template.mxd* file).

**Change the text** to “Assisted by: <name>”.

Click **OK** to close the text box.

*Use this setting if the designated staff member will always be the same. Otherwise update this information each time you run the tool.*





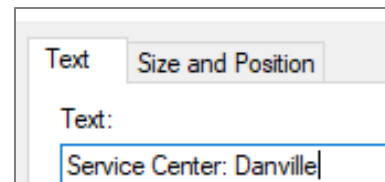
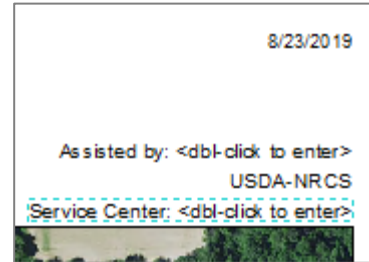
- **Set the “Service Center:” text box** at the top-right of the map.

**Double-click** the “Service Center: text box” (if you started with the *HEL\_Template.mxd* file).

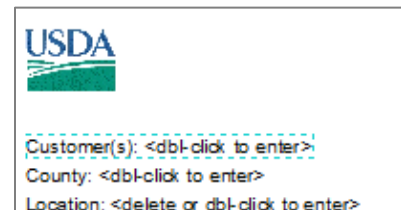
**Change the text** to “Service Center: <name>”.

Click **OK** to close the text box.

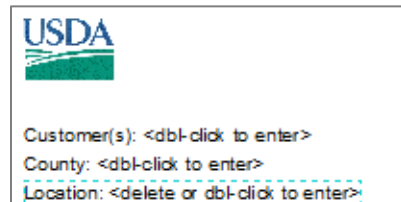
*Use this setting if the Service Center will always be the same. Otherwise update this information each time you run the tool.*



- **Managing the “Customer(s):” text box** – This field is updated by the tool parameters, or by directly editing the text box in the map layout after running the tool. *It does not need to be modified while building your template.*



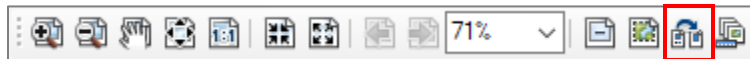
- **Managing the “Location:” text box** – This field is only needed if you define the location of each tract through an additional description such as a Township, Range, and Section. If you intend to use this box, leave it as is and update it each time you run the tool. Otherwise, it is OK to delete it or move it off the map page. Another alternative to try to keep this information up to date better is to remove this box from the layout (delete or move it off the page), and use a layer in your template to display the location grid used by your state, if any, and its labels.
- **Managing the “Farm”, “Tract”, and “County” text boxes** – These fields are automated if the map layout is created from the *HEL\_Template.mxd* file. They will update each time the tool is run.
- **Save and exit** the map template.



## Import the Blank Template

This section provides instructions to build a local county template for the tool by importing the map layout from the **HEL\_Template.mxd** file provided with the download to an existing project. Follow these instructions to enable the automatic features of the tool's layout in your existing local ArcMap templates. This method will also restore the tool's automatic map layout functions if they stop working or if updates to the tool are released in the future.

- Close any active ArcMap projects.
- Open your existing local map template (**.mxd**) file.
- Click the **File** menu, and then click **Save As...**
- Save a new version of the local template and include "HEL" in the name. (Example: "LaPorte County HEL Template"). **DO NOT** overwrite the existing local template file.
- Switch to Layout View in the map.
- On the **Layout Toolbar**, click the "Change Layout" button.



- Navigate to **C:\HEL**.
- Select and open the **HEL\_Template.mxd** file.
- Accept the defaults in the next window and click **Finish**.
- Confirm that your template has all the data layers needed for the HEL tool (see *bullet 4* in the **Build a Template** section above).
- Continue with the remaining the instructions following the *bullet 4* in the **Build a Template** section above to finish customizing the layout.
- Save the map template.

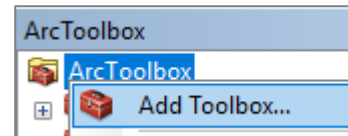
## Run with Any Template

The tool can be run from any ArcMap template if the **HEL Toolbar** described on page 1 of this guide is present in your map project along with the required data layers. Using this method, the map layout may appear differently than examples in this guide and the auto-population of some of the map headers will not function. The user will need to manually enter the Farm, Tract, County, and Customer Name fields in the map layout.

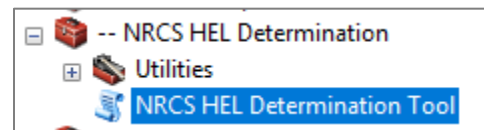
## Customizing Tool Parameters

This section provides steps to customize the tool parameters if you always use the same DC Signature name. These customizations can only be made using ArcToolbox, but they will carry through to the HEL Toolbar. *Do NOT change this setting if the DC Signature cannot be defaulted to a single person for every tract that you would run in the tool.*

- Open any ArcMap project and then open ArcToolbox.
- Add the NRCS HEL Determination toolbox, if it is not already in your list of toolboxes.
  - Right-click the ArcToolbox header and select **Add Toolbox**
  - Navigate to **C:\HEL**
  - Select and add the **NRCS HEL Determination toolbox** file.



- Expand the NRCS HEL Determination toolbox.
- Right-click the NRCS HEL Determination Tool script and select **Properties**.



- Go to the **Parameters** tab.
- In the top half of the window, highlight the **DC Signature** entry.
- In the bottom half of the window, enter a name for the DC Signature in the **Default** box.
 

*Note. To clear a name from the default, highlight the name and press Backspace on your keyboard.*
- Click **Apply** and **OK**.
- Close ArcMap. You do not need to save.

The dialog box has tabs: General, Source, Parameters, Validation, Help. The Parameters tab is active.

Display Name	Data Type
Select FSA CLU Layer	Feature Layer
Select HEL Layer	Feature Layer
Input DEM	Raster Layer
Choose DEM Elevation	String
<b>DC Signature</b>	<b>String</b>
Customer Name(s)	String

Click any parameter above to see its properties below.

Parameter Properties

Property	Value
Type	Optional
Direction	Input
Multivalue	No
<b>Default</b>	<b>Chris Morse</b>
Environment	
Filter	None
Obtained from	

To add a new parameter, type the name into an empty row in the name column, click in the Data Type column to choose a data type, then edit the Parameter Properties.

Buttons: OK, Cancel, Apply