Data Updates & Sharing Application - Upload

Instruction Manual

TPP, Data Management Section

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Purpose

Welcome to the Data Updates & Sharing Application – Upload Section!

This document serves as a how-to guide and reference for using the Upload functionality within the Data Updates & Sharing Application (DUSA). This is an optional step for users with advanced GIS skills.

Browser Information

DUSA is accessed through an internet browser. It is highly suggested to use Google Chrome to receive the highest performance while working within the Application. Mozilla Firefox will also provide acceptable performance. TxDOT advises against using Internet Explorer.

Upload Section Display

The Upload section of the menu offers multiple options for uploading datasets to the the Application.

Upload Instructions

Options display
Quick reference describing the Upload Options.

Upload Option Selector

'Choose a File' Button
Click to browse and select the zipfile to be uploaded. When chosen, the upload will start automatically.

Status display
Display the status of the current upload in progress.

Upload ⬆

Note: This is an OPTIONAL Step for Users with Advanced GIS Skills

How To Upload ❓

Upload a zipped (.zip) shapefile for:

1. Temporary display
2. Bulk Inventory Submission

Help with Shapefiles

Temporary Display ▼

🔍 Choose a File

↻ Loading: southcounties

"Temporary Display": Option 1
This option will display all Shapefiles within the zipfile on the map for reference purposes when reviewing the TxDOT inventory and marking updates. Displayed Shapefiles are temporary and can be removed with the 'Clear Display' button. They will be cleared upon logging out of the application.

"Bulk Submission": Option 2
This option will upload all records from the 'Template Schema' Shapefile to the edits layer and display them on the map as if the records were created within the map using the Edit Section tools. **Requires only 1 Shapefile be present in the zipfile. Shapefile must have the same schema as the 'Template Schema' Shapefile acquired from the Download Section of the menu.

Upon a successful upload, the **Status display** will reveal the name of the zipfile which was uploaded. The **Status Display** will also reveal a dialogue confirming the Upload Option associated with the successful upload; identifying whether the data is temporary or has been submitted as changes to the inventory.

Upload ⬆

Note: This is an OPTIONAL Step for Users with Advanced GIS Skills

How To Upload ❔

Upload a zipped (.zip) shapefile for:

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Help with Shapefiles

Temporary Display ▾

🔍 Choose a File

Loaded: southCounties

Shapefile added to the map only and has not been submitted as an inventory update.

⬙ Clear Display

'Clear Display' Button. Click to remove all the Shapefiles displayed with the 'Temporary Display' option.

Bulk Submission Requirements

The standard workflow to complete a 'Bulk Submission' is as follows: download the 'Schema Template' shapefile, unzip the shapefile onto your computer, complete the markup by editing the shapefile within a GIS program (ex. ArcGIS Desktop), zip up the edited shapefile, and then upload the zipfile within the 'Upload' section of the menu win the Application.

The following requirements **must** be met to have a successful 'Bulk Submission' upload.

1. The schema of the submitted shapefile must be exactly the same as the 'Schema Template' shapefile (acquired from the 'Download' section of the menu).
2. Use the acceptable codes for each field when populating the attributes for each record in the markup shapefile. Reference the Data Dictionary found within the 'Resources' section of the menu for the proper CODE, and not the DESCRIPTION for each field in the Schema Template shapefile.
3. The uploaded zipfile must be in a '.zip' format. A '.zipx' format will not work and an error will display upon attempt.

Progress & Results

Begin an upload by selecting the desired option from the selector dropdown and then press the 'Choose a File' button. A file explorer window will appear. Navigate to a zipfile containing the shapefile(s) to be uploaded. Select the zipfile and click 'Open'. The upload will begin immediately.

