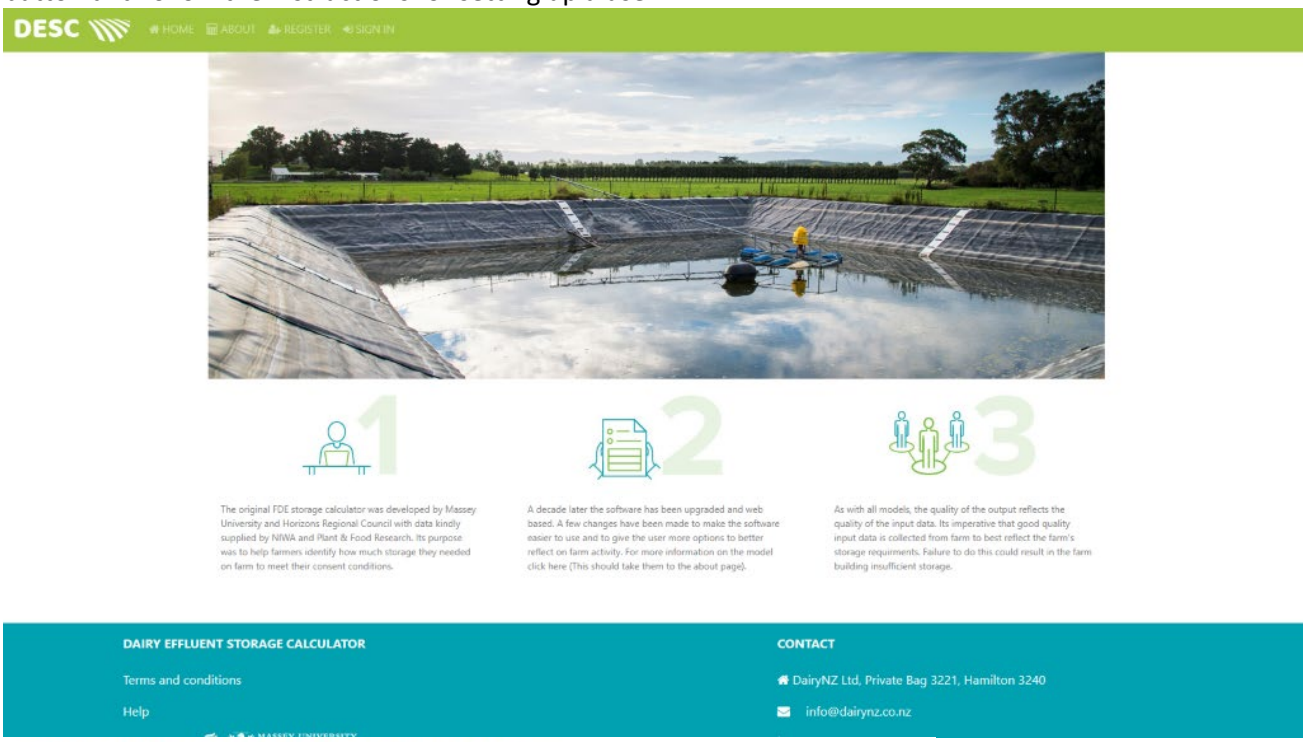
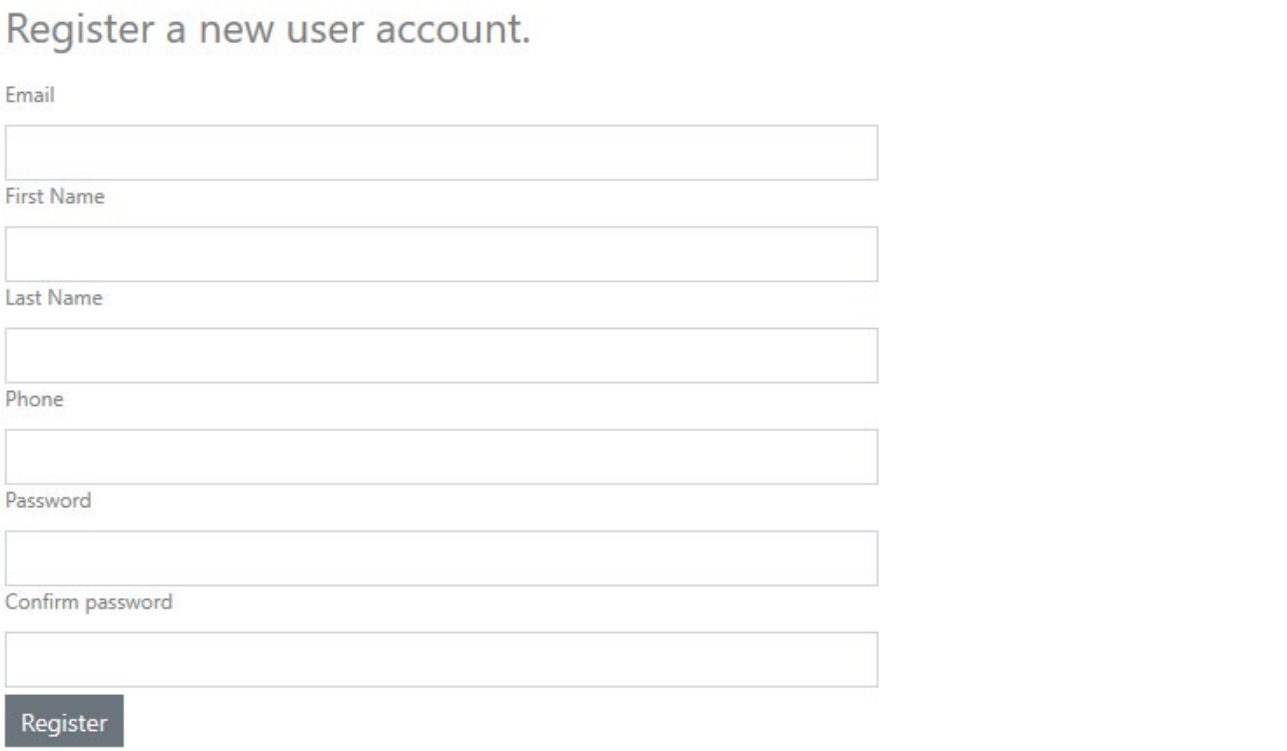
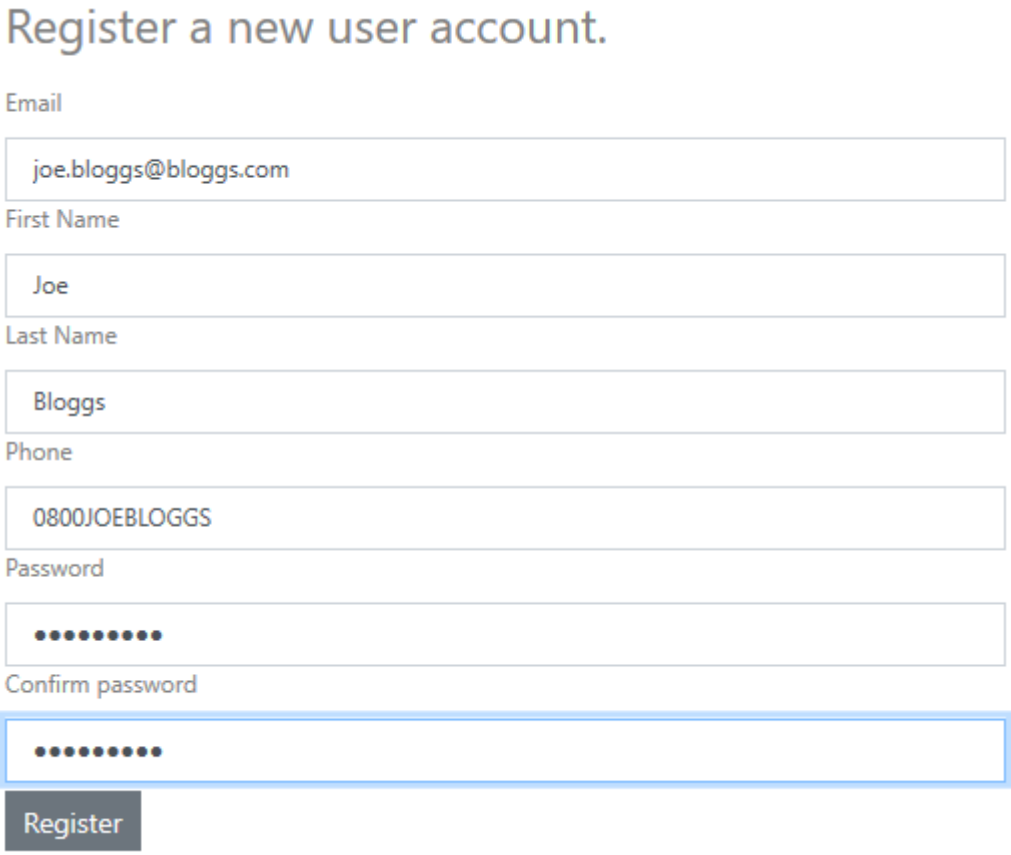
DESC web version instructions 29/08/21

