# Standard Energy Efficiency Data Platform™

SEED STANDARD ENERGY EFFICIENCY DATA PLATFORM™ U.S. DEPARTMENT OF ENERGY

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

# SEED PLATFORM™ 2.4.0

Updated
November 5, 2018

# Contents: Overview, Data

# Contents: Inventory

# Contents: Organizations, API Documentation, Contact, About

# Standard Use Cases

## Use Case to Cover

- **Energy Benchmarking**
    - Commercial Buildings

## Outcomes

- **Annual Disclosure Report**
    - By Tax Parcel ID
- **List of Building Violations**
    - By Tax Parcel ID
- **Annual Report of Building Stock Performance**
    - By energy (Portfolio Manager data)

# Standard Use Cases

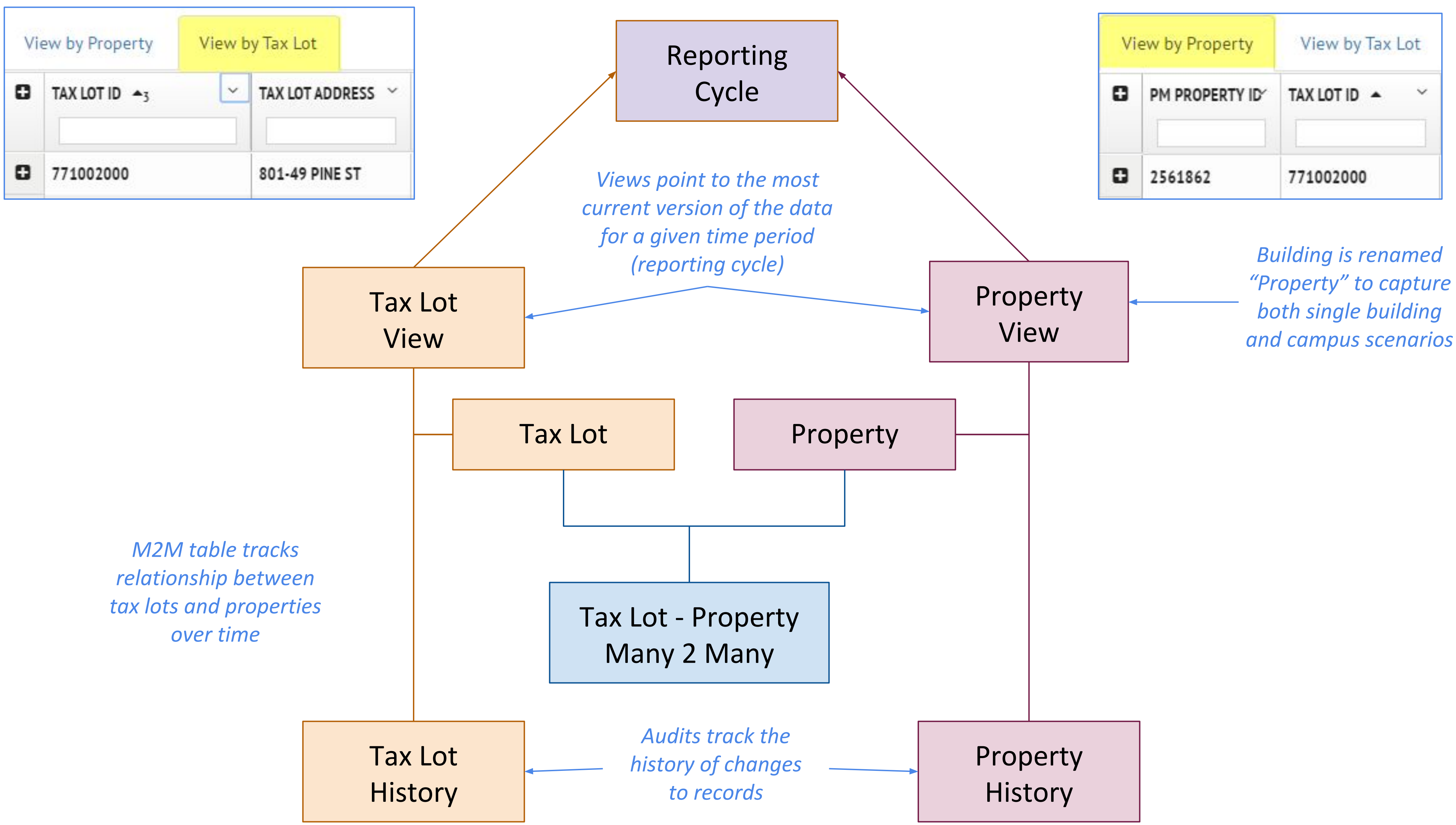
## Tasks to achieve outcomes:

- **Import data from different sources**
  - Tax assessor lists
  - Costar Data
  - Portfolio Manager Data
- **Match data from different sources**
- **Handle data with different types of relationships**
  - Tax Assessor data defined by Lot/Parcel

    vs
  - CoStar or Portfolio Manager data defined by buildings
- **Maintain data based on compliance year**

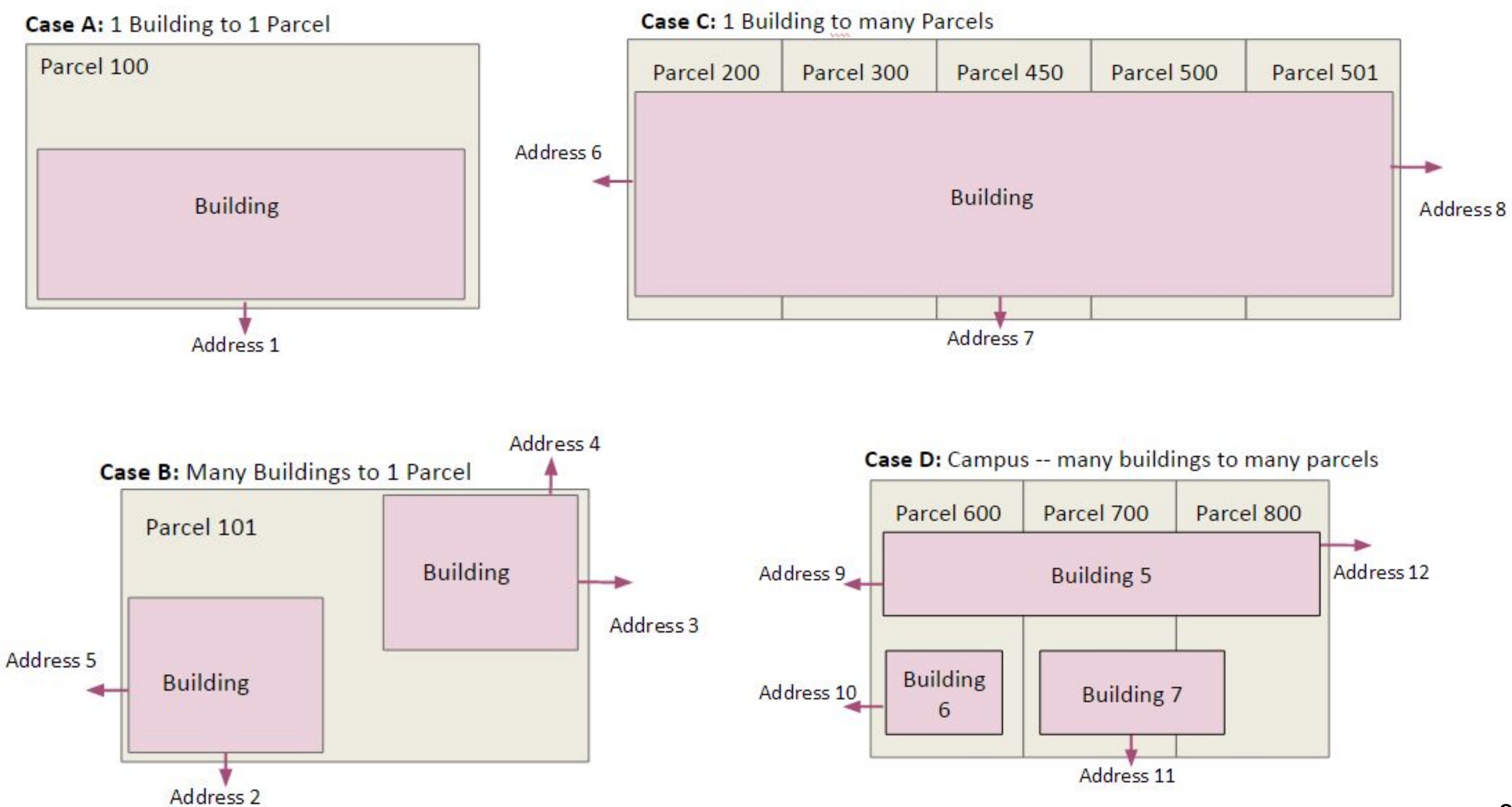
# Data Model Schematic

- View different states in time
- Many to many relationship between Tax Lot data and Building/Portfolio Manager data
- Viewing Tax Lot and Property data combined / rolled up



# Physical reality of the data

The relationship of Buildings to Parcels/Tax Lots can be complicated



# SEED Workflow

**Import data**
(Tax Lot & Property by Cycle)

**Map fields**

**Merge & pair data**

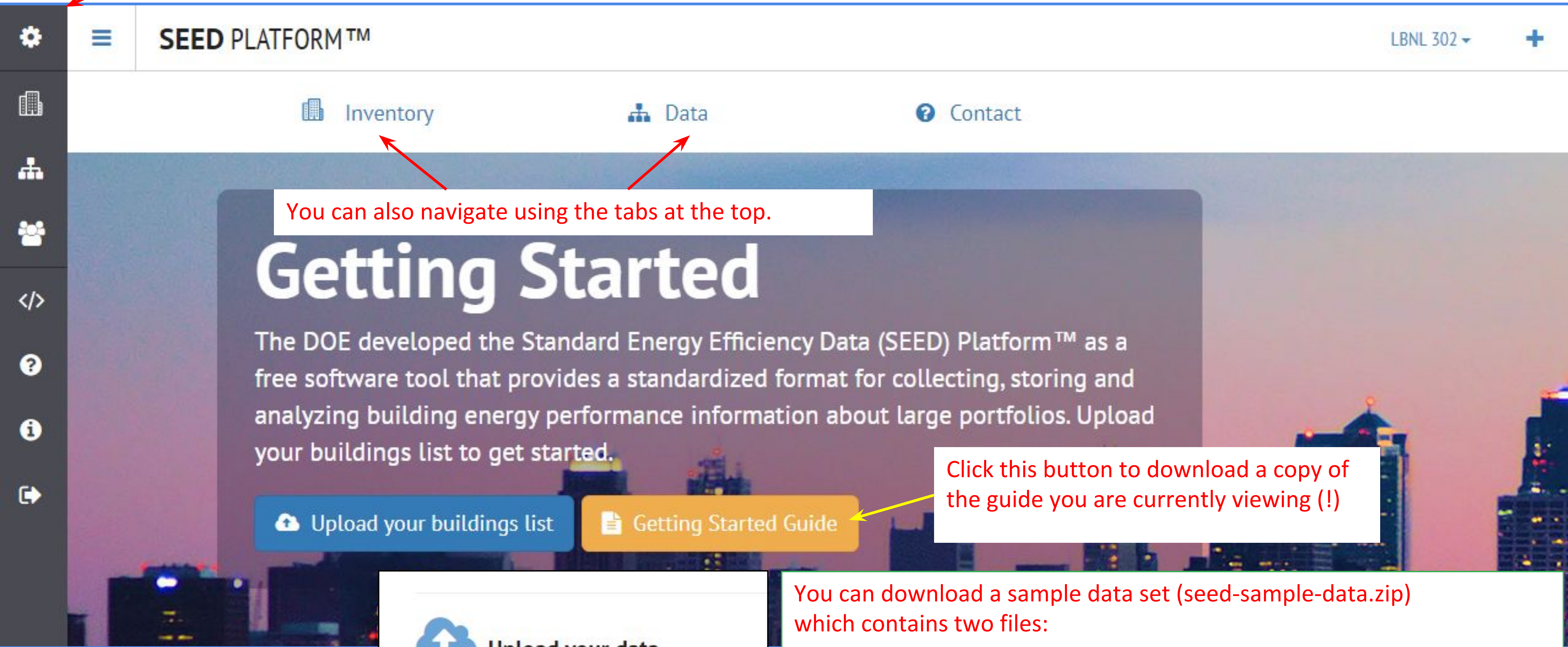
**View Inventory**
(Tax Lot and Property data)

**Filter / Label Inventory**

**Export Data**

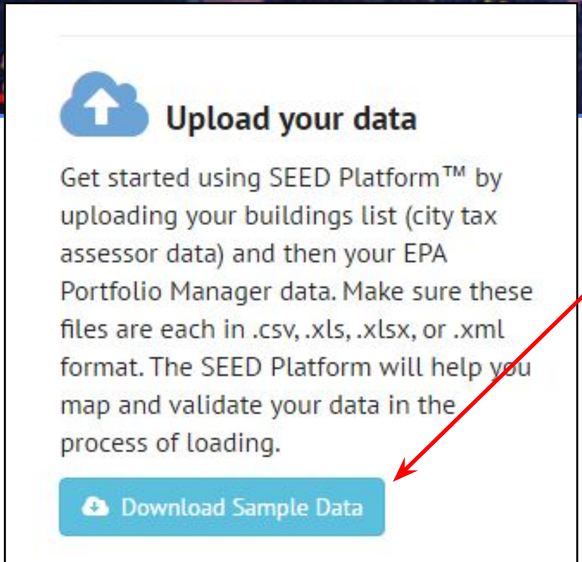
# Home Page

You can open the Navigation Side Bar to view different program areas



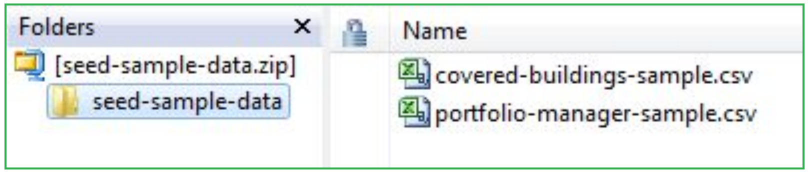

You can also navigate using the tabs at the top.

Click this button to download a copy of the guide you are currently viewing (!)



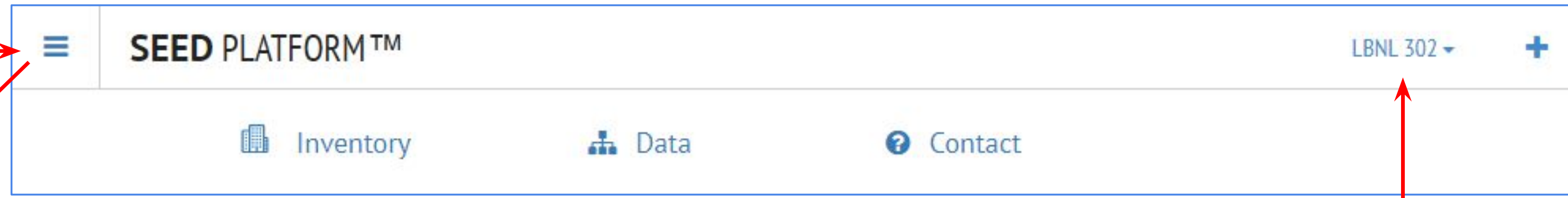

You can download a sample data set (seed-sample-data.zip) which contains two files:

- Covered-buildings-sample.csv
  (tax assessor building list)
- Portfolio-manager-sample.csv
  (custom report data from ENERGY STAR Portfolio Manager)



# Navigation

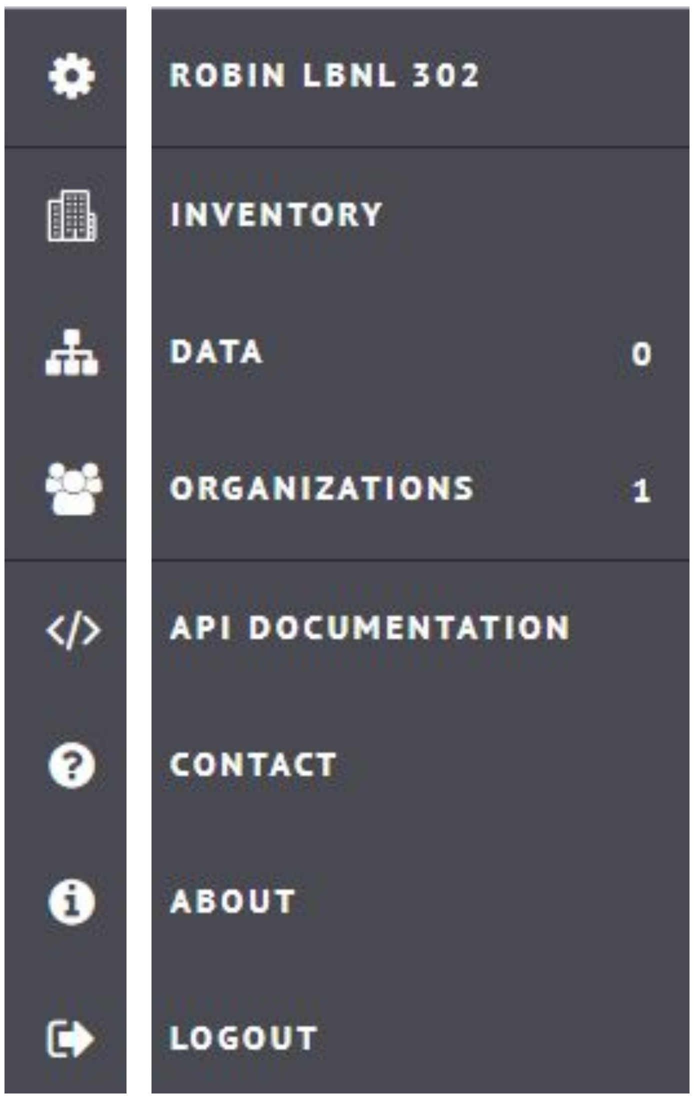
Click to Expand and Contract the Navigation Side Bar




Organization

contracted

expanded




**User Account Name:** Click to view information about the account

**Inventory:** Click to view of the Tax Lot / Parcel and Property / Building data, by Cycle / Time Period

**Data:** Click to import data into SEED that will become records in the Inventory

**Organizations:** Click to view the organizations associated with the user account

**API Documentation:** Click to view the Swagger API documentation

**Contact:** Click to view SEED contact info, including a link to user documenation and the User and Developer Forums, and a link to the Github code repository

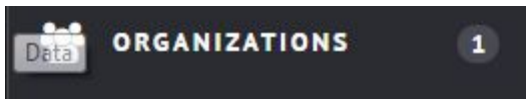
**About:** Click to view information about SEED development and funding

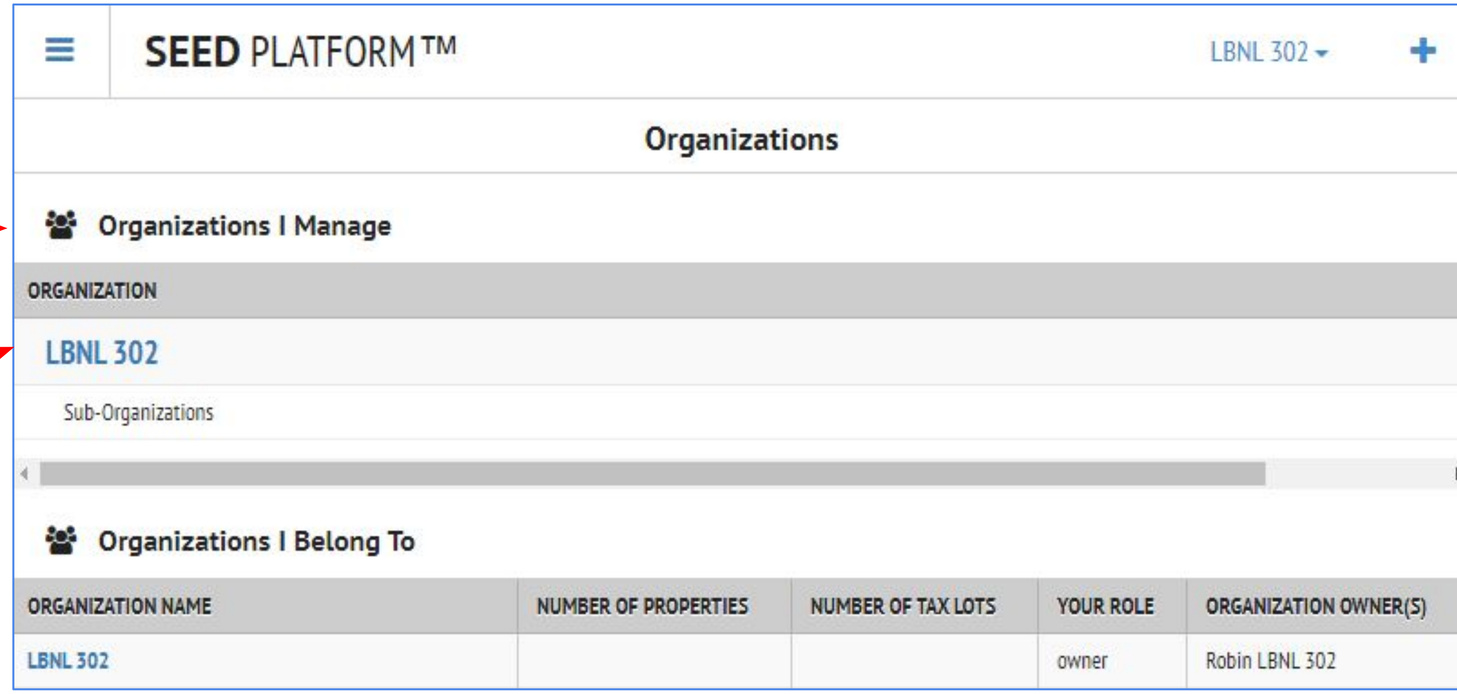
**Log out:** Click to log out of the program

# Create Cycle in Organizations (before uploading data)

**At least one cycle must be defined before importing data.**

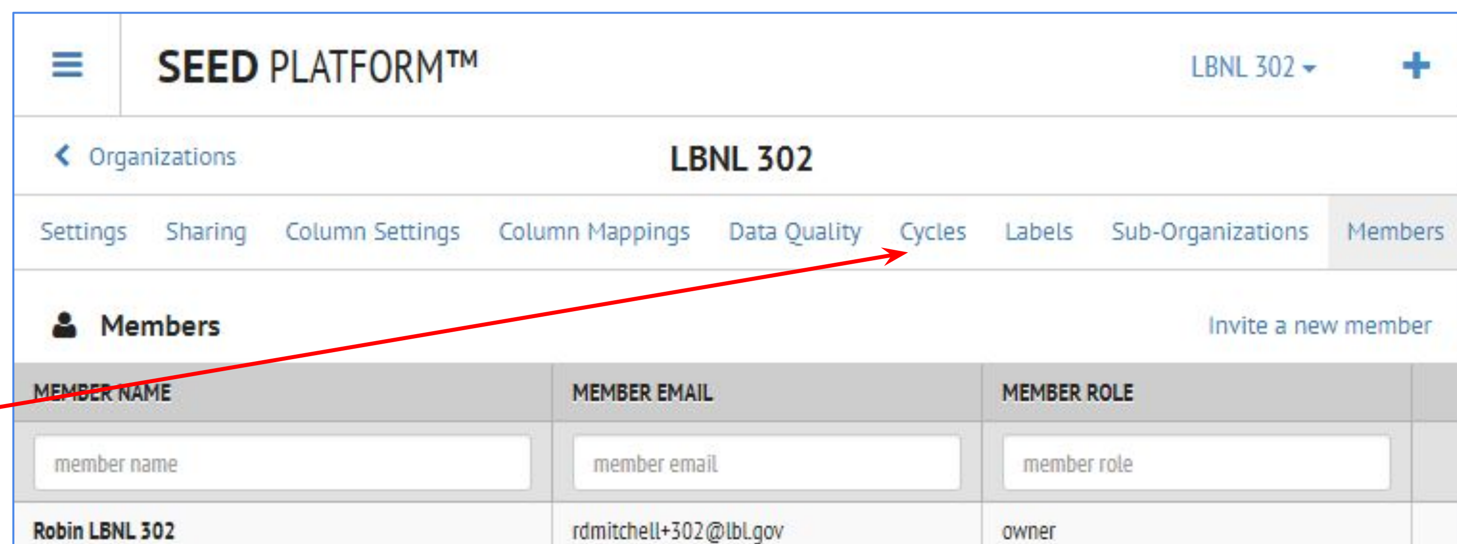
To define a new cycle, go to the Organizations navigation bar to see the organizations that you manage and belong to.



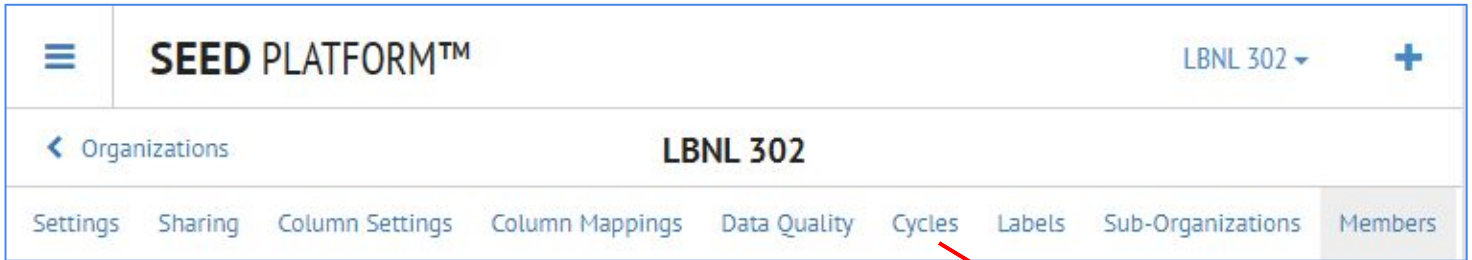

Click on the Organization that you want to make a cycle for

The program will open up a view of that Organization.



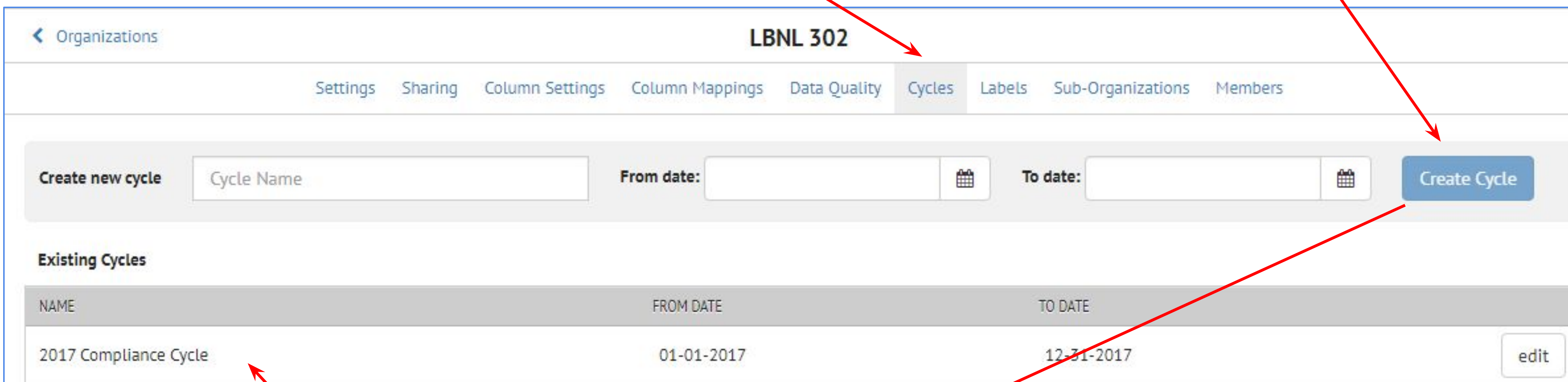

Click on the “Cycles” link to view and edit existing cycles, and define new cycles

# View, Edit and Create Cycles




Click on **Cycles** link to view the **Cycles** page

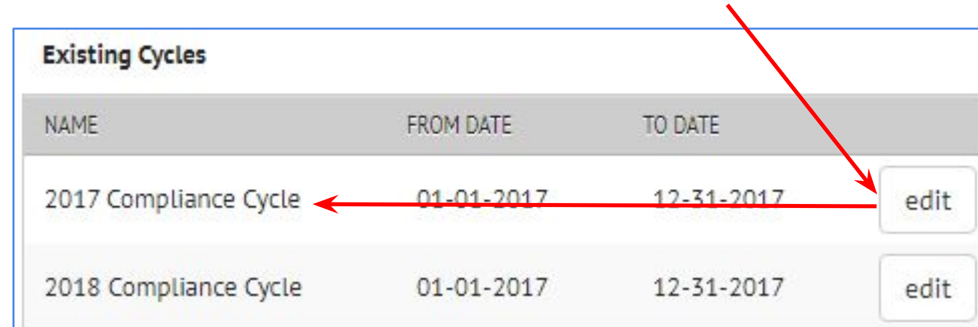
To make a new **Cycle**, enter the Cycle **name**, **From date** and **To date**, then click **Create Cycle**




There is a default Cycle provided by the program called **2017 Calendar Year**

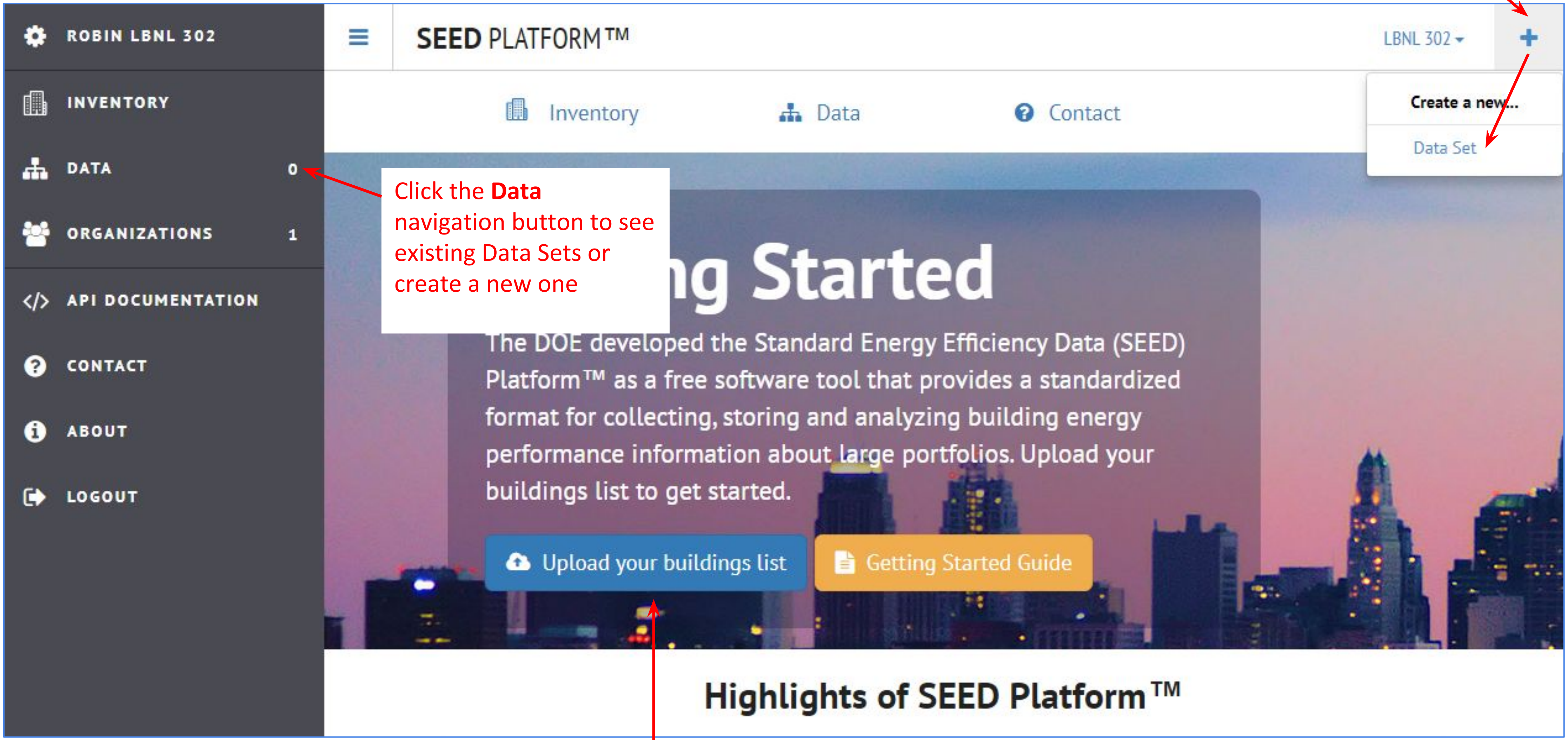
The new **Cycle** is added to the **Existing Cycles** list

Click **Edit** to change the default **Cycle** name if desired

# Uploading Data - There are many ways to start

OR click the "**+**" icon at the and then select "**Data Set**"

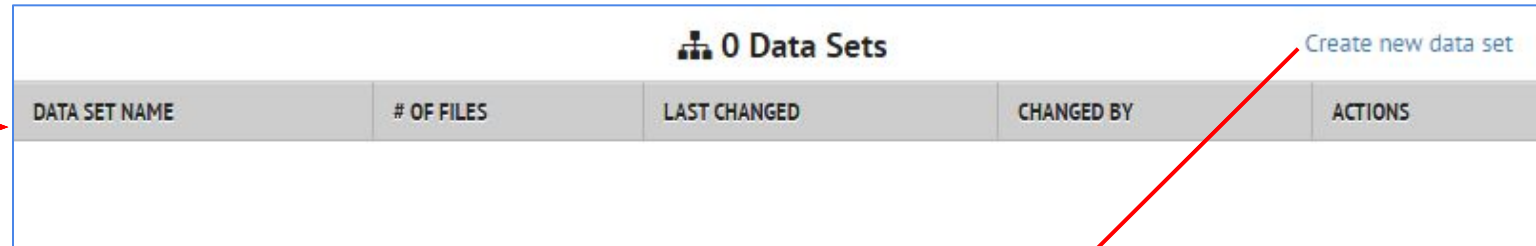



Click the **Data** navigation button to see existing Data Sets or create a new one

OR
click the blue button labeled "**Upload your buildings list**"


# Create a New Data Set

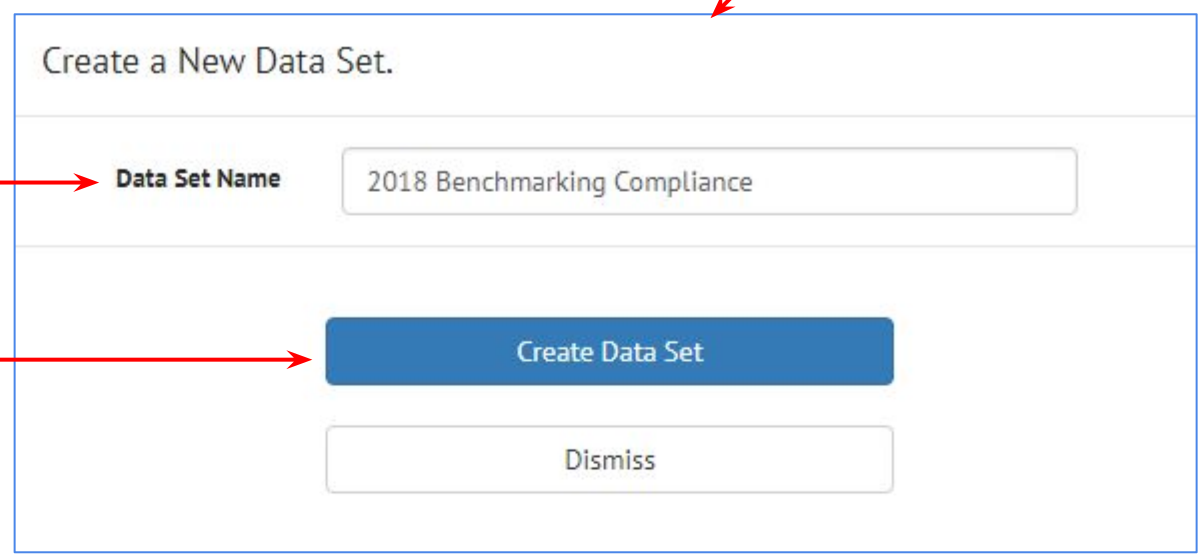
Clicking the Data Navigation option will open the Data Sets view, to display existing Data Sets and create new Data Sets

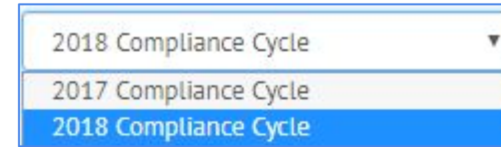

Click the **Create new data set** link to open this dialog box

Give the new data set a name

Click the Create Data Set button




# Add a file to the data set




Select the data file type, either

**Upload a Spreadsheet** (CSV, XLS, XLSX) to import

- Tax / Parcel lists
- Building lists

**Upload Portfolio Manager Data** (CSV, XLS, XLSX) to import

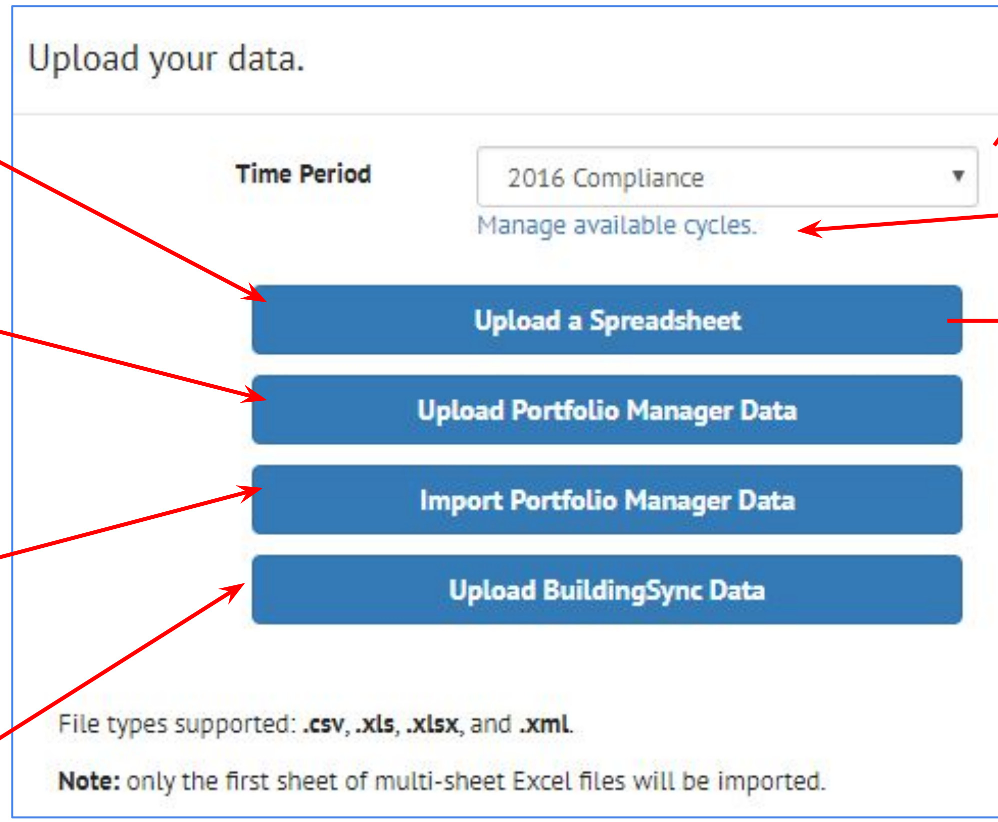
- Custom Report files generated from Portfolio Manager

**Import Portfolio Manager Data** to

- Log in to your Portfolio Manager account and import the custom report template directly into SEED

**Upload BuildingSync Data**

- This option allows importing a BuildingSync (XML format) file, such as produced by Asset Score.

