EPA Terminology Services

EDITOR'S TRAINING MANUAL

Data Management Services Division
EPA / Office of Mission Support/Office of Information Management

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EPA TERMINOLOGY SERVICES

Training Overview

The EPA Terminology Services is a system to create, modify, manage and publish terminology systems, including glossaries, classification schemes, taxonomies, and thesauri.

This training manual consists of the following main sections:

> ➢ An Introduction to EPA Terminology Services
> ➢ Getting Started – Logging on, Selecting a Project and Searching
> ➢ Creating and Modifying Glossaries & Lists of Terms and Definitions
> ➢ Creating and Modifying Taxonomies and Other Hierarchies
> ➢ Publishing a Vocabulary
> ➢ Setting Up a New Vocabulary

The training begins with a general introduction to the EPA Terminology Services. This is followed by two modules—one for vocabularies that are simple terms and definitions and the other for vocabularies that have hierarchical structures. You may work through both components or focus on the vocabulary type in which you are most interested.

Each training module provides step-by-step instructions on performing a series of functions.

> ➢ Steps that you should perform are presented in **bold**.
> ➢ Strings to be entered as exact input are presented in <u>Underline</u>.
> ➢ The system response is presented or described in *italics*.
> ➢ Explanatory text is in regular font.

Introduction to EPA Terminology Services

The EPA Terminology Services is a web-based system and suite of services for creating, maintaining, searching and publishing vocabularies. It consists of five components:

Content

The EPA Terminology Services is a repository of terms of importance to the EPA, its stakeholders and partners. It currently includes a selection of vocabularies, including those that were in the system's predecessor, the Terminology Reference System (TRS). Some vocabularies have been archived. The remaining vocabularies are in an Active Vocabularies project. A project is a pre-selection of vocabularies related to a specific task. The vocabularies that you can see and the functions you can perform are managed by a series of projects which group vocabularies together and by permission levels assigned to your user account.

The content includes:

- Terms and definitions from environmental regulations and laws
- Glossaries, term lists and hierarchical terminology resources produced by EPA programs
- Classification schemes produced for use in SoR services and/or EPA programs
- Glossaries, term lists, and hierarchical terminology resources from state and other partners

Tools

The main tool of the EPA Terminology System is Synaptica® by Synaptica LLC, a commercial-off-the-shelf product to create, store, maintain, and distribute vocabularies. The functionality provided by the Synaptica tool is the main focus of the Editors' Training Manual which is available at http://www.epa.gov/ts, click on the "References" tab*.*

Figure 1: Terminology System High Level Data Model
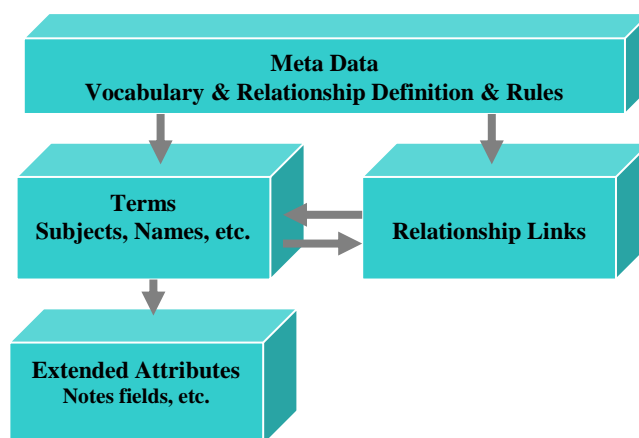
Used with permission of Synaptica LLC. This diagram is proprietary and not for redistribution.

The terminology system is based on a data model that can accommodate various types of vocabularies from simple code lists to terms and definitions to complex hierarchies (see Figure 1). The system also contains metadata about each vocabulary. The vocabularies contain terms which may be linked by one or more relationship types. Terms may have extended attributes such as note or source fields.

Currently, there are four main types of vocabularies in Terminology Services:

- Terms and definitions (non-hierarchal)
- Terms and acronyms
- Terms organized into hierarchies, such as taxonomies and thesauri

> ➢ Codes and their expansions (non-hierarchical and hierarchical)

Governance

Collaborative governance approaches are being developed that will support consistent development of vocabularies across EPA in order to promote search and reuse; and bring communities of interest together to create terminology, definitions, and mappings/documentation of differences. Several governance structures have been developed to date, and can be accessed via the Terminology Services website. Additional information about best practices in vocabulary development and governance is provided in *Best Practices in Terminology Development and Management: A Guide for Editors and Stewards. (See* http://www.epa.gov/ts, click on the "References" tab*.)*

Services

Machine-to-Machine Services

APIs and Web Services are available that allow other systems to access the vocabularies managed in the Terminology Services. For API and Web Services documentation, see the Terminology Services Automated Services website. *(See* https://sor.epa.gov/sor_extranet/registry/termreg/automatedservices/)

Vocabulary Training and Development Services

 A series of other services are available to support your vocabulary efforts. Individual or group training sessions can be provided and tailored to the needs of your group. In addition, the Terminology Services team within the Data Management Services Division is available to consult with you about the design of your vocabularies, to discuss appropriate governance structures and procedures, to discuss the integration of your vocabulary with other systems, to help with the import of existing vocabularies into the terminology system, and to develop customized reports to support the management or publication of your vocabulary.

What is a Vocabulary?

A vocabulary is a grouping of terms that have something in common. Vocabularies may come from a particular subject area, such as drinking water; a document or event, such as a law or regulation that has been passed; or the work of a particular EPA program, project, stakeholder, or partner, such as a glossary published by an EPA Regional Office.

Each vocabulary in Terminology Services is described in the *Vocabulary of Vocabularies*, a project maintained by the Terminology Services Coordinator that consists of the Vocabularies file which contains metadata for each vocabulary. Included in the *Vocabularies* file is the language(s) of the terms, the source, the publishing organization, the editor's contact information, etc. This file is accessed by the read-only interface to provide a list of the vocabularies and information about them. Each vocabulary is given a vocabulary type, which is closely related to the structure. The vocabulary types are managed in the Vocabulary Type file. For example, of the types listed below, the Glossary and Key Word Lists are simple terms with or without definitions. Taxonomies and Thesauri have hierarchical structures and may or may

not have definitions. Abbreviation and Acronym List are acronyms or abbreviations paired with its spelled out term without definitions. To date, the following vocabulary types have been defined for Terminology Services:

Vocabulary Type	Definition
Abbreviation and Acronym List	Terms, abbreviations, and acronyms from a subject, field, or project. These terms do not have definitions. The abbreviations and acronyms are paired with their expanded term using associated relationships.
Glossary and Key Word List	Terms from a subject, field or project which may have definitions.
Taxonomy	Terms organized into broader-narrower relationships based on some presumed natural order.
Thesaurus	Terms related by broader-narrower, synonymous, associated (related) and other more specific relationships based on international or national standards.

Roles and Permissions

The Terminology Services Coordinator is responsible for supporting vocabulary developers by maintaining the terminology system and providing related services. They set general guidance for the use of the system and promote the use of the system through training and outreach. The System Administrator supports the Coordinator by performing specific activities for vocabularies in Terminology Services. These functions include creating vocabularies, extending the attributes, assigning and modifying permissions, creating new relationship types, and supporting the development of reports.

Your profile within the system dictates which vocabularies you can access and what you can do with each vocabulary. Levels of access and permission ensure that the changes to the vocabularies in the system are performed by the appropriate people and as part of an agreed upon workflow. These profiles are created by the Terminology Services Coordinator.

The following list provides a general description of the roles and general functions that can be performed.

- ➢ Administrator
    - – Set up vocabulary metadata
    - – Replicate vocabulary models
    - – Add data elements to vocabularies
    - – Control projects (user profiles)
    - – Set permissions
- ➢ Editor
    - – Add, deactivate and delete terms
    - – Add and modify relationships
    - – Add, delete, and modify other content such as definitions
- ➢ "Public"
    - – Read-Only Access depending on the project

        –   Comment to the Terminology Services Coordinator via email

The vocabularies, roles, and permissions are controlled by the user's project. The project provides flexibility in that a person can have editor's access (creation and modification privileges) to one vocabulary and read-only access to another. The project allows the same vocabularies and permissions to be granted to a group of users.

