BEIMA

BSU Energy Infrastructure Mapping App

User Manual

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Devices

The Devices page displays all saved devices in a list which can be filtered.

Selecting items from the dropdowns will limit results to the selected Device Type, Building, or both.
An individual filter can be removed by clicking the 'X' next to the item.

To clear all filters from the list at once the user can click 'Clear Filters'.
Clicking 'Apply Filters' will repopulate the list based on the selections.

More information about a device can be viewed by clicking Show Details area and hidden by clicking Hide Details.

A CSV report of all the devices can be downloaded by selecting "Generate All Devices Report".

An individual CSV file will be made for each Device Type and will be populated with the Devices saved. If there is a Device Type with no Devices, a file will not be made for that Device Type.

Boiler	Microsoft Excel Comma S...	1 KB	No	1 KB	44%
Chillers	Microsoft Excel Comma S...	1 KB	No	1 KB	29%
Domestic Water Meters	Microsoft Excel Comma S...	1 KB	No	1 KB	27%
Electric Meters - BSU Owned	Microsoft Excel Comma S...	1 KB	No	1 KB	28%
Electric Meters - Utility Owned	Microsoft Excel Comma S...	1 KB	No	1 KB	37%
Gas Meters	Microsoft Excel Comma S...	1 KB	No	1 KB	28%

An individual device can be viewed by clicking the three orange dots in each listing. Clicking the dots will take you to the View Device page.

B-34 - Boiler - No Assigned Building   •••
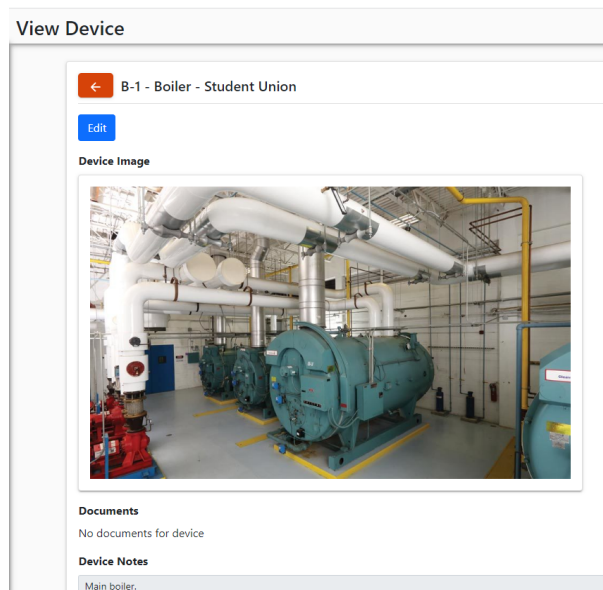
Show Details   >
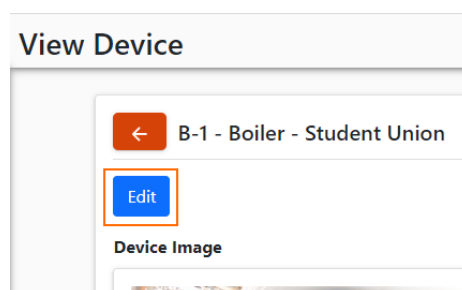
Device

View Device

The View Device page shows the entered details for the selected device.
Clicking the picture for the device will open it in a new tab. If needed the image can be saved by right clicking and selecting "Save image as…"

Edit Device

Clicking the edit button on the View Device page will allow changes to be made to the device if details have changed.

When editing a device, if multiple documents are being added, all new documents must be selected in one action to be shown in the interface. If documents are added in more than one

action they will all be uploaded when save is clicked but won't show in the interface until the device page is refreshed.

All other fields are editable as text or dropdowns. Confirmation, warning, and error messages will appear, similar to the ones outlined in the Device Type View page where appropriate for the actions taken.

Add Device

The Add Device page allows users to add a device to the application. A Device Type **must** be selected for the device to be saved.

Select Device Type

Select Device Type ▾

Once selected the Device Type will be displayed and the colors will invert to indicate that it's been selected.

Select Device Type

Generators ▾

All other fields on the page are optional. If they are left blank a warning will appear allowing the user to cancel the addition of the device and add the information or proceed and save it with the fields blank. The fields can be updated with information at a later time through the View Device page. We recommend that the device tag field is always filled out however, as that field is used as the "name" of the device wherever it is displayed.

An image of the device and related documents can be added to the record for reference.

Device Image

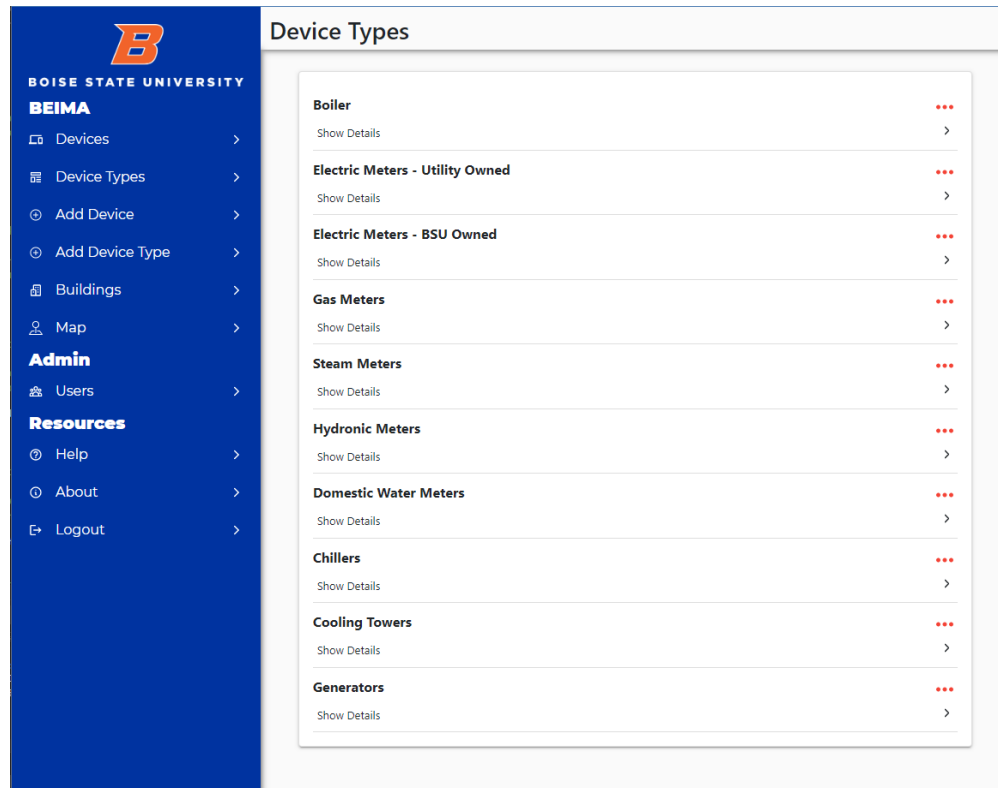Choose File   No file chosen

**Additional Documents**

Choose Files   No file chosen

Device Types

Device types are used as a means for The Device Types page displays all of the saved device type information as a list.

