

WELCOME TO ARABLE

WEB ONBOARDING GUIDE
NOVEMBER 2023



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System Setup



NAVIGATION: The First 4 Essentials

When devices ship, the **Org Admin** will receive an email with account details, including how to log in from the web, and how to download the mobile app. When you deploy your device and log into the web app (<https://app.arable.com>), you will land on the **Map** screen. The deployed device will populate the **Map** as “New” and will need a name for the location. If you are invited to the account by an **Org Admin**, you will land on the **Teams** page first. Let’s get started with these four key pages:



**1. Account
& Devices**

3. Seasons

2. Teams

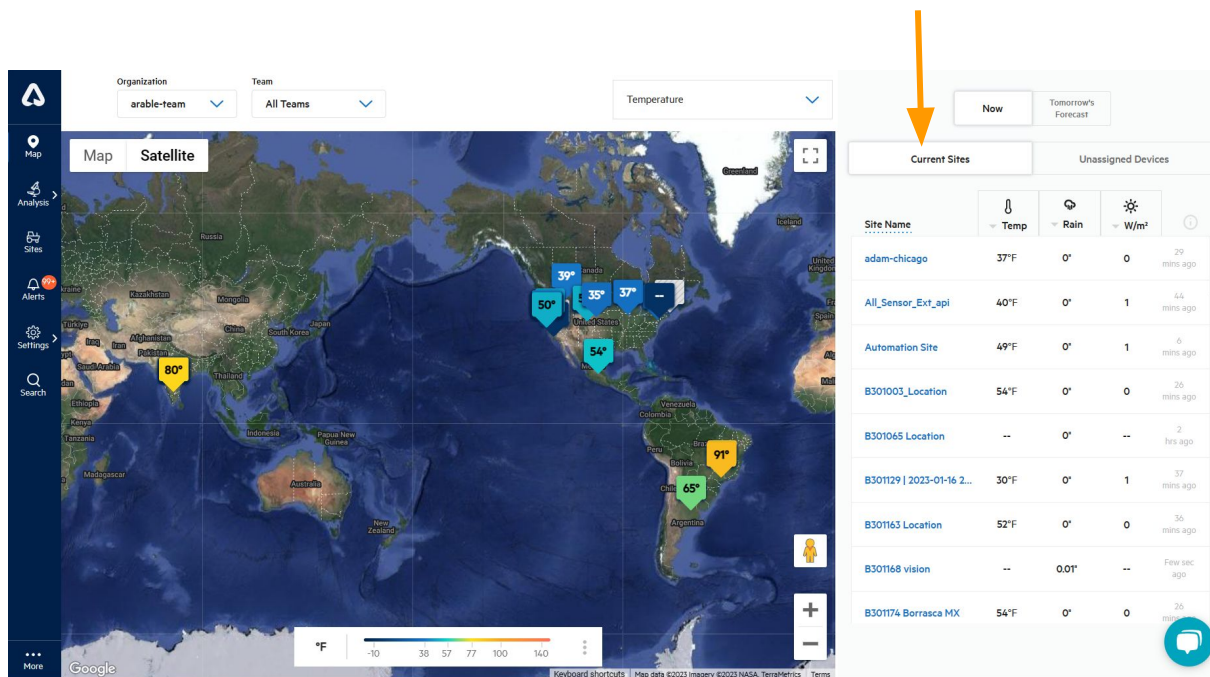
**4. Alerts
& Settings**



SITES: A Field-Based Approach to Visualizing Your Data

MAP VIEW

You'll notice that the Web landing page, [Map](#), has changed to a Sites-specific view. Your currently-deployed devices will appear in the [Current Sites](#) tab with the Site Name as the original name of the device location.

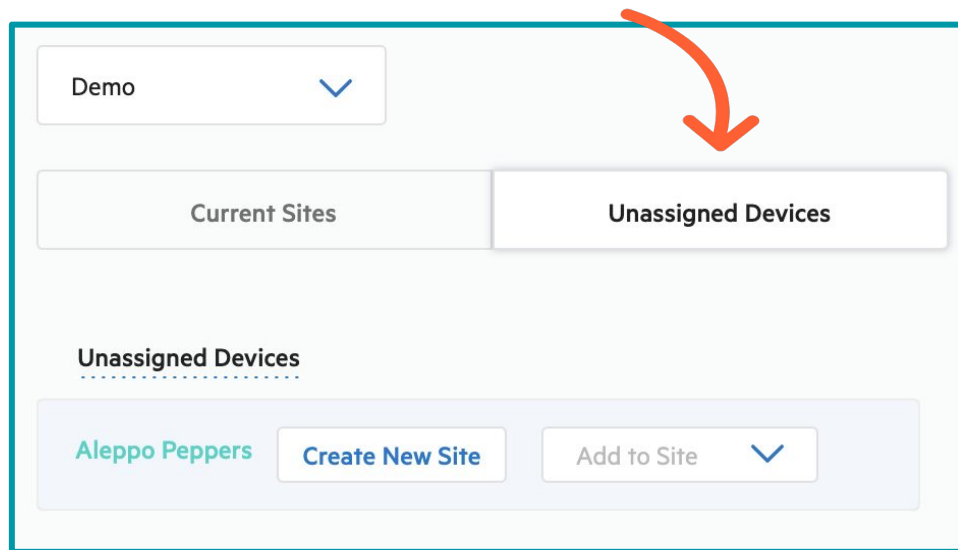




SITES: A Field-Based Approach to Visualizing Your Data

NEW DEPLOYMENTS

Future deployments will appear under the **Unassigned Devices** tab on the **Map** screen. If you would like to tie the new deployment to an existing site, select that site's name under "Add to Site." If you would like to create a new site for this device, select "Create New Site."



The screenshot shows a user interface for managing sites and devices. At the top, there is a dropdown menu labeled "Demo" with a blue chevron icon. Below this, there are two tabs: "Current Sites" and "Unassigned Devices". A red arrow points to the "Unassigned Devices" tab. Under the "Unassigned Devices" tab, there is a section titled "Unassigned Devices" with a dotted line underneath. Below this section, there is a list of devices. The first device is "Aleppo Peppers" in teal text. To the right of the device name are two buttons: "Create New Site" and "Add to Site" with a blue chevron icon.



Map View Toggle Button, Org Dropdown & Team Dropdown

You can switch the **view** of Map. And, also can switch to **another org or teams** you are part of. Also, the org and team selected from dropdown will act as **globally** on the app.

The screenshot displays the Arable app interface. At the top, there are dropdown menus for 'Organization' (set to 'arable-team') and 'Team' (set to 'All Teams'). To the right is a 'Temperature' dropdown. Below these are 'Map' and 'Satellite' view toggle buttons. A red box highlights the 'Map & Satellite View Toggle button' with an orange arrow pointing to it. The main map shows a world map with temperature markers: 61° (green), 61° (grey), 62° (green), 74° (yellow), and 34° (blue). A temperature scale at the bottom ranges from -10 to 140 °F. On the right, a table lists 'Current Sites' with columns for Site Name, Temp, Rain, W/m², and a timestamp.

| Site Name | Temp | Rain | W/m² | Timestamp |
|---------------------------|------|------|------|-------------|
| 1.2Mary-test | 56°F | 0" | 1 | 29 mins ago |
| 2.1Mary-test | 56°F | 0" | 1 | 29 mins ago |
| Anand's Device | 54°F | 0" | 1 | 6 mins ago |
| Berg Enclave site | 56°F | 0" | 116 | 28 mins ago |
| Blackberry Top | 55°F | 0" | 1 | 9 mins ago |
| Borrasca Area | 74°F | 0" | 1 | 18 mins ago |
| Bryan Jensen Front Yar... | 62°F | 0" | 1 | 11 mins ago |
| Caylor Home edit | 32°F | 0" | 1 | 25 mins ago |

Help

YOU ARE HERE: Arable Overview

The dashboard is titled "YOU ARE HERE: Arable Overview". It features a dark blue sidebar on the left with navigation icons for Map, Analysis, Sites, Alerts, Settings, Devices, Seasons, Alert Settings, Teams, Account, and Distributor. The main area displays a world map with temperature markers in various locations: 19°, 22°, 24°, 20°, and 23°. A red arrow points from the "Org List" label to the "arable-team" dropdown menu, and another red arrow points from the "Team List" label to the "All Teams" dropdown menu. A red arrow also points from the "Teams" icon in the sidebar to the map. A temperature scale at the bottom shows a range from -23 to 60 °C. On the right, a table displays weather data for various locations, including Bayer Smallholders Tra..., Berg Enclave, Borrasca, Bryan Jensen Front Yard, and several C005449, C006309, C006692, C006753, and C009024 entries. The table columns are Location, Temp, Rain, and W/m². The table also includes a "Sort By" dropdown set to "A to Z" and buttons for "Now" and "Tomorrow's Forecast".

Org List

Team List

| Location | Temp | Rain | W/m² | |
|---------------------------|------|-------|------|-------------|
| Bayer Smallholders Tra... | 15°C | 0mm | 1 | 14 mins ago |
| Berg Enclave | 20°C | 9.9mm | 1 | 18 mins ago |
| Borrasca | 23°C | 0mm | 1 | 18 mins ago |
| Bryan Jensen Front Yard | 16°C | 0mm | 1 | 3 mins ago |
| C005449 2022-07-20 1... | 22°C | 0mm | 1 | 43 mins ago |
| C006309 2022-06-17 ... | 31°C | 0mm | 1 | 28 mins ago |
| C006692 2022-06-16 1... | -- | 0mm | -- | Jul 30 |
| C006753 2022-07-29 1... | -- | -- | -- | Few sec ago |
| C009024 2021-09-22 ... | 15°C | 0mm | 1 | |

Activate Windows
Go to Settings to activate Windows

Help

Keyboard shortcuts Imagery ©2022 NASA, TerraMetrics Terms of Use

<https://app.arable.com/dashboard/locations/devices>



ACCOUNT: Settings & Notifications

Map

Analysis

Sites

Alerts

Settings

Seasons

Alert Settings

Teams

Account

Distributor

Name *
First & Last

Automation

Orgadmin

Email Address
Email Address

automation+orgadmin@arable.com

Username *
Usernames must be all lowercase and cannot be longer than 20 characters.

automation orgadmin

Phone Number
e.g. +1 999 999 9999

+1 · 201-555-0123

API Key
Generate or refresh

920affe0-345e-4d5e-aeba-e6c7dbcd7b24

Refresh Key

Current Password

New Password

Confirm Password

Language
Select your desired language.

English

Português

Español

Units
Select your measurement units.

Size

Inches

or

Millimeters

Temperature

Fahrenheit

or

Celsius

Pressure

Millibars

or

Kilopascals

Volume

Gallons

or

Liters

Speed

Miles per hour

or

Kilometer per hour

or

Meter per second

Agreements & Policies
Latest versions

Terms of Service

Privacy Statement

First, head over to [Account](#). On this page, you should change your password, plus find a copy of the [Terms of Service](#) (covering Warranty and Replacement) and the [Arable Data Privacy Statement](#). You can also generate API Keys and ensure that you have access to the right account.

Here you will also add your mobile phone number to receive SMS- and phone- based alerts (in addition to push notifications), find the [Data Privacy Agreement](#), [API Key](#), and change [Unit Preferences](#).

To get started with the API,
visit
<https://developer.arable.com/>



ACCOUNT: LANGUAGE SELECTION



Organization

Absolute Foods

Team

All Teams

Current Password

New Password

Confirm Password

Language

Select your desired language.

English

Português

Español

Units

Select your measurement units.

Size

Inches

or

Millimeters

Temperature

Fahrenheit

or

Celsius

Pressure

Millibars

or

Kilopascals

Volume

Gallons

or

Liters

Cancel

Save

✓

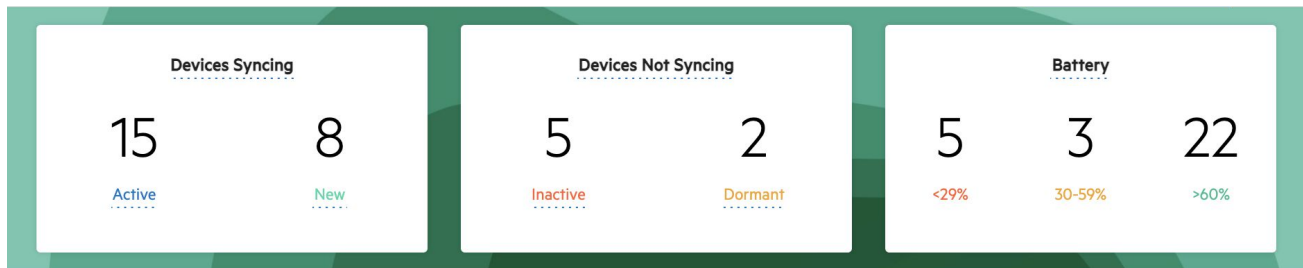
Successfully Saved

-Introduced '**Save**' and '**Cancel**' button On selecting the language.

-After clicking save button '**Successfully saved**' popup message will appear.

DEVICES: SETTINGS

The **Devices** page helps you manage the status of each of your devices & monitor connected sensors.



Devices Syncing: Active

Named devices that are posting measurements to our servers at least once every 8.5 hours.

Devices Syncing: New

Devices from the factory will show up as Untitled upon first deployment. Once given a sitename the status is updated to Active.

Inactive

Deployed devices experiencing a field problem. Main causes are battery <15% or the device has not posted measurements to our servers for 8.5 hours.











Dormant

Devices that have sent an undeployment message to the Arable system and are no longer collecting data.

Battery

Grouped by low, medium, and high percentage. Under 30% is in danger of losing power, and may need to be plugged into a power source to charge, then moved to a permanent location with more direct sunshine. Medium should be monitored for future dips in charge. High is fine, no action required.

DEVICES: DETAILS



Organization
Bayer Breeding

Team
All Teams

Devices Syncing

789

Active

333

New

Devices Not Syncing

7

Inactive

2

Dormant

Battery

61


























<29%

24

30-59%

1243

>60%

| Device ID | GPS | Sites | Model | Battery | Connectivity | Last Sync | Status | Connected Sensors |
|-----------|--|---|--------|--|--|-----------|---|---|
| C010561 |  | | Mark 2 |  94% |  Very Good | 1 min ago |  Active |  Validate |
| C011002 |  | C011002 2022-04-20 15:32:18 C011002 Spencer Corn | Mark 2 |  100% |  Very Good | 1 min ago |  Active |  Validate |
| C012354 |  | Untitled Location | Mark 2 |  95% |  Very Good | 1 min ago |  Active |  None Found |
| C006374 |  | Bellmont ILBB site - 2 C006374 2021-09-12 17:03:07 C006374 2021-09-13 11:31:36 C006374 Harrisburg, IL C010219 2022-03-29 19:30:38 | Mark 2 |  100% |  Very Good | 1 min ago |  Active |  Validate |
| C011053 |  | | Mark 2 |  99% |  Very Good | Aug 25 |  Active |  None Found |

We can Validate the sensor's, while clicking on 'Validate' button.



SET UP CONNECTED SENSORS

Map

Analysis

Sites

Alerts

Settings

Devices

Search

Seasons

Alert Settings

Teams

Account

Organization

Team

Bayer Breeding

All Teams

Devices Sync

789

Active

| # | Device ID | GPS | Sites |
|---|-----------|-----|--|
| 1 | C010561 | | |
| 2 | C011002 | | C011002 2022-0 C011002 Spencer |
| 3 | C012354 | | Untitled Location |
| 4 | C006374 | | Bellmont ILBB site C006374 2021-0 C006374 2021-0 C006374 Harris C010219 2022-0 |
| 5 | C011053 | | |
| 6 | C006464 | | |

Set Up Connected Sensors

Please confirm the following sensors are plugged into the Mark.

Port 1 Analog

Davis Wind Anemometer 6410 (Direction) ✓

1

Davis Wind Anemometer 6410 (Direction)

GEMS PS41 Series Pressure Switch

Specifically, for deployments in the Southern Hemisphere, it is recommended that the arm of the anemometer is pointed South and that a value of 180° is entered as offset.

Port 2 Pulse

Davis Wind Anemometer 6410 (Speed) ✓

Port 3 SDI-12

Sentek Drill and Drop Soil Moisture Probe ✓

Cancel

Confirm

Battery

1 24 1243

30-59% >60%

ync Status Connected Sensors

| | | |
|-----|--------|------------|
| ago | Active | Validate |
| ago | Active | Validate |
| ago | Active | None Found |
| ago | Active | Validate |
| 25 | Active | |
| | Active | |

Activate Windows
Go to Settings to activate Windows
Help



SET UP CONNECTED SENSORS: NEW DEPLOYMENTS

We can Validate the sensor's, while clicking on '**Validate**' button and Before selecting port 2, the user should select 'Port 1 Analog' sensors or an error message will appear.

Set Up Connected Sensors

Please confirm the following sensors are plugged into the Mark.

Port 1 Analog

Please select Wind Direction or Pressure Switch to continue

Port 2 Pulse

Davis Wind Anemometer 6410 (Speed)

Port 3 SDI-12

Sentek Drill and Drop Soil Moisture Probe

Cancel Confirm

Organization: Bayer Breeding Team: All Teams

Devices Synced: 789 Active

| # | Device ID | GPS | Sites |
|---|-----------|-----|---|
| 1 | C010561 | | |
| 2 | C011002 | | C011002 2022-04 C011002 Spencer C |
| 3 | C012354 | | Untitled Location |
| 4 | C006374 | | Belmont ILBB site C006374 2021-09 C006374 2021-09 C006374 Harrisb C010219 2022-03 |
| 5 | C011053 | | |
| 6 | C006464 | | |

Mark 2 73% Very Good 1 min ago

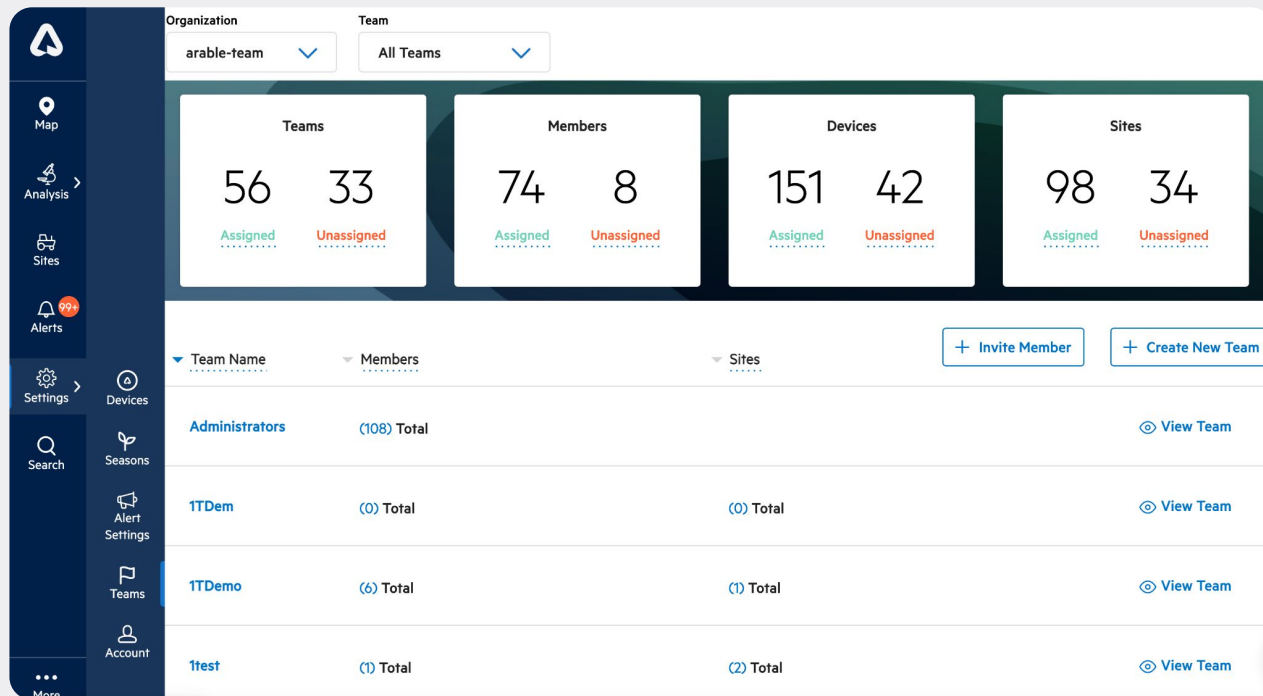
Activate Windows Go to Settings to activate Windows

Help

<https://app.dev.arable.com/dashboard/settings/devices>




TEAMS: OVERVIEW



Next, to get everything set up, navigate to the [Teams](#) page. This will allow you to set up your team, add additional users, change account permissions, and ensure that you have the right level of access to account information.

We've designed the Arable platform to be flexible enough to serve users with different needs, from granular operations to large-scale data collection across multiple geographies. On the [Teams](#) page, the Org Admin will be able to see all the teams, devices and members associated with the account. Teams tie together users with devices. Within each team, members will have access to the subset of devices associated with that team. Please check this page and make sure you have access to the right teams and right subset of devices/locations.

TEAMS: Members & Permissions



Map

Analysis

Sites

Alerts

Settings

Search

More

Organization

arable-team

Team

All Teams

Test







(1) Team Admin (2) Member

(1) Sites (5) Devices

Edit Team

Hide Team

Team Members Information

| Name | Email | Role | Last Login | |
|---------------------------|--------------------------------------|------------|-----------------------|---|
| Test Automation Member | test.automation_member@arable.com | Member | 09/13/2023 @ 04:27 pm |   |
| Test Automation Teamadmin | test.automation_teamadmin@arable.com | Team Admin | 11/28/2023 @ 10:33 am |   |
| Test Team member | test_teammember@arable.com | Member | 04/06/2022 @ 09:24 am |   |

Site Information

| | |
|---------------|------------------------------------|
| Current Sites | Devices associated to current site |
| Berg Enclave | C005310 |

Devices associated to this team

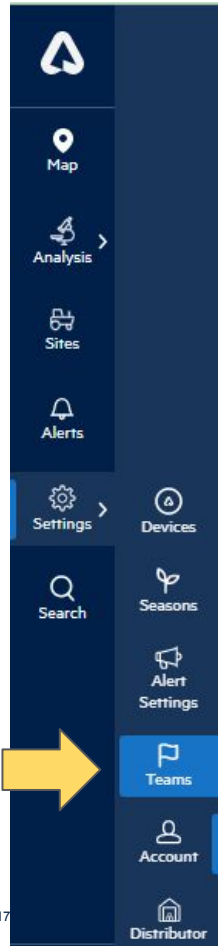
C005310, C008081, C008048, C008104, C003068

Select “View Team” to see any of the members associated with each team. You will be able to see members, their email address, and their level of access. At Arable, we take data privacy very seriously. To make it easy for you to manage permissions, we have four levels of access: **Org Admin**, **Org Reader**, **Team Admin** and **Members**.

- **Org Admin** will be able to see all the devices associated with the account, can add members to any team and create new teams.
- **Org Reader** can see all the devices, but cannot move members, teams and devices.
- **Team Admins** can invite new members to their teams.
- **Members** can view & edit device, team and member data for only their team, and cannot invite new team members.



TEAMS: Inviting Members & Creating New Teams



Invite Member to Organization

CurrentNew

Select Member

Select Member

Select Role

Select Role

Select Team(s)

Select Team(s)

Add

Teams & Roles

Please select a member, assign a role and select a team or teams from the drop down above and click "add".

Cancel

Confirm

Unlimited users can join the Arable platform. Click on “Invite Member” to add new members (New) and to move existing members to new teams (Current).

Create New Team

Team Name

Type the team's name

Add or Remove Members

Type Name or Email Address and press Enter

Add or Remove Devices or Locations

Type Device ID or Location Name and press Enter

Cancel

Confirm

By clicking “Create New Team” you can organize a new set of users and subset of devices/sites. If you need help adding members or teams, please get in touch with support@arable.com.



SEASONS: APP ADMIN

Dashboard

Users

Orgs

Devices

Locations

Sites

Crops

Feature Flags

Feature Flag Settings

Key

season-days

Description (optional)

season-days

☐ Enable Everywhere (optional)

Update

Users

@ Email

Q

Email

Add User

Email

Actions

Orgs

Org Name

Add Org

Org

Actions

arable-team

- The **Season-days feature flag** can be Added and Removed under **Season-days** menu

- The Season-days feature can be Added and Removed for each user and user roles by adding their respective mail Id under '**User**'

- The Season-days feature can be Added and Removed for the Organization by adding their respective Org name under '**Orgs**'

SEASONS: Overview

Then, navigate to **Seasons** to add details about the crop at your site. We have variety-specific growth stages that will allow for growth-stage based alerting. There are two different ways to create season and track the growth stages by 'GDD' mode and 'Days from Start Date' mode which can be selected in Growth Stage Tracking drop down. User will have access to 'Days from Start Date' mode when the Org or the user is added in the feature flag of 'Season-days' in App-admin.

Even if a device is not deployed at a site at the start of the season, setting up a season retroactively will enable us to backfill with remotely sensed data to provide a better snapshot of the season as a whole.

We built Arable to understand interactions between the climate and crop productivity. To maximize the benefits of the system, we encourage users to add in their seasons and track growth stages.

By inputting seasonal start dates, harvest dates and growth stages, we can combine measurements to allow users to monitor water availability during critical stages, or if different fields are maturing faster.

Days Mode : A new Growing season by Days addition allows users to create Seasons by Days. While in the Days mode, the calculated cumulative GDD values will be provided based on the number days entered for the selected 'Growth Stages'.

GDD Mode : A new Growing season by GDD allows users to create Seasons by GDD. While in the GDD mode, user can add temperature threshold and growth stages.

Create New Season

Please select a Site and assign it a crop type and varietal.
Select to use GDD Units or Days from Start Date for growth stages.
Once your new season has been created you will need to add growing dates and growth stages

Site

Select Site

Crop Type

Select Crop

Varietal

Select Varietal

Growth Stage Tracking

GDD Units

Days from Start Date

GDD Units

Cancel


Confirm



SEASONS: Entering Growth Stages in GDD mode

If the standard growth stages for a varietal does not match your specific needs or experience, you can easily add or remove growth stages yourself.

Once you enter your varietal and growth stages, it's also easy to apply the same growth stages to multiple devices/Sites. Make sure the season start date is correct, even if it is in the past. Note that the absolute value of cumulative growing degree days will vary based on preferred unit (°C or °F).



Crop
Choose your crop type: Almond

Varietal
Choose your varietal type: Aldrich

Threshold: Low 5 °C - High 35 °C

Growing Season

Refill Threshold: 70%

Start Date: 09-Nov-2023
End Date: 24-Nov-2023

Growth Stages

| GDD Units (°C) | Growth Stages |
|----------------|---------------|
| 100 | stage1 |
| 200 | stage2 |

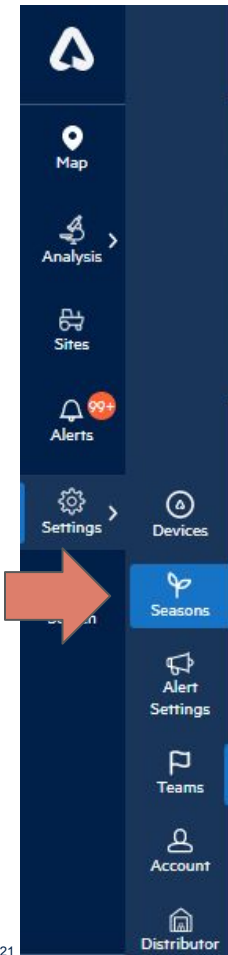
Save Season



SEASONS: Entering Growth Stages in Days from Start Date mode

If the standard growth stages for a varietal does not match your specific needs or experience, you can easily add or remove growth stages yourself.

Once you enter the number of days manually or can click on the calendar button and select the date, the GDD cumulative value will be displayed based on the number of days. The GDD values are not editable in days mode but user can edit the growth stages, it's also easy to apply the same growth stages to multiple devices/Sites. Make sure the season start date is correct, even if it is in the past. Note that the absolute value of cumulative growing degree days will vary based on preferred unit (°C or °F).



