

AssetWise Linear Referencing System: Transportation Data Loader (AWLRS TDL)

System Administrator Role

Reference Guide



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Purpose

This document provides detailed guidance for the AssetWise Linear Referencing System Transportation Data Loader (AWLRS TDL) System Administrator Role.

This Guide describes system navigation, actions, workflows, and data configuration activities required for successful data uploading, validation, review, and incorporation into a production AWLRS system.

1 Audience

This document is provided for AWLRS TDL System Administrators who perform data loading workflows.

This document is provided to TDL System Administrators responsible for creating and maintaining Profiles, which control the data loading process.

Note: The Data Loader user role workflows and functions are covered in a separate AWLRS User Guide.

It is recommended that System Administrators review the Data Loader User Role Guide, as this will help them understand the data loading workflows in addition to system admin' tasks.

2 Scope

This document contains an overview of the workflows and steps performed by the TDL System Administrators that establish data rule sets and enable Data Load Users to perform transportation data loading and review tasks within the TDL system.

3 Terminology

The following acronyms are used in this document:

Acronym	Description
AWLRS	AssetWise Linear Referencing System product
TDL	Transportation Data Loader – the software for importing data into AWLRS
TIG	Transportation Intelligence Gateway – the software for exporting data out of AWLRS
UI	User Interface
ESU	Elementary Street Unit – the building blocks of the network / maintenance sections
PAI	Positional Accuracy Improvement
esri or ESRI	Environmental Systems Research Institute – data file format
LRS	Linear Referencing System
ARNOLD	<p>All Road Network of Linear Referenced Data</p> <p><i>Where State DOT's are mandated to include all public roads in the geometric network submittal for their Linear Reference System (LRS).</i></p> <p><i>This requirement is commonly referred to as "ARNOLD".</i></p>

4 Introduction to the AWLRS TDL Functions

The **AssetWise** product range provides multiple Network and Asset Management capabilities in a single unified system, referred to as the **AssetWise Linear Referencing Services** (AWLRS).

Transportation Data Loader provides users the ability to easily manage the import of network and asset data from varied sources, including spatial sources such as shape files and file geodatabase, and non-spatial sources such as CSV.

These capabilities combine all network and asset management capabilities into a single application without the need for multiple technology stacks or third-party applications.

This document describes the functions and workflows associated with the System Administrator Role within **Transportation Data Loader (TDL)**.

Transportation Data Loader Benefits

The AWLRS is designed to accommodate multiple networks and asset data sets. The Transportation Data Loader (TDL) enables users to easily add to the AWLRS network and asset data sets in a simple, repeatable manner.

The TDL will also provide users the following benefits: -

- **Independence** – to independently undertake network data loading without the need for external consulting service providers.
- **Expanded Linear Referencing System (LRS) Footprint** - The scope of the AWLRS can be easily expanded to include additional networks, such as rail, trails, ferry, and additional asset types, which can simplify transportation organization complexity.
- **Redlining/Long Transactions** - The features within the TDL will allow users to create new networks and display them on an integrated map alongside other existing networks. Upon completion of editing, the new network can then be either integrated into the existing network or used as a standalone network.
- **Cost Reduction/Efficiency**. TDL facilitates many tasks currently performed manually, like data merging etc., therefore providing a more efficient use of time and resources.
- Like the AWLRS **Transportation Intelligence Gateway (TIG)**, the TDL will likely provide benefits to users in ways that go beyond those initially envisioned.

The TDL allows users to identify, acquire, and integrate network data into their existing LRS data set, allowing them to create comprehensive transportation networks.

The driving User Roles directing the development of this application include the US DOT All-Roads initiative (ARNOLD), the incorporation of network data currently stored in systems external to the AWLRS, and the drive to improve and evolve solutions to meet users demands as they change over time.

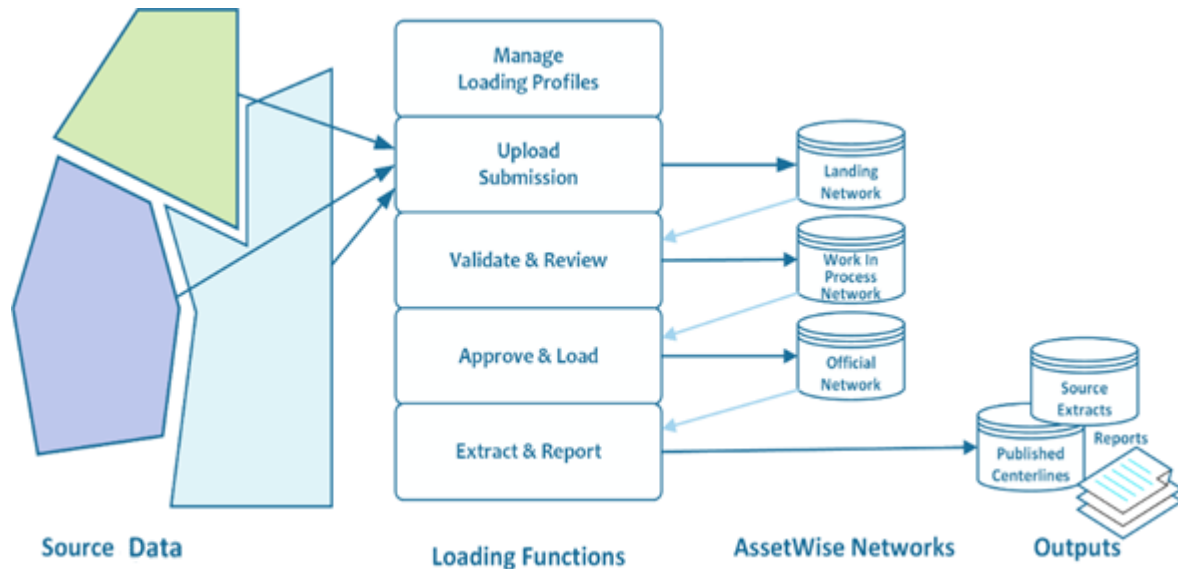
In simple terms...the Transportation Data Loader (TDL) imports data into AWLRS and the Transportation Intelligence Gateway (TIG) exports data out.

Training for TIG is covered in separate documents and training courses.

5 TDL Overview

Loading Functions Overview:

The Transportation Data Loader functions allows authorized users to select/ upload/ submit source spatial data, validate and review submitted data, and incorporate approved road network changes into the AWLRS Network.



The Transportation Data Loader (TDL) manages the process of incorporating network data from various spatial data sources into AWLRS. These capabilities are web-based.

The high-level steps in the loading process are listed below and are described in greater detail in the Data Loading User Role Reference Guide (not covered in this document).

This document describes:

- **Manage Profiles** - The Loading Profile is the key concept within the TDL that controls the spatial data submission and validation process. To load spatial data, a user must have authorization to apply a profile to the loading activity. The Loading Profile is established by the Application Administrator and includes the following components:
 - **Access control permissions.** The Profile will allow the administrator to restrict access by userid and role. Only Authorized users will be able to employ a Profile and thereby load transportation data.
 - **Target network type.** Since the AWLRS environment can contain one or more network types, this designation allows the administrator to define the network type to be the target of spatial loading activity. All the validations that are enforced by

the business rules defined by the network type, will be applied to the incoming spatial and logical data.