The zipfile chosen must be of the '.zip' format. A '.zipx' formatted zipfile will not work and an error will display upon attempt. Software to create a zipfile can be found here.
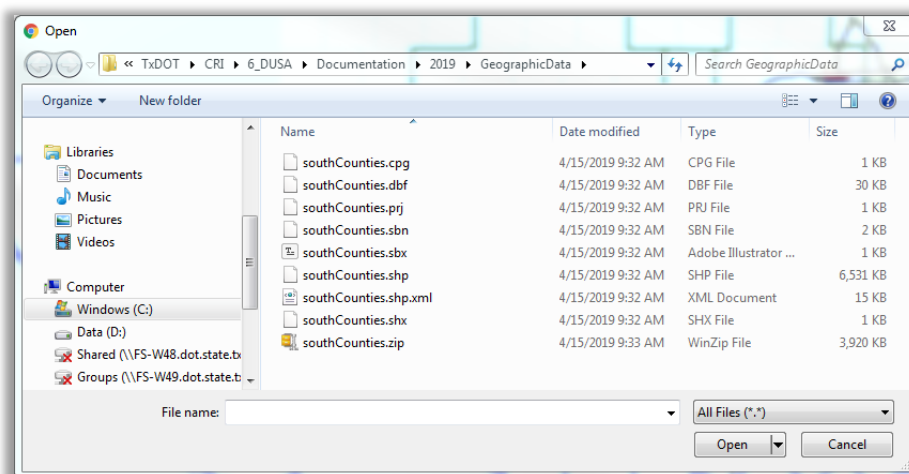
The Upload section of the menu has a Status Display below the 'Choose a File' Button. This area is blank until an upload begins. Once commenced, the Status display will reveal a "Loading" dialogue indicating the upload has successfully begun.

The upload process will take a couple seconds at minimum as the application prepares the upload. The 'Bulk Submission' option may take several minutes depending on the size of the submission being uploaded.
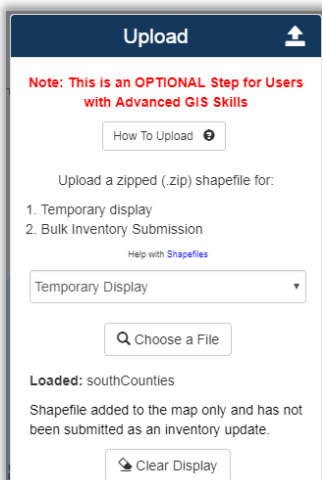
If the **'Temporary Display'** option has been chosen, upon a successful upload, all the shapefiles within the zipfile will display on the map with generic symbology. The Status Display will display the name of the uploaded zipfile and a dialogue will explicitly state the upload was for map display only and not part of a bulk submission.

A 'Clear Display' button will also appear. Click the 'Clear Display' button to remove the uploaded, display shapefiles from the map.

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This option is for any potential reference purposes while performing a markup which may include things like the organization's current road inventory, jurisdiction boundaries, or various structures specific to the organization performing the markup. Shapefiles on display are not interactive and their attributes cannot currently be displayed; they are for visual and overlaying purposes only.
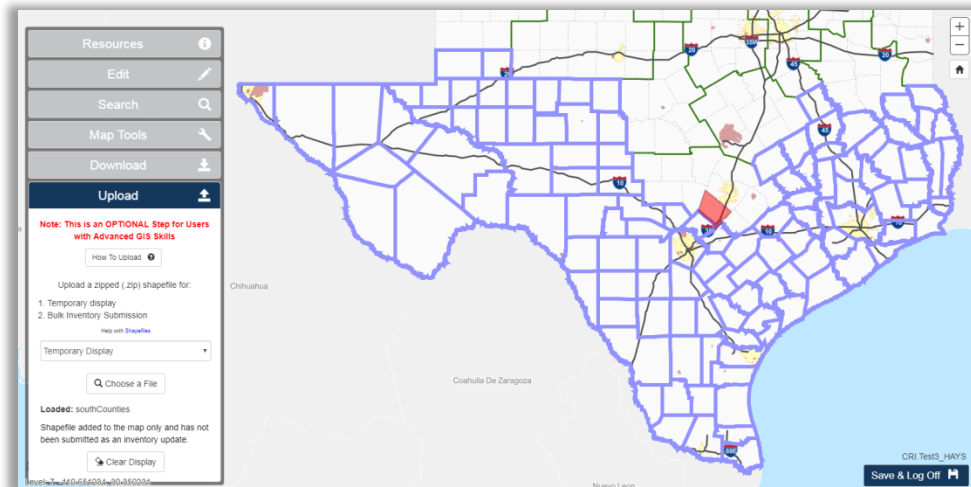
If the **'Bulk Submission'** option has been chosen, the DUSA application will verify the schema of the shapefile being submitted.