Crop Choose your crop type: Alfalfa
Varietal Choose your varietal type: Spring
Threshold: Low 4 °C - High N/A

Growing Season

Refill Threshold: 70%
Start Date: 28-Nov-2023
End Date: 11-May-2024

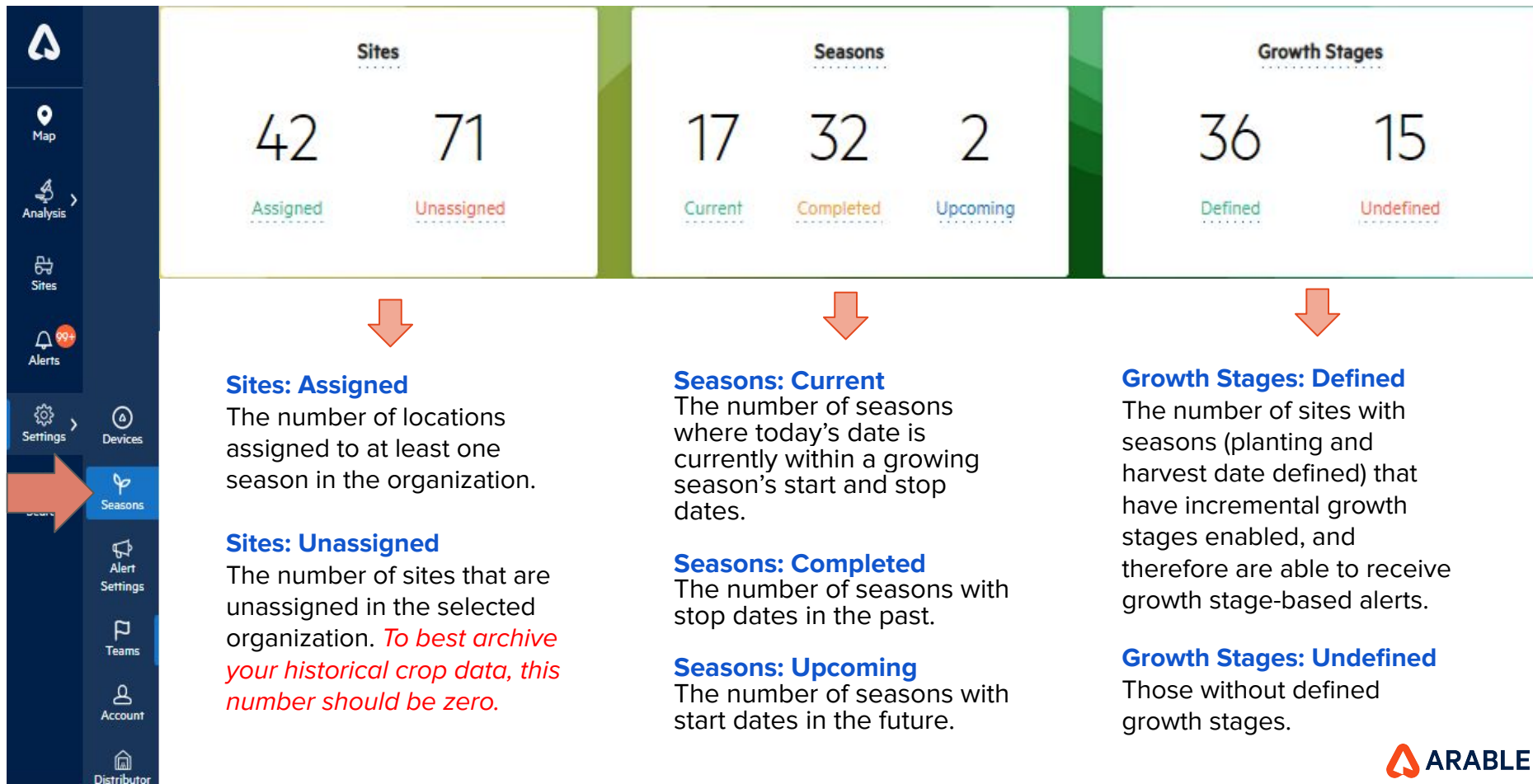
Growth Stages

| Days from Start Date | Growth Stages | GDD Units (°C) |
|----------------------|---------------|----------------|
| 1 | Stage 1 | 45 |
| 10 | Stage 2 | 229 |

Add Stages (Value is required)

Save Season

SEASONS: Understanding the Dashboard





ALERTS: Overview

Now, select **Alerts**. Since you've already added your phone number, crop and season information, it will be easy to select different thresholds for unique locations to make sure you don't miss an event in your field.

The screenshot shows the 'Alerts' settings page in the Arable application. It is organized into two main categories: 'Weather Alerts' and 'Crop Health Alerts'. Under 'Weather Alerts', there are three sub-sections: 'Heat Spikes' with a threshold of 58 °C, 'Frost Events' with a threshold of 23 °C, and 'Rainfall Events' with a threshold of 3 in/hr. Under 'Crop Health Alerts', there is one sub-section: 'GDD & Growth Stages'. Additionally, there is a 'Device Alerts' section with two sub-sections: 'Inactive and New Sites' and 'Device Tilts' with a threshold of 7. Each of these six alert types has three interactive icons below its threshold: a speech bubble (representing email or in-app notifications), a smartphone (representing push notifications), and a telephone handset (representing SMS or voice calls). A blue arrow on the left points to the 'Alert Settings' option in the sidebar.

Only **Org Admins** can change/set the global alert thresholds. There are options to receive alerts on the following parameters:

- **Heat Spikes**
- **Frost Events**
- **Precipitation Rate**
- **Growth Stage / GDD** (new growth stage transition)
- **Device Alerts** (tilt/inactives)

All users can opt in to receive alerts three different ways, and will receive alerts for ALL devices assigned under their permissions:

- **SMS-Based Text Alerts**, enter phone number on Account page.
- **Phone Calls**, enter phone number on Account page.
- **Push Notifications**, via the mobile app.



ALERTS: Site-Specific (1 of 2)

The alerts system defaults to global alert, setting the same thresholds across devices/locations.

By clicking “Add Alerts for Specific Site,” **Org Admins** will be able to set own thresholds for specific devices/locations. Similarly, any user can customize the method for receiving alerts with the same mechanism.

Notifications Settings Created for a Specific Location

Your new specific notification settings have been created for **Untitled Location**. You can now set specific parameters and notification channels for this location.

Close

Add Notifications Settings for a Specific Location

Please choose the location you would like to add specific notification settings

↓ Name | Date

Device ID
C005196

Deployment Date
November 21, 2020

Device ID
C005310

Deployment Date
January 5, 2021

Device ID
C004681

Deployment Date
January 2, 2021

Device ID
C004798

Deployment Date
September 25, 2020

Device ID
C005391

Deployment Date
October 24, 2020

Hardy Homestead

Device ID
C005430

Deployment Date
October 28, 2020

Lupine Lane

Device ID
C004527

Deployment Date
December 13, 2020

Mount Tamalpais

Device ID
C003985

Deployment Date
July 7, 2020

Neelys

Device ID
C005135

Deployment Date
November 30, 2020

RD Backyard

Device ID
C004863

Deployment Date
December 3, 2020

Untitled Location

Device ID
C005137

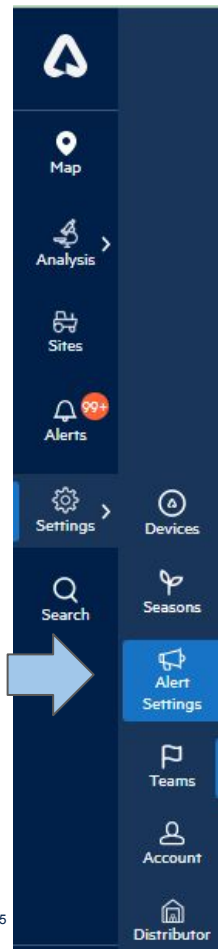
Deployment Date
November 15, 2020

Cancel

Confirm



ALERTS: Site-Specific (2 of 2)



For each location, the alert settings will mirror the global settings as the default setting. Once a specific location is selected, it will appear below the global settings (as shown for **Weather Alerts** on the right). Initially, both the **Parameters** and **Channels** boxes will be checked, indicating that that location will mirror the global settings by default.

To set location-specific alerts, uncheck the **Parameters** and **Channels** boxes. This will allow the user to change the thresholds and select different methods for receiving the alerts.

By rechecking the **Parameters** and **Channels** boxes, the user overrides the local settings and reverts to the default global settings.

Weather Alerts

Heat Spikes °F

☒ ☒

Crop Health Alerts

GDD & Growth Stages

☒ ☒

Untitled Location

Weather Alerts

Heat Spikes °F

☐ ☒

Make Same as Default: ☐ Parameters ☐ Channels



ALERTS: Overview

| Date | Detail | Date |
|-------------|---|----------|
| Account | | |
| Crop Health | The temperature is below 7 C at C007991 2022-06-28 01:25:1... | 04:47 PM |
| Date | | |
| Device | The temperature is below 7 C at B301222 Irrigation Site. | 04:46 PM |
| Unread | | |
| Weather | The temperature is below 7 C at Umbrella Irrigation Site. | 04:46 PM |

Frost Alert
Weather

The temperature is below 7 C at B301198 | 2023-02-02 17:21:1...

04:36 PM

Type: Frost Alert
Category: Weather
Detail:
12/07/2023 04:36 PM
The temperature is below 7 C at B301198 | 2023-02-02 17:21:15.

[Change subscription settings: Alert Settings](#)

The **Alerts** page is an easy way to check on current and historical alerts across devices/sites in your organization. Alerts on device location (movement > 200 meters), crop health and growth stage, weather threshold alerts and device and account activity will be logged here.

Alerts can be sorted by type:

- **Date** (chronological)
- **Weather**
- **Crop Health**
- **Device**
- **Account**
- **Unread**

To get additional detail on each alert, click the “+” next to it.

Here, there will be a quick link to change alert settings. Previously read alerts will show as gray.

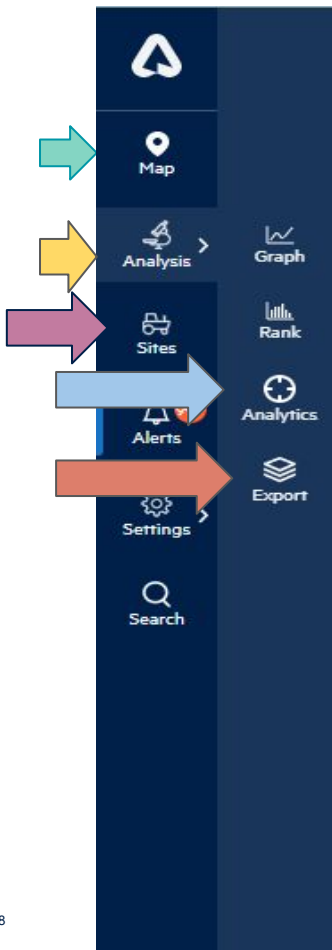


Data Exploration



EXPLORE THE WEB APP: Getting the Most Out of Arable

Once you have the basics set up, you can begin to explore more functionality in the app.



5. Map & Details

7. Export

6. Graph & Rank

8. Analytics

9. Sites

MAP: Overview

Map

Satellite

Show satellite imagery

Organization

arable-team

Team

All Teams

Temperature

Now

Tomorrow's Forecast

Temp

Rain

W/m²

17 mins ago

Site Name

Demo field

12°C

0mm

1

17 mins ago

Site Name

Demo site 1

9°C

0mm

1

17 mins ago

Map

Satellite

Show satellite imagery

Organization

arable-team

Team

All Teams

Temperature

Now

Tomorrow's Forecast

Temp

Rain

W/m²

17 mins ago

Site Name

Demo field

12°C

0mm

1

17 mins ago

Site Name

Demo site 1

9°C

0mm

1

17 mins ago

Map

Satellite

Show satellite imagery

Organization

arable-team

Team

All Teams

Temperature

Now

Tomorrow's Forecast

Temp

Rain

W/m²

17 mins ago

Site Name

Demo field

12°C

0mm

1

17 mins ago

Site Name

Demo site 1

9°C

0mm

1

17 mins ago

Toggle Button

Click any site for details

Measurement Scale

Activate Windows
Go to Settings to activate Windows

Help

Sites : Overview

Organization: arable-team

Team: All Teams

Search Sites

+ Create New Site

123_c009018

Crop: Cantaloupe - Unspecified

Growth Stage: s1

| Device | Deployment | Battery |
|---------|---------------------|---------|
| C009128 | Untitled Location | 100% |
| C009013 | Untitled Location | 77% |
| C009125 | C009125 2021-0... | 100% |

View Site Data >

126_c009018

Crop: Cantaloupe - Unspecified

Growth Stage: s1

| Device | Deployment | Battery |
|---------|-------------------|---------|
| C006911 | Santa Rosa | -- |
| B301227 | B301227 Location | 83% |
| C009128 | Untitled Location | 100% |

View Site Data >

1New_Site_Test

No Crop Specified

No Growth Stage Defined

Create a Season

| Device | Deployment | Battery |
|---------|------------------------|---------|
| B301281 | B301281 2023-03-2... | -- |
| B301168 | Untitled Location | -- |
| B301168 | B301168 2023-06-2... | 92% |

View Site Data >

The first Org in the dropdown should be the default org showed in the Sites page and as per **Org** selected, the **Site** should be displayed.

Site page should have the button **'Create New Site'**, where we can create the new site.

And also **'Search Sites'** field to search specific site

Sites : Pagination & “Go To Page” Field

The screenshot displays the ARABLE Sites interface. On the left is a dark blue sidebar with navigation icons for Map, Analysis, Sites, Alerts, Settings, and Search. The main content area shows a list of sites under the 'Organization' (Mark 3 Test) and 'Team' (All Teams) filters. Three site cards are visible: 'B30025 Site', 'B30028 Test Unit - Ron', and 'B30030'. Each card includes a satellite map, crop information, growth stage, and a table of site data. Below the site cards is a pagination control with a red dashed border, showing page numbers 1 through 10 and a 'Go to page' input field. To the right of the pagination is a link to 'Activate Go to Settings'.

| Device | Deployment | Battery |
|--------|-----------------------|---------|
| B30025 | B30025 2022-09-2... | 12% |

| Device | Deployment | Battery |
|--------|----------------------|---------|
| B30030 | B30030 2022-09-... | 94% |

Introduction :- We are introducing the Pagination & Go To Page feature on the site page, where we can jump to any page where site details are present.


Sites : Search Sites Field

Organization: arable-team Team: All Teams

Search: Jan

+ Create New Site

Jans Backyard



No Crop Specified


No Growth Stage Defined

Create a Season

| Device | Deployment | Battery |
|---------|------------------------|---------|
| C003068 | Jans Backyard | -- |
| C013860 | C013860 2023-02-... | 100% |
| C007712 | Jan's Backyard - C0... | -- |

View Site Data >

Jan's Backyard - B3



No Crop Specified


No Growth Stage Defined

Create a Season

| Device | Deployment | Battery |
|---------|------------------------|---------|
| B301223 | B301223 2023-01-1... | -- |
| B30057 | Jan's Backyard - B3... | -- |
| B301270 | B301270 2023-01-2... | -- |

View Site Data >

Jan's Backyard B301188



No Crop Specified


No Growth Stage Defined

Create a Season

| Device | Deployment | Battery |
|---------|----------------------|---------|
| B301188 | B301188 location | -- |
| B301188 | B301188 2023-02... | 88% |

View Site Data >

Jan's Backyard C009070



Introduction :- We are introducing the “Search Sites” feature on the site page, which will enable user to search the specific sites.

Minimum *three* letters are required to initiate search.

User has to press “Enter” button on keyboard, after entering search keyword.

Clicking on “X” button in search box, will reset the search and will redirect to 1st page.



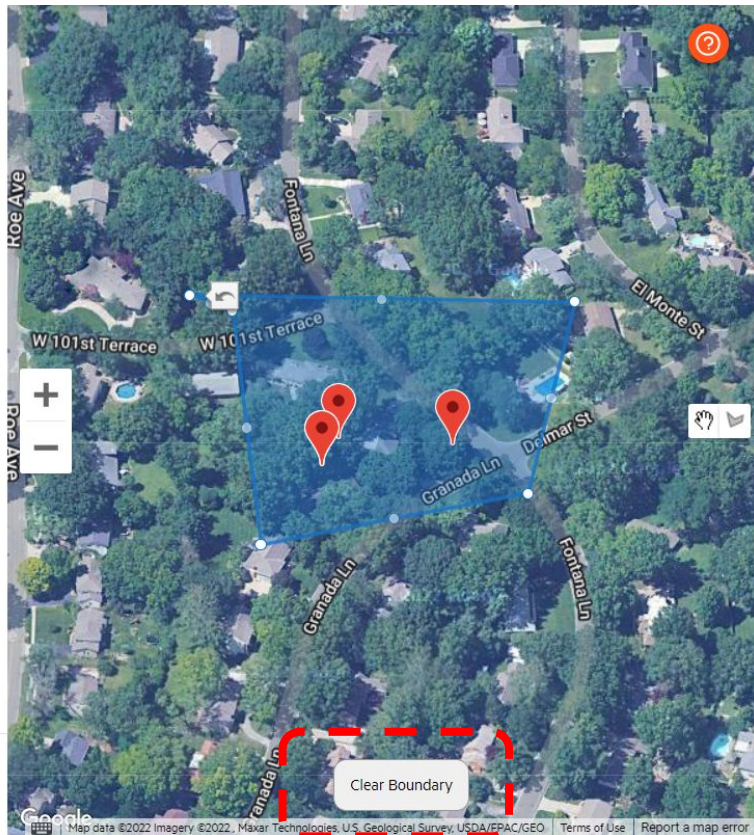
Sites : “Clear Boundary” button

10 Square meters

| Device ID | Deployment Name | Status |
|-----------|-------------------|----------|
| C005306 | Untitled Location | Assigned |
| C005306 | Untitled Location | Assigned |
| C005306 | New Location | Assigned |

Cancel

Confirm



Introduction :- On the site view page, we are introducing the 'Clear Boundary' option. If a user wishes to clear a boundary that has already been drawn, the 'Clear Boundary' option can be used to do so immediately.

Sites : Default Status for Devices as “Assigned”

10 Square meters

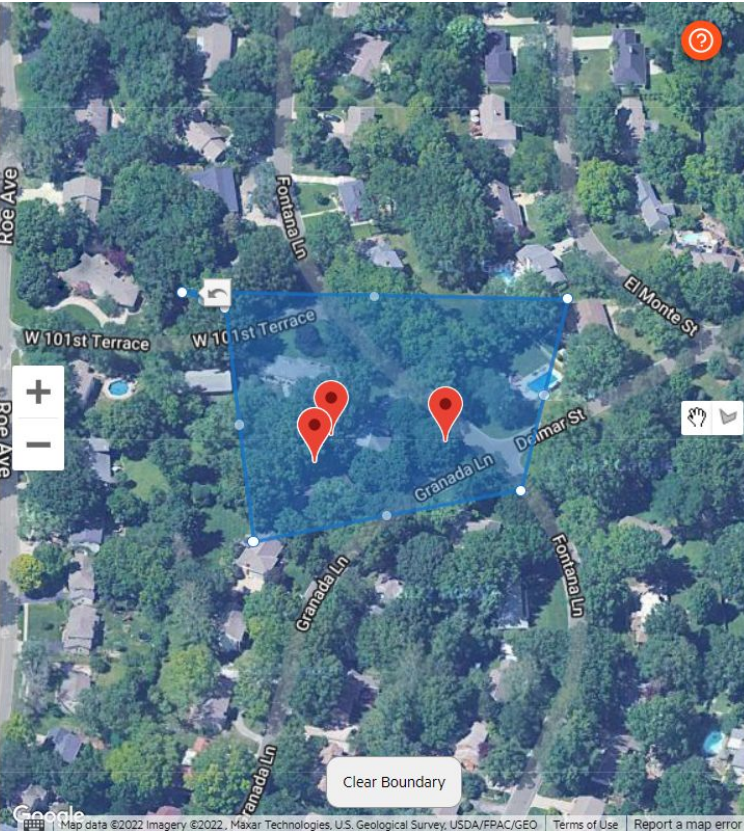
| Device ID | Deployment Name | Status |
|-----------|-------------------|----------|
| C005306 | Untitled Location | Assigned |
| C005306 | Untitled Location | Assigned |
| C005306 | New Location | Assigned |

+

-

Cancel

Confirm



Description:- Here we are introducing default status for devices as ‘Assigned’ which means if user want to create a site so the default site created on unassigned devices on map page has area of 10*10 m and for default sites, the device shall be set to ‘Assigned’ rather than Include on creating boundary and If the boundary is removed, the assigned devices should still be visible in the list and if user has marked all device as "Assigned" & then deleted the boundary, then clicking on "Confirm" button, should not allow user to save.

SITE DETAILS: Overview

Organization: arable-team Team: All Teams

1.4New Test Site

Bucks County, Pennsylvania, United States (3) Marks

Google Imagery ©2022 Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO

40.26618, -74.93062

Site's Device List

Local Site Time: 5:26 am

| Device ID | Deployment Name | Battery Status | Connected Sensors |
|-----------|-----------------|----------------|-------------------|
| C004730 | Berg's Enclave | Unknown | None |

On the map, click a Site's name from the list on the right to be taken to that Site's complete details page. A **Site** is a named Mark device; if you need to name your new device, this is where you do it.

All of the device's information can be found on the right side of this page, including the Sitename, device ID, GPS Site, battery percentage, time of last sync, and any connected external sensors such as soil probes or anemometers.

Here you can add tags (e.g., alfalfa, strawberries, greenhouse) to the Site; these tags can be searched and referenced via the **Search** page.

Top right are quick links to the **Export** and **Graph** pages.

In the following slides we'll explore the **Weather**, **Water**, & **Plant** tabs. Click on any of the words underlined in blue (e.g., **Current Conditions**) to see detailed descriptions of the measurements and other helpful information.



SITE DETAILS: Weather Tab (1 of 2)

Current Conditions

| Metric | Value |
|-----------------|-----------|
| Temperature | -9 °C |
| Humidity | 87 % |
| Pressure | 102.9 kPa |
| Solar Radiation | 107 W/m² |

Today's Temperature

| Freezing and Dry | |
|------------------|-------|
| Low | High |
| -11 °C | -6 °C |

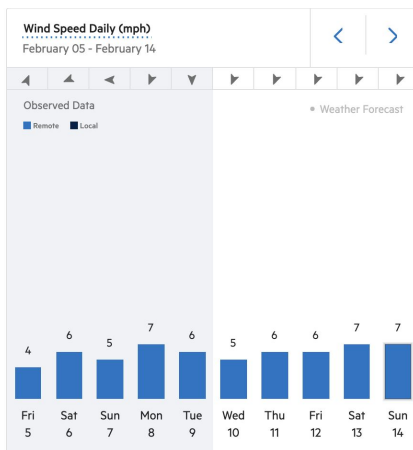
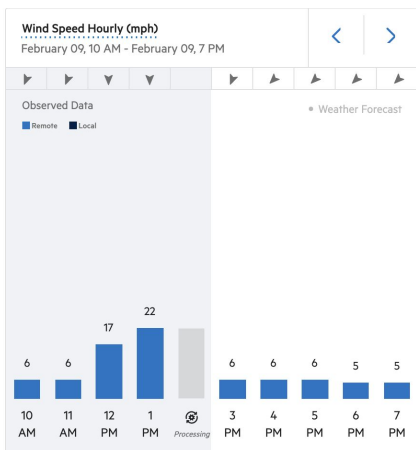
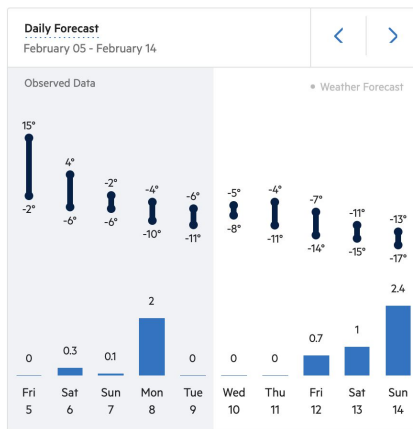
Forecasted Precipitation Next 24 Hours

| |
|-----|
| 0mm |
|-----|

Detailed weather measurements can be found on this tab. **Current Conditions** shows climate conditions for the selected location, like humidity and solar radiation. **Today's Temperature** shows a low and high temperature for the day, as well as expected rainfall.



SITE DETAILS: Weather Tab (2 of 2)



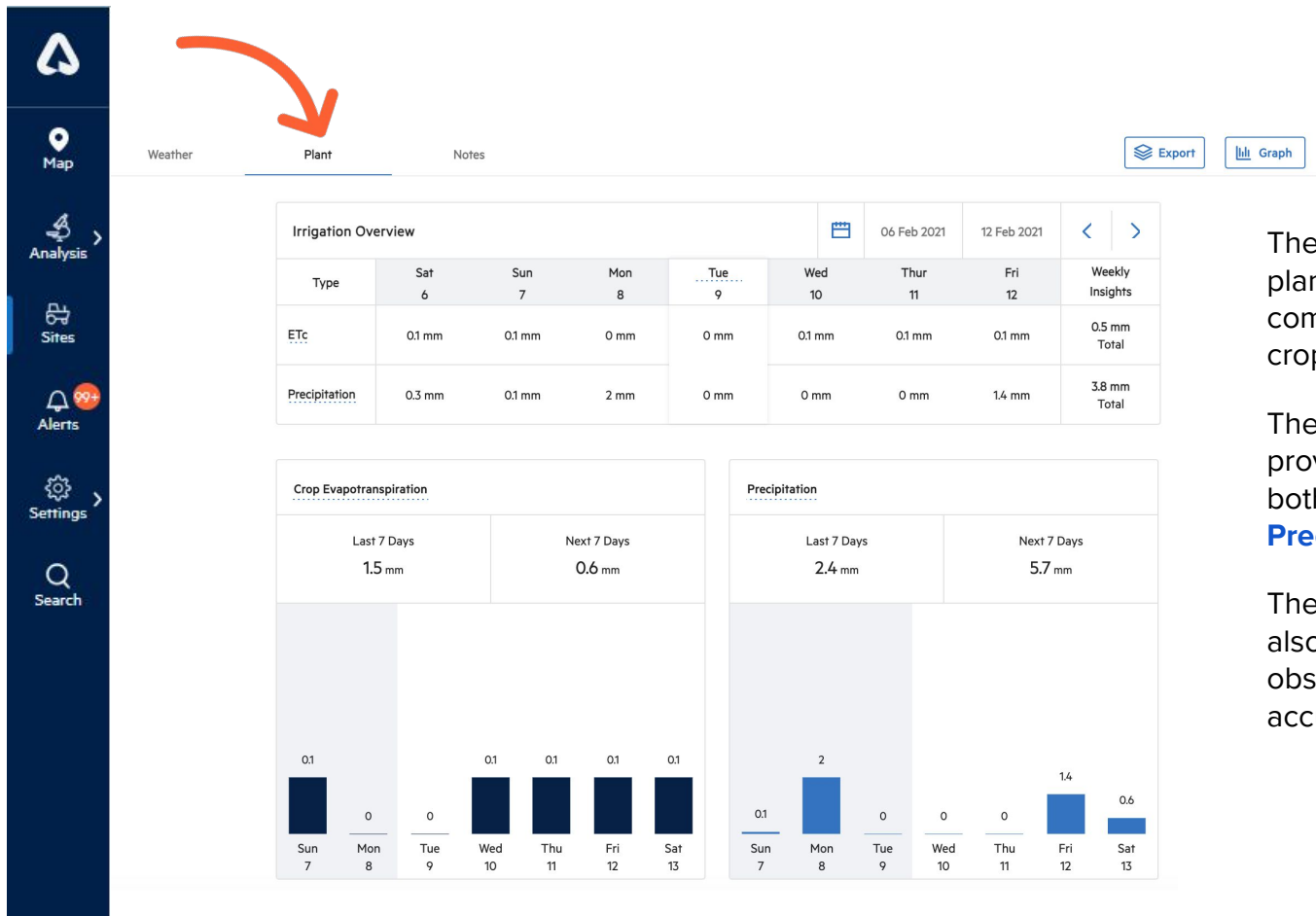
The graphs at the bottom show **Hourly & Daily Rainfall** and **Hourly & Daily Wind Speed**. Without an attached anemometer, we will show remotely sensed wind.