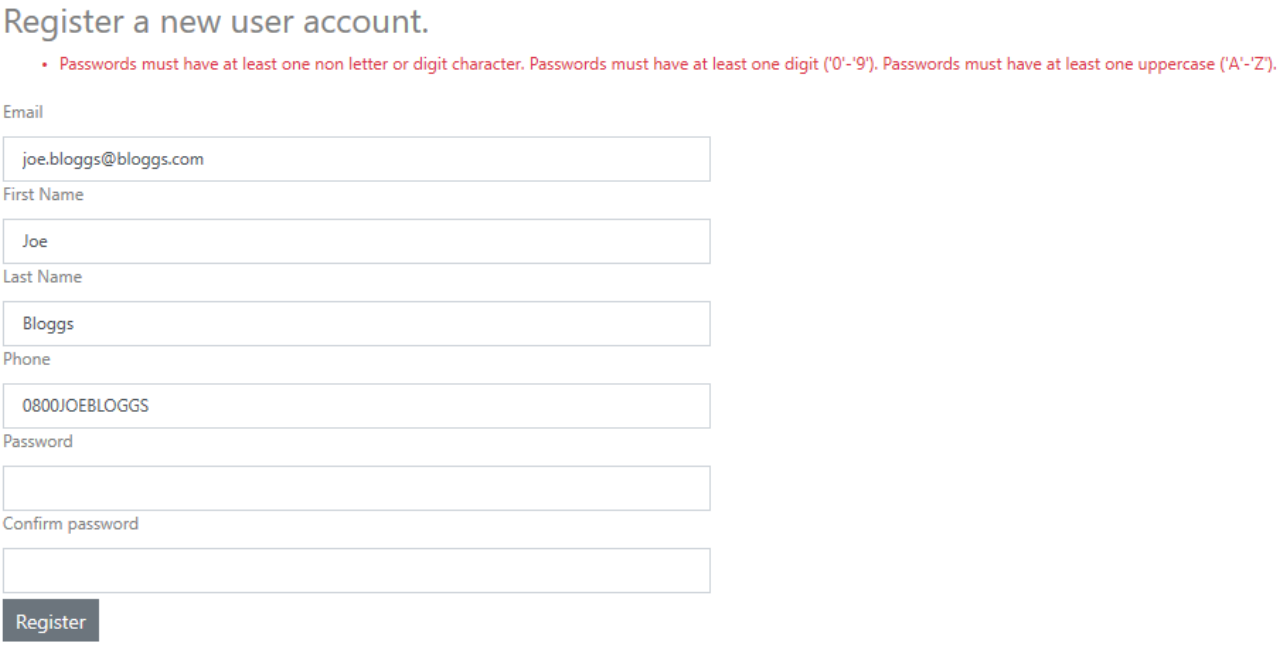
Creating an account

Logging in for the first time enter www.dairynzdesc.co.nz into your browser. Click on the register new user button and follow the instructions for setting up a user.



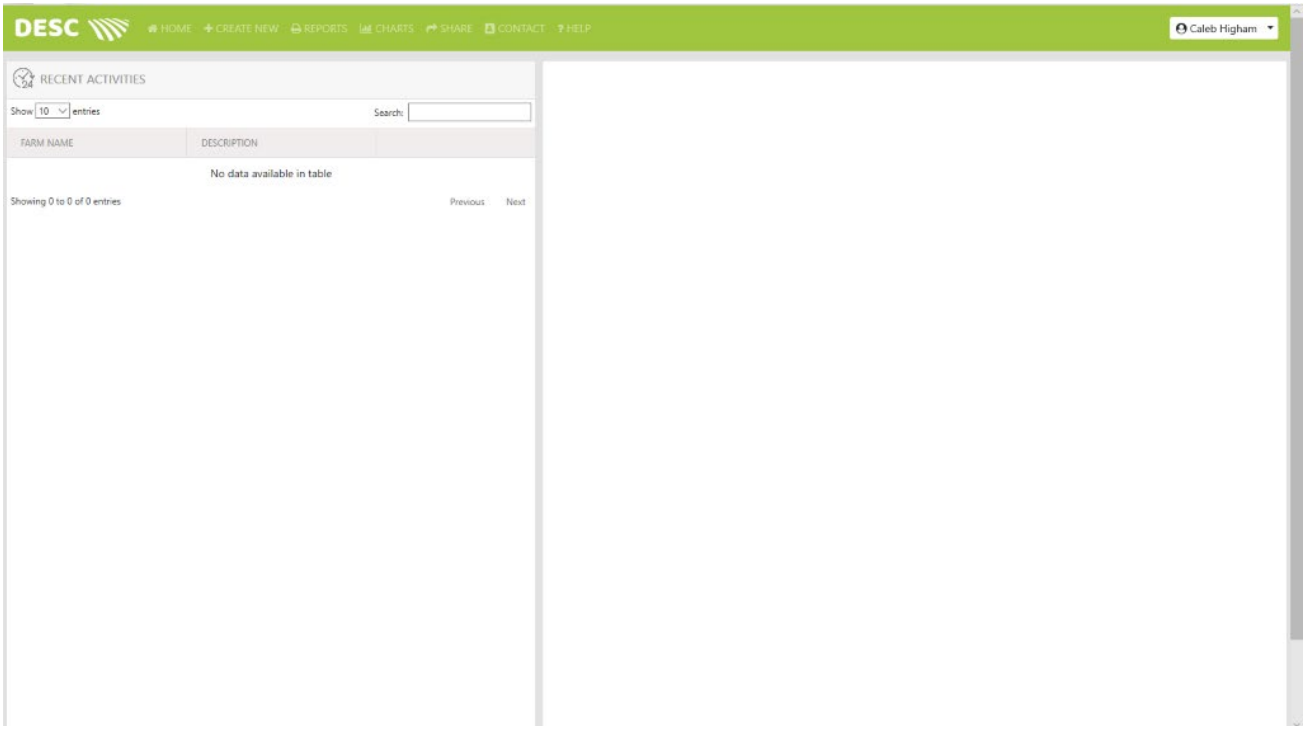






Once a user is set up, they can then log onto the DESC.
Once logged in they are taken to the “recent activities” page. For a first-time user this will be empty, as they will not have any saved calculations. For users who have previously been on the site any saved calculations will be displayed on this page. Options are available to view, edit, share, delete or assign. Share allows a user to let another user view the file with either read only or read and write access. If write access is given, any changes made will be changed for all both users, so, don’t share a file with write access if you don’t want the inputs changed by another user. Assign allows a user to give access to another user who can then alter or

edit the file. If you assign a file to another user it disappears from your list of files. If you still need to access the file, make a copy and assign the copy.