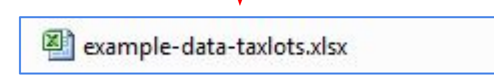



Select a **Cycle** (time period) to associate with the data

Click "**Manage available cycles**" to go to the Cycle definition page

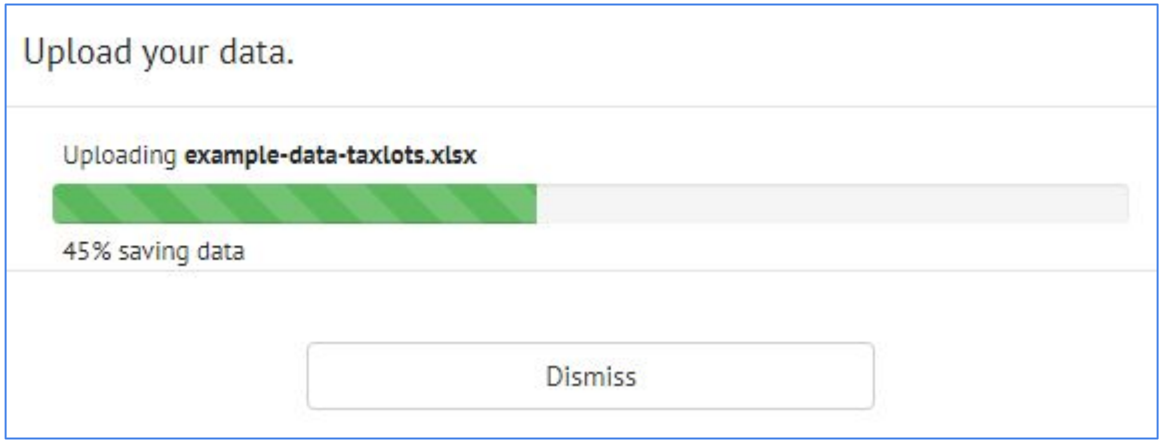
A browser window will open to select a file to upload

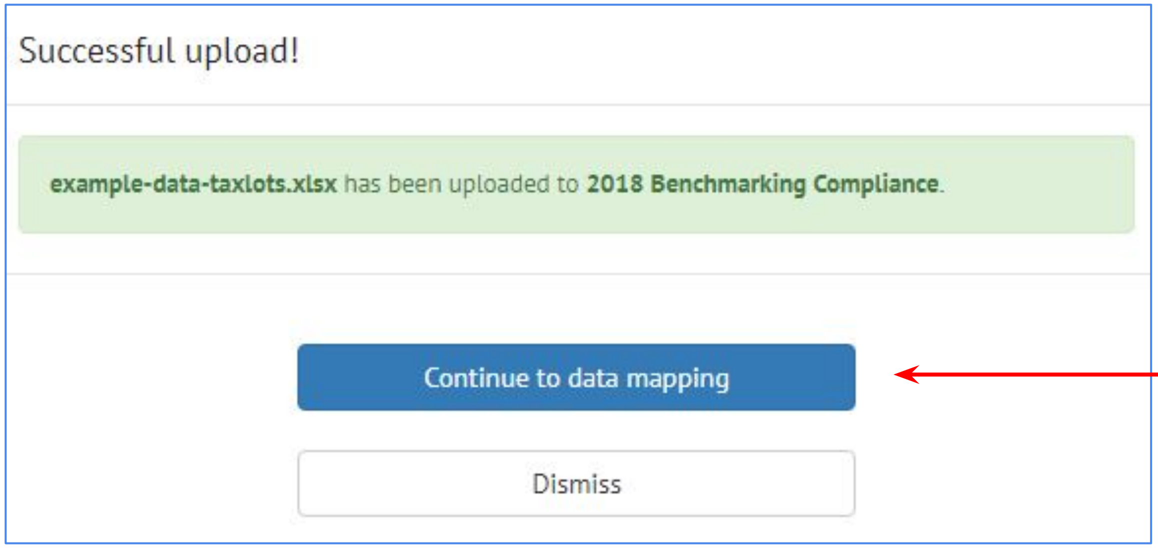
In this example, a **Tax Lot / Parcel** data file is uploaded




# Upload Data

During the data upload, SEED reports the progress
and the success of the upload




When the data upload is complete, click the "**Continue to data mapping**" button

After you click the "**Continue to data mapping**" button, you may see a spinning circle if the data file is large

# Mapping Fields

**Matching Fields:**
SEED matches records between files (such as Tax Lot and Building lists and ENERGY STAR Portfolio Manager data) based on the matching fields so it is **very important** to map your data's fields to at least one of these SEED fields.

***Pick a field that is common between the files you plan to merge and pair to each other***

Directions for mapping data are at the top of the Mapping page in the STEP 1 tab.

The Matching fields are

- **Jurisdiction Tax Lot ID** (Tax Lot table)
- **PM Property ID** (Portfolio Manager ID) (Property table)
- **Custom ID** (Property and/or Tax Lot table)
- **Address Line 1** (Property and/or Tax Lot table)
- **UBID** (Unique Building ID) (Property table)

‹ 2017 Compliance

**Data Mapping and Validation (1 - example-data-taxlots-...**

STEP 1: Map Your Data | STEP 2: Review Your Data Mappings | BEDES | Collapse Tabs

**MAPPING YOUR DATA TO SEED**

It is necessary to map your field names to SEED field names. You can select from the list that appears as you start to type, which is based on the Building Energy Data Exchange Specification (BEDES), or you can type in your own name, as well as typing in the field name from the original datafile.

In addition, you need to specify where the field should be associated with Tax Lot data or Property data. This will affect how the data is matched and merged, as well as how it is displayed in the Inventory view.

**Field names for matching:** The following fields are used by SEED to match records: **Jurisdiction Tax Lot ID**, **PM Property ID**, **Custom ID 1**, **Address Line 1**, and **UBID**. If there are fields in a datafile mapped to these names, the program will attempt to match on those same names in existing records.

For Portfolio Manager files, SEED has a default set of field names which can be used without extra user editing unless desired.

When you click the **Map Your Data** button, the program will show a grid with the new field names as the column headings and your data in the rows. In that view, you can still come back to the initial mapping screen and change the field mapping.

**Duplicate** -- if fields are marked as duplicates they need to be resolved to have different names.

The **Collapse Tabs** option is useful if you already know all the matching rules and need more room to view the mapped fields


# Mapping Fields

The fields in a data file can be mapped

- All to the same table (either Tax Lot or Property)
- To different tables
    - In the example below, mapping to both tables defines the relationship between the Property and the Tax Lot data with **matching fields**.

Building List

| **UBID** | **Jurisdiction Tax Lot ID** | **Lot Owner** | **Gross Floor Area** | **Parcel Area** | **Building Owner** |
|---|---|---|---|---|---|
| 123 | 13234 | Williams | 25000 | 55000 | Chen |
| 256 | 33423 | Smith | 40000 | 75000 | Fowler |
| 535 | 33423 | Smith | 10000 | 75000 | Hilgard |

Map to Tax Lot table

Tax Lot table

| **Jurisdiction Tax Lot ID** | Lot Owner | Parcel Area |
|---|---|---|
| 13234 | Williams | 55000 |
| 33423 | Smith | 75000 |

Map to Property table

Property table

| **UBID** | Gross Floor Area | Building Owner |
|---|---|---|
| 123 | 25000 | Chen |
| 256 | 40000 | Fowler |
| 535 | 10000 | Hilgard |

Tax-Lot Property Join table

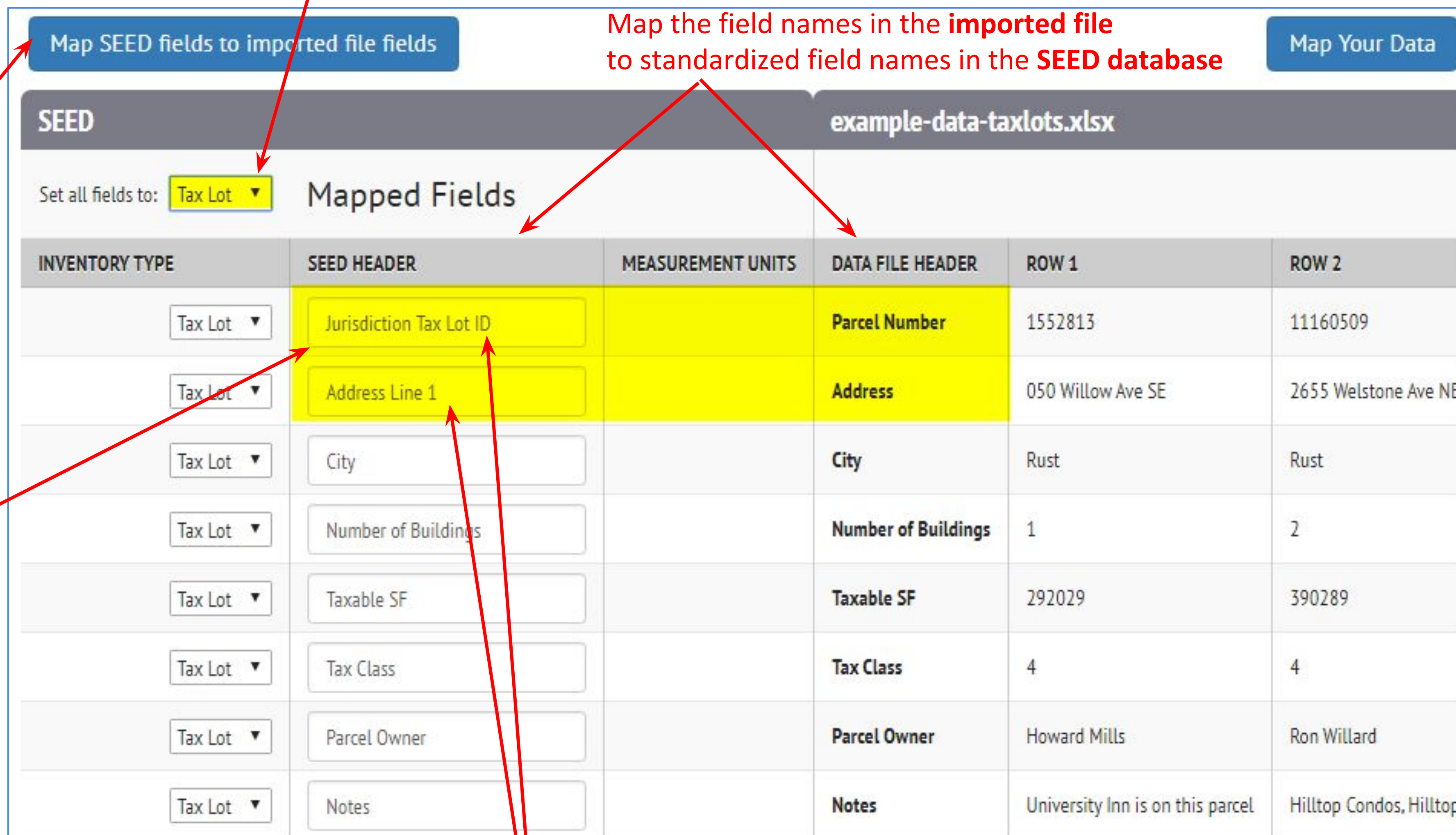
| **Jurisdiction Tax Lot ID** | **Unique Building ID** |
|---|---|
| 13234 | 123 |
| 33423 | 256 |
| 33423 | 535 |


# Mapping Fields

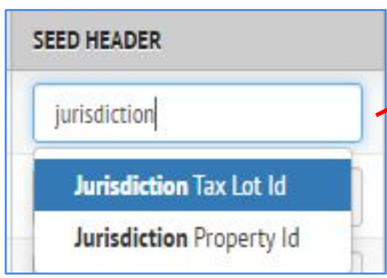
The program will make a guess at an appropriate field name, which is not always correct or desired. The field names can get changed to another name if desired or you can click on this button to map all the SEED fields to the fields in the imported file

This data is all from the Tax Assessor so all the fields are mapped to the Tax Lot table

Map the field names in the **imported file** to standardized field names in the **SEED database**




Start typing in the SEED field input to see a list of fields containing that word




These fields were mapped to **the reserved Matching field names** to specify the fields the program will use to match records in files

- Parcel Number ⇒ **Jurisdiction Tax Lot ID**
- Address ⇒ **Address Line 1**

**Matching**

- In this case, the program will match two records if the data in either the **Jurisdiction Tax Lot ID** field **OR** the **Address Line 1** field are the same

DATA 0

# Mapping Fields


Click **Map Your Data** when all the fields are mapped as desired

Some of the non-matching field names are changed from the default program suggestions

For “Number of Buildings”, SEED suggested “Number Properties” but this was changed back to “Number of Buildings” for the final mapping (by just typing the complete field name in the SEED Header input box)

Map SEED fields to imported file fields

Map Your Data

**SEED** | **example-data-taxlots.xlsx**

Set all fields to: Tax Lot

Mapped Fields

| INVENTORY TYPE | SEED HEADER | MEASUREMENT UNITS | DATA FILE HEADER | ROW 1 | ROW 2 |
|---|---|---|---|---|---|
| Tax Lot | Jurisdiction Tax Lot ID | | **Parcel Number** | 1552813 | 11160509 |
| Tax Lot | Address Line 1 | | **Address** | 050 Willow Ave SE | 2655 Welstone Ave NE |
| Tax Lot | City | | **City** | Rust | Rust |
| Tax Lot | Number of Buildings | | **Number of Buildings** | 1 | 2 |
| Tax Lot | Taxable SF | | **Taxable SF** | 292029 | 390289 |
| Tax Lot | Tax Class | | **Tax Class** | 4 | 4 |
| Tax Lot | Parcel Owner | | **Parcel Owner** | Howard Mills | Ron Willard |
| Tax Lot | Notes | | **Notes** | University Inn is on this parcel | Hilltop Condos, Hilltop |

DATA 0

# Field Mapping Review

Map Your Data

View the mapped fields populated with the data

Click **Save Mappings** if the mapping is correct

You can click **Back to Mapping** if it is not correct

Click **Data Quality Results** to see data errors (see next page)

Back to Mapping

Data Quality Results

Save Mappings

It is possible to filter and sort the data by field in this view

View by Tax Lot

SEED displays the number of records

9 tax lots

| Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | City (Tax Lot) | Notes | Parcel Owner | Tax Class | Taxable Sf | Number Of Buildings |
|---|---|---|---|---|---|---|---|
| 1552813 | 050 Willow Ave SE | Rust | University Inn is on this parcel | Howard Mills | 4 | 292029 | 1 |
| 11160509 | 2655 Welstone Ave NE | Rust | Hilltop Condos, Hilltop Retail, Hillt... | Ron Willard | 4 | 390289 | 2 |
| 13334485 | 93029 Wellington Blvd | Rust | Lucky University on this parcel | University Trust | 5 | 1234560 | |
| 23810533 | 94000 Wellington Blvd | Rust | Lucky University on this parcel | University Trust | 2 | 5312 | |
| 24651456 | 11 Ninth Street | Rust | Lucky University on this parcel | University Trust | 2 | 45135 | 5 |
| 33366125 | 525 Elm Street | Rust | Montessori school on this tax lot | Susan Anthony | 3 | 954652 | |
| 33366148 | 530 Elm Street | Rust | Montessori school on this tax lot | Heidi Folk | 1 | 154623 | |
| 33366555 | 521 Elm Street | Rust | Montessori school on this tax lot | Buildings LLC | 9 | 15213 | |
| 55039309 | 39929 Ranch 99 Road | Rust | | Ward Thatcher | 7 | 331235 | |

Back to Mapping

DATA 0

# Mapping – Review – Data Cleansing

From the **Data Mapping** screen, click **Data Cleansing Results** to see what the program discovered about the data

14 Data Quality Results

## Data Quality Results

File Name: example-data-taxlots.xlsx

Date Uploaded: February 8th 2018, 7:26:40 PM -08:00

| ADDRESS LINE 1 | JURISDICTION TAX LOT ID | PM PROPERTY ID | CUSTOM ID | FIELD | ERROR MESSAGE |
|---|---|---|---|---|---|
| Address Line 1 | Jurisdiction Tax Lot ID | PM Property ID | Custom ID | Field | Error Message |
| 93029 Wellington Blvd | 13334485 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |
| 94000 Wellington Blvd | 23810533 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |
| 94000 Wellington Blvd | 23810533 | -- | -- | Taxable Sf | Taxable Sf [5312] < 10000 |
| 525 Elm Street | 33366125 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |
| 530 Elm Street | 33366148 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |
| 521 Elm Street | 33366555 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |
| 39929 Ranch 99 Road | 55039309 | -- | -- | Number Of Buildings | Number Of Buildings is required and is None |

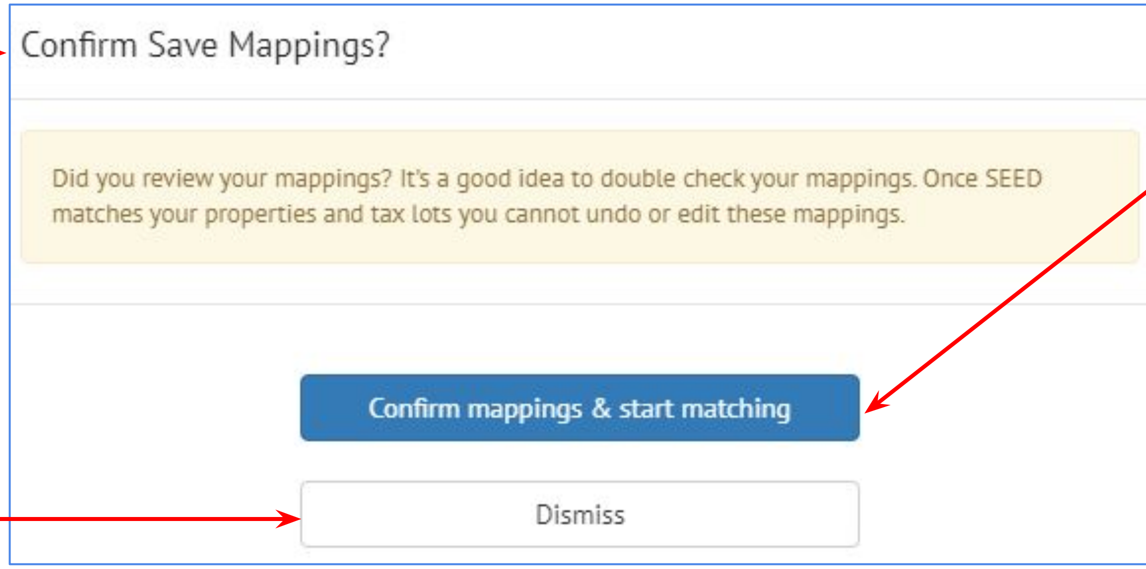
Click **Export** to export the contents of the Data Cleansing screen to a CSV file

Export Close

Click **Close** to return to the **Data Mapping** Screen

Data Cleansing Results.csv

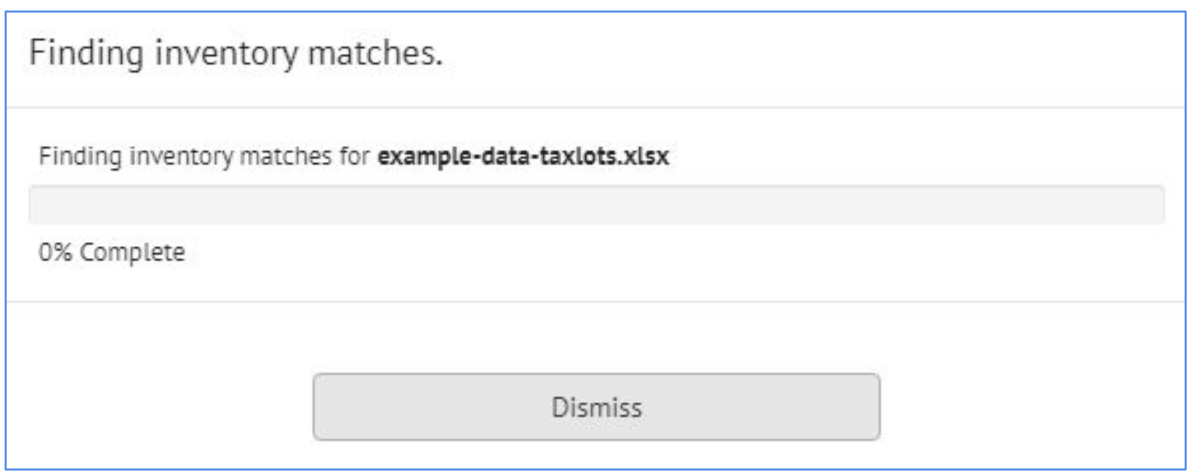

# Mapping – Confirm and Start Matching


Click **Confirm mappings and start matching** if you are happy with the data mapping

SEED will check to see if any records match within the file (or across other files if they have already been imported)

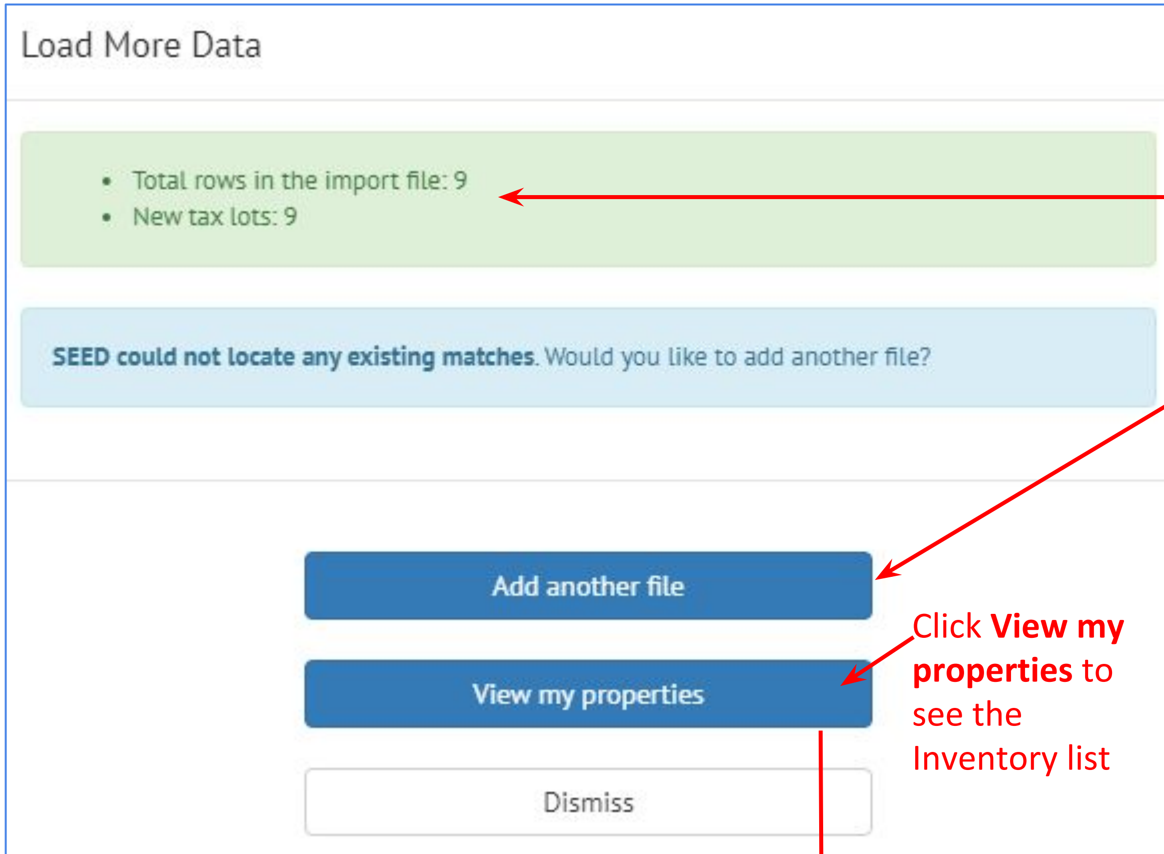
You have one more chance to review the mapping




Program checks to see if any records match within the file based on the matching fields set in Mapping, such as Address or Tax Lot ID

The program checks for matching even if there is no data already loaded into the program to match to, in case there are matches within the file being imported

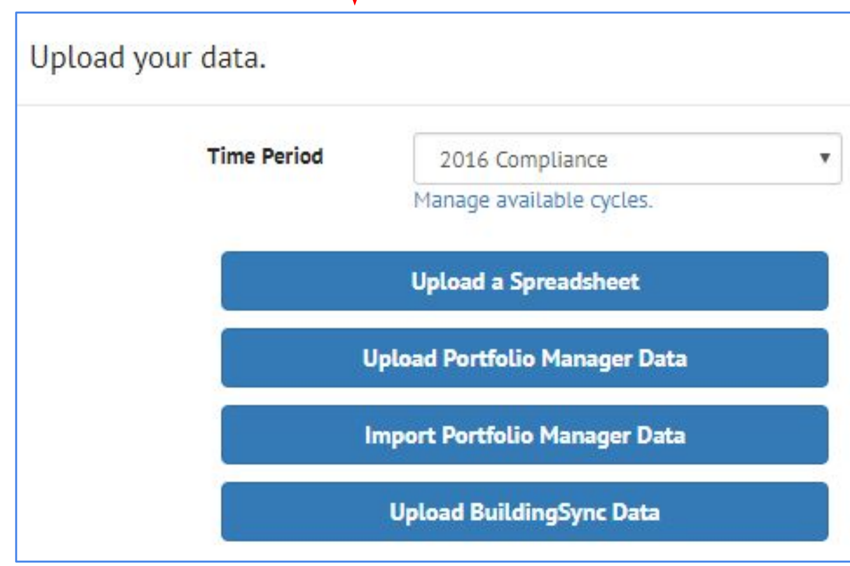
# Matching - View Results / Add a File

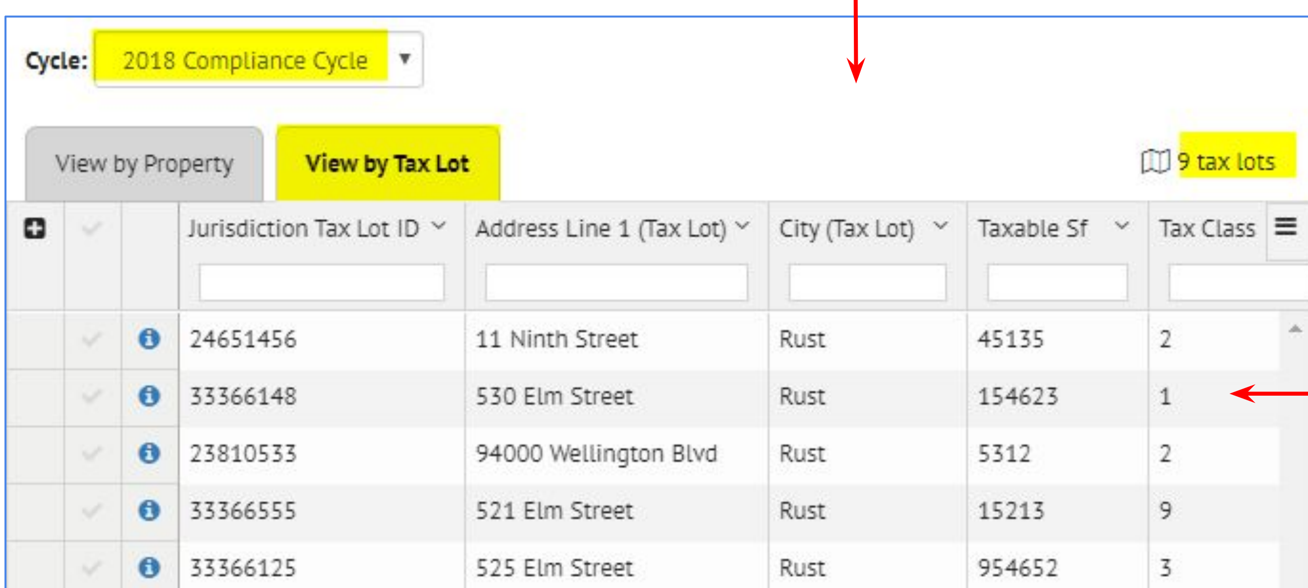



The program reports on what was done with the records. In this case, the program imported 9 records and created 9 new records in the Tax Lot table from those imported records

Click **Add another file** to upload another data file, such as ENERGY STAR Portfolio Manager data, which allows you to add more data to match to the records that were just created

Click **View my properties** to see the Inventory list




| Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | City (Tax Lot) | Taxable Sf | Tax Class |
|---|---|---|---|---|
| 24651456 | 11 Ninth Street | Rust | 45135 | 2 |
| 33366148 | 530 Elm Street | Rust | 154623 | 1 |
| 23810533 | 94000 Wellington Blvd | Rust | 5312 | 2 |
| 33366555 | 521 Elm Street | Rust | 15213 | 9 |
| 33366125 | 525 Elm Street | Rust | 954652 | 3 |

After a data file has been mapped and matched, the records can be viewed in the Inventory list view.

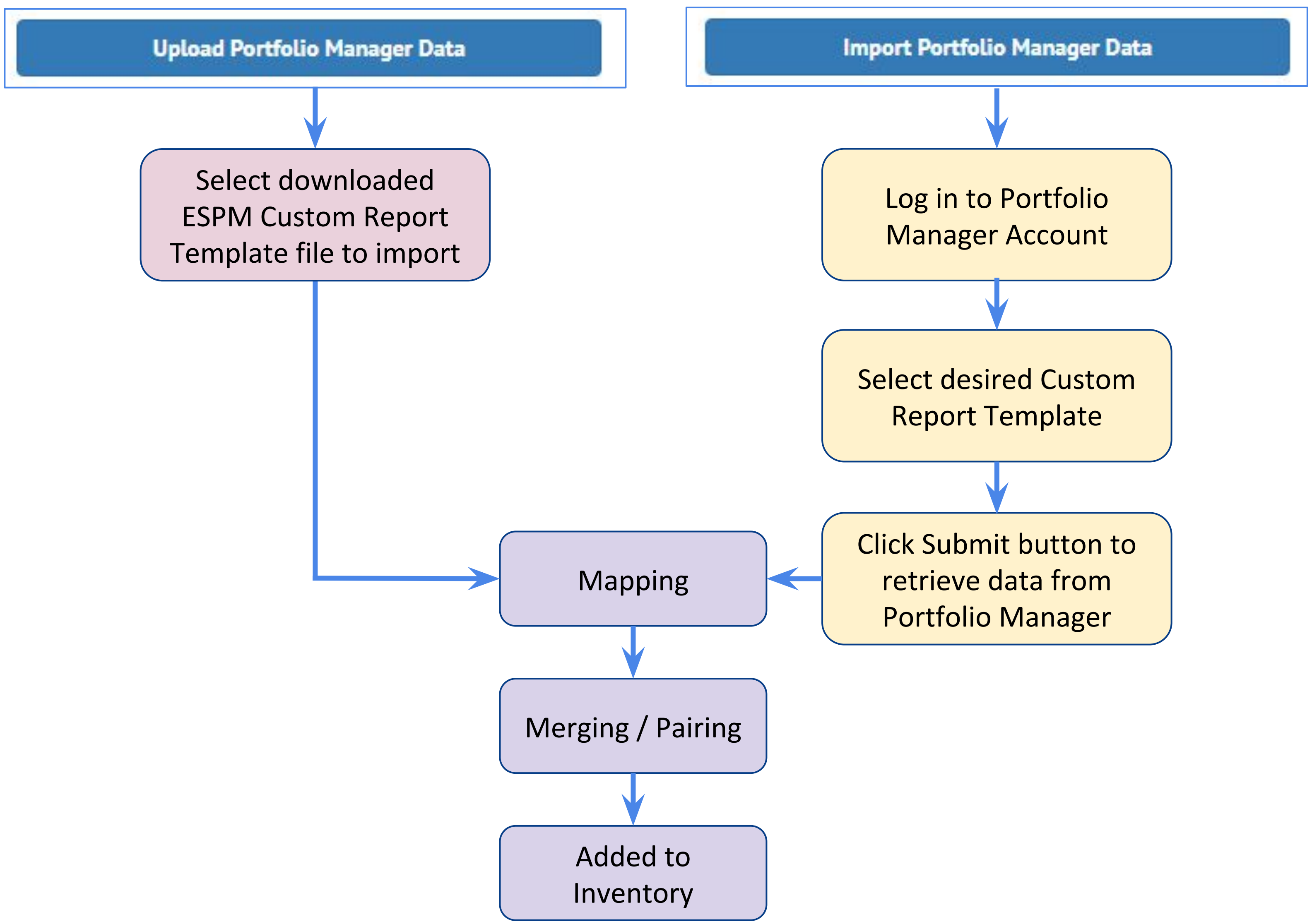
In this example, **Tax Lot** data was imported, so the data can be viewed in the View by Tax Lot tab, for the appropriate **Cycle**

# ENERGY STAR Portfolio Manager (ESPM) Data

## Two paths for obtaining ENERGY STAR Portfolio Manager (ESPM) data

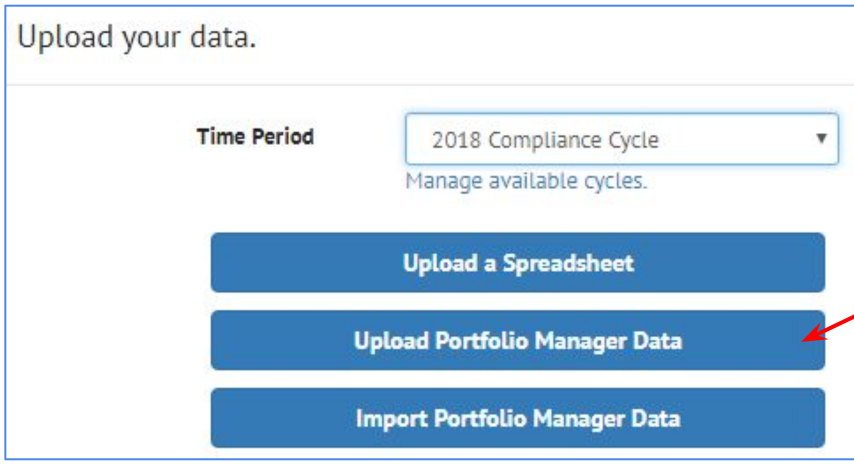
**Option 1**
**Upload Portfolio Manager Data**
Upload an ESPM Custom Report Template that has been downloaded from ESPM as a CSV file "by hand"

**Option 2**
**Import Portfolio Manager Data**
Log directly into ESPM and import an ESPM Custom Report Template data directly into SEED without first downloading the CSV file.