- **Field mapping between the source transportation data and the target LRS network.** This component contains a collection of input fields from the source spatial data and their corresponding assignments to network attribute fields. This collection will also include the ability to establish data conversion rules to be applied to the incoming data before it is assigned to a network attribute.
- **Network Overlay Rules.** This collection of rules will dictate what happens to existing data that the newly loaded data may overlay.
- **Collision/Thresholds rules.** This collection of rules will determine the degree to which user intervention is required during the spatial loading process. for example, if an incoming spatial element overlays an existing element by 100% (a complete overlay), does the user need to review this transaction prior to the data being loaded? What if the overlay percent is 80%, or 60%, 20% etc.? The user will have the ability to determine the applications actions using these rules.
- **Validation rules.** The application will use the existing collection of network logical data validation rules that are defined in the network attribution metadata within the standard AWLRS product. As the rules are applied during a loading activity, variances are captured into a log for review. Records that fail validation will not be loaded.
- **Repeatable Error Correcting Activity.** The application will record all activities during a load process. If an input spatial file is loaded a subsequent time, the application will be able to associate that subsequent data with actions previously taken. This ability to Save error correcting actions and re-apply them will reduce the amount of time spent repeating the same error correcting activity over time.
- **Upload Submission** - The Source Data Provider will browse their local file system to identify the source transportation data to be uploaded and submitted.

If the user has more than one Loading Profile assigned to them, they will select one to be used for this submission. The data can then be uploaded into the AWLRS, reviewed, and submitted for further processing.

The identified Loading Profile specifies how the submitted data is read, applies the data conversion rules, and maps attributes to the target network.

The submitted data is then available for processing and a confirmation message can be sent to the Provider.

- **Validate and Review** - A series of change detection and validation processes are executed according the Loading Profile (automated or manually by the Application

Analyst). The validation results are reviewed by an Application Analyst and each change or validation flag is either accepted or rejected. The accepted spatial and logical results are stored in the **Work In Progress (WIP) Network**.

- **Approve and Load into AWLRS Network** - The Application Analyst can review the proposed new spatial data on a map alongside existing network data.

After all reviews have been completed, the submission is ready for final approval and loading into the network.

An automated communication is sent to the Source Data Provider, as defined in the profile.

AssetWise Networks Technical Overview

The AWLRS environment has three separate repositories containing Transportation Data.

- **Landing Network** - The Landing Network receives the submitted transportation data after the data conversion formulas identified in the Loading Profile have been run. The data conversion formulas are meant to prepare the data for validation against the AWLRS Network metadata during a subsequent step. The Landing network can be cleared out by the Transportation Data Provider to abort or undo a load attempt.
- **Work In Progress** - The WIP table contains the submitted spatial and logical network data after the validations have been run. Network attribute validations are identified within the AWLRS network metadata definition. Spatial validations are performed in addition to the logical/attribute validations during the population of this table. A grade is assigned to each segment of data loaded, representing the degree to which the data complies with Loading Profile's spatial and logical validation rules. The Profile also indicates the amount of user involvement in the Network loading process for each grade. A Pass/Fail value indicates if the submitted data complies with the spatial and logical rules.

As the Application Analyst reviews the data, they may Pass records that the application would have failed or reject records that the application would have passed. The Application Analyst can clear out all data from a load attempt.

- **AWLRS Network** - These tables are the core network tables that currently exist within the AWLRS environment. As network data is added, it is overlayed onto the existing network and a status record is maintained.

In addition to the three network tables, two additional attribute tables manage the data used within and generated by the TDL.

- **Loading Profile Tables** - One table will hold the header information for the Source Data Provider's Loading Profile and related child-tables will hold the field mappings,

permissions, mapping formulas, etc. Together, the data in these tables will control the loading and validation process.

- **Activity/Status Log** - This table will contain a history of all activities undertaken during the loading process. Key user interactions will be captured along with the status/results of those interactions.

Reports/Outputs

- By clicking the **Load Data** tab, **Actions** button within the Submissions form users can access the **Run Load Report** and **Run Detailed Load Report** options.

Assumptions

- Before any source network data can be submitted, via the Transportation Data Loader, for inclusion into the AWLRS Network, it must be reviewed to determine how that specific data can be translated mapped into the existing Network.

This is pre-work is a practical necessity considering the potential variability of spatial sources. It is essentially a data profiling task that includes documenting data characteristics (quality, values & structure) with metadata. The output of these data profiling activities can be used to build the Loading Profile, which governs the process for using the Transportation Data Loader for updating the AWLRS Network as described in Data Loading User Role Reference Guide.

- This document is not intended to address the diversity of all potential data sources and formats. It is anticipated that, over time, additional formats will be accommodated.

Function Summary

This table summarizes the functions for each of the major Transportation Data Loader functions.

Note: *Italics* are used to indicate functional steps that occur as background processes. These functions are triggered by user activity but are not necessarily visible on the user interface (for example, when the user clicks on the submit function, a new status record is added to the Activity/ Status Log).

Function	Steps
Manage Loading Profiles	<ol style="list-style-type: none"> 1.1. Create Source Data Provider's Loading Profile 1.2. Edit Landing Profile 1.3. Archive/ remove Loading Profile 1.4. Authorize Loading Profile for use 1.5. <i>Record Loading Profile creation and edits (background)</i>
Upload Submissions	<ol style="list-style-type: none"> 2.1. Login, choose Loading Profile (if multiple) 2.2. Browse, select, upload, and submit source data file 2.3. Read uploaded Shapefile/ Geodatabase, CSV, or other file format. 2.4. Convert and copy submission into temporary AWLRS Landing repository. 2.5. Produce submission confirmation and statistics 2.6. In the case of spatial data, display map visualization of Landing repository, optionally alongside the Official Network 2.7. Undo submission, if desired 2.8. <i>Notify Application Analyst that data is ready for review (manual)</i> 2.9. <i>Record submission, statistics, confirmation notification (background).</i>
Validate and Review	<ol style="list-style-type: none"> 3.1. Review Activity/ Status Log for submissions 3.2. Load submitted data from Landing into Work In Progress 3.3. Detect the amount of change from the Official Network 3.4. Perform validation 3.5. Display map of work-in-progress network 3.6. Review, assign acceptance type 3.7. <i>Notify Application Analyst validation is complete (manual)</i> 3.8. <i>Record validation/ review statistics and notification (background)</i>
Approve and Load	<ol style="list-style-type: none"> 4.1. Approve Work In Process (WIP) Network for loading 4.2. Load WIP Network into Official Network 4.3. Stitch as needed using AWLRS editing tools. 4.4. Display map of Official Network

	<p>4.5. <i>Notify Source Data Provider submission has been loaded (manual)</i></p> <p>4.6. <i>Record approval results, loading activity, and notification (background)</i></p>
Extract and Report	<p>5.1. Extract data subset from Official Network</p> <p>5.2. Extract entire Official Network for publishing to GIS</p> <p>5.3. Query Official Network and Activity/ Status Log for reporting</p>

6 TDL Data Sources

The **Transportation Data Loader (TDL)** will accept various data source file input types...including:

- Shapefiles
- File Geodatabases.
- Comma Separated Values
- Web Feature Service
- esri feature Service

The data types listed above is based on feedback from current AWLRS users, but this list will likely over time expand based on user feedback and demand for other data types to be used.