To see additional high level information about the device type, such as the number of devices associated with the given device type, simply click the small arrow icon on the right side of the list icon to expand the device type details.
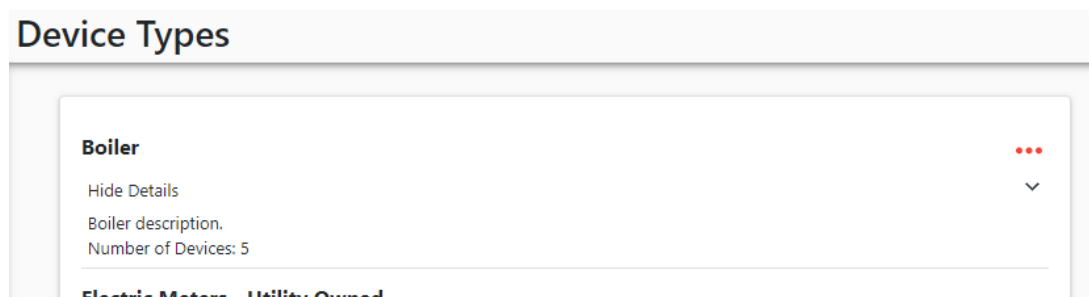
To view the device type and visit the individual device page, simply click on the orange ellipses to the right of the device type list item.

Device Type View

When viewing an individual device type you will be able to see the name of the device type at the top of the page, along with the number of devices associated with the device type. There is also a back button that will bring you back to the device type list view. On the viewing page, you will also be able to see a description of the device type, some notes about the device type, the mandatory device fields associated with the device type (mandatory for all devices regardless of their assigned device type), and the additional device fields specific to the device type.


This device type can be deleted using the red delete button in the top right corner of the card, or edited using the blue edit button in the top left corner of the page. When attempting to delete a device type, you will first be prompted with a dialog asking if you would like to proceed with the operation.
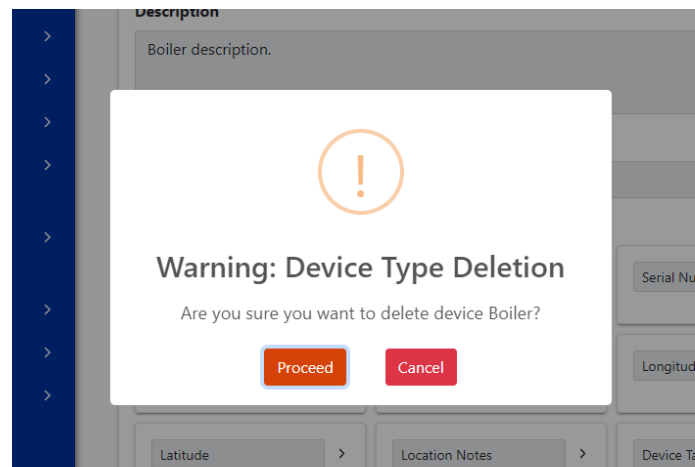
Upon clicking the cancel button, no deletion will be performed and the device type will remain as it was. Upon clicking the Proceed button, the deletion will proceed and will present the following dialog if successful. You will also be redirected back to the device type list page.
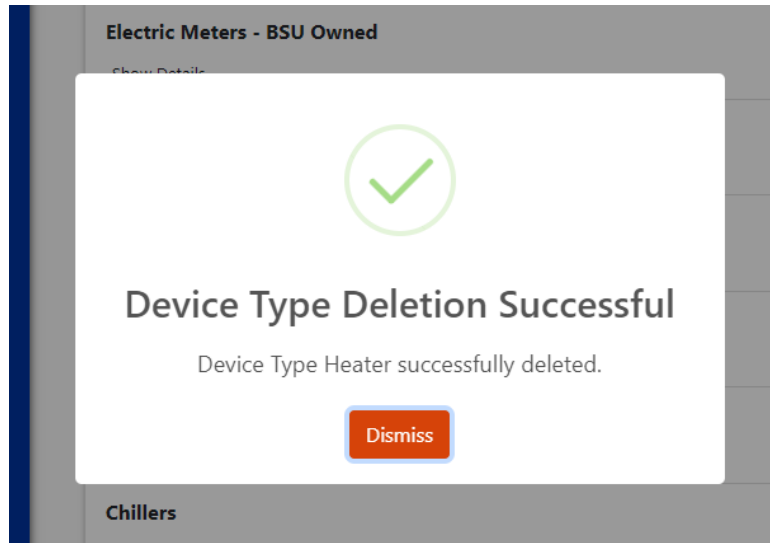
If the deletion is unsuccessful, a dialog such as the following will be displayed.
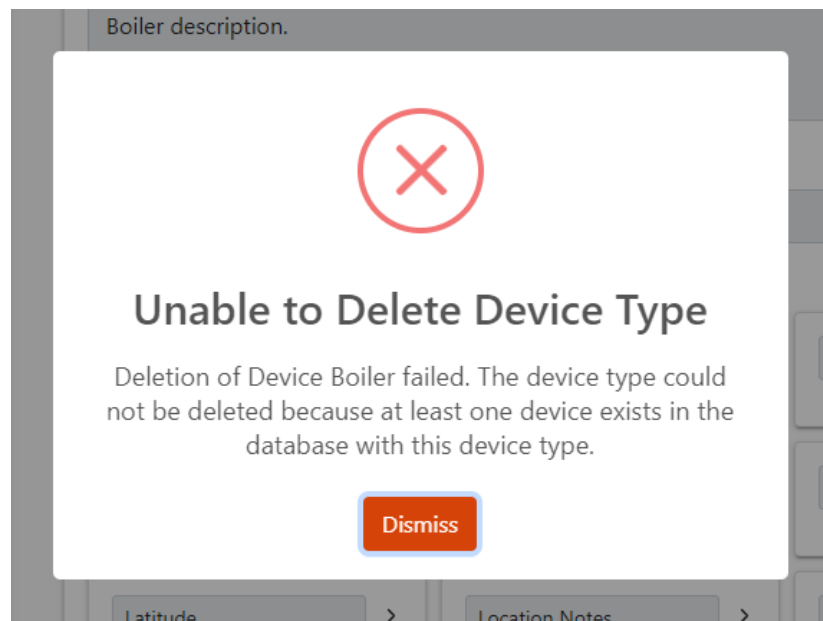
It should be noted that as can be seen in the error above, a device type will not be able to be deleted if there is at least one device using it. In order to delete a device type, you must first delete or update all the devices associated with the device type so that no device refers to it any longer. This is done so that device data is not lost when a device type is removed.

Device Type Edit

When editing a device type (by clicking the edit button on the view device type page), you will be able to modify the description, notes, and additional fields of the device type. The mandatory fields are not editable as they are required for all device types. To add an additional field, simply click the blue plus button to create one, and give it a name. To delete an additional field, simply click the delete button. You will also be able to update the names on existing additional fields. If you would like to revert or cancel your changes, simply click the gray cancel button in the upper left. To save your changes, you can click the save button.


An important note is that these changes will affect all devices using this device type. So if a field is removed, all devices using that field will also remove any information that was in that field. So it is important to ensure that you actually want to delete that field for all of the associated devices before clicking the save button.