Finding out More ~ Related Resources

Additional information about EPA's Terminology Services is available from the Terminology Services - References website (https://ofmpub.epa.gov/sor_internet/registry/termreg/trainingandeducation/home.do). It provides access to the other manuals mentioned in this document, more detailed manuals from the vendor, and presentations about this project.

For more information, contact:

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1.0 GETTING STARTED – LOGGING IN, SELECTING A PROJECT & SEARCHING, LOGGING OUT

The first steps in accessing EPA Terminology Services are the same regardless of the type of vocabulary. This section will teach you how to:

> ➢ Log into Terminology Services
> ➢ View existing terms
> ➢ View a whole vocabulary
> ➢ Log out of the system

The following sections and the practice exercises are based on a series of personal training vocabularies in the Training Taskview project. This vocabulary allows you to make additions and changes without impacting other vocabularies. If you do not have access to the Training Taskview project or a training vocabulary assigned to you, contact the Terminology Services Coordinator to have one created.

1.1 Logging into the Terminology System

Enter the Terminology System by entering https://etss.epa.gov from your browser. Note that EPA's default browser is Google Chrome. When using Chrome, be sure to clear your cache regularly to ensure proper system performance.

A single sign-in log-in box is displayed.

Enter your User ID and Password. Your User ID and Password are the same as your EPA LAN/WAA Login/Password (also called Web Application Access). If you do not have EPA LAN/WAA access, go to https://waa.epa.gov and request access using the Terminology Services Coordinator as the EPA contact. If you have EPA LAN/WAA access and do not have access to Terminology Services – Synaptica KMS, contact the Terminology Services Coordinator.

If the User ID and Password are accepted, the home page is displayed. All projects assigned to the user will be in the project list.

1.2 Viewing Existing Terms

Select a Project from the Project List. In this case, the Training Taskview project.

Please note that you have approximately 20 seconds to select a project from the list before your session expires.

The Project Details tab will display in the workspace panel. The list of object classes assigned to this project will display on the Hierarchy tab next to the navigation panel on the left side of the page.

Click on the SEARCH tab on the left side of the page.
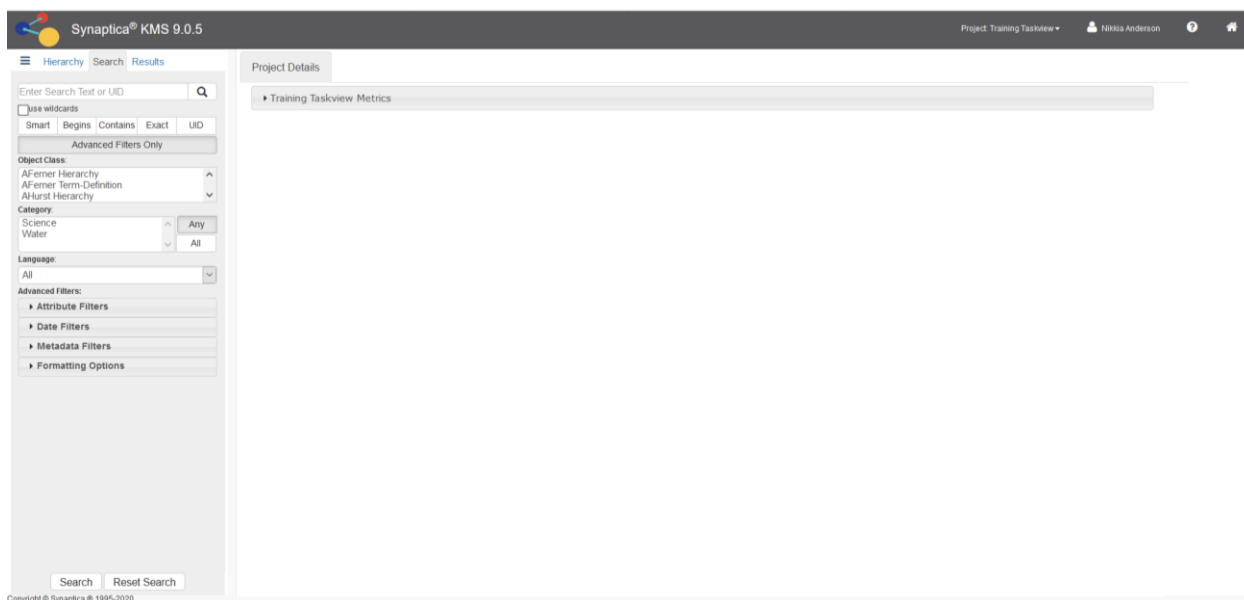
Enter Water in the search box. Choose a Search Mode:
There are six search modes available for creating searches from the most general to the most specific.

1. SMART: This mode retrieves all terms that contain words or parts of words entered in the search field (1-3 search terms are allowed).

For example: Entering "water drink" in the search field yields 45 results, including "drinking water," "Safe Drinking Water Act," and "Primary Drinking Water Regulation."

2. BEGINS: This mode retrieves all terms that begin with the characters entered in the search field.

> For example: Entering "drink" in the search field yields results, including "drinking water," "Drinking Water Glossary," and "drinking water supply."

3. CONTAINS: This mode retrieves all terms that contain the characters entered in the search field.

> For example: Searching "water" results in "waterbody use," "waters," and "watershed."

4. EXACT: This mode retrieves all terms that exactly match the search word or phrase.

> For example: Entering "watershed" in the search field yields all of the instances of the term "watershed" in the Terminology Services vocabularies.

5. UID: All terms in Synaptica® have a **UID** (Unique ID), which is unique and persistent to the term and its object class across all object classes. This mode retrieves terms based on their UID; if used, all other criteria are ignored when the search is initiated.

> For example: Entering "1001180" in the specific UID search field yields the term that has that UID.

6. ADVANCED FILTERS: Performs searches based on attribute filters, date filters, metadata filters and/or control the format of the search results.

> For example: Expand the date filter >> pick the begin and end date (year, month, day) based on modified date or created date yields all results within the date range entered.

Once a search mode has been chosen, **Click SEARCH** at the bottom of the page.

A list of terms from all vocabularies in the project is displayed in the Results tab with the object class name (vocabulary) in parentheses after each term.
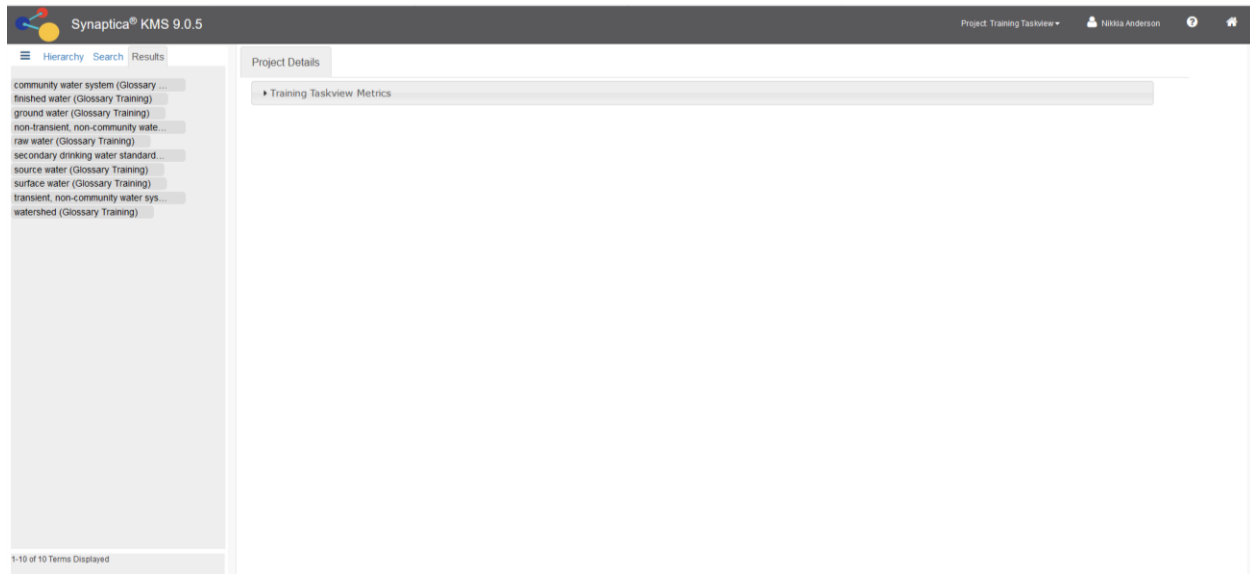
Click on a term to view its details, including a definition, if available.