Both observed (grayed, to the left) and forecasted (white, to the right) data are shown for the day selected. You can scroll to the left or right to see past and forecasted values. For hourly, we show 48 hours' observed data and 48 hours' forecast. For daily, we show 14 days' observed and 10 days' forecast data.

Use the blue < > arrows at the top of each graph to change the time/date.



SITE DETAILS: Plant Tab (1 of 2)



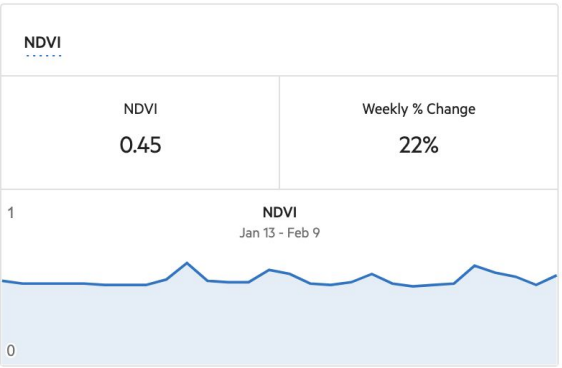
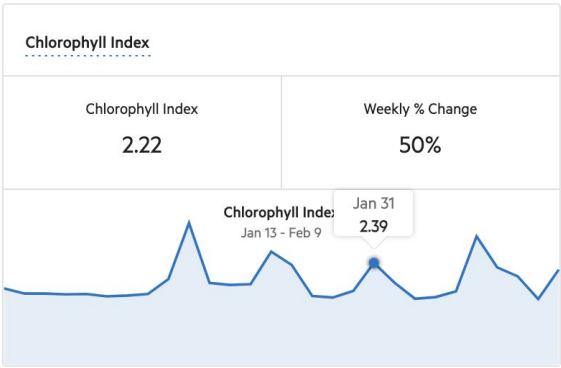
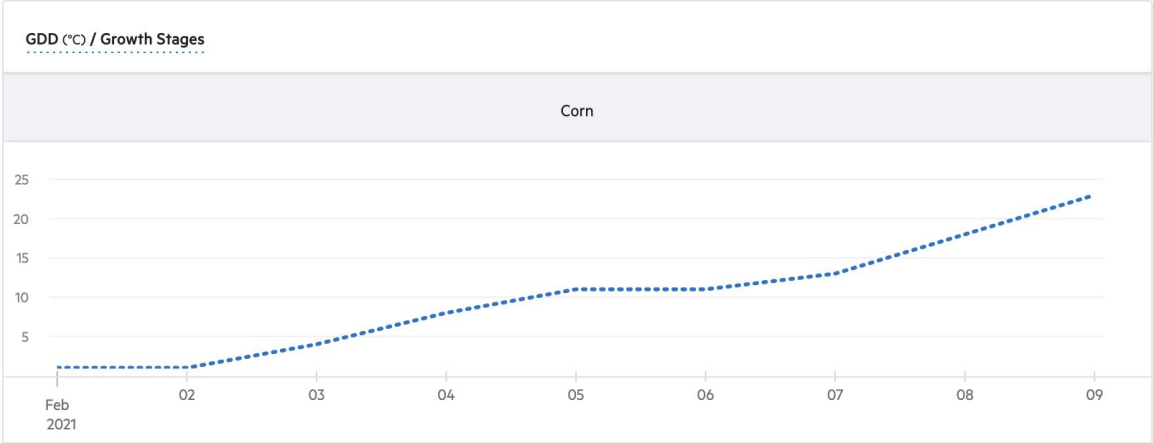
The **Plant** tab shows a Sites plant measurements, a critical component to understanding crop outcomes.

The **Irrigation Overview** provides a daily summary of both **Evapotranspiration** and **Precipitation**.

These two measurements are also shown below, with observed and forecasted accumulations.



SITE DETAILS: Plant Tab (2 of 2)



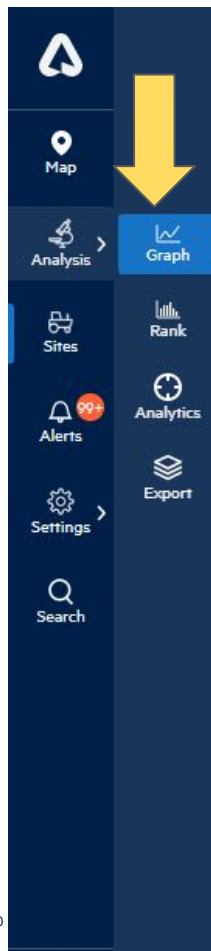
If a season has been defined for the location (set on the Seasons page), **Cumulative Growing Degree Days** and **Crop Growth Stages** will be displayed on this page.

Chlorophyll Index and **NDVI** are also shown on this page in absolute value and weekly percent change.

Hover your cursor over the graph to see daily values.



GRAPH: Overview



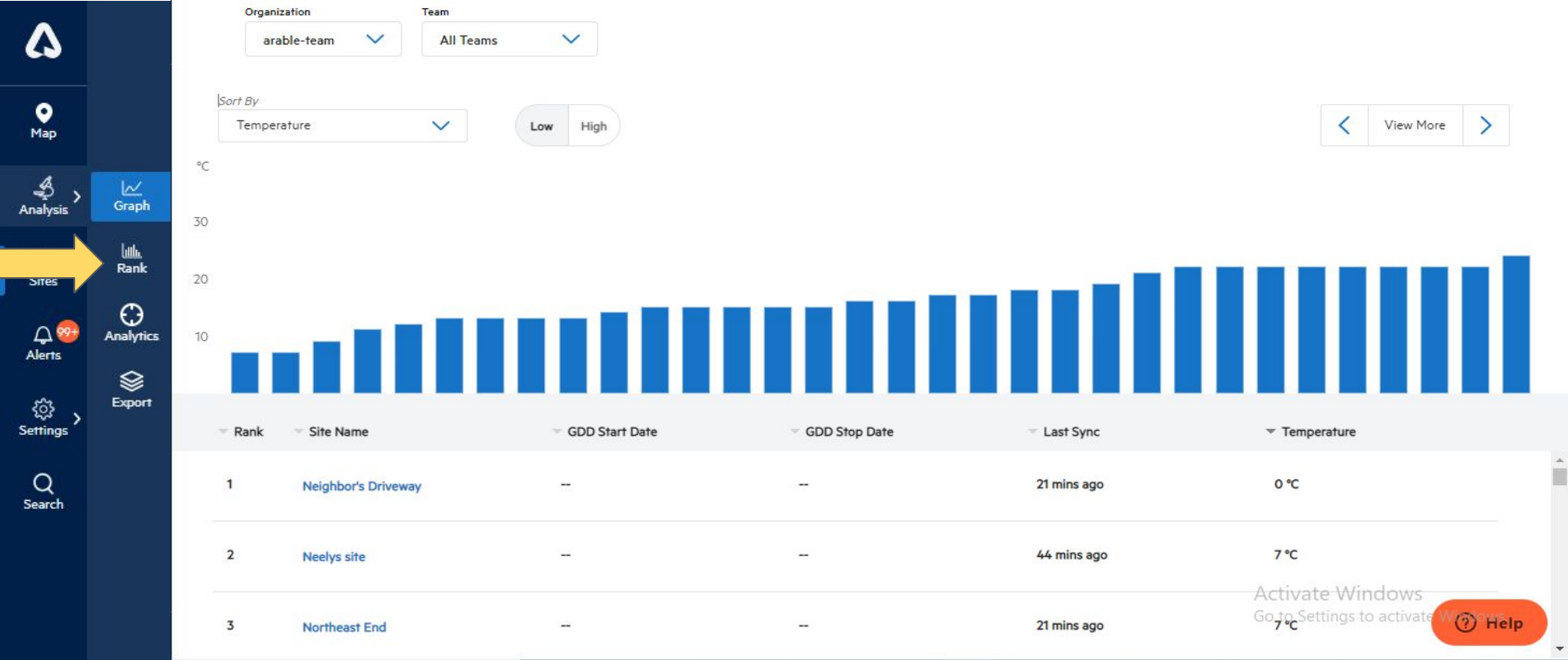
Select **Graph** from the left-hand menu to visit this page. Here you can combine weather and plant data at one or several Site, all in one view.

In the **Time** view, pick your Site(s), measurement(s), and date range (e.g., last 30 days) before clicking Graph to view your data.

Most measurements have an hourly option and allow the use of a slider at the bottom to focus in on specific time events.



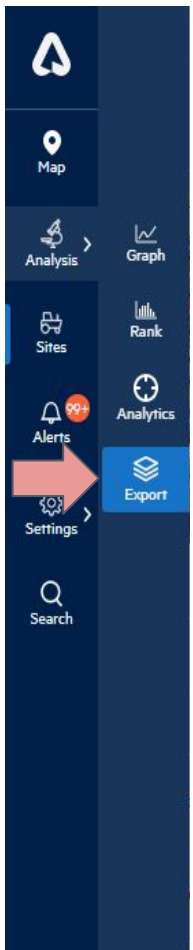
RANK: Overview



To see how each Site ranks against the others, toggle to **Rank** at the top of the page. Select your preferred measurement (e.g., growing degree days, solar radiation, NDVI, etc.) from the Sort By dropdown to rank your Sites by that measurement.



EXPORT: Overview



Organization: Absolute Foods
Team: All Teams

Export

Site

Enter site name or device ID

1test12

Granularity

Select all, hourly, or daily data tables.

All

Hourly

Daily

Measurements

Will change dependent upon granularity.

[Download Data Dictionary in PDF](#)

All

Date Range

From first deployment date to today.



18-Apr-2022

03-Aug-2022

Units

Select your measurement units.

Inches

or

Millimeters

Fahrenheit

or

Celsius

Millibars

or

Kilopascals

Miles per hour

or

Kilometers per hour

or

Meters per second

Format

Select export format.

CSV

Export

To export site data, visit the [Export](#) page and select the site, granularity, date range, and preferred units, then click [Export](#) to download data as a CSV. The file can be opened with all CSV-compatible platforms, e.g., Excel or Google Sheets.

The export contains summary information at the top (e.g., Date Range and Number of Records) and detailed time-series data below.

Select multiple Sites in the Sites drop-down in order to export data for more than one Site at the same time.

On changing [Teams/ Orgs](#) from dropdown, the [Sites](#) dropdown data will also get updated.



ANALYTICS : Overview

Select **Analytics** from the left-hand menu to access the two dashboards we have recently written about, [Site Deep Dive](#) (single Site) and [Compare Across Sites](#) (multi-Site). Toggle between them here.

On both dashboards, you can select your **Org** and the **Team**(s) you want to graph.

Organization: arable-team

Team: All Dashboards

Water | Weather | Plant

Controls: Device [ALL] | Location [ALL] | Start Date: Sun Mar 01 202... | End Date: Wed Mar 31 20...

Compare Across Location Version 1.0.0: Select multiple devices or locations and enter your date range in the control panel. Use Group By on X axis to drill up or down to view different time scales.

There are three tabs we will explore in the next slides, **Water**, **Weather**, and **Plant**.

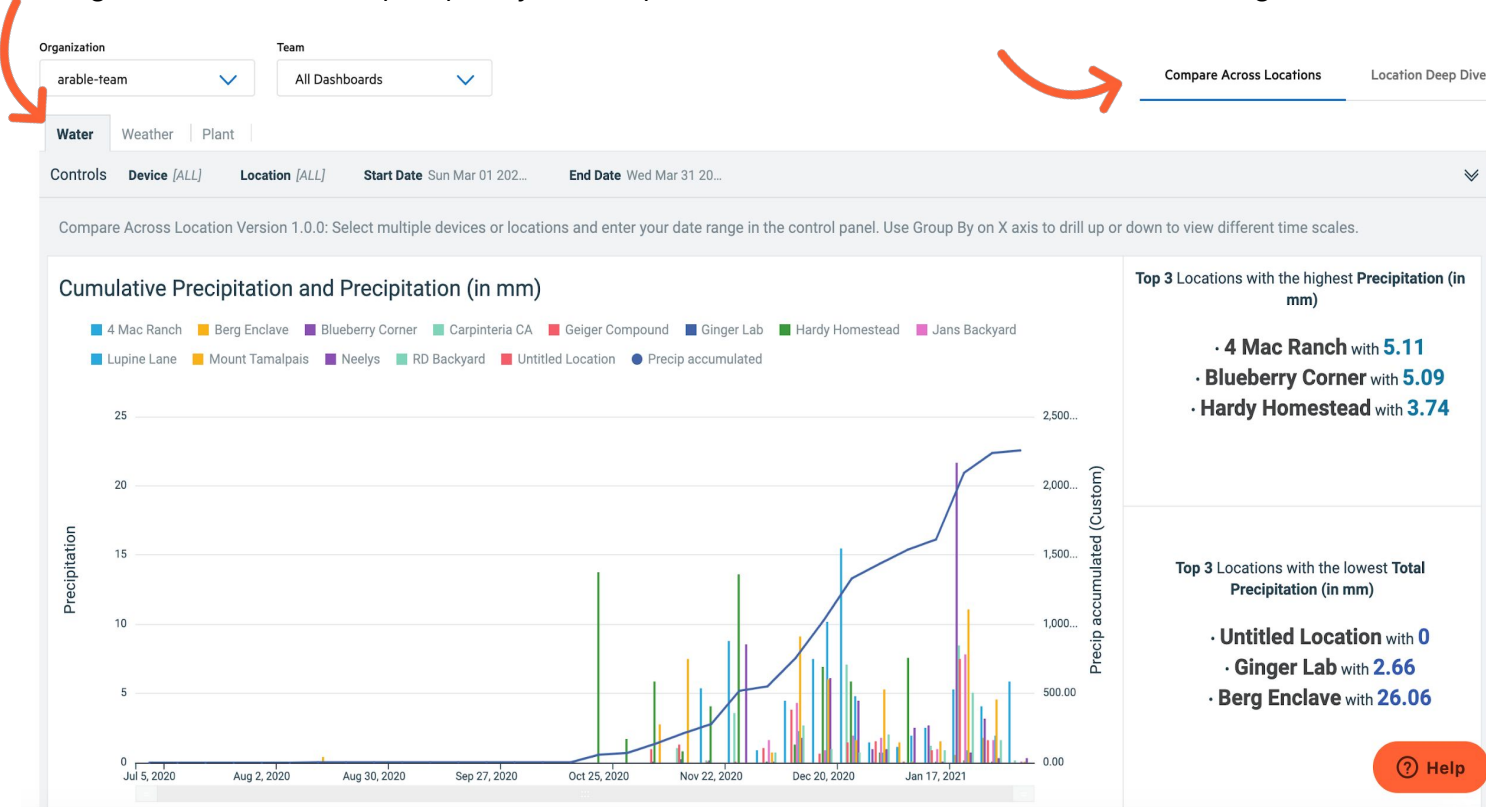
On the **Controls** panel, you should also select which devices/Site you want to graph, and indicate a start date and end date.

Interested in something specific? To request a specific model or dashboard (or to discuss feasibility for a data ingest/integration project), reach out your partnership manager.



ANALYTICS : Compare Across Sites, Water Tab

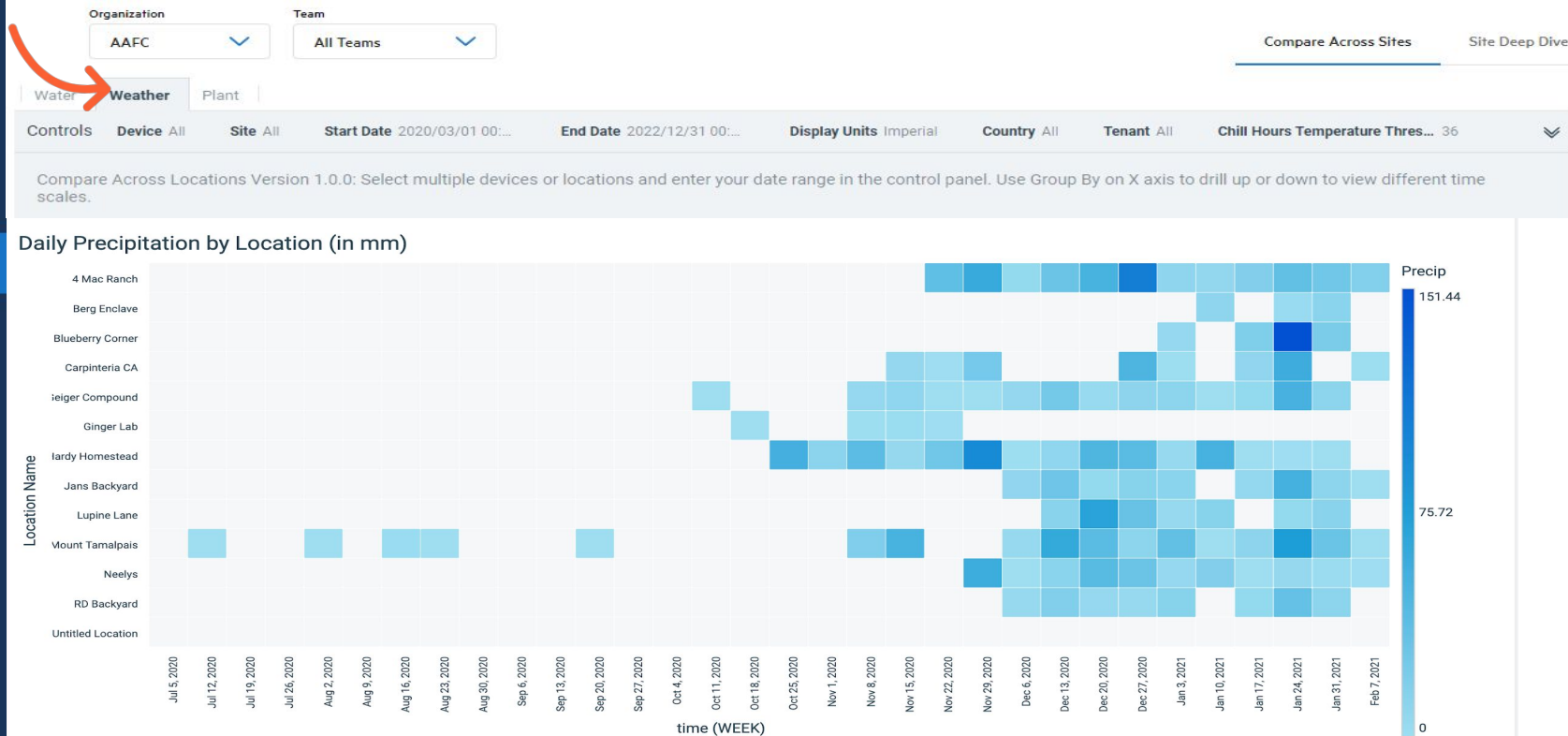
Compare Across Sites, Water displays precipitation, ETc accumulation by Site, crop water balance by Site, and average soil moisture at top depth by Site. Top 3 Sites for each measurement are in the right-hand column.





ANALYTICS : Compare Across Sites, Weather Tab

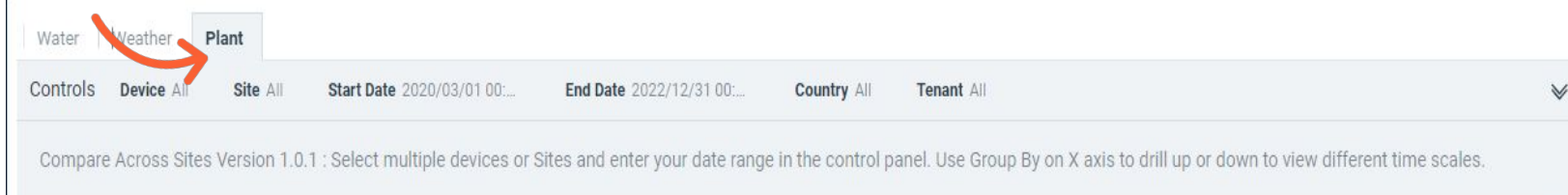
Compare Across Sites, Weather displays precipitation by Sites, heat stress days, vapor pressure deficit, and temperature extremes. Top Sites for each measurement are in the right-hand column.



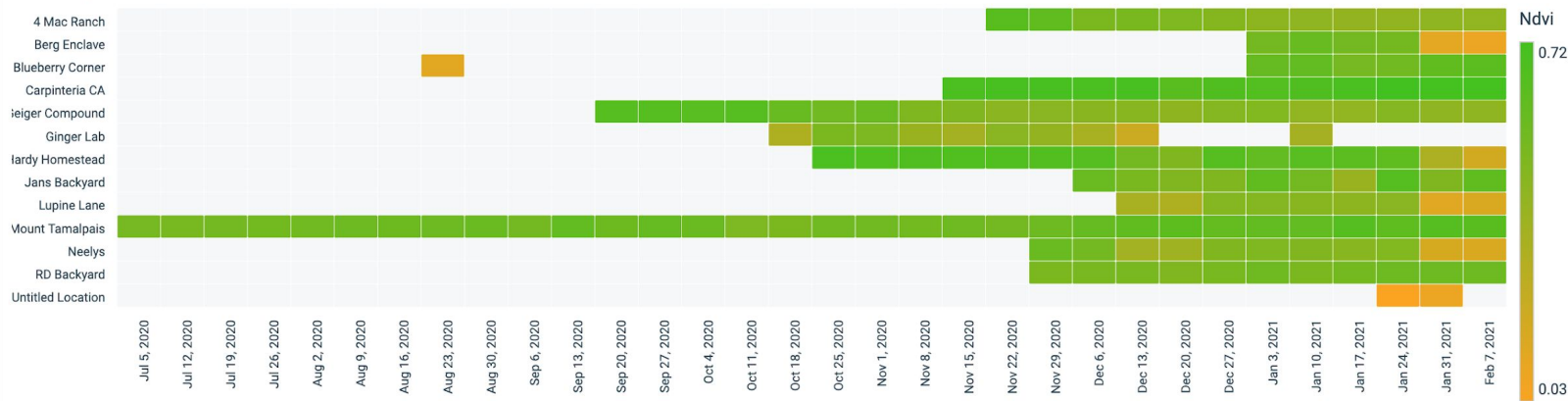


ANALYTICS : Compare Across Sites, Plant Tab

Compare Across Sites, Plant displays NDVI by location, peak NDVI, cumulative growing degree days, chlorophyll index, sunshine duration, sunshine hours, & growing season summary. Top Sites for each measurement are in the right-hand column.



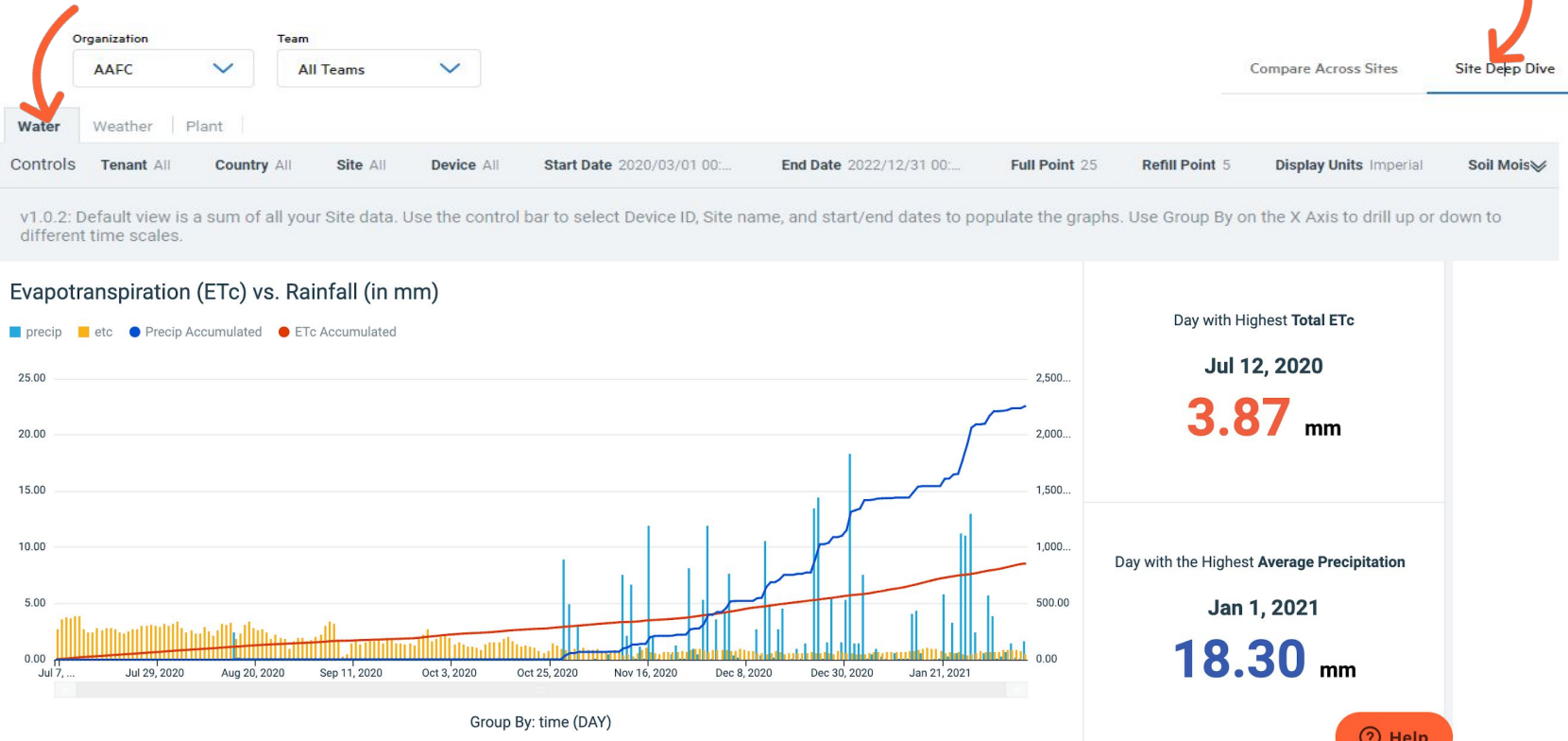
NDVI by Location





ANALYTICS : Site Deep Dive, Water Tab

Site Deep Dive, Water displays ETc plotted with rainfall, crop water balance, top depth of soil moisture with refill point and field capacity lines, and precip as a percent of ETc. Extreme days are shown in the right-hand column.