When saving the device type edit, if you have empty fields, a dialog will be displayed to inform the user which fields are empty and if they would still like to proceed. If the cancel button is clicked, the operation will not proceed. If the Proceed button is clicked, the save operation will proceed.
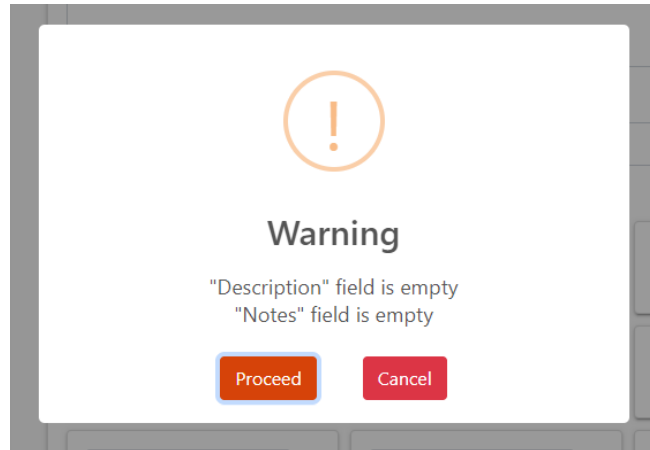
Once the save operation has been completed, the application will show the following dialog.
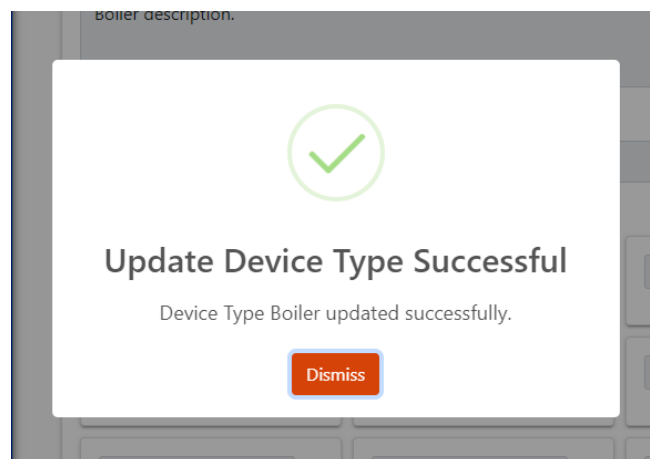
Add Device Type

The purpose of the Add Device Type page is to allow users to create and define new device types to build devices off of. On the add device type page, you can device the name, description and notes of the device. Additionally, you can add in custom device fields by entering in the name of the field in the text input field at the bottom of the page and clicking the Add Field button. The Mandatory fields cannot be modified, as they are required for all devices.

Add Device Type

Device Type Information

Name

Enter Name

Description

Enter Description

Notes

Enter Notes

Add Device Type

Associated Fields

Mandatory Fields

Building
Longitude
Latitude
Location Notes
Device Tag
Manufacturer
Model Number
Serial Number
Year Manufactured
Device Notes

Custom Fields

Add Custom Field

Enter Field Name

Add Field

Once you have finished entering in all of the fields, you can click the Add Device Type button to add the device type. If there are empty fields, a warning dialog will appear. From here you can either cancel the operation by clicking the cancel button, or proceed with the operation by clicking the proceed button.
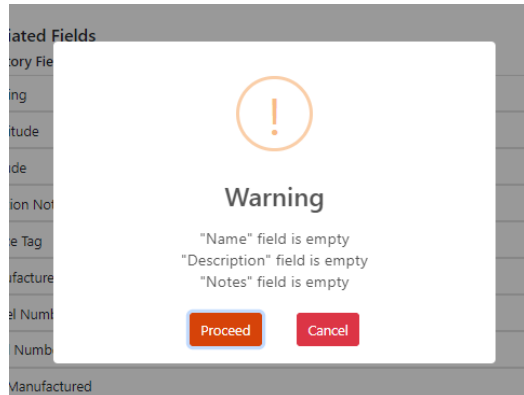
When proceeding with the add device type operation, the application will produce the following dialog once the device type has been successfully added in.
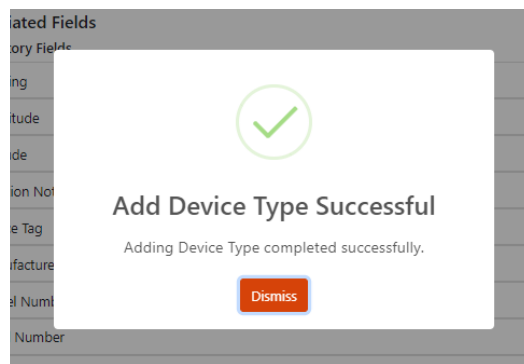
Buildings

Building List

The Buildings page displays all saved buildings in a list.
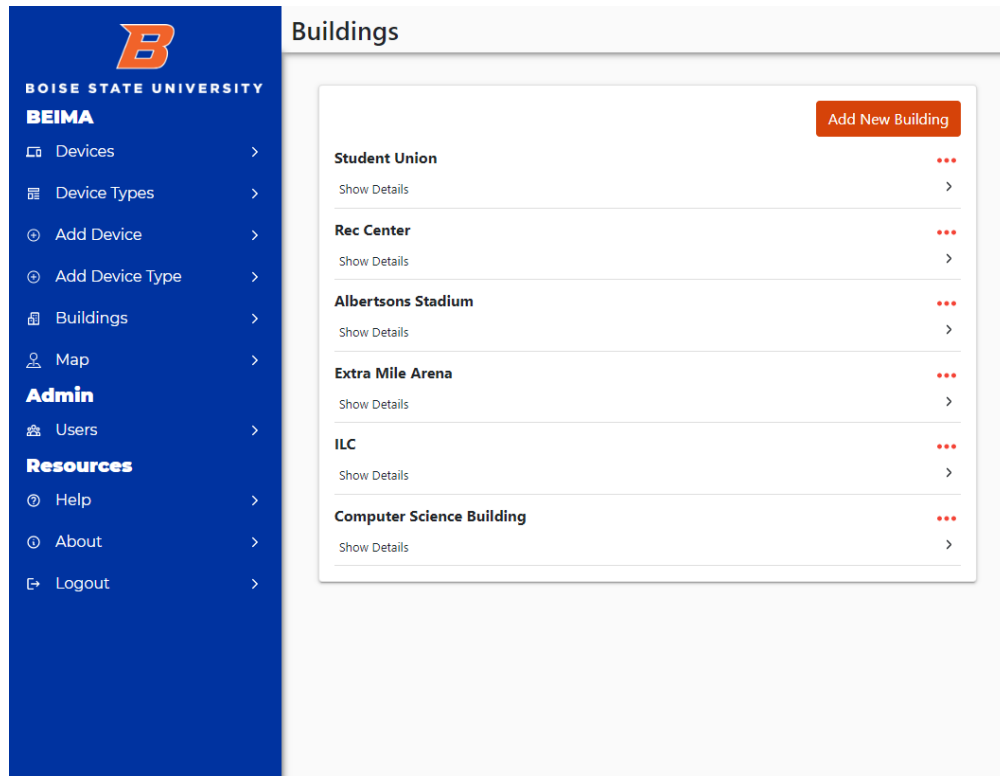
Each building in the list displays a subset of building information when the "Show Details" button is selected. Selecting "Hide Details" will hide the information.