To create a new file, click on the “create new” option.

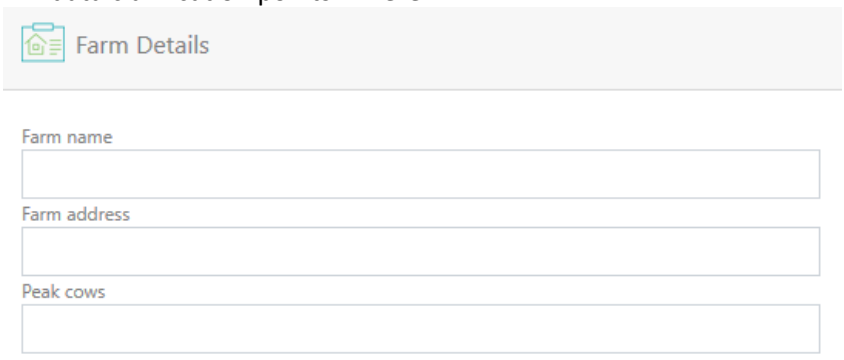
- Enter the farm name (this becomes the file name for later identification)
- Enter the farms address. This uses Google maps which sometimes struggles to recognise the address. Try some variants if struggling and add NZ to help Google
- Enter maximum herd size
- Click “create farm”

You have now landed on the farm inputs screen.

Farm information

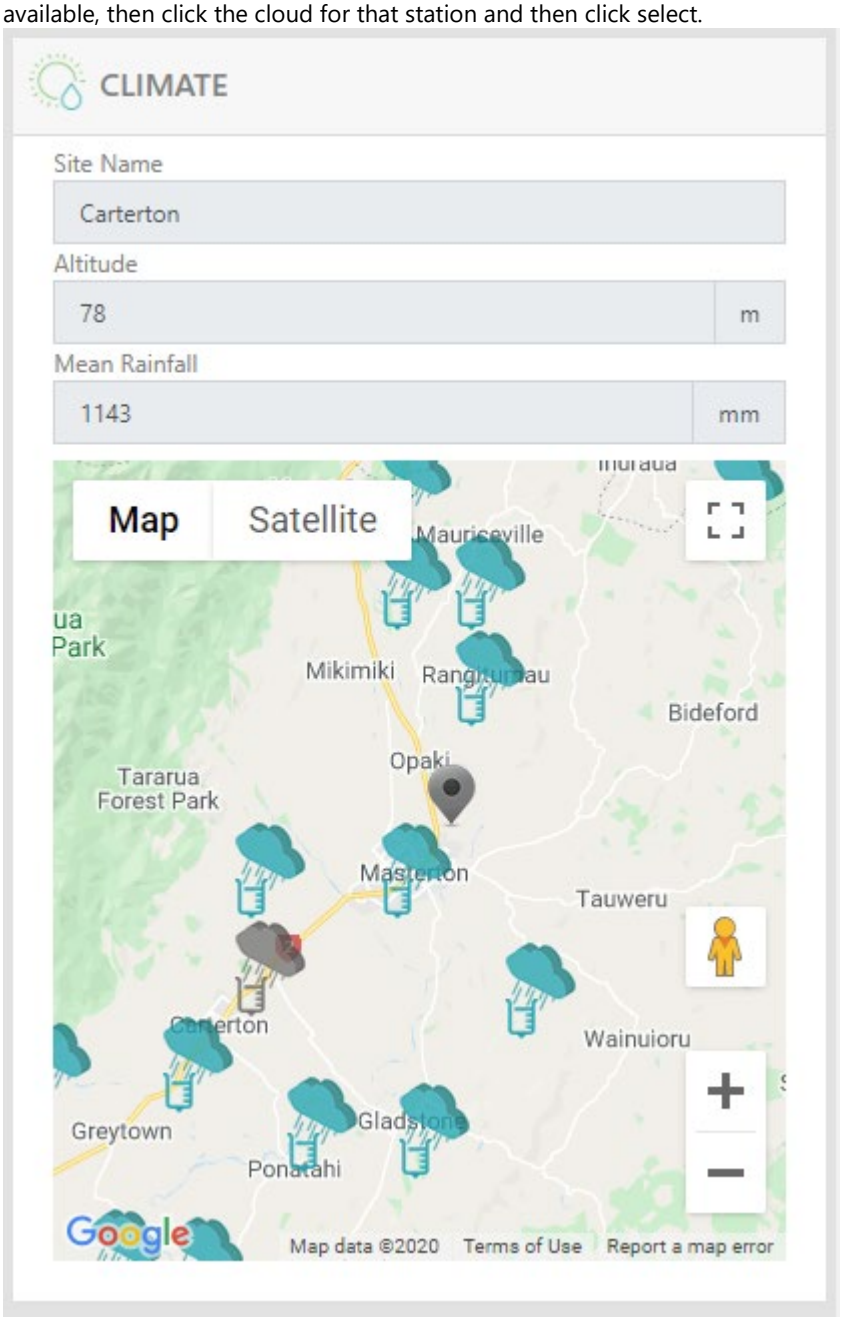
Farm information can now be entered into the DESC.

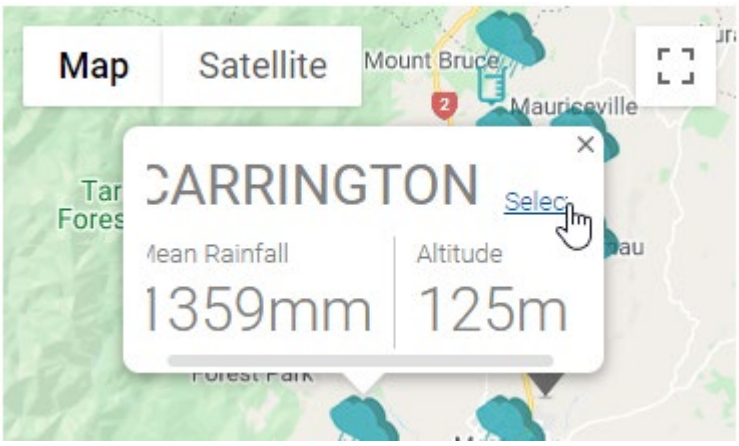
- The farm name can be changed if wanted.
- The address fine-tuned.
- A supplier number added.
- And a description of the effluent system can be entered in the free text description box. This is the only place on the site that free text can be entered. It is advised to write assumptions and other input data clarification points in here.



Create Farm

Based on the farm address the closest weather station will be selected. If there is a more representative climate station available, then click the cloud for that station and then click select.