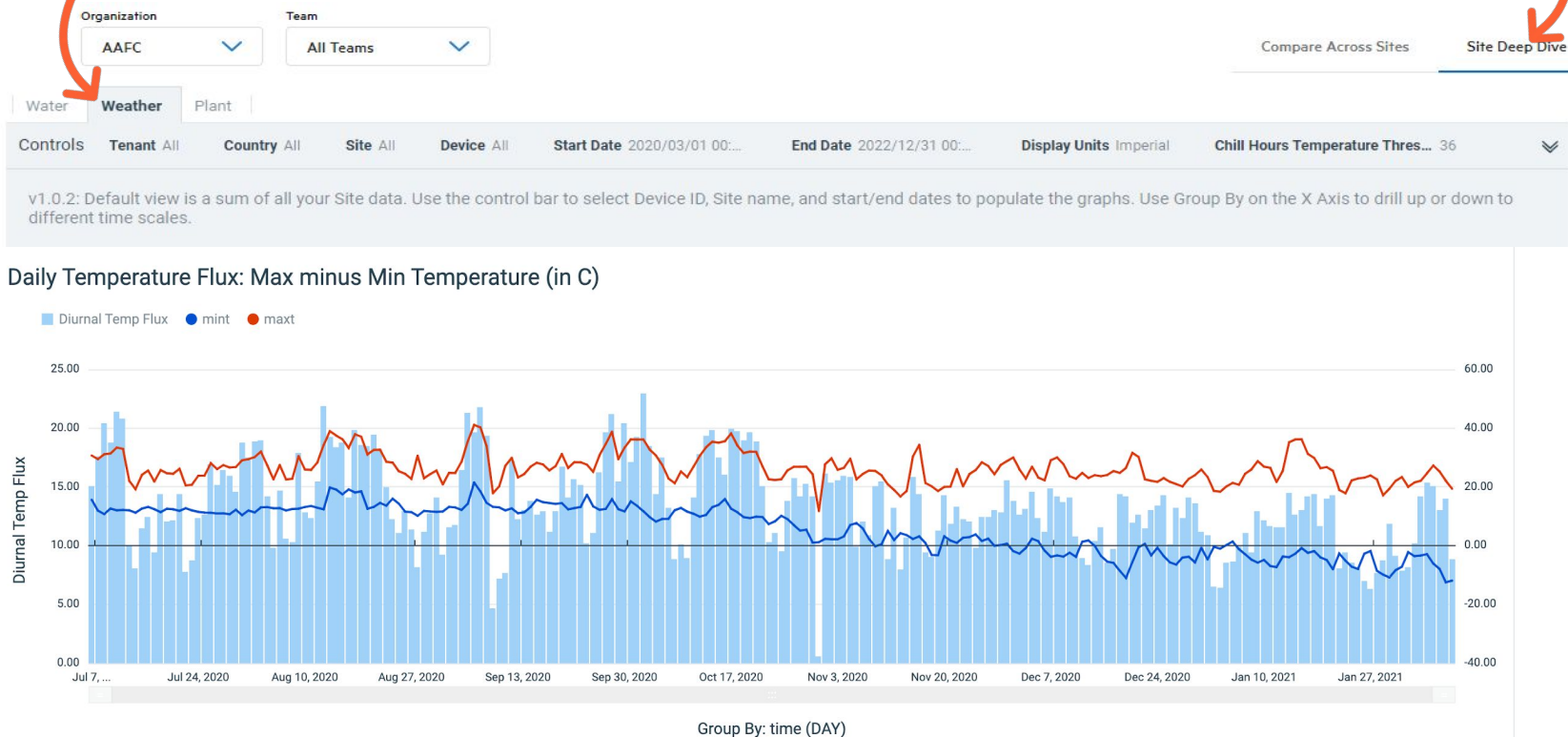


Help



ANALYTICS : Site Deep Dive, Weather Tab

Site Deep Dive, Weather displays cumulative & daily rainfall, daily temperature flux, vapor pressure deficit, heat stress days, freeze days, sunshine duration, and warm nights/cool days. Extreme days are shown in the right-hand column.





ANALYTICS : Site Deep Dive, Plant Tab

Site Deep Dive, Plant displays NDVI, cumulative growing degree days & NDVI (if seasons are set up), sunlight duration & quality, and a seasonal growth overview. Extreme days are shown in the right-hand column.

Organization
AAFC

Team
All Teams

Compare Across Sites

Site Deep Dive

Water | Weather | **Plant**

Controls Tenant All Country All Site All Device All Start Date 2020/03/01 00:00:00 End Date 2022/12/31 00:00:00

v1.0.2: Default view is a sum of all your Site data. Use the control bar to select Device ID, Site name, and start/end dates to populate the graphs. Use Group By on the X Axis to drill up or down to different time scales.

Cumulative GDD and NDVI (GDD data will be blank if season has not been populated in Arable Seasons Tab)

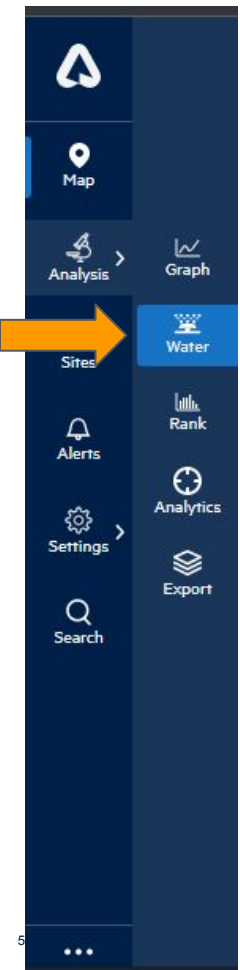




Arable Water (Multi-Site View)



Analysis : WATER



There is an optional feature in the web application called '**Water**'.

To navigate to the '**Water**' (Multi-site) page, click on '**Water**' under the **Analysis** icon.

*Why we are introducing **Multi- Site View** ?

Irrigation managers often face trade-offs when deciding which sites to irrigate and for how long. To make informed decisions, they need to understand the water stress, demand, and irrigation deficiencies of each site. A multi-site view can provide instant insights, allowing managers to prioritize their sites and make necessary changes to their irrigation management practices.



Multi-Site View

Map

Analysis

Sites

Alerts 15

Settings

Search

More

Organization
Arable - Wine Co

Team
Vineyard Management

Water Balance

Irrigation

Soil Moisture

Heat Stress

Last 7 Days

| Site Name | Irrigation to Replace ETC | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|------------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| Lasso Vineyards | 2:00 hrs | 3/27 21:00 hrs | +44.4% | 0 |
| Orchard Farms | 3:12 hrs | 3/25 00:31 hrs | +7.8% | 8 |
| Late Rain Vineyards | 3:23 hrs | 03/21 01:00 hrs | +27.3% | 2 |
| Flatwoods Farm | 1:01 hrs | 03/21 00:45 hrs | +2.5% | 5 |
| Seven Brothers Cellars | 8:00 hrs | 03/18 05:00 hrs | -20.3% | 17 |

Irrigation to Replace Etc

< 8 hours

2 - 8 hours

< 2 hours

1

2

2

Irrigation to Replace Etc

Flatwoods Farm

Lasso Vineyards

Orchard Farms

Late Rain Vineyards

Seven Brothers Cellars

1 hrs

2 hrs

3 hrs

4 hrs

5 hrs

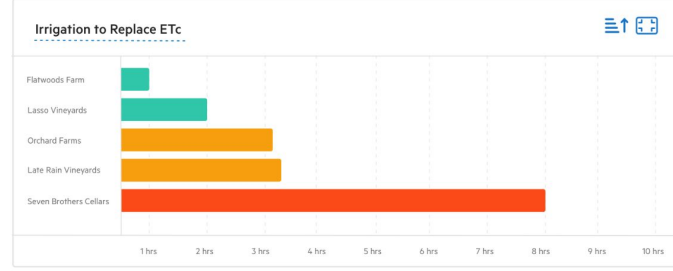
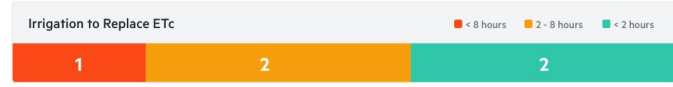
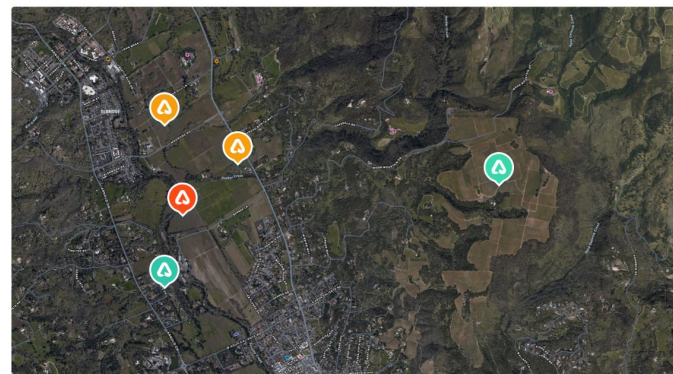
6 hrs

7 hrs

8 hrs

9 hrs

10 hrs





Overview Of Multi-Site Top Bar Selector

Organization
arable-team

Team
All Teams

You can filter devices by **Organization** and **Team**. The default landing view will display a single team's worth of data on the Water Balance tab

Water Balance Irrigation Soil Moisture Heat Stress

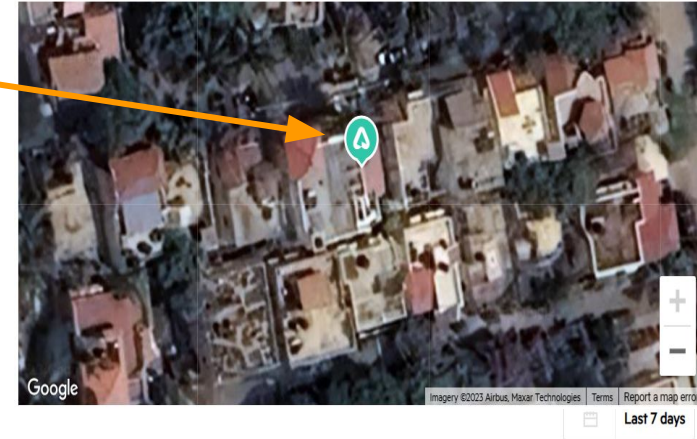
Toggle the top navigation bar to select the metric of interest: Water Balance (default), Soil Moisture, Irrigation, and Heat Stress.



Multi-Site Map Zoom Management

- Double click on the icon to see the field view (close up). Might need at least four time clicks.
- Retains the same zoom level on tab and page switching.
- Retains the zoom across site selection also.
- Hover over the locators and it gets highlighted.
- Also maintaining zoom level on doing pagination step.
- Page reload or org switching will not retain zoom levels.
- On selecting another team, zoom level will be retained for the new devices of that team.
- Mouse scrolling is enabled also.
- Single click on one icon, then that will be centerpoint .
- On reaching max zoom level, the buttons will get disabled.

| Site Name | Irrigation to Replace ETC | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|-------------------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| All_Sensor_Ext_apl | --- | --- | -831.2% | 0 |
| B301215_test | --- | --- | --- | --- |
| B301311 2023-01-10 17:08:24 | --- | 12/05 07:45 hrs | --- | 0 |
| COO9018_Site | --- | --- | --- | --- |
| Center Pivot Field B301121 | --- | --- | --- | 0 |



Overview of Multi-Site Water table

Organization

Bayer Breeding

Team

All Teams

| Site Name | Irrigation to Replace ETC | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|--|------------------------------|-------------------------|-------------------------------|-------------------|
| 1-Olmeneta | -- | -- | -- | 0 |
| Agricola C012489 | 62:23 hrs | 04/02 07:44 hrs | +1216.7% | 10 |
| <div>Manual Irrigation</div> <div>Validate Sensors</div> | | | | |
| Device ID | Battery Status | | | |
| C012489 | <div>100%</div> <div> </div> | | | |
| Done with validation | | | | |
| Agricola Giadela | 08:18 hrs | 04/02 07:44 hrs | -- | 10 |

<<

<

1

2

3

4

>

>>

* The multi-site view can be accessed from a new drop-down icon located on the left-hand side of the Arable Homepage, under the Analysis icon.

* The multi-site table displays measurement data based on the current date, and a colour-coding scheme is used to indicate data from the previous seven days.

* Each site has three dots that reveal a manual irrigation option, where you can set the irrigation parameters similarly to the single water modal.


* Clicking on "**Validate sensor**" option allows you to see device information.

* To access device information, go to "**Device info**" and click on "**Validate sensors**" under the three dots. You can validate sensors based on the device type (Mark 2/3).

For Mark 3 devices, the connected sensor modal will be static, except for the irrigation sensor flow rate, which you can adjust to your needs using the **GEMS PS41 Series Pressure Switch**.




Modals : Validate Sensor & Manual Irrigation


Map
Analysis
Graph
Water
Rank
Alerts
Analytics
Settings
Export
Search


Set Up Connected Sensors

Please confirm the following sensors are plugged into the Mark.

Wind

 Arable Mark 3 Anemometer

Irrigation

 GEMS PS41 Series Pressure Switch


3.15

ltr/s

Total Flow Rate

Enter the site-wide application flow rate, assuming the total irrigated area is the same as the site.
For example, for drip irrigation, if the emitter rate is 1 liters/hour and there are ~1,000 emitters on the site, then you will enter $1,000 \times 1 \text{ liter/hour} \times 1/60 \times 1/60 = 0.3 \text{ ltr/s}$.

Soil Moisture

 Sentek Drill and Drop Soil Moisture Probe

Cancel

Confirm

&

Manual Irrigation

Entry Table (Historical)

| Date | Amount | User |
|--------------|--------|--------------------------|
| Mar 15, 2023 | 10 in | pramitha.lobo@arable.com |



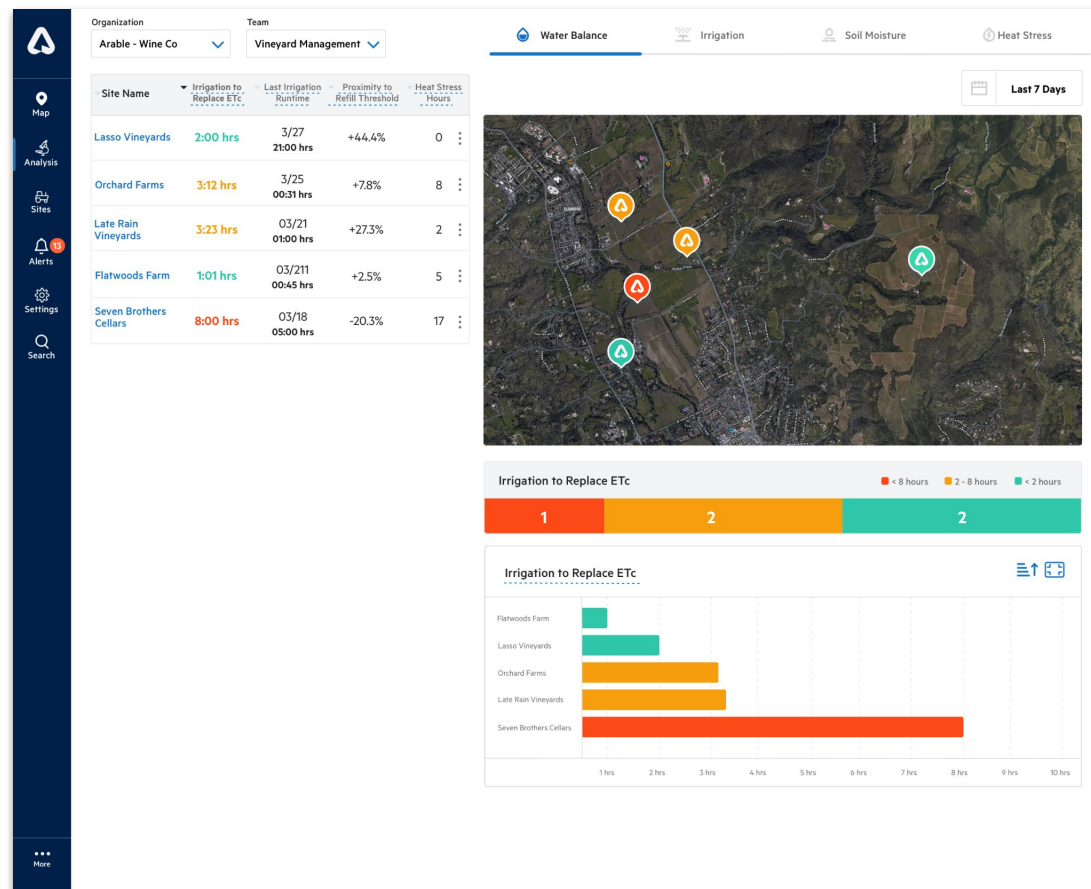
Overview of 'Irrigation to Replace ETc'

*The irrigation hours required to meet the specified Replacement ETc can be viewed on the Arable Web Water page's Water Balance visualization.

The Replacement ET % is set by the user and defaults to 100% if a Growth Stage is defined for the measurement period otherwise, it is set to 0%.

This value is only displayed if a flow rate for a GEMS Pressure Switch has been configured for the site.

For the last 7 days
Green = 2 or less hours
Yellow = 3 to 8 hours
Red = 9 or more hours



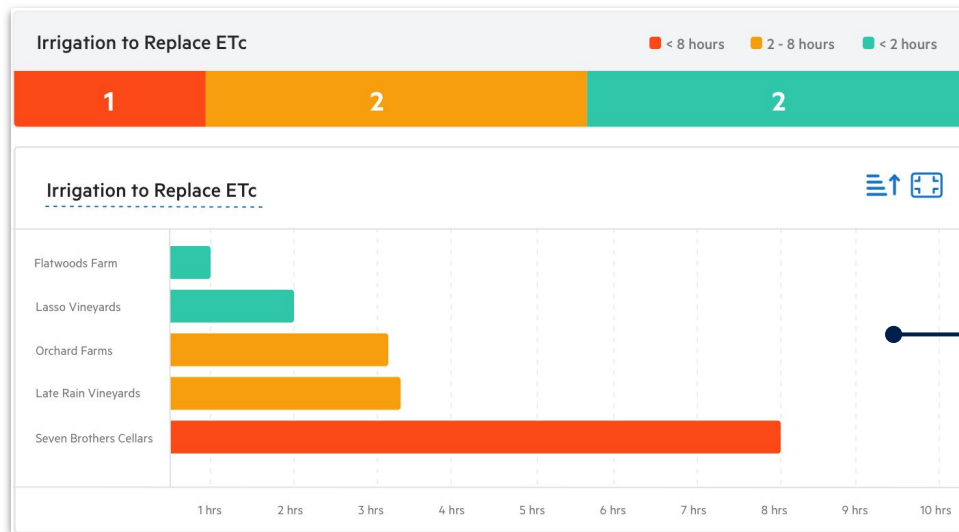
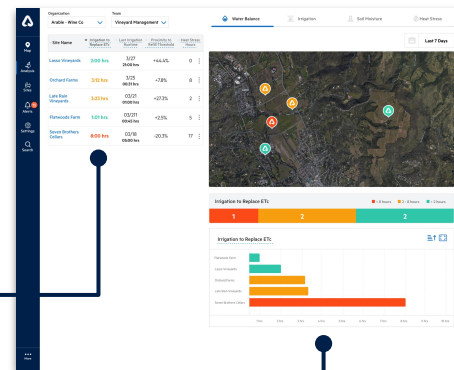


Overview of 'Irrigation to Replace ETc'

* The status bar for **Irrigation to Replace ETc** indicates that sites requiring more than 8 hours of irrigation to replace ETc are colored red. If they require between 2 to 8 hours, they will be colored yellow, and if they require less than 2 hours, they are colored green. Sites without pressure switches will not be included in the status bar. Manually entered irrigation events will not be displayed here, on the map, or in the benchmark graph.

*The **Irrigation to Replace ETc Benchmark Graph** shows the irrigation hours required to meet the defined Replacement ETc. The Replacement ET% is set on the Arable Web Water page, Water Balance visual. If a Growth Stage is defined for the measurement period, it will default to 100%, otherwise, it will be 0%. This value will be displayed only if a flow rate for a Gems Pressure Switch is configured for the site.

| Site Name | Irrigation to Replace ETc | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|---------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| Lasso Vineyards | 2:00 hrs | 3/27 21:00 hrs | +44.4% | 0 |
| Orchard Farms | 3:12 hrs | 3/25 00:31 hrs | +7.8% | 8 |
| Late Rain Vineyards | 3:23 hrs | 03/21 01:00 hrs | +27.3% | 2 |





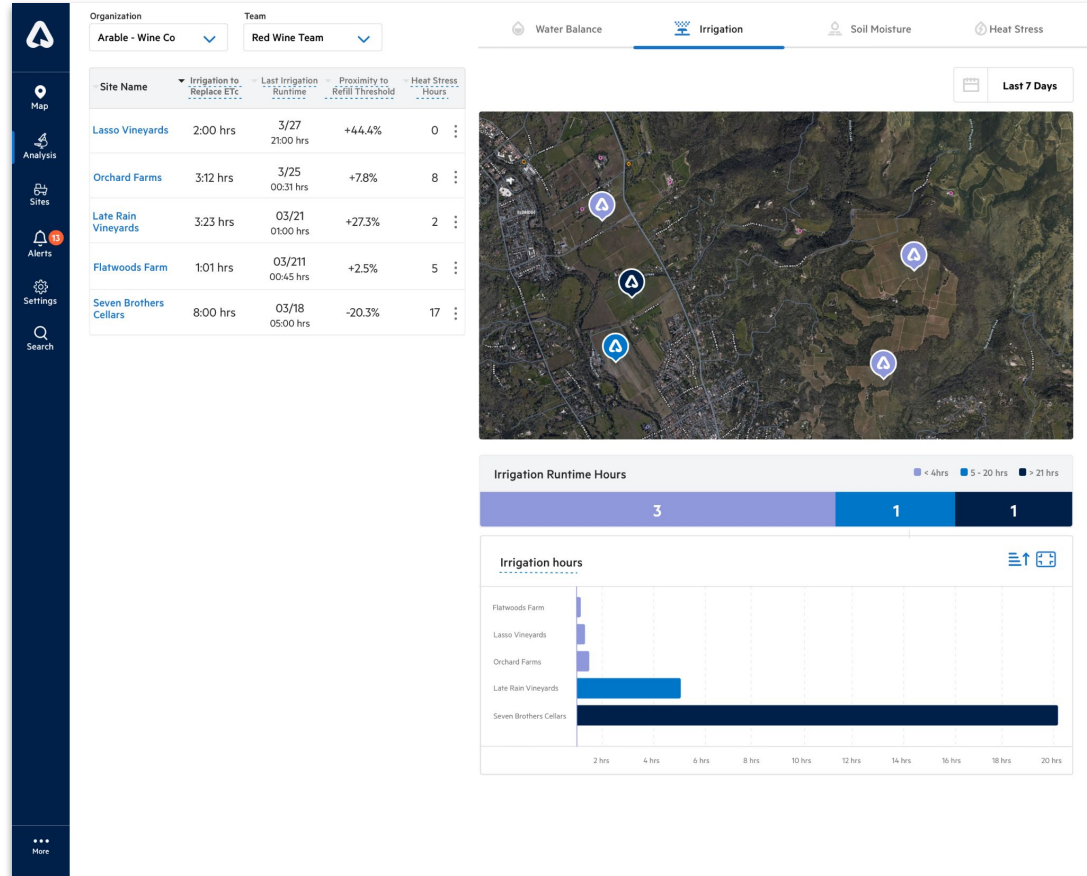
Overview of 'Last Irrigation Runtime'

* The date and amount when an irrigation event was last observed using data from the pressure switch or from data which was manually entered on the Water tab for that site.

* **Last irrigation runtime :**
Timestamp of last irrigation event and hours of runtime.
No colour coding for data.

* If there was no irrigation event in the last 7 days, the column will remain blank with "--".

* If an irrigation event is currently taking place we will display **"Currently Irrigating"**.



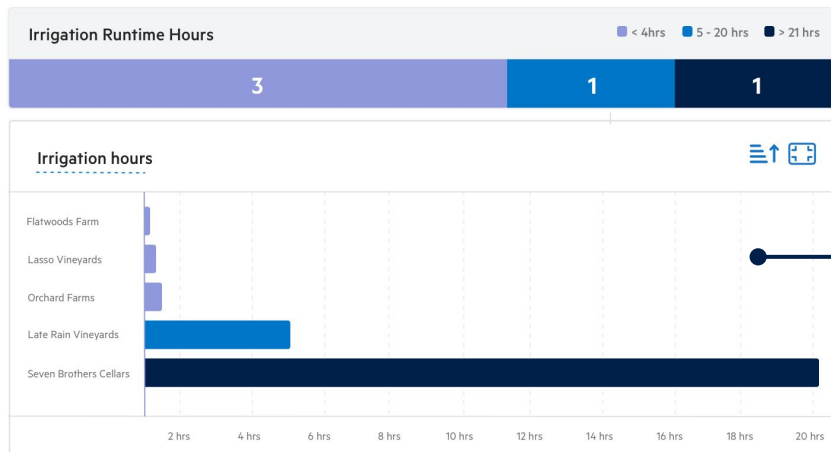
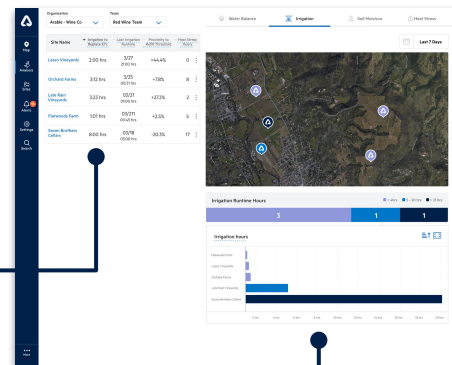


Overview of 'Last Irrigation Runtime'

* In the Status Bars, for the last seven days, irrigation sites are color-coded based on the number of hours they have received irrigation. Sites that have received over 21 hours of irrigation are colored dark blue, while those that have received between 5 and 20 hours are colored blue. Sites that have received 4 or fewer hours of irrigation are colored light blue. Please note that sites without pressure switches are not included in the status bar.

In the Benchmark Graphs, the total number of hours that each site has been irrigated over the past 7 days is being reported.

| Site Name | Irrigation to Replace Etc | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|---------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| Lasso Vineyards | 2:00 hrs | 3/27 21:00 hrs | +44.4% | 0 |
| Orchard Farms | 3:12 hrs | 3/25 00:31 hrs | +7.8% | 8 |
| Late Rain Vineyards | 3:23 hrs | 03/21 01:00 hrs | +27.3% | 2 |
| Flatwoods Farm | 1:01 hrs | 03/21 00:45 hrs | +2.5% | 5 |





Proximity to Refill Threshold refers to the distance from a site to the soil moisture refill point, expressed as a percentage. It is calculated by subtracting the refill threshold from the mean soil moisture for the measurement period (as a percentage of field capacity). If no soil probe is attached or if the soil moisture measurement has not been configured in the soil moisture graph below, this value will appear blank. The Water tab for each site with a soil moisture probe is where this value can be configured.

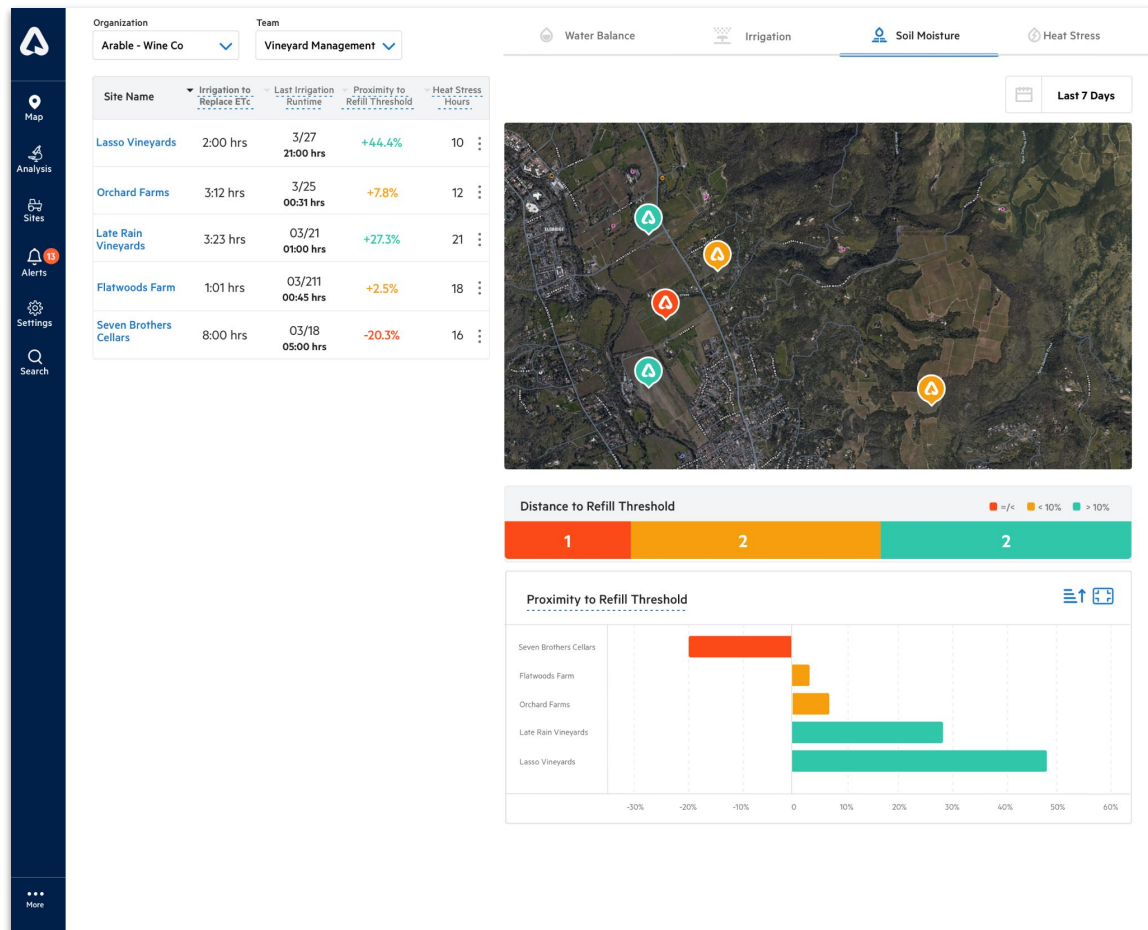
For the last 7 days

Light Blue = 4 hours or less

Blue = between 5 and 20 hours

Dark Blue = 21 or more hours.