1.3   Finding a Term in a Specific Vocabulary

Follow the steps in Section 1.2 above, but prior to clicking the search button, select an Object Class (Vocabulary).

Select the vocabulary from the list on the search tab. (To select multiple vocabularies, hold down the control key.)

A list of "water" terms from only that vocabulary/vocabularies chosen is displayed on the Results tab.

Click on a term to view its details and definition.

1.4   Viewing All the Terms in a Vocabulary

Select the Training Taskview project and select your Term-Definition Vocabulary from the list. If you do not find this vocabulary, contact the Terminology Services Coordinator to have it created.

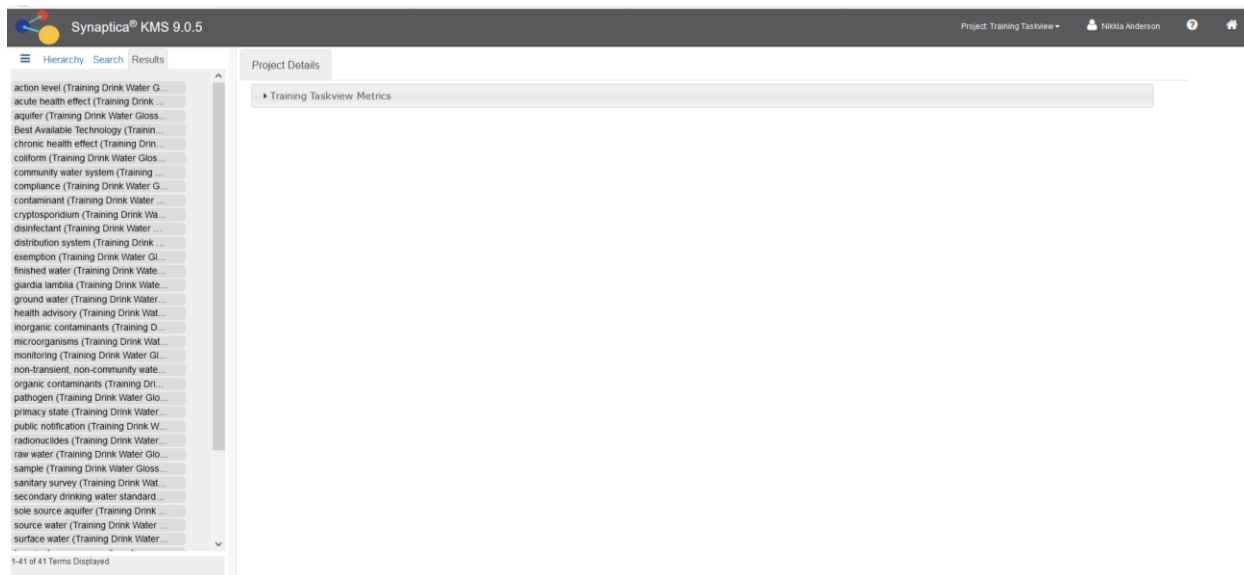**Click SEARCH.**

Now, click RESET SEARCH to clear out the previous search selections.

Click the ADVANCE FILTERS ONLY button.

Select the TRAINING DRINK WATER GLOSSARY object class from the object class list.

Click SEARCH.

All the terms in the TRAINING DRINK WATER GLOSSARY are displayed on the Results tab.

1.5   Logging out of a Vocabulary

To log out of the vocabulary and the system, **click your name at the upper right corner of the screen. The LOG OUT option will appear. Click LOG OUT.**

2.0 CREATING AND MODIFYING GLOSSARIES AND LISTS OF TERMS & DEFINITIONS

Many of the vocabularies in Terminology Services are simple terms and definitions. These vocabularies may be entries extracted from EPA environmental glossaries, which are terms and definitions in a particular domain.

This training will teach you how to:

➢ Add terms and definitions to an existing vocabulary
➢ Add definitions to an existing term
➢ Delete terms and definitions

2.1   Adding Terms and Definitions to an Existing Vocabulary

Select the Training Taskview project. The list of object classes will appear in the Hierarchy tab on the left of the screen.

Click your Term-Definition vocabulary from the list. Example: JSmith Term-Definition

The Object Class landing page will appear in the workspace panel.

Click on the Add + button.

Enter the term into the Descriptor field. For this example, enter Brackish Water.
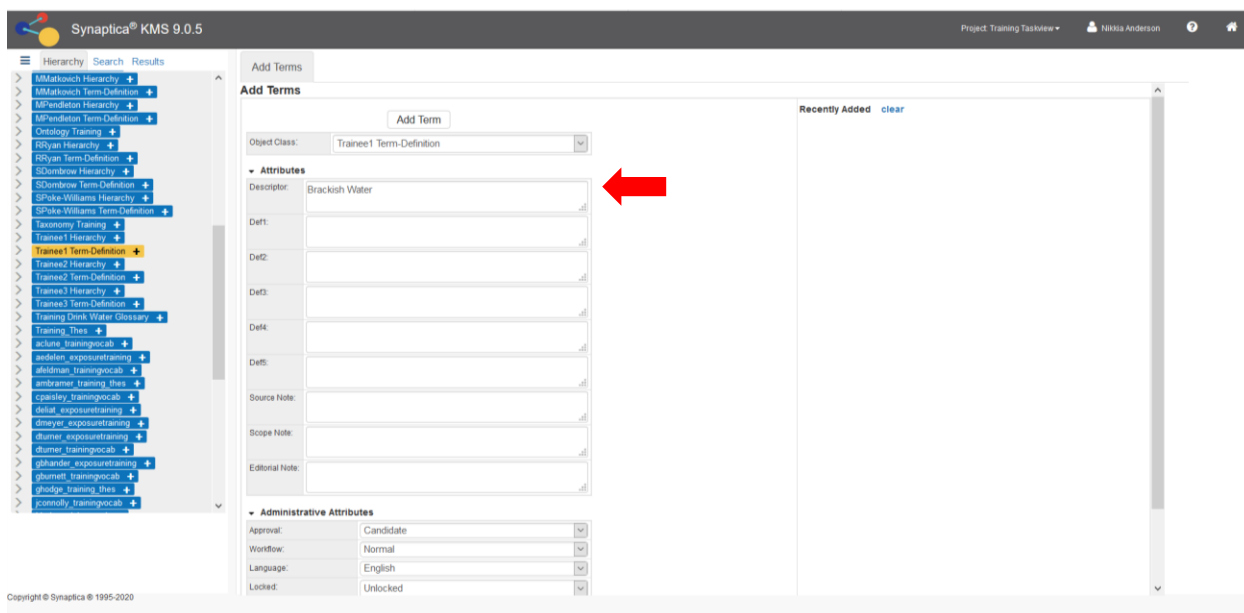
Click the ADD TERM button, which is displayed at both the top and bottom of the screen.

If the term already exists in the selected vocabulary, the system will alert you with the statement: "Term save error: An active term with the descriptor "Brackish Water" already exists in the object class.". If you receive this message, check to make sure that you have selected the correct vocabulary (object class) and that you have correctly spelled the term you wish to enter.

Once the term is added, the screen will automatically refresh and the new term will be listed under the Recently Added area to the right of the workspace panel.

2.2 Adding Definitions to an Existing Term

Select the Training Taskview project.

Click on the SEARCH tab.

Enter Brackish Water in the search box.

Select the Exact Search Mode.