7 TDL Roles

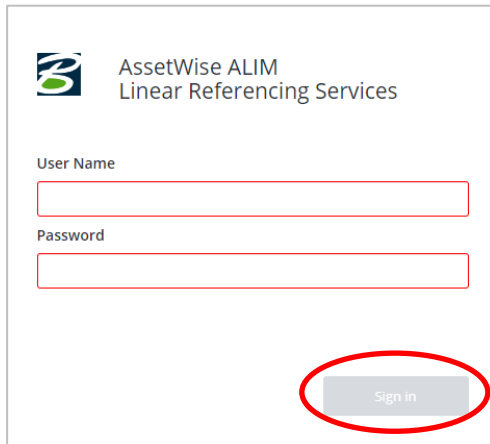
The TDL will present functionality via roles defined within AWLRS and assigned to users through their AWLRS user role. There are three primary responsibilities/roles within the TDL process. These roles are described as “User Roles” in the Functional Requirements section of this document.

- **Application Administrator** - This role is responsible for creating and maintaining Source Data Provider application profiles for each user submitting source spatial data. These Landing Profiles define the access control and parameters used during the source spatial data loading process as described below.

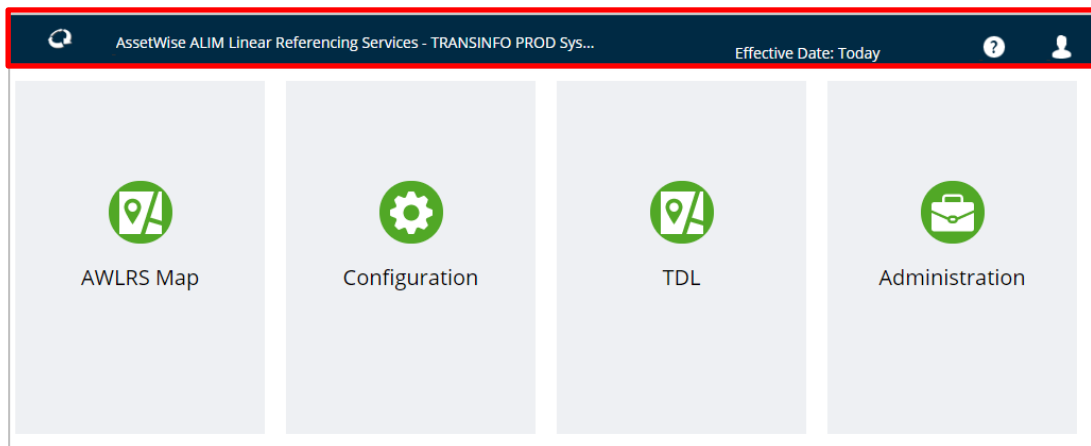
- **Source Data Provider** - This role is responsible for submitting spatial data to the TDL upload process. Their primary responsibility is to ensure that the transportation data is loaded into the AssetWise environment for subsequent validation and processing.
- **Application Analyst** - This role is responsible for validating and processing the spatial data previously uploaded by the Spatial Data Provider, and ensuring it is properly incorporated into the existing AWLRS system.

8 TDL – Logging into AWLRS and Basic System Navigation

1. Click the URL provided to access the AWLRS TDL.
2. Enter the **User Name** and **Password** as provided to you, then click **Sign In**.



The Initial screen opens...this is referred to as the **Launchpad**



The Launchpad consists of...

- a. the **Navigation bar** (the dark blue horizontal strip at the top of the page)
- b. themed **Tiles (rectangular containers)**.

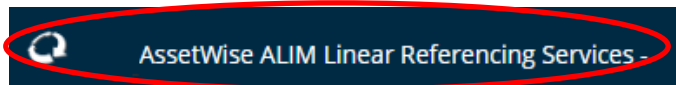
Access to the tiles will vary dependent upon the user account used.

8.1 Navigation bar: the dark blue strip at the top of the Launchpad, containing the following...

- Home button
- TDL Banner Help button
- Profile button



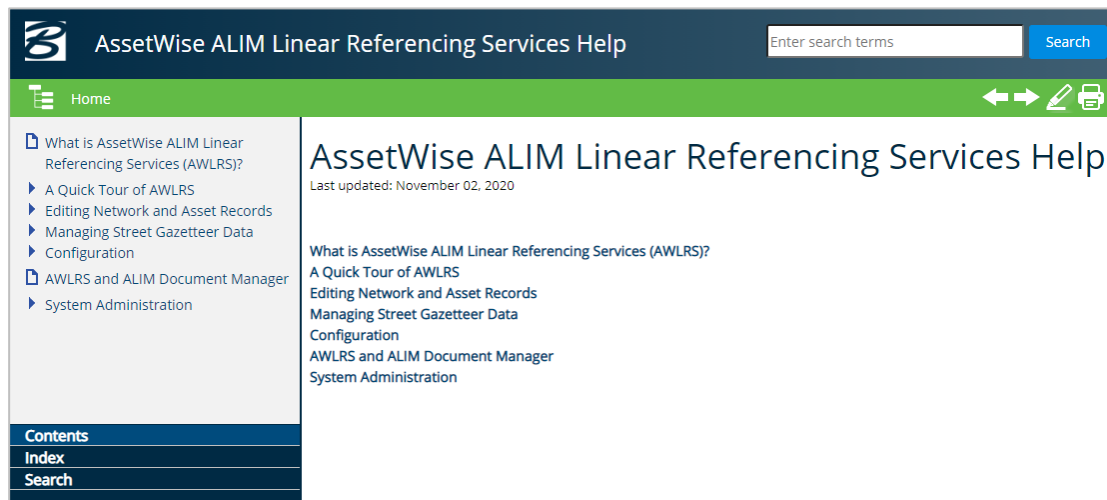
Home button: click this button to return to the Launchpad screen.



System header: Confirms to the user which system is being used e.g. AssetWise ALIM Linear Referencing Services (as shown above). This provides a check to the system being used, for example a training environment or live / production system.

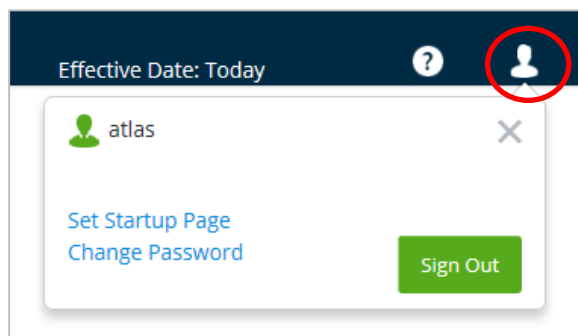
8.2 Help:

Click the **Help** button (white circle with a question mark) to review system help. The Help will open in a new window, allowing you to easily navigate the Help and application.



8.3 User Profile:

Click the **User Profile** (head shaped button) to review the **User**, **Set Startup Page** and **Change Password** options.

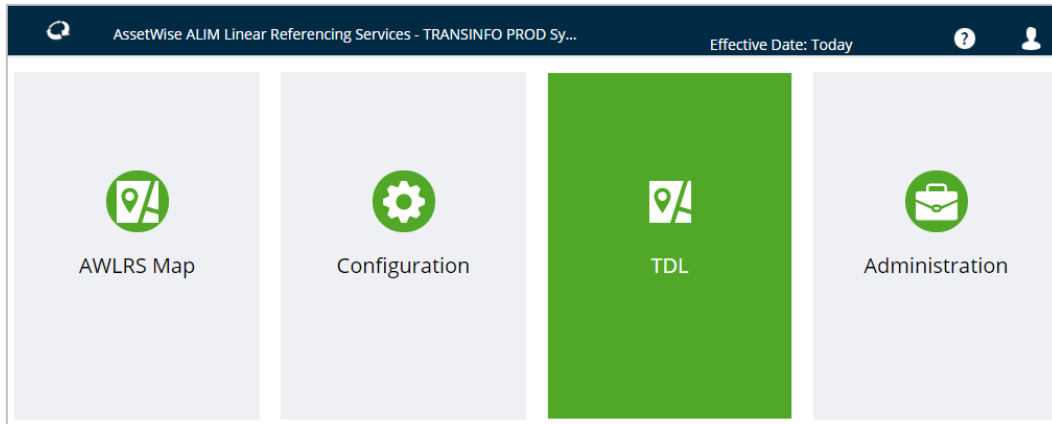


8.4 Launchpad Views:

The Launchpad tiles shown below appear if the user has a System Administrator user profile and rights.

