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NexGen® Liquid Controller (NGLC) User Guide

Easy Automation, Inc. User Guide
Last Updated: September 18, 2025

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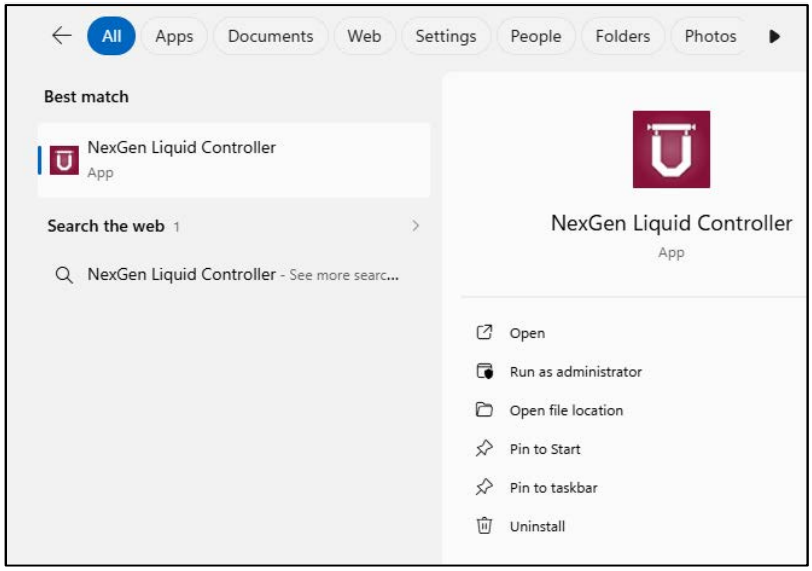
INTRODUCTION TO NGLC

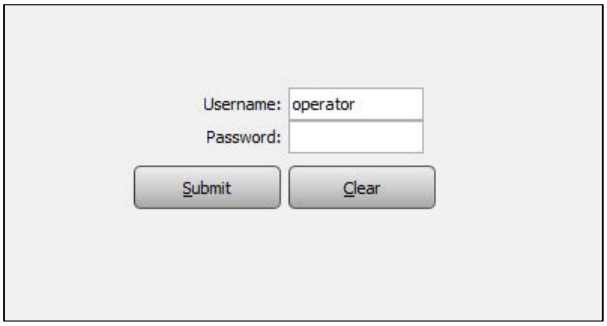
NexGen Liquid Controller is a software program developed by Easy Automation that provides an efficient and effective solution for organizing and controlling a liquid fertilizer facility's ability to run liquid fertilizer blends. The following information in this user guide will help guide an operator on setting up and configuring different measuring systems, organizing different ingredients and their settings, and the process of running and rejecting orders through the system.

Opening NGLC

1. Double click on the NexGen Liquid Controller desktop icon Or search for the NexGen Liquid Controller app in your Windows search bar and open it from there.

2. On the login screen that pops up, enter username and password, click "Submit."





SETTING UP INGREDIENT LOCATIONS

Assigning Ingredient Location

One of the first steps needed to be done before being able to release and run an order in NGLC is to assign the ingredients in NGLC a location such as a tank or tote.