Select the vocabulary (object class) where the term is recorded (if you know it, otherwise the search defaults to search in all object classes). In this example, select your Term-Definition vocabulary.
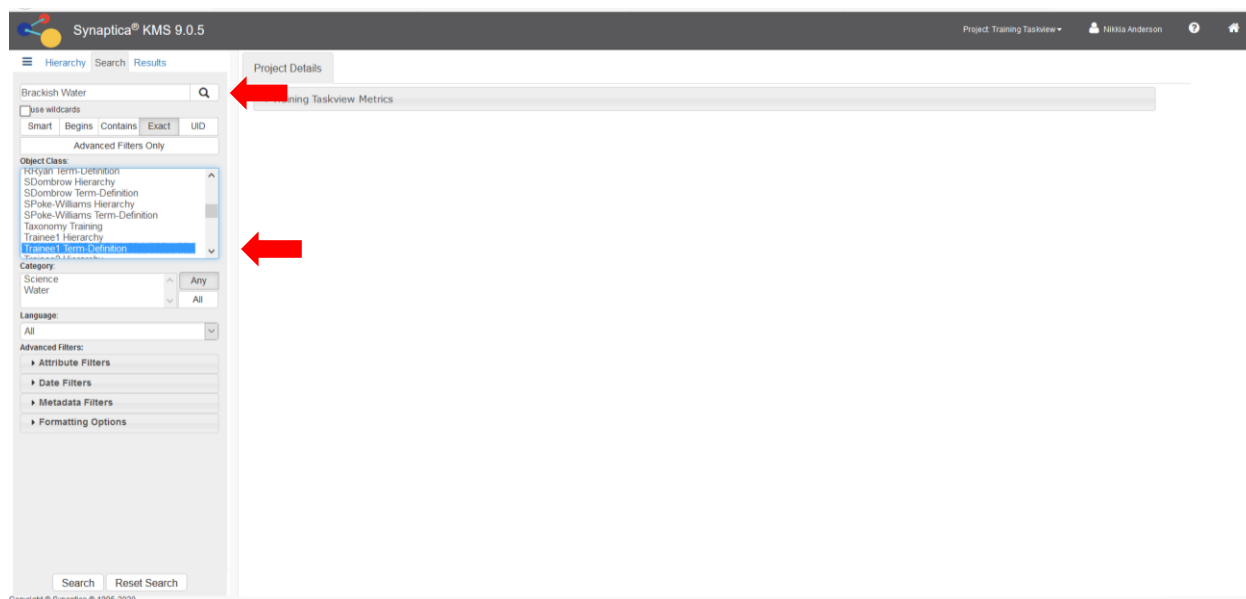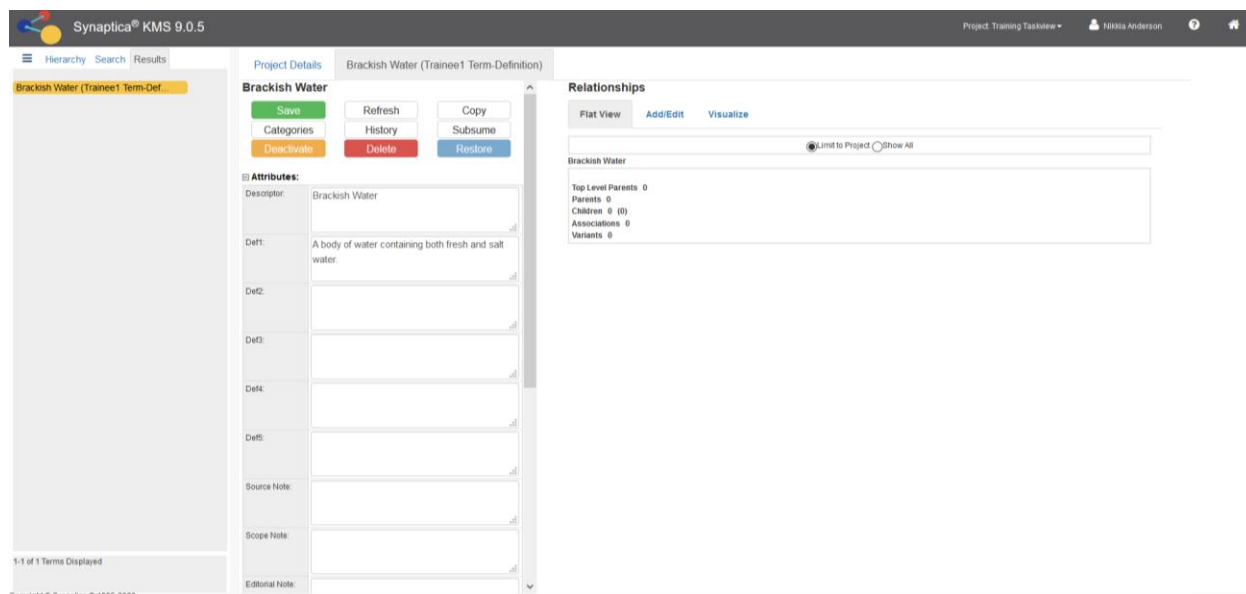
Click SEARCH.

All records containing the search term appear on the Results tab, with respective vocabularies (object classes) in parentheses after each term.

Click on the desired term.

The Term Details tab will appear in the workspace panel.

Enter a definition in the Def1 field. For this example, enter "<u>A body of water containing both fresh and salt water.</u>"

Click SAVE.

The definition has been saved when the Modified field has updated to reflect the change.

2.3 Deleting Definitions and Terms

To Delete a definition only:

Select the Training Taskview project.

Click the SEARCH tab.

Enter the term <u>Brackish Water</u>.

Select the Exact Search Mode.

Select the vocabulary (object class) where the term is recorded (if you know it, otherwise the search defaults to search in all object classes). In this example, select your Term-Definition vocabulary.

Scroll down to the bottom of screen and click SEARCH.

All records where the term appears are displayed on the right side of the page, with the respective vocabulary (object class) in parentheses after each term.

Click on the desired term.

The Term Details tab will appear in the workspace panel.

Insert the cursor into the Def1 field, highlight the definition, right click, and select CUT to erase the text or use the delete button on your keyboard. *NOTE: Do not click the* DELETE *button in the Term Details tab to delete text in the definition field, as this will delete the term. See below for steps to DELETE the term.*
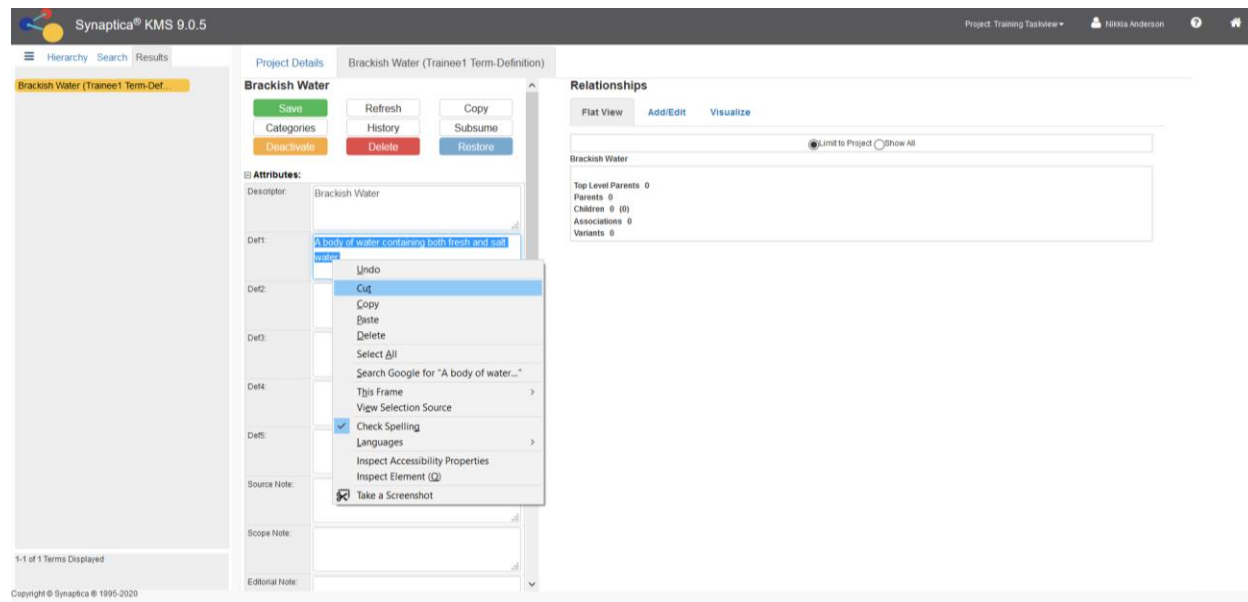
Click SAVE**.**

The definition has been deleted when the Modified date has been updated to reflect the change. The modified date is at the bottom of the page.