Selecting the three ellipses on the right will direct to the Building View page for the selected building.

View Building

When viewing a building, the name, building number, latitude and longitude, and notes are displayed. These fields are disabled from editing by default. If changes need to be made, selecting "Edit" will enable the fields for editing. Selecting the back arrow will direct back to the Buildings page.

While editing, changes can be undone by selecting "Cancel", and all the fields will return to the disabled state. Saving changes can be done by selecting "Save". When an updated building is saved successfully, the following message is displayed.

If updating the building is unsuccessful, the following message will be displayed.
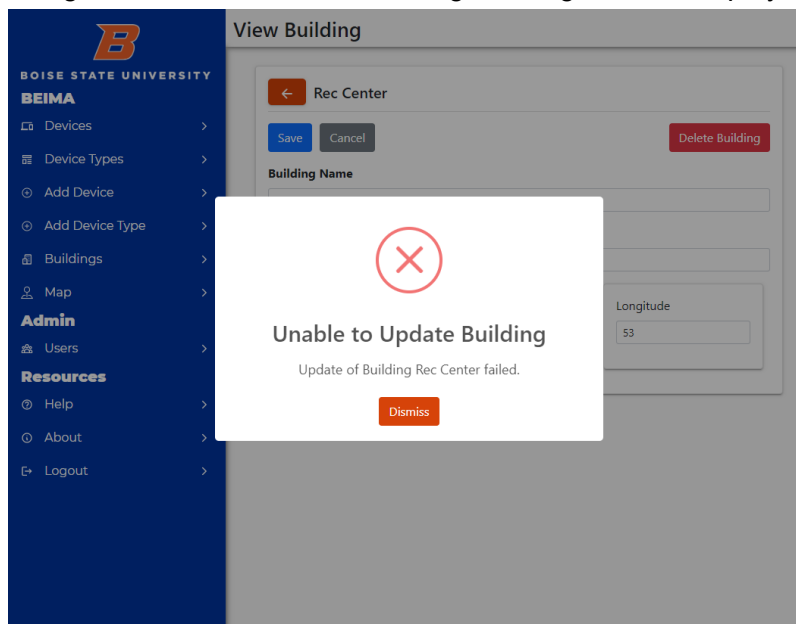

If this message is seen, it is important to confirm the changed fields are correct. Latitude and Longitude values **must** be numeric values between -180 to 180 for Longitude, and -90 to 90 for Latitude. If this message still persists, please contact support listed in the Additional Information section of this manual.

If a building needs to be deleted, select "Delete Building". The following message will prompt a confirmation to continue with the deletion action.
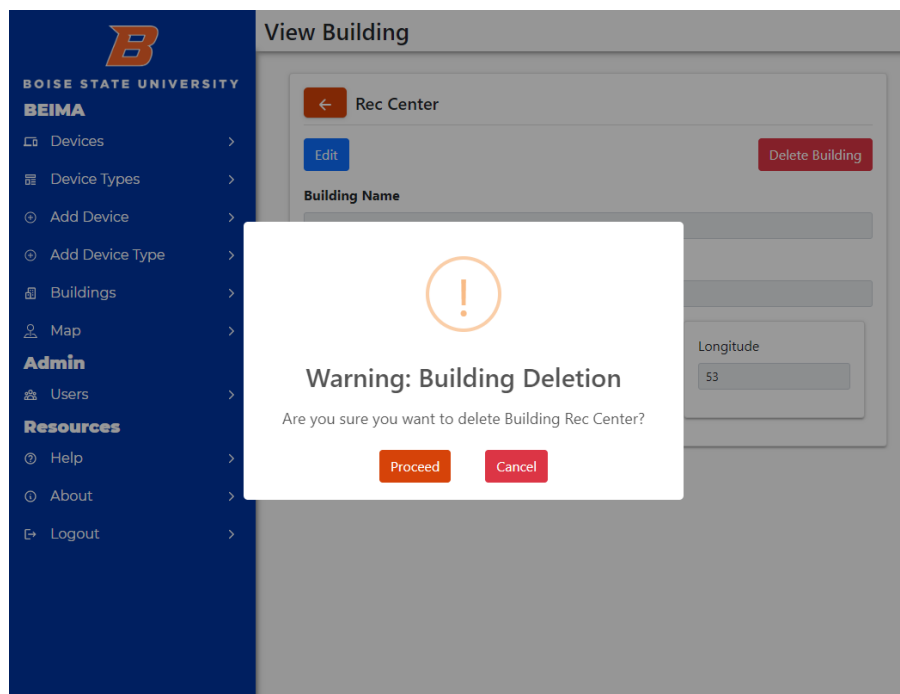
Selecting "Cancel" will stop the deletion action, and selecting "Proceed" will continue the deletion. If the deletion completes successfully, the following message will be displayed.
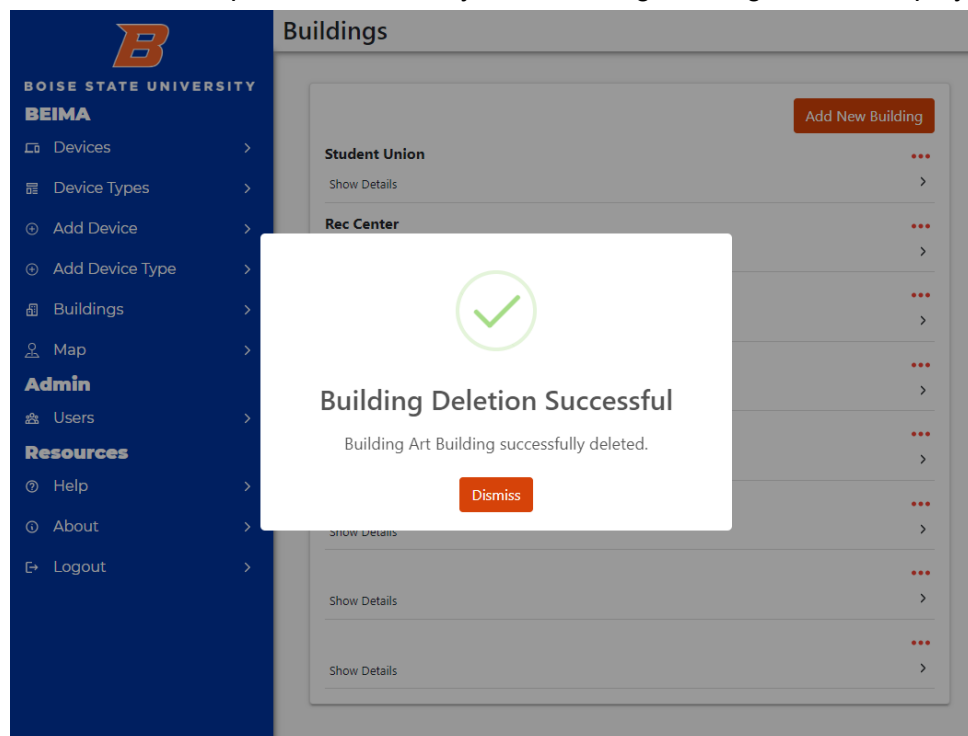
If there is at least one device using the building that is trying to be deleted, then the following message will be displayed.
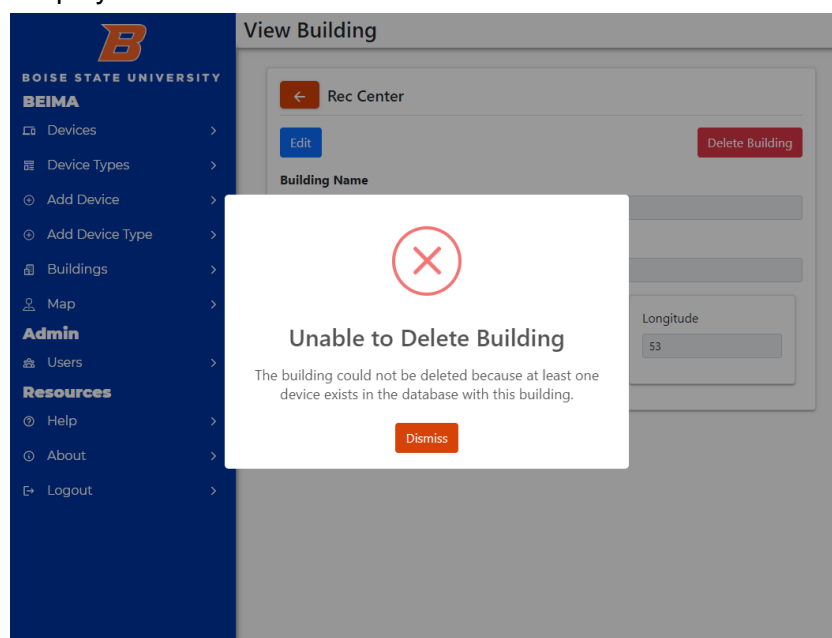
In this case, deleting the device(s) that use the building will need to be done first before the building can be deleted. If the building cannot be deleted, please contact support listed in the Additional Information section of this manual.