Overview of 'Soil Moisture'



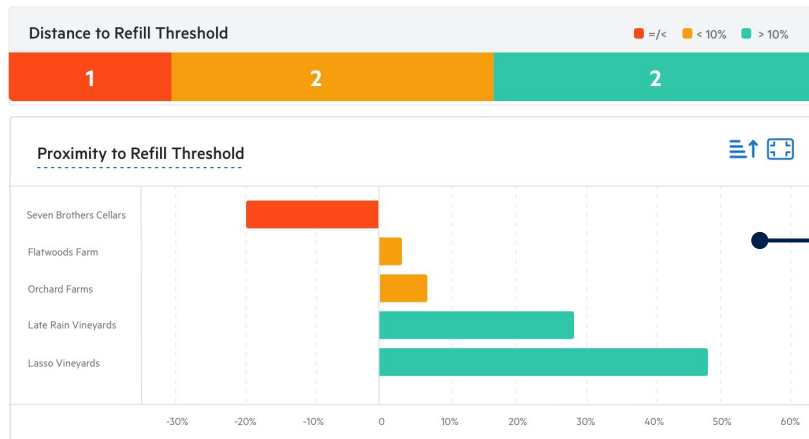
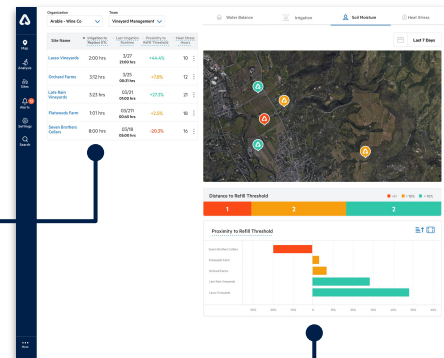


Overview of 'Soil Moisture'

The 'Proximity to Refill Threshold' status bars indicate the proximity of sites to the refill point. If a site is at or below the refill point, it will be colored red. If it is within 10% above the refill point, it will be colored yellow, and if it is above 10%, it will be colored green. Sites without soil probes will not be included in the status bar.

The benchmark graphs indicate the proximity of a site to the refill point set in the soil moisture graph. This value is calculated as the mean soil moisture for the measurement period (as a percentage of field capacity) minus the refill threshold. If no soil probe is attached or if the soil moisture measurement has not been configured in the soil moisture graph below, this value will appear blank.

| Site Name | Irrigation to Replace ETC | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|------------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| Lasso Vineyards | 2:00 hrs | 3/27 21:00 hrs | +44.4% | 10 |
| Orchard Farms | 3:12 hrs | 3/25 00:31 hrs | +7.8% | 12 |
| Late Rain Vineyards | 3:23 hrs | 03/21 01:00 hrs | +27.3% | 21 |
| Flatwoods Farm | 1:01 hrs | 03/21 00:45 hrs | +2.5% | 18 |
| Seven Brothers Cellars | 8:00 hrs | 03/18 05:00 hrs | -20.3% | 16 |





Overview of 'Heat Stress'

The Heat Stress Hours metric represents the total number of daylight hours in which the air temperature has been above the crop-specific GDD (Growing Degree Day) max temperature threshold for the selected time period at the site.

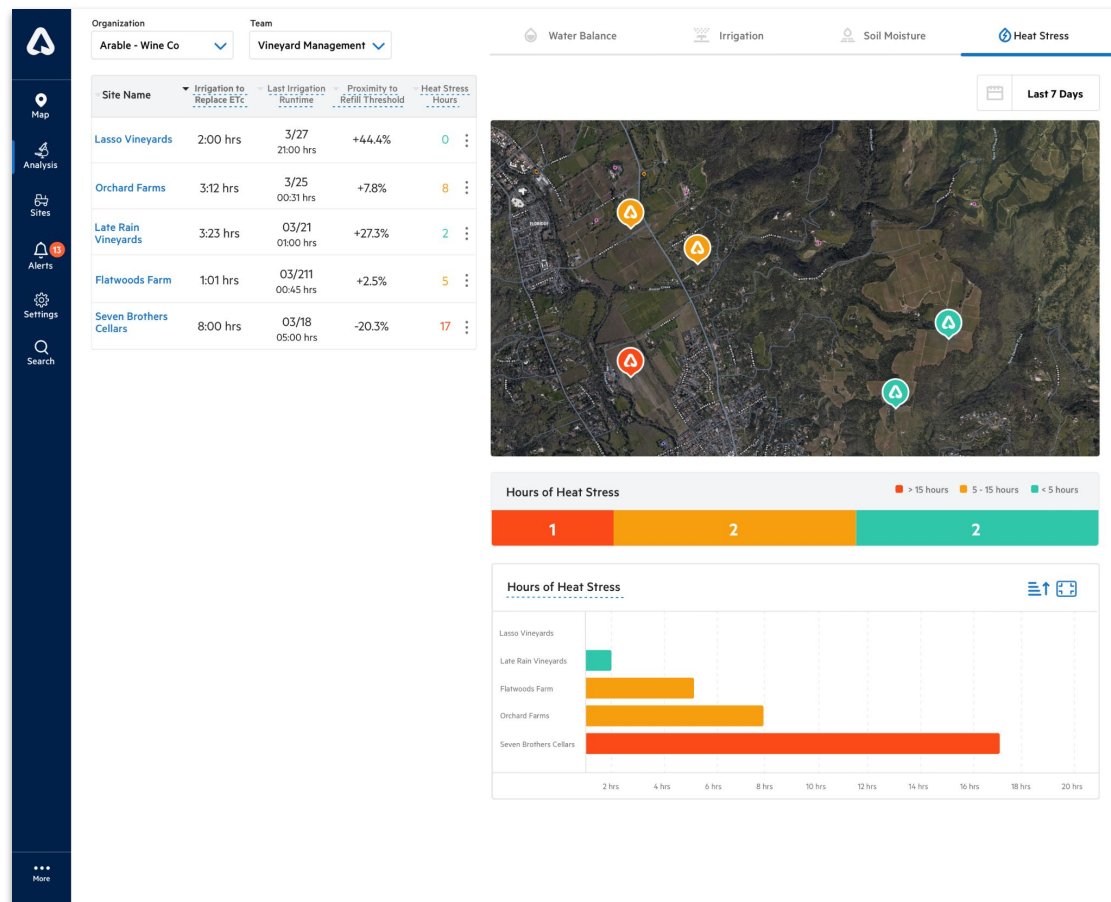
If the GDD max temperature threshold has not been defined for the crop in the system, a default value of 96°F is used.

For last 7 days:

Green = <5 hours

Yellow = 5-15 hours

Red = > 15 hours





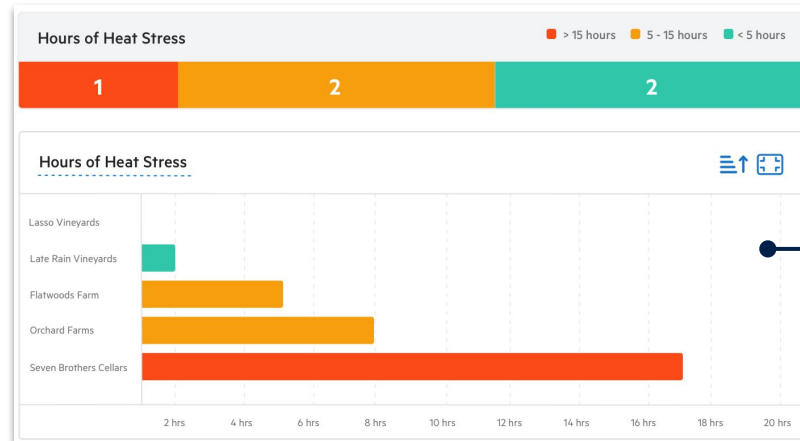
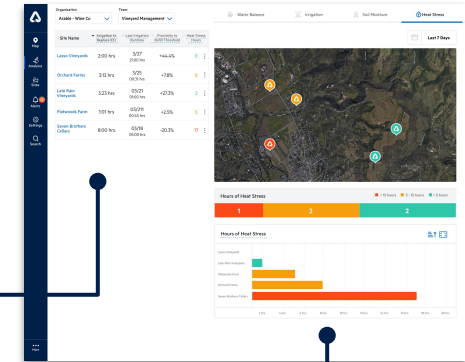
Overview of 'Heat Stress'

The 'Heat Stress Hours' status bars indicate the level of heat stress experienced by sites. Sites with more than 15 hours of heat stress will be colored red. Sites with between 5 and 15 hours of heat stress will be colored yellow, and sites with less than 5 hours of heat stress will be colored green.

The benchmark graphs for Heat Stress Hours show the total number of daylight hours in which the air temperature has been above the crop-specific GDD (Growing Degree Day) max temperature threshold for the selected time period at the site.

If the GDD max temperature threshold has not been defined for the crop in the system, a default value of 96°F is used.

| Site Name | Irrigation to Replace Etc | Last Irrigation Runtime | Proximity to Refill Threshold | Heat Stress Hours |
|------------------------|---------------------------|-------------------------|-------------------------------|-------------------|
| Lasso Vineyards | 2:00 hrs | 3/27 21:00 hrs | +44.4% | 0 |
| Orchard Farms | 3:12 hrs | 3/25 00:31 hrs | +7.8% | 8 |
| Late Rain Vineyards | 3:23 hrs | 03/21 01:00 hrs | +27.3% | 2 |
| Flatwoods Farm | 1:01 hrs | 03/21 00:45 hrs | +2.5% | 5 |
| Seven Brothers Cellars | 8:00 hrs | 03/18 05:00 hrs | -20.3% | 17 |

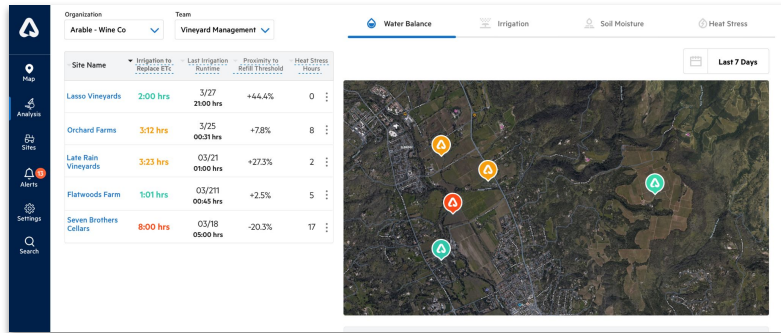




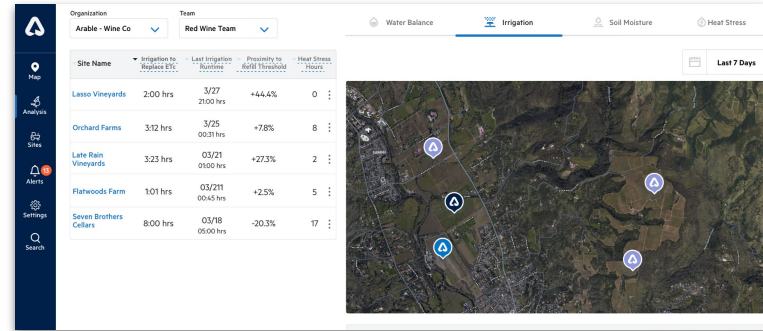
Overview of Multi-Site Map View

The icons on the map will change according to the selected metric, as the user navigates between the different metrics using the top bar icons. The Map View icons will be highlighted using the color-coded logic.

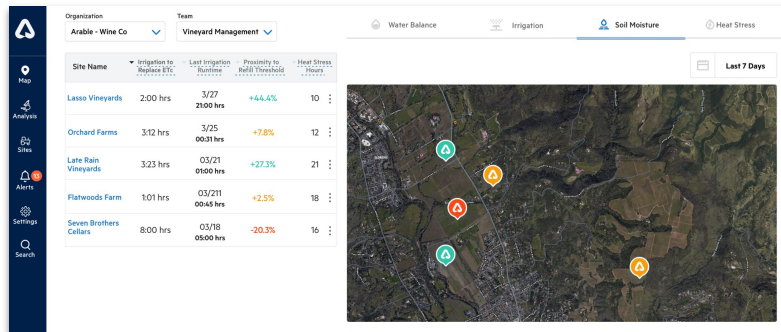
Water Balance View



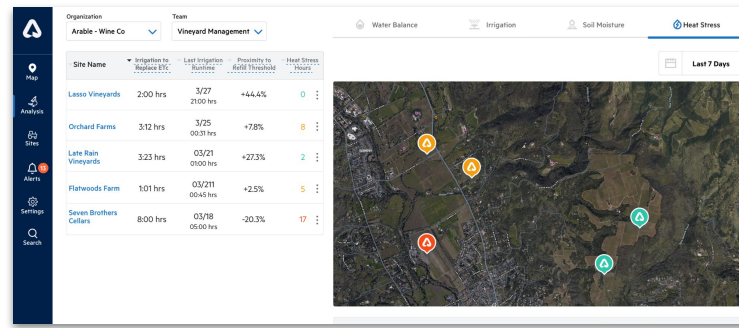
Irrigation View



Soil Moisture View



Heat Stress View

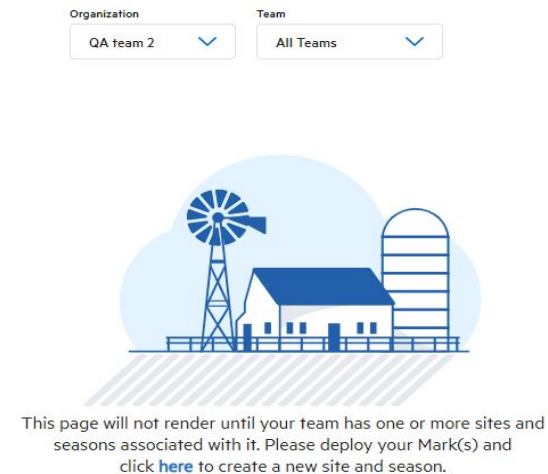




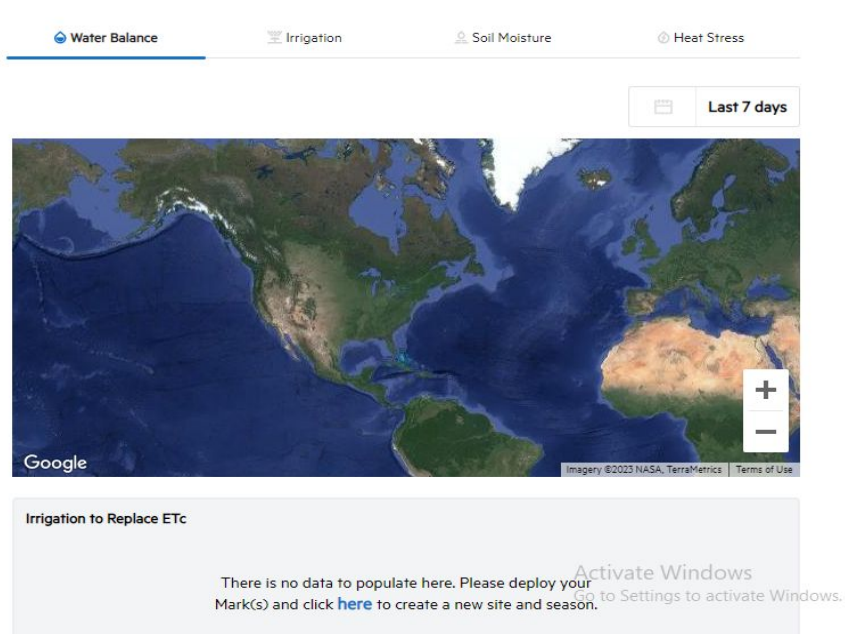
If users have no sites configured they will see a prompt to set up Sites

If an organization or team does not have a site, clicking on the 'here' sublink will take you to the Create Site Modal page.

As a result, the user will need to create a new site and season.



[ge.arable.com/dashboard/analysis/multisites/list/\(tab:multiSiteWater\)](https://ge.arable.com/dashboard/analysis/multisites/list/(tab:multiSiteWater))

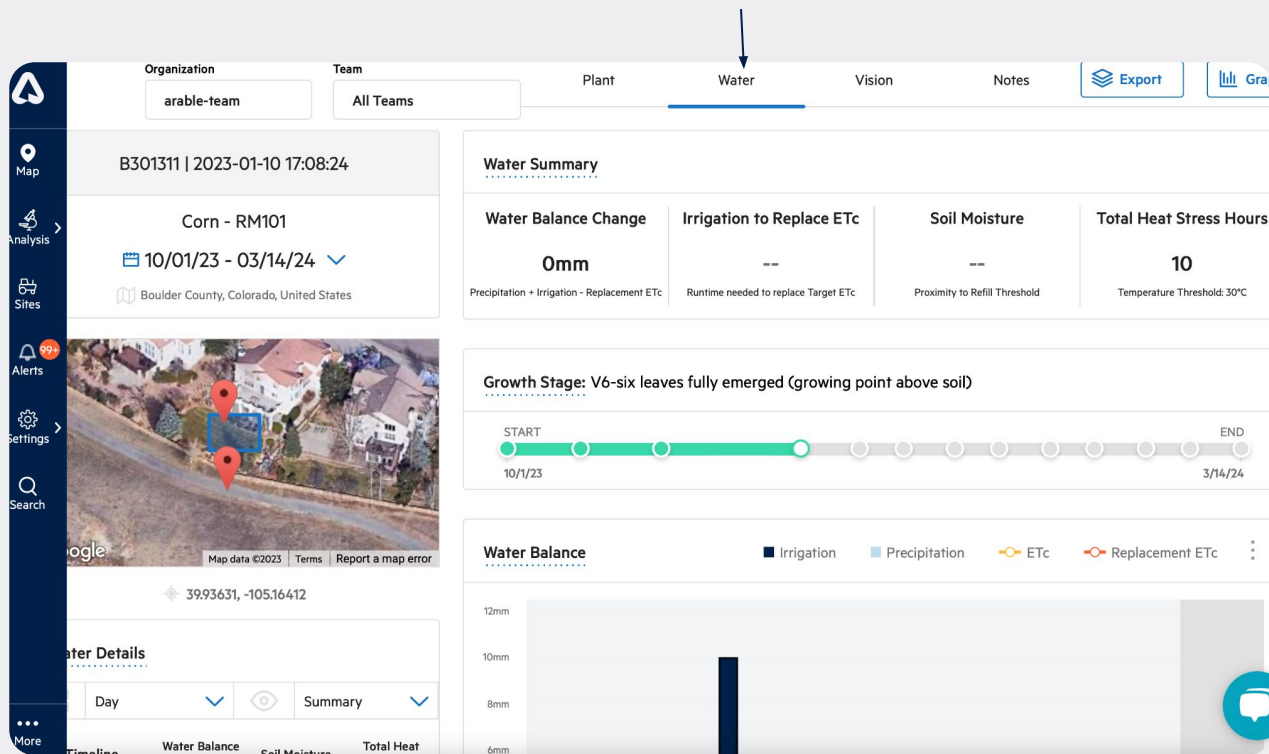


Activate Windows
Go to Settings to activate Windows.



Arable Water (Single-Site View)

SINGLE SITE DETAILS: 'Water'



The 'Water' tab for a single site can be accessed by clicking on a site detail page from the homepage. It will appear as an icon next to the 'Weather' and 'Plant' tabs.

Or

You can navigate to the multi-site Water page and click on a site name, then you will find the Single Site Water page, which displays any device sensor that has been configured with **Seasons**.



Overview of 'Single Site Water' page components

Organization

arable-team

Team

Jan Forslow

Jan's Backyard B301206

Corn - RM100

01/01/23 - 04/26/23 ✓

Marin County, CAL Fire Northern Region, California, United States



Google UMB SFML, CA OPC, Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO

37.84964, -122.48019

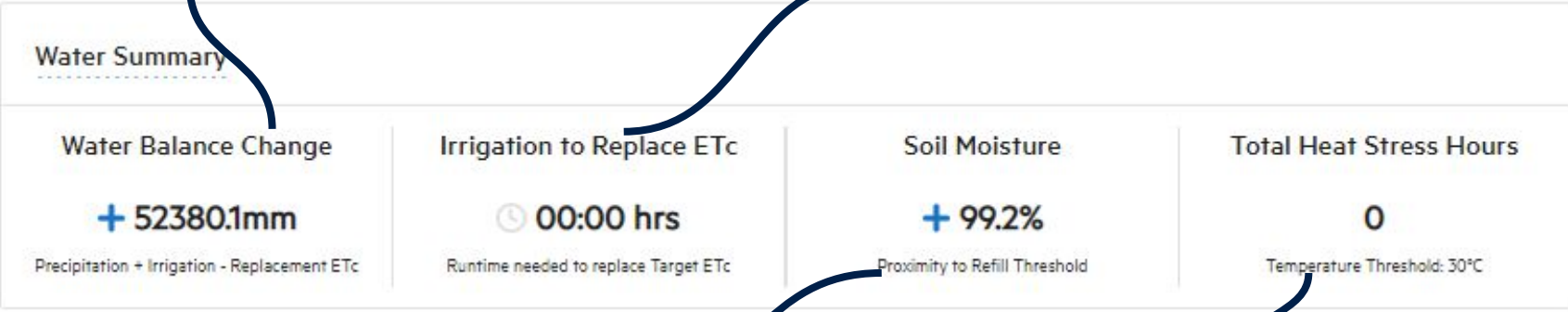
On the Single Site Water page, you will find a site description that includes the site name, crop and varietal, the season duration that was created, and the device location.



Overview of ‘Single Site Water’ page components

Water Balance Change: This was previously filled with cumulative Water Balance values and shall now be filled with values from the Water Balance Change row in the table. This denotes the equation: $\text{Precipitation} + \text{Irrigation} - \text{Replacement ETc}$ and is the amount of water needed to match desired water balance for the week.

Irrigation to Replace ETc: The irrigation system runtime needed to meet the defined Replacement ETc. The Replacement ET % is set in the Arable Web Water page, Water Balance visual. It will default to 100% if a Growth Stage is defined for the measurement period and otherwise it will be 0%. This value will only populate if a flow rate for a Gems Pressure Switch has been configured.



Soil Moisture: If the soil moisture reference values have not been defined by the user or if there is no probe attached to the site then there will be no data displayed in this visual.

Total Heat Stress Hours :The total number of daylight hours during which the air temperature is above the GDD max temperature threshold for the crop at the site since the start of the current season. If the GDD max temperature threshold is not defined for the crop in the system, then a default of 96°F is used.



‘Single Site Water’ : Components : - *Water Details*

When you land on the single site water page, the water details table will display weekly historical data, current data, and forecast data.

Week

Day

Week

Month

Growth Stage

Water Details

Week

Summary

Timeline

Water Balance Change

Soil Moisture

Total Heat Stress Hours

Apr 4 - 10
(Next 7 Days)

7mm

--

--

Apr 3 - 4
(This Week So Far)

52380.1mm

169.2%

0

Mar 27 - Apr 2
(Last Week)

14997.8mm

170.8%

0

Summary

Water Balance

Soil

Heat Stress

In the Water Details table dropdown, users can select the desired time frame (daily, weekly, monthly, growth stage) to view the data. This is a global control that affects the entire page and updates the views on all the other visuals accordingly. The table's right-hand toggle allows users to switch between the Summary, Water Balance, Soil Moisture, and Heat Stress views, which will be explained in the next slide.

71



Month view Soil Data

Growth Stage view 'Heat Stress' data



ARABLE



‘Single Site Water’ : Components : *Growth Stage*

Based on the number of 'Growth stages' created while creating a 'Season', you will see this information in the Growth stage bar line.

Growth Stage: planting date

V10-ten leaves fully emerged

START

3/27/23

END

9/8/23

The Growth Stage feature in our application marks the physiological development of a plant throughout its life cycle, which is primarily driven by heat, light, or the combination of both. These stages occur at progressive Growing Degree Days and are unique to a crop or even a varietal. They are essential for a range of timed applications and events, such as irrigation, inputs, pests/disease risk, frost risk, deficit irrigation strategies, and insurance policies. We offer default Growth Stages for some varieties, but users can also edit or enter their own if they have the necessary information.



‘Single Site Water’ : Components : *Water Balance*

Users can view a graph with their water inflows and outflows broken down by daily, weekly, or monthly views. Inflows (precipitation and irrigation) will be stacked and colored as shown below, and outflows (ETc and replacement ETc) will also be stacked and colored accordingly. The values of each bar will be expressed in either millimeters or inches depending on the user's settings. The default view will show weekly values. Forecasted data will have a white backdrop, current day's data will have a shaded backdrop, and observed data will have a gray backdrop. Forecasts for the following timestamps will be aggregated as follows: daily - next 7 days, weekly - next 1 week, monthly - no forecast (since we don't have a monthly forecast available for the next 1 week), growth stage - no forecast since we don't predict future growth stages.



ETc (evapotranspiration) : This represents the Arable Canopy Evapotranspiration at the site for the given measurement period on the x-axis. If there are multiple Marks associated with the site, their individual ETc values will be averaged.

Replacement ETc is the percentage of ETc that you would like to replace through irrigation. This can be configured by clicking on the three dots located on the right-hand side of the modal. For example, to irrigate and replace 80% of the observed ETc, a user can set the value for the current growth stage to 80. The values between 0 to 200 are accepted.



‘Single Site Water’ : Components : Sub Option of *Growth Stage*

* User can set the irrigation manually and ETc Replacement %, which is showing in below option:-



Activate Windows



Manual Irrigation

 Edit Delete Entry



‘Single Site Water’ : Components : Sub Option of *Growth Stage*

Enter ET Replacement %. The ET replacement % will determine the shaded area of the ET bar chart. If no ET replacement % is set then only ETc will be displayed on the graph. Set ET replacement percentages by growth stages. Enter values ranging from 0 to 200%. Default ‘% of ETc’ values will be 100.