To Delete a term:

Follow the steps above for locating a term in a particular vocabulary.

Click on the desired term. In this example, select Brackish Water (your Term-Definition).

Select the term.

The Term Details tab will appear in the workspace.

Click DELETE**.**

A confirmation message appears.

Click OK or YES to confirm.

NOTE: The term and all its information will be retained in a deleted status. To find deleted terms within an object class, use the status filter (expand Metadata Filters) under the SEARCH tab, change the STATUS field to DELETED. The deleted terms will appear in the results list. To

restore a deleted term to active status, click on the deleted term from the results choose the RESTORE button in the Term Details. This button is only activated in records of terms that have deleted or deactivated (temporarily unavailable) status.

2.4   Adding and Deleting categories to an existing term

Select the Training Taskview project.

Click on the SEARCH tab.

**Enter Brackish Water in the search box.**

Select the Exact Search Mode.

Select your Term-Definition from the list of vocabularies (object class).

Click SEARCH

All records containing the search term appear on the right side of the page, with respective vocabularies (object classes) in parentheses after each term.

Click on the desired term from the RESULTS tab.

A Term Details tab will appear in the workspace panel.
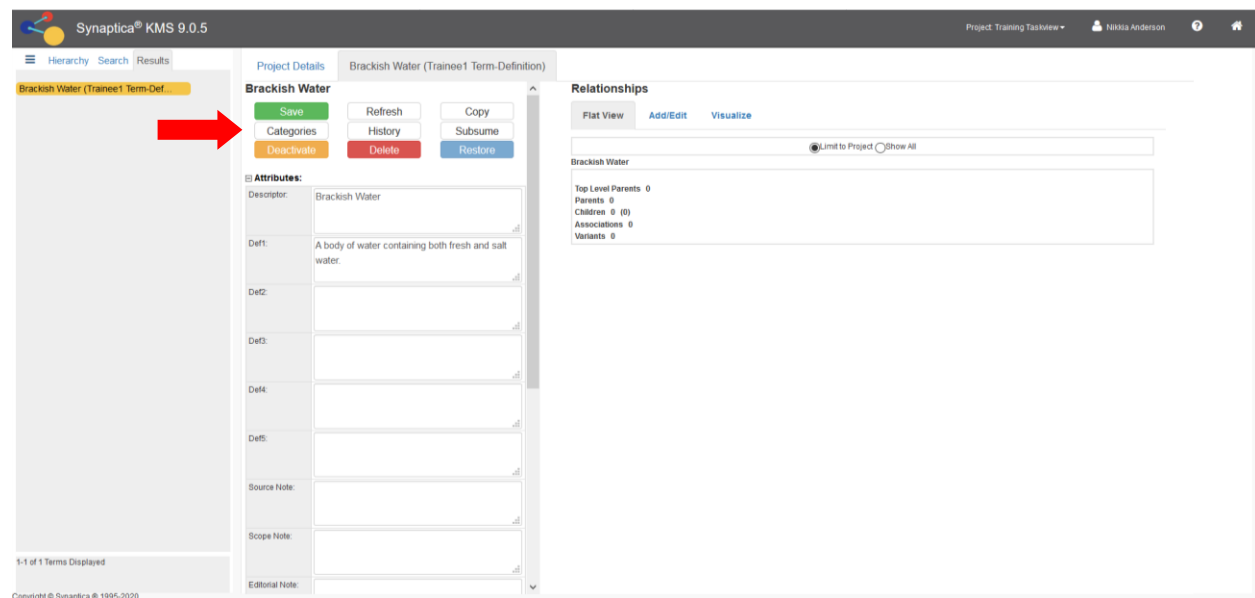
Click CATEGORIES

The right frame will now present a list of categories.

NOTE: if you receive a message "No Categories are assigned to the current Object Class" please contact the Terminology Services so the proper categories can be assigned to your training object class.

If categories are already applied to the term there will be a check in the box next to the category name. **To add a category, select 1 or more categories that apply to the term. To delete a category, de-select the category. Click UPDATE CATEGORIES.** *The system will refresh.*

Click SAVE

3.0   CREATING AND MODIFYING TAXONOMIES AND THESAURI

Terminology Services also includes terms in hierarchies, such as taxonomies and thesauri.

This training will teach you how to:

> ➢   Add terms to an existing hierarchy
> ➢   Add relationships between terms that are already in a hierarchy
> ➢   Modify relationships

3.1   Adding Terms to an Existing Hierarchy

Enter the appropriate Project. In this example, click on the Training Taskview project.

Click on an object class. For this example, use your Training Hierarchy.
The Object Class Landing Page will display in the workspace. Click the ADD + button.

The Add Terms tab will display in the workspace.

Enter all of the details for the new term. For this example, use the descriptor name <u>Home Environment</u> and the definition text, " <u>Environment in the home</u>".

Click on the *ADD TERM* button, which is displayed at both the top and bottom of the screen.

The system will check to make sure that there are no duplicates of the new term in the vocabulary before the term is accepted. The screen refreshes to a clean Add Term template with the new term listed as a "Recently Added" to the right of the screen. The term may be clicked on to review its record.

3.2   Adding Term Relationships

In this example, add the term "Home Environment" in an NT (narrower term) relationship to "Children's Health."

Enter the appropriate Project. In this example, select the Training Taskview project.

Click the SEARCH tab to the left of the screen. Enter the term Children's Health in the search box. Select your Training Hierarchy from the object class pick list and then click SEARCH.

The results of the search will appear on the Results tab. Select the appropriate term. The Term Details tab will appear in the workspace.
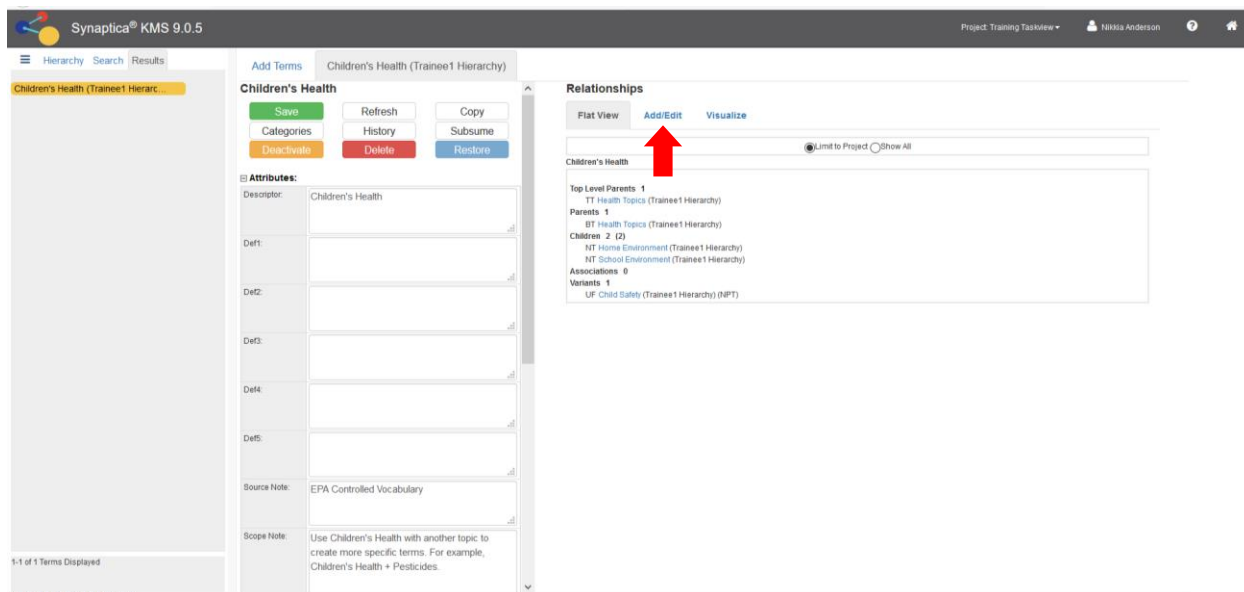
Click the ADD/EDIT tab in the right frame labelled Relationships.