Note: Data Loading workflows and functions (accessed via the TDL Tile) are not covered in this document.

Click any of the tiles to open the forms related to that theme.



A User with Administration rights can:

1. Prepare data – data mapping to provide specific and unique data parameters
2. Upload data from external source e.g. laptop / system
3. Validate and amend data / repeat steps 1 and 2 until all data loads
4. Complete data load / verify in AWLRS
5. Create / amend User Accounts roles and profiles

Notes:

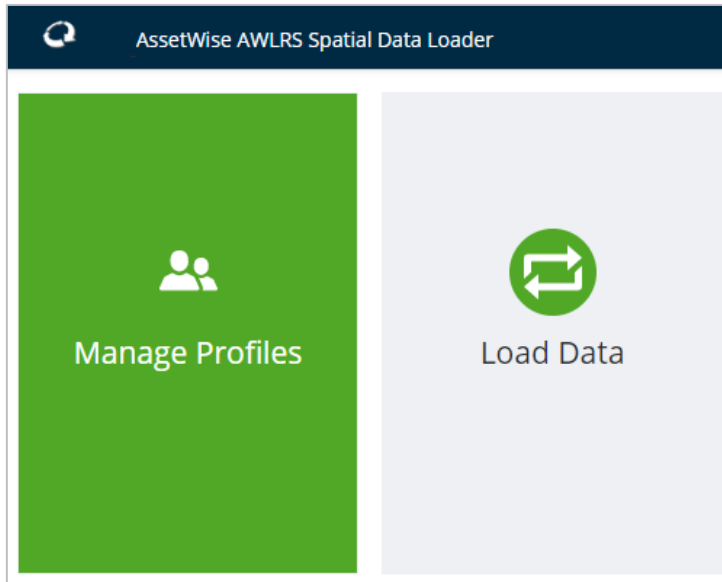
Step 1 (above) to be agreed between system administrator and user prior to data upload.

Steps 2 to 4 above are done by the user.

A User with standard rights and access can:

1. Prepare data mapping
2. Upload data
3. Validate and amend data / repeat steps 1 and 2 until all data loads
4. Complete data load / verify in AWLRS

The following screen appears to the user with standard user rights and profile.



The focus of this document is the **Manage Profiles** tile and its related functions.

9 TDL Manage Profiles Workflow

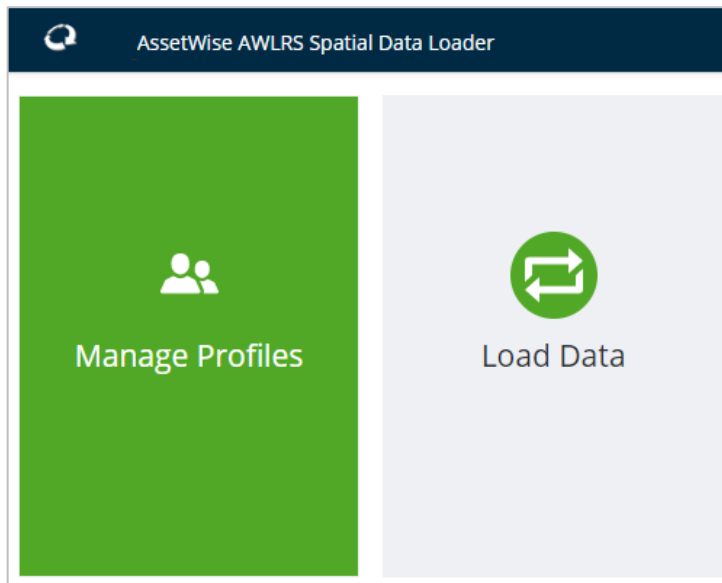
1. Managing Profiles –review and update the data file profile
2. Upload data file
3. Validate data
4. a) Correct errors in data load file and repeat steps 4 and 5 until all data is successfully loaded
OR
b). Partial successful data load with exception report sent to originator to review, correct, and submit a revised data file
5. All data loaded and ready to view in AWLRS map

Note: Only Item 1 above is covered in this document.

Manage Profiles Tile

The profiles need to be created / checked prior to data loading. Reviewing and updating / removing / adding profiles will reduce errors in the data load.

The System Administrator Role may restrict data file / profile editing access to specific users as required.



Click the **Manage Profiles** tile to open the profiles page from which the user can review and edit existing profiles and add / remove profiles.

Profiles

A profile describes all of the context parameters within which a type of data load occurs. To load data into the AWLRS, a Profile must be used, and this profile will control the data loading event and access to the data loading process. The Profile is composed of a header, and a series of tabs that contain associated context information.

The Profile header record defines:

- The name of the Profile, which must be unique
- A description of the profile
- The source data type (Shape File, File Geodatabase, CSV file, web service)
- Whether the Profile users can edit incoming source data (Yes/No).

Once a Profile header is created, associated context data must be provided. This associated context data is specified through a series of tabs that are associated with the profile header. The tabs include information specific to:

a list of users who are allowed to load data from that county

the mapping of the county's source file to the AWLRS target network or asset type

spatial conversions (if any)




default validation review modes

any attribute adjustment rules that are assigned to the profile.































Profiles Form

Once the Profile tile is clicked, the Administrator is presented with a list of Profiles, as shown in the screenshot below. Navigation buttons are located at the top of the page.

To go **back** to the previous form, click the grey arrow icon, and to go to the Home page click the green **Home** icon.





Profiles


		ID	Name	Views Generated	Source File Type	Edit Allowed	Last Used
		15	PROF133	Y	Shapefile	Y	12-MAR-2021
		14	PROF11	Y	Shapefile	Y	10-MAR-2021
		13	TSHP	Y	Shapefile	Y	11-MAR-2021
		12	EER	N	Shapefile	Y	08-MAR-2021
		11	SEGNET	Y	Shapefile	Y	02-MAR-2021
		10	PROFCSV	Y	Comma-Separated VALUES	Y	01-MAR-2021
		9	PROF5	N	File Geodatabase	Y	19-FEB-2021
		8	PROF4	Y	Shapefile	Y	19-FEB-2021
		7	ERTRETYRE	Y	Comma-Separated VALUES	Y	18-FEB-2021
		6	VORG	N	Shapefile	Y	16-FEB-2021
		5	OCSV	Y	Comma-Separated VALUES	Y	15-FEB-2021
		4	DESCHUTES	Y	Shapefile	Y	10-MAR-2021
		3	PROF3	Y	Comma-Separated VALUES	Y	11-MAR-2021
		2	PROF2	Y	Shapefile	Y	25-JAN-2021
		1	PROF1	Y	Shapefile	Y	25-JAN-2021

Each row on the Profiles page represents an individual profile and includes icons (shown below) that are used to manage them.