×

ETc Replacement %

Enter percentage of ETc value for each growth stage (0-200 range values)

| Growth Stage | % of ETc |
|--------------|----------|
| start | 100.00 |
| mid | 100.00 |
| end | 100.00 |

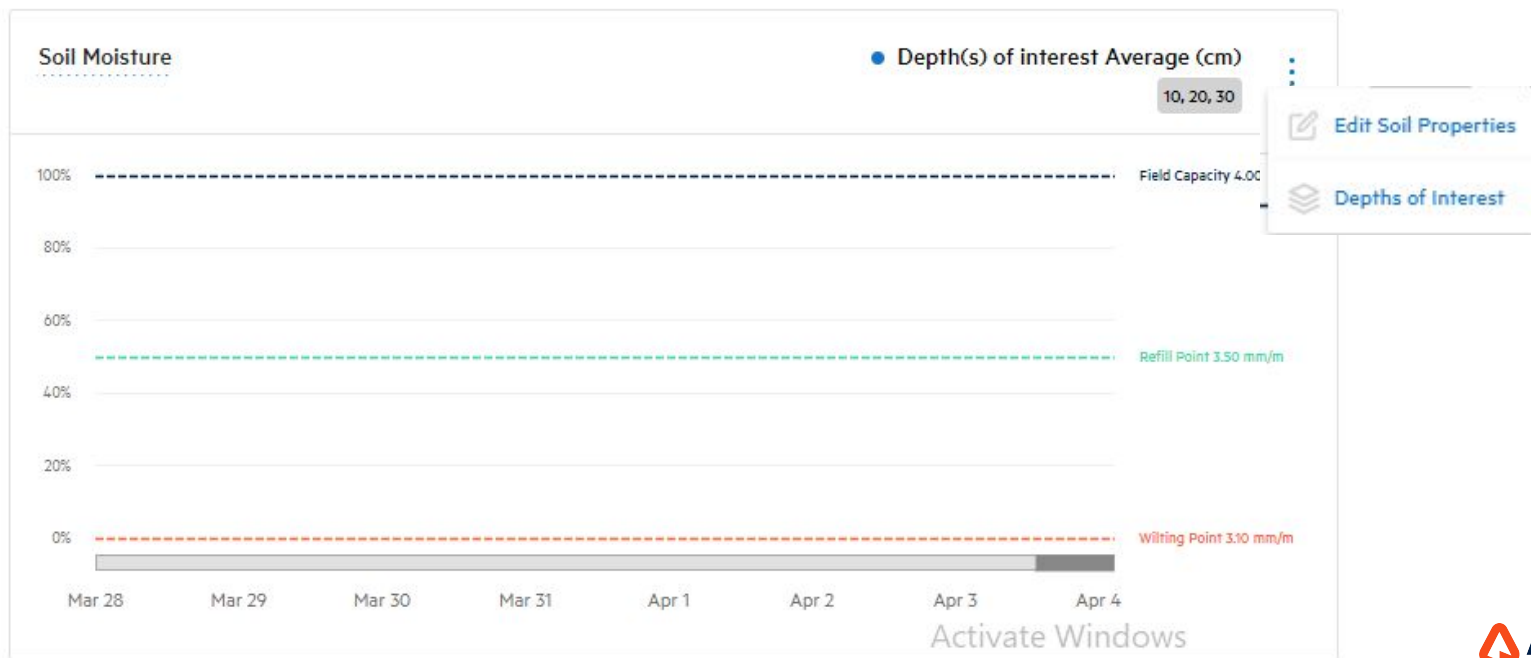
Close

Save



'Single Site Water' : Components : *Soil Moisture*

View an average of selected depths of interest that soil moisture probe measures. Set a Field Capacity, Refill Threshold, and Permanent Wilting Point expressed based on soil textures.

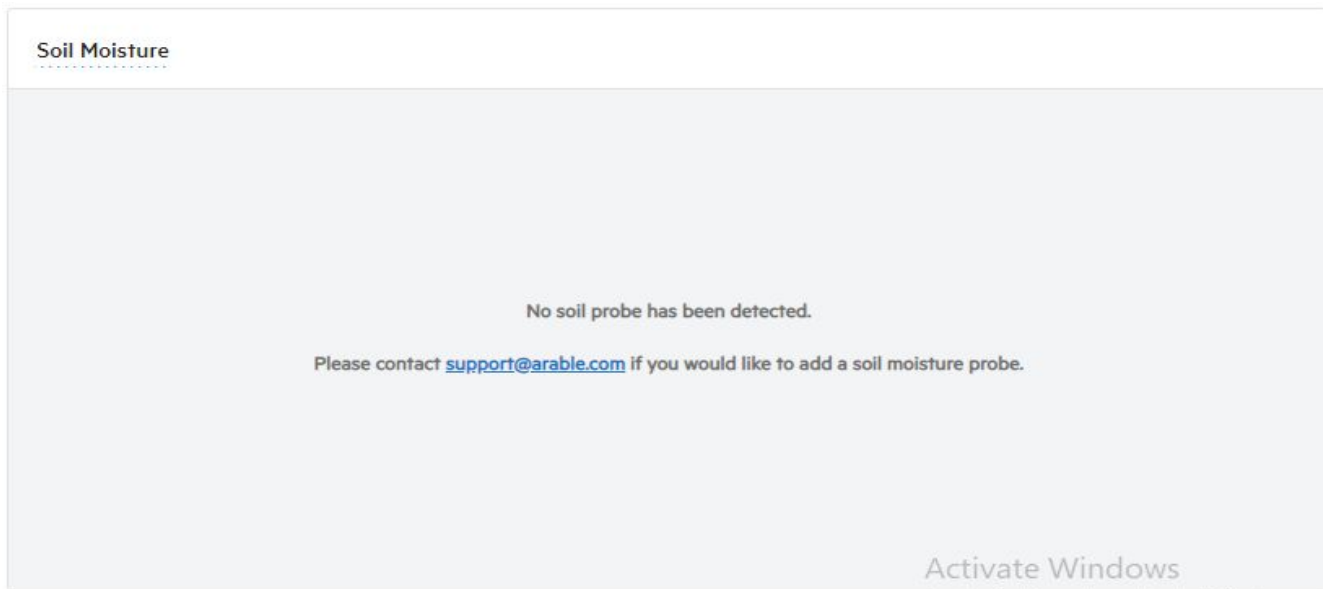




‘Single Site Water’ : Components : *Soil Moisture*

*If no soil probe has been detected, the graph will display a message that says “No soil probe has been detected. Please contact support@arable.com if you would like to add a soil moisture probe

*If one or more probes are detected, you can select different depths of interest to create a line depicting the average soil moisture of all of their depths.

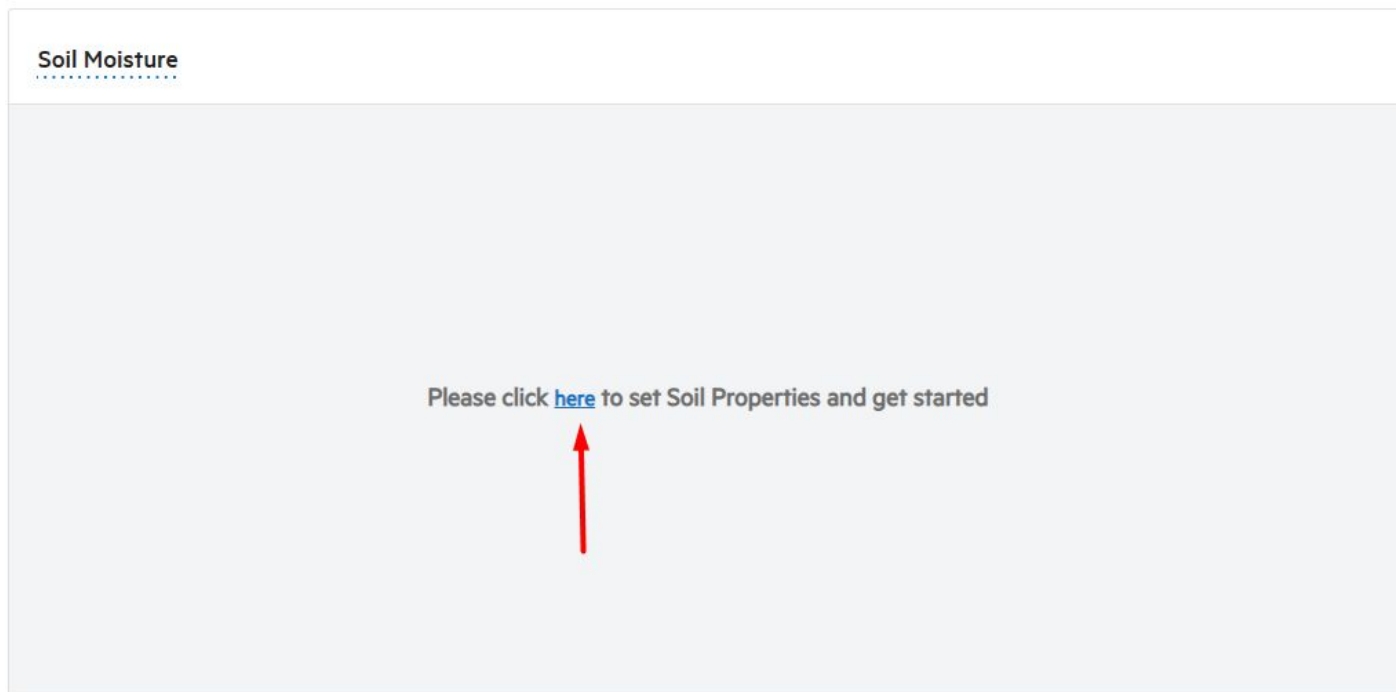


Activate Windows
Go to Settings to activate Windows.



‘Single Site Water’ : Components : *Soil Moisture - Setting Soil Properties*

*If you have multiple probes associated with site, see the average of all of those depths across the multiple probes. arriving on the page users shall be prompted to set their soil properties.

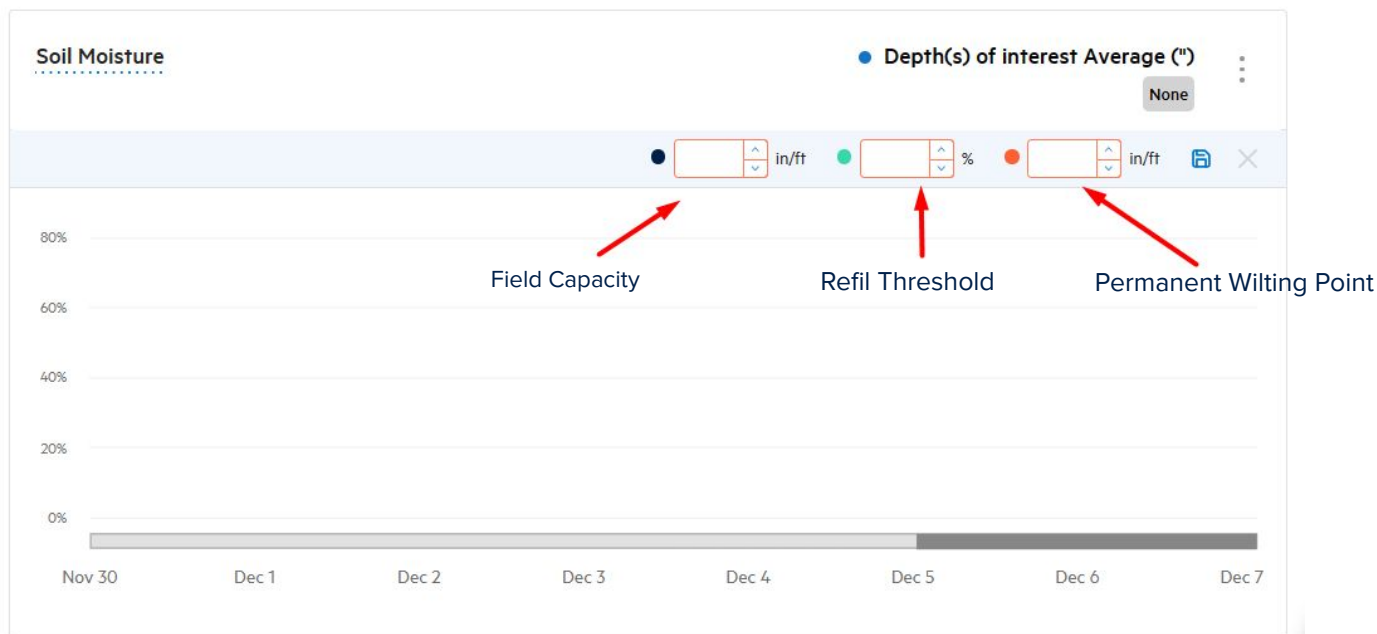




‘Single Site Water’ : Components : *Soil Moisture*

*First, enter reference lines for Field Capacity, Refill Threshold, and Permanent Wilting Point.

NOTE: If the site has a soil probe, you **MUST** first add soil properties before setting a depth of interest and the stress point must be equal to or less than the refill point.





‘Single Site Water’ : Components : *Soil Moisture - Setting Depth of Interest*

*If you have multiple probes associated with site, see the average of all of those depths across the multiple probes. arriving on the page users shall be prompted to select their depth(s) of interest.

Soil Moisture

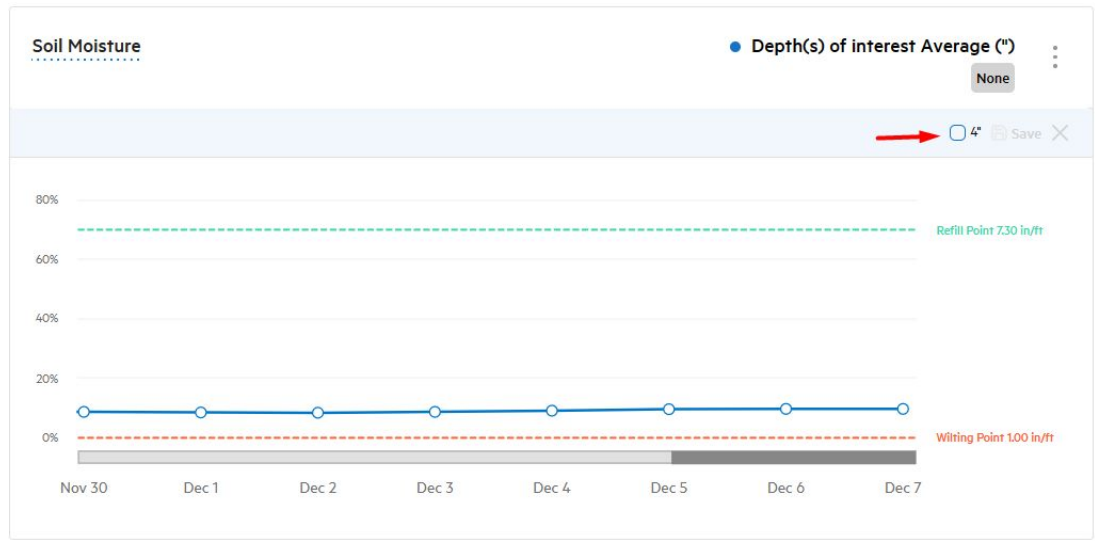
Please click [here](#) to set Depths of Interest and get started



‘Single Site Water’ : Components : *Soil Moisture*

Choose from a drop down selector to choose the depths of interest. The drop down will show all available depths. Depending on the size of the probe(s) associated with the site, depths range from 10 cm to 120 cm.

Note: If the site has a soil probe, the user should first add soil properties before setting a depth of interest.





Arable Vision (Mark 3 Devices)



VISION - App Admin (Configuration)

| Key | Description | Orgs | Users | Enabled Everywhere |
|----------|------------------------|------|-------|--------------------|
| water | use the water feature | 23 | 36 | ✗ |
| vision ← | use the vision feature | None | 27 | ✗ |
| sites | use the sites feature | 428 | 12 | ✗ |

Feature Flags

Home / Feature Flags

Feature Flag Settings

Key

Description (optional)

☐ Enable Everywhere (optional)

Update

Users ←

 Add User

Email

Actions

Orgs ←

 Add Org

Org

Actions

- The '*Vision feature flag*' can be Added and Removed under vision menu

- The Vision feature can be Added and Removed for each user and user roles by adding their respective mail Id under '*User*'

- The Vision feature can be Added and Removed for the Organization by adding their respective Org name under '*Orgs*'



VISION - App Admin (Configuration)

The App Admin has the access to 'Enable' and 'Disable' the Vision license for all the Mark3 devices.

- The Vision license option will be present on the last column for each Mark3 device under Devices menu.
- On enabling the option the Vision license will be provided for the specific device and the device starts capturing the images.
- On disabling the option the Vision license will be disabled for the specific device and the device stops capturing the images.

| Org | Device | Current Location | Battery % | Signal | State | Firmware | Last Sync | Last Deploy | Vision |
|-------------|---------|-------------------------------|-----------|-----------|--------|-------------------|----------------|-------------|-------------------------------------|
| arable-team | B301255 | B301255 2023-06-08 03:16:08 | 70.0 | Very Good | Active | Release-2.1.106.6 | 20 minutes ago | 7 days ago | <input checked="" type="checkbox"/> |

On clicking on the "check box" the "Vision license" will be enabled for the Mark3 device

| Org | Device | Current Location | Battery % | Signal | State | Firmware | Last Sync | Last Deploy | Vision |
|-------------|--------|------------------------------|-----------|-----------|----------|-----------------------|-----------|-------------|--------------------------|
| arable-team | B30042 | B30042 2023-06-19 05:10:44 | 98.0 | Very Good | Inactive | PostmanRuntime/7.32.2 | a day ago | a day ago | <input type="checkbox"/> |

On clicking on the "check box" the "Vision license" will be Disabled for the Mark3 device



Welcome To Vision

The screenshot displays the Arable Vision web application. A central dialog box titled "Welcome To Vision" is overlaid on a dark-themed world map. The dialog box contains the following text:

Welcome To Vision

You will now be able to access the images captured from your Mark 3 deployment(s).

You can access Vision by searching for your Site name, Device Id, or by navigating to your Site detail page and selecting the Vision tab.

If you would like to enable Vision on additional devices, please contact your Customer Success representative.

A "Close" button is located at the bottom of the dialog box.

The background interface includes a sidebar with navigation options: Map, Analysis, Sites, Alerts, Settings, and Search. The top navigation bar shows "Organization: arable-team" and "Team: All Teams". On the right, there are tabs for "Current Sites" and "Unassigned Devices". The "Current Sites" tab is active, displaying a table with the following data:

| Site Name | Temp | Rain | Wm* | |
|-------------------------|------|------|-----|-------------|
| Wnew_Site | 59°F | 0" | 1 | 27 mins ago |
| Wnew_Site_Historical | 76°F | 0" | 1 | 27 mins ago |
| Wnew_Site_Mark2_Vision | 44°F | 0" | 1 | 32 mins ago |
| TTWC_Site | — | 0" | — | 32 mins ago |
| 4 MAC RANCH | 41°F | 0" | 1 | 32 mins ago |
| 91_springboard_koram... | 76°F | 0" | 1 | 27 mins ago |
| AgTech Garage | — | 0" | — | 32 mins ago |
| arable-team_site_315 | 59°F | 0" | 1 | 32 mins ago |
| arable-team_site_320 | 59°F | 0" | 1 | 32 mins ago |
| arable-team_site_325 | 50°F | 0" | 1 | 3 mins ago |
| arable-team_site_308 | 50°F | 0" | 1 | 32 mins ago |
| B301034 Site | — | 0" | — | 3 mins ago |

The step screen is displayed on login shows “*Welcome To Vision*” indicating the user has access to Vision feature for there Mark3 deployment(s) and can enable the Vision feature for other Mark3 devices by contacting the Customer Success

SINGLE SITE DETAILS: 'Vision'

The 'Vision' tab for a single site can be accessed by clicking on a site detail page from the homepage. It will appear in between the 'Water' and 'Notes' tabs.

Organization: arable-team Team: All Teams

Weather Plant Vision Notes Export Graph

Active Site

Bangalore East, Bengaluru Urban District, Karnataka, India

Deployment: B301028 | 2023-05-08 20:42:50 View: All Images

Arable Vision is not enabled.
Please contact [Customer Success](#) to enable this feature

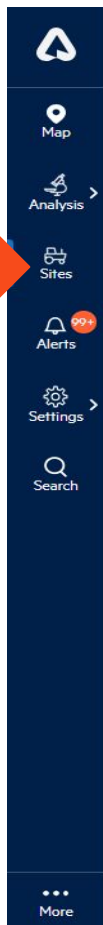
Site's Device List

Local Site Time: 11:05 am

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|-------------------|
| B301028 | B301028 20... | Current | None |

SINGLE SITE DETAILS: 'Vision License Disabled'

The 'Vision' tab with a message 'Arable Vision is not enabled. Please contact Customer Success to enable this feature' indicates the Vision license is disabled for the specific Mark3 device



Organization
arable-team

Team
All Teams

Weather

Plant

Vision

Notes

Export

Graph

Deployment
B301028 | 2023-05-08 20:42:50

View
All Images

Active Site

Bangalore East, Bengaluru Urban District, Karnataka, India

12.90671, 77.68616

Site's Device List

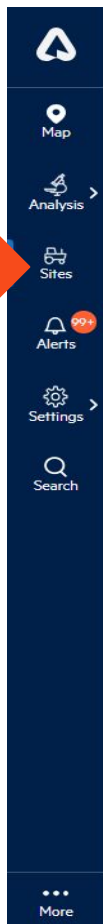
Local Site Time: 11:05 am

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|-------------------|
| B301028 | B301028 20... | Current | None |

Arable Vision is not enabled.
Please contact [Customer Success](#) to enable this feature

SINGLE SITE DETAILS: 'Vision License Enabled'

The 'Vision' tab with a message 'The selected deployment does not have any images available. Please check back again later' indicates the Vision license is enabled for the specific Mark3 device



Organization
arable-team

Team
All Teams

WeatherPlantVisionNotes

ExportGraph

Deployment
B301002 | 2022-11-19 08:25:38

View
All Images

arable-team-site-308

Marin County, California, United States (2) Marks

Google Map data ©2023 Terms Report a map error
37.8495, -122.48021

Site's Device List

Local Site Time: 9:31 pm

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|-------------------|
| B301002 | Untitled Loc... | Current | |
| B301188 | B301188 20... | Current | |

The selected deployment does not have any images available.
Please check back again later

SINGLE SITE DETAILS: 'No Mark3 Devices'

The 'Vision' tab with a message 'No Mark3 devices deployed in this site.' under Site's Device List indicates the site does not have any Mark3 device associated to the site. The 'Deployment' and the 'View' will be greyed out as 'Mark2' does not support the 'Vision feature'.

Organization: arable-team | Team: All Teams | Weather | Plant | Vision | Notes | Export | Graph

Akash site

Chilanga District, Lusaka Province, Zambia | (0) Marks

Google | Map Data | Terms | Report a map error | -15.54796, 28.24945

Site's Device List

Local Site Time: 7:28 am

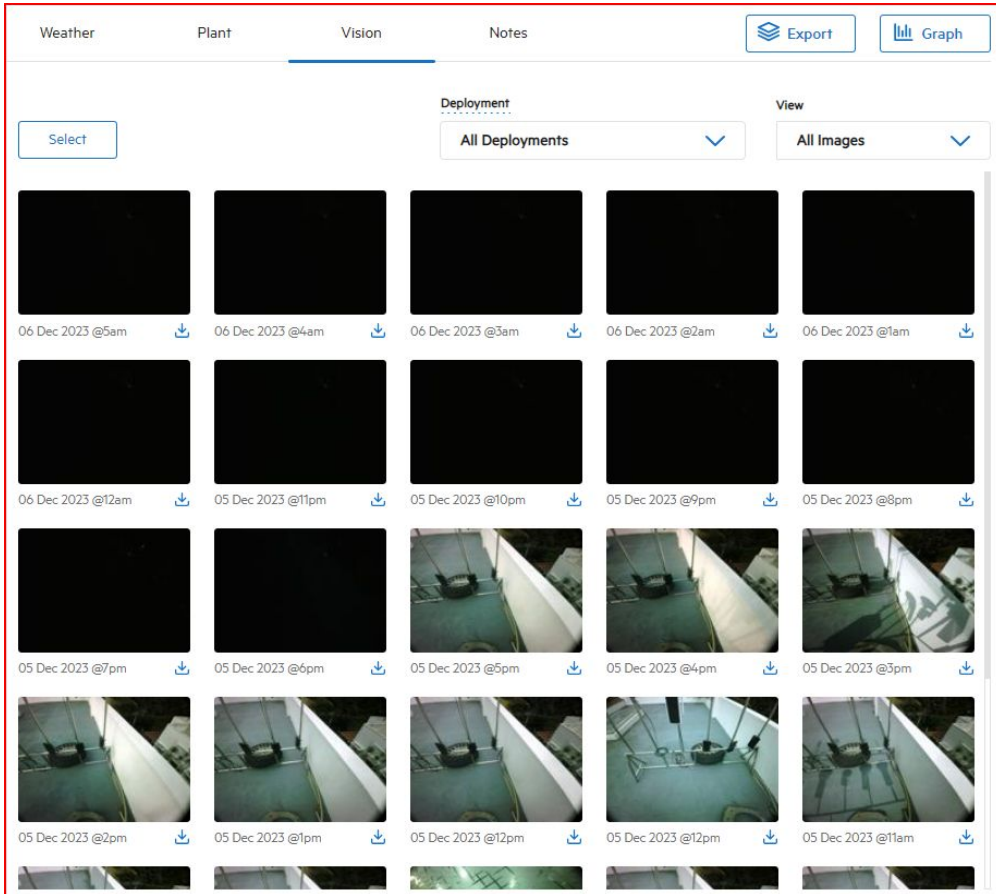
| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|--|-----------------|-------------------|-------------------|
| No Mark 3 devices deployed in this site. | | | |

Deployment: No Deployments | View: All Images

Arable Vision is not enabled.
Please contact [Customer Success](#) to enable this feature.



SINGLE SITE DETAILS: 'Gallery View'



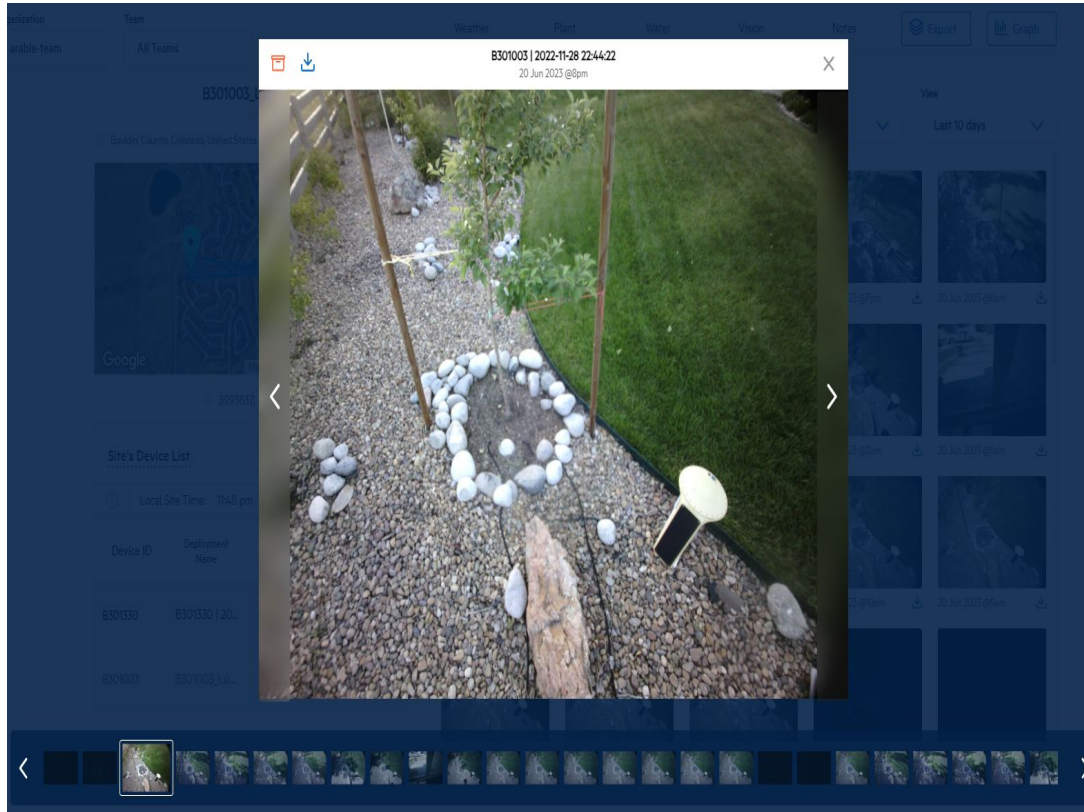
Gallery View consist of the following information.