Enter the term <u>Home Environment</u> into the search phrase box. *The system will check to see if the term already exists. All records where the term appears are displayed, with the respective vocabulary (object class) in parentheses after each term. If the system finds that the term does not exist, the system will display "no matching terms found. – Double-Click to add this term."*

Double Click to Add the Term, or **click on the term** you need.
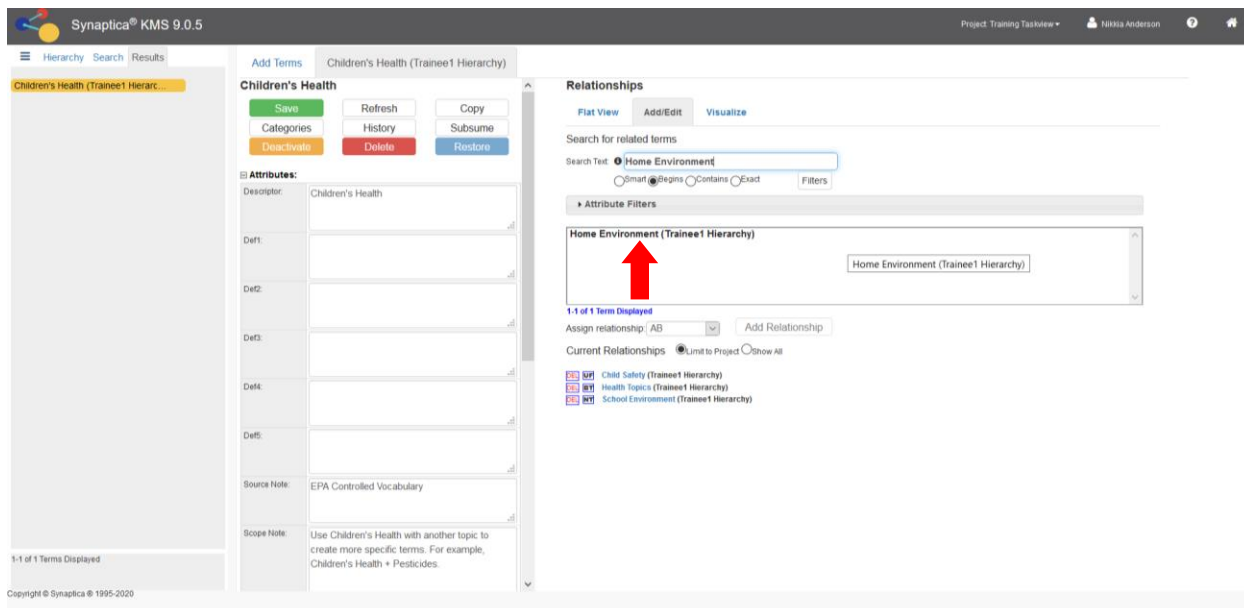
The right frame will now present your options to assign a relationship type.
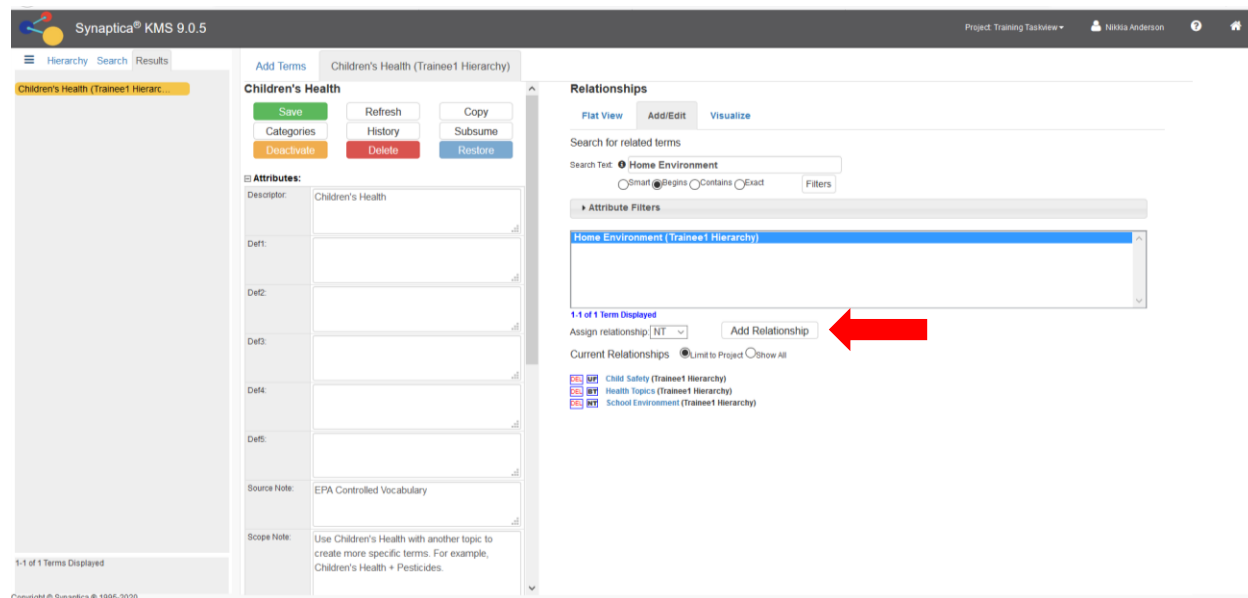
Select the NT ("narrower than") relationship type and click ADD RELATIONSHIP.

You have now created your first relationship: CHILDREN'S HEALTH NT HOME ENVIRONMENT

To view the changes, click on the term Children's Health which should be listed under Current Relationships.

The system will automatically build the reciprocal relationship HOME ENVIRONMENT BT CHILDREN'S HEALTH.

To add another term relationship to the term Home Environment, **enter another term** in the search phrase box and repeat the directions above to choose and add the new relationship.

3.3   Modifying Term Relationships

To edit or delete a relationship link for a term, the right of the Term Details page will list the Current Relationships assigned.. For this example, use "HOME ENVIRONMENT."

Click on the relationship abbreviation for the relationship link you want to change. For this example, select BT ("broader than").

The list of available relationship types will be in the pick list.
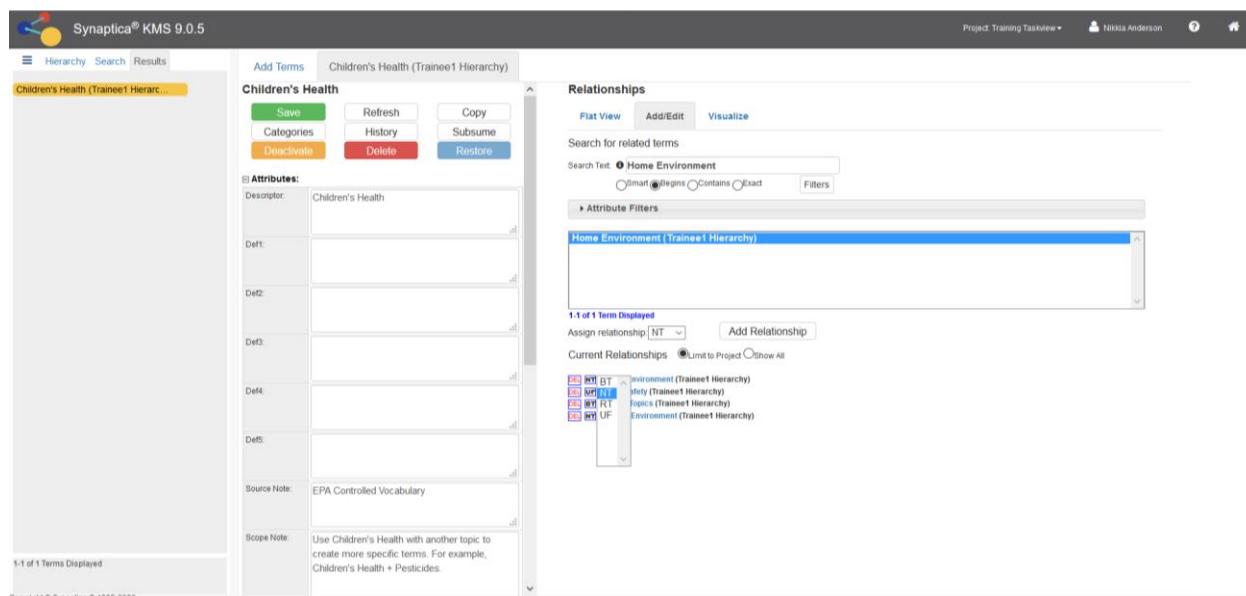
Relationships between terms can be either CHANGED or DELETED.