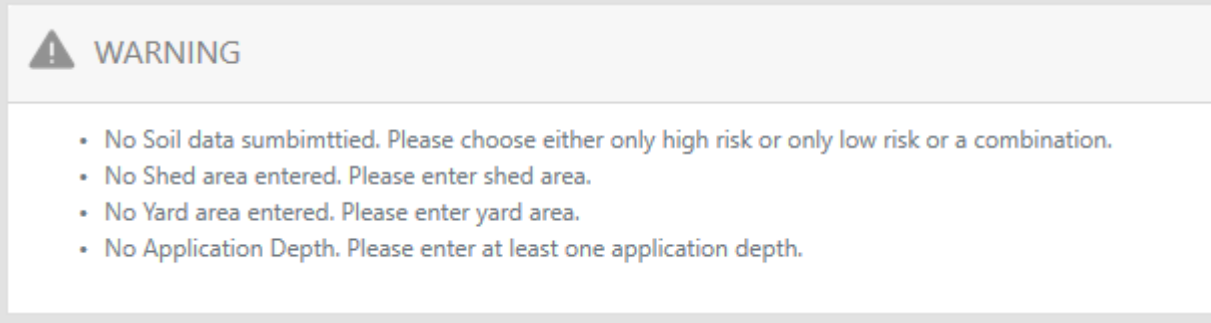
Soil Risk

Enter the effluent blocks soil risk into the three boxes. The combination of low risk area and high risk area should equal the minimum effluent block size required. Any remaining high risk areas should be entered into the 3rd box "remaining area of high risk soils available for effluent irrigation".

Catchments

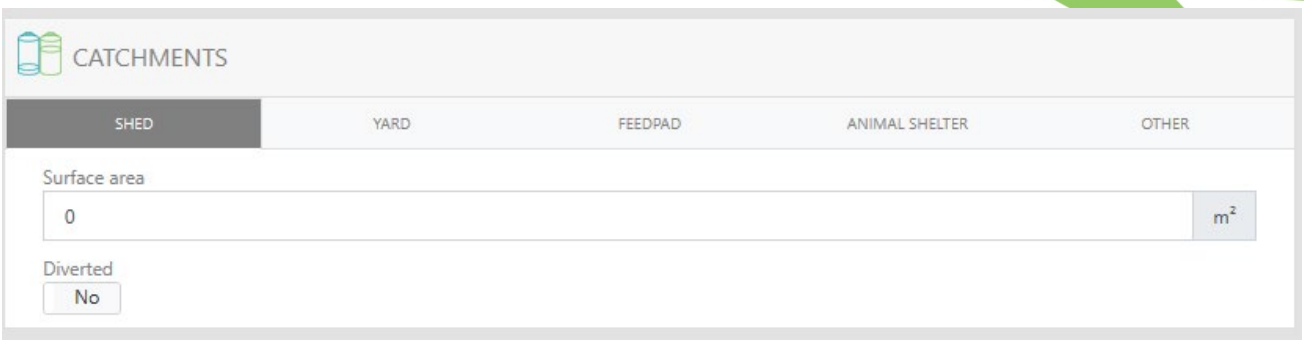
The page opens with the shed input page.

Initially in the charts area a warning appears – to alert you that data needs to be entered before the storage can be calculated.



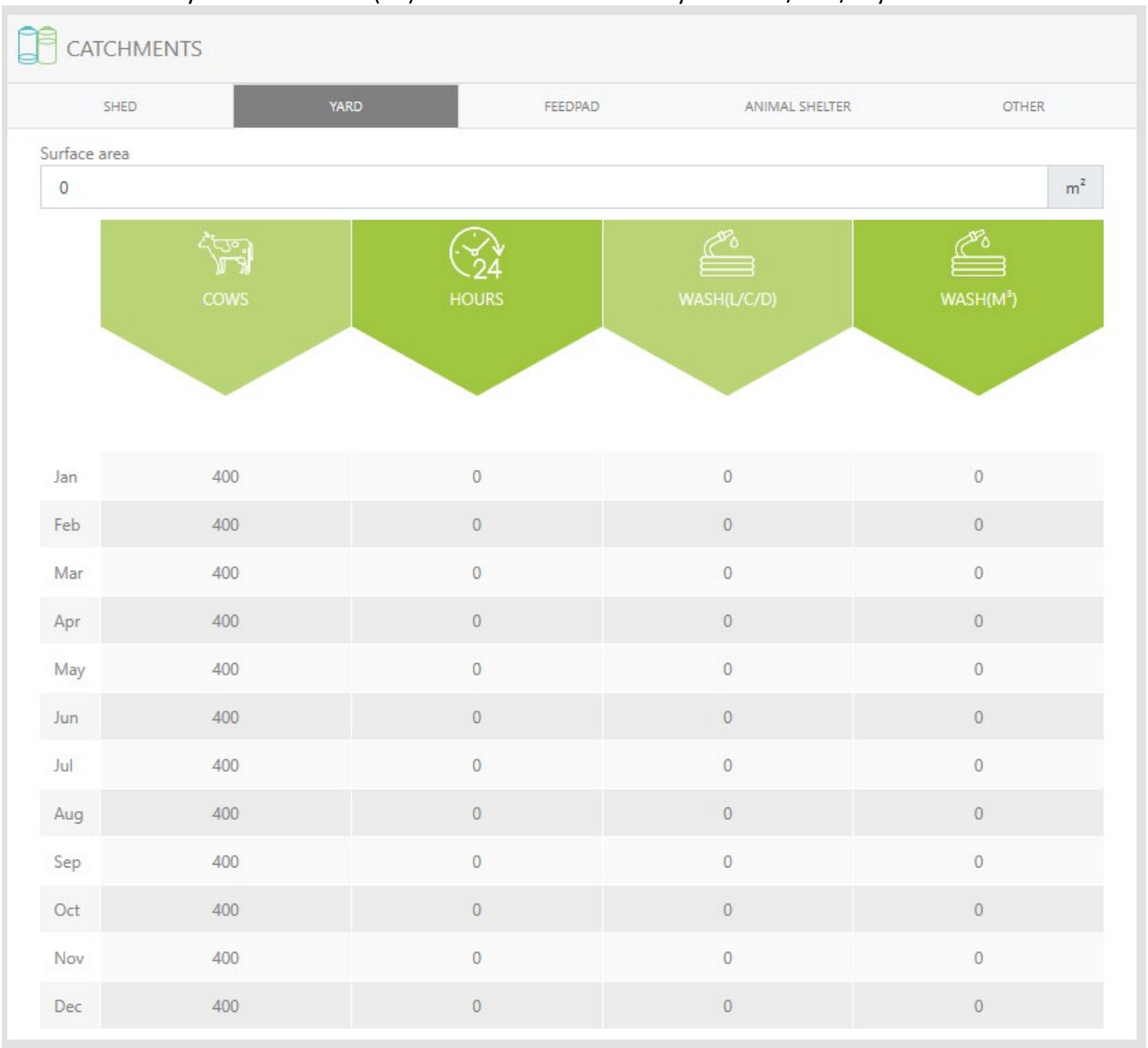
Shed

- Enter the dairy shed roof area (m^2) and select yes or no for diverted. "No" indicates all rain falling on the roof will be contributed to the effluent system. "Yes" indicates the rainwater landing on the roof will be diverted away from the effluent system.