- Select Button
- 'Deployment' Drop Down
- 'View' Drop Down
- 20 Images per page
- Download button on each image
- Image captured Date and Time on each Image

Note : Gallery View supports '*Lazy Loading*', can be scrolled Up and Down to view more Images if it exceeds more than 20 images.



SINGLE SITE DETAILS: 'Image View'



On selecting any image from gallery the Image View is displayed and consist of the following information.


- Archive Button
- Download Button
- 'Deployment' Name on each Image
- Image captured Date and Time on each image
- Close Button
- Left/Right Arrow key to view Next/Previous Image
- Scroll bar with multiple Images and can be selected any Image to view



Overview of the Vision Component Page

Multiple_Mark3_Mark2

Bangalore East, Bangalore Urban, Karnataka, India (8) Marks



12.90651, 77.68624

Site's Device List

Local Site Time: 1:54 pm

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|-------------------|
| B301065 | B301065 Loc... | Current | None |
| B301402 | B301402 Lo... | Current | None |
| B301016 | B301016_Lo... | Current | None |
| B301028 | B301028 2... | Current | None |
| B301034 | B301034 Lo... | Current | None |

On the Site Vision page, you will find the below site descriptions.

- Site Name
- Mark device Count
- Location Markers
- Mark3 site's device list

Site's Device List

- The '**Highlighted**' Device ID indicates the device '**Vision License is enabled**'.
- The '**Greyed Out**' Device ID indicates the device '**Vision license is disabled**'.

Note : The Site's Device List in Vision tab shows only the Mark3 devices and the count will be displayed as per the devices present in the list of the devices.

Overview of the Vision Component : 'Deployment and View'

Deployment Lists

Deployment

| |
|-------------------------------|
| All Deployments |
| All Deployments |
| B301065 2022-11-26 15:41:28 |
| B301402 2022-12-14 18:17:02 |
| B301016 2022-11-28 19:34:47 |
| B301028 2023-05-08 20:42:50 |
| B301034 2022-11-26 20:42:10 |
| B301158 2022-12-18 16:07:01 |
| B301371 2022-12-14 18:01:41 |
| B301023 2022-12-12 11:08:46 |

View/Filter

| |
|------------|
| All Images |
| All Images |
| Archived |

The **Deployment** Drop Down lists consist of the following information.

- The Deployment drop down will show all the Devices associated with the site.
- '**All Deployment**' will show the images captured by all the Current and Historical Mark3 devices associated with the site.
- Selecting any deployment will display the images captured by that devices.
- A '**logo**' present initial to the deployment name indicates that the location is '**Historical**' but the images are present.
- Vision license enabled deployment name will be '**Highlighted**'.
- Vision license disabled deployment name will be '**Greyed Out**'.

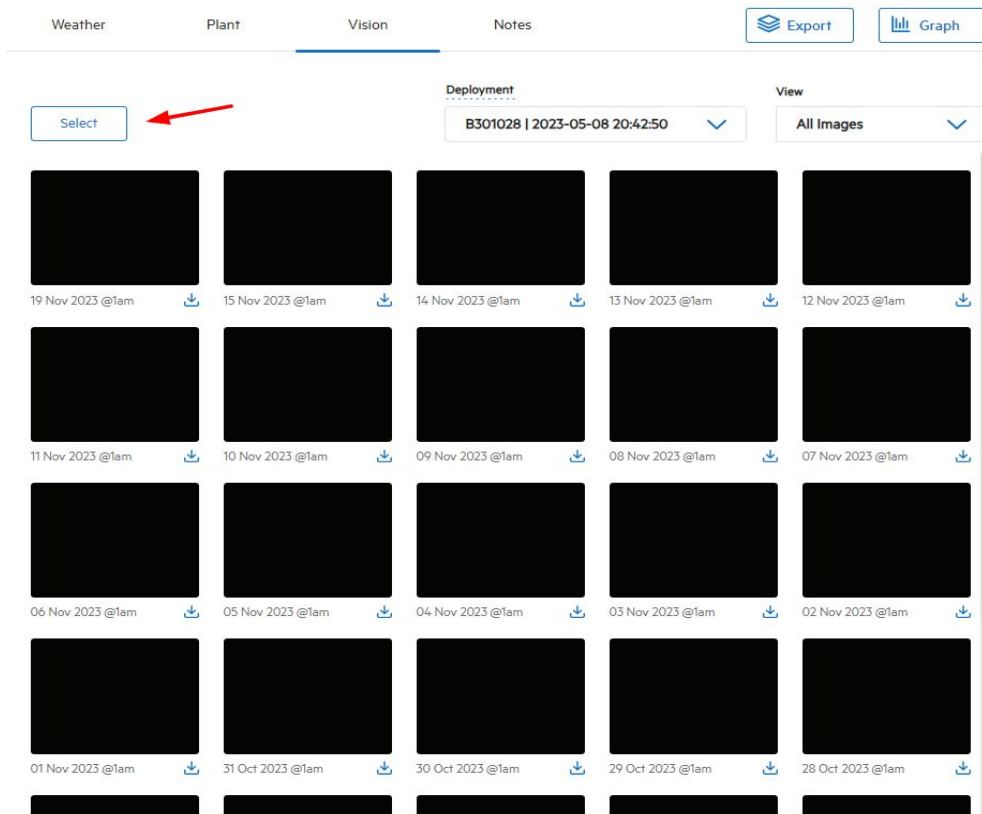
The '**View**' consist of the following information.

- The View acts has an filter where the images can be filtered for All Images and Archived.
- The '**Archived**' will show the images which is archived from the other view i.e., from All Images.



Overview of the Vision Component : 'Select and Download'

Select and Download Button



- The '*Select*' button is present on the top left corner in the Image grid

- Multiple/Single Images can be selected for any of the '*Deployment*' by clicking on the Select button first, later selecting the Images


- The 'Select' button is used for '*Archiving*' the Images from '*View*' of All Images.

- The 'Select' button is also used for '*Restoring*' the Images from the Archived '*View*'.


- The '*Download*' button will download the Image to your system

Overview of the Vision Component : 'Archive and Cancel in Gallery View'


Archive and Cancel Button




Map




Analysis




Sites



Alerts



Settings



Search


More

Organization
arable-team

Team
All Teams

Sentek Site



Boulder County, Colorado, United States



39.9362, -105.16409

Site's Device List

Local Site Time: 2:07 am

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|---|
| B301003 | B301003_Lo... | Current |  |
| B301311 | B301311 20... | Current |  |
| D003692 | D003692 Lo... | Current | None |

Weather


Plant

Water

Vision


Notes

Cancel




Deployment


All Deployments



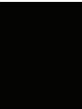
07 Dec 2023 @1am




07 Dec 2023 @12am



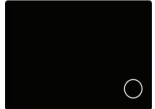
07 Dec 2023 @12am



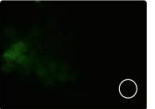
06 Dec 2023 @11p




06 Dec 2023 @10pm



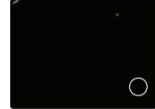
06 Dec 2023 @10pm



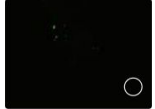
06 Dec 2023 @9pm



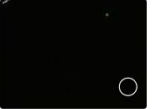
06 Dec 2023 @9p




06 Dec 2023 @8pm



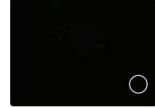
06 Dec 2023 @7pm



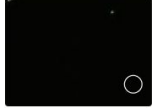
06 Dec 2023 @7pm



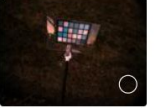
06 Dec 2023 @6p




06 Dec 2023 @5pm



06 Dec 2023 @5pm



06 Dec 2023 @4pm



06 Dec 2023 @4pm

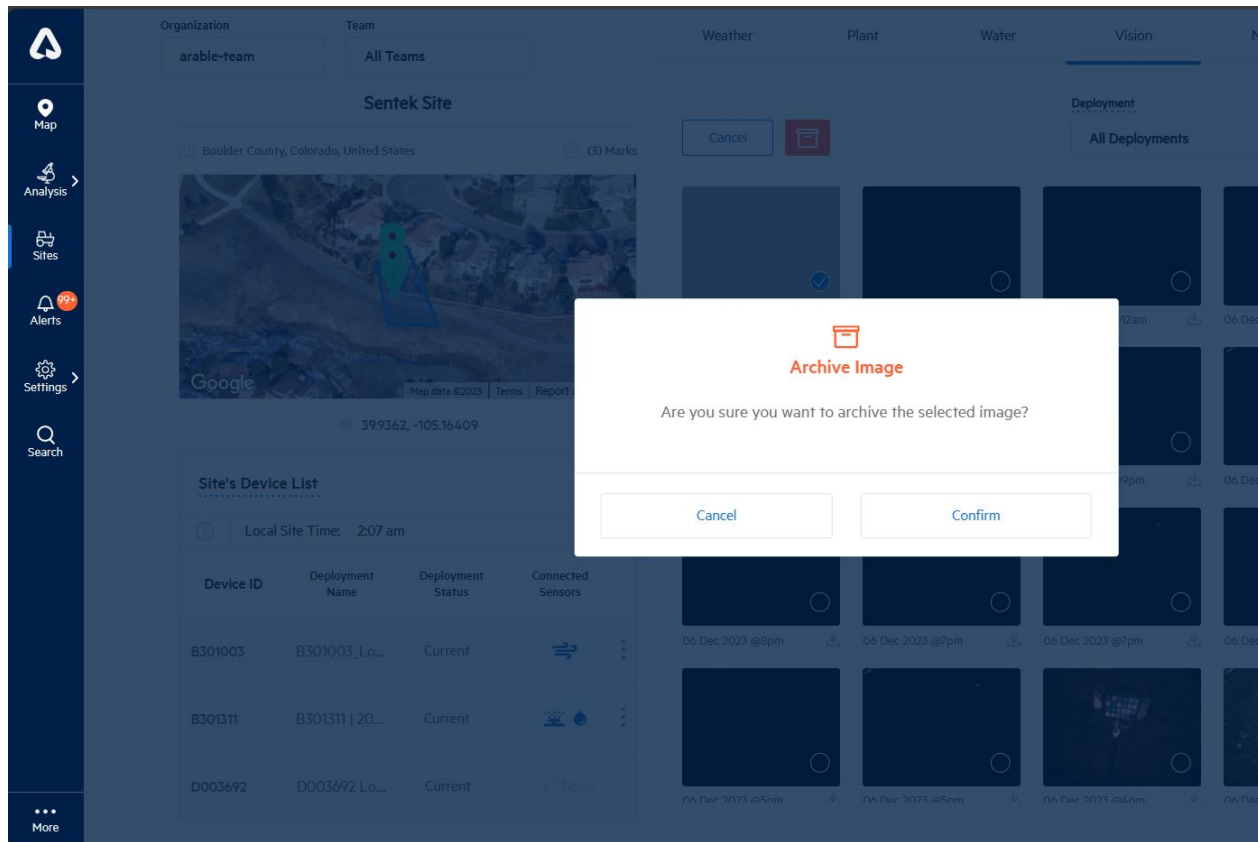
- The 'Archive' button is present on the top left corner in the Image grid

- The Archive button will appear 'Red' in color after selecting Single/Multiple Images

- The Cancel Button is used to cancel the selected Images

- The Archive button is present for 'All Deployments' and 'single deployment' for all the 'View' i.e., All Images.

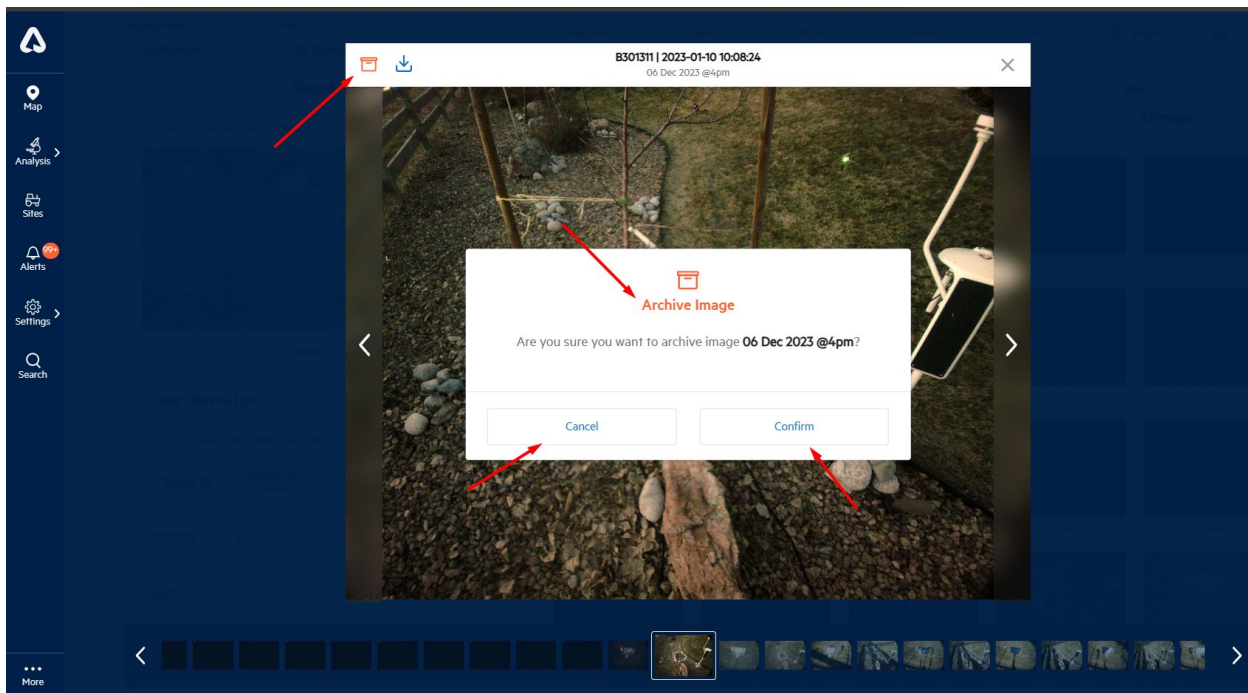
Overview of the Vision Component : 'Archive of Images from Gallery View'



- The selected Single/Multiple Images can be archived by clicking on the archived button
- A pop up message will be displayed on clicking the archive button indicating the selected image can be '**Archived**'
- Based on the action provided the '**Confirm**' button will archive the selected Images and the '**Cancel**' button will discard the message
- The archived Images will be present under '**Archived**' view



Overview of the Vision Component : 'Archive and Download of Image from Image View'



- The selected Image can be '**Archived**' and '**Download**' by clicking on the button which is present on the top left corner of the Image.
- A pop up message will be displayed on clicking the archive button indicating the opened Image can be '**Archived**'
- Based on the action provided the '**Confirm**' button will archive the selected Image and the '**Cancel**' button will discard the message
- The archived Images will be present under '**Archived**' view
- Single Image can be archived and downloaded from the Image View

Overview of the Vision Component : 'Restore and Cancel in Gallery View'

Restore and Cancel Button

The screenshot displays the Arable Vision interface. On the left, a sidebar contains navigation icons for Map, Analysis, Sites, Alerts, Settings, and Search. The main content area is divided into several sections. At the top, there are tabs for Organization (arable-team), Team (All Teams), Weather, Plant, Water, Vision (selected), and Notes. Below these are buttons for Export and Graph. The central part of the interface shows a map of Boulder County, Colorado, with a green pin and a blue rectangle indicating a selected area. Below the map is a 'Site's Device List' table. To the right of the map is a 'Deployment' section with a dropdown menu set to 'All Deployments' and a 'View' dropdown set to 'Archived'. Below this is a grid of three images showing a solar panel deployment. The first image has a blue checkmark icon in the bottom right corner, indicating it is selected. A red arrow points to this icon. Above the images are buttons for 'Cancel' and 'Restore' (a blue square with a white 'X'). A red arrow points to the 'Restore' button.

Organization: arable-team Team: All Teams

Sentek Site

Boulder County, Colorado, United States (3) Marks

Map data ©2023 Terms Report a map error

399362, -105.16409

Site's Device List

Local Site Time: 2:07 am

| Device ID | Deployment Name | Deployment Status | Connected Sensors |
|-----------|-----------------|-------------------|-------------------|
| B301003 | B301003_Lo... | Current | |
| B301311 | B301311 20... | Current | |
| D003692 | D003692 Lo... | Current | None |

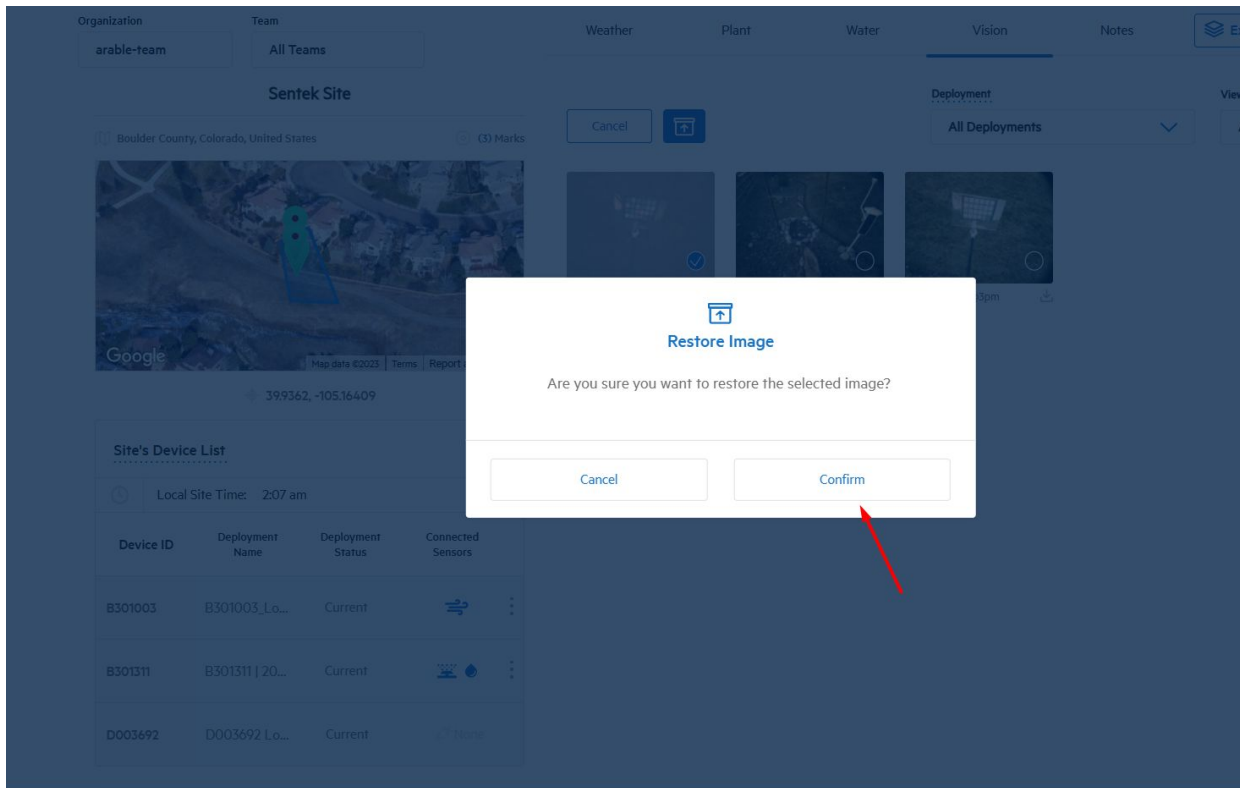
Deployment: All Deployments View: Archived

Cancel Restore

06 Dec 2023 @4pm 06 Dec 2023 @4pm 06 Dec 2023 @3pm

- The '**Restore**' button is present on the top left corner in the Image grid
- The Restore button will appear '**Blue**' in color after selecting Single/Multiple Images
- The Cancel Button is used to cancel the selected Images
- The Restore button is present for '**All Deployments**' and '**Single Deployment**' only under the '**Archived**' View

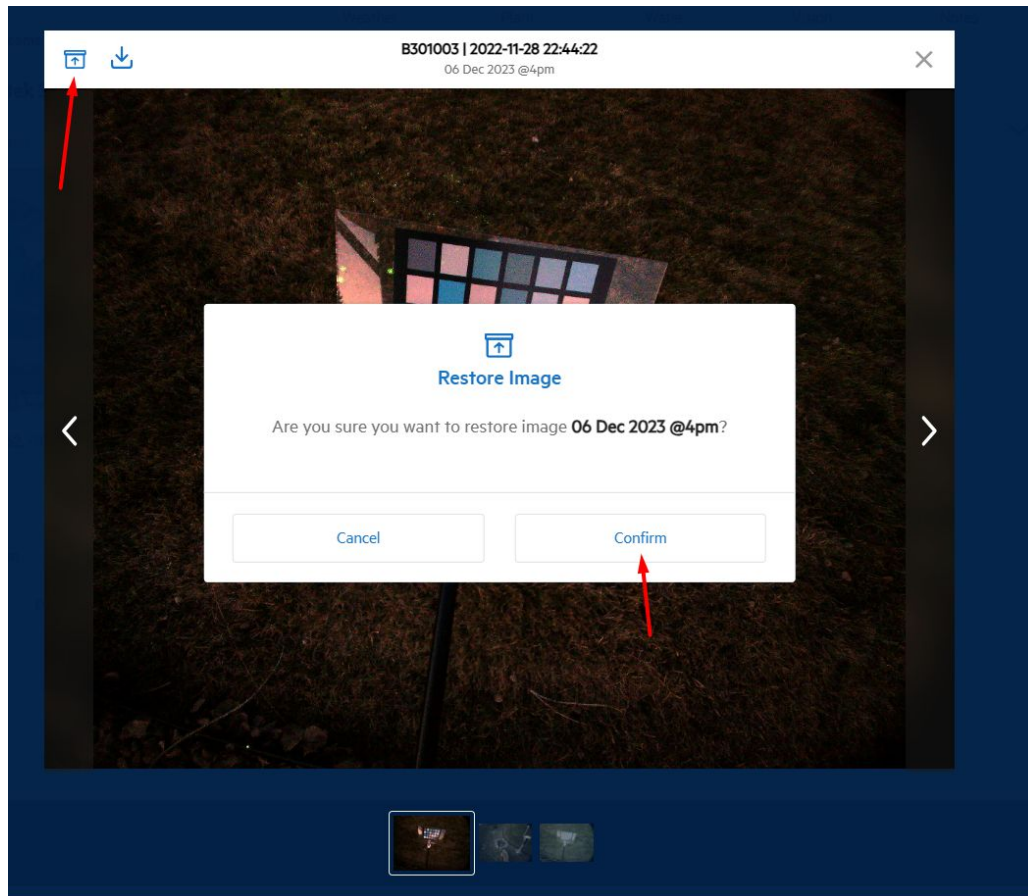
Overview of the Vision Component : 'Restore of Images from Gallery View'



- The selected Single/Multiple Images can be restored by clicking on the restore button
- A pop up message will be displayed on clicking the restore button indicating the selected image can be '**Restored**'
- Based on the action provided the '**Confirm**' button will restore the selected Images and the '**Cancel**' button will discard the message
- The restored Images will be sorted and moved to there original position from were the Images were 'Archived'



Overview of the Vision Component : 'Restore and Download of Image from Image View'



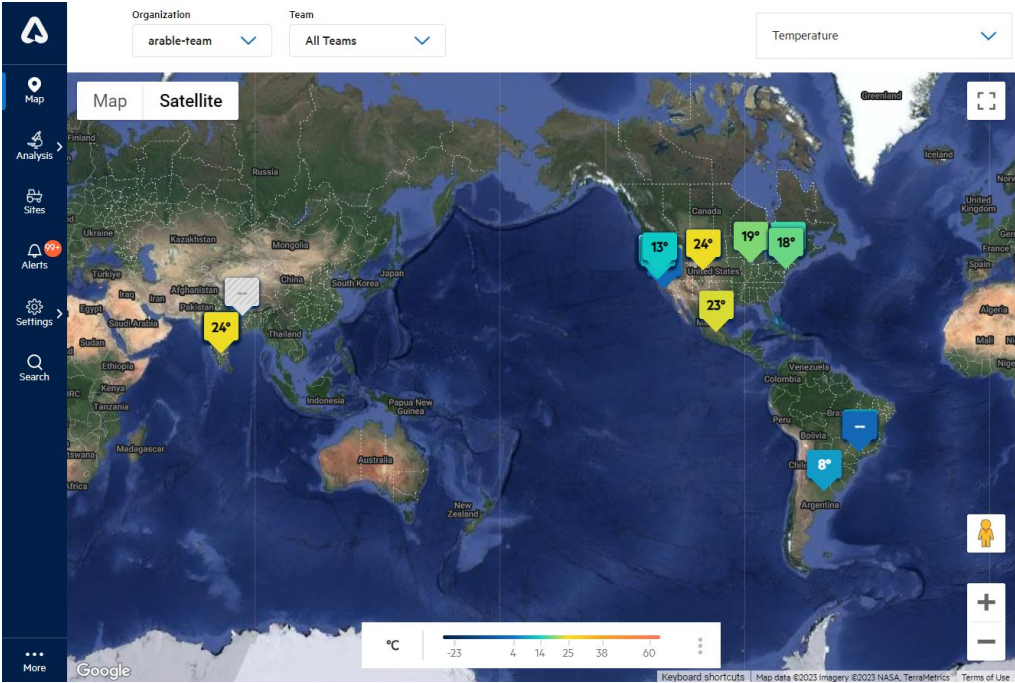
- The selected Image can be '**Restore**' and '**Download**' by clicking on the button which is present on the top left corner of the Image.
- A pop up message will be displayed on clicking the restore button indicating the opened Image can be '**Restored**'
- Based on the action provided the '**Confirm**' button will restore the selected Image and the '**Cancel**' button will discard the message
- The restored Images will be sorted and moved to there original position from were the Images were '**Archived**'
- Single Image can be restored and downloaded from the Image View



Arable Support Access



Hubspot : Chat Bubble Icon



The screenshot shows the Arable Hubspot interface with a table of current sites. Above the table are tabs for 'Now' and 'Tomorrow's Forecast'. The table has columns for Site Name, Temp, Rain, W/m², and a timestamp. A chat bubble icon is located at the bottom right of the table, with an orange arrow pointing to it.