Add Building

From the Building list page, selecting "Add New Building" will direct to the Add Building page.

Here, a new building can be added to BEIMA. When the new building is ready to be added, select "Add Building". If the building is added successfully, the following message will be displayed.

If a building with empty fields tries to be added, the following message will be displayed asking for confirmation.
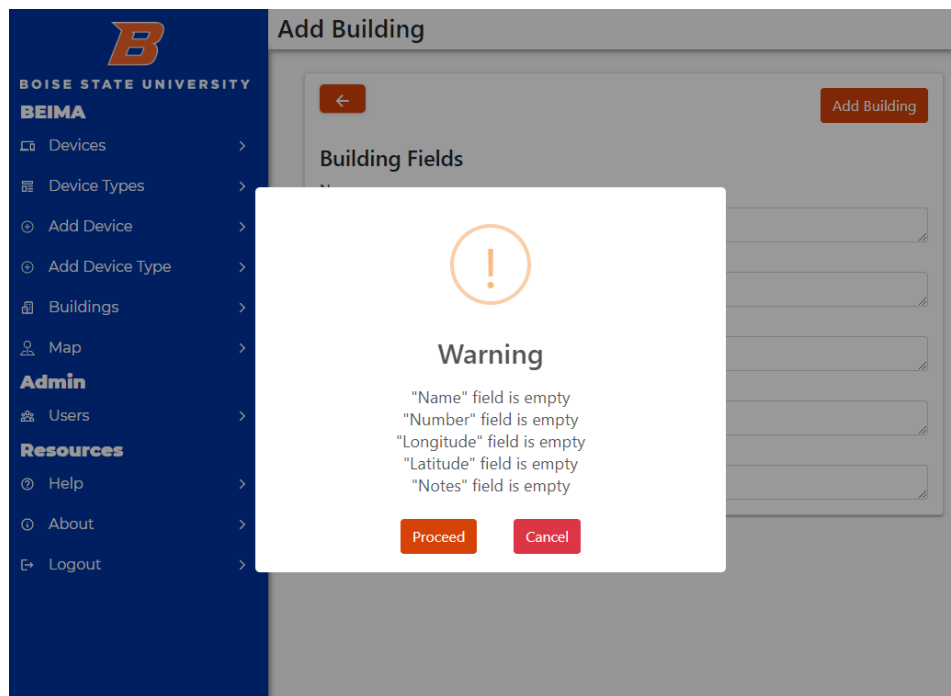
If field values are invalid, they will appear red and show an error message indicating the problem when selecting "Add Building". A building will not be added until all errors are resolved.
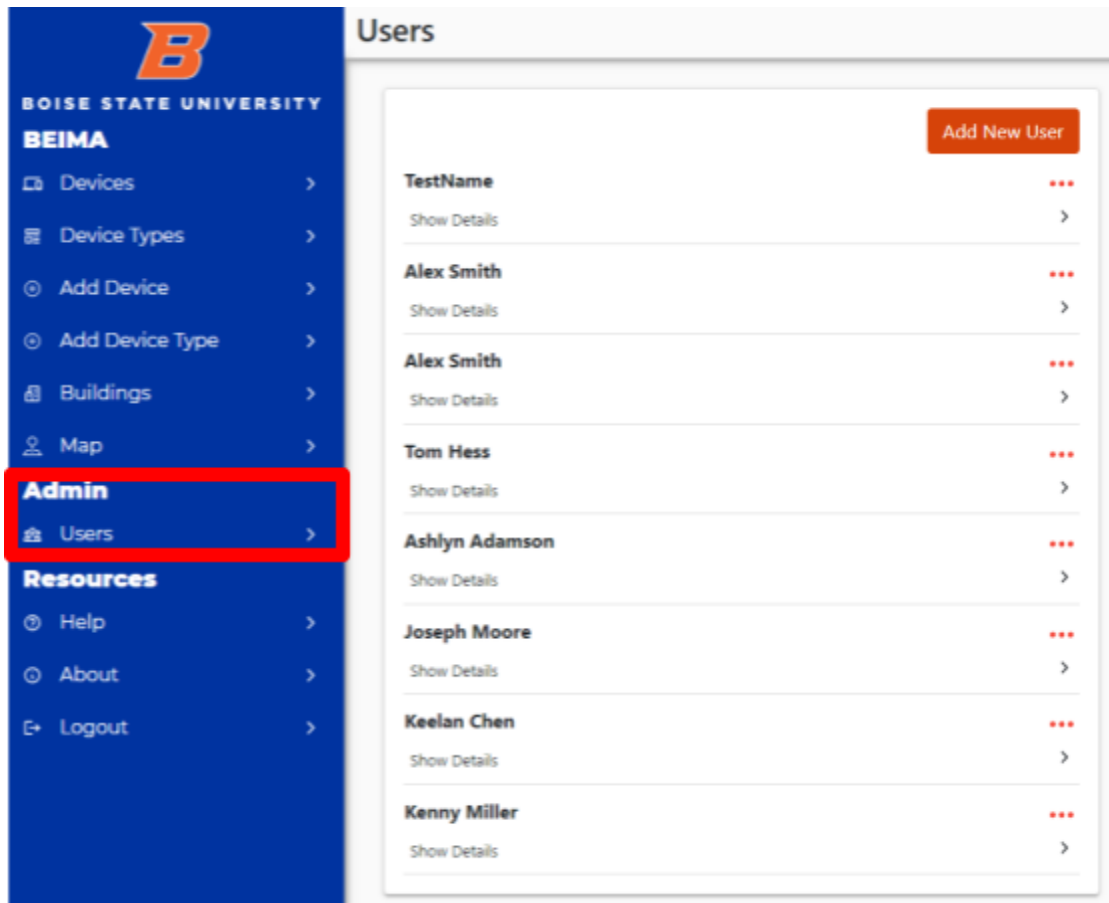
Users

The Users page is only accessible to administrators. This page allows admins to view, create, update, and delete user accounts used for logging into BEIMA.