Profiles









15







14

Delete Profile

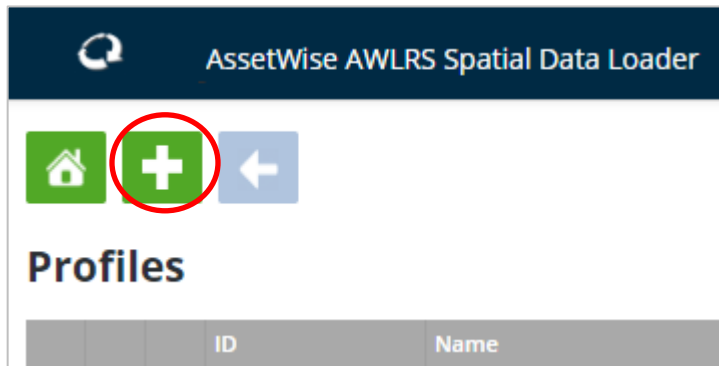
Generate Profile View

Edit Profile

From the Profiles page you can review the list of Profiles.

Additionally, the **Profiles** page includes the columns: ID, Name, View Generated, Source File Type, Edit Allowed and Last Used.

To create a new Profile, click the **+** button, the **Add Profile** form appears.



The **Add Profile** form appears. This form allows the Administrator to create a new profile.

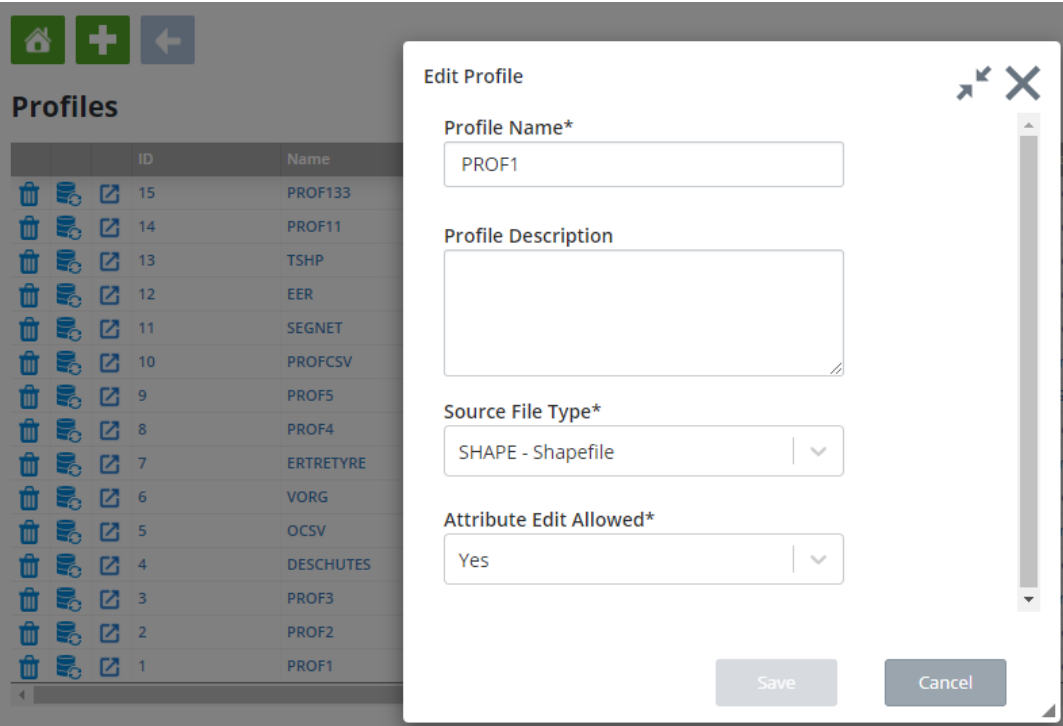
Populate the form with the header information and click **Save**.































Add Profile form fields:

- The name of the Profile, which must be unique
- A description of the profile
- The source data type (Shape File, File Geodatabase, CSV file, web service)
- Whether the Profile users can edit incoming source data (Yes/No).

To edit a profile, click the **Edit Profile**  button. As needed, update details within the form and click **Save**.

Note that the Save button is only activated when a change is made.

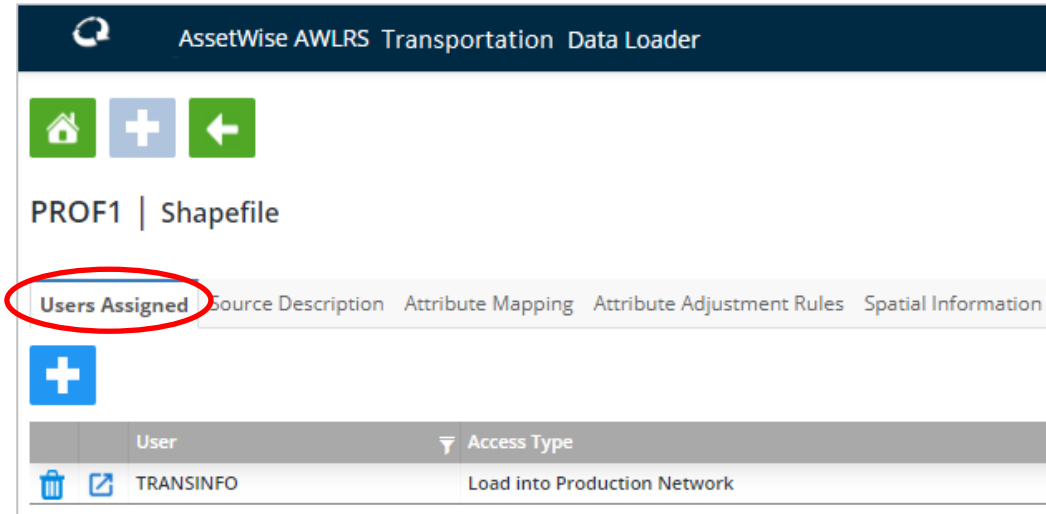


	ID	Name
 	15	PROF133
 	14	PROF11
 	13	TSHP
 	12	EER
 	11	SEGNET
 	10	PROFCSV
 	9	PROF5
 	8	PROF4
 	7	ERTRETYRE
 	6	VORG
 	5	OCSV
 	4	DESCHUTES
 	3	PROF3
 	2	PROF2
 	1	PROF1

Once a profile is created, the Administrator may click the link in the **Name** column to review the specific profile details. For example:

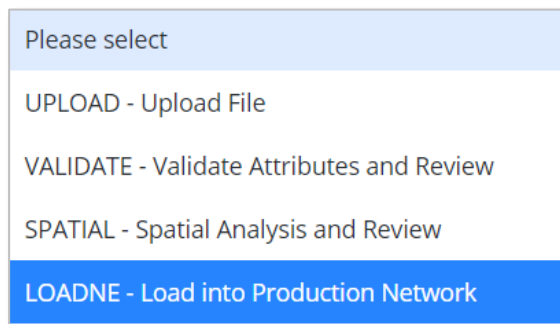
Users Assigned

The **Users Assigned** tab lists the user names assigned to the profile and the Access Type. User names can be added and removed from this list using the **+** button or **delete** (bin) button.