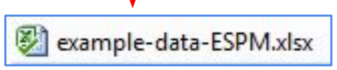

# ESPM Option 1: Upload Data from ESPM CSV files

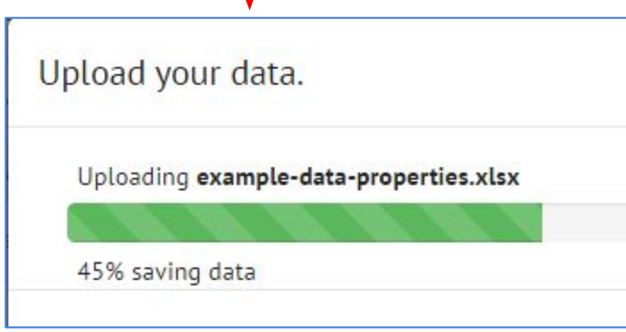
This example shows how to upload Portfolio manager data from Custom Report Template CSV text files that have been downloaded from Portfolio Manager

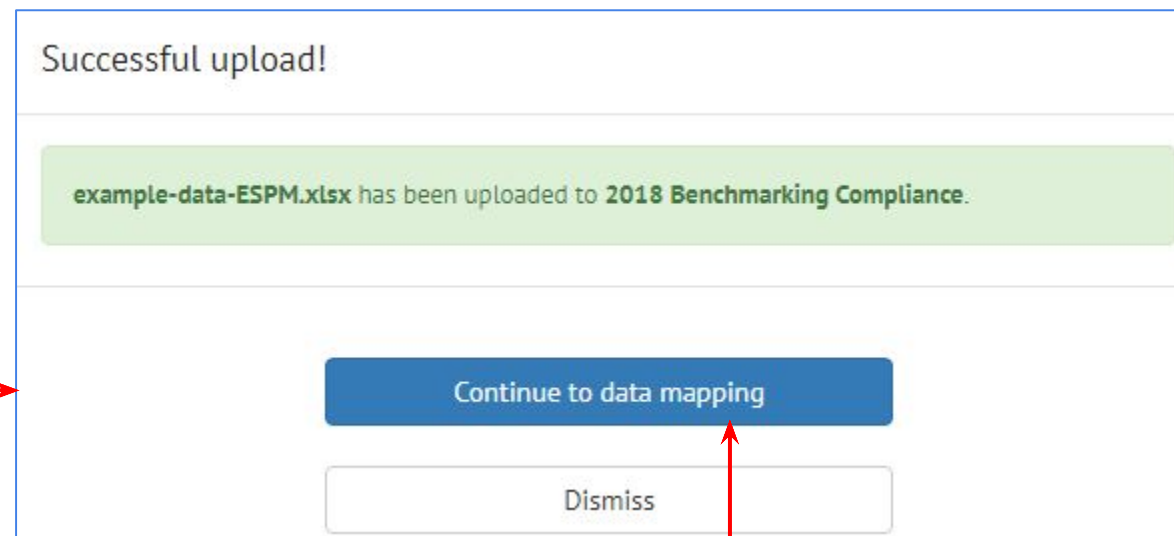



- Select the appropriate Cycle
- Click the **Upload Portfolio Manager Data** button to upload an ESPM Custom Report Template that has been exported from ESPM as a CSV file

Browse to the appropriate file to upload to SEED



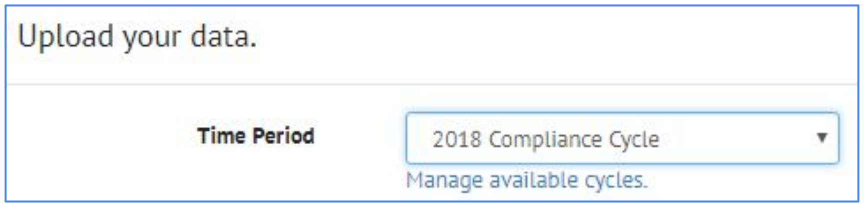




Click
**Continue to data mapping**
(See Mapping Portfolio Manager Data)


# ESPM Option 2: Import Data Directly from ESPM

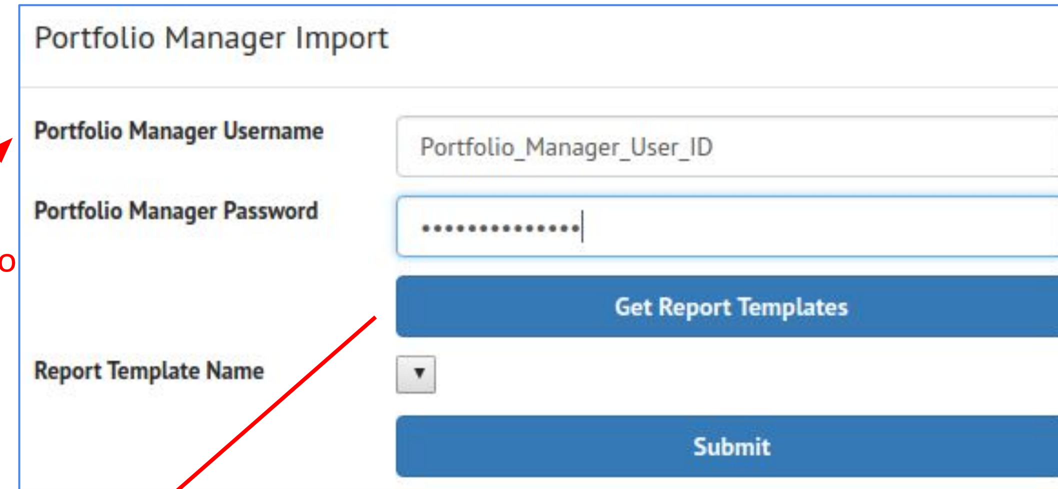
This example shows how to import Portfolio manager data from Custom Report Template directly by logging into a Portfolio Manager account from SEED

**1** - Select the appropriate Cycle

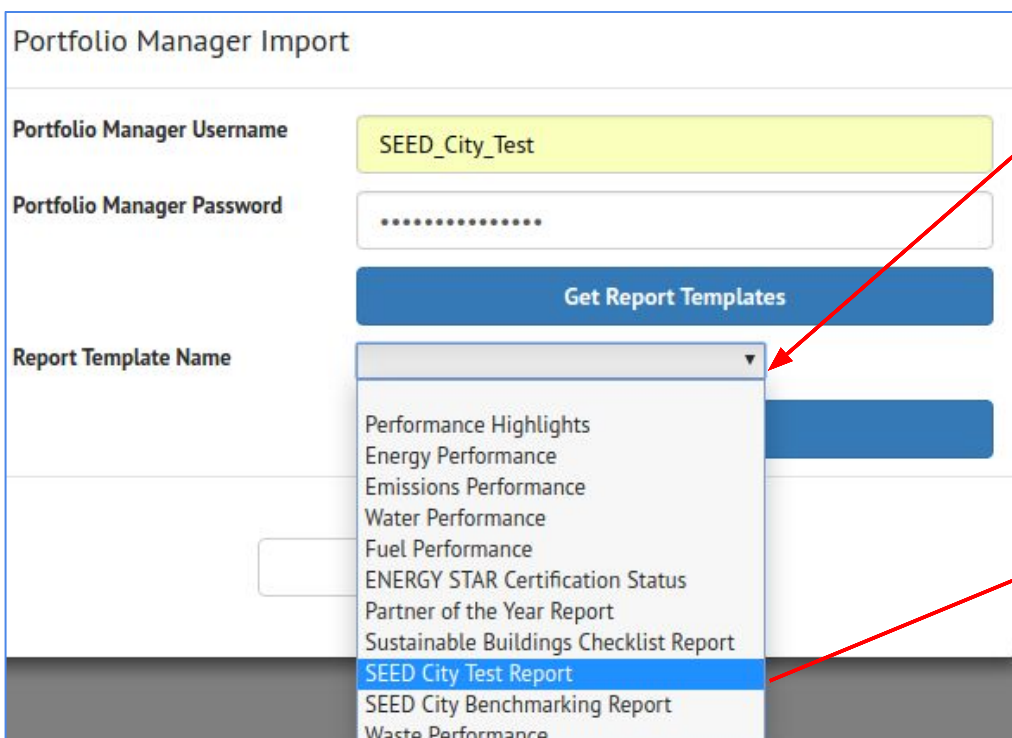


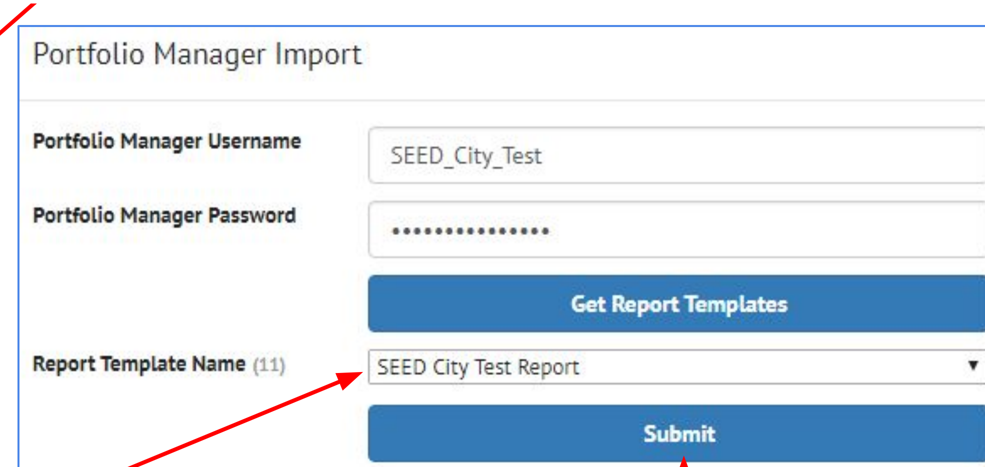

**2 -** Click the **Upload Portfolio Manager Data** button to upload an ESPM Custom Report Template that has been exported from ESPM as a CSV file


**3** - Enter Portfolio Manager Username and Password




**4** - Click **Get Report Templates button**




**5** - Select the desired Report Template

**6** - Click **Submit** to continue to data Mapping

DATA 0

# Mapping Portfolio Manager Data

## SEED field mapping for a Portfolio Manager file

*Map all the fields to the Property Table except if there is a Tax Lot / Parcel ID -- map that to the Tax Lot table*

**UBID**

- ***Matching field - Property table***
- Use for a Unique Building ID, if that field is in the ESPM data

**PM Property ID**

- ***Matching field - Property table***
- Map to **Property ID** in PM file

**PM Parent Property ID**

- Map to **Parent Property ID** in PM file to define the campus relationship

**Address Line 1**

- ***Matching field - Property table***
  - If you want to match on Address, map to Address Line 1.
  - If you don't want to match on Address, use the ESPM field name of "Address 1"

**Jurisdiction Tax Lot ID**

- ***Matching Field - Tax Lot table***
- If there is a Tax Lot ID field in the Portfolio Manager data that can be used to set up the relationship between Tax Lot and Property, map it to Jurisdiction Tax Lot ID
- Set the field to the **Tax Lot** table

Map SEED fields to imported file fields

SEED | example-data-ESPM.xlsx

Mapped Fields  Set all fields to:

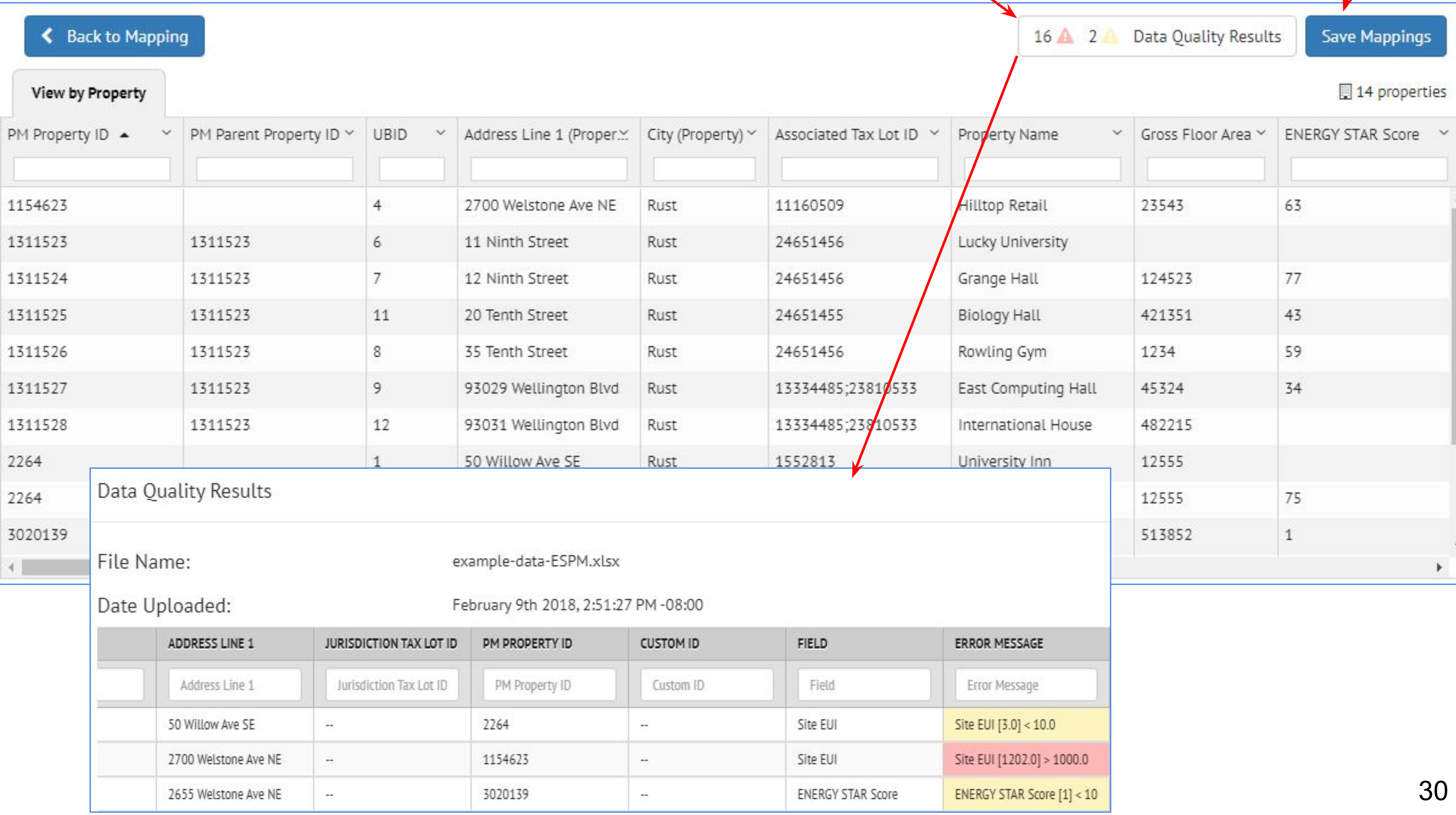
| SEED HEADER | DATA FILE HEADER | INVENTORY TYPE | ROW 1 |
|---|---|---|---|
| Ubid | Unique Building ID | Property | 1 |
| Pm Property Id | Property ID | Property | 2264 |
| Pm Parent Property Id | Parent Property ID | Property | |
| Property Name | Property Name | Property | University Inn |
| Address Line 1 | Address 1 | Property | 50 Willow Ave SE |
| Jurisdiction Tax Lot Id | Tax Lot ID | Tax Lot | 1552813 |
| Property Type | Property Type | Property | Hotel |

DATA 0

# Mapping Review - Portfolio Manager

Click **Data Cleansing results** button to view the errors or warnings.

Click **Save Mappings** if mapping is correct




| PM Property ID | PM Parent Property ID | UBID | Address Line 1 (Proper... | City (Property) | Associated Tax Lot ID | Property Name | Gross Floor Area | ENERGY STAR Score |
|---|---|---|---|---|---|---|---|---|
| 1154623 | | 4 | 2700 Welstone Ave NE | Rust | 11160509 | Hilltop Retail | 23543 | 63 |
| 1311523 | 1311523 | 6 | 11 Ninth Street | Rust | 24651456 | Lucky University | | |
| 1311524 | 1311523 | 7 | 12 Ninth Street | Rust | 24651456 | Grange Hall | 124523 | 77 |
| 1311525 | 1311523 | 11 | 20 Tenth Street | Rust | 24651455 | Biology Hall | 421351 | 43 |
| 1311526 | 1311523 | 8 | 35 Tenth Street | Rust | 24651456 | Rowling Gym | 1234 | 59 |
| 1311527 | 1311523 | 9 | 93029 Wellington Blvd | Rust | 13334485;23810533 | East Computing Hall | 45324 | 34 |
| 1311528 | 1311523 | 12 | 93031 Wellington Blvd | Rust | 13334485;23810533 | International House | 482215 | |
| 2264 | | 1 | 50 Willow Ave SE | Rust | 1552813 | University Inn | 12555 | |
| 2264 | | | | | | | 12555 | 75 |
| 3020139 | | | | | | | 513852 | 1 |

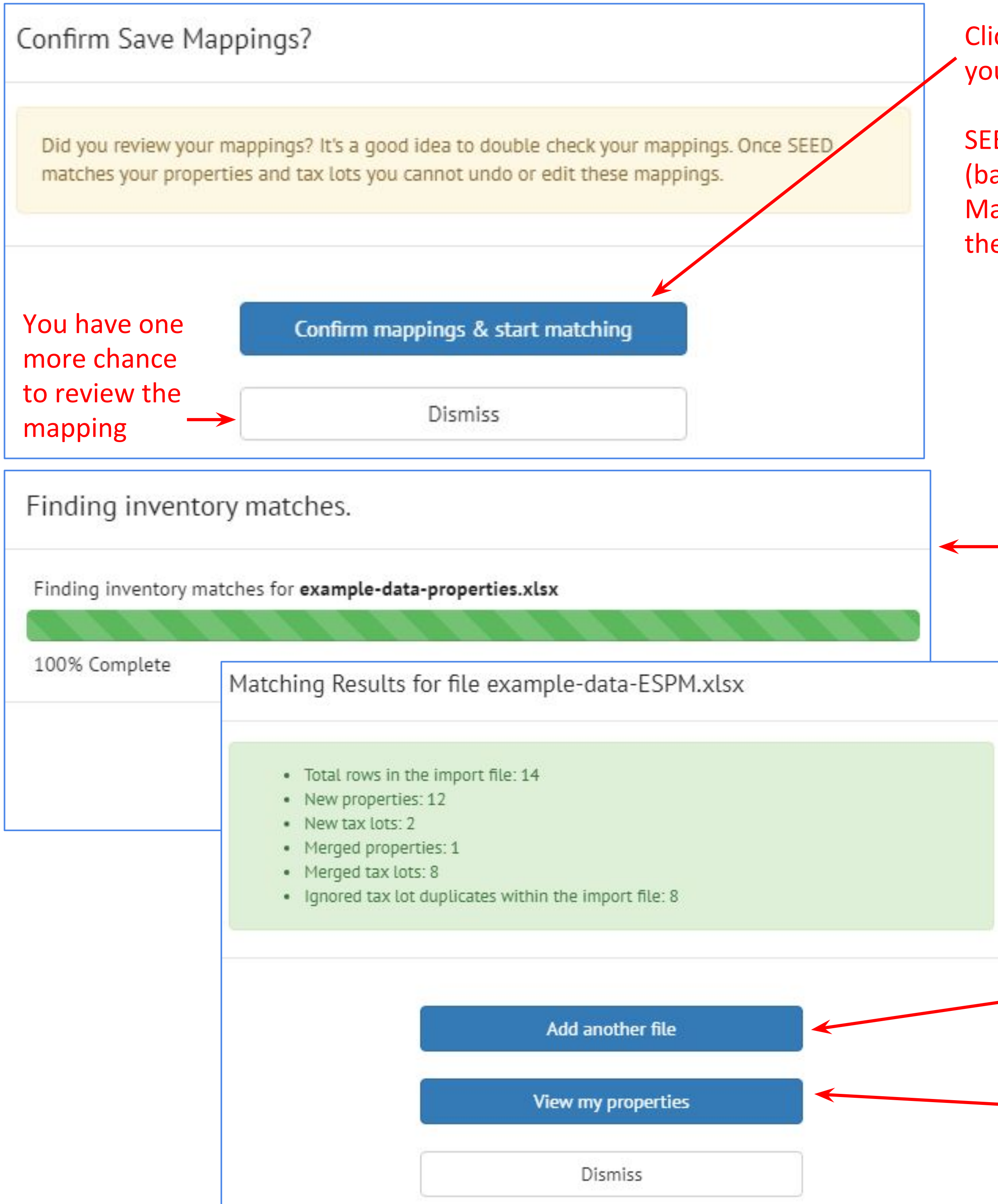
Data Quality Results

File Name: example-data-ESPM.xlsx

Date Uploaded: February 9th 2018, 2:51:27 PM -08:00

| | ADDRESS LINE 1 | JURISDICTION TAX LOT ID | PM PROPERTY ID | CUSTOM ID | FIELD | ERROR MESSAGE |
|---|---|---|---|---|---|---|
| | 50 Willow Ave SE | -- | 2264 | -- | Site EUI | Site EUI [3.0] < 10.0 |
| | 2700 Welstone Ave NE | -- | 1154623 | -- | Site EUI | Site EUI [1202.0] > 1000.0 |
| | 2655 Welstone Ave NE | -- | 3020139 | -- | ENERGY STAR Score | ENERGY STAR Score [1] < 10 |

# Confirm Mapping and Start Matching




Click **Confirm mappings and start matching** if you are happy with the data mapping

SEED will check to see if any records match (based on the Matching fields defined in Mapping) within the file (or across other files if they have already been imported)

You have one more chance to review the mapping

Program checks to see if any records match within the file (such as Address Line 1 or Tax Lot ID)

In this example, using the Sample data, the **matching field** that is common between the two data files, Tax Lot data and the Portfolio Manager data is **Address Line 1.**

The program reports the results of the matching.

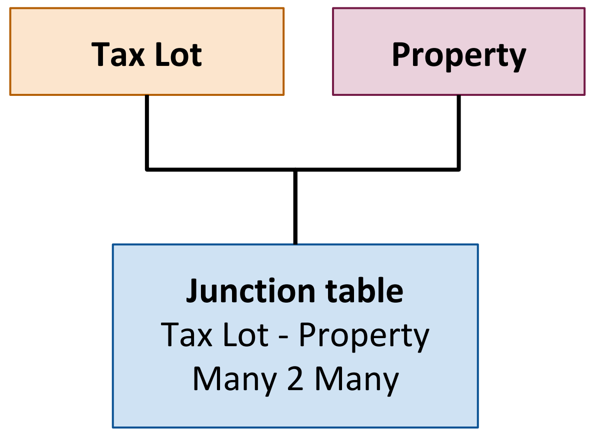
**Add another file** takes you back to the **Upload Your Data** dialog box.

**View my properties** takes you **Inventory List** view


# Hand Pairing Tax Lot and Property records

## Pairing records between Tax Lot and Property tables

- Records are “paired” between Tax Lot and Property tables in the Junction table based on matching fields




Viewing and changing the data pairing is in the Data Import view


< Data Sets

2018 Compliance Year (2017 Data)

Add more data files

| DATA FILES | DATE IMPORTED | # OF RECORDS | CYCLE | DATA MAPPING | DATA PAIRING |
|---|---|---|---|---|---|
| example-building-List.xlsx | 02/02/2018 04:38:06 PM | 11 | 2018 Compliance Year (2017 Data) | Data Mapping | Data Pairing |

# Hand Pairing Tax Lot and Property records

DATA 0

In the Data Sets view, for any imported file, click the Data Pairing button to view the automatic pairing or changing the pairing (pair or unpair records) by hand

Data Pairing

Select the Cycle for the desired data

View options

- Show All
- Show Paired
- Show Unpaired

Select table to view on the left hand side; the other table will display on the right hand side

- Property
- Tax Lot

Data Sets

**Pair Properties to Tax Lots**

Pairing | Pairing Settings

Click Pairing Settings to select the fields to display for both tables

Show All

Cycle: 2018 Compliance Cycle

Property

| ADDRESS LINE 1 (PROPERTY) | PM PROPERTY ID | PAIRED |
|---|---|---|
| 20 Tenth Street | 1311525 | 1 |
| 2660 Welstone Ave NE | 4828379 | 1 |
| 521 Elm Street | 5233255 | 3 |
| 295444 Moser Lane | 6798444 | |
| 2700 Welstone Ave NE | 1154623 | 1 |
| 93029 Wellington Blvd | 1311527 | 2 |
| 93031 Wellington Blvd | 1311528 | 2 |
| 12 Ninth Street | 1311524 | |
| 35 Tenth Street | 1311526 | 1 |
| 11 Ninth Street | 1311523 | 1 |
| 50 Willow Ave SE | 2264 | 1 |
| 295302 Moser Lane | 6798215 | |
| 2655 Welstone Ave NE | 3020139 | 1 |

Showing 13 Properties (3 unpaired)

Unpaired property records

Tax Lot

Uncheck this X to unpair the records

| ADDRESS LINE 1 (TAX LOT) | JURISDICTION TAX LOT ID | |
|---|---|---|
| 11 Ninth Street | 24651456 | |
| 35 Tenth Street | 1311526 | X |
| 11 Ninth Street | 1311523 | X |
| 530 Elm Street | 33366148 | |
| 521 Elm Street | 5233255 | X |
| 94000 Wellington Blvd | 23810533 | |
| 93029 Wellington Blvd | 1311527 | X |
| 93031 Wellington Blvd | 1311528 | X |
| 521 Elm Street | 33366555 | |
| 521 Elm Street | 5233255 | X |
| 525 Elm Street | 33366125 | |
| 521 Elm Street | 5233255 | X |
| 050 Willow Ave SE | 1552813 | |
| 50 Willow Ave SE | 2264 | X |
| 93029 Wellington Blvd | 13334485 | |
| 93029 Wellington Blvd | 1311527 | X |
| 93031 Wellington Blvd | 1311528 | X |
| 39929 Ranch 99 Road | 55039309 | |
| Drag Property here to pair with this Tax Lot | | |
| 2655 Welstone Ave NE | 11160509 | |
| 2660 Welstone Ave NE | 4828379 | X |
| 2700 Welstone Ave NE | 1154623 | X |
| 2655 Welstone Ave NE | 3020139 | X |
| | 24651455 | |
| 20 Tenth Street | 1311525 | X |

Showing 11 Tax Lots (2 unpaired)

Unpaired Tax Lot record

Tax Lot record

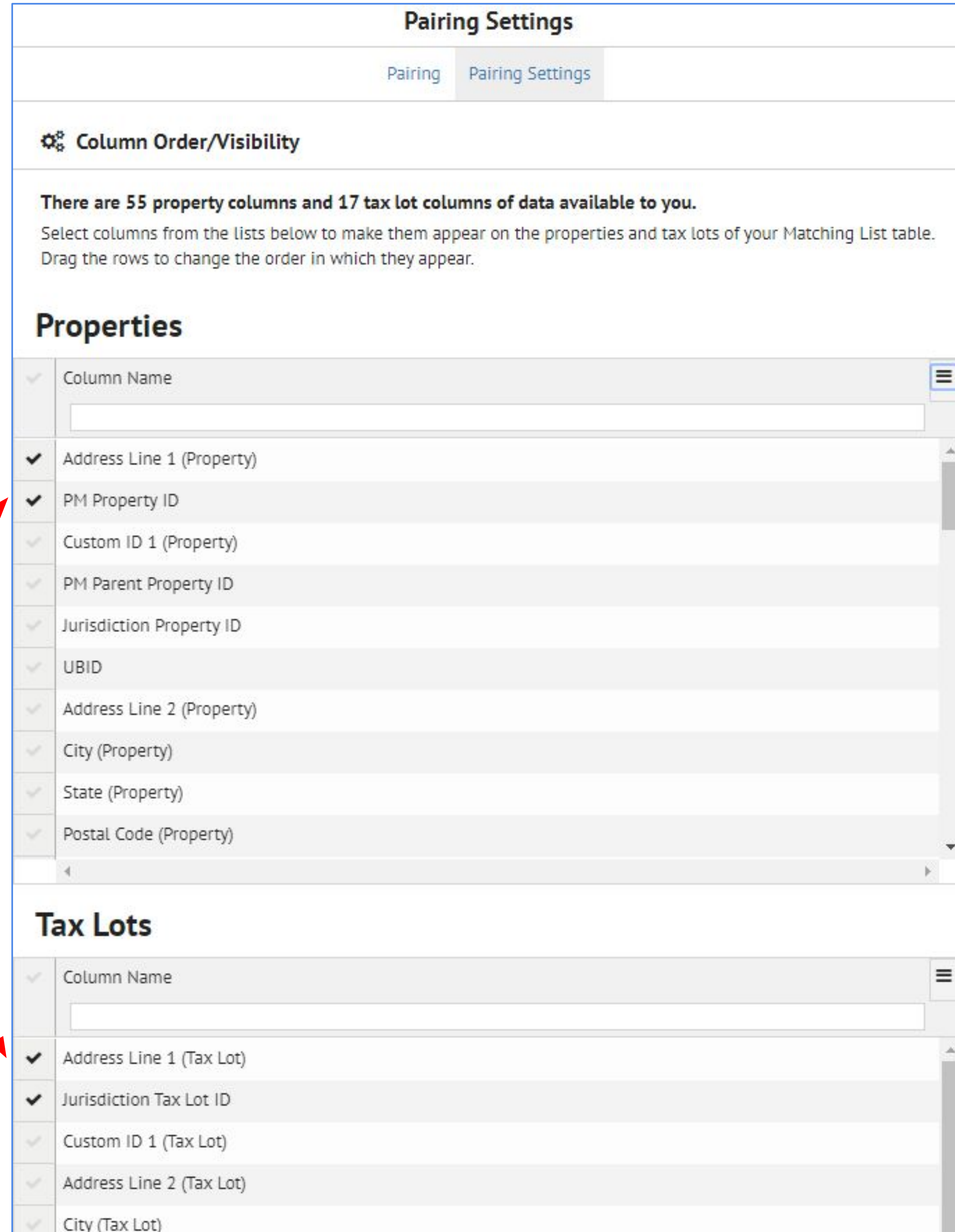
Property records paired to the Tax Lot record


# Hand Pairing Tax Lot and Property records

The Pairing Settings view allows you to select the fields from each table (Property and Tax Lot) to view in the Pairing screen

Check the fields to view for each table

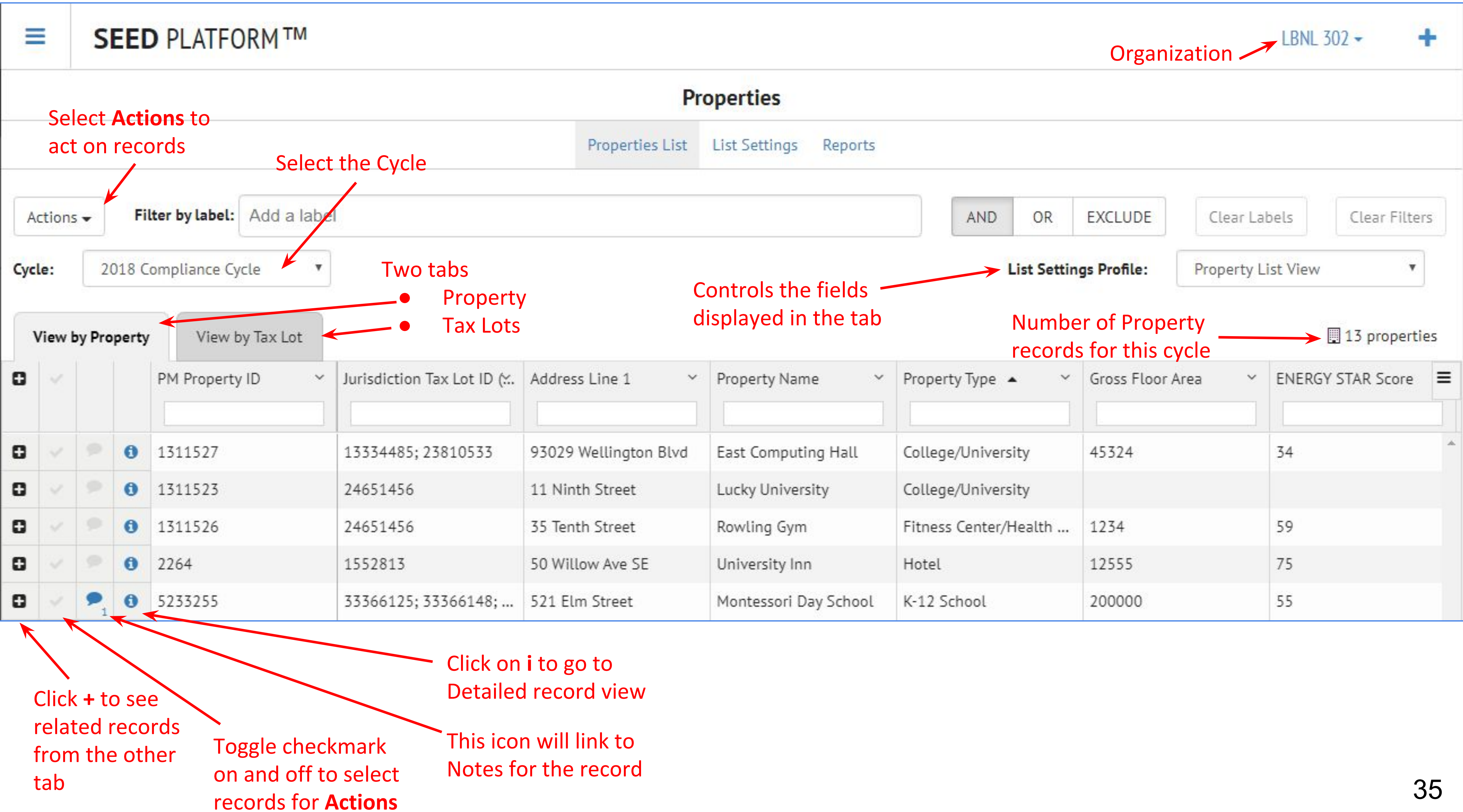
Only the fields mapped to the specific table will be shown for each table



INVENTORY

# Main Screen - List Views

- **Cycle:** Select the **Cycle** data is associated with
- **Tabs: View by Property** and **View by Tax Lot**



INVENTORY

# Property & Tax Lots - List View

## View by **Property**

"Collapsed" view shows all associated records from the tax lot table separated by semicolons

Select the **Cycle** for the data to view

**PM Property ID** can be pinned to the left side of the grid

Click the **+** icon to "expand" the view to show data from the associated Tax Lots

Address from the Property table

Address from the Tax Lot table

Cycle: 2018 Compliance Cycle

View by Property | View by Tax Lot

13 properties

| PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Property) | Address Line 1 (Tax Lot) | Property Type | ENERGY STAR Score |
|---|---|---|---|---|---|
| 5233255 | 33366125; 33366148; ... | 521 Elm Street | 521 Elm Street; 525 El... | K-12 School | 55 |
| | 33366148 | | 530 Elm Street | | |
| | 33366555 | | 521 Elm Street | | |
| | 33366125 | | 525 Elm Street | | |
| 6798215 | | 295302 Moser Lane | | Library | 88 |

## View by **Tax Lot**

Select the **Cycle** for the data to view

**Jurisdiction Tax lot ID** can be pinned to the left side of the grid

Click the **+** icon to "expand" the view to show data from the associated Property (in this case Portfolio Manager) records

"Collapsed" view shows all associated records from the property table separated by semicolons

Cycle: 2018 Compliance Cycle

View by Property | View by Tax Lot

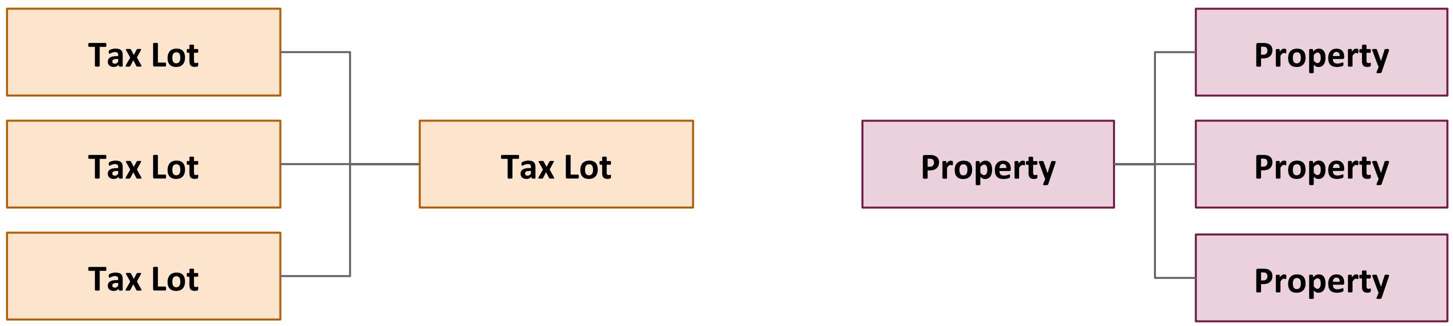
11 tax lots

| Jurisdiction Tax Lot ID | PM Property ID | Address Line 1 (Tax Lot) | Address Line 1 (Property) | Taxable Sf | Tax Class |
|---|---|---|---|---|---|
| 24651455 | 1311525 | | 20 Tenth Street | | |
| 24651456 | 1311523; 1311524; 13... | 11 Ninth Street | 11 Ninth Street; 12 Ninth S... | 45135 | 2 |
| | 1311523 | | 11 Ninth Street | | |
| | 1311526 | | 35 Tenth Street | | |
| | 1311524 | | 12 Ninth Street | | |
| 33366125 | 5233255 | 525 Elm Street | 521 Elm Street | 954652 | 3 |
| 33366148 | 5233255 | 530 Elm Street | 521 Elm Street | 154623 | 1 |

# Hand Merging / Pairing Records

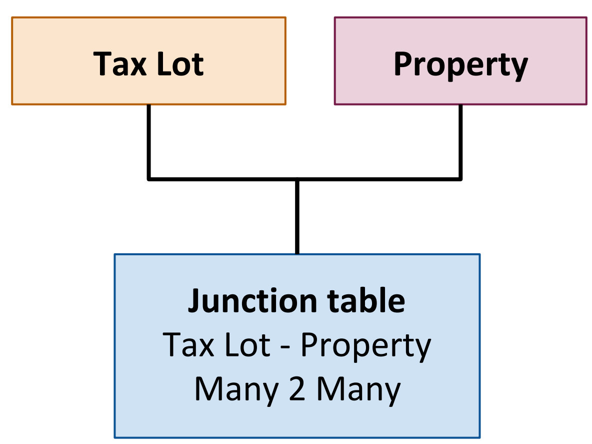
**Merging** (matching):

- Records are merged within the same table (Tax Lot or Property) based on matching fields




**Pairing**:

- Records are “paired” between Tax Lot and Property tables in the Junction table based on matching fields



# Hand Merging Records

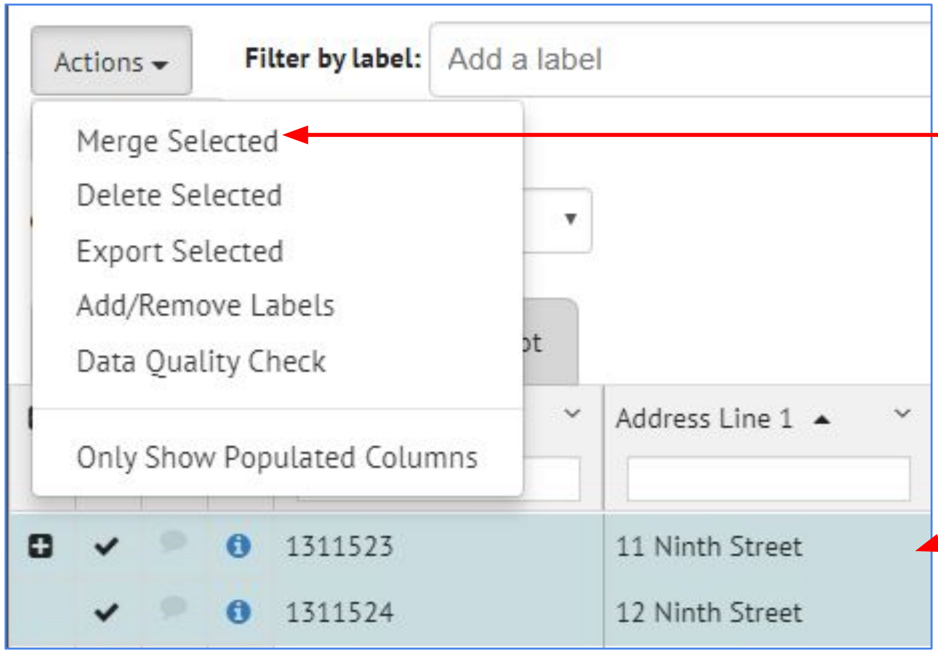
## Merging

The hand merging functionality is in the **Inventory List** view

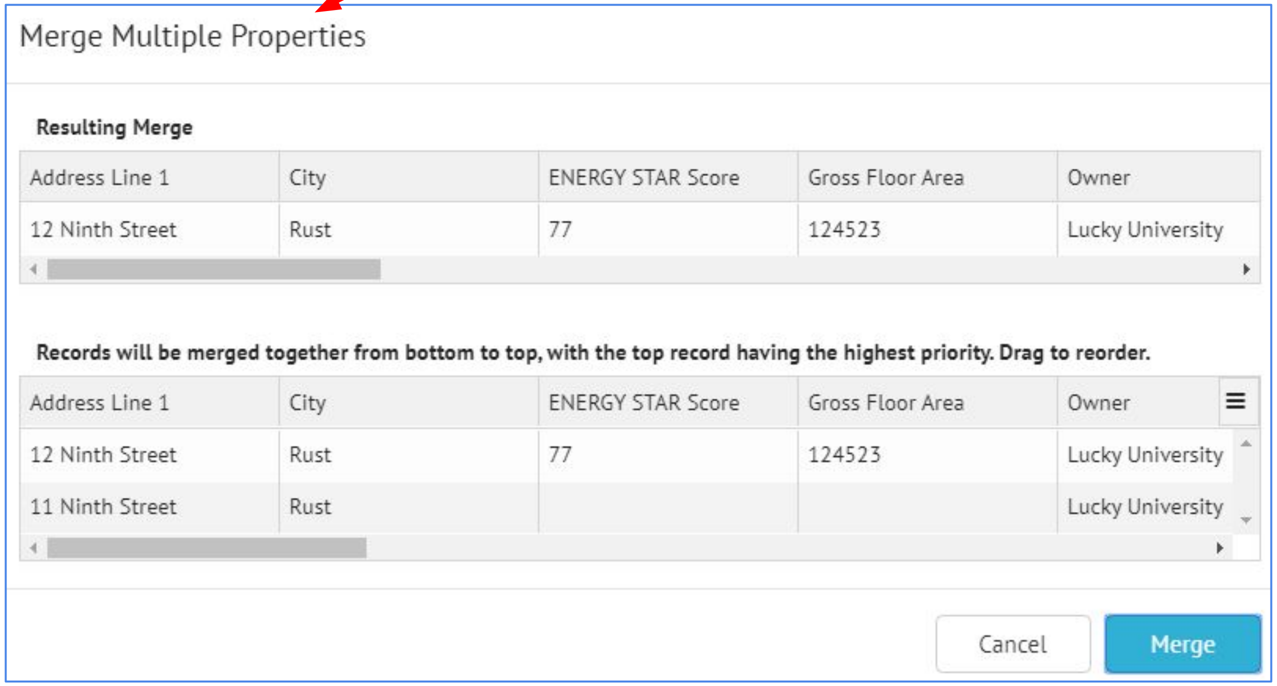
It is possible to merge two records together if the program didn't automatically merge them