The schema of the submitted shapefile must be exactly the same as the 'Schema Template' (acquired from the 'Download' section of the menu) or an error message will appear as shown in the image to the right.
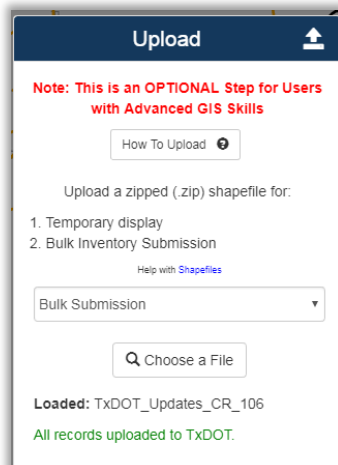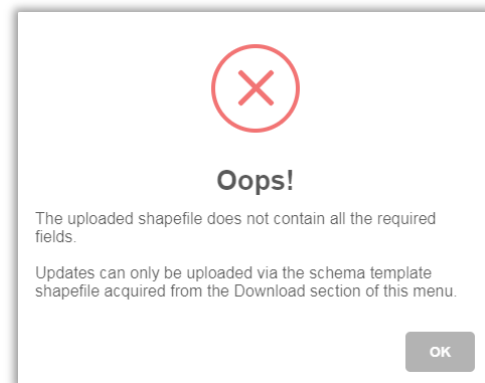
Upon successful schema verification, the DUSA application will upload the records from the shapefile into the Updates Layer. A counter will tally as each record is added to the Updates Layer.

When all the records in the shapefile have uploaded to the Updates Layer successfully, the Status display will reveal: All records uploaded to TxDOT. The Updates Layer will then display the records submitted in the map as if they were being submitted with the tools in the 'Edit' section of the menu.
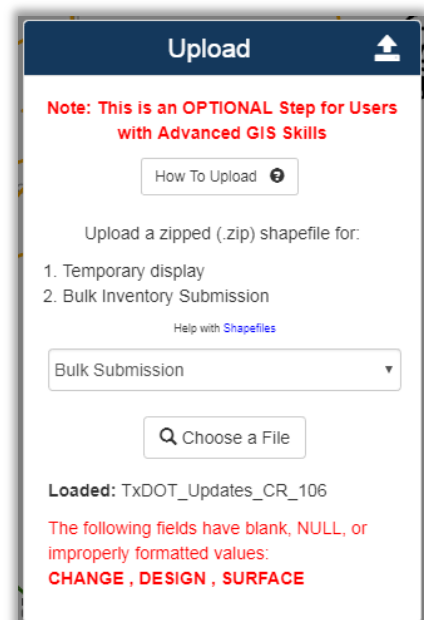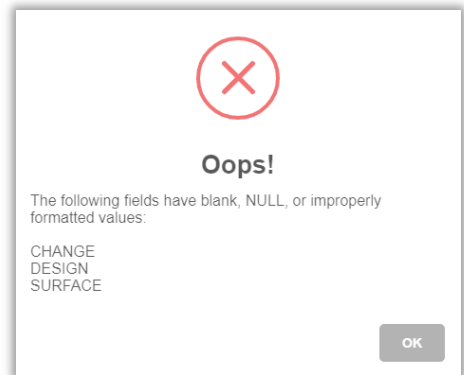
If an upload is unsuccessful, an error message will appear describing the issue. The same error message will also appear at the bottom of the Upload section. If any attribute for any of the required fields are blank, NULL, or improperly formatted the upload will continue to be unsuccessful for all records.