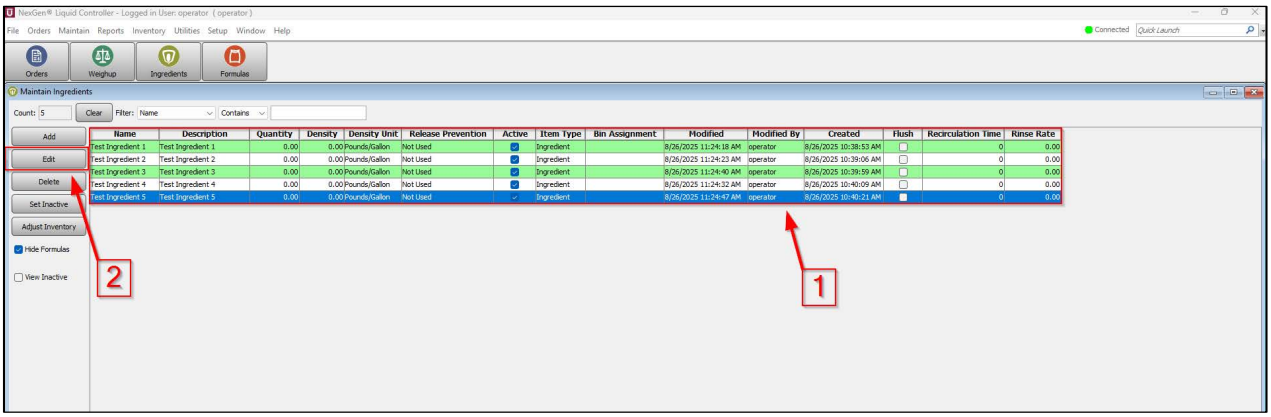
NOTE: Ingredients in NGLC are "created" when an order is sent over to NGLC from NexGen Office (NGO) if they don't already exist in your NGLC database. Ingredients can be made in NGLC but this should only be done if NGO is NOT used for order creation.

1. Open the "Ingredients" window.

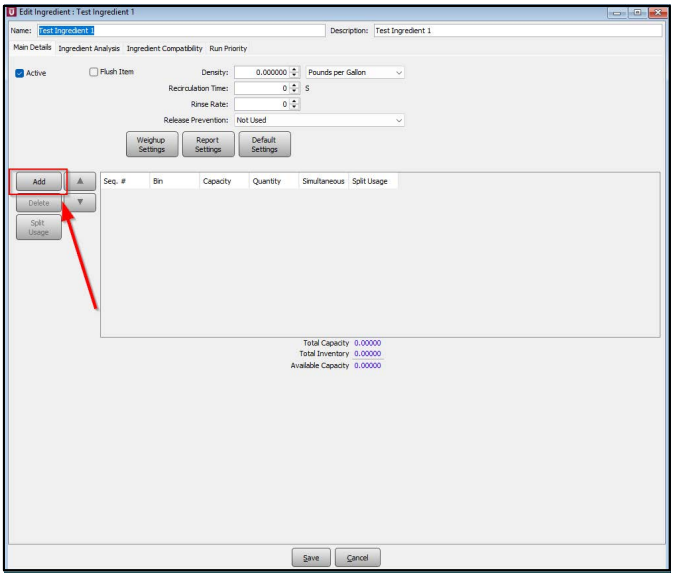
2. With the "Ingredients" window open:

    1) Click on and highlight the desired ingredient.

    2) Either double click the highlighted ingredient or click the "Edit" button with the desired ingredient selected.



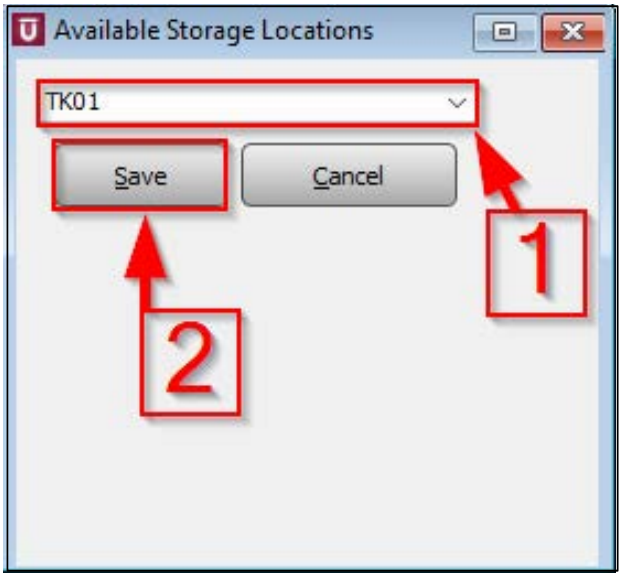
3. With the "Edit Ingredient" window open, click the "Add" button.