Step 2:
Select the **Merge Selected** Action

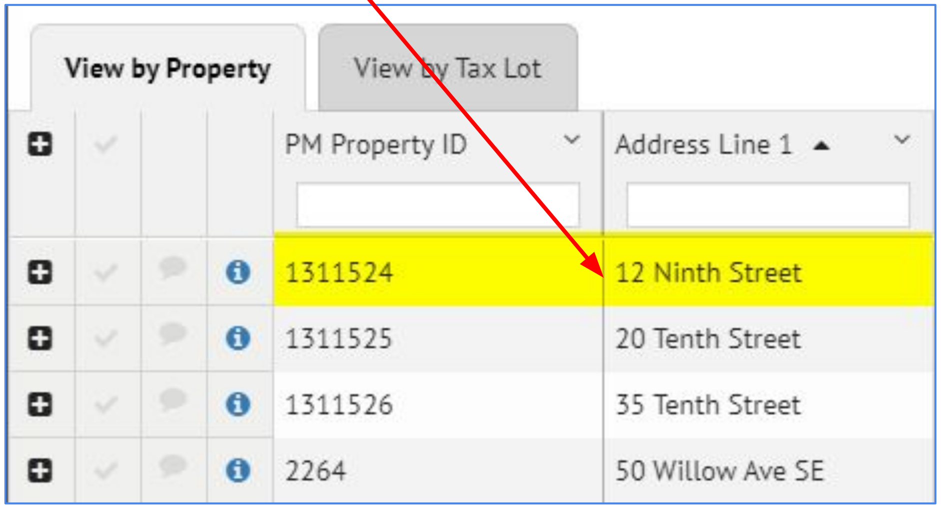
Step 1:
In Inventory List view
Select records to hand merge (by clicking on the checkmark to the left of the record)




Step 3:
Reorder the records if needed for final merge result




Step 4:
You will now see only the one Master record in the Inventory List view

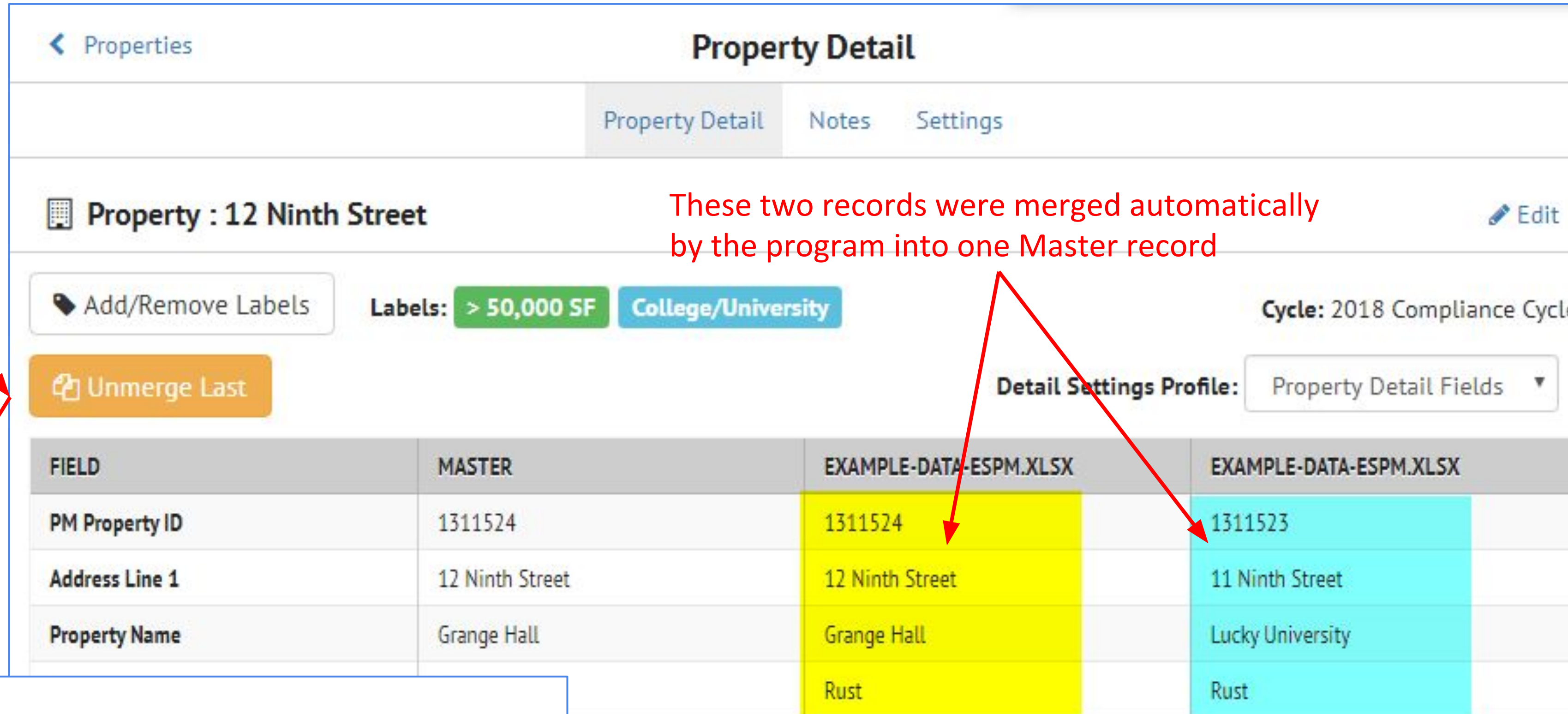


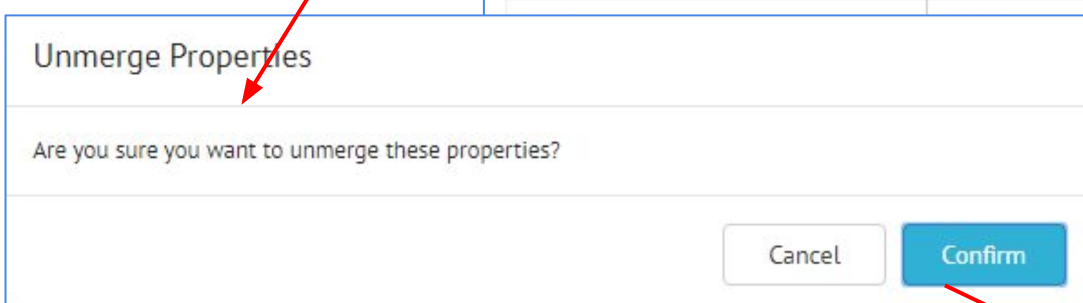
# Hand Un-Merging Records

Merged records can be viewed in the Inventory Detail view

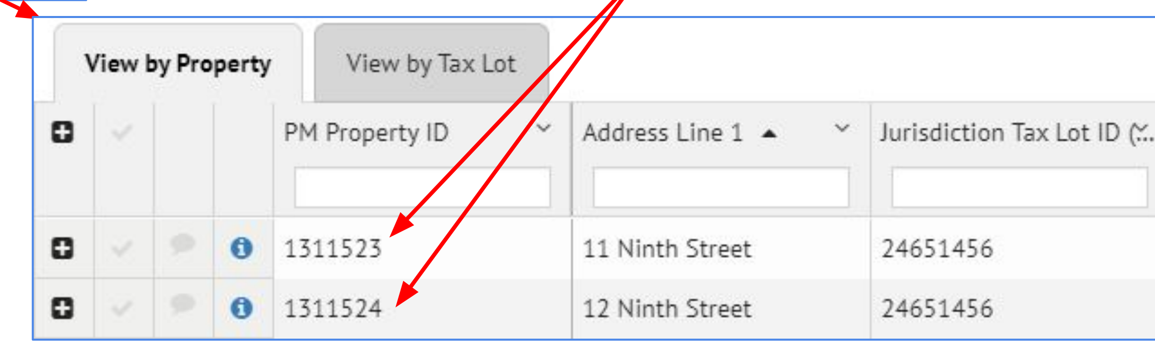
It is possible to un-merge records (one at a time) in the **Inventory Detail** view

These two records were merged automatically by the program into one Master record




Unmerging will make these records into two separate records in the Inventory List view

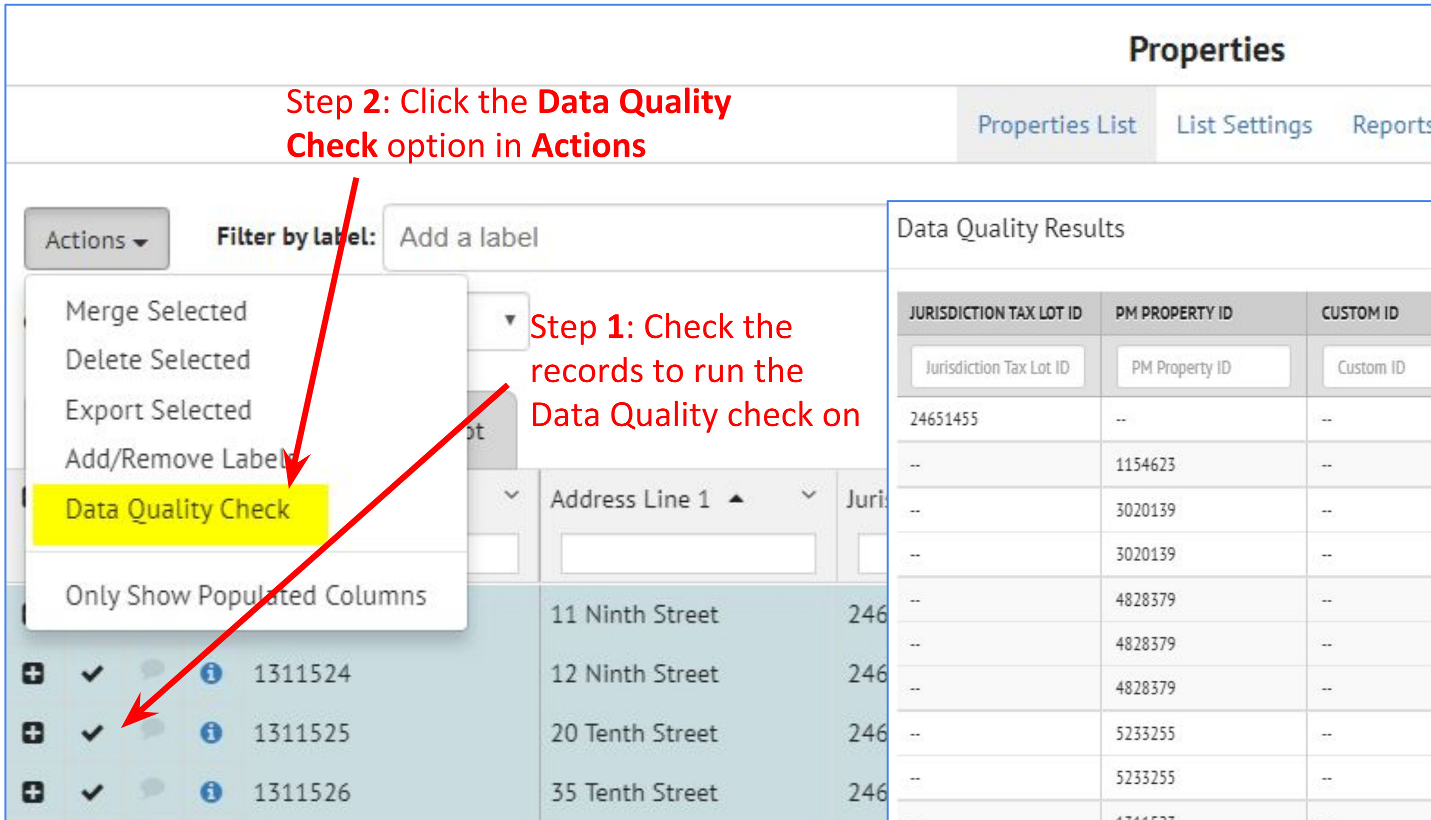


# Data Quality: Run from Inventory List

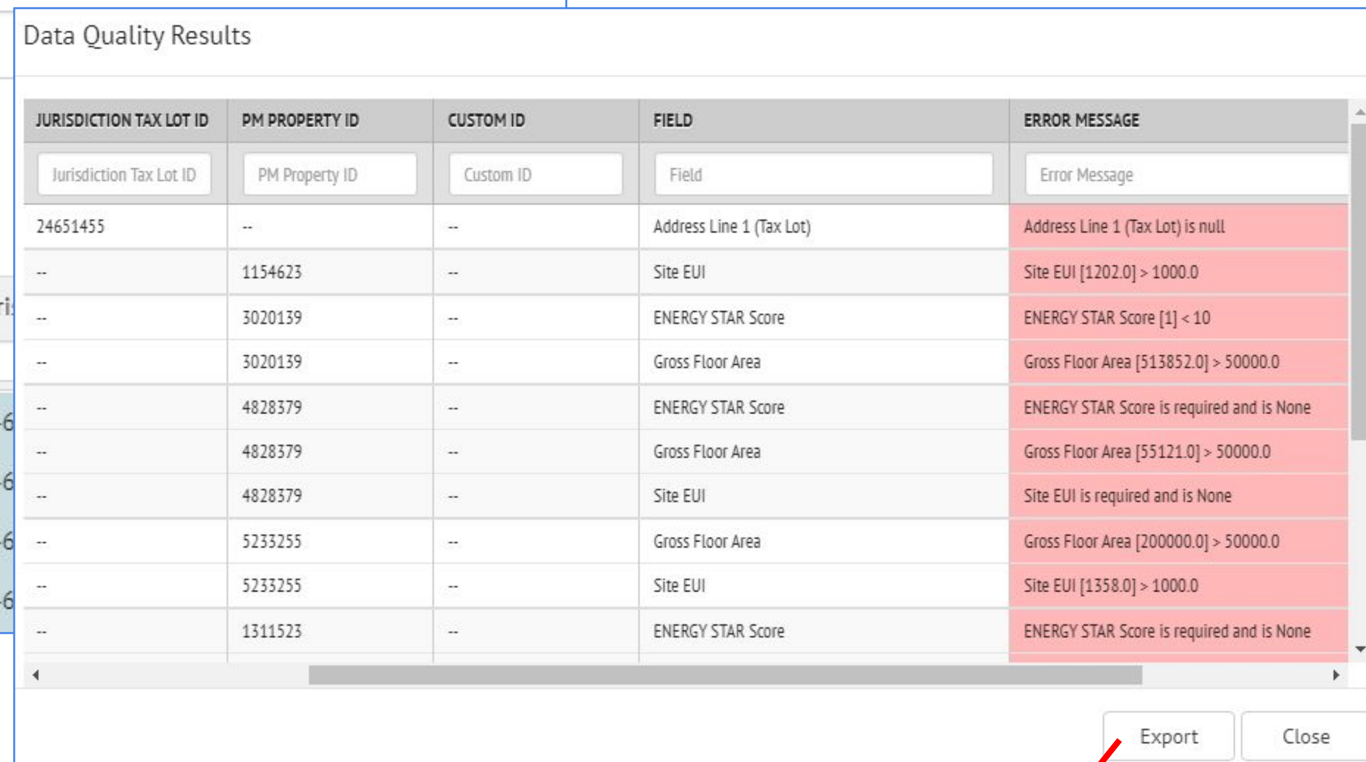


Step **1**: Check the records to run the Data Quality check on

Step **2**: Click the **Data Quality Check** option in **Actions**



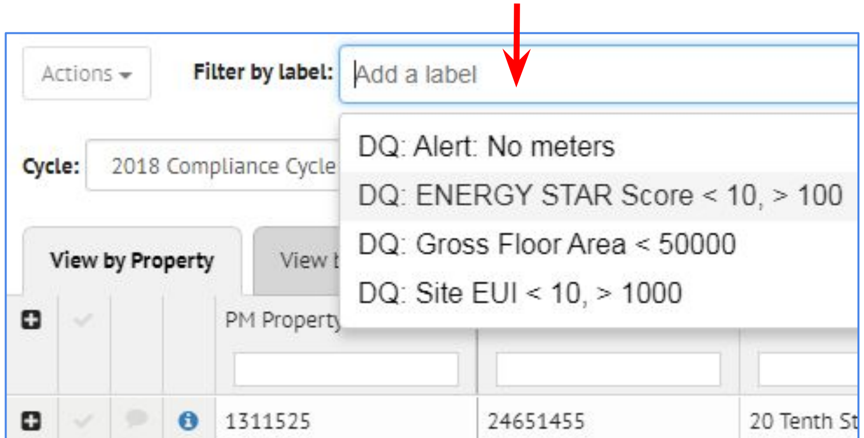

Step **3**: The **Data Quality Results** screen is displayed


Data Quality Results

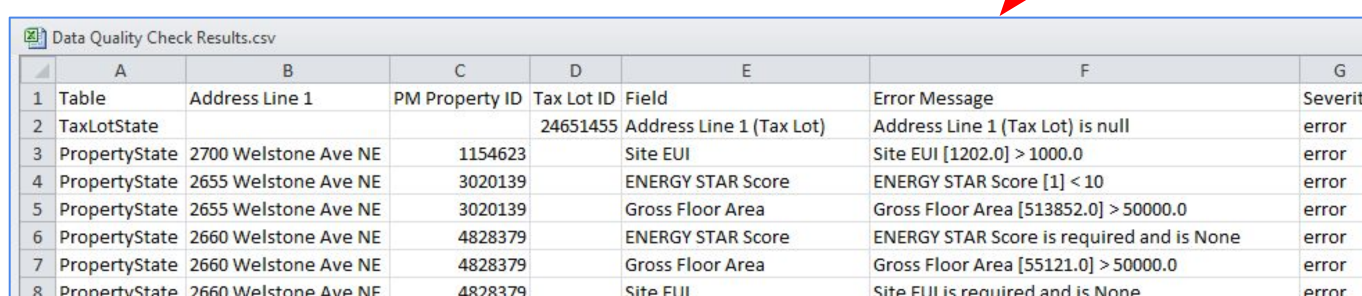
| JURISDICTION TAX LOT ID | PM PROPERTY ID | CUSTOM ID | FIELD | ERROR MESSAGE |
|---|---|---|---|---|
| 24651455 | -- | -- | Address Line 1 (Tax Lot) | Address Line 1 (Tax Lot) is null |
| -- | 1154623 | -- | Site EUI | Site EUI [1202.0] > 1000.0 |
| -- | 3020139 | -- | ENERGY STAR Score | ENERGY STAR Score [1] < 10 |
| -- | 3020139 | -- | Gross Floor Area | Gross Floor Area [513852.0] > 50000.0 |
| -- | 4828379 | -- | ENERGY STAR Score | ENERGY STAR Score is required and is None |
| -- | 4828379 | -- | Gross Floor Area | Gross Floor Area [55121.0] > 50000.0 |
| -- | 4828379 | -- | Site EUI | Site EUI is required and is None |
| -- | 5233255 | -- | Gross Floor Area | Gross Floor Area [200000.0] > 50000.0 |
| -- | 5233255 | -- | Site EUI | Site EUI [1358.0] > 1000.0 |
| -- | 1311523 | -- | ENERGY STAR Score | ENERGY STAR Score is required and is None |

Export Close

Labels are automatically added to the problem records. If those records are fixed and reimported, and the DQ check is rerun, the labels will be automatically removed if the program doesn't detect the data problem




The Data Quality Results can be exported to a CSV file


Data Quality Check Results.csv

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Table | Address Line 1 | PM Property ID | Tax Lot ID | Field | Error Message | Severity |
| 2 | TaxLotState | | | 24651455 | Address Line 1 (Tax Lot) | Address Line 1 (Tax Lot) is null | error |
| 3 | PropertyState | 2700 Welstone Ave NE | 1154623 | | Site EUI | Site EUI [1202.0] > 1000.0 | error |
| 4 | PropertyState | 2655 Welstone Ave NE | 3020139 | | ENERGY STAR Score | ENERGY STAR Score [1] < 10 | error |
| 5 | PropertyState | 2655 Welstone Ave NE | 3020139 | | Gross Floor Area | Gross Floor Area [513852.0] > 50000.0 | error |
| 6 | PropertyState | 2660 Welstone Ave NE | 4828379 | | ENERGY STAR Score | ENERGY STAR Score is required and is None | error |
| 7 | PropertyState | 2660 Welstone Ave NE | 4828379 | | Gross Floor Area | Gross Floor Area [55121.0] > 50000.0 | error |
| 8 | PropertyState | 2660 Welstone Ave NE | 4828379 | | Site EUI | Site EUI is required and is None | error |

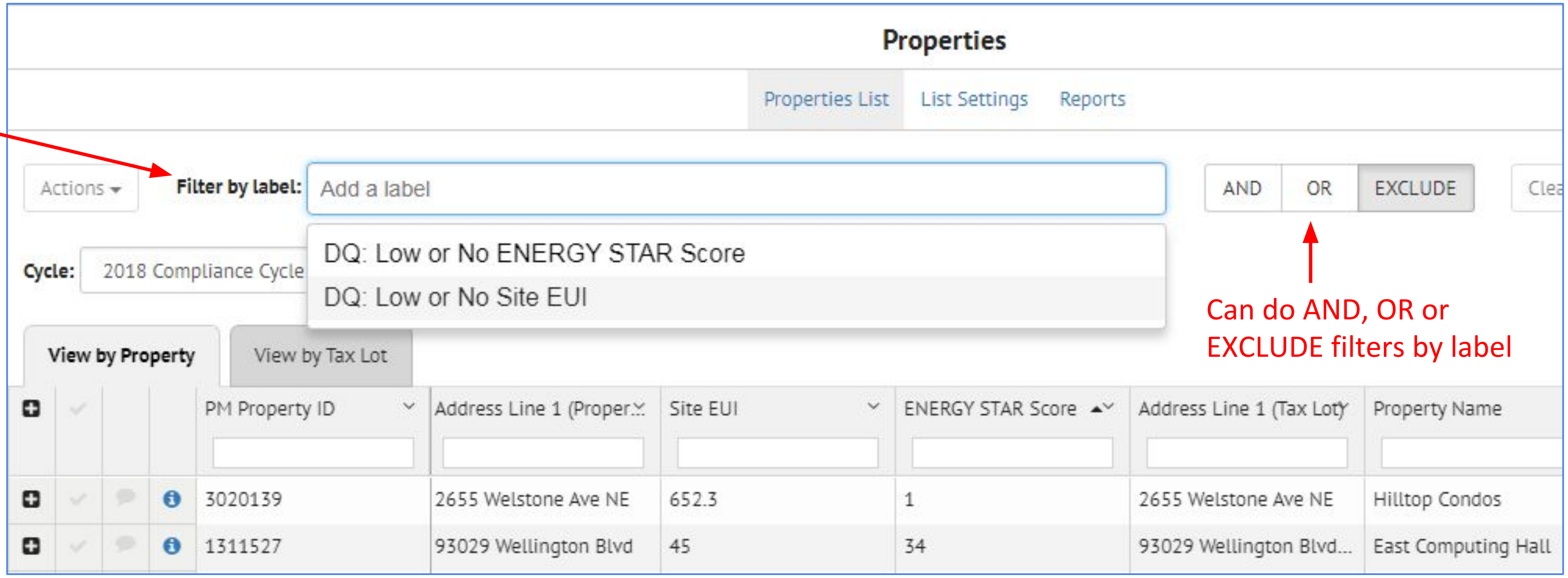
# List Grid Functionality

The grid used in the Inventory List view has many features
*(explained in detail on the following pages)*

- **Filter** -- enter filter criteria in the blank box under the column name
- **Sort** -- click in the middle of the column header to see the small up and down arrows to sort ascending and descending; alternatively select the right menu arrow in the column to see the Sort Ascending, Sort Descending and Remove Sort options
- **Select fields to view** -- click on the right menu arrow in an individual field to turn it on or off, or click on List Settings to see a list of columns to display or hide
- **Field order by dragging columns** -- click in the middle of a column header, hold the left mouse button down, and drag it right or left to place it the desired order
- **Pin columns** -- click on the right menu arrow in an individual column to see the Pin Left, Pin Right and Unpin options for that column
- **Resize columns** - click on the right hand side of the column header, hold the left mouse button down, and drag the column edge right and left to the desired width
- **Fixed column headers** -- the column headers are fixed, so scrolling down keeps the column headers visible.
- **Single page with all the data --** All the records for a view are loaded at once -- there is no data view “pagination

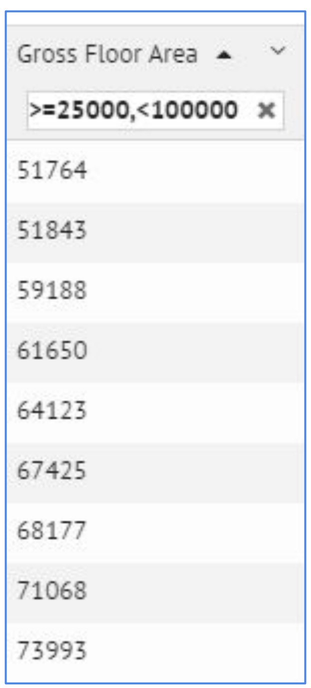
# Filter

Filter by Label shows only labels that are applied to records

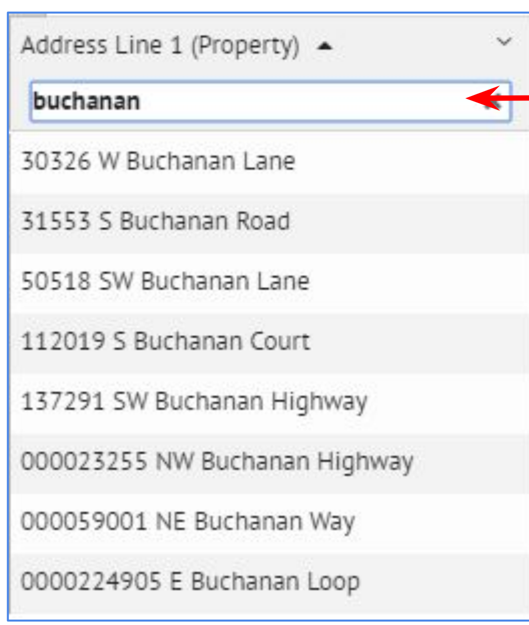



Can do AND, OR or EXCLUDE filters by label

Numeric fields can have expressions




Text columns can be filtered

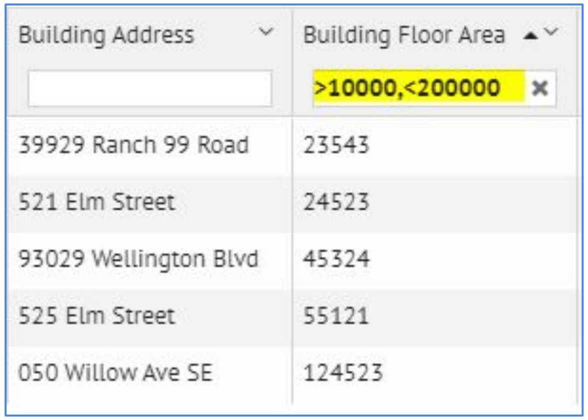



Enter values into the input boxes at the top of the field in order to filter the data by those values

The program will then only display the records with values based on the filter criteria

# Filter

The filter feature supports multiple filters separated by commas.



| Building Address | Building Floor Area |
|---|---|
| | >10000,<200000 |
| 39929 Ranch 99 Road | 23543 |
| 521 Elm Street | 24523 |
| 93029 Wellington Blvd | 45324 |
| 525 Elm Street | 55121 |
| 050 Willow Ave SE | 124523 |

Date strings can be either

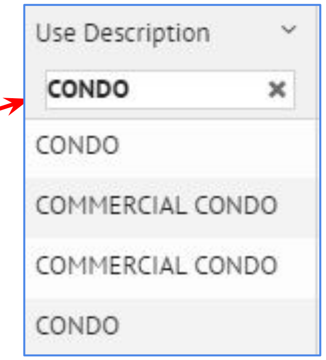
- a year (2016)
- a year and a month (2016-05)
- a full date with no time (2016-05-31)

| | |
|---|---|
| Text/Numeric Case-Insensitive Contains | abc<br>5 |
| Text/Numeric Exact Match | ""<br>"abc"<br>= 5 |
| Text/Numeric Not Exact Match | != ""<br>!= "abc"<br>!= 5 |
| Numeric Range | > 5<br>>= 5<br>< 5<br><= 5 |
| Text/Numeric Combination | 123, street |
| Date Equality | 2016<br>2016-05<br>2016-05-31<br>= 2016<br>= 2016-05 |
| Date Inequality | != 2015<br>!= 2016-10-01 |
| Date Range | >= 2016<br>< 2016-05 |
| Date Combination | 2016, >= 2016-10-01<br>>= 2015, < 2017 |

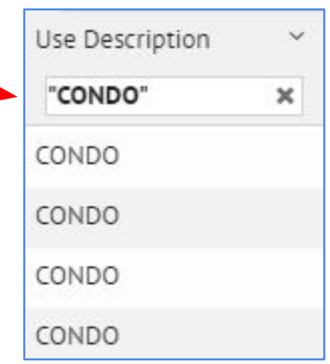
# Filter

Most of the lists in SEED (Mapping, Matching, Inventory) allow you to sort and filter on the data in the columns by entering the filter values in the input box below the field (column name)

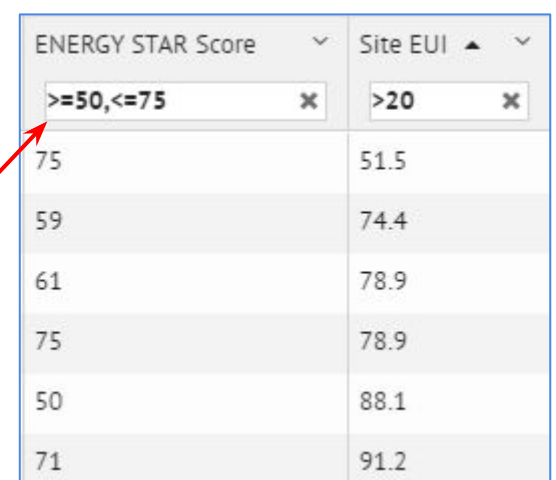
SEED supports filtering using “expressions” for both text and numeric data




- ”” double quotes for null (empty) string
- !”” for non-null (non-empty) string
- Enter a value to show all records that contain that value: typing **condo** will show results for **CONDO** and **COMMERCIAL CONDO**
- Enter a value surrounded by double quotes (“”) for an exact match (including case): typing **“CONDO”** will show results for only uppercase **CONDO**
- Operators: =, !=, <, <=, >, >= followed by a value
  - **>100** is greater than 100
  - **!0** is not equal to 0
- Multiple expressions should be separated by commas.
  - **>1984,<1990** is greater than 1984 and less than 1990



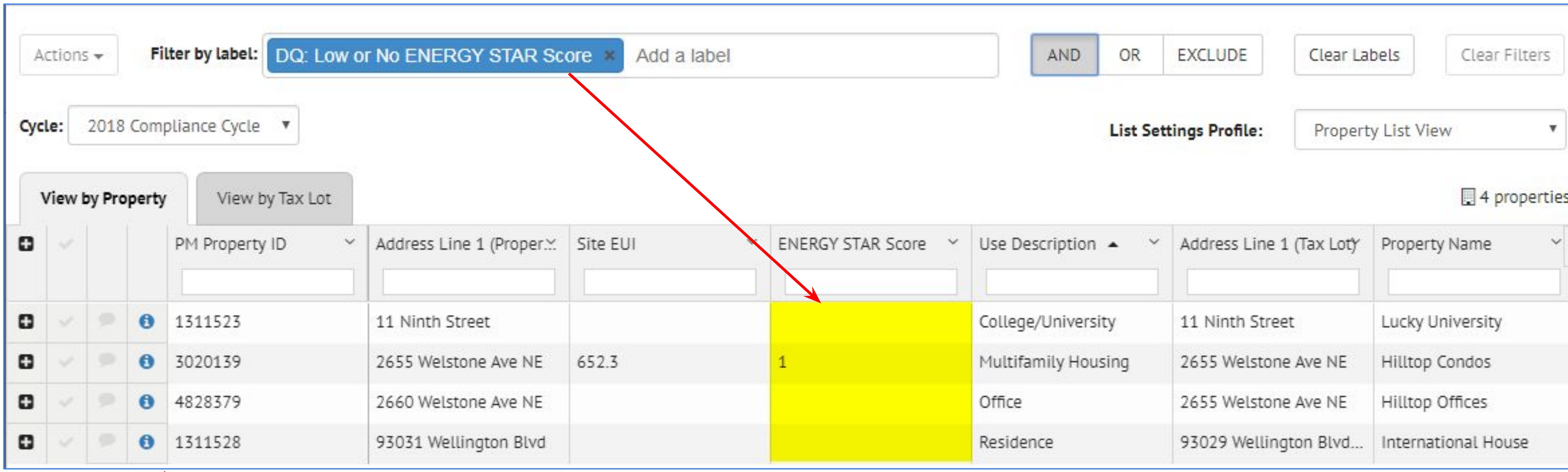

Add as many filters as needed, in this case the filter is show only records with ENERGY STAR Score data between 50 and 75, and with a Site EUI greater than 20



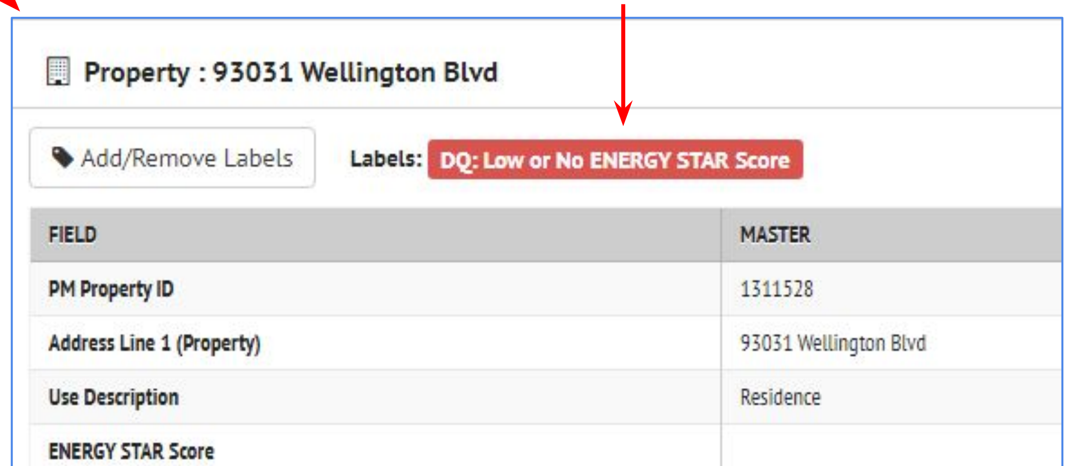
# Filter Using Labels

Multiple labels can be applied to the filter box and filter operators (AND, OR, and EXCLUDE) can be applied to the filter

- Filter Operators
  - AND == When filtering on multiple labels, displays records that have all the labels selected in the Filter by Label box
  - OR == When filtering on multiple labels, displays records that have at least one of the labels selected in the Filter by Label box
  - EXCLUDE == Displays all records that DO NOT have the label or labels in the Filter by Label box



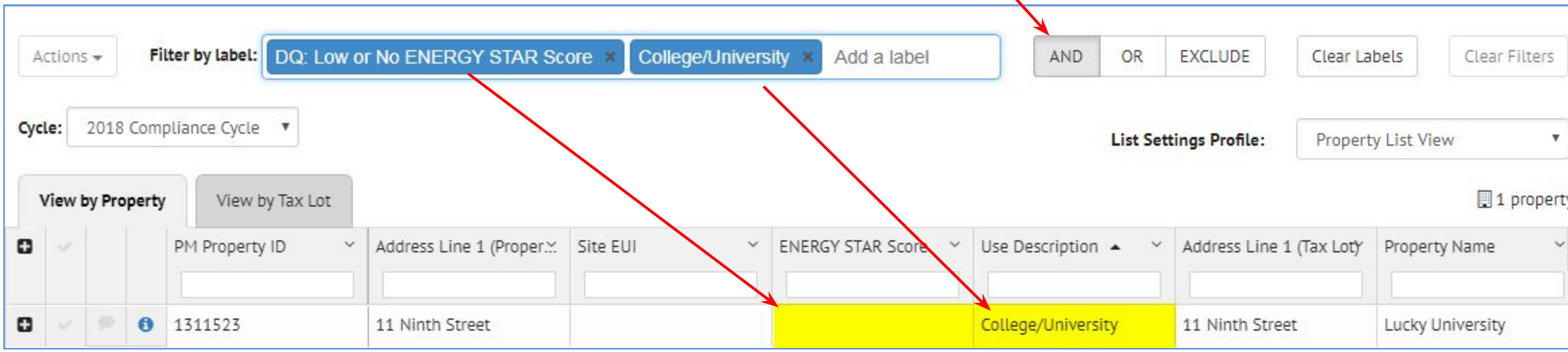

Clicking on the "information" icon displays the Detail view which shows all the labels associated with that record.