**The records will only display/upload in the map if the proper codes are used for these required fields:

- **CHANGE**
- **STREET_NM**
- **DESIGN**
- **SURFACE**
- **NUM_LANES**

Reference the Data Dictionary found within the 'Resources' section of the menu for the proper codes for each field in the Schema Template shapefile.

If there was any issue or error during the upload, the Status Display will reveal the error textually in red. Please contact the TPP Data Management Section (contact address below) to inform them of your error or simply correct the mistakes and resubmit. Please describe the error in detail and include screenshots when possible.

Oops!

The following fields have blank, NULL, or improperly formatted values:

CHANGE
DESIGN
SURFACE

OK

Upload

Note: This is an OPTIONAL Step for Users with Advanced GIS Skills

How To Upload ❓

Upload a zipped (.zip) shapefile for:

1. Temporary display
2. Bulk Inventory Submission

Help with Shapefiles

Bulk Submission ▾

🔍 Choose a File

Loaded: TxDOT_Updates_CR_106

The following fields have blank, NULL, or improperly formatted values:
CHANGE , DESIGN , SURFACE

Bulk Submission Best Practice Workflow

This document serves a how-to guide for completing a bulk load submission using the Download and Upload functionality within the Data Updates & Sharing Application (DUSA).

While there are many different workflows within a GIS to complete a bulk submission, the following represents a best practice workflow:

1. Begin by downloading the 'Schema Template' shapefile from DUSA. Unzip the file to a local drive.


   Optionally, download the current TxDOT Road Inventory for your county to review and identify changes. Mark up any changes in your county's GIS shapefile.

2. For a successful submission, the schema of the submitted shapefile must be exactly the same as the 'Schema Template' shapefile. In order to match the schema of your county's shapefile with TxDOT's 'Schema Template' shapefile, first convert the 'Schema Template' shapefile into a feature class.

   - In ArcCatalog, create a File Geodatabase and import TxDOT's 'Schema Template' shapefile as a feature class

3. Right-click on the new feature class and select "Load Data" and follow the steps provided in the 'Simple Data Loader' wizard.