Yard

- Click on “Yard” button.
- Enter the yard surface area (m^2).
- Enter monthly cow numbers – automatically populated from when the file was created.
    - Note: To change the number cows, click on a cell and delete out the values, add the new value and **click enter**. This is the same for the time that cows are on the yard each day and wash water volumes.
- Enter the time that cows are on the yard each day and **click enter**.
- Enter the daily wash water use (m^3) and **click enter**. Currently the litres/cow/day column is inactive



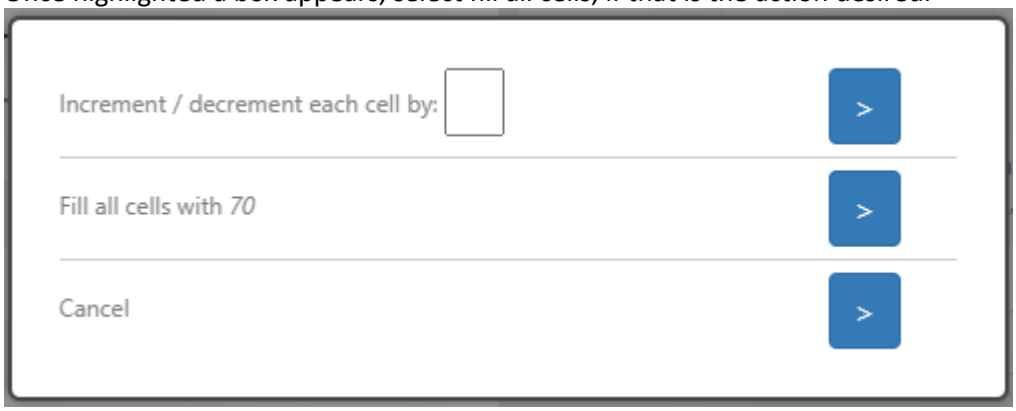
Once one number is entered you can click and drag on the blue dot in the corner which brings up options to fill down.

Jan	350	0	70		0
Feb	350	0	0		0
Mar	350	0	0		0
Apr	350	0	0		0

This highlight the cells in blue.

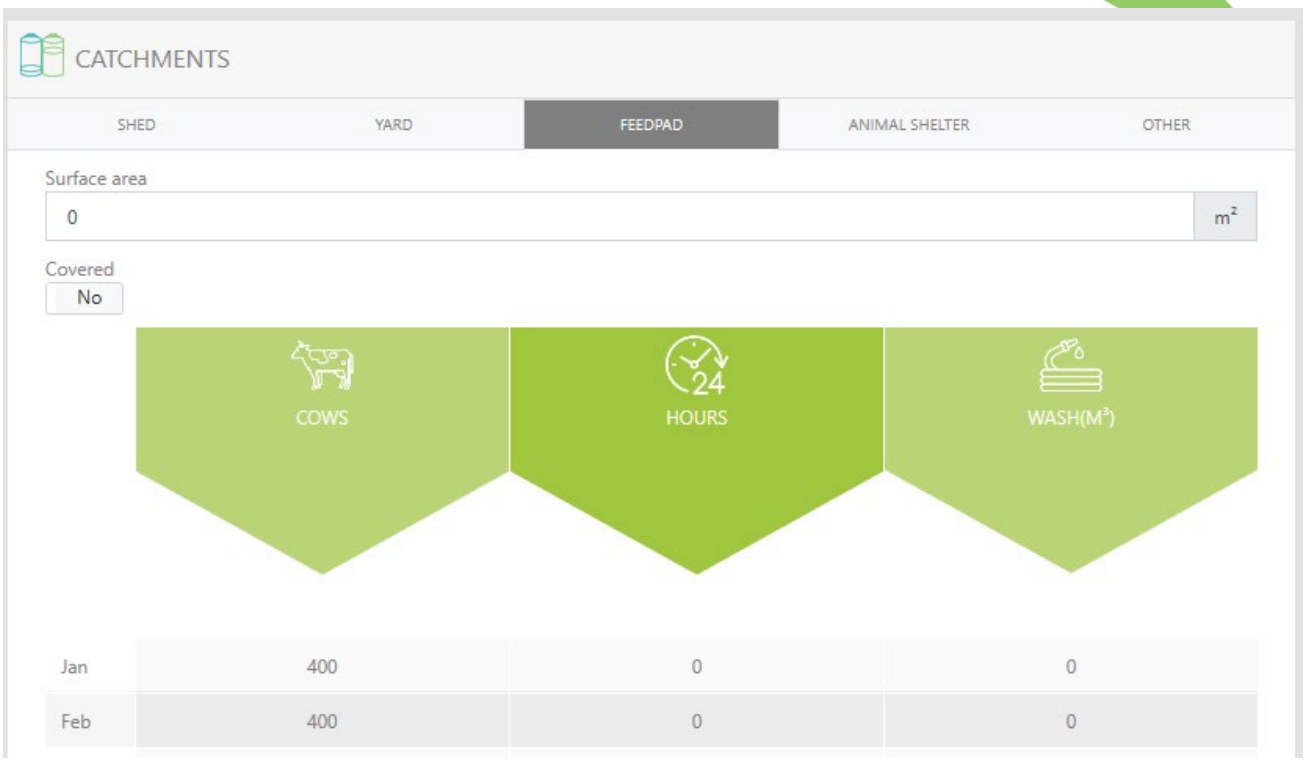
Jan	350	0	70		0
Feb	350	0	0		0
Mar	350	0	0		0
Apr	350	0	0		0

Once highlighted a box appears, select fill all cells, if that is the action desired.



Feed pad

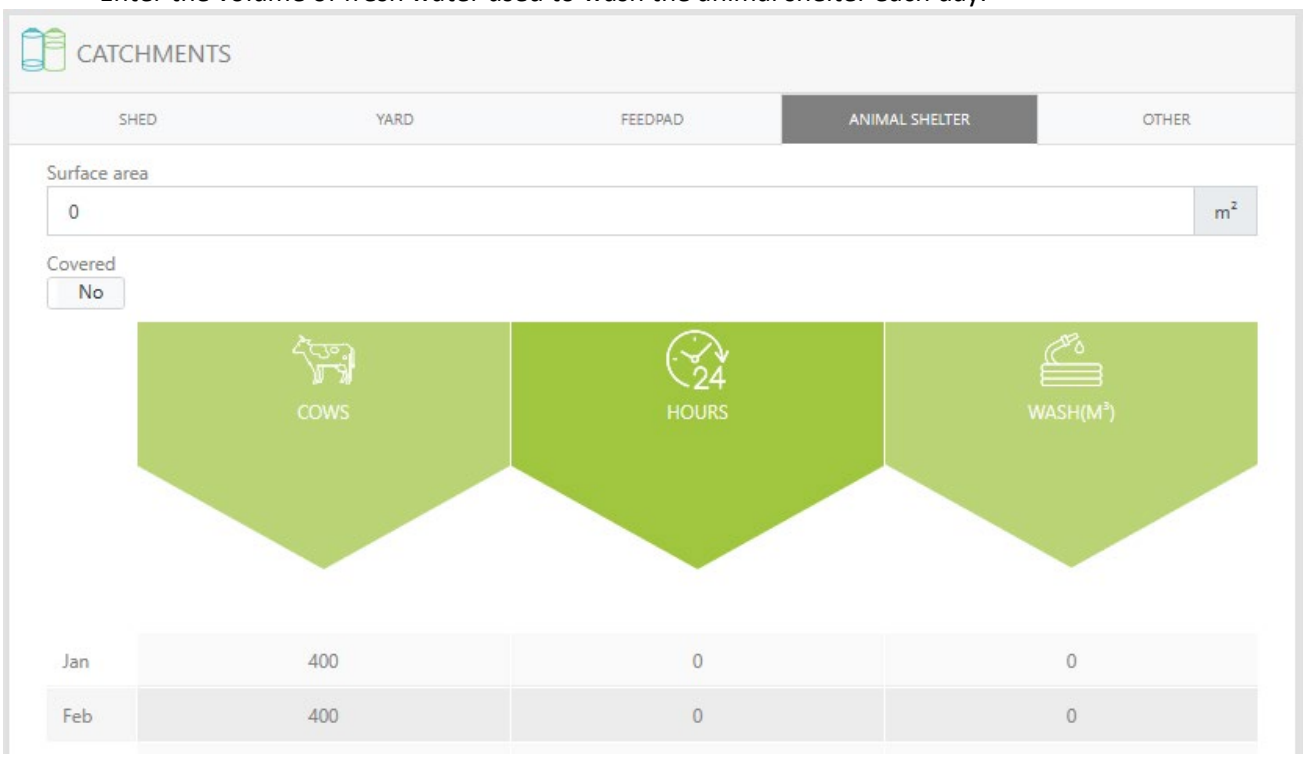
- Enter the feed pad surface area (m^2).
- Select yes or no to indicate if the feed pad is covered or not.
- Enter monthly cow numbers.
- Enter the length of time cows are on the feed pad each day.
- Enter the volume of fresh water used to wash the feed pad each day.