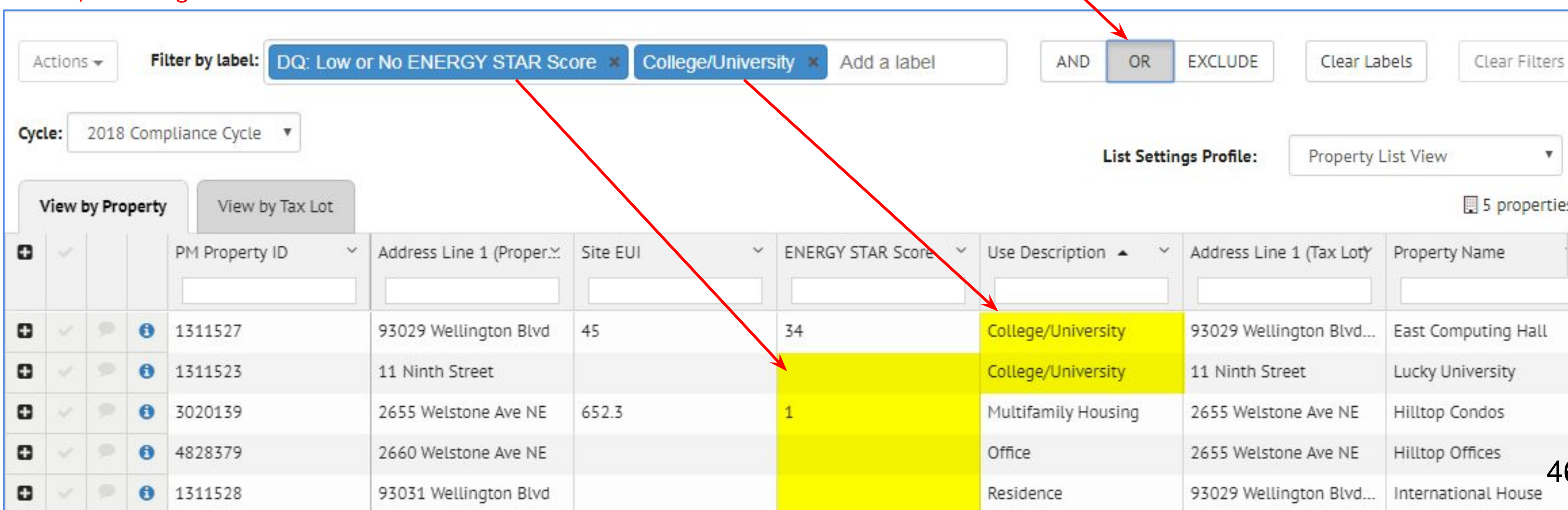
INVENTORY

# Filter Using Labels: AND / OR

Filter Operator == **AND**: Shows records that have all of the labels in the Filter by Label box
In this case, it shows the one record that has both no value for ENERGY STAR Score and Use Description set to College/University




Filter Operator == **OR**: Shows records that have at least one of the labels in the Filter by Label box
In this case, it shows the 2 records that have Use Description set to College/University and the 4 records that have low or no ENERGY STAR Score, including the 1 record that fits both criteria



INVENTORY

# Filter Using Labels: EXCLUDE

Filter Operator == **EXCLUDE**: Shows records that have NONE of the labels in the Filter by Label box

Actions ▾ **Filter by label:** DQ: Low or No ENERGY STAR Score × College/University × Add a label AND OR EXCLUDE Clear Labels Clear Filters

**Cycle:** 2018 Compliance Cycle ▾ **List Settings Profile:** Property List View ▾

ENERGY STAR Score is valid

Use Description is not College/University

View by Property | View by Tax Lot

7 properties

| PM Property ID | Address Line 1 (Property) | Site EUI | ENERGY STAR Score | Use Description | Address Line 1 (Tax Lot) | Property Name |
|---|---|---|---|---|---|---|
| 1311526 | 35 Tenth Street | 72 | 59 | Fitness Center/Health ... | 11 Ninth Street | Rowling Gym |
| 2264 | 50 Willow Ave SE | 125 | 75 | Hotel | 050 Willow Ave SE | University Inn |
| 5233255 | 521 Elm Street | 1358 | 55 | K-12 School | 521 Elm Street; 525 El... | Montessori Day School |
| 1311525 | 20 Tenth Street | 84 | 43 | Laboratory | 11 Ninth Street | Biology Hall |
| 6798215 | 295302 Moser Lane | 942 | 88 | Library | | City Library |
| 1311524 | 12 Ninth Street | 219 | 77 | Performing Arts | 11 Ninth Street | Grange Hall |
| 1154623 | 2700 Welstone Ave NE | 1202 | 63 | Retail | 2655 Welstone Ave NE | Hilltop Retail |

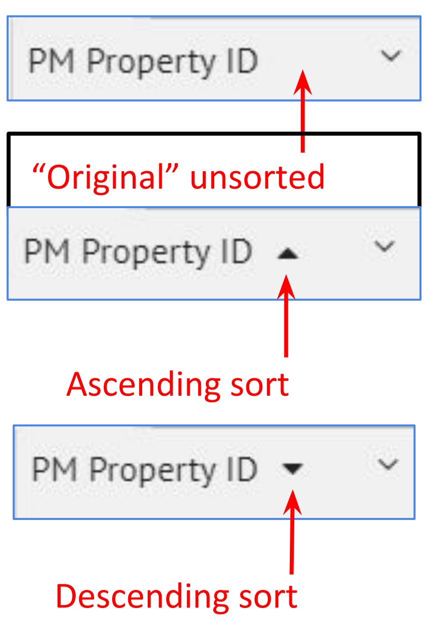
# Sort

You can sort in two different ways

- Up/down arrow
- Column menu on right

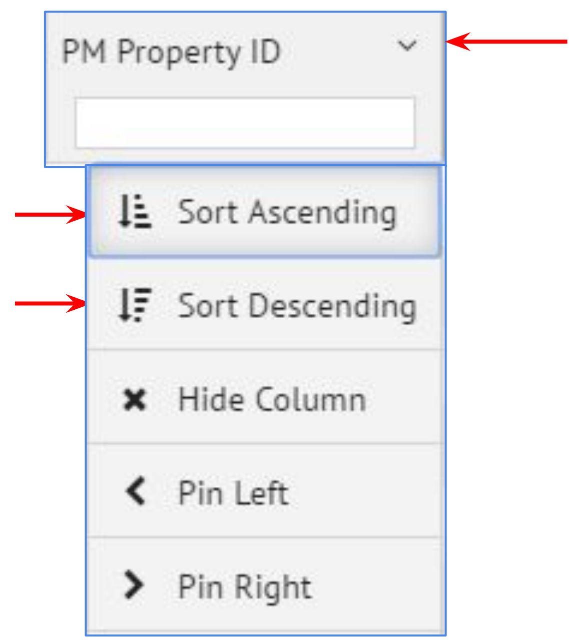
If you click to the right of the field name, you can toggle between

- Ascending
- Descending
- “original” unsorted




The down arrow to the right of the field shows a menu of sort options, including Remove sort

Using this Sort option allows hierarchical sorting

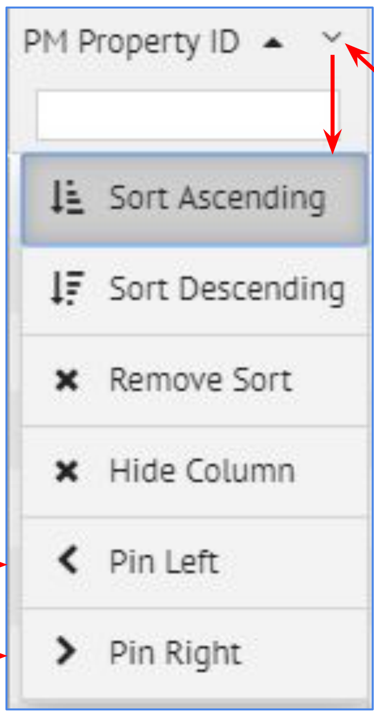


# Pin Columns

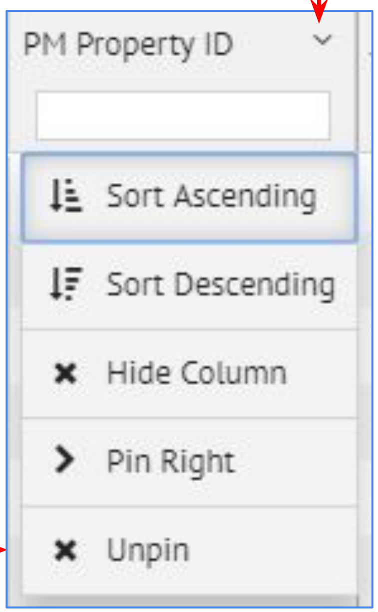
## Pinning columns left and right

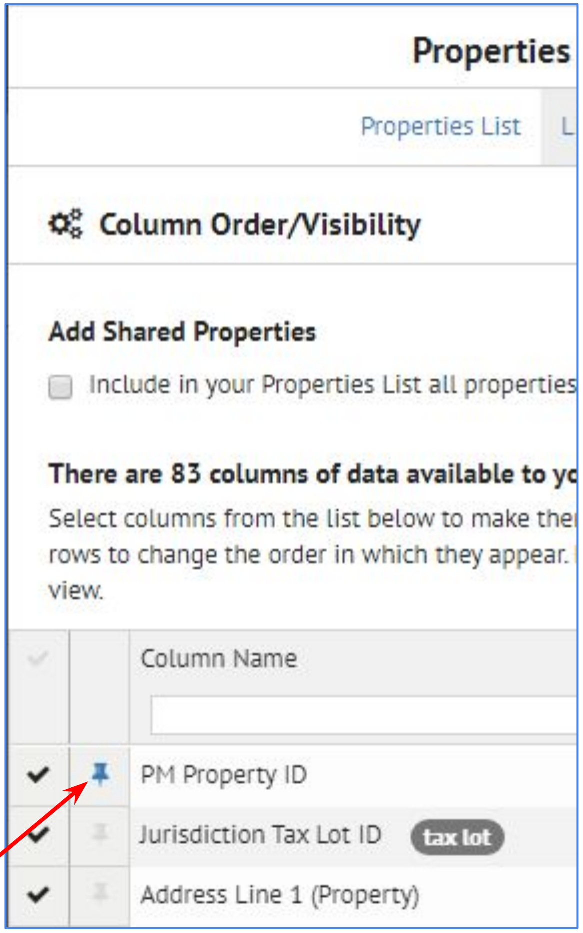
- Individual columns can be pinned either to the right or the left
- Multiple columns can be pinned

If a column is already pinned, click on the field right hand pulldown to select the **Unpin** option




The down arrow to the right of the field name shows a menu of sort options, including **Hide Column**




**List Settings** also has feature to pin columns to the right side

# Save List Settings

List Settings, where fields are selected for display, can be saved by “name”, which enables the creation of combinations of fields that are useful to view for specific data review cases.

There are a few different options for doing this.

- **List View / Actions option**
  There is now an option in the Actions pulldown list to “**Only Show Populated Columns**”. This is good way to get started when creating a specifically named List Setting

- **List Settings pages**
  In all the List Setting views (for both List and Detail view), there is a new option called “List Settings Profile” which allows the currently highlighted fields to be saved to a name, which then appears in a pulldown list in both the List Settings view as well as the Inventory List views.

  It is possible to save separate (and multiple) list settings to names for each of these cases:
  - View by Property List View
  - View by Property Detail View
  - View by Tax Lot List View
  - View by Tax Lot Detail View

  Saved List Settings Profiles are available across Cycles, but can also be made for specific cycles (by naming them appropriately)

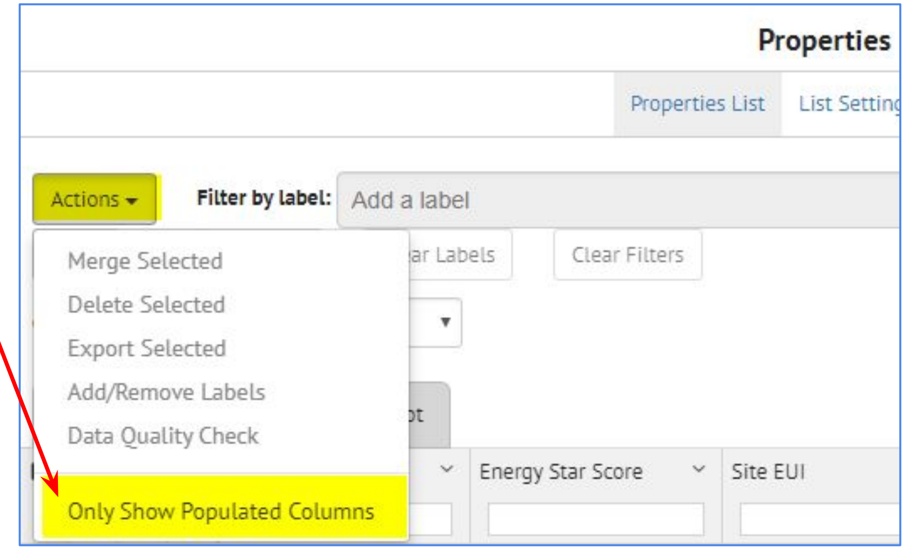
The following pages illustrate the way that these options work.

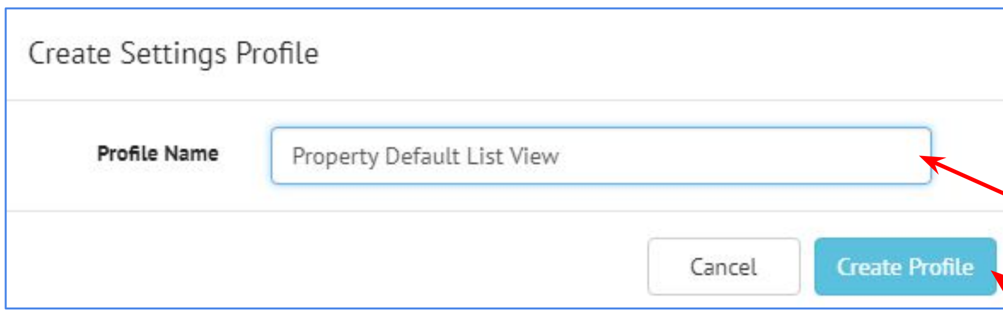
# List View - Only Show Populated Columns

**List View / Actions option**

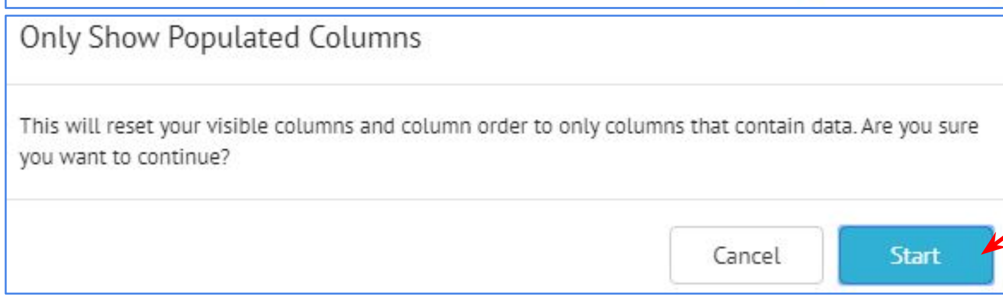
The “**Only Show Populated Columns**” option in the Inventory List / Actions pulldown is a good way to get started when defining saved List Settings.

Select the “Only Show Populated Columns” in either the View by Property or View by Tax Lot tabs

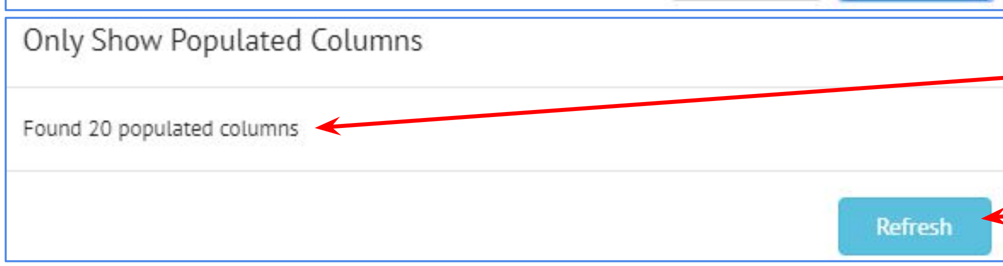



A dialog box appears asking for a name for this new **Settings Profile**. Type in any name that is appropriate. You will be able to refine the fields and change the name later in the List Settings view if needed. Click the **Create Profile** button to save this set of fields under the **Profile Name**

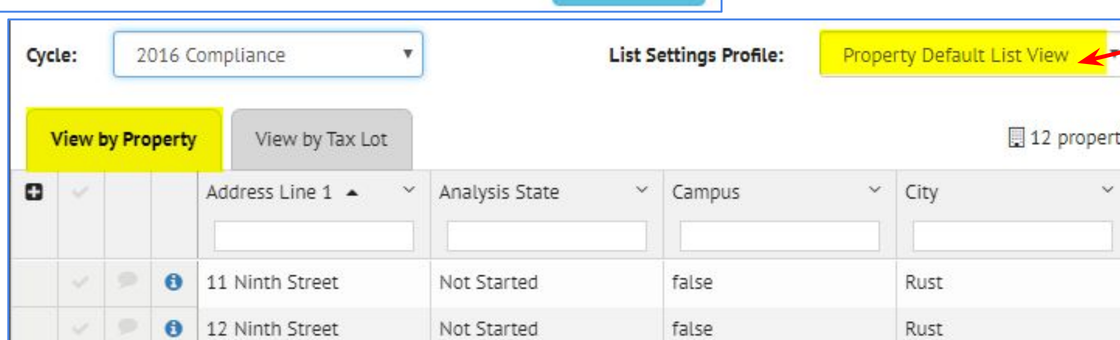



This causes a dialog box to appears which warns that the columns displayed will be reset. Click the **Start** button to continue or the **Cancel** button to return to the List view without starting the action.




When the program has finished determining the populated columns, the number of columns found is displayed.

Click the Refresh button to refresh the browser and see the new fields



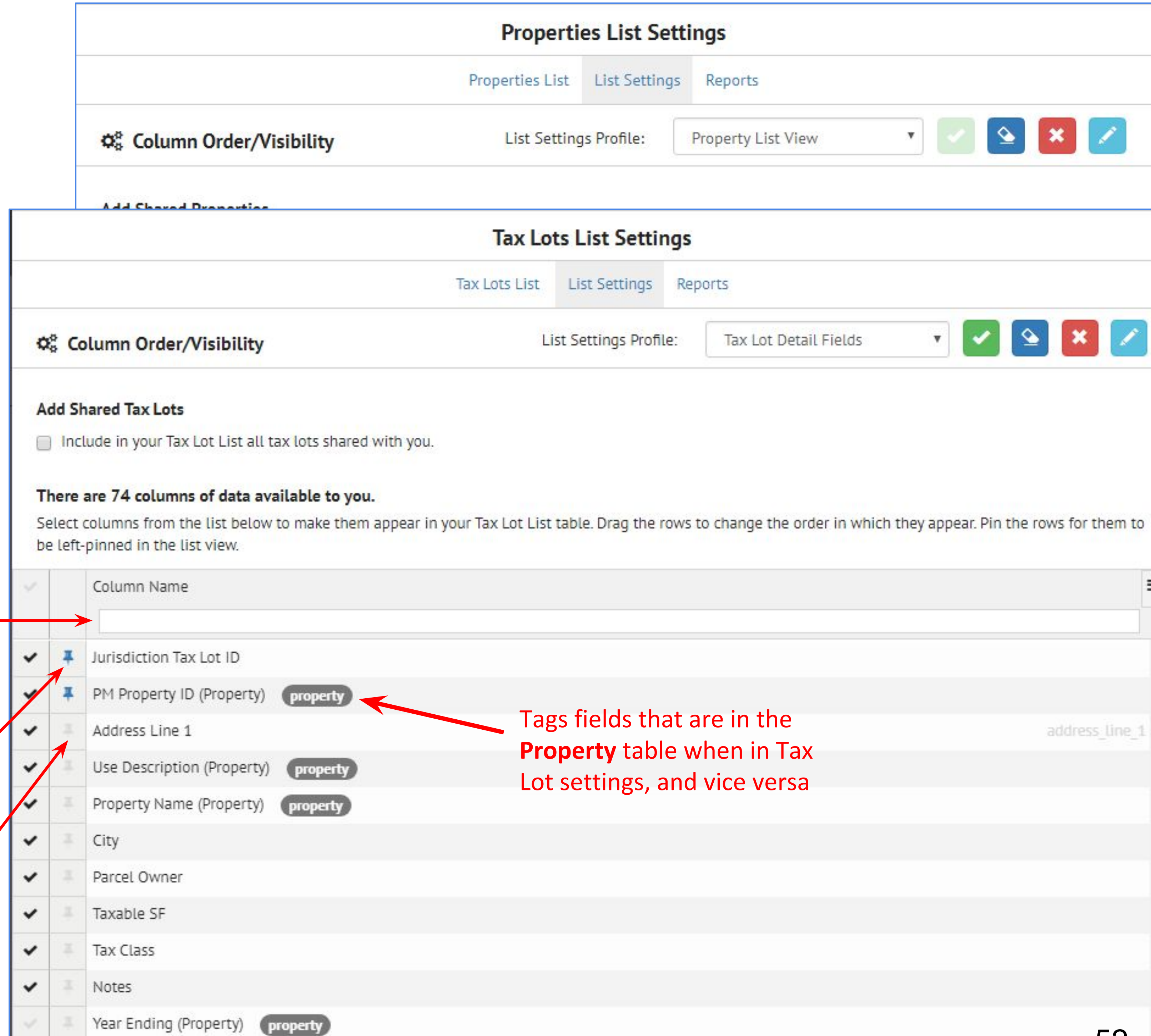

These fields are now what is displayed in the List View with the name entered for the **List Settings Profile**.

It will still probably be necessary to refine the fields to be displayed in **List Settings**, but this is a good way to start the process

INVENTORY

# List View - List Settings

- Displays all possible fields for both Tax Lot and Property
- Tax Lot and Property List Settings can be different
- Tags fields that are in table NOT being viewed
- Changes made here are reflected in the View by Tax Lot tab, and vice versa
- Field display and order are on one screen
- Changes are saved to a List Settings Profile (see next page)




Enter values to search the list of fields

Tags fields that are in the **Property** table when in Tax Lot settings, and vice versa

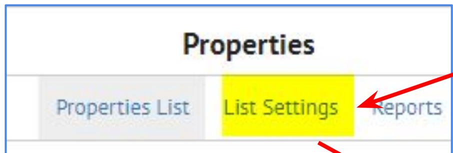
Shows which fields are pinned left

Can set more fields to be pinned left

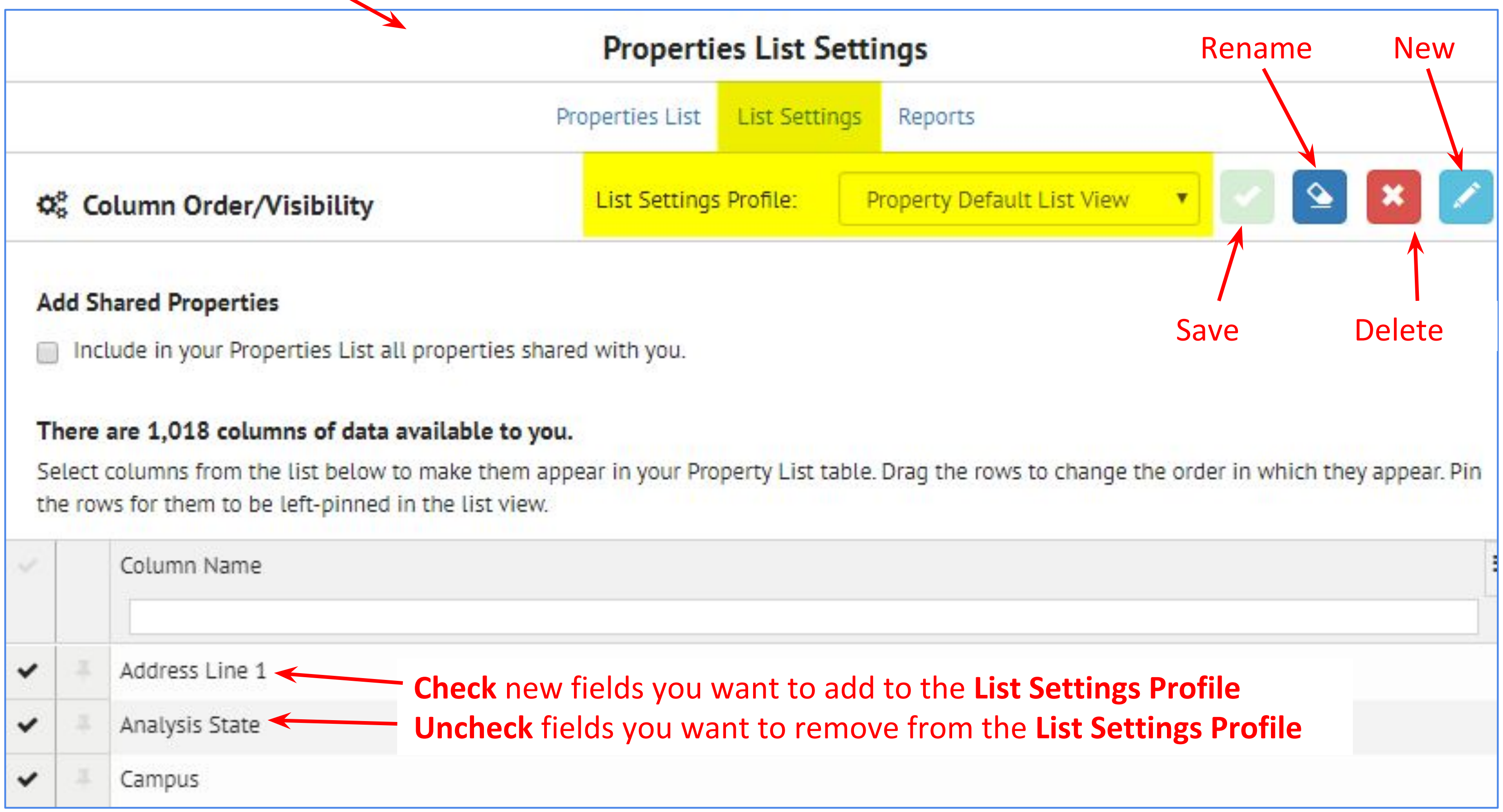
INVENTORY

# List Settings Profiles

- **List Settings pages**
  In all the List Setting views (for both List and Detail view), there is a new option called "List Settings Profile" which allows the currently highlighted fields to be saved to a name, which then appears in a pulldown list in both the List Settings view as well as the Inventory List views.




To edit an existing List Settings Profile, or to make a new one, click the List Settings link on either the Properties or Tax Lot List View

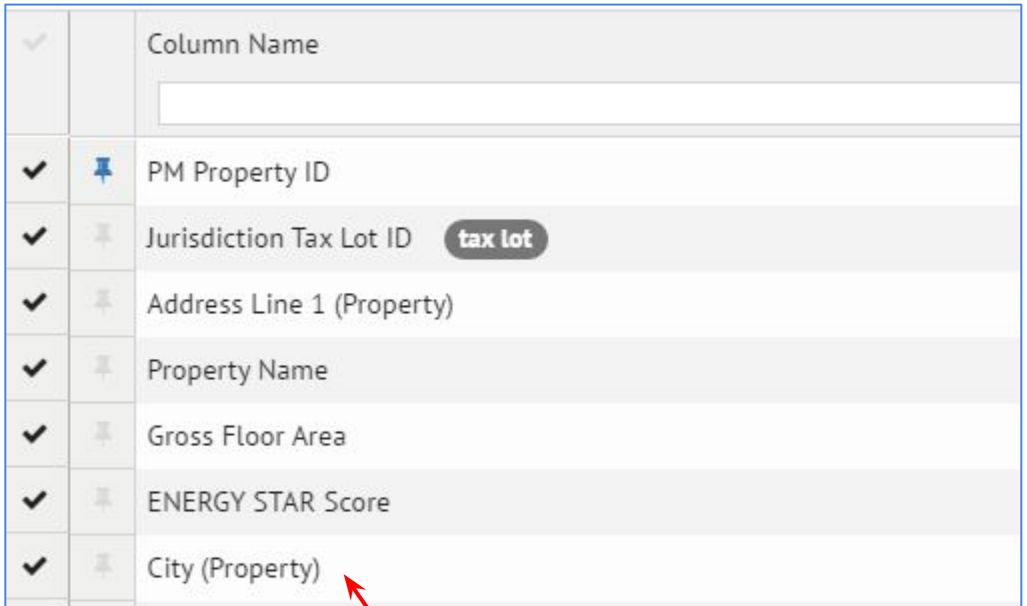



Click **Save** to save the changes to the current **List Setting Profile**

Click **New** to save the newly selected fields to a new **List Settings Profile**

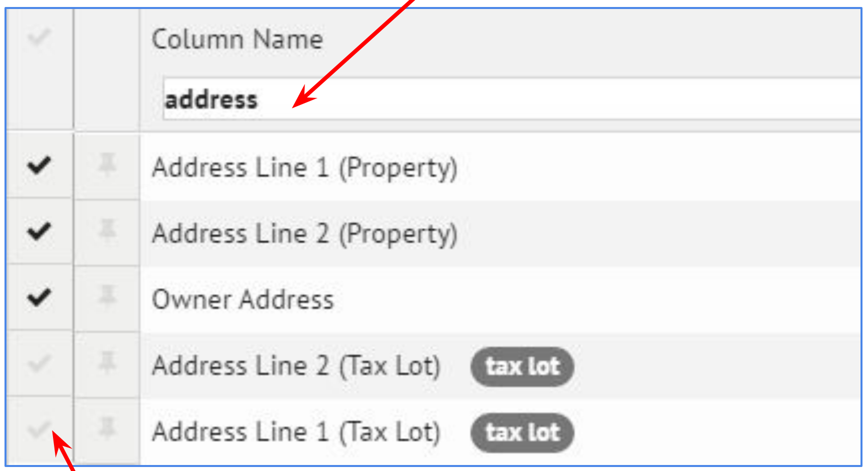
# List View – List Settings – Reorder Columns

INVENTORY

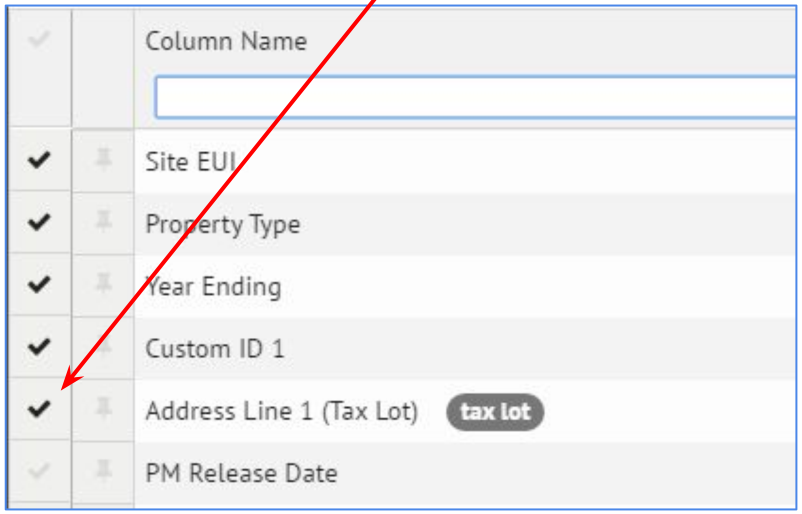



Click and hold down the left mouse button, and drag the Column Names around to change the order

Type into the input box to filter the list of fields

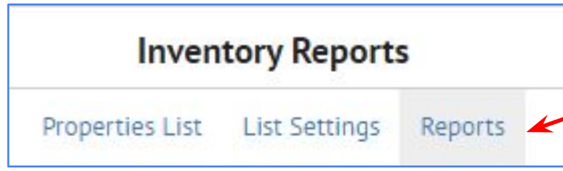



Adding a checkmark to an unchecked field adds it to the end of the checked fields. It can then be dragged to the desired position



INVENTORY

# List View – Reports Overview




From either the **Properties** or **Tax Lots Inventory List** view click on **Reports**

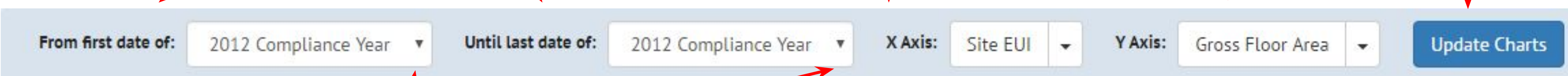
## Select criteria to graph

Click **Update Charts**

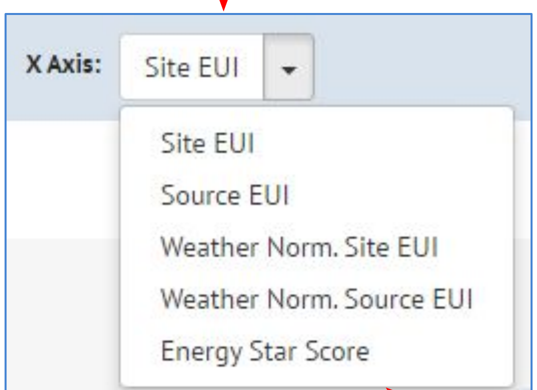
**Date ranges for reporting** based on Cycles

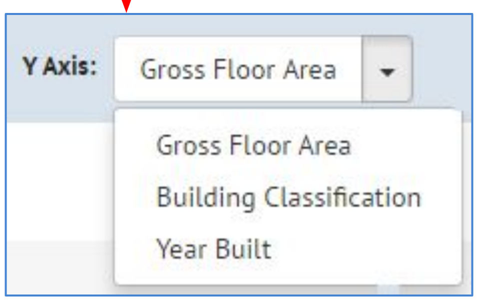
**X Axis** (Energy data)

**Y Axis** (Building Characteristic)




The pulldown list shows the Cycles for the organization



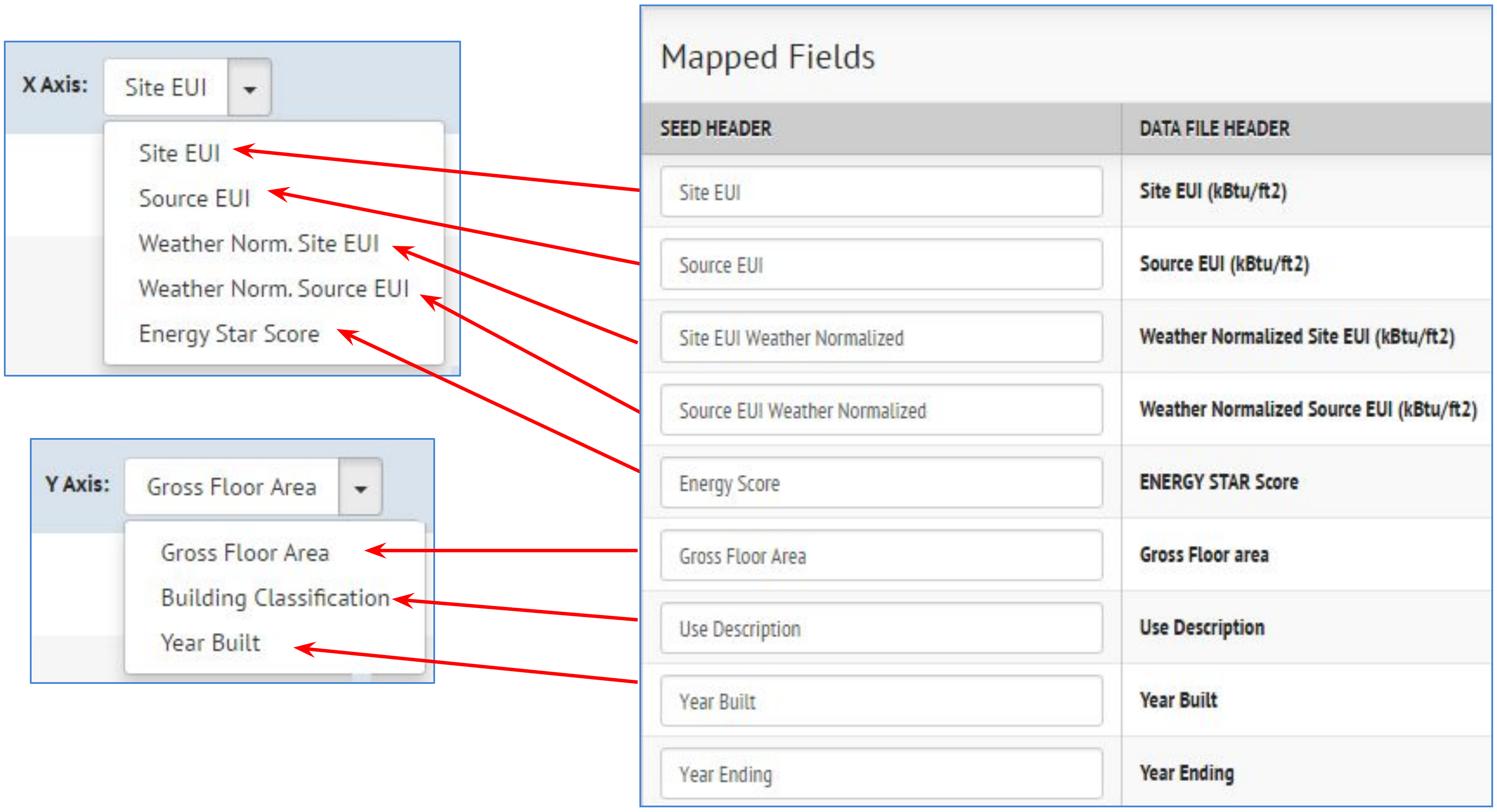




**These field names must have been used when Mapping data in order to show data in the reports** (see the next page for details)

# List View – Reports – Field Mapping

**You need to map the following fields in order for the reports to work**

*(Future work will include the ability to select fields that you want to plot so the mapping will not be as critical)*