   - This wizard will walk you through the process of loading the GIS data and schema from your county's shapefile into the schema of the 'Schema Template' shapefile.
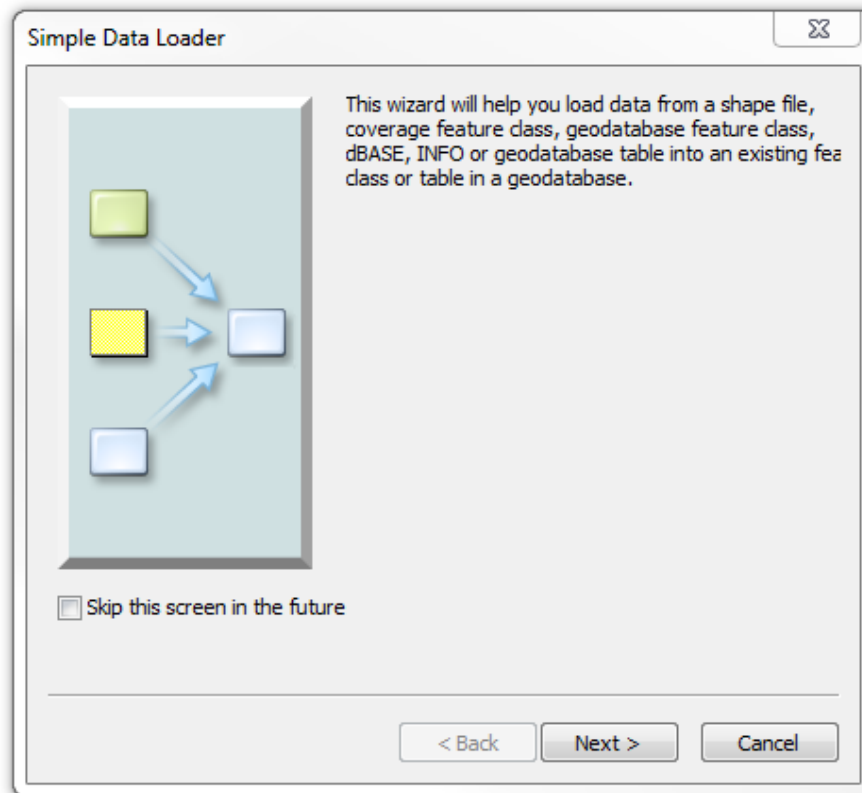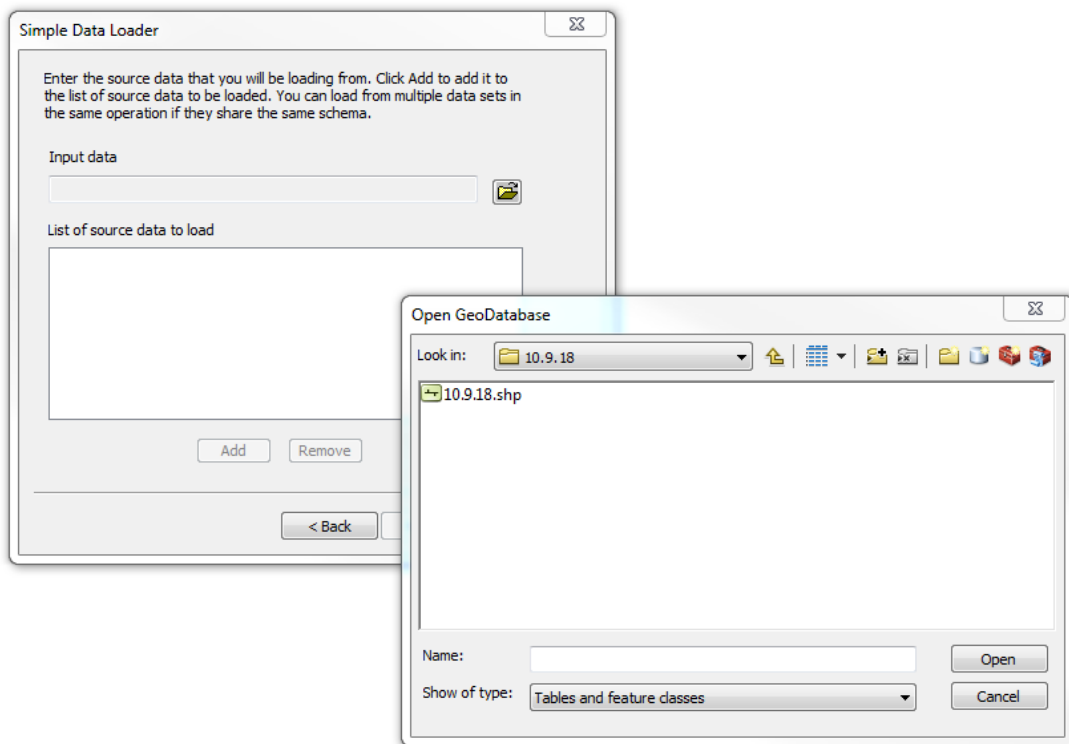
4. Direct the appropriate fields from the 'Matching Source Field' to the 'Target Field'. The 'Target Field' is TxDOT's 'Schema Template' shapefile schema. The 'Matching Source Field' is your county's shapefile schema.
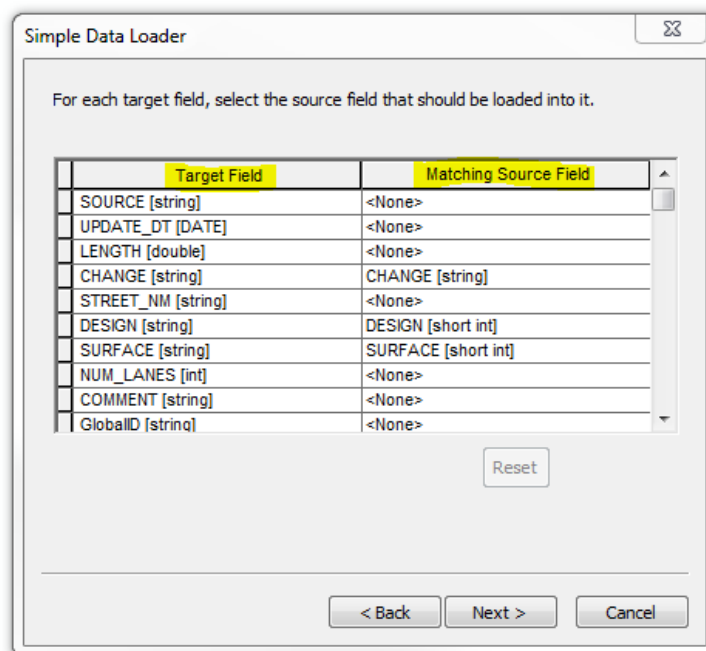
5. After the 'Simple Data Loader' wizard completes the process, you will notice some fields contain 'NULL' values. Note that these are the **ONLY** fields that allow NULL values. When the shapefile is uploaded into DUSA, these fields will be auto populated:

    - **SOURCE**
    - **UPDATE_DT**
    - **LENGTH**
    - **GlobalID**
    - **CreationDa**
    - **Creator**
   - **EditDate**
    - **Editor**
    - **Shape_Leng**

    ***Note: It's **CRITICAL** that you field calculate your fields to match the acceptable values in the Data Dictionary. More specifically, the **CODE** values need to match, not the DESCRIPTION. The upload will fail if they don't match.

6. Export the feature class back to a shapefile.

    - Right-click the feature class and select 'Export' > 'To Shapefile (single)'

7. Zip up the shapefile and upload to DUSA

    - Select 'Bulk Submission' from the Upload menu.
    - Click 'Choose a File' to select your zipped shapefile
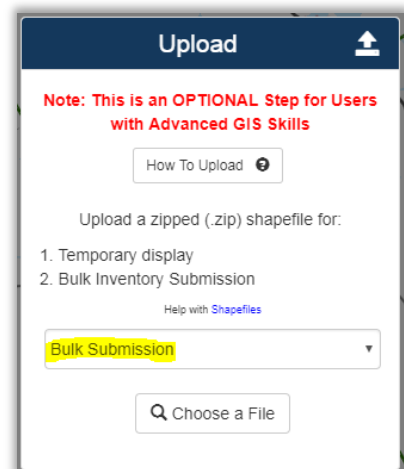
8. The data from your shapefile will appear in DUSA. A quick review in DUSA will show the same geometry and attributes from your shapefile.

9. Log out of DUSA to complete the bulk load process.

Completion & Contact Info

The deadline for completing the present year's review and markup is August 31. Any markups submitted after August 31 will be applied towards next year's submission. At the time of completion, the updates will be reviewed and the changes which meet the inventory criteria will be implemented to update the TxDOT Road Inventory.

Thank you for using the Data Updates & Sharing Application to submit changes to the TxDOT Road Inventory. If you would like to report any bugs or issues, or have any questions which need clarification of the procedures, please contact the Transportation, Planning, and Programming Division's Data Management staff at:

TPP-GIS@txdot.gov

(512) 486-5052