The Access Type column allows the Administrator to control what the user can do during a load event. The options are described here and shown in the screenshot below:

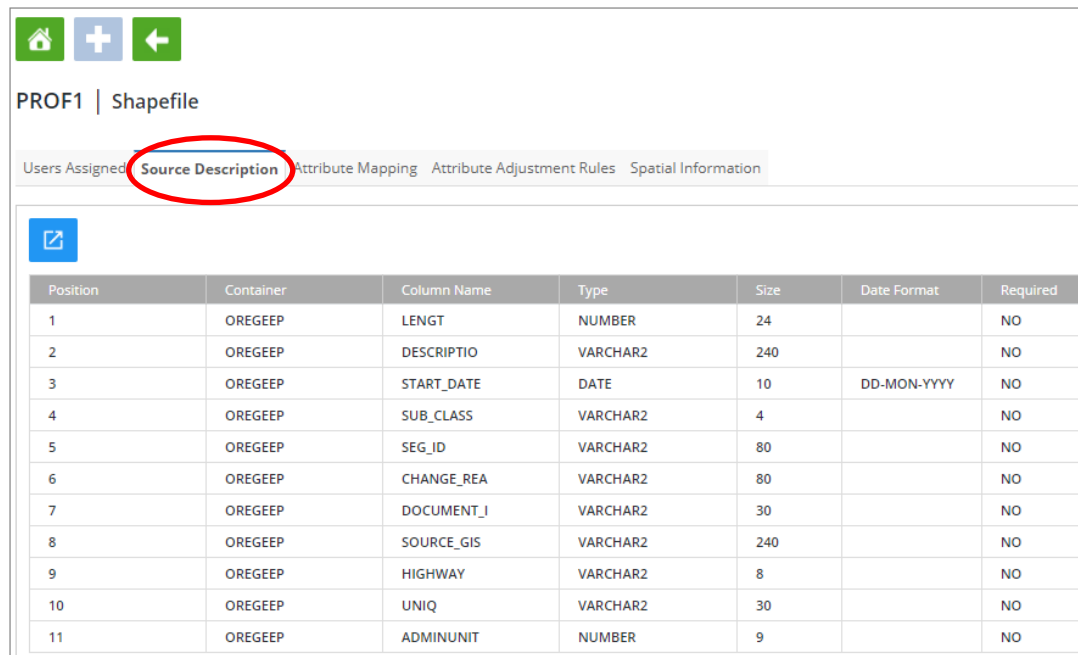
- Upload. This allows the user to upload the source data to the TDL landing repository. The user is not able to run the validation or loading tasks.
- VALIDATE allows the user to upload and validate source data.
- SPATIAL allows the user to upload, validate, and perform spatial validations on the source data.
- LOADNE allows the user to perform all of the above functions as well as load the data into AWLRS.



Source Description

The **Source Description** tab defines the data structure (data fields) of the load file in detail. These are the fields that can be used to map data into existing network or asset columns. The Administrator can auto-populate the contents of this form by supplying a sample source data file, which the TDL will read. The information gathered from reading the sample source file will be used to populate the form. Alternately, the Administrator can manually enter data into this form by using the + button. Both approaches can also be employed.

The options and content available on this form will be dependent on the Source Data Type selected. For instance, CSV files will ask for a delimiter, date format, whether there is a header row, and whether the data is of fixed length. Shape files do not require this level of description since each field is already precisely defined within the shape file.



PROF1 | Shapefile

Users Assigned **Source Description** Attribute Mapping Attribute Adjustment Rules Spatial Information

Position	Container	Column Name	Type	Size	Date Format	Required
1	OREGEEP	LENGT	NUMBER	24		NO
2	OREGEEP	DESCRIPTIO	VARCHAR2	240		NO
3	OREGEEP	START_DATE	DATE	10	DD-MON-YYYY	NO
4	OREGEEP	SUB_CLASS	VARCHAR2	4		NO
5	OREGEEP	SEG_ID	VARCHAR2	80		NO
6	OREGEEP	CHANGE_REA	VARCHAR2	80		NO
7	OREGEEP	DOCUMENT_I	VARCHAR2	30		NO
8	OREGEEP	SOURCE_GIS	VARCHAR2	240		NO
9	OREGEEP	HIGHWAY	VARCHAR2	8		NO
10	OREGEEP	UNIQ	VARCHAR2	30		NO
11	OREGEEP	ADMINUNIT	NUMBER	9		NO

This form details how the data load file content is structured.


PROFCSV | Comma-Separated VALUES

Users Assigned | **Source Description** | Attribute Mapping | Attribute Adjustment Rules | Spatial Information

Source Type : CSV

Delimiter: Fixed Length: Headers?: Date Format:

Position	Container	Column Name	Type	Size	Date Format	Required
1	ALL	ADMINUNIT	VARCHAR2	50		NO
2	ALL	STARTDATE	VARCHAR2	50		NO
3	ALL	DESCRIPTION	VARCHAR2	50		NO
4	ALL	SOURCETYPE	VARCHAR2	50		NO
5	ALL	ATTR1	VARCHAR2	50		NO
6	ALL	ATTR2	VARCHAR2	50		NO
7	ALL	ATTR3	VARCHAR2	50		NO
8	ALL	XSP	VARCHAR2	4		NO
9	ALL	ROUTE	VARCHAR2	50		NO
10	ALL	STARTOFFSET	VARCHAR2	50		NO
11	ALL	ENDOFFSET	VARCHAR2	50		NO
12	ALL	LSTARTDATE	VARCHAR2	50		NO

Click the **Update** button  to select a source file to upload if you would like to TDL to automatically populate this form using a sample data set. Otherwise, the Administrator can manually enter source file columns, one at a time

The Administrator can click the Upload button, then navigate to the desired file. Then select the sample file to be used to auto-populate the form. The Administrator can then click **Open** to access the sample file, then once the form is populated, click Save to save the source file column definitions.

For CSV files, the Administrator must ensure the order of data (**Position** column) is correct to reduce loading errors, as shown in the screenshot below.

Source File Columns for PROFCSV

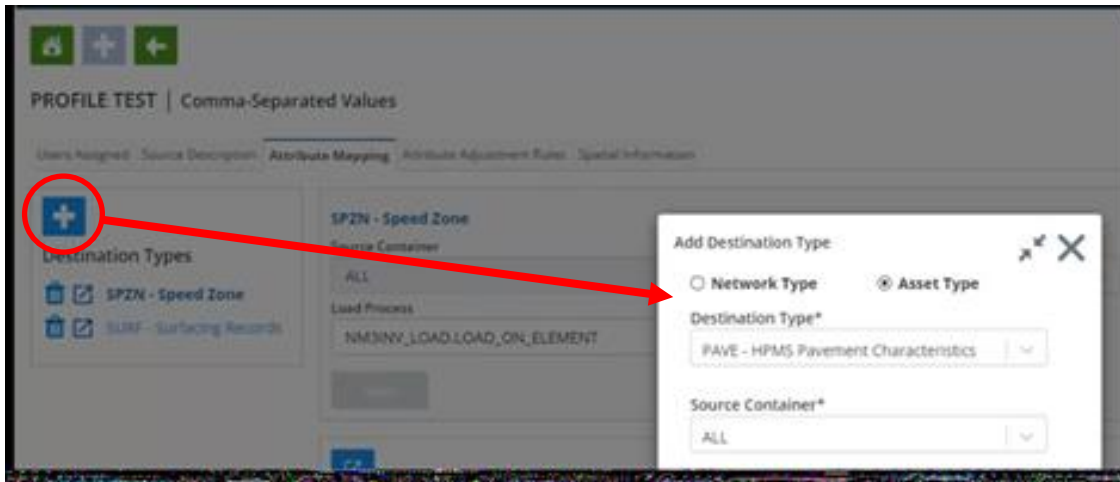
Position	Container	Column Name	Type	Size	Date Format	Required
1	ALL	ADMINUNIT	Varchar2	50		No
2	ALL	STARTDATE	Varchar2	50		No
3	ALL	DESCRIPTION	Varchar2	50		No
4	ALL	SOURCETYPE	Varchar2	50		No
5	ALL	ATTR1	Varchar2	50		No
6	ALL	ATTR2	Varchar2	50		No

Attribute Mapping

The Attribute Mapping tab associated the incoming source data with the target AWLRS object, whether network or asset. This tab allows the Administrator to select multiple destinations for the source columns specified in the Profile. For instance, a local roads shape file may contain network information (such as local road geometry) plus Functional Class, and/or Jurisdiction information (example only).