# List View – Reports

INVENTORY

**Scatter Plot with all buildings**

**Bar Graph with Median Values**

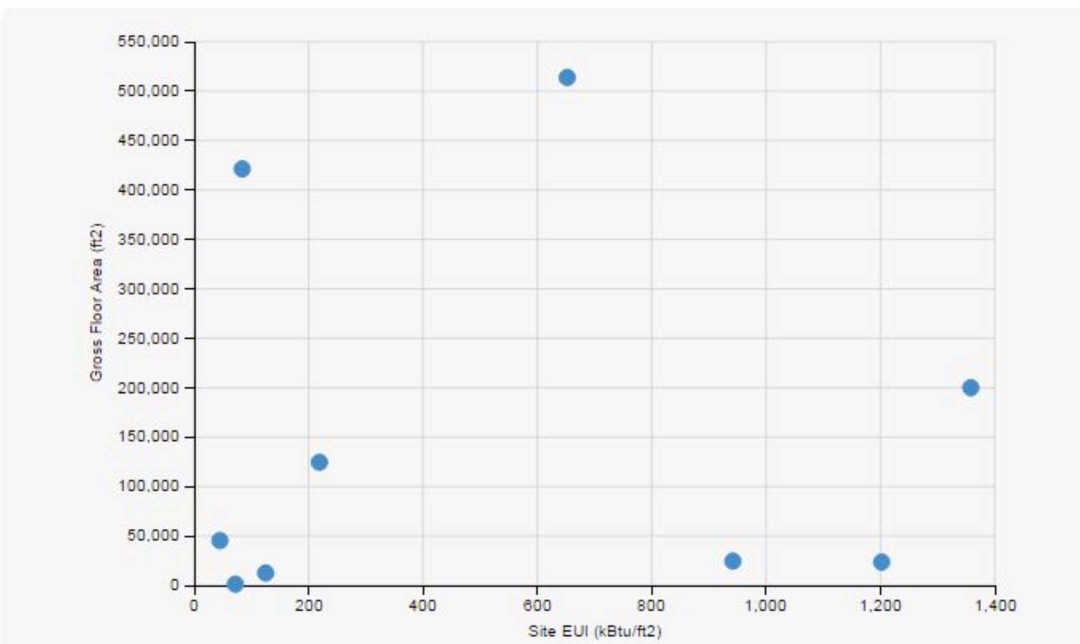
## Inventory Reports

Properties List | List Settings | Reports

Property Reports

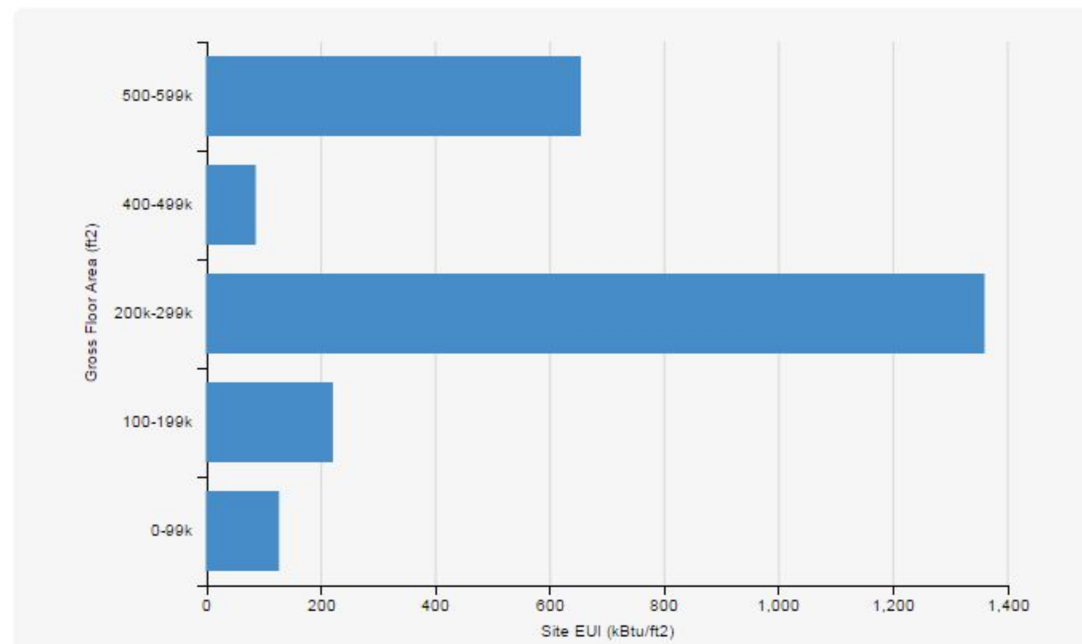
From first date of: 2017 Compliance | Until last date of: 2017 Compliance | X Axis: Site EUI | Y Axis: Gross Floor Area | Update Charts

Site Energy Use Intensity vs. Gross Floor Area




| Year Ending | Properties with Data | Total Properties |
|---|---|---|
| 2017 | 9 | 12 |

Site Energy Use Intensity vs. Gross Floor Area (Aggregated)

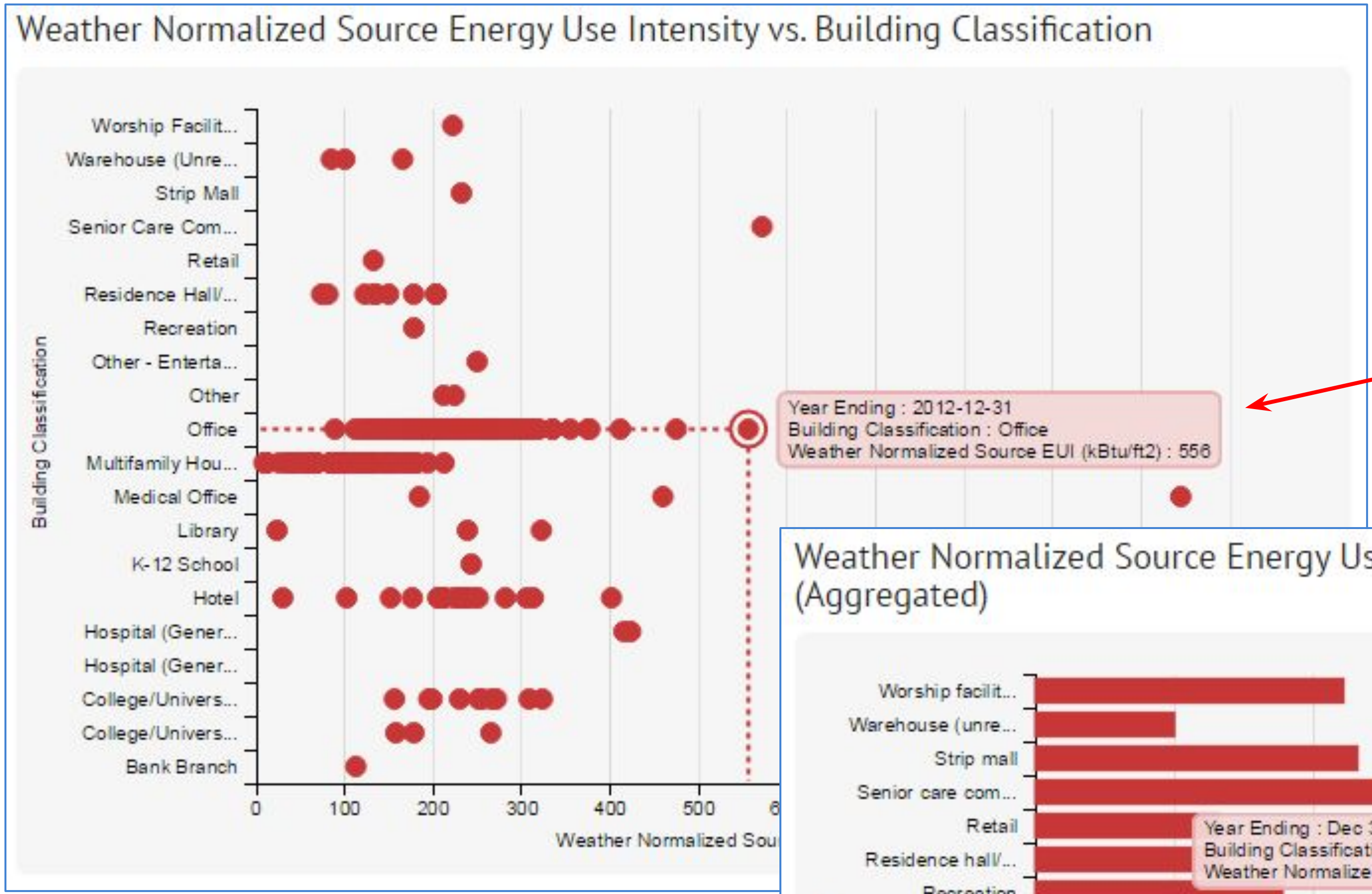



| Year Ending | Properties with Data | Total Properties |
|---|---|---|
| 2017 | 9 | 12 |

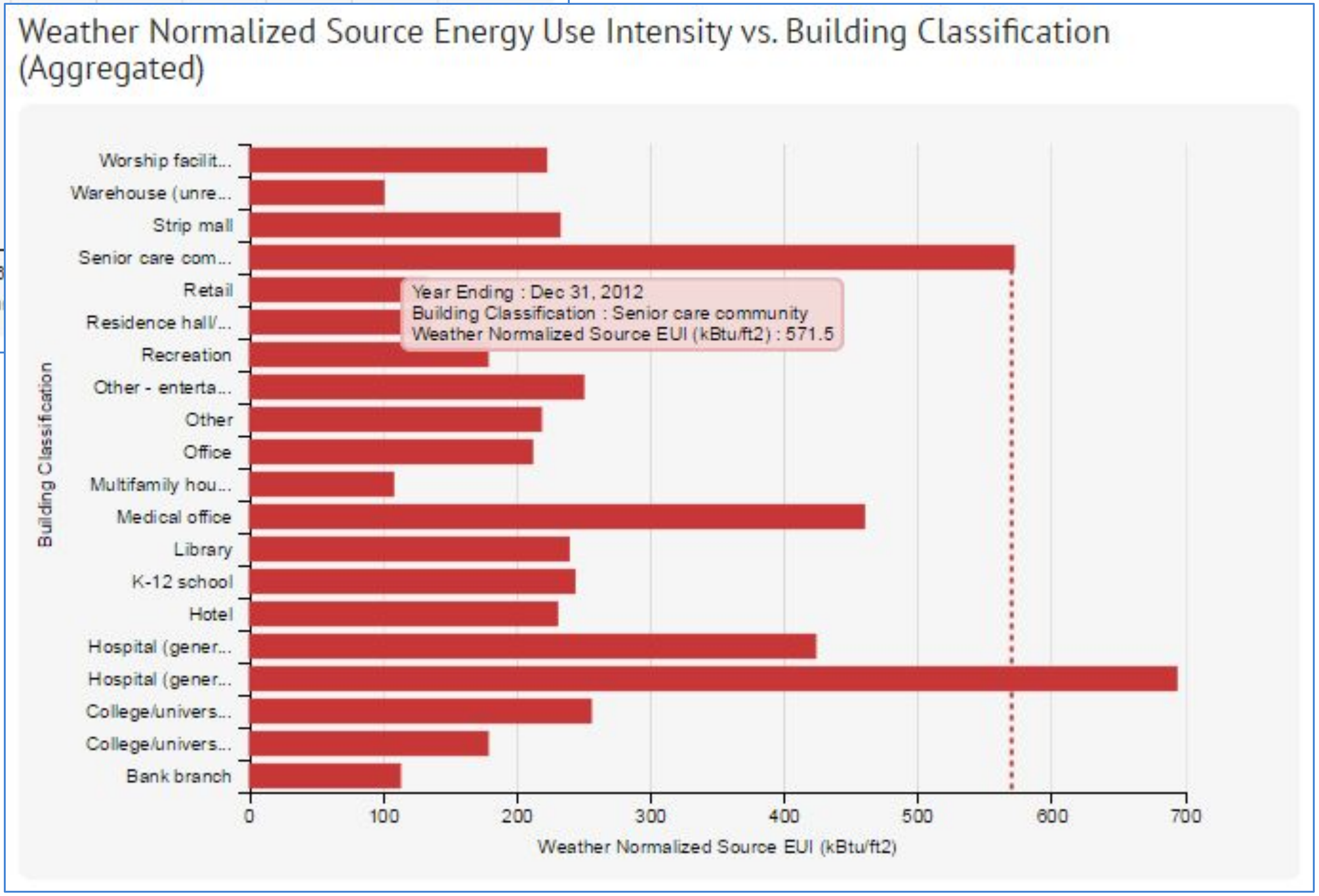
Program reports # data points actually used for graphs

INVENTORY

# List View – Reports



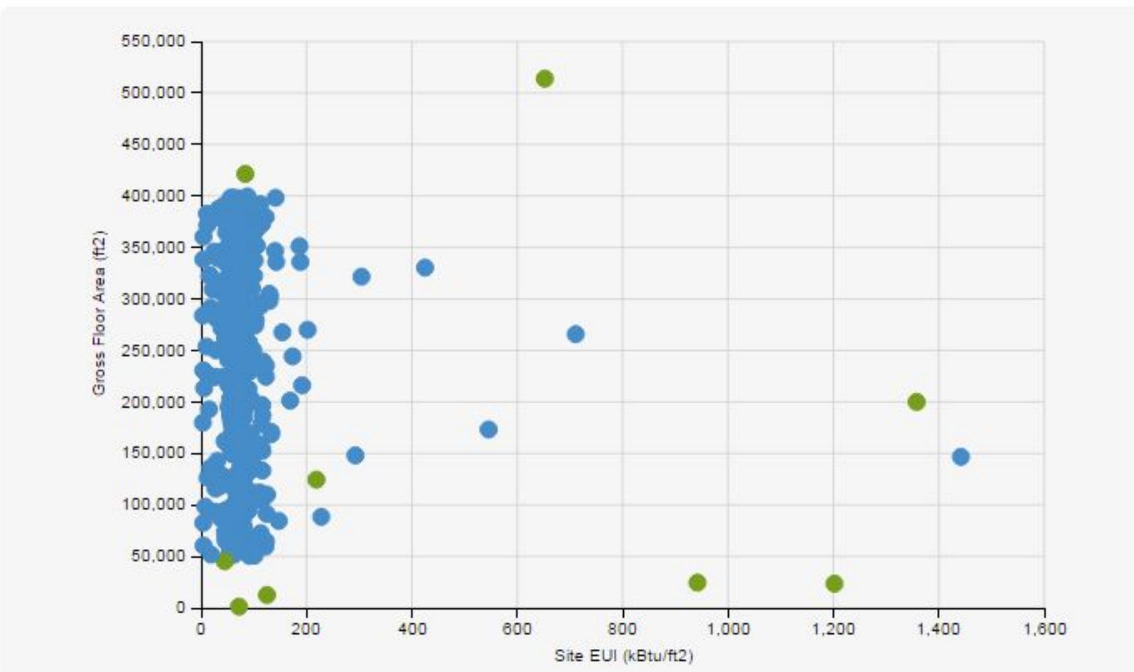

Mouse over point to display exact data for that point



# List View – Reports - Multiple Years of Data

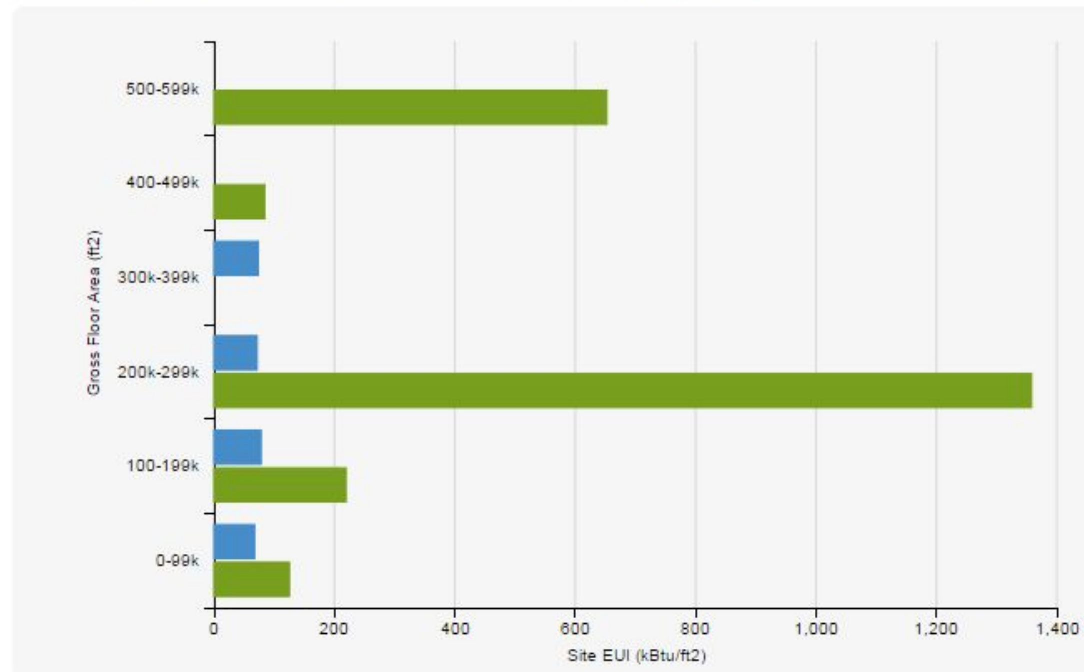
**Multiple years of data**
(based on Cycles)

Site Energy Use Intensity vs. Gross Floor Area




| Year Ending | Properties with Data | Total Properties |
|---|---|---|
| 2016 | 392 | 512 |
| 2017 | 9 | 12 |

Site Energy Use Intensity vs. Gross Floor Area (Aggregated)




| Year Ending | Properties with Data | Total Properties |
|---|---|---|
| 2016 | 392 | 512 |
| 2017 | 9 | 12 |

INVENTORY

# Labels - List View

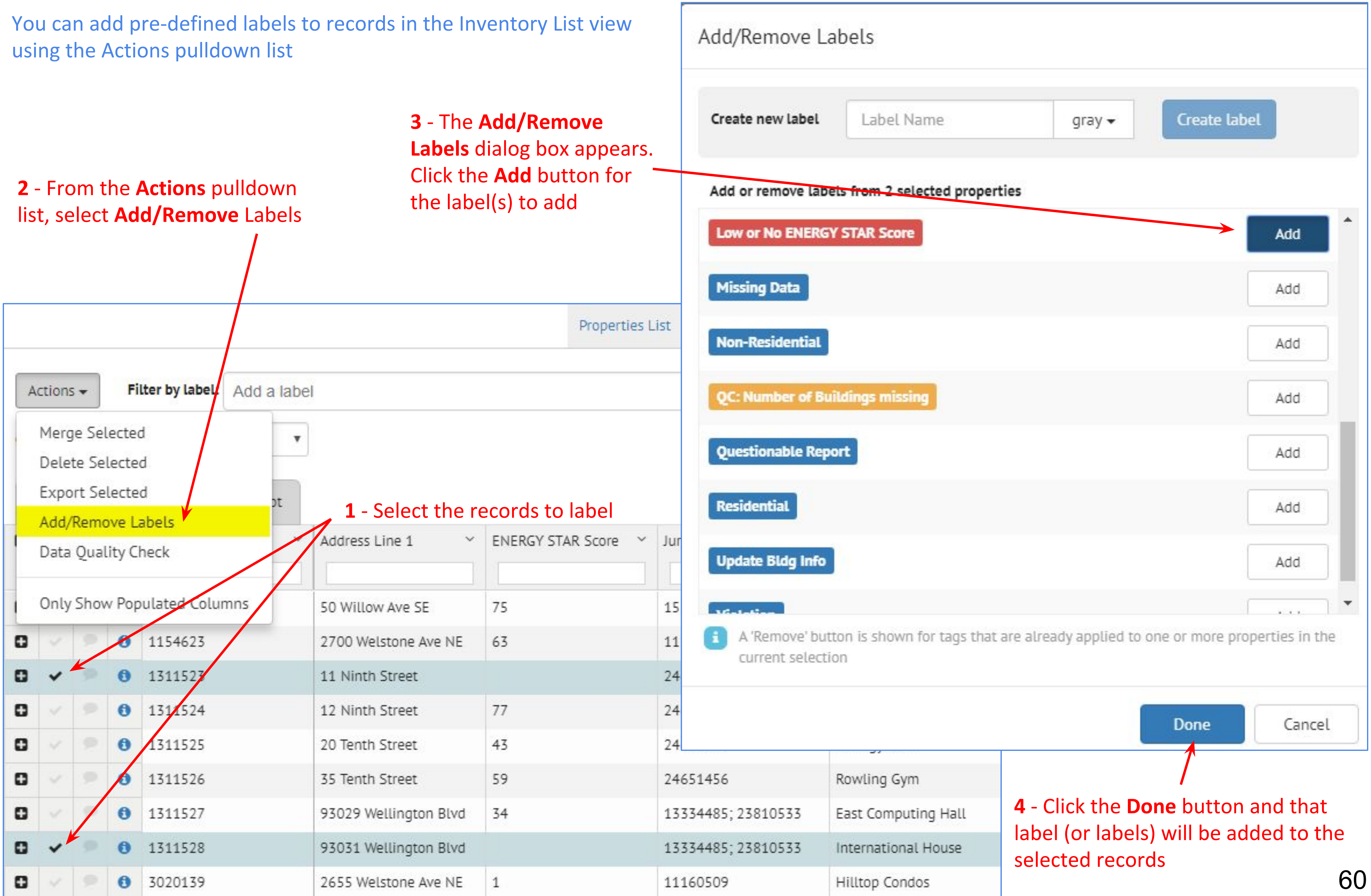
You can add pre-defined labels to records in the Inventory List view using the Actions pulldown list

**1** - Select the records to label

**2** - From the **Actions** pulldown list, select **Add/Remove** Labels

**3** - The **Add/Remove Labels** dialog box appears. Click the **Add** button for the label(s) to add

**4** - Click the **Done** button and that label (or labels) will be added to the selected records



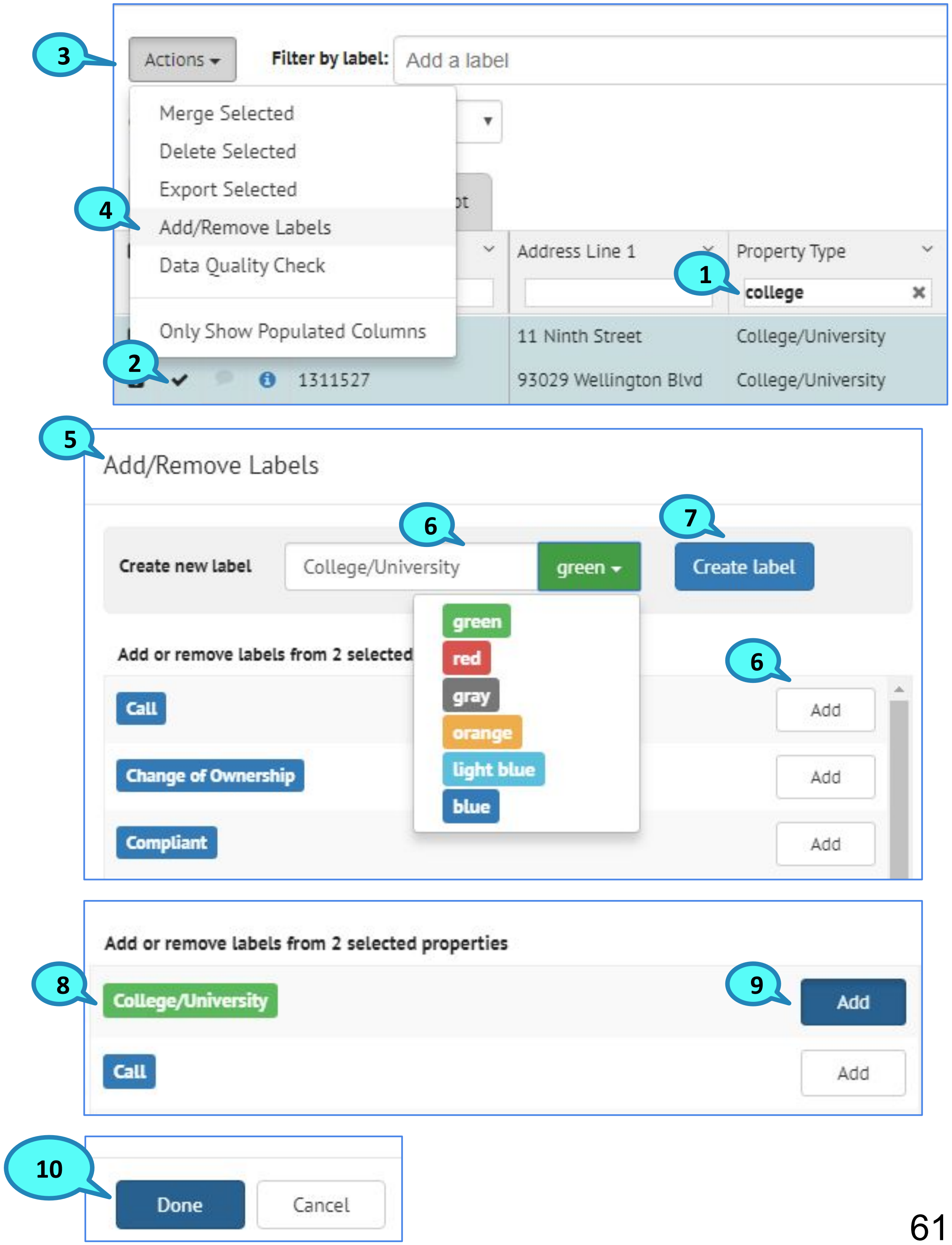
# Labels - Adding Labels “on the fly”

**You can also define labels “on the fly” from the Inventory List view**

In the Property or Tax Lot tab

1. Filter a field or fields -- in this example we are filtering on the **Property Type** field for any value with **college** in the name
2. Select all the records by click the checkbox to the left of the column names
3. Click the **Actions** pulldown list
4. Select the **Add/Remove Labels** choice
5. The **Add/Remove Labels** dialog box appears
6. Type the name of the new label in the **Create new label** box and select the color
7. Click the **Create Label** button
8. The new label is added to the list of Labels
9. Click the **Add** button for the label you just created
10. Click the **Done** button to apply the label to the selected records

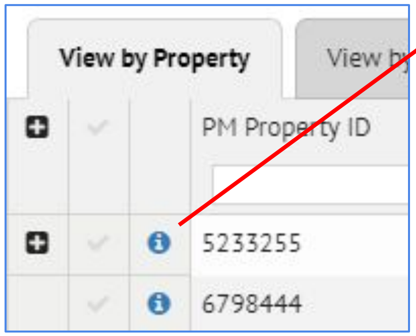
The label will be added to all the selected records
You can view the labels for each record in the Building Detail view *(see next page)*



INVENTORY

# Detail View - Property & Tax Lot

From the Inventory List view, click the "Information" icon for a record to access the Inventory Detail view.




The **Tax Lot Detail** view will only show fields and data mapped to the Tax Lot table

The **Property Detail** view will only show fields and data mapped to the Property table

Links to access associated (paired) Tax Lot record detail views

Property Detail | Notes | Settings

Settings link controls fields displayed and order

## Property : 521 Elm Street

Edit the Master record

Edit

Add/Remove Labels

**Labels:** > 50,000 SF

Labels assigned to the record

Cycle

**Cycle:** 2018 Compliance Cycle

**Detail Settings Profile:** Property Detail Fields

| FIELD | MASTER | EXAMPLE-DATA-ESPM.XLSX |
|---|---|---|
| PM Property ID | 5233255 | 5233255 |
| Address Line 1 | 521 Elm Street | 521 Elm Street |
| Property Name | Montessori Day School | Montessori Day School |
| Property Type | K-12 School | K-12 School |
| City | Rust | Rust |
| Gross Floor Area | 200000 | 200000 |
| ENERGY STAR Score | 55 | 55 |
| Site EUI | 1358 | 1358 |
| Owner | Norton Schools | Norton Schools |
| Owner Telephone | 213-555-4368 | 213-555-4368 |
| Owner Email | Lee@norton.com | Lee@norton.com |

Associated records can be unpaired

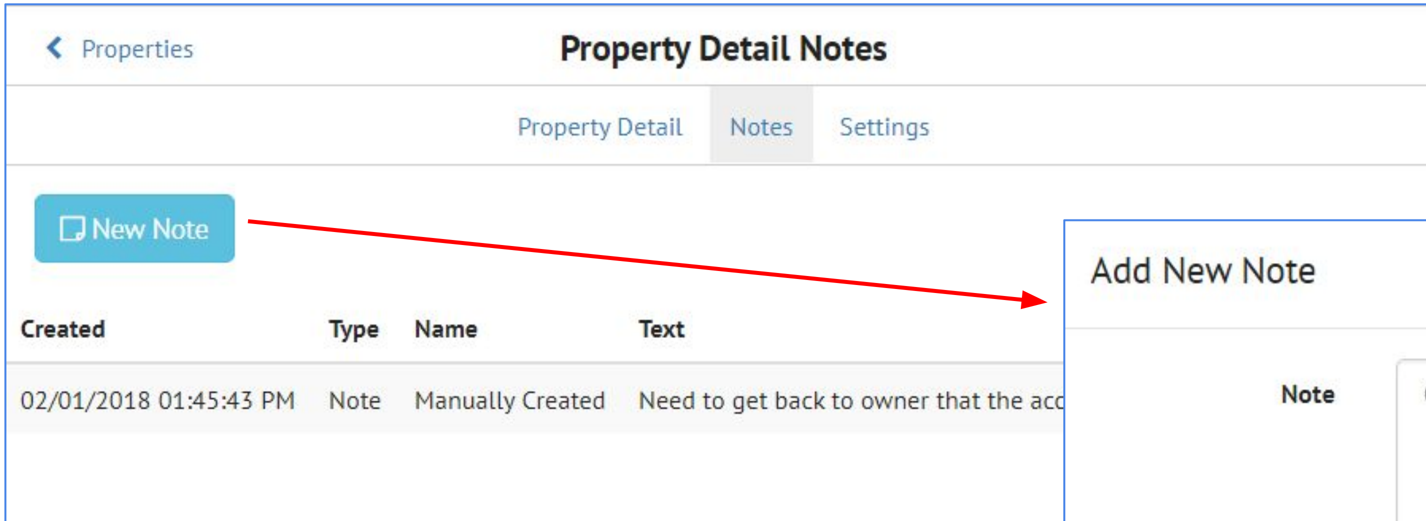
The first column is the **Master** record

**History** of record shown in columns

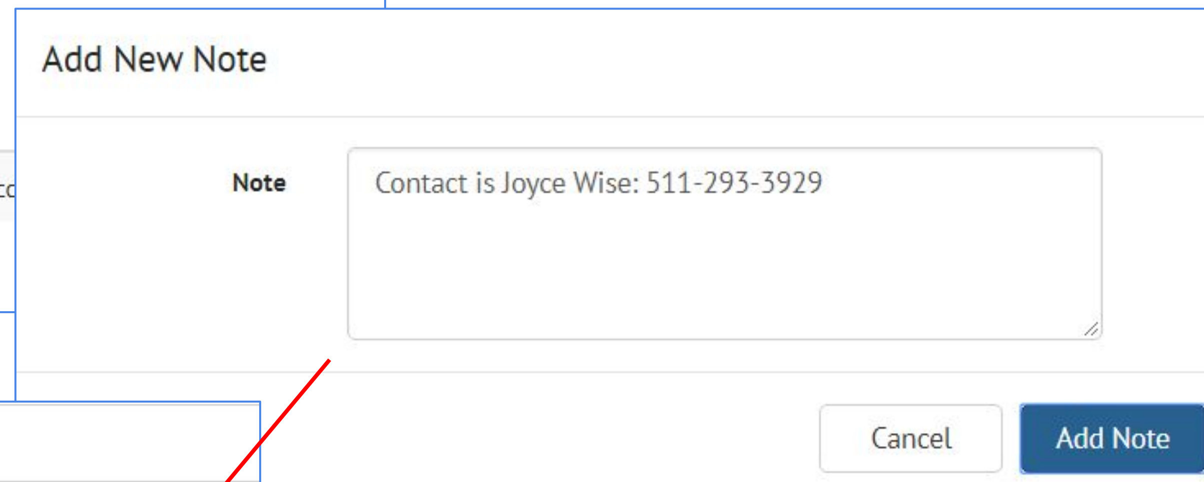
## Paired Tax Lots

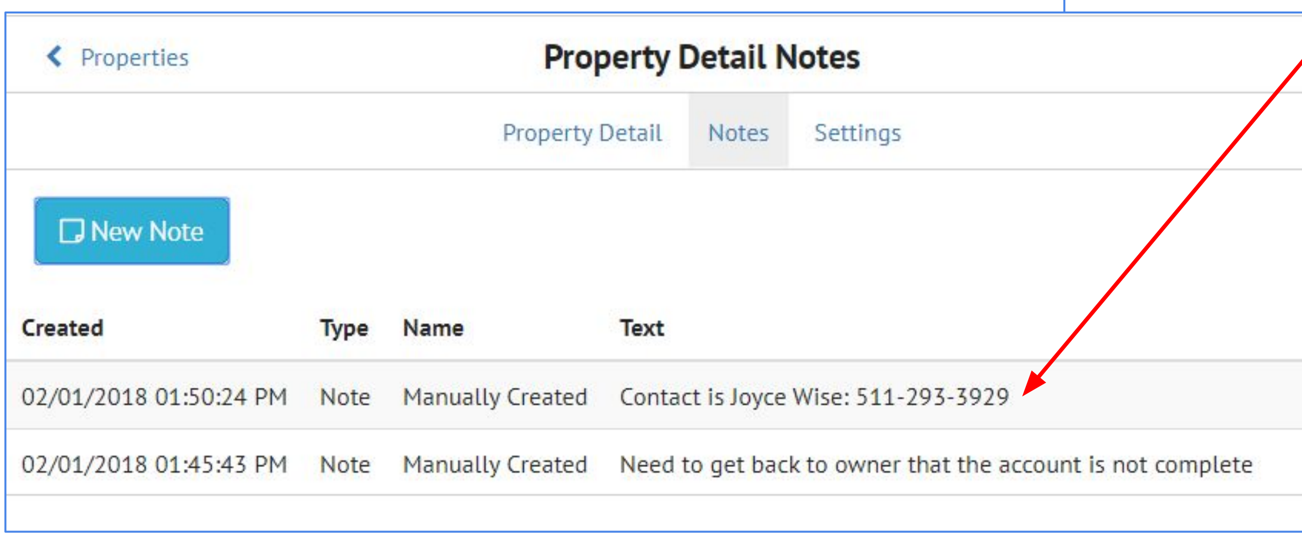
| TAX LOT ID | ADDRESS LINE 1 | UNPAIR |
|---|---|---|
| 33366148 | 530 Elm Street | × |
| 33366555 | 521 Elm Street | × |
| 33366125 | 525 Elm Street | × |

# Detail View - Notes

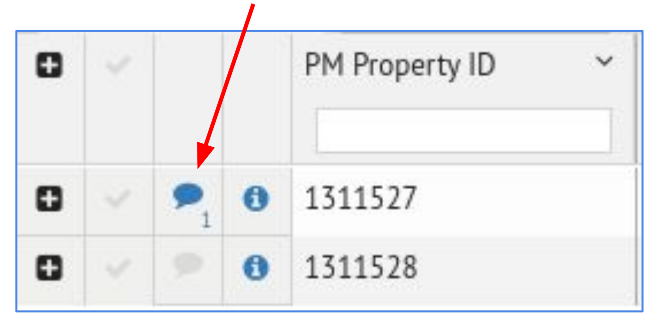



Property and Tax Lot details each have their own notes




Icon indicates Notes (Inventory List)




When unmerging a record that contains notes, the notes are duplicated to each new record with the original timestamps preserved.

When merging records that contain notes, the notes are combined into the new record with the original timestamps preserved. If exact note duplicates exist (for instance, from unmerging a record prior to re-merging) the exact duplicates are de-duplicated.

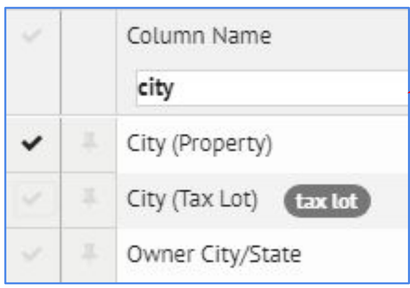
# Detail View - Settings - Property & Tax Lot

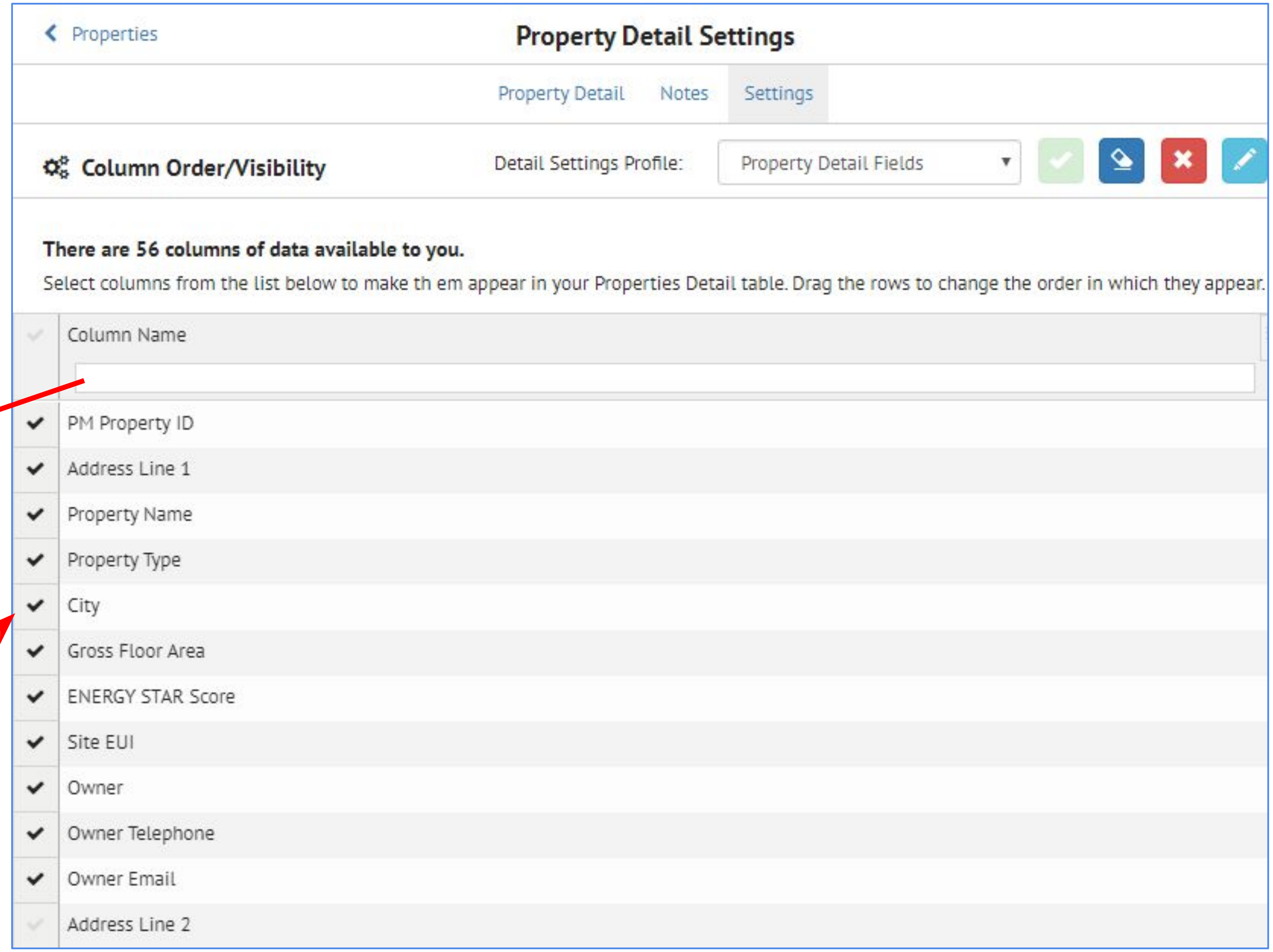
Click Settings from either **Property** or **Tax Lot Detail view** to set the visibility and order properties for fields.