The functionality is the same as that for yard.

Animal Shelter

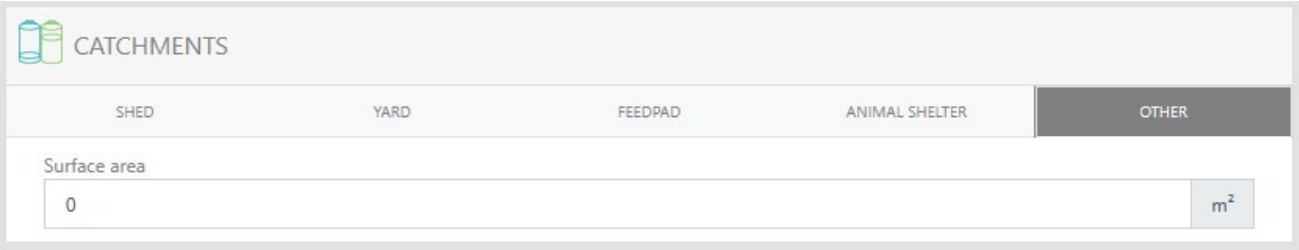
- Enter the animal shelter surface area (m^2).
- Select yes or no to indicate if the animal shelter is covered or not.
- Enter monthly cow numbers.
- Enter the length of time cows are in the animal shelter each day.
- Enter the volume of fresh water used to wash the animal shelter each day.



The functionality is the same as that for yard.

Other Area

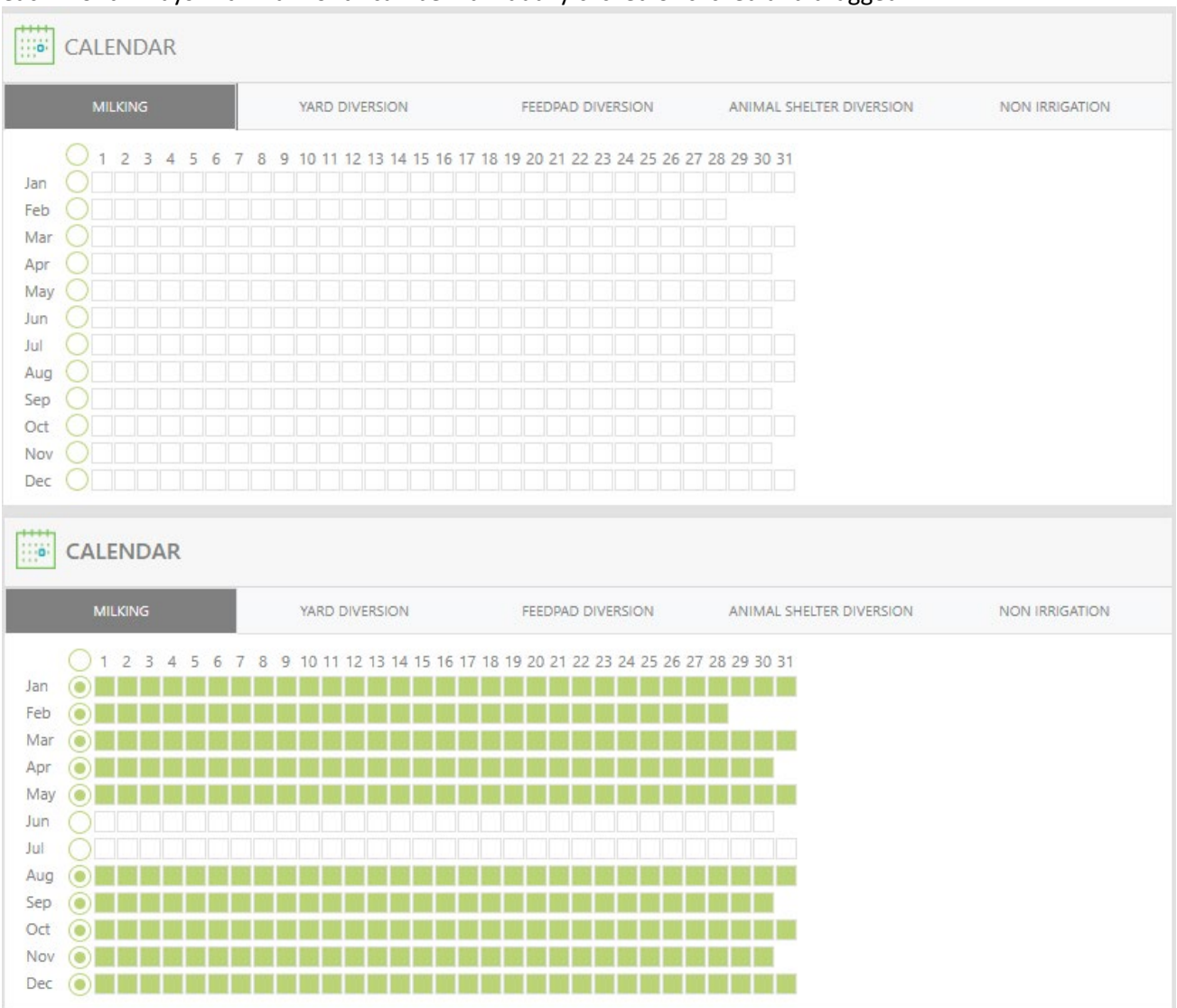
- Enter the surface area of any “other areas”. These are areas that are unable to be storm water diverted. E.g. tanker aprons, vat stands, underpasses, silage areas etc.



Calendar

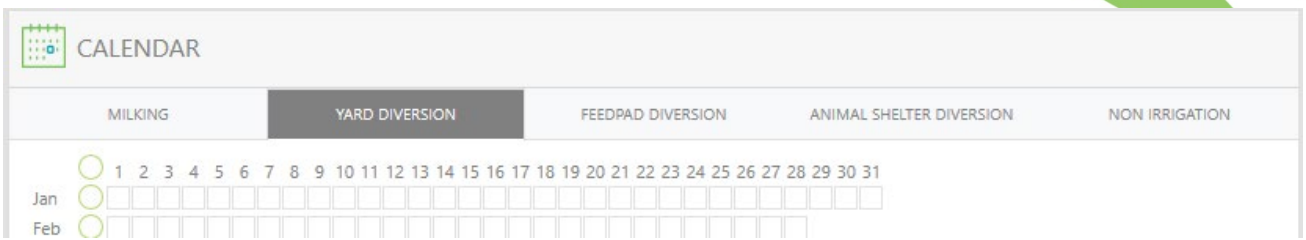
Milking

- Highlight the days that milking takes place. Clicking the circle at the top left selects and de-selects every day, likewise each month’s days can be selected or de-selected by clicking on the circle next to each month. Days within a month can be individually clicked or clicked and dragged.