On the **Attribute Mapping** tab, click **+** in the **Destination Types** section (sub form) to add a new destination type, for example, a new asset type.

Select from the radio buttons of the **Add Destination Type** dialog, selecting either Network Type or Asset Type. Populate the form and click **Save**.



For each destination selected, the Administrator can specify:

- A destination location type. For instance, if the source data includes route references, then the destination location would reflect that.
- A Validation Process. This is the name of the procedure that is executed to validate the incoming data. By default, the value of this field is taken from the AWLRS metadata.
- A Loading Process. This is the name of the procedure that is executed to load the incoming data. By default, the value of this field is taken from the AWLRS metadata.
- The Mappings. This is the list of source column-to-destination column mappings.

On the **Attribute Mapping** tab is a form that maps the source column to the destination column and includes Table Column, Default Value (if any), Attribute, etc.

PROFCSV | Comma-Separated VALUES

Users Assigned Source Description **Attribute Mapping** Attribute Adjustment Rules Spatial Information

PARK - PARKING

Source Container: ALL

Destination Location: V_LOAD_INV_MEM_ON_ELEMENT

Validation Process: NM3INV_LOAD.VALIDATE_ON_ELEMENT


Load Process: NM3INV_LOAD.LOAD_ON_ELEMENT

Save

Column Of	Source Column	Destination Column	Table Column	Attribute Formula
DESTINATION TYPE		IIT_NE_ID	IIT_NE_ID	NVL(IIT_NE_ID,nm3seq.next_ne_id_seq)
DESTINATION TYPE		IIT_INV_TYPE	IIT_INV_TYPE	NVL(IIT_INV_TYPE,'PARK')
DESTINATION TYPE	STARTDATE	IIT_START_DATE	IIT_START_DATE	
DESTINATION TYPE	ADMINUNIT	IIT_ADMIN_UNIT	IIT_ADMIN_UNIT	
DESTINATION TYPE	DESCRIPTION	IIT_DESCR	IIT_DESCR	
DESTINATION TYPE	ATTR1	COND_CD	COND_CD	NVL(COND_CD,'AS')
DESTINATION TYPE	SOURCETYPE	SRCE_TYP	SRCE_TYP	
DESTINATION TYPE	XSP	IIT_X_SECT	IIT_X_SECT	
DESTINATION TYPE	ATTR1	TYP_CD	TYP_CD	NVL(TYP_CD,'PP')
LOCATION		IIT_NE_ID	IIT_NE_ID	NVL(IIT_NE_ID,VPARK.IIT_NE_ID)

Showing 1 to 10 of 14

First Previous 1 2 Next Last

Click the **Edit Attribute Mapping** icon  to view the **Attribute Mapping** sub form. A User can change data attribute mapping within the existing table, remove and / or remove items.

The Administrator can supply a formula in the Default Value text box. Valid values include text in single quotes (for character fields), numbers, or any Oracle function which returns a value that is compatible with the destination data type.


Attribute Mapping for PROFCSV / PARK - PARKING

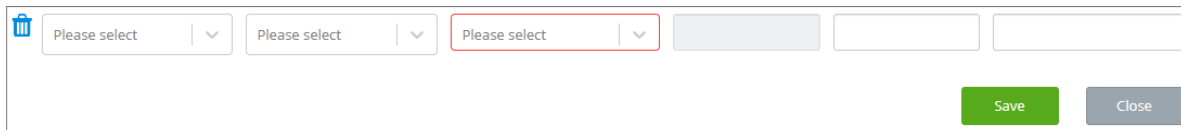
+

Column Of	Source Column	Destination Column	Table Column	Default Value	Attribute Formula
DESTINATION TYPE	Please select	IIT_NE_ID	IIT_NE_ID	nm3seq.next_ne_id_seq	
DESTINATION TYPE	Please select	IIT_INV_TYPE	IIT_INV_TYPE	'PARK'	
DESTINATION TYPE	STARTDATE	IIT_START_DATE	IIT_START_DATE		
DESTINATION TYPE	ADMINUNIT	IIT_ADMIN_UNIT	IIT_ADMIN_UNIT		
DESTINATION TYPE	DESCRIPTION	IIT_DESCR	IIT_DESCR		
DESTINATION TYPE	ATTR1	COND_CD	COND_CD	'AS'	
DESTINATION TYPE	SOURCETYPE	SRCE_TYP	SRCE_TYP		

Save Close

Enter or select the attribute and click **Save**.

To add a mapping attribute, click . A new row appears at the bottom of the table.

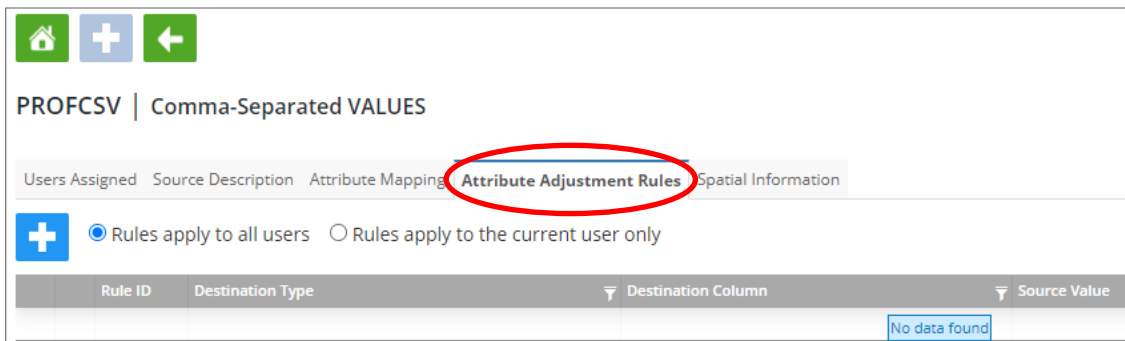


This can be used to add a custom field – one that is not present in the source data – along with a Default value. This option allows the Administrator to load source data files that do not contain all required values.

Click **Save** when finished.

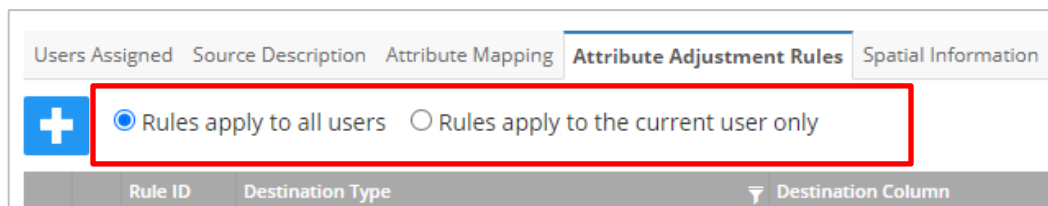
Attribute Adjustment Rules

On the **Attribute Adjustment Rules** tab, users can specify rules that will change incoming data values to new values before being loaded into the AWLRS system. Here, rules are created and managed. The user of the Profile has the option, if their security access allows, to add adjustment rules during the load process as well.