**Tax Lot Detail Settings** will only contain fields and data from the **Tax Lot** table

**Property Detail Settings** will only contain fields and data from the **Property** table

Enter values to search the list of fields, then "check" the ones you want to display



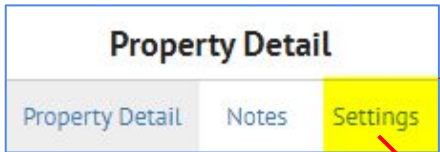




Check the fields to display, uncheck them to prevent them from displaying, in the Detail view

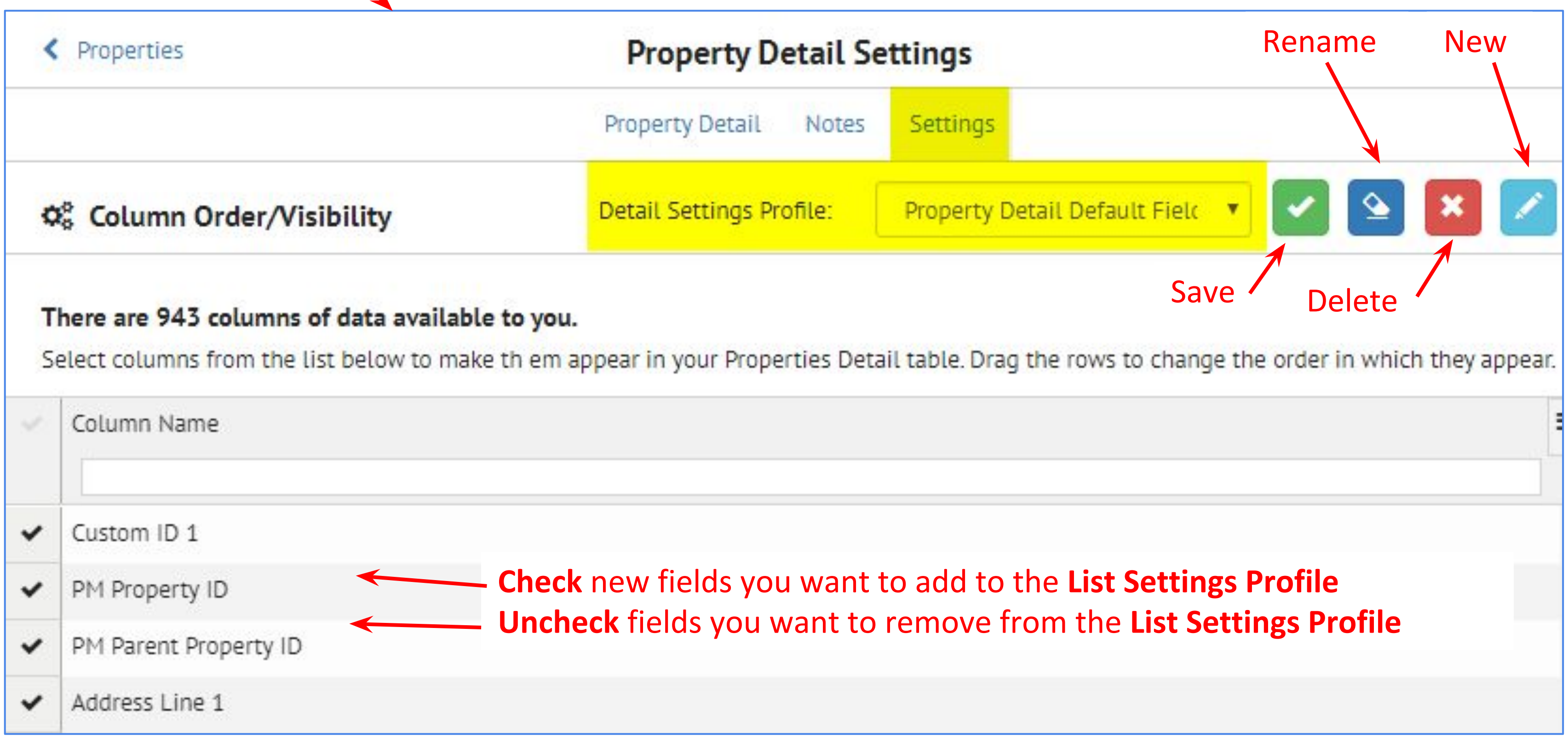
Drag fields up and down to set the order

# Detail View - Settings - Property & Tax Lot

In all the Detail View (for both Property and Tax Lot views) the "List Settings Profile" allows the currently highlighted fields to be saved to a name, which then appears in a pulldown list. This allows different sets of fields to be saved to different profiles.




To edit an existing Detail Settings Profile, or to make a new one, click the Settings link on either the Property or Tax Lot Detail View




Rename

New

Save

Delete

**Check** new fields you want to add to the **List Settings Profile**

**Uncheck** fields you want to remove from the **List Settings Profile**

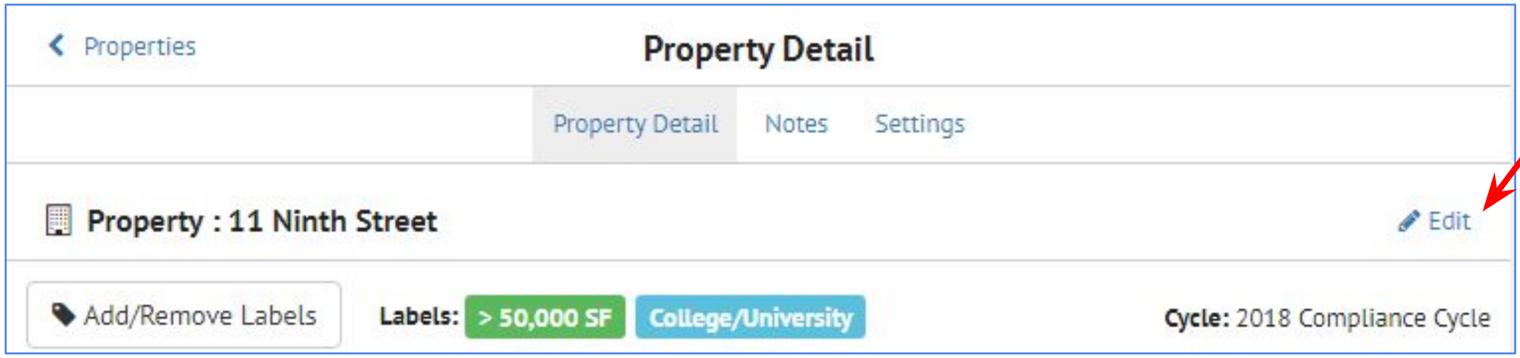
Click **Save** to save the changes to the current **List Setting Profile**

Click **New** to save the newly selected fields to a new **List Settings Profile**

# Detail View - Edit the Master Record

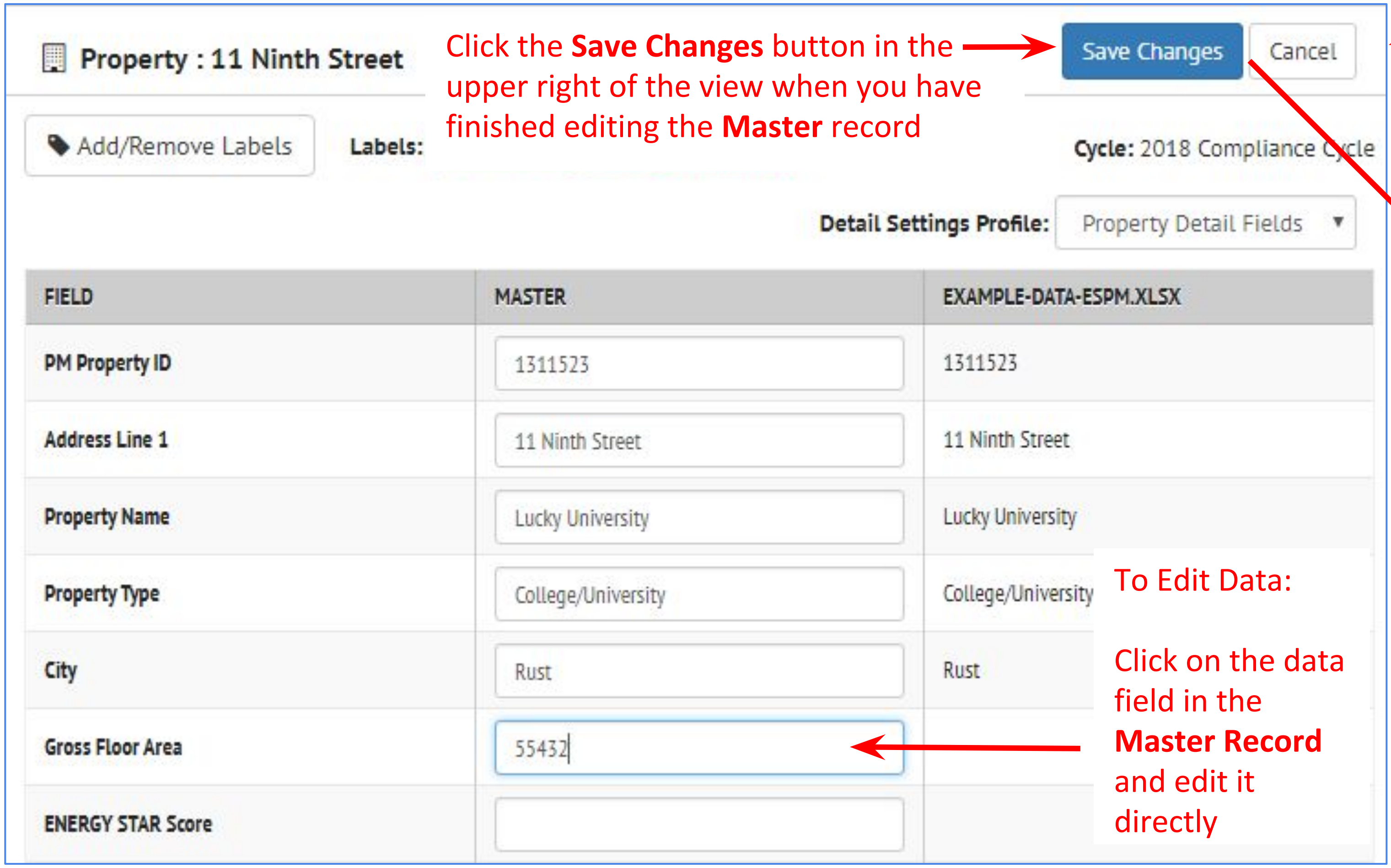
INVENTORY

From the **Inventory List** view, click the “**Information**” icon for a record to access the **Inventory Detail** view.




Click **Edit** to change the information in the **Master** record.

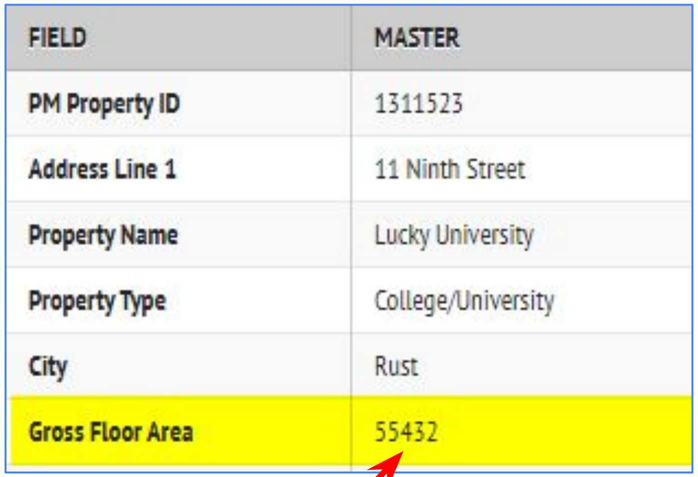
This will put you in “Edit” mode




Click the **Save Changes** button in the upper right of the view when you have finished editing the **Master** record

To Edit Data:

Click on the data field in the **Master Record** and edit it directly



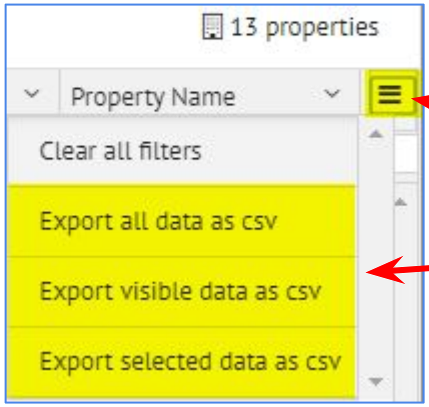

The Master record is now updated with the changes

INVENTORY

# Export Data -- 2 Options

**Option 1: Export options from the "Hamburger" menu**
*(this is probably the preferred option for most export needs)*

- 3 choices
  - **1a:** Export all data as CSV
  - **1b:** Export visible data as CSV
  - **1c:** Export selected data as CSV
    *This option only appears if you have checked some or all of the records*
- Pros
  - Multiple values for matching fields will be exported (which will not using Option 2)
  - You can export the data as
    - "collapsed" (one line per record) or
    - "expanded" (includes separate lines for associated data)
- Cons
  - You do not have control over the export filename
    - Then name defaults to
      - <Organization Name> <Property/Tax Lot> Data.csv
        Such as:
        LBNL 302 Property Data.csv
    - Multiple exports result in filenames with sequential numbers after them (they are not overwritten)
      - LBNL 302 Property Data (1).csv
  - You do not have control over the location of the export file -- it will always be exported to your "Downloads" folder

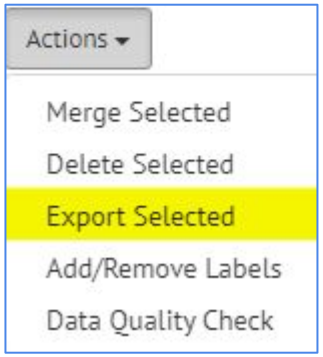



Hamburger
(right hand side of list)

Click it to see the options

**Option 2: Export Selected from the Actions pulldown**

- Pros
  - You can specify the filename and download location
- Cons
  - There is a **bug** that doesn't export multiple values in associated data fields
  - Only exports "collapsed" no matter what the Inventory view is




The following pages show examples using each of these options

INVENTORY

# Export Data -- Option 1a

**Option 1a:** Export all data as csv

- **Exported data is "expanded"** whether Inventory List is in "**collapsed" or "expanded**" view
- All records exported
- All fields set in List Settings exported

View by Property | View by Tax Lot — 13 properties

| PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Address Line 1 (Proper... | Property Name | Property Type | Gross F |
|---|---|---|---|---|---|---|
| 1311525 | 24651455 | | 20 Tenth Street | Biology Hall | Lab | |
| 4828379 | 11160509 | 2655 Welstone Ave NE | 2660 Welstone Ave NE | Hilltop Offices | Offi | |
| 5233255 | 33366125; 33366148; ... | 521 Elm Street; 525 El... | 521 Elm Street | Montessori Day School | K-1 | |
| 6798444 | | | 295444 Moser Lane | Senior Center | Social Meeting Hall | 15533 |
| 1154623 | 11160509 | 2655 Welstone Ave NE | 2700 Welstone Ave NE | Hilltop Retail | Retail | 23543 |

- Clear all filters
- Export all data as csv
- Export visible data as csv

The Inventory List can be in "collapsed" or "expanded" view
The export will always be "expanded", i.e., showing all the records including the associated records from the other table (Tax Lot or Property)

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Address Line 1 (Property) | Property Name | Property Type |
| 2 | 1311525 | 24651455 | | 20 Tenth Street | Biology Hall | Laboratory |
| 3 | | 24651455 | | | | |
| 4 | 4828379 | 11160509 | 2655 Welstone Ave NE | 2660 Welstone Ave NE | Hilltop Offices | Office |
| 5 | | 11160509 | 2655 Welstone Ave NE | | | |
| 6 | 5233255 | 33366125; 33366148; 33366555 | 521 Elm Street; 525 Elm Street; 530 Elm Street | 521 Elm Street | Montessori Day School | K-12 School |
| 7 | | 33366555 | 521 Elm Street | | | |
| 8 | | 33366148 | 530 Elm Street | | | |
| 9 | | 33366125 | 525 Elm Street | | | |
| 10 | 6798444 | | | 295444 Moser Lane | Senior Center | Social Meeting Hall |
| 11 | 1154623 | 11160509 | 2655 Welstone Ave NE | 2700 Welstone Ave NE | Hilltop Retail | Retail |
| 12 | | 11160509 | 2655 Welstone Ave NE | | | |

INVENTORY

# Export Data -- Option 1b -- collapsed

**Option 1b:** Export visible data as csv

- **Exported data is in same form as Inventory List** (in the example below, both are "collapsed")
- All records exported
- All fields set in List Settings exported

View by Property | View by Tax Lot | 13 properties

| PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Property Name | Address Line 1 (Proper... | Property Type | Gross Fl |
|---|---|---|---|---|---|---|
| 1311525 | 24651455 | | Biology Hall | 20 Tenth Street | Lab | |
| 4828379 | 11160509 | 2655 Welstone Ave NE | Hilltop Offices | 2660 Welstone Ave NE | Offi | |
| 5233255 | 33366125; 33366148; 33366555 | 521 Elm Street; 525 Elm Street; 530 Elm Street | Montessori Day School | 521 Elm Street | K-1 | |
| 6798444 | | | Senior Center | 295444 Moser Lane | Social Meeting Hall | 15533 |
| 1154623 | 11160509 | 2655 Welstone Ave NE | Hilltop Retail | 2700 Welstone Ave NE | Retail | 23543 |

Clear all filters
Export all data as csv
Export visible data as csv

Collapsed view in Inventory List (13 Property records)
Collapsed records in export (13 records)

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Property Name | Address Line 1 (Property) | Property Type |
| 2 | 1311525 | 24651455 | | Biology Hall | 20 Tenth Street | Laboratory |
| 3 | 4828379 | 11160509 | 2655 Welstone Ave NE | Hilltop Offices | 2660 Welstone Ave NE | Office |
| 4 | 5233255 | 33366125; 33366148; 33366555 | 521 Elm Street; 525 Elm Street; 530 Elm Street | Montessori Day School | 521 Elm Street | K-12 School |
| 5 | 6798444 | | | Senior Center | 295444 Moser Lane | Social Meeting Hall |
| 6 | 1154623 | 11160509 | 2655 Welstone Ave NE | Hilltop Retail | 2700 Welstone Ave NE | Retail |
| 7 | 1311527 | 13334485; 23810533 | 93029 Wellington Blvd; 94000 Wellington Blvd | East Computing Hall | 93029 Wellington Blvd | College/University |
| 8 | 1311528 | 13334485; 23810533 | 93029 Wellington Blvd; 94000 Wellington Blvd | International House | 93031 Wellington Blvd | Residence |
| 9 | 1311524 | 24651456 | 11 Ninth Street | Grange Hall | 12 Ninth Street | Performing Arts |
| 10 | 1311526 | 24651456 | 11 Ninth Street | Rowling Gym | 35 Tenth Street | Fitness Center/Health Clu |
| 11 | 1311523 | 24651456 | 11 Ninth Street | Lucky University | 11 Ninth Street | College/University |
| 12 | 2264 | 1552813 | 050 Willow Ave SE | University Inn | 50 Willow Ave SE | Hotel |
| 13 | 6798215 | | | City Library | 295302 Moser Lane | Library |
| 14 | 3020139 | 11160509 | 2655 Welstone Ave NE | Hilltop Condos | 2655 Welstone Ave NE | Multifamily Housing |

# Export Data -- Option 1b -- expanded

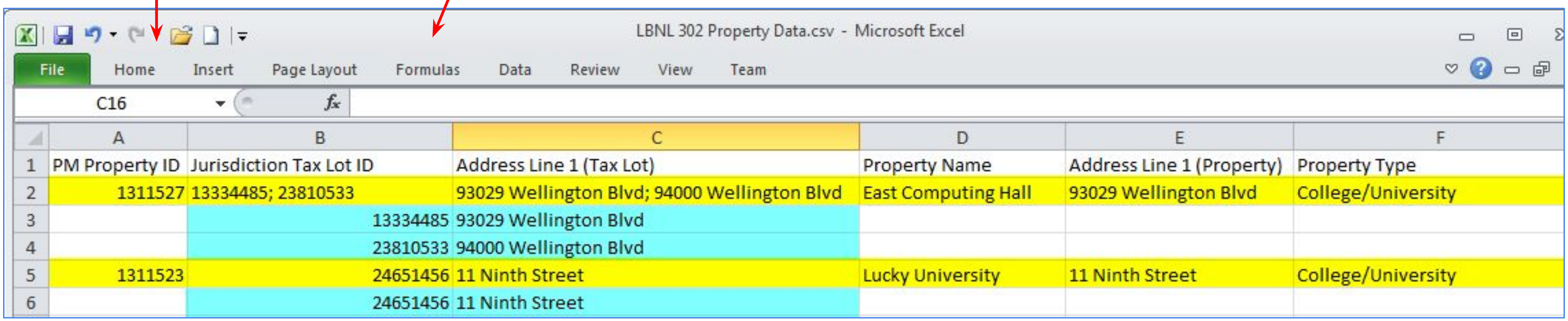
**Option 1b:** Export visible data as csv

- **Exported data is in same form as Inventory List** (in the example below, both are "expanded")
- All records exported
- All fields set in List Settings exported


| PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Address Line 1 (Proper... | Property Name | Property Type | Gross Fl |
|---|---|---|---|---|---|---|
| 1311527 | 13334485; 23810533 | 93029 Wellington Blvd; 94000 Wellington Blvd | 93029 Wellington Blvd | East Computing Hall | Coll | |
| | 13334485 | 93029 Wellington Blvd | | | | |
| | 23810533 | 94000 Wellington Blvd | | | | |
| 1311523 | 24651456 | 11 Ninth Street | 11 Ninth Street | Lucky University | College/University | |
| | 24651456 | 11 Ninth Street | | | | |

Expanded view in Inventory List
Expanded records in export

All records are exported with their associated records; in this case, all 13 Property records are exported with separate lines for their associated Tax Lot records



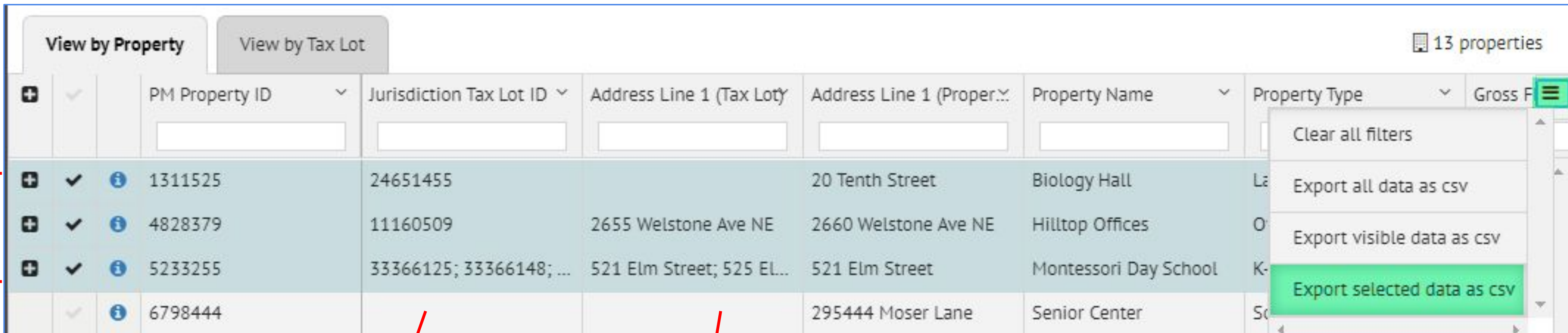

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Property Name | Address Line 1 (Property) | Property Type |
| 2 | 1311527 | 13334485; 23810533 | 93029 Wellington Blvd; 94000 Wellington Blvd | East Computing Hall | 93029 Wellington Blvd | College/University |
| 3 | | 13334485 | 93029 Wellington Blvd | | | |
| 4 | | 23810533 | 94000 Wellington Blvd | | | |
| 5 | 1311523 | 24651456 | 11 Ninth Street | Lucky University | 11 Ninth Street | College/University |
| 6 | | 24651456 | 11 Ninth Street | | | |

# Export Data -- Option 1c

INVENTORY

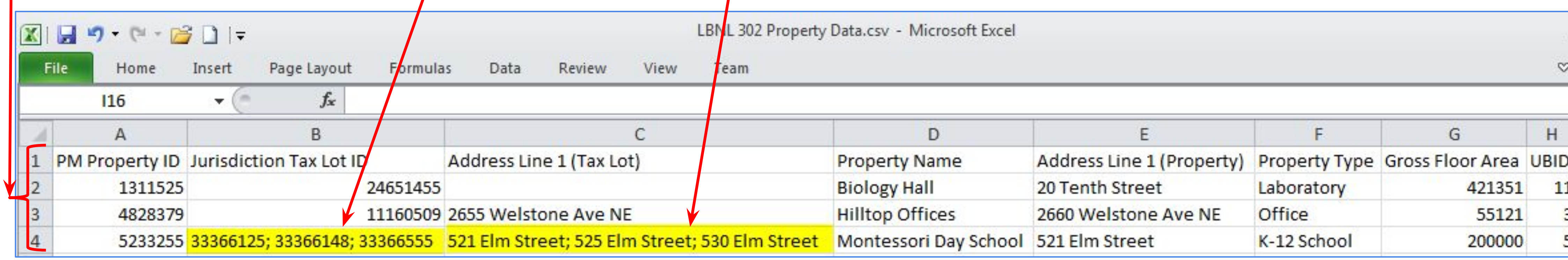
**Option 1c:** Export selected data as csv

- **Exported data is "collapsed"** whether Inventory List is in "**collapsed" or "expanded**" view
- Selected (checked) records are exported
- All fields set in the Inventory List view List Settings are exported




All selected (checked) records are exported (3 in this example)

Multiple values in matching fields are included (in this case the Jurisdiction Tax Lot ID and Address Line 1 Tax Lot fields)



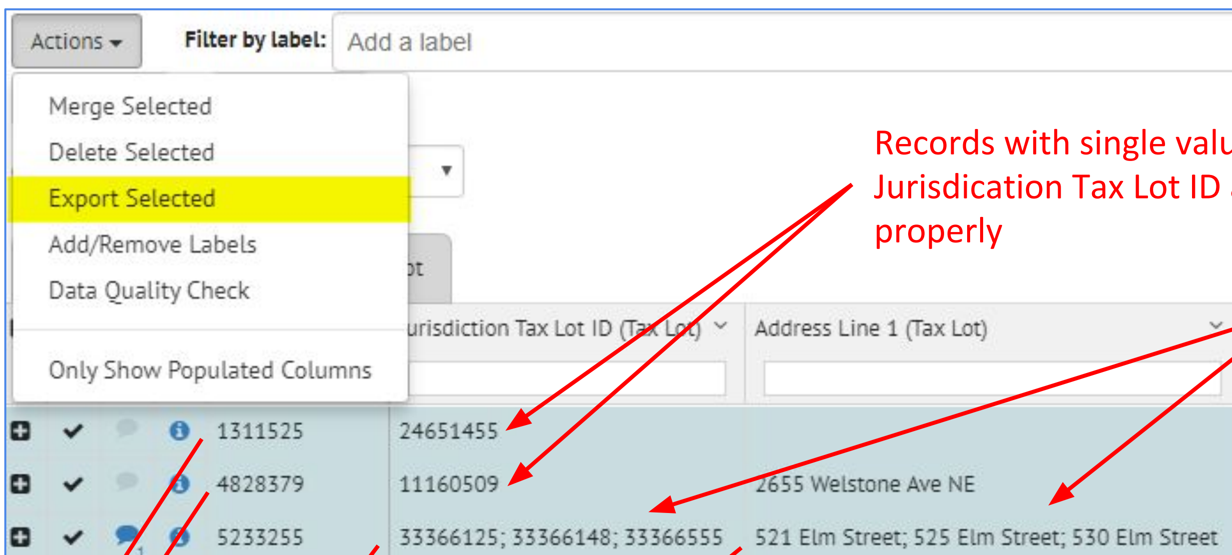

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Property Name | Address Line 1 (Property) | Property Type | Gross Floor Area | UBID |
| 2 | 1311525 | 24651455 | | Biology Hall | 20 Tenth Street | Laboratory | 421351 | 11 |
| 3 | 4828379 | 11160509 | 2655 Welstone Ave NE | Hilltop Offices | 2660 Welstone Ave NE | Office | 55121 | 3 |
| 4 | 5233255 | 33366125; 33366148; 33366555 | 521 Elm Street; 525 Elm Street; 530 Elm Street | Montessori Day School | 521 Elm Street | K-12 School | 200000 | 5 |

All fields set in List Settings (and visible in the Inventory List view) are exported

# Export Data -- Option 2

**Option 2:** Export Selected

- **Exported data is "collapsed"** whether Inventory List is in "**collapsed" or "expanded**" view
- Selected (checked) records are exported
- All fields set in the Inventory List view List Settings are exported
- Pro
  - You can specify the name and location of the exported file
- Con
  - **BUG:** If there are multiple associated values in any matching fields (such as Jurisdiction Tax Lot ID, UBID, etc) only one value will be exported *(this will be fixed in future versions)*
    - If you don't have multiple values in a matching field or you don't want to export those fields, you can use this option




Records with single values in the matching fields (in this case Jurisdication Tax Lot ID and Address Line 1 Tax Lot) are exported properly

Records with multiple values in the matching fields (in this case Jurisdication Tax Lot ID and Address Line 1 Tax Lot) are **NOT** exported properly -- only one of the values is exported

| | B | C | D | E | F | G | H | I | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | PM Property ID | Jurisdiction Tax Lot ID | Address Line 1 (Tax Lot) | Property Name | Address Line 1 (Property) | Property Type | Gross Floor Area | UBID | Property Lab |
| 2 | 1311525 | 24651455 | | Biology Hall | 20 Tenth Street | Laboratory | 421351 | 11 | > 50,000 SF |
| 3 | 4828379 | 11160509 | 2655 Welstone Ave NE | Hilltop Offices | 2660 Welstone Ave NE | Office | 55121 | 3 | > 50,000 SF |
| 4 | 5233255 | 33366555 | 521 Elm Street | Montessori Day School | 521 Elm Street | K-12 School | 200000 | 5 | > 50,000 SF |

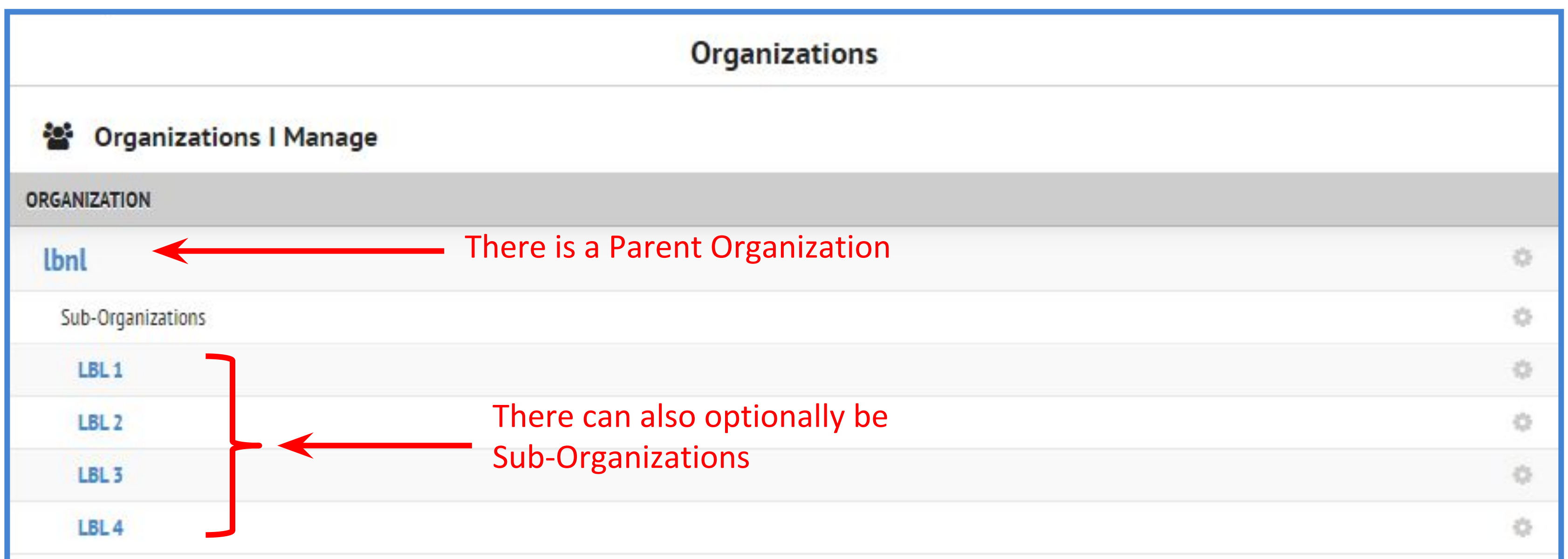
# ORGANIZATIONS Overview

- Every account holder belongs to an Organization
- Most SEED users will only have a Parent Organization


Number of records for **Properties** and **Tax Lots** for each **Cycle**, by **Organization**

Role can be:
- Owner
- Member
- Viewer

- SEED is structured to allow a Parent Organization to have Sub-Organizations

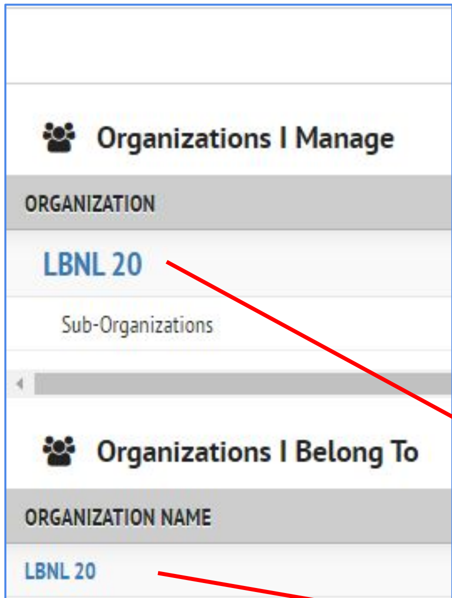



There is a Parent Organization

There can also optionally be Sub-Organizations

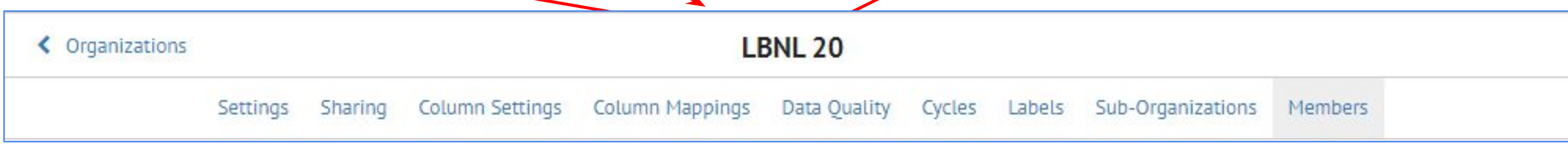
ORGANIZATIONS

# Menu




- Click on an organization in either
  - Organizations I Manage
    Or
  - Organizations I Belong To
- The view for that organization will be displayed

Organization Name



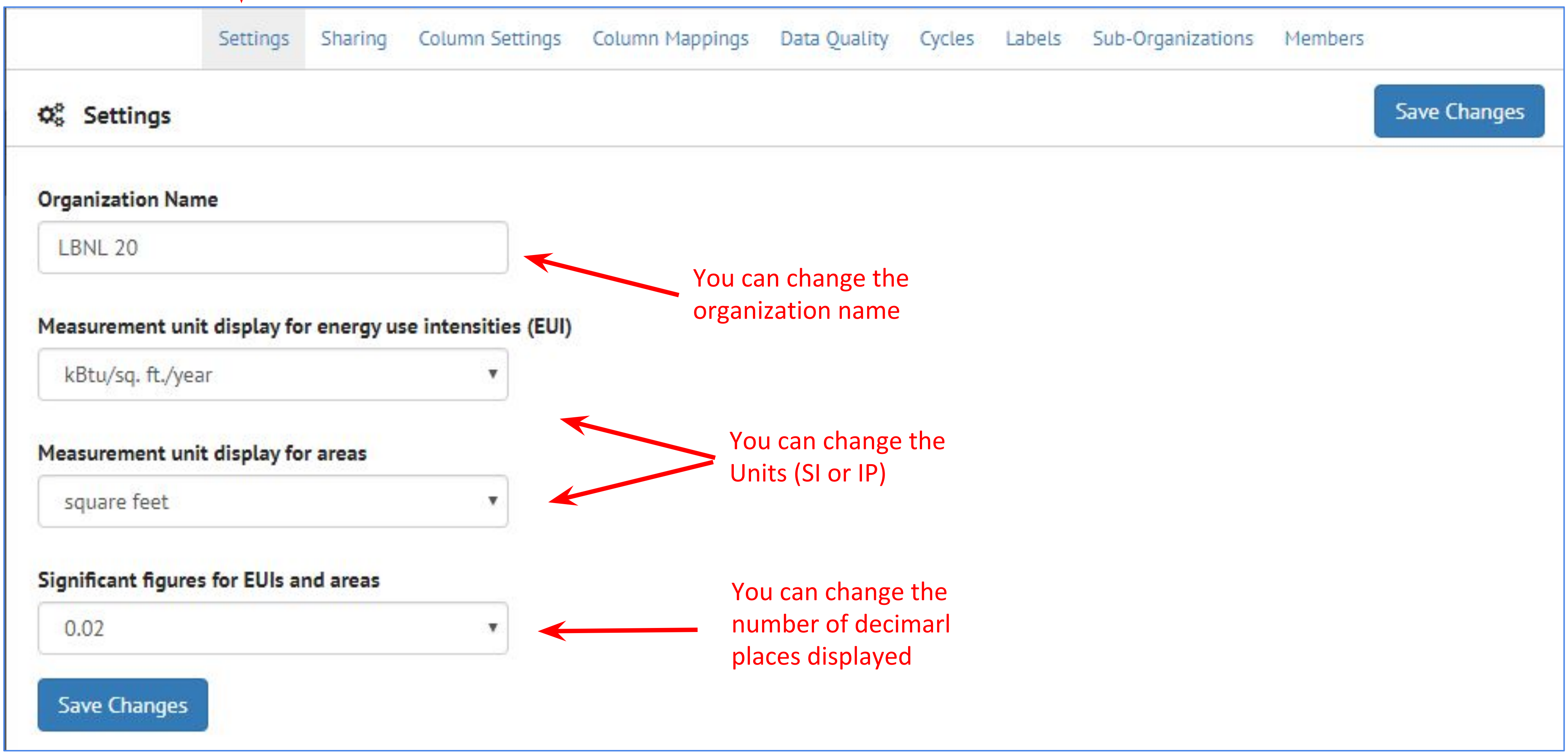

- The links from this view are
  - **Settings:** The Admin screen for organization settings
  - **Sharing:** The Admin screen for managing how data is shared
  - **Column Settings:** Change the names of the fields in the existing data
  - **Column Mappings:** Manage the mappings for new fields being imported
  - **Data Cleansing:** The Admin screen for managing Data Cleansing settings
  - **Cycles:** The Admin screen for managing Cycles
  - **Labels:** The Admin screen for managing Labels
  - **Sub-Organizations:** A list of all sub-organizations related to this organization
  - **Members:** A list of all members of this organization

ORGANIZATIONS

# Settings Admin Page

In the Organization / Settings tab, you can change the name of the organization

Click on the **Settings** link




You can change the organization name

You can change the Units (SI or IP)

You can change the number of decimarl places displayed

# Sharing Admin Page

ORGANIZATIONS

< Organizations

## LBNL 20

Settings | Sharing | Column Settings | Column Mappings | Data Quality | Cycles | Labels | Sub-Organizations | Members

### Sharing Your Data

Save Changes

Click on the **Sharing** link

**Selecting Fields to Share**

As the admin of your SEED instance you can control what data is shared throughout your organization and between your sub-organizations as well as what data is shared externally with the public-at-large. The subset of data you choose to share with the public can be different than the subset shared between your sub-organizations.