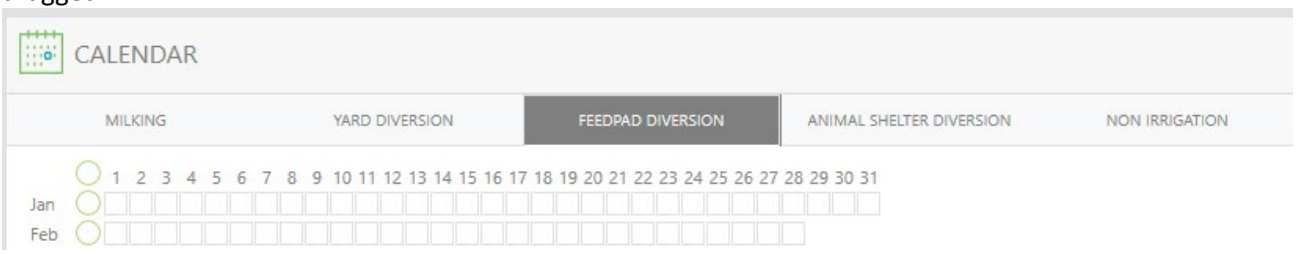
Yard diversion

- Highlight the days that the yard has a stormwater diversion activated. Clicking the circle above Jan selects and de selects every day, likewise each month’s days can be selected or de selected by clicking on the circle next to each month. Days within a month can be individually clicked or clicked and dragged.
- If stormwater diversion is selected on a milking day, then the DESC calculates stormwater diversion on the period of day that cows are not on the yard.



Feed pad diversion

- Highlight the days that the feed pad has a stormwater diversion activated. Clicking the circle above Jan selects and de selects every day, likewise each month's days can be selected or de selected by clicking on the circle next to each month. Days within a month can be individually clicked or clicked and dragged.

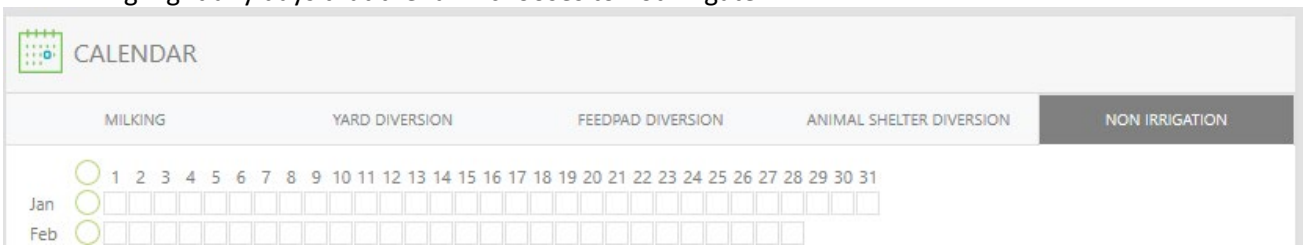


Animal Shelter

- Highlight the days that the animal shelter has a stormwater diversion activated. Clicking the circle above Jan selects and de selects every day, likewise each month's days can be selected or de selected by clicking on the circle next to each month. Days within a month can be individually clicked or clicked and dragged.

Non Irrigation days

- Highlight any days that the farm chooses to not irrigate FDE.



Before moving on click save changes at the top of the page.

Other Inputs

Climate

- The address entered under the farm information should have pre-selected the closest climate site and be displaying the site information in the climate section.
- Other close by sites can be seen. Clicking on another site will display mean rainfall and elevation. Click select if the alternative site better represents the farms climate.

Irrigation

- Click on the add depth button to add an application depth and enter application depth and an associated daily pump volume that can be achieved at the entered depth.
- Alternatively, options 1 or 2 can be entered. These options do need the application depth to be added to allow them to calculate.
- Multiple depths can be added but no two depths can have the same depth value.

Solids

- If solids separation is occurring on farm, then solids separation units can be added by clicking on the add unit button.

General

- No catchment can have more than one solids separation unit associated with it.
- A solids separation unit cannot be entered unless there is a catchment available to have its effluent separated.
- Name the unit.
- Enter the dry matter percentage of the separated solids.
- Enter the separator efficiency percentage. i.e. what percentage of total solids will the separator remove from the effluent stream.
- Select the catchment(s) that will be separated.
- Click Create Solid Unit (or Edit Solid Unit if editing)

Bunker type

- Enter bunker dimensions and click Create Solid Unit (or Edit Solid Unit).

Separation

- Highlight the days in the year that solids separation occurs and click Create Solid Unit (or Edit Solid Unit)

Empty days

- Highlight the dates that the solids bunker will be emptied.
- Enter the four-day forecast soil water deficit excess. This is the amount of drainage over the four days post solids spreading.
- Enter the minimum soil water deficit that needs to be available to be able to drive on pastures with the heavy spreading equipment.
- Click Create Solid Unit or Edit Solid Unit to save changes.

Storage

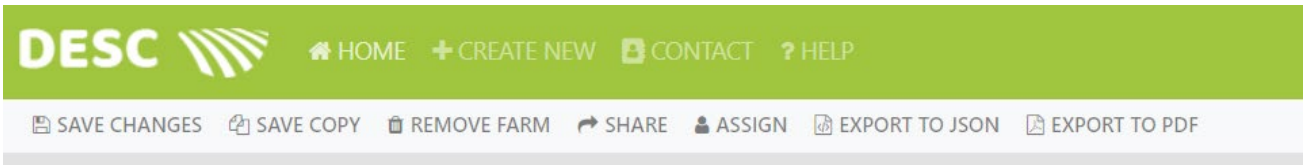
- Click add storage.
- Choose storage type.
- Name the storage.
- Select whether the storage will be pumped or not. This option is usually used where two ponds are present- the first pond for solids separation and remains full with not pump, and the second pond is the storage pond that FDE is pumped from.
- Select yes or no for covered.
- Enter dimensions.
- Click create storage.
- Enter the amount of emergency days storage required.

Multiple storage facilities can be entered and these can be a mixture of storage types.