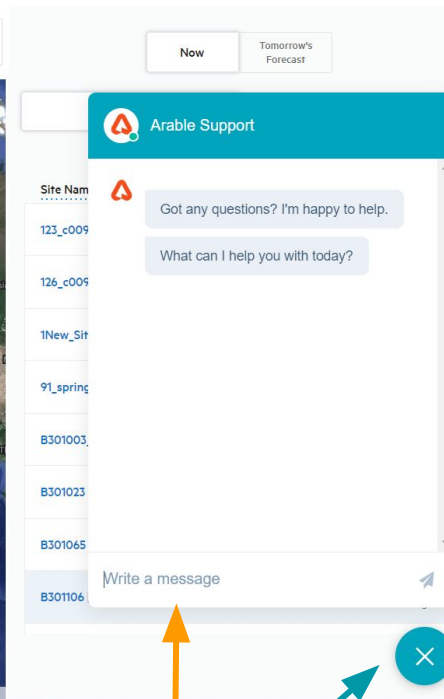
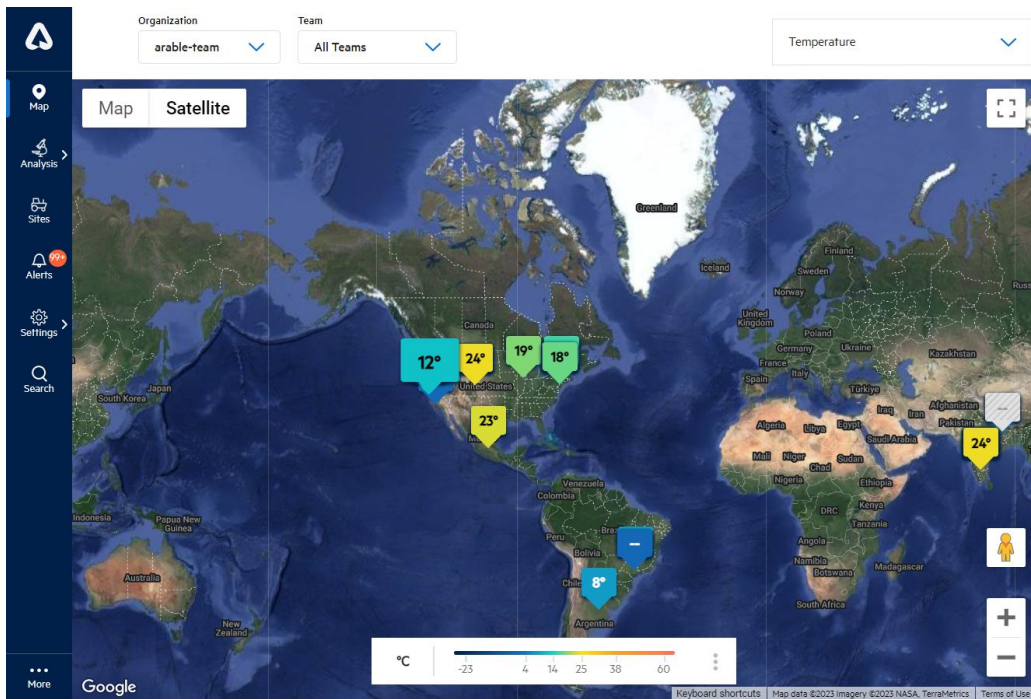
| Site Name | Temp | Rain | W/m² | Timestamp |
|---------------------------|------|-------|------|-------------|
| 123_c009018 | 12°C | 0" | 1 | 11 mins ago |
| 126_c009018 | 12°C | 0" | 0 | 11 mins ago |
| 1New_Site_Test | 24°C | 0.01" | 44 | 25 mins ago |
| 91_springboard_koram... | 24°C | 0" | 1 | 12 mins ago |
| B301003_Location | 21°C | 0" | 0 | Few sec ago |
| B301023_Location | -- | 0.08" | -- | 3 hrs ago |
| B301065_Location | -- | 0.07" | -- | 9 mins ago |
| B301106 2023-01-12 2... | 12°C | 0" | 0 | 5 mins ago |

Introduction:
Hubspot chat bubble is based on knowledge base and support bot.

It will be used for Customer Support ticket management in addition to as a CRM



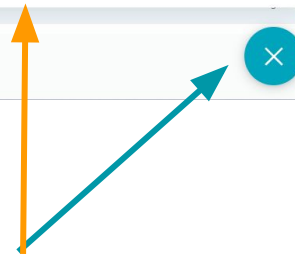
Hubspot : Chat Bubble View



Introduction:

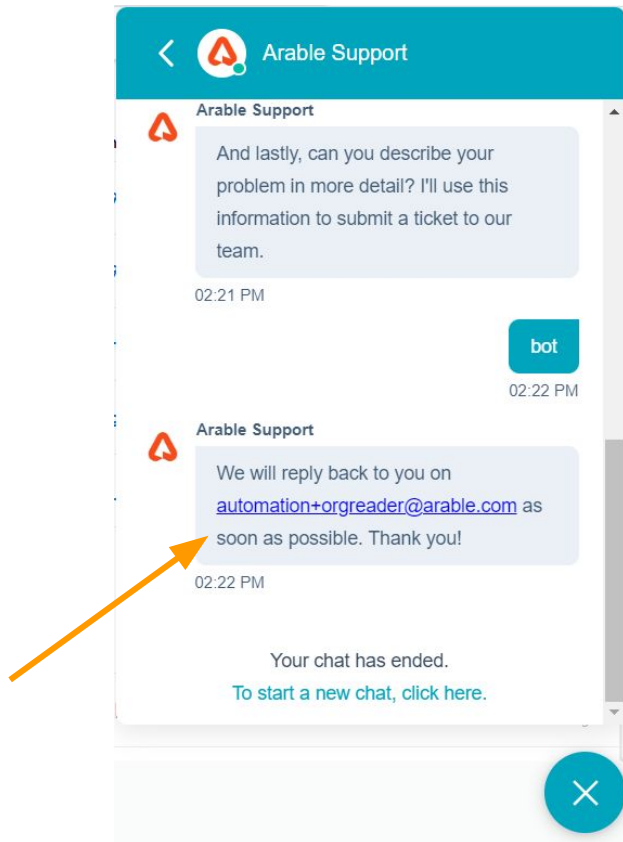
Hubspot chat will allow user to enter the query and based on that query it will provide knowledge based search.

User can close the chat by clicking on "X" button.





Hubspot : View



Overview:

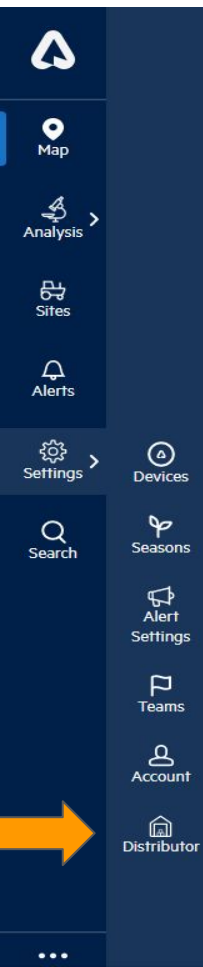
Hubspot chat bubble will help in automatic creation ticket.



Distributor Functionality



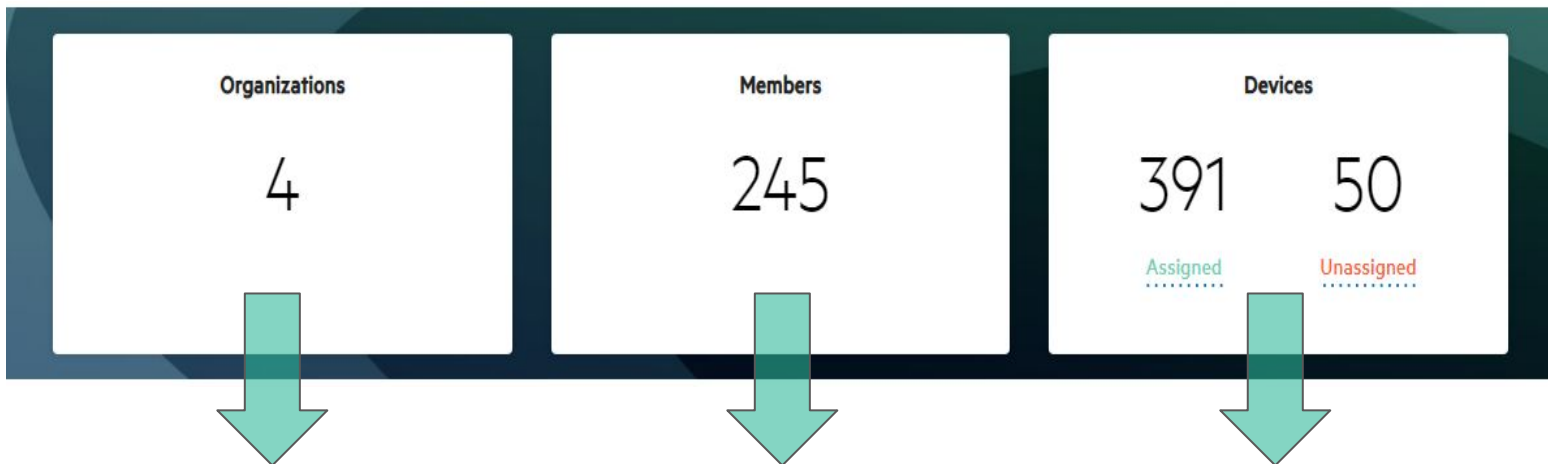
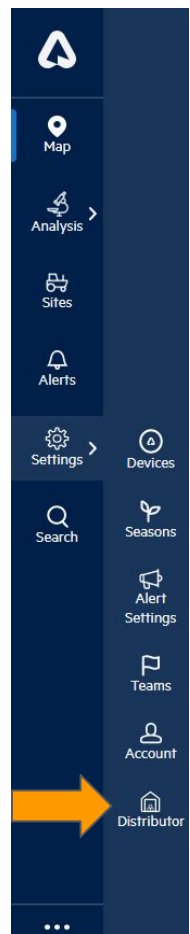
DISTRIBUTOR: SETTINGS



You can navigate to Distributor page by clicking on [Distributor icon](#) under Settings as a Distribution Channel Partner.



DISTRIBUTOR PAGE



Organization:

Count of orgs where distributor user is associated with.

Members:

Count of all members in the orgs listed on distributor page.

Assigned:

Count should be equal to assigned devices, which are all the devices belonging to all the orgs that the user is a part of and not a distributor.

Unassigned:

Count should be displayed, and it should be equal to the total number of devices that really are part of the distributor.



Distributor- Organization Summary

- Each individual org contains the total number of **Members** and **Devices** assigned to that org.

| Organization Name | Members | Devices | |
|-------------------|---------|---------|---|
| AAFC | 13 | 12 | + |
| Ankit-demo5 | 1 | 0 | - |

Not enough permissions to update this org.

Devices Assigned to this Organization

- Only users who are a **Distributor** or an **org admin** or **both** of the respective org can rename it, otherwise, an error message appears (**Not enough permission to update this Org**)



Distributor - Assigned Devices

-
- Map
- Analysis
- Sites
- Alerts
- Settings
- Devices
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor

Assigned Devices



To view the devices associated to a specific organization, please select the organization from the "Source" drop-down menu.

If you wish to move any devices from one organization to another, please select the devices you wish to move from the source organization, then select an organization from "Destination" the drop-down, and press Return.

Source

testdemo1



Destination

arable-team



C006687

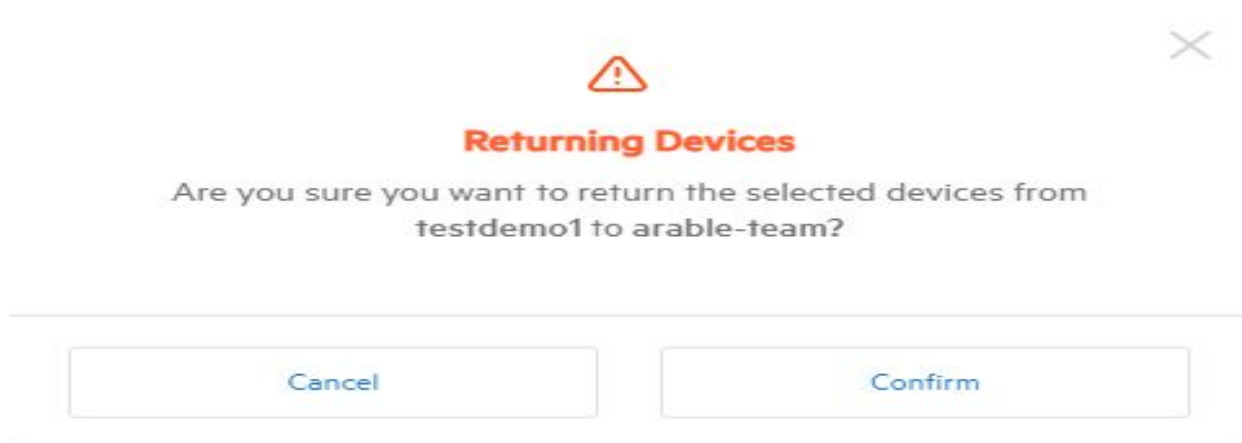
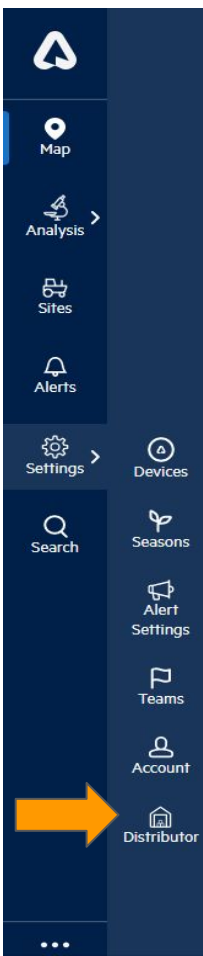


Cancel

Return

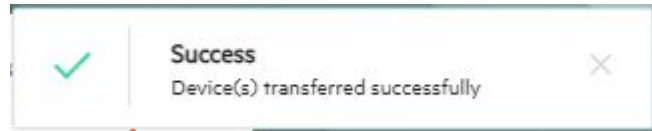
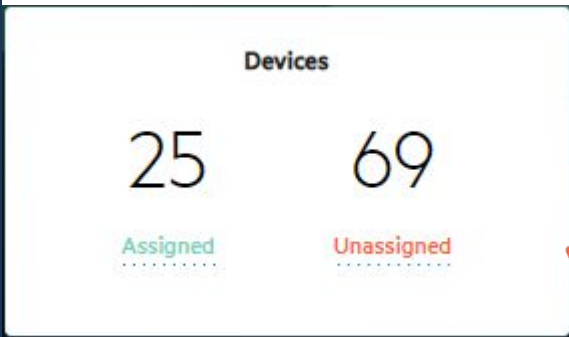
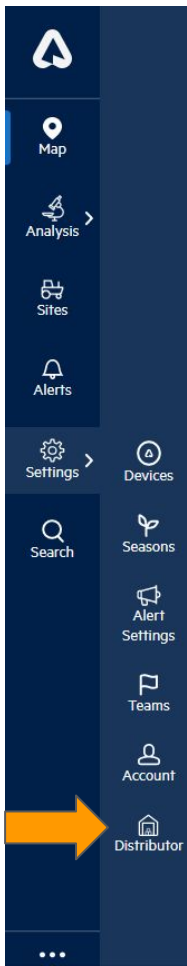


Distributor - Confirmation Pop-Up





Distributor Device Stats



- ❑ After clicking the 'Confirm' button, a successful pop message will appear, and the stats **Assigned** count on devices will decrease while the **Unassigned** count will increase.

Distributor - Assigned Devices - Search Devices Functionality

- The message will be shown for minimum length required to search device.
- Should be able to search the devices by entering valid device id's in the search box (minimum of 3 characters are required) and pressing enter key.
- Search option should be case sensitive
- Should be able to search the devices using only one device Id at a time.
- Based on the organization selected and search input, the devices list should display.
- The devices which are selected previously should retain selection after the device search.
- "No devices found" message will be shown if searched device is not present in that org.

Assigned Devices

To view the devices associated to a specific organization, please select the organization from the "Source" drop-down menu.

If you wish to move any devices from one organization to another, please select the devices you wish to move from the **source organization**, then select an organization from "Destination" the drop-down, and press **Return**.

Source: StagQA

Destination: Select distributor

B301203

B301203

Cancel return

Assigned Devices

To view the devices associated to a specific organization, please select the organization from the "Source" drop-down menu.

If you wish to move any devices from one organization to another, please select the devices you wish to move from the **source organization**, then select an organization from "Destination" the drop-down, and press **Return**.

Source: StagQA

Destination: Select distributor

3019

No devices found

Cancel return

Assigned Devices

To view the devices associated to a specific organization, please select the organization from the "Source" drop-down menu.

If you wish to move any devices from one organization to another, please select the devices you wish to move from the **source organization**, then select an organization from "Destination" the drop-down, and press **Return**.

Source: StagQA

Destination: Select distributor

Search Devices

Minimum length of search field is 3 characters

T300019 B301203 B301065

Cancel return



Distributor - Unassigned Devices

Map

Analysis

Sites

Alerts

Settings

Devices

Seasons

Alert Settings

Teams

Account

Distributor

Unassigned Devices

The devices on this list have not yet been assigned to any Organization. To assign them please select the organization you wish to assign a device from the "Destination" drop-down, select the device(s) you wish to assign from the list, and press **Assign**.

Source

arable-team

Destination

Alfa

| | | | | |
|---------|---------|---------|---------|---------|
| C004681 | C006877 | C006687 | C005135 | C005430 |
| C005449 | C007712 | C009024 | C009125 | C007485 |
| C009665 | C009070 | C007659 | C012035 | C004543 |
| | | | | |

Cancel

Assign



Confirmation Pop-up

Map

Analysis

Sites

Alerts

Settings

Devices

Search

Seasons

Alert Settings

Teams

Account

Distributor

Assigning Devices

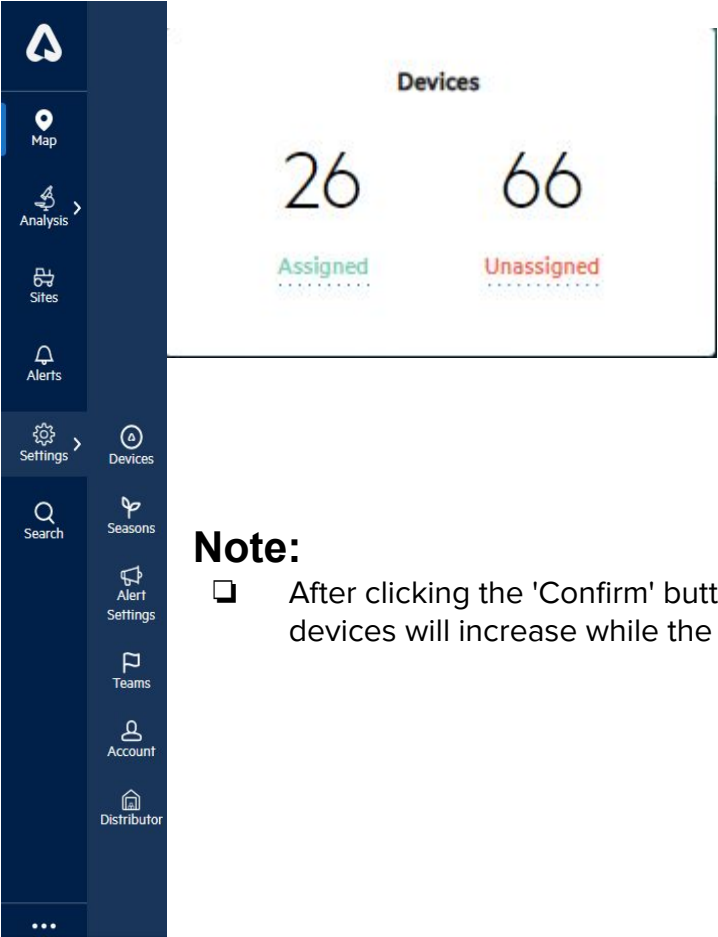
Are you sure you want to assign the selected devices from arable-team to Alfa?

Cancel

Confirm



Distributor Device Stats



Success

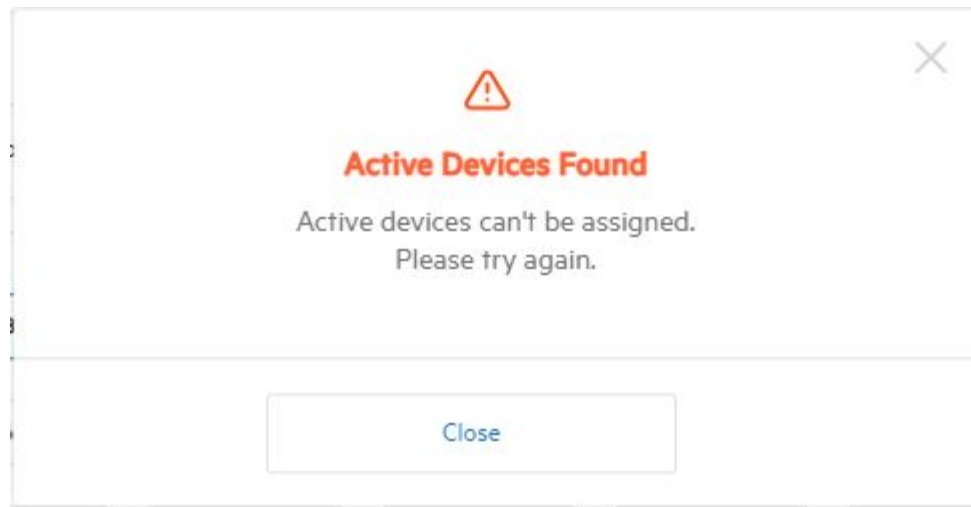
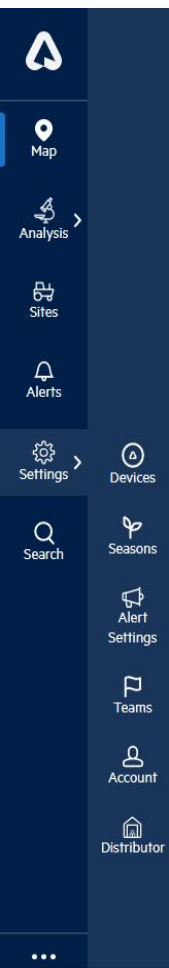
Device(s) transferred successfully

Note:

- After clicking the 'Confirm' button, a successful pop message will appear, and the stat assigned count on devices will increase while the unassigned count will decrease.



Distributor - Active Device Pop-up





Distributor - Create New Organization

Map

Analysis >

Sites

Alerts

Settings >

Devices

Seasons

Alert Settings

Teams

Account

...

Create New Organization

Organization Name

Guru



Source

arable-team



Assign Devices

C004681



C006877



C009665



C005430



C007712



C009024



C005135



C009070



C005449



C012035



C009125



C007485



C007659



C004543



C003359

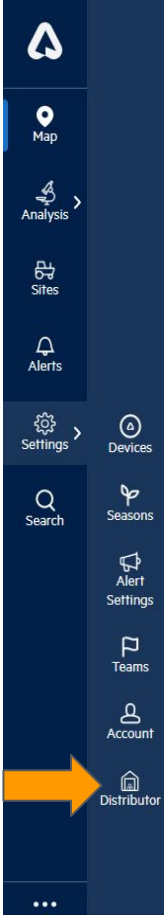


Cancel

Confirm



Successful Message



Organization created successfully

You can now add members to **Organization Name** by going to the [Teams Page](#) and clicking the **Invite Member** button.

Close

Go To Teams

Distributor - Unassigned Devices - Search Devices Functionality

- The message will be shown for minimum length required to search device.
- Should be able to search the devices by entering valid device id's in the search box (minimum of 3 characters are required) and pressing enter key.
- Search option should be case sensitive
- Should be able to search the devices using only one device Id at a time.
- Based on the organization selected and search input, the devices list should display.
- The devices which are selected previously should retain selection after the device search.
- "No devices found" message will be shown if searched device is not present in that org.

Unassigned Devices

The devices on this list have not yet been assigned to any Organization. To assign them please select the organization you wish to assign a device from the "Destination" drop-down, select the device(s) you wish to assign from the list, and press **Assign**.

Source: arable-team

Destination: Select organization

Search Devices: C003619

Minimum length of search field is 3 characters

C003619

Cancel Assign

Unassigned Devices

The devices on this list have not yet been assigned to any Organization. To assign them please select the organization you wish to assign a device from the "Destination" drop-down, select the device(s) you wish to assign from the list, and press **Assign**.

Source: arable-team

Destination: Select organization

Search Devices: C002146

No devices found

Cancel Assign

Unassigned Devices

The devices on this list have not yet been assigned to any Organization. To assign them please select the organization you wish to assign a device from the "Destination" drop-down, select the device(s) you wish to assign from the list, and press **Assign**.

Source: arable-team

Destination: Select organization

Search Devices: C003141

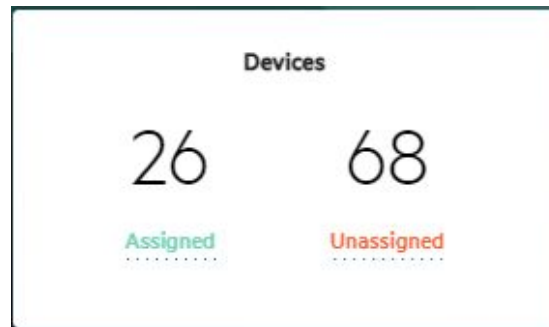
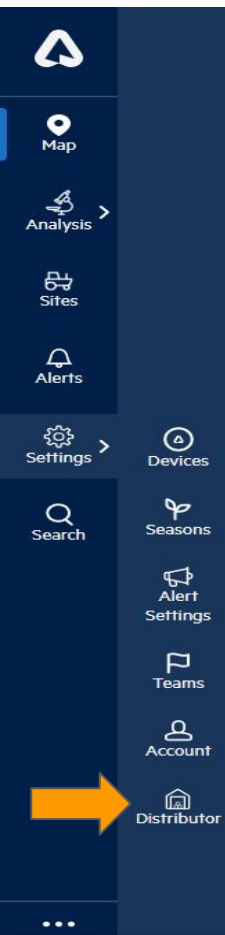
Minimum length of search field is 3 characters

| | | | | |
|---------|---------|---------|---------|---------|
| T30007 | C003619 | C003141 | T300016 | C003830 |
| C006558 | T300018 | C011841 | C003106 | B301216 |
| C013488 | C002752 | B301071 | B301160 | C006309 |

Cancel Assign



Devices Stats



Note:

- ❑ After clicking the 'Confirm' button, a successful pop message will appear and the stat **Assigned** count on devices will increase while the **Unassigned** count will decrease.
- ❑ Also the page will be navigated to the Team page after clicking 'Go To Teams'.



Distributor - Teams Page

Map

Analysis

Sites

Alerts

Settings

Devices

Seasons

Alert Settings

Teams

Account

Distributor

Organization

Guru

Team

All Teams

Teams

0

Assigned

0

Unassigned

Members

0

Assigned

0

Unassigned

Sites

0

Assigned

0

Unassigned

+ Invite Member

+ Create New Team

| Team Name | Members | Sites |
|----------------|-----------|----------------------|
| Administrators | (1) Total | <div>View Team</div> |



Distributor - Teams Page_Invite Member

The screenshot displays the Arable interface with a dark blue sidebar on the left containing navigation icons for Map, Analysis, Sites, Alerts, Settings, Devices, Seasons, Alert Settings, Teams, Account, and Distributor. An orange arrow points to the 'Teams' icon. The main content area is divided into two panels: 'Organization' (Guru) and 'Team' (All Teams). The 'Team' panel shows a table with columns for Team Name, Members, and Administrators. A modal titled 'Invite Member to Organization' is open, featuring tabs for 'New' and 'Current'. The 'New' tab contains form fields for First Name, Last Name, Email Address, and a dropdown for Select Role. Below these is a 'Select Team(s)' section with a dropdown and an 'Add' button. The 'Current' tab shows a table with columns for Sites, Assigned, and Unassigned. At the bottom of the modal, there is a 'Teams & Roles' section with a message: 'Please enter the member information, assign a role and select a team or teams from the drop down above and click "add".' and buttons for 'Cancel' and 'Confirm'.

Organization: Guru

Team: All Teams

Teams

Assigned

Team Name

Members

Administrators

Invite Member to Organization

New

Current

First Name

Last Name

Email Address

Select Role

Select Team(s)

Teams & Roles

Please enter the member information, assign a role and select a team or teams from the drop down above and click "add".

Cancel

Confirm

Sites

Assigned

Unassigned

+ Invite Member

+ Create New Team

View Team

Activate Windows

Go to Settings to activate Windows

Help

Arable



Distributor - Teams Page_Create New Team

The screenshot shows the Arable 'Teams' page. The left sidebar contains navigation icons for Map, Analysis, Sites, Alerts, Settings, Devices, Seasons, Alert Settings, Teams (highlighted with an orange arrow), Account, and Distributor. The main content area has filters for 'Organization' (Guru) and 'Team' (All Teams). It displays a 'Teams' card with 0 assigned members and a 'Sites' card with 0 assigned sites. The 'Create New Team' modal is open, featuring a 'Team Name' input field with the placeholder 'Type the team's name'. Below this are four sections: 'Add or Remove Members' with a 'Select Team Members' dropdown, 'Add or Remove Sites' with a 'Select Sites' dropdown, and 'Add or Remove Devices' with a 'Select Device or Locations' dropdown. At the bottom of the modal are 'Cancel' and 'Confirm' buttons. The background shows buttons for 'Invite Member' and '+ Create New Team'.