User List

The Users page displays all saved users in a list.

Each user in the list displays a subset of user information when the "Show Details" button is selected. Selecting "Hide Details" will hide the information.


Selecting the three ellipses on the right will direct to the User View page for the selected user.
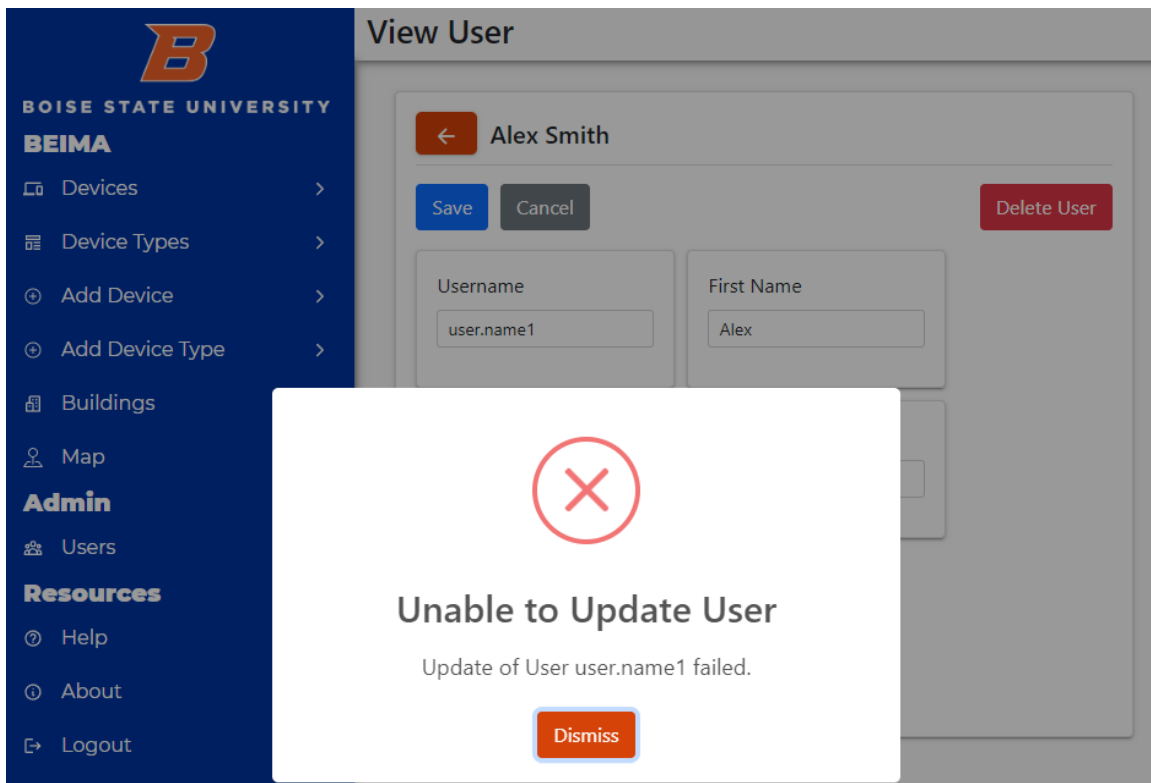
View User

When viewing a user, the username, first name, last name, and role are displayed. These fields are disabled from editing by default. If changes need to be made, selecting "Edit" will enable the fields for editing. Selecting the back arrow will direct back to the Users page.

While editing, changes can be undone by selecting "Cancel", and all the fields will return to the disabled state. Saving changes can be done by selecting "Save". When an updated user is saved successfully, the following message is displayed.
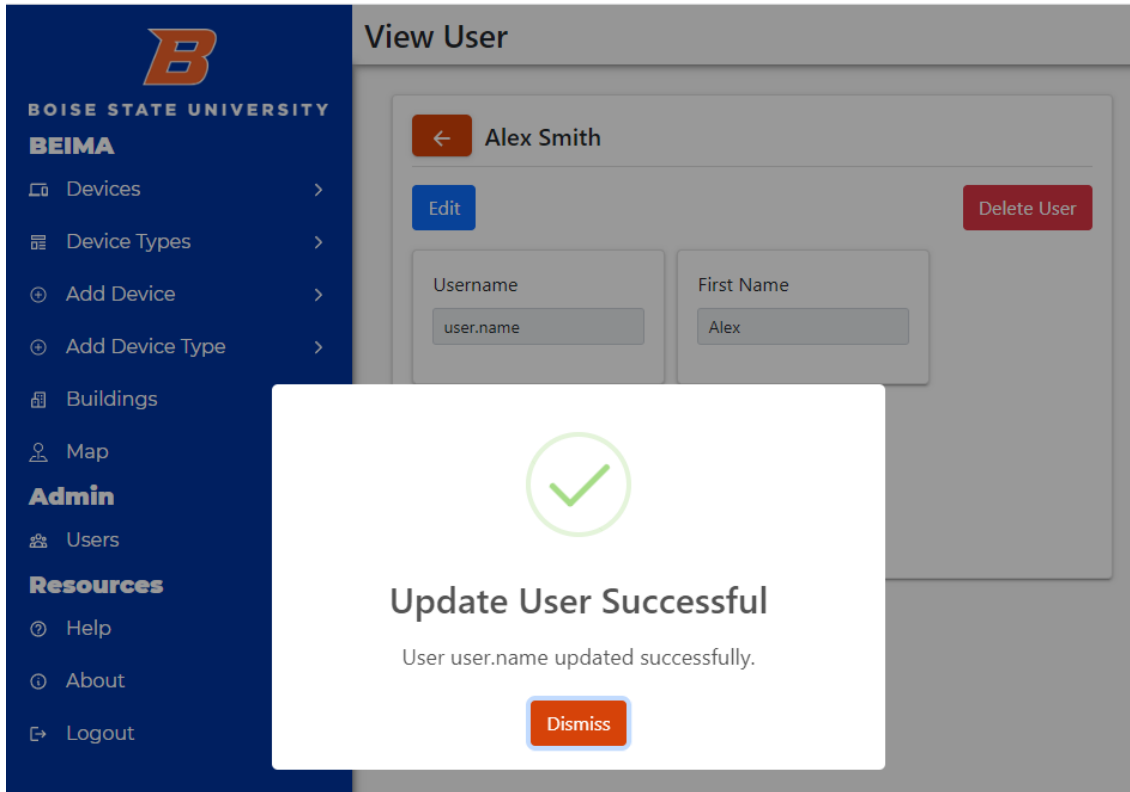
If updating the user is unsuccessful, the following message will be displayed.