From the list below, select the fields that you want to: 1) share internally within your organization, and 2) share publicly with users outside your organization.

| SHARE DATA WITH PUBLIC | TABLE NAME | FIELD NAME |
|---|---|---|
| | Search table name | Search field name |
| | PropertyState | Address Line 1 |
| | TaxLotState | Address Line 1 (Tax Lot) |
| | PropertyState | Address Line 2 |
| | PropertyState | Building Certification |
| | TaxLotState | City (Tax Lot) |
| | PropertyState | Custom ID 1 |
| | PropertyState | Energy Alerts |
| | PropertyState | ENERGY STAR Score |
| | PropertyState | PM Generation Date |
| | PropertyState | Gross Floor Area |
| | TaxLotState | Jurisdiction Tax Lot ID (Tax Lot) |
| | PropertyState | Associated Tax Lot ID |

The owner of a Parent Organization can select fields to view between Sub-Organizations.

**Set a Query Threshold**

Enter the minimum threshold count of buildings that can be returned in a shared query. The building count threshold is important for allowing other organizations to perform statistical analysis on your data without revealing information about individual buildings.

Count #

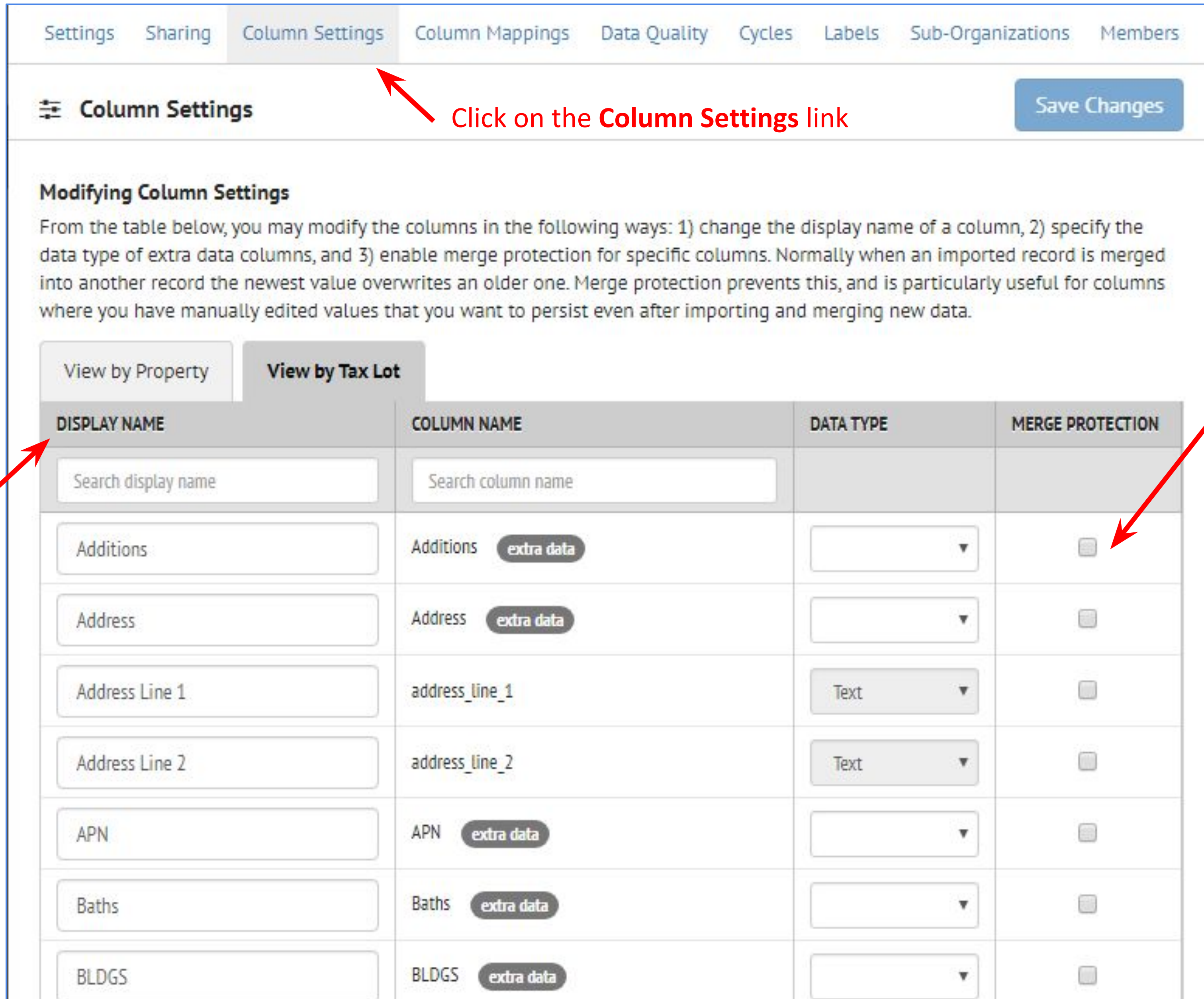
The owner of a Parent Organization can set the query threshold for viewing records between Sub-Organizations.

# Column Settings Admin Page

ORGANIZATIONS

This screen shows the mappings for the data in the database. Changes to the mappings here affect the existing data. For example, if the Display Name is changed, it will affect the field "display" name that is shown in the Inventory List and Detail screens for existing data. It does not affect the way that future fields will be mapped, so if field mappings are changed, they should probably also be changed in the Column Mappings screen. This screen also allows fields to be protected from being overwritten when new data is imported.

This is the name that is displayed, for example, in the Inventory List and Detail views, based on how the data was originally mapped. This name can be changed and it will affect all views of that field



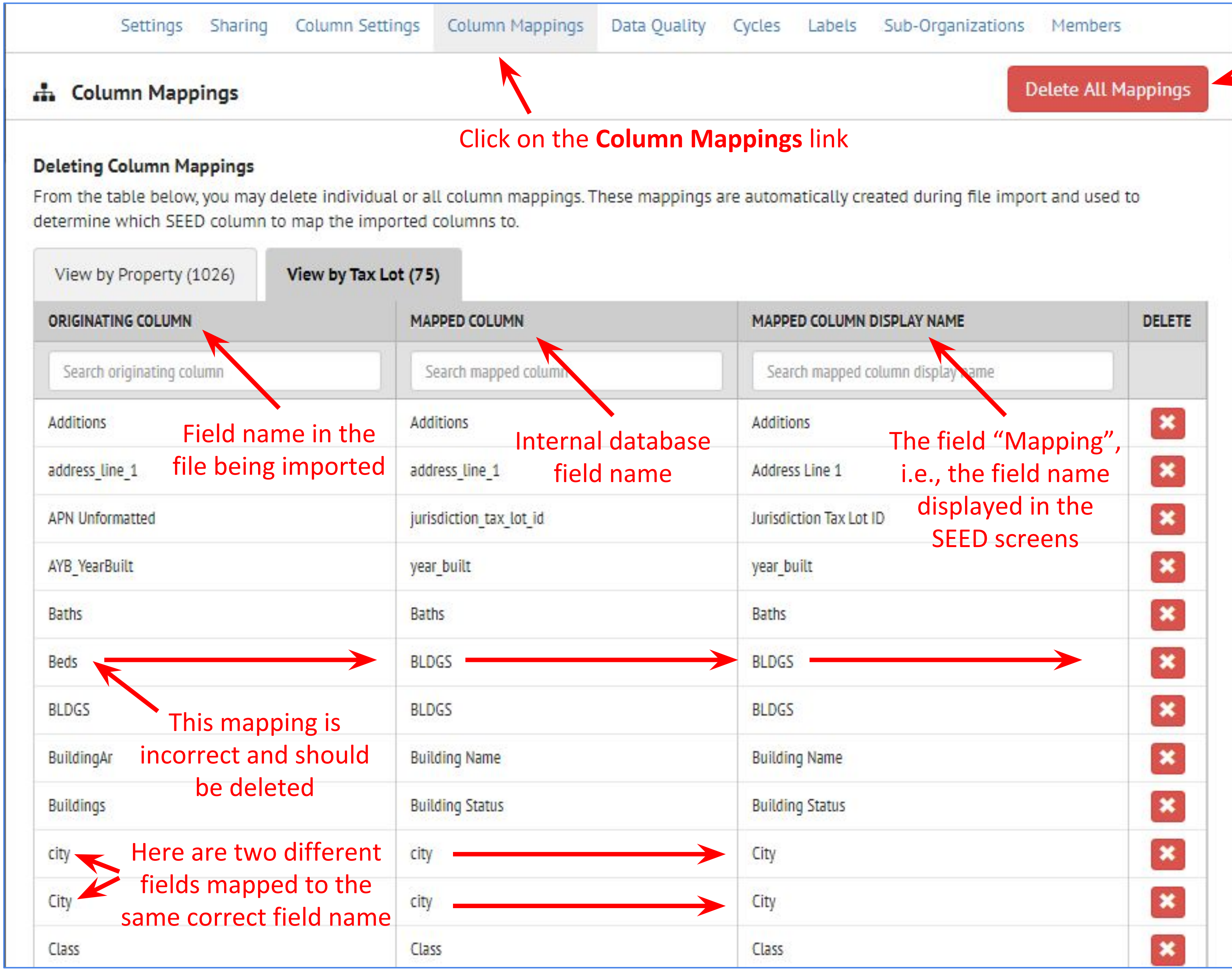

Click on the **Column Settings** link

Check the box in the "Merge Protection" column to prevent existing data in the "Master Record" from being updated when new data is imported. This is useful for fields where the data has been edited by hand, and could be overwritten when new data is imported which would overwrite the hand edited changes.

ORGANIZATIONS

# Column Mappings Admin Page

This screen shows the stored default mappings for files that have been previously imported, which is the **default** mapping for these fields when new files are imported in the future.  If problems are found in the mappings here, the bad mappings should be deleted so that when new files with these fields are imported, those same mapping mistakes will not be made again. Changing the mappings here does not affect existing data, it only affects the default mapping settings for data that will be imported in the future.




Click the “Delete All Mappings” button to eliminate all the default mappings for files being imported in the future

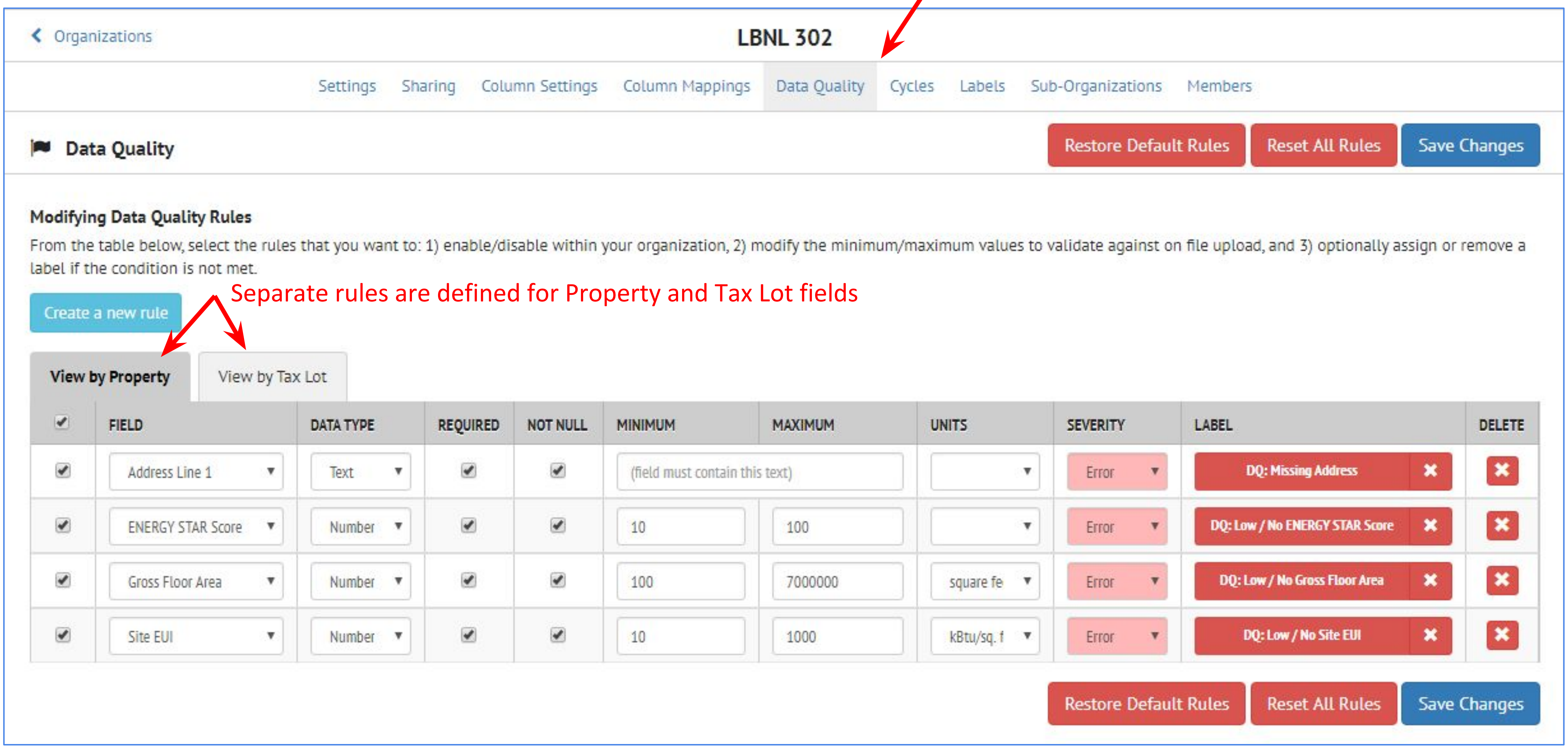
ORGANIZATIONS

# Data Quality Admin Page: Overview

## Manage Data Quality Rules

- Create Data Quality rules
- Data Quality rules are run automatically by the program in the Mapping Review step
- Data Quality rules can be run “by hand” any time from the Actions menu in the Inventory List view

Click on the **Data Quality** link



ORGANIZATIONS

# Data Quality Admin Page: Create a new rule


Click the **Create a new rule** button

Select the desired field from the pulldown list

A rule defines the criteria for CORRECT data. Any data that does not meet that criteria is considered either an Error or a Warning and labeled accordingly if labels are defined for the rule.

In the example below for the Text field "Alert - No Meters are Associated with this Property", the correct data is "OK". Any text other than "OK" is flagged as an error and given the label "DQ: Alert: No meters"

Set the Data Type

Check Required and/or Not Null

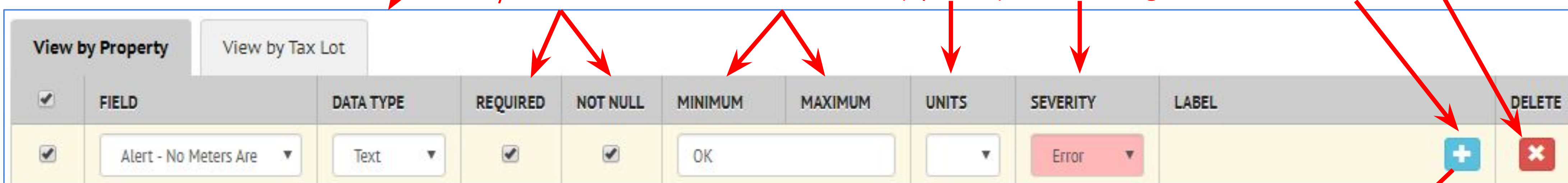
Enter Min/Max or Text to check

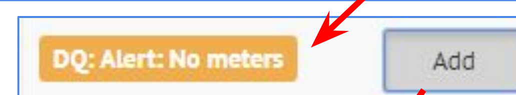
Units (optional)

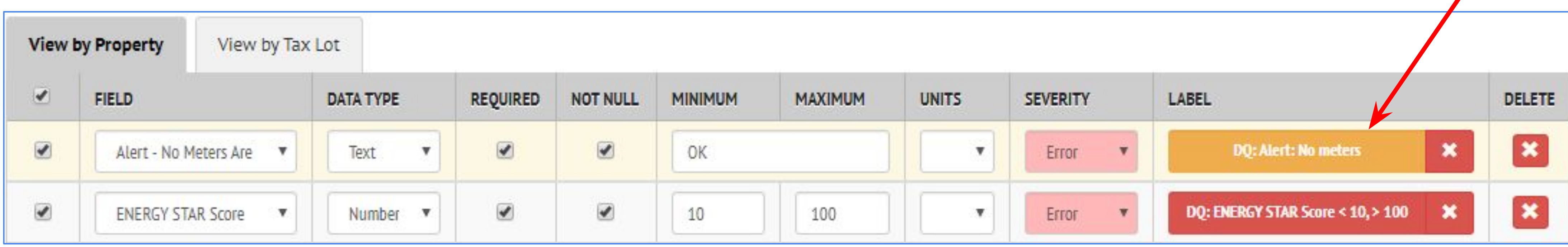
Set to Error or Warning

Click + to add a label

Click the red X button to delete the rule




Click the Save Changes button

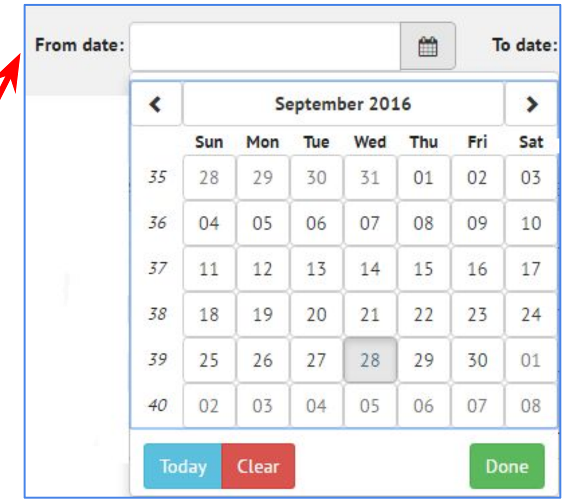
Save Changes

ORGANIZATIONS

# Cycles Admin Page

## Manage Cycles

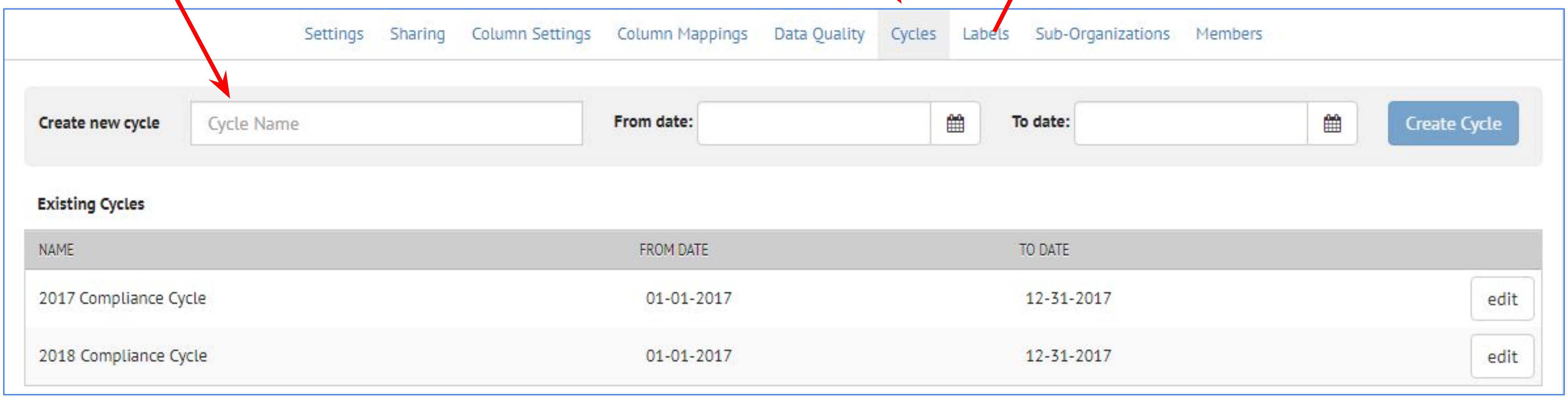
- Create Date “cycles” such as Compliance cycles
- Assigned on data import
- Used to filter data views




Set the **From date** and **To date**

Type a name to create a new cycle

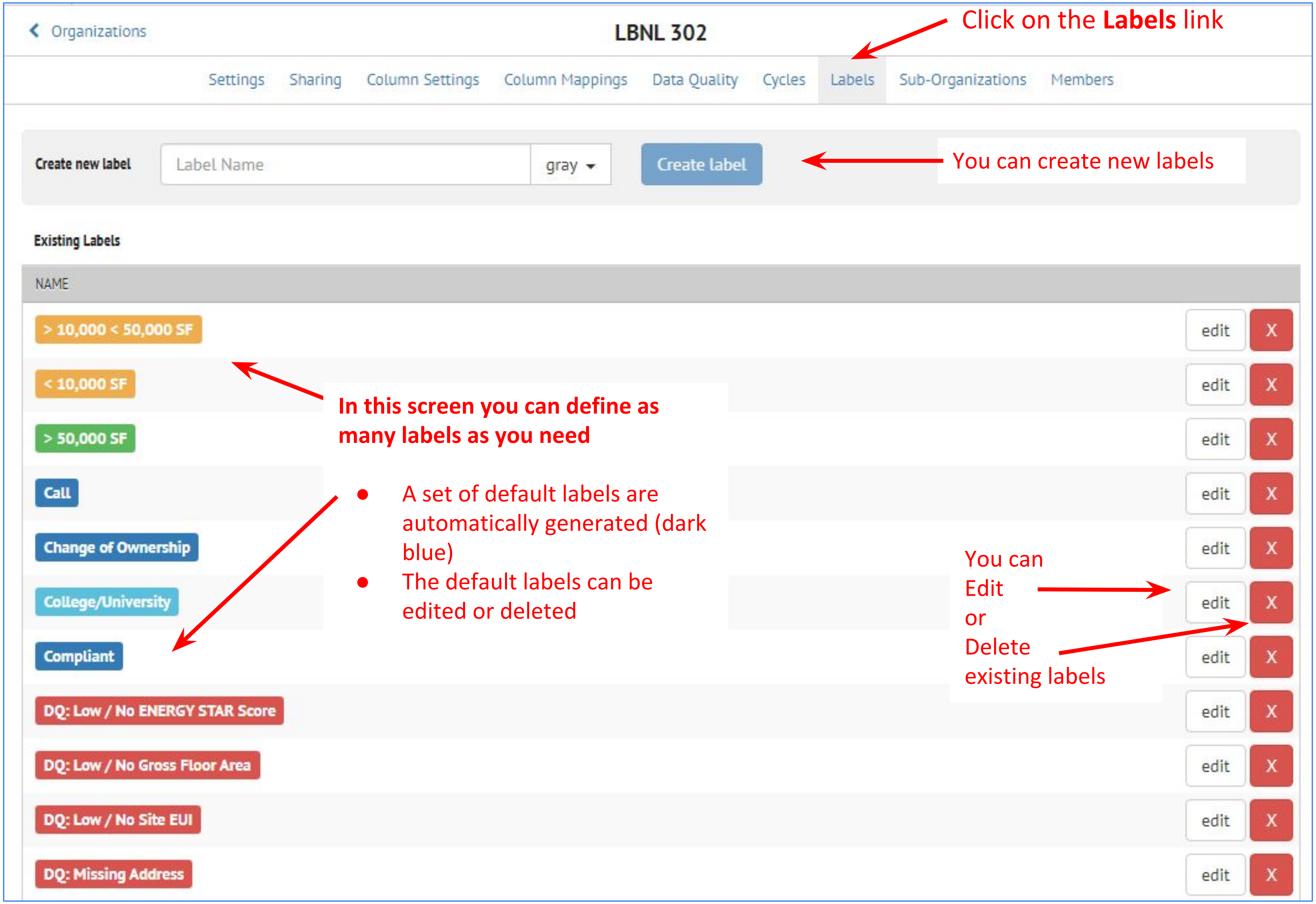
Click on the **Cycles** link



ORGANIZATIONS

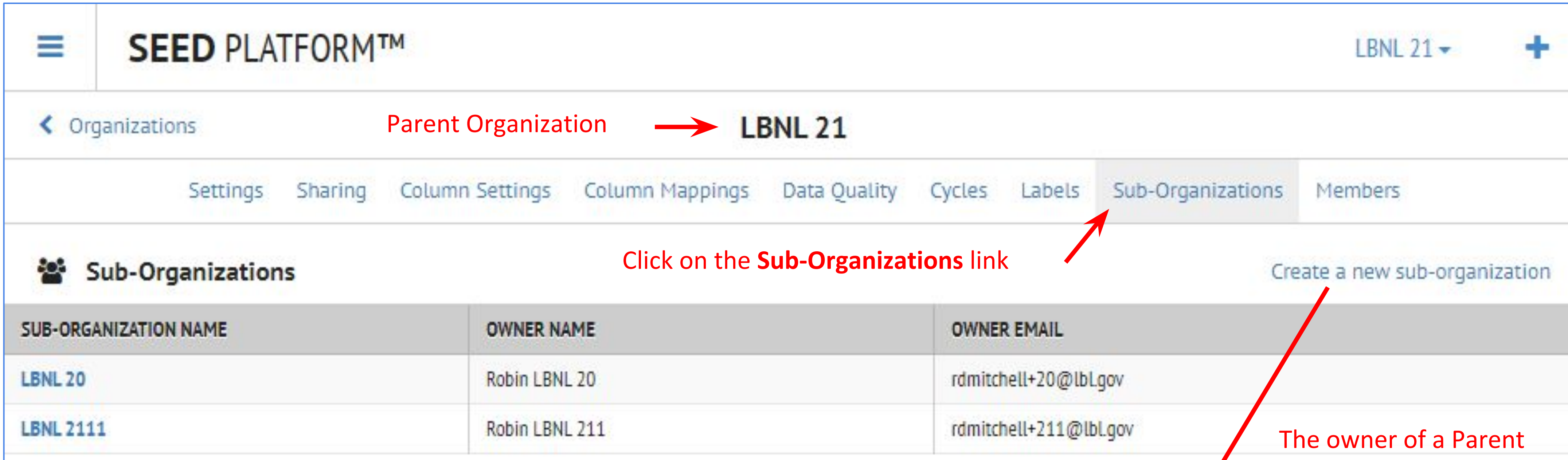
# Labels Admin Page

- Labels can be defined in this Admin page
- They can also be defined “on the fly” in the Inventory List and Detail view as needed

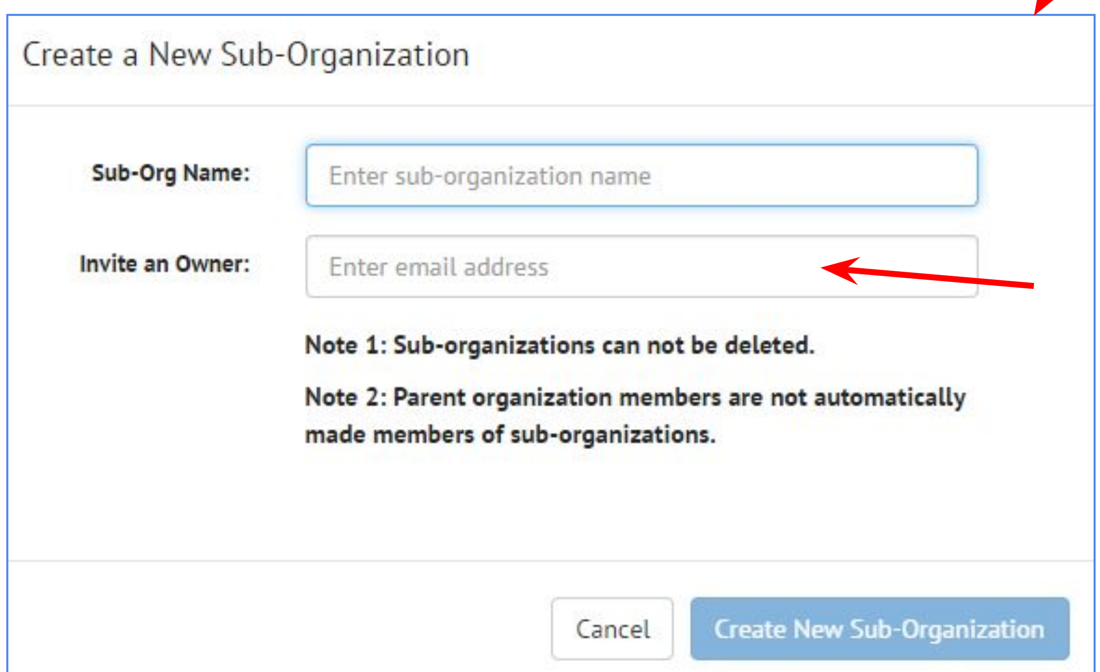


ORGANIZATIONS

# Sub-Organizations Admin Page




The owner of a Parent Organization can create Sub-Organizations




The owner being invited to a Sub-Organization has to already be a member of the Parent Organization (and can be deleted from the Parent later)

ORGANIZATIONS

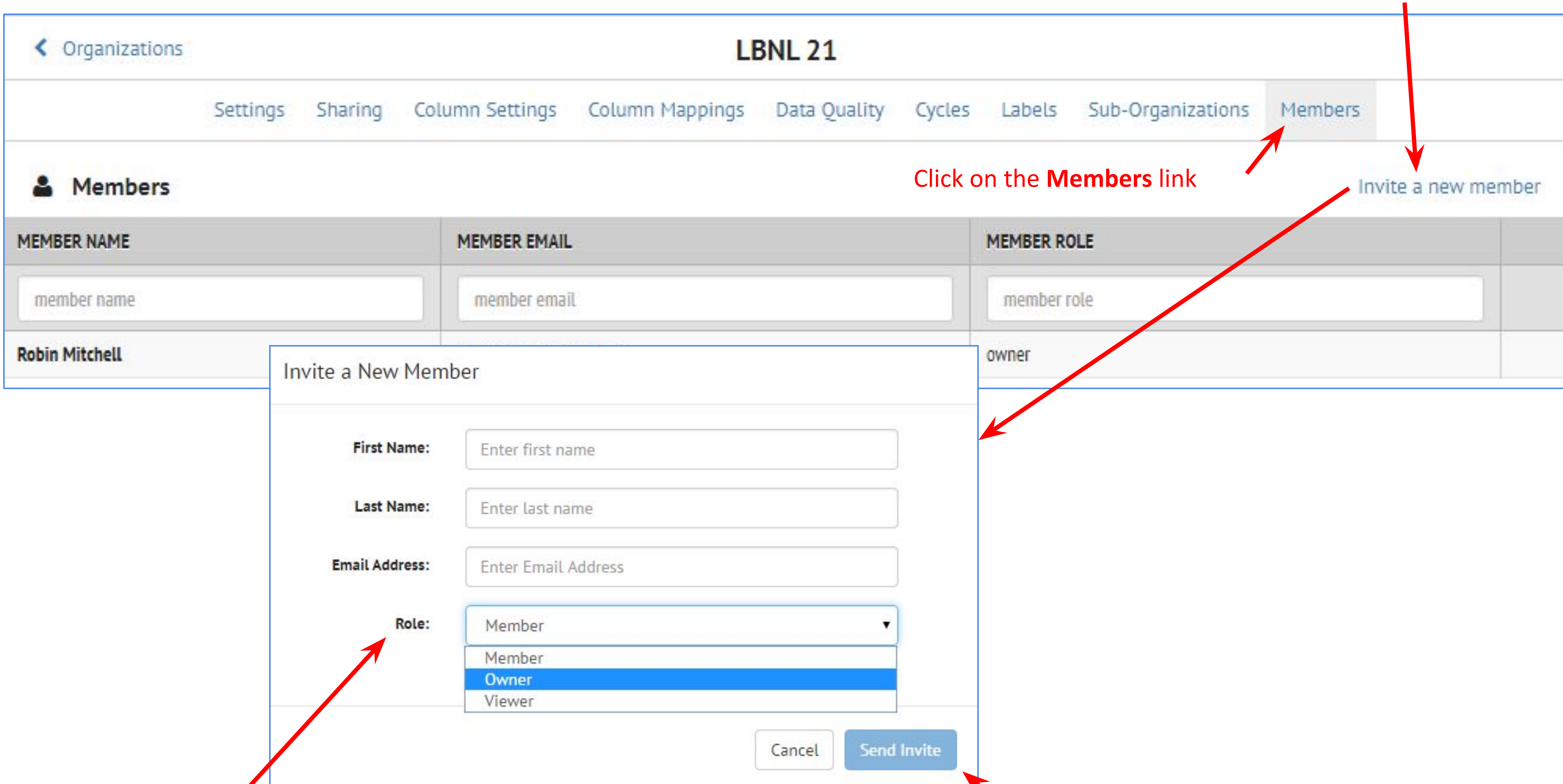
# Parent / Sub-Organization Roles

The permissions for each Role in a Parent Organization and a Sub-Organization

| | | Sub Organization | | |
|---|---|---|---|---|
| | Parent | Owner | Member | Viewer |
| **Set fields for display between Sub-Org** | X | | | |
| **Create Sub Orgs** | X | | | |
| **Add Members** | X<br>To parent or<br>at Sub org setup | X<br>To own Suborg | | |
| **Remove Members** | X<br>In parent | X<br>From own Sub org | | |
| **View Members** | X<br>In parent<br>Owner(s) of suborg | X<br>In own Sub org | | |
| **Change Settings**<br>• **Rename Suborg**<br>• **Change member role** | X<br><br>In parent | X<br>In own Sub org | | |
| **Add Data (Create Datasets)** | X | X | X | |
| **Edit data** | X<br>All the Suborgs associated with it | X<br>In own Sub org | X<br>In own Sub org | |
| **View data** | X<br>All the Suborgs associated with it | X<br>In own Sub org | X<br>In own Sub org | X<br>In own Sub org |

# ORGANIZATIONS Members Admin Page

You can invite new members to your organization




Click on the **Members** link

You can set the role of the new member

When you click
**Send Invite**
the person will receive an email, asking them to set a password for their account

API DOCUMENTATION

# Swagger Interface to SEED RESTful APIs

SEED PLATFORM™ LBNL 302

swagger Hello, rdmitchell+302@lbl.gov Django Logout Authorize

## SEED API

v1 Show/Hide | List Operations | Expand Operations

v2 Show/Hide | List Operations | Expand Operations

**v2.1** Show/Hide | List Operations | Expand Operations

POST /api/v2.1/portfolio_manager/report/

POST /api/v2.1/portfolio_manager/template_list/

GET /api/v2.1/properties/ Return all Properties available to user through specified org.

### Implementation Notes

Return all Properties available to user through specified org.

### Parameters

| Parameter | Value | Description | Parameter Type | Data Type |
|---|---|---|---|---|
| page | | | query | string |
| per_page | | | query | string |
| identifier | | | query | string |
| address_line_1 | | | query | string |
| cycle | | | query | string |
| property | | | query | string |
| cycle_start | | | query | string |
| cycle_end | | | query | string |
| analysis_state | | | query | string |

### Response Messages

| HTTP Status Code | Reason | Response Model | Headers |
|---|---|---|---|
| 200 | | | |

Try it out!

CONTACT

# Contact

## Contact

### For SEED-Platform Users:

Please visit our User Support website for tutorials and documentation to help you learn how to use SEED-Platform.

https://sites.google.com/a/lbl.gov/seed/

There is also a link to the SEED-Platform Users forum, where you can connect with other users.

https://groups.google.com/forum/#!forum/seed-platform-users

For direct help on a specific problem, please email:

SEED-Support@lists.lbl.gov

### For SEED-Platform Developers:

The Open Source code is available on the Github organization SEED-Platform:

https://github.com/SEED-platform

Please join the SEED-Platform Dev forum where you can connect with other developers.

https://groups.google.com/forum/#!forum/seed-platform-dev

ABOUT

# About

## About SEED Platform ™

The Standard Energy Efficiency Data (SEED)™ Platform is a software application that helps organizations easily manage data on the energy performance of large groups of buildings. Users can combine data from multiple sources, clean and validate it, and share the information with others. The software application provides an easy, flexible, and cost-effective method to improve the quality and availability of data to help demonstrate the economic and environmental benefits of energy efficiency, to implement programs, and to target investment activity.

More details

### Development Team:

Managed by: National Renewable Energy Laboratory

Funding from: U.S. Department of Energy

**Version**

2.3.0.68bdd74

When reporting an issue, including the complete Version # is useful