Options on the tool bar

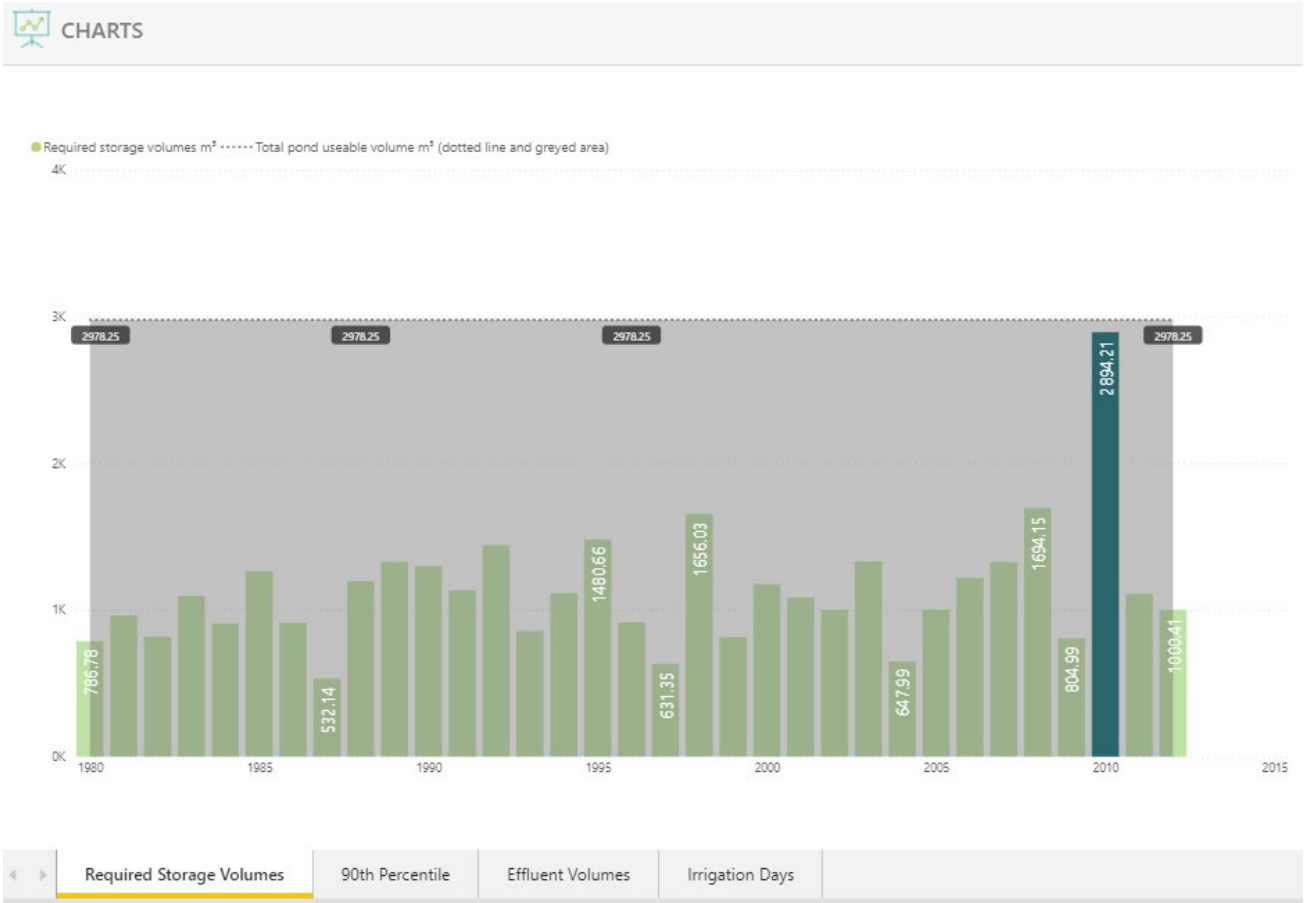
- **Save changes** – self-explanatory.
- **Save copy.** This allows a copy to be made of a file to enable easy creations of scenarios without reentering all the data.

- **Remove farm.** This deletes the file from your library of files.
- **Share.** This allows the file to be shared with somebody allowing them to see the file with the ability to give view only or editing access.
- **Assign.** This allows the user to give (assign) the file to somebody else who will be able to edit the file. Be aware the file will be removed from the users file list, so if the user wants to retain the file, make a copy and assign the copy.
- **Export to PDF.** This creates a PDF report.
- **Export to JSON.** This function is not operational.

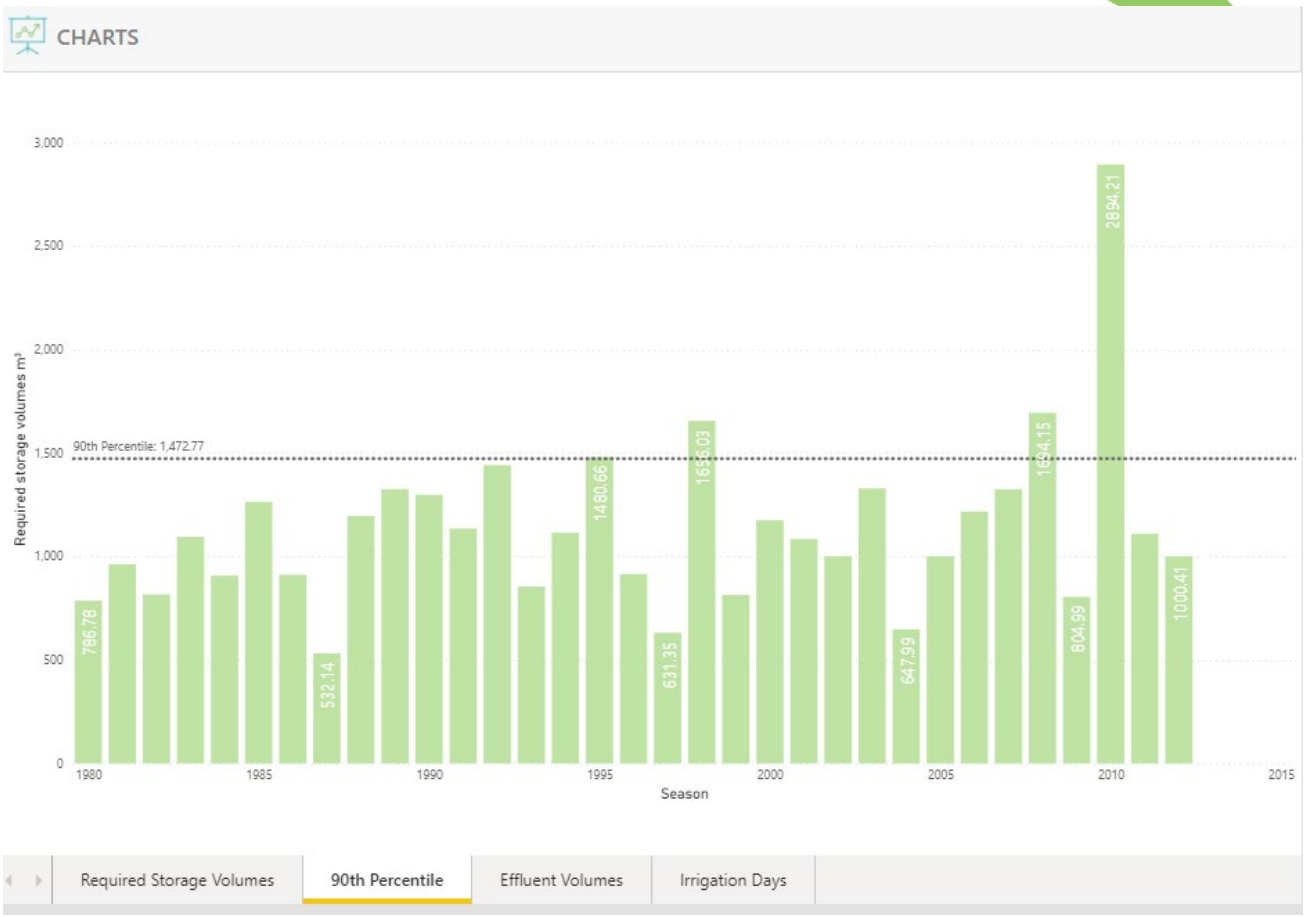


Charts

Once all the correct data is entered and saved the graph of required storage will show. The axis shows the required storage volume in m³. The dotted line with the area greyed out underneath is the amount of storage that is included in the calculation. The individual years can be hovered over to show the volumes for each year. By clicking on three dots at the top right of the chart area the option to Export Data is given, which downloads the data to an Excel spreadsheet.



The 90th Percentile tab shows the yearly data with a 90th percentile line drawn on this.



Reports

Currently effluent volumes and irrigation days can be displayed by selecting the appropriate tab. We are continuing working on the report function that will give better information in the .sreports.

User Account Settings

Users account information can be edited by selecting the down arrow beside the user's name, then account settings.

Logo display

Users can upload their company logo to their account. This will then print on the bottom of every page of the PDF reports.

Likewise, if the user is a certified WOF assessor or the company is an accredited FDE system designer, request can be made to admin for the associated logos to be added to PDF reports