To Change a relationship:

Change the relationship type by clicking on the abbreviated relationship type next to the term. For this example, use 'HOME ENVIRONMENT'.

For this example, change the BT relationship to RT by clicking on RT and then the CHANGE LINK button.

*You will see a prompt asking if you are sure you want to make the change.* **Click OK.**

The screen will show the change you made. **You may click on either term to view more detail, or click REFRESH in the Term Details.**

To Delete a relationship:

Display the term in the Relationship Edit Option Screen as above. For this example, we will delete the relationship between the terms "HOME ENVIRONMENT" and "CHILDREN'S HEALTH."

Click the DEL LINK button next to the term.

You will receive a prompt asking you to confirm that you want to delete the relationship. **Click OK.**
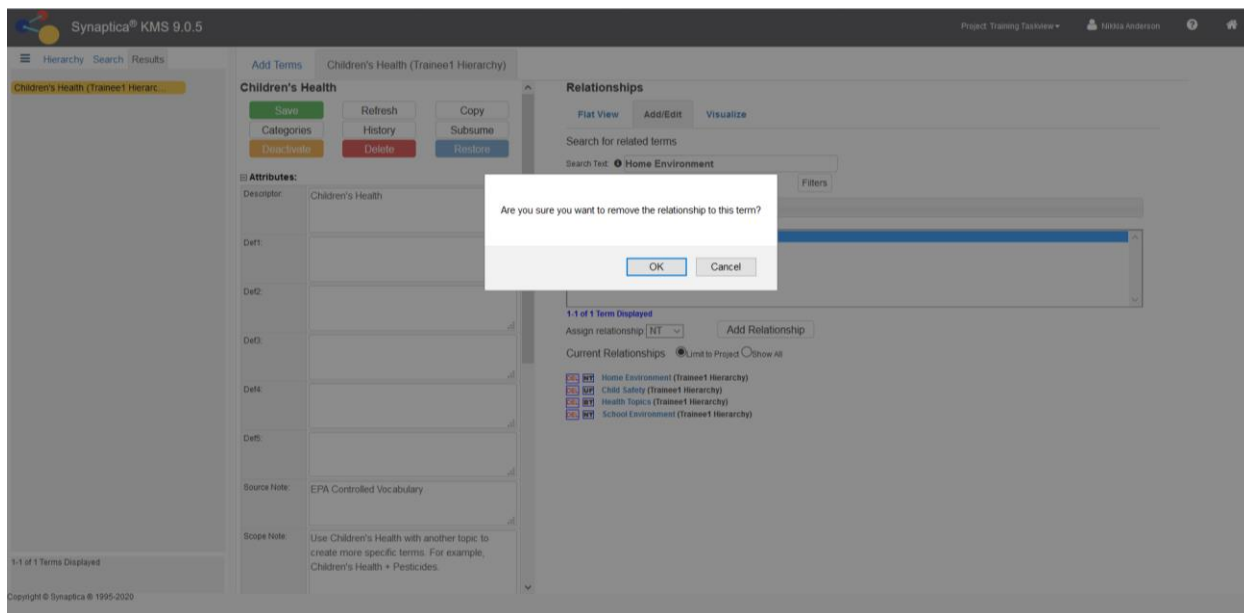
**To view the change, click on REFRESH in the Term Details.**

4.0   PUBLISHING A VOCABULARY/CREATING REPORTS

A vocabulary can be compiled and saved on a hard drive for publishing, sharing, or record-keeping purposes. Publishing a vocabulary requires two steps—creating a report and outputting the report in the desired format.

To Create a report:

Select a Project. In this case, the Training Taskview project.

Click on the navigation bar to the far left next to the Hierarchy Tab. Click Report, the list of report types will expand.
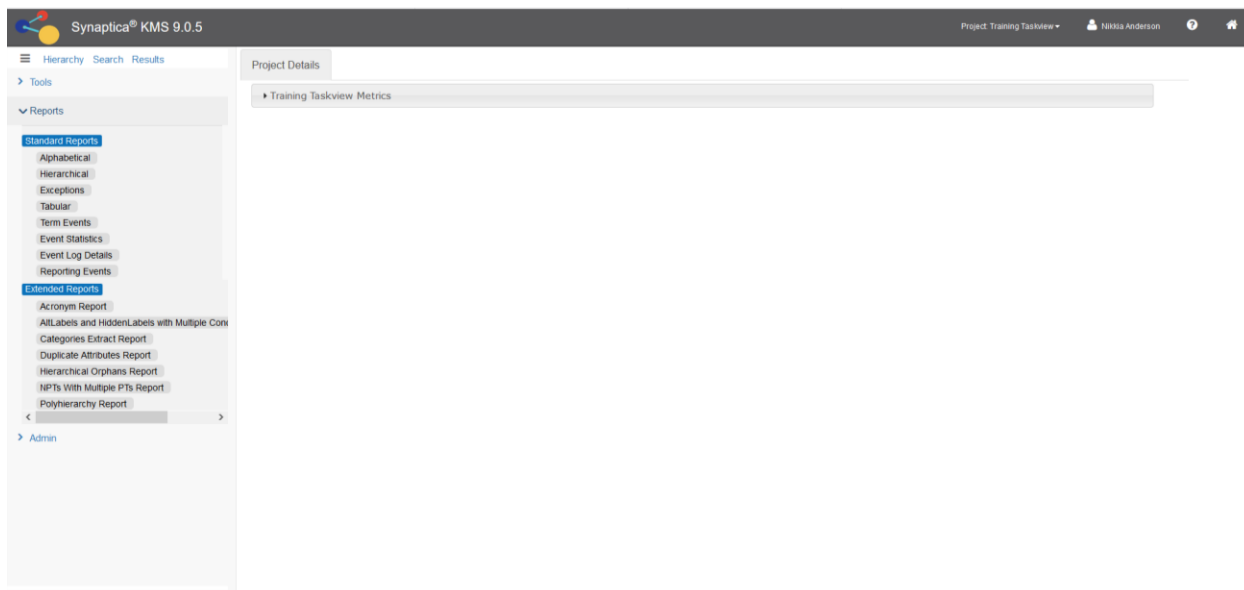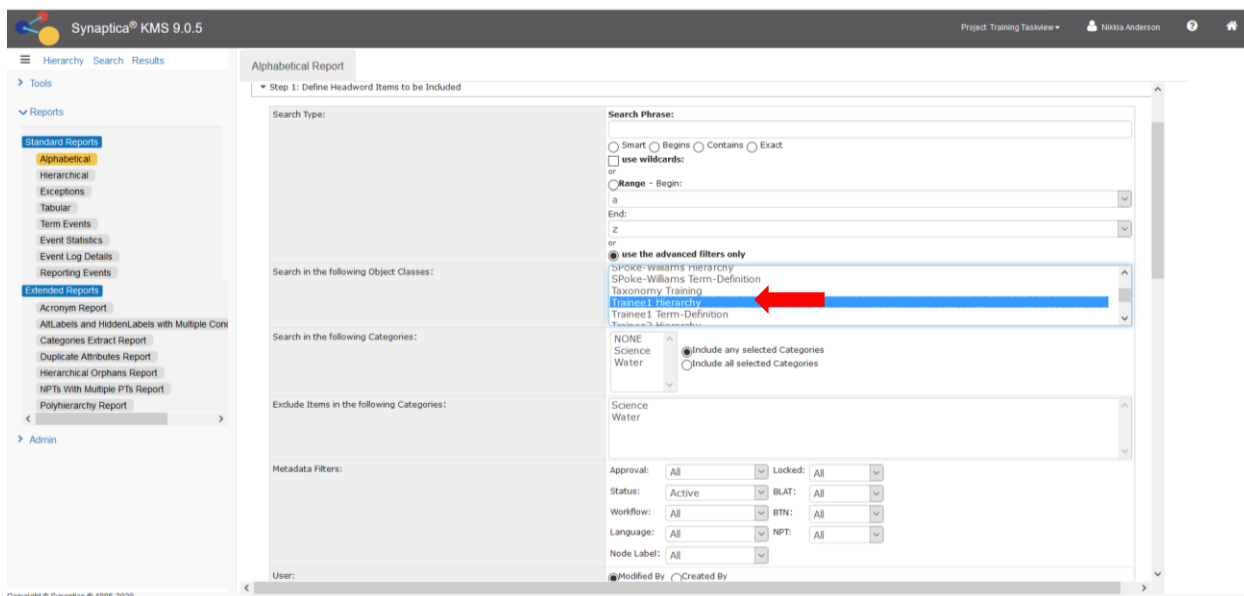
To obtain a glossary and key word list:

Click ALPHABETICAL under Standard Reports.