If this message is seen, it is important to confirm the changed fields are correct.

For the Username field, ensure that the username being used is unique. Usernames are case insensitive, and the new username cannot already be used for another user.

Password Constraints

For the Password field, ensure that all password constraints are being met. The password must meet the following rules:
1. At least 8 characters
2. At least one lowercase character
3. At least one uppercase character
4. At least one number
5. At least one special character from this list: #?!@$%^&*-

For the Confirm New Password field, the same password entered in the Password field must be entered here. If the passwords do not match, the input is rejected.

For the Role field, ensure that a role has been selected.

If this message still persists after verifying all constraints listed above are met, please contact support listed in the Additional Information section of this manual.

If a user needs to be deleted, select "Delete User". The following message will prompt a confirmation to continue with the deletion action.
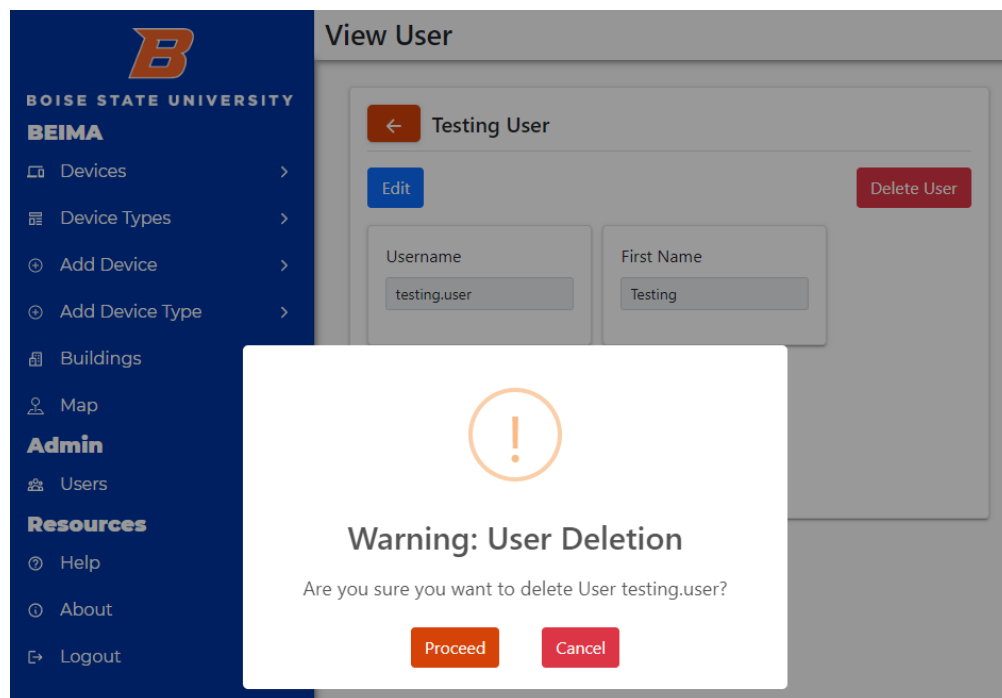
Selecting "Cancel" will stop the deletion action, and selecting "Proceed" will continue the deletion. If the deletion completes successfully, the following message will be displayed.
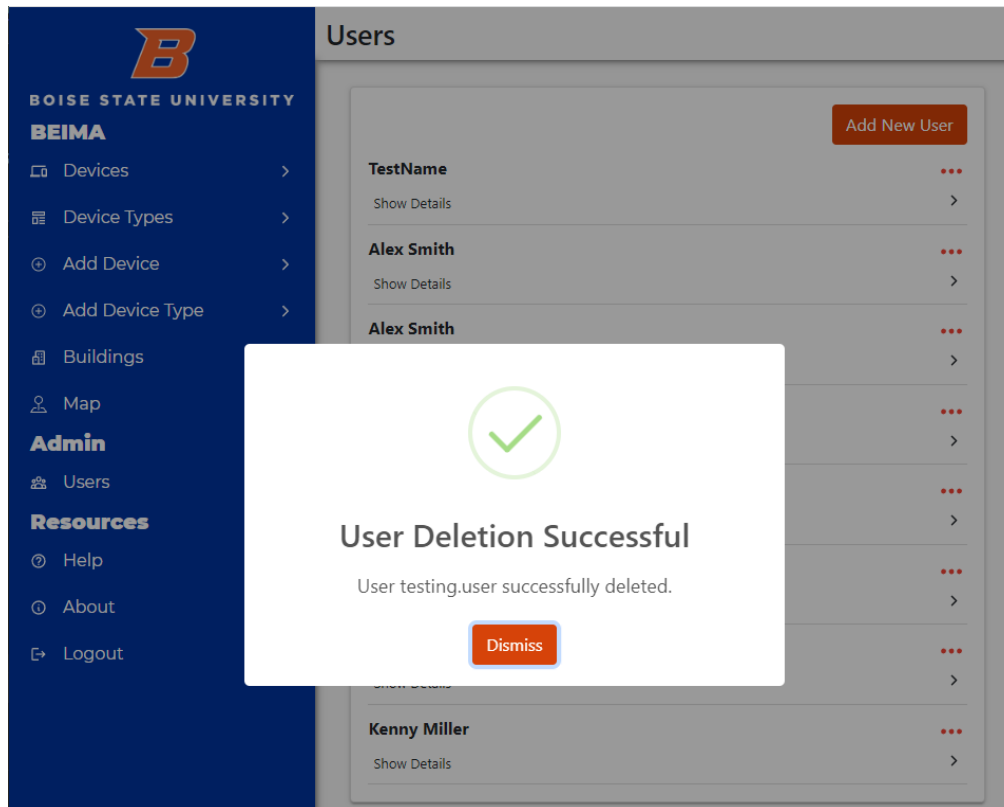
If the user being deleted is the only admin remaining inside of BEIMA, then the following message will be displayed.
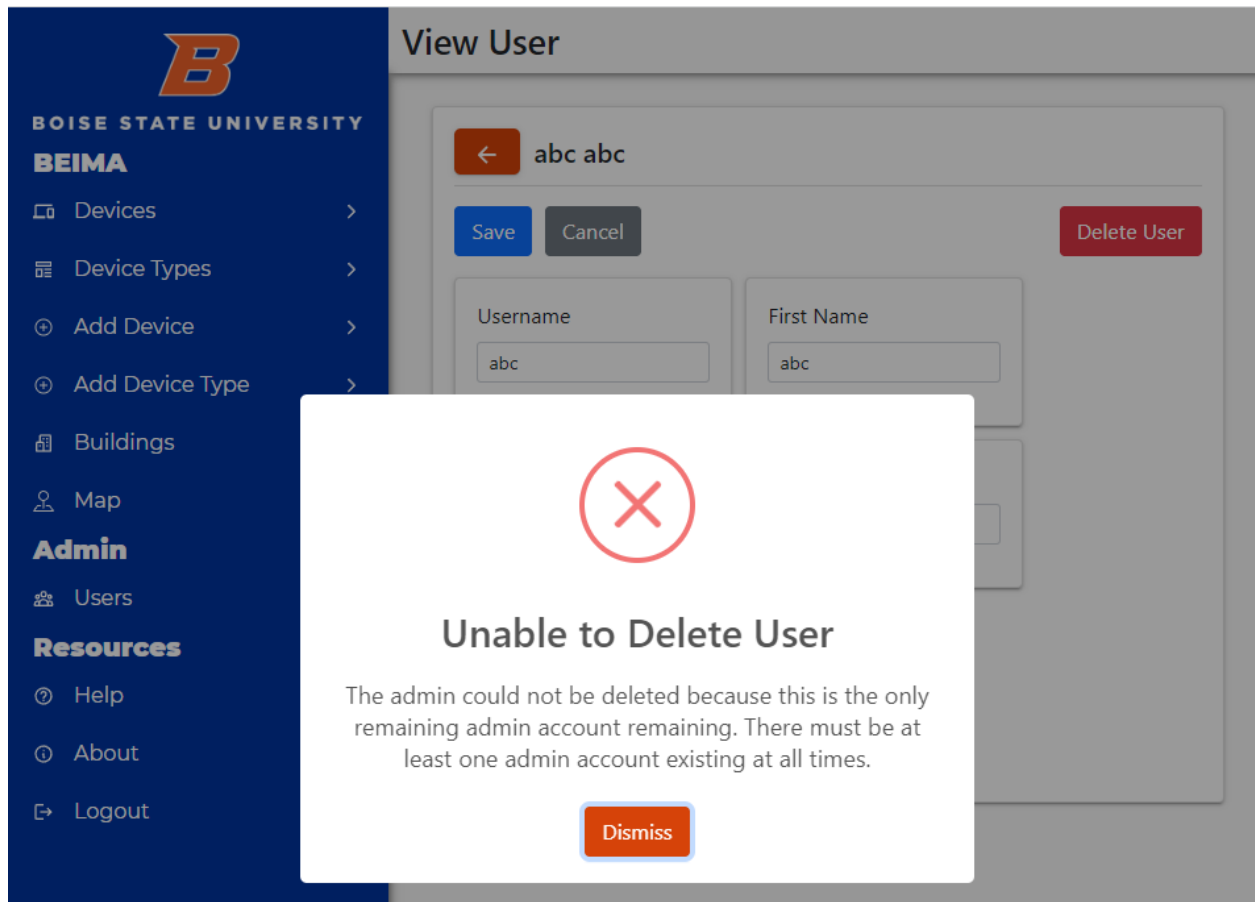
In this case, you must create another admin user before deleting this user. This is a safety measure to ensure there is at least one admin account in BEIMA at all times.