An Attribute Adjustment rule allows the user to change incoming source data. This may be necessary to correct incoming data that will not pass validation, or to convert incoming data into a more acceptable format.

Note the radio buttons beside **Rules apply to all users** and **Rules apply to the current user only**.



These restrict which users can modify data, therefore applying another layer of data security.

To create an Attribute Adjustment Rule, click  to open the **Add Profile Attribute Adjustment Rule** dialog.

Add Profile Attribute Adjustment Rule

Destination Type*

Please select

Apply Rule to User*

Please select

Destination Column*

Please select


Source Value

Adjust to Value

Save

Cancel

Enter the values for the rule and then click **Save**.

To edit an existing adjustment rule, click the **Edit** icon  in the row of the rule to be changed.

Users Assigned

Source Description

Attribute Mapping

Attribute Adjustment Rules

Spatial Information

Rules apply to all users

Rules apply to the current user only

	Rule ID	Destination Type	Destination Column	Source Value	Adjust To Value	Apply Rule To User	Created By	Created On
<div><div></div><div></div></div>	1	SEGM	REASON_FOR_CHANGE		DATA	TRANSINFO	TRANSINFO	25-Jan-2021
<div><div></div><div></div></div>	2	SEGM	GIS_SOURCE		CV	TRANSINFO	TRANSINFO	25-Jan-2021

On the **Edit Profile Attribute Adjustment Rule** dialog, enter or change the rules as may be needed. If, for example, the user wanted to change a data entry of 3 (Source Value) to 5 (Adjust to Value).

Edit Profile Attribute Adjustment Rule - PROF1

Destination Type*

SEGM - HIGHWAYS SEGMENTS

Apply Rule to User*

TRANSINFO

Destination Column*

REASON_FOR_CHANGE

Source Value

Adjust to Value

DATA - Data Correction

Save Cancel




Enter data and click **Save**.

Spatial Information

The **Spatial Information** tab is used only where the data source is a **spatial data** file, otherwise the tab is disabled.

The spatial validation process built into TDL makes it unique and highly useful. Two types of comparisons are run against incoming geometry: comparisons within the incoming data; and comparisons of incoming data to existing data within the AWLRS system. The result of the comparison is used by the TDL to propose a default action, as determined by the Administrator.

The default actions shown on this form are dependent of the %Coverage value. If an incoming line overlays an existing geometry within the AWLRS, the default action for that incoming line will be presented to the user. In the case shown below, a 0% coverage means that the incoming line does not overlay **any** line in the AWLRS and therefore, the default action is to LOAD it. The user has the option of accepting this proposed action or overriding it during the Spatial Review portion of the load event.



PROFCSV | Comma-Separated VALUES

Users Assigned








Source Description

Attribute Mapping

Attribute Adjustment Rules

Spatial Information

Spatial Review Levels

% Coverage	Default Action
 None	REVIEW
 0% - 20%	LOAD
 20% - 40%	REVIEW
 40% - 60%	REVIEW
 60% - 80%	REVIEW
 80% - 100%	REVIEW
 100% +	SKIP

Profile Spatial Attributes

Search Radius Units

1 - Meter

Source: Search Radius

1

Destination: Search Radius

1

Node Creation Stop Count

0

Source Projections/Coordinate System

Destination Projections/Coordinate System

2992 - NAD83 / Oregon Lambert (ft)

Save

The **Spatial Review Levels** sub form allows the user to set a **Pct** (percent) **Coverage** value and establish what **Default Action** the system will make when a shapefile is loaded, for example. **Review**, **Load**, or **Skip**.

PROFCSV | Comma-Separated VALUES

Users Assigned








Source Description


Attribute Mapping

Attribute Adjustment Rules

Spatial Information

Spatial Review Levels

% Coverage	Default Action
 None	REVIEW
 0% - 20%	LOAD
 20% - 40%	REVIEW
 40% - 60%	REVIEW
 60% - 80%	REVIEW
 80% - 100%	REVIEW
 100% +	SKIP

To edit a spatial review level, click the **Edit** icon  in the row of the rule to be changed. On the dialog that opens, select a new **Default Action**, and then click **Save**.

The **Profile Spatial Attributes** sub form allows the user to specify:

- Search Radius Units. These are the units of Measure used in the rest of the parameters.
- Source: Search Radius. This option allows the TDL to close gaps and overmaps that fall within the value of this option. For a value of 1, the TDL will close any gap within the source spatial file where two geometries are within 1 meter of each other. The TDL will also truncate overlaps that fall within 1 meter of each other. This value applies only to geometries contained within the spatial source.
- Destination: Search Radius. This option allows the TDL to close gaps/overlaps between the incoming source geometries and the destination geometries.
- Node Creation Stop Count. If an incoming spatial geometry overlays a geometry in the destination (ALWRS) but does so inconsistently, then this option value will instruct TDL as to when to stop creating nodes and geometry segments as a result. For example, if an existing line is straight and an incoming line is a very curvy snake-shaped line – this parameter tells TDL to stop creating segments after the incoming line crosses the existing line n times (where n is the option value).
- Source Projections / Coordinate System. This is a read-only value that is taken from the spatial source data file.
- Destination Projections / Coordinate System. This is the target destination spatial projection or coordinate system. If the source and destination are not the same, the TDL will convert the source to the destination.

Profile Spatial Attributes

Search Radius Units
1 - Meter

Source: Search Radius
1

Destination: Search Radius
1

Node Creation Stop Count
0

Source Projections/Coordinate System

Destination Projections/Coordinate System
2992 - NAD83 / Oregon Lambert (ft)

Save




Review / update data within the form and click **Save** when finished.

By following the workflow steps shown above, the data load file profile has been created.













Profile View

The final and necessary step after the Profile has been created or modified, is to **generate** the Profile views. This generates the views necessary to make the TDL loading process work.

Navigate to the **Profiles** page. For each profile listed, an indicator of whether the view has been generated can be seen in the **Views Generated** column.

Profiles

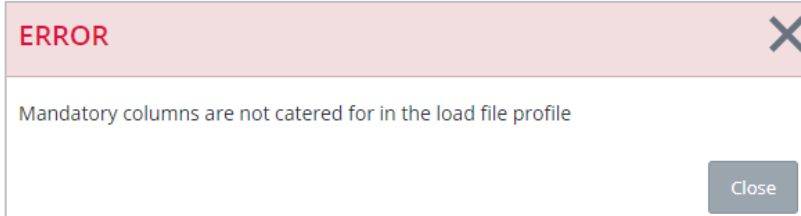
		ID	Name	Views Generated	Source File Type	Edit Allowed	Last Used
		15	PROF133	Y	Shapefile	Y	05-APR-2021
		14	PROF11	Y	Shapefile	Y	10-MAR-2021
		13	TSHP	Y	Shapefile	Y	11-MAR-2021
		12	EER	N	Shapefile	Y	08-MAR-2021
		11	SEGNET	Y	Shapefile	Y	02-MAR-2021
		10	PROFCSV	Y	Comma-Separated VALUES	Y	01-MAR-2021

To Generate a profile view, click the **Generate Profile View** icon





If an error occurs that prevents the view from being generated, an error message will appear on-screen. For example:



If the Profile view was generated successfully, a **Success** message appears to the bottom of the screen.

Once the Views are successfully generated, the Profile is ready to be used for loading data.