The Alphabetical Report screen appears in the workspace panel.

Ensure that the "use advanced filters only" radio button is selected.

Select a Vocabulary (Object Class) to output. For this example, select your Term-Definition vocabulary.

Expand Step 5, Select the attributes to include in the output. If you want multiple definitions printed, select one or more of the additional Def fields.

For a taxonomy or thesaurus vocabulary:

Click HIERARCHICAL from the Reports Menu.

The Hierarchical Report Screen appears in the workspace panel.

Select your Hierarchy under Object Class in Step 1 and Step 2.

In Step 6, select the attributes you would like to include in the output.

For both Alphabetical and Hierarchical output:

Select HTML as the output format. If the report should appear in plain print format, uncheck the "DISPLAY RESULTS WITH HYPERLINKS" box; otherwise leave the default.
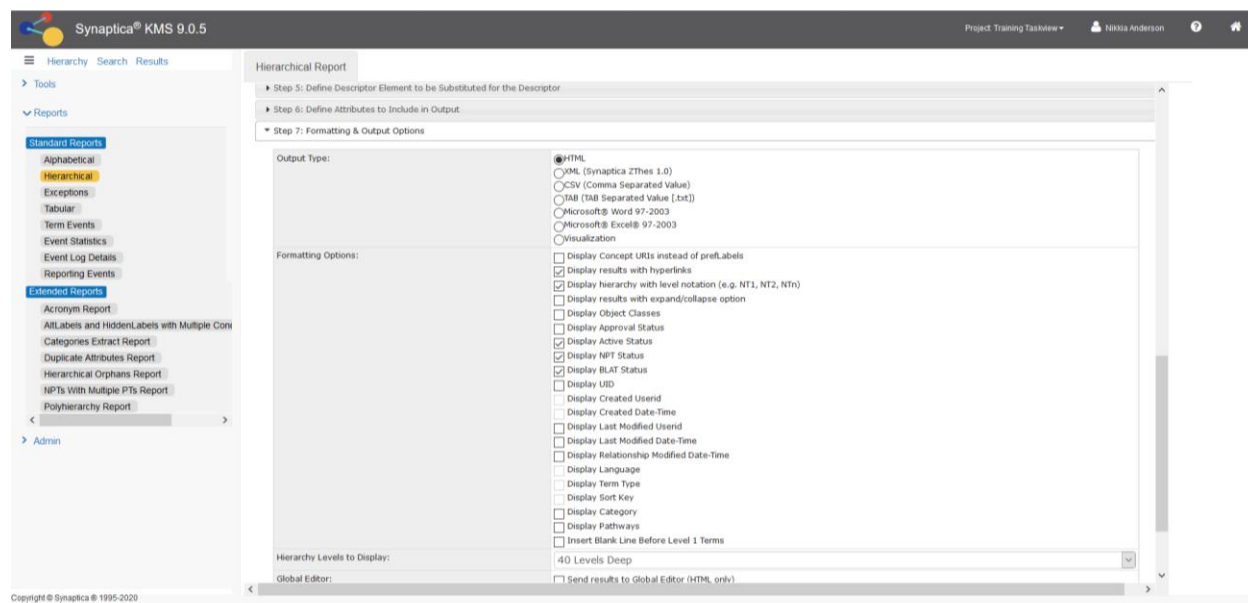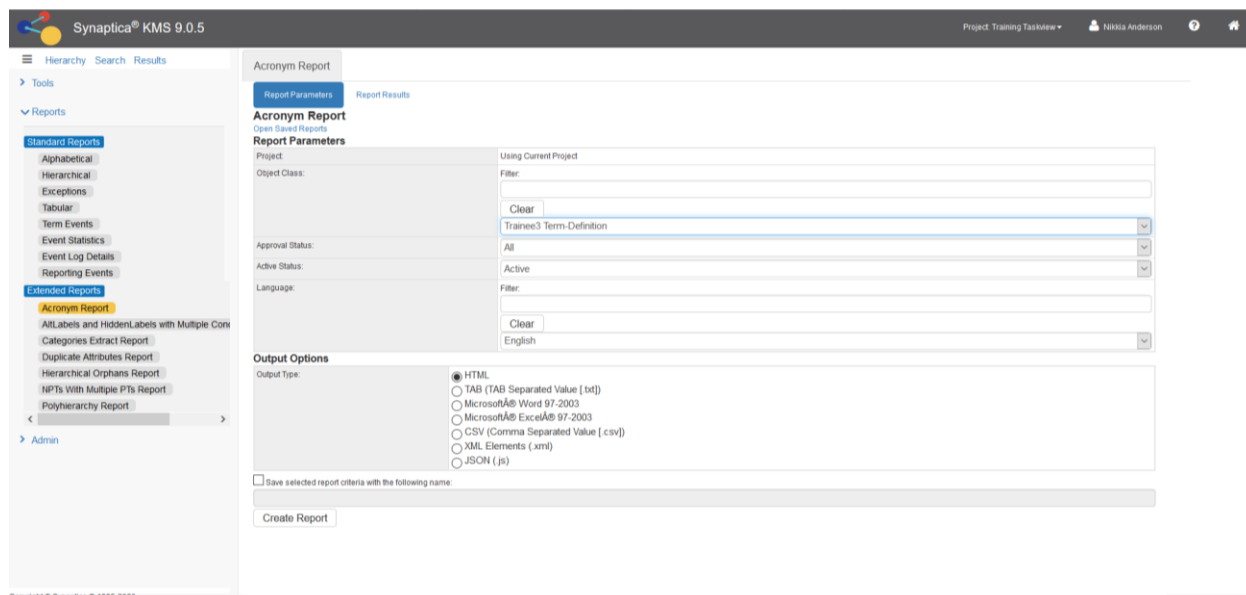

Click the CREATE REPORT button.

The report appears in the Report Results tab.

For an Acronym Report:

Click Acronym Report under Extended Reports.

The Acronym Report Screen appears in the workspace panel.

Select a Vocabulary (Object Class) to output.

You can limit the parameters further by selecting a specific Approval Status, Active Status, and/or Language.

Select the Output Type of choice.

Click the CREATE REPORT button.

The report appears in the Report Results tab.

Outputting the vocabulary:

Output your vocabulary by saving the report to your hard drive.

Select the FILE link on the top of the web browser window containing your report.

Click SAVE AS, browse to the folder where you want to save the file, and enter a name for your report. Ensure the file extension matches the format of your output. Click SAVE.

The file will be saved to your hard drive from which it can be modified, distributed, printed, etc.

The report can be distributed using a variety of file formats. For example, the Comma Separated Variable (CSV) or TAB Separated Value (TAB) format can be saved and then imported into an Excel spreadsheet, Notepad or an Access database. XML and JSON can be selected to share the output with another application or for use with style sheets. SKOS (Simple Knowledge Organization System)/RDF format can be selected to interchange the vocabulary with others

and to make it accessible via SKOS-oriented Web Services. Microsoft Word or Microsoft Excel are also available. *Note: Hierarchical Report output options also include Visualization outputs in Hyper Tree, Word Tree, or Tree Map.* Additional information about import and export can be found in the *Synaptica Import Guide* available from the Terminology Services – Synaptica KMS, by clicking the **?** at the top right corner of the screen.

5.0 SETTING UP A NEW VOCABULARY

The previous functions have been performed on existing vocabularies. If you need to create or import a new glossary, thesauri, or taxonomy, contact the Terminology Services Coordinator. The Coordinator will add the vocabulary to the *Vocabularies* file. The Coordinator will provide information on importing a vocabulary into Synaptica.

In addition, the Coordinator will need to know who should have access to the vocabulary and with which permissions. If there are new users who do not currently have access to Terminology Services, the Coordinator will need their contact information and a statement about the reason they will be accessing the system.