Add User

From the User list page, selecting "Add New User" will direct to the Add User page.

Here, a new user can be added to BEIMA. When the new user is ready to be added, select "Add User". If the user is added successfully, the following message will be displayed.

If a user with empty fields tries to be added, the following field validation messages show.

If field values are invalid, they will appear red and show an error message indicating the problem when selecting "Add User". A user will not be added until all errors are resolved.

The password constraints can be found here: Password Constraints

Other User Information

When BEIMA is first initialized, and it detects that there are no users that exist in the database, a default user is created. Here is the default login information:

Username: first.admin
Password: Abcdefg12345!

After logging in using this account, it is highly recommended that you change the username and password for this account. Otherwise, it leaves you at risk for attackers to access your account.

When a user logs in, the user remains logged in to BEIMA for a maximum of seven days from the time of login. If those seven days lapse while you are logged in, you may notice that you are redirected to the login page when you refresh the page or navigate to another page.

Map

The map page allows you to view every device in the system that has a valid longitude and latitude. Each device will be displayed on the map through a pin with the device's device tag value. You can then click on a pin to be taken to the respective device page. To navigate within the map, you can left click and drag to move the map. To zoom in and out, you can use the scroll wheel.
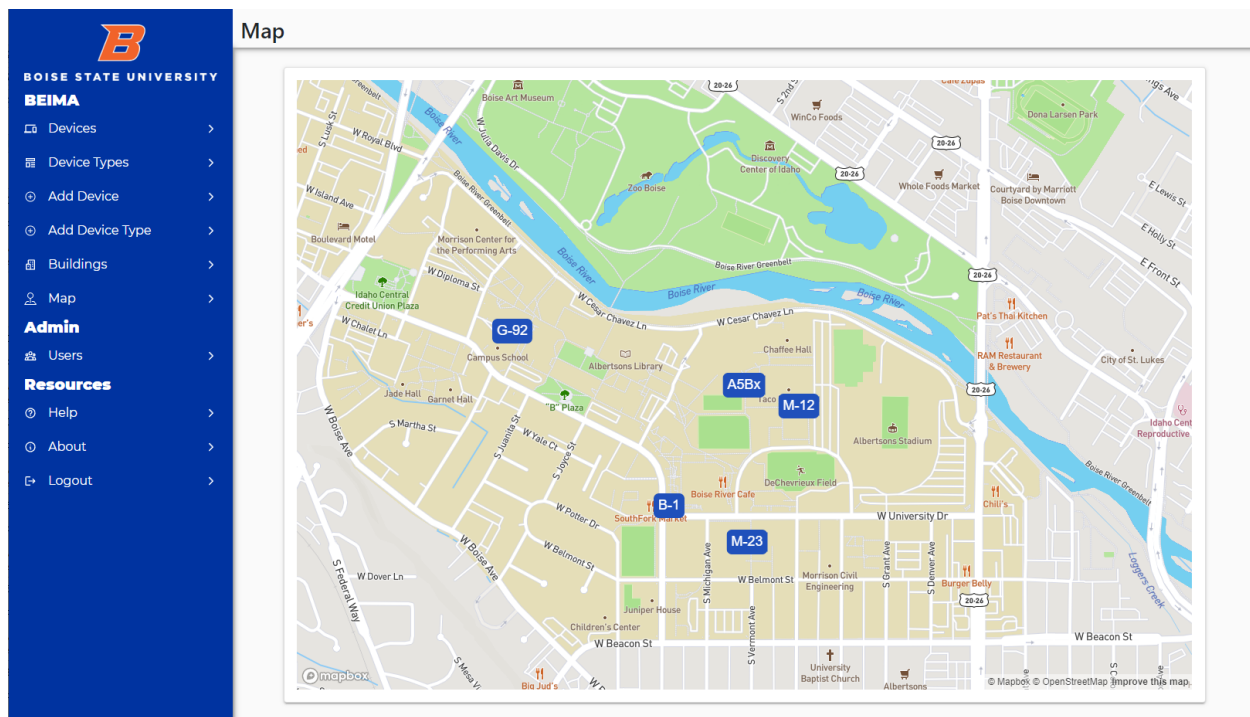
Additional Information

All text input fields have a character limit of 1024 characters. If this limit is met, the user will not be able to type within the input field.

Latitude and Longitude values must be numeric. Latitude values must be between -90 to 90, and Longitude values must be between -180 to 180.

When logging in, if "Remember Me" is selected, then the user will remain logged in for seven days. If a user's session expires, BEIMA will redirect the user to the login page.

If unknown issues arise, please contact Dr Eric Henderson at ehenderson@boisestate.edu.