4. With the available storage locations window open:

   1) Select the desired location from the drop down menu.

   2) Click the "Save" button to save that location.

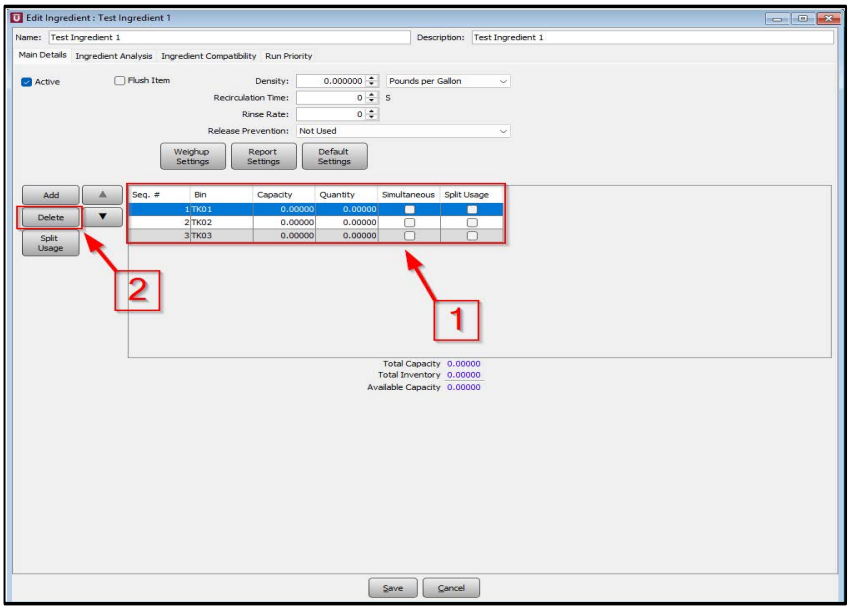


Removing Ingredient Locations

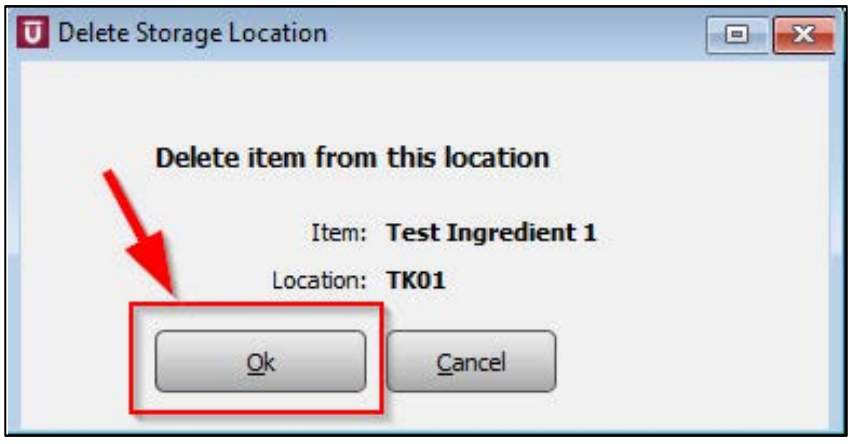
1. Navigate to the "Edit Ingredient" window via the "Ingredients" window (See ASSIGNING INGREDIENT LOCATIONS for reference):

    1) Select the location to be deleted.

    2) Click the "Delete" button.



2. With the "Delete Storage Location" window open, click "Ok".

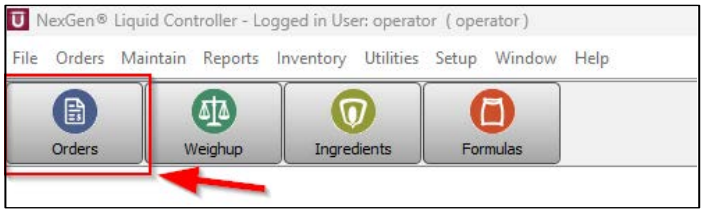


Creating an Order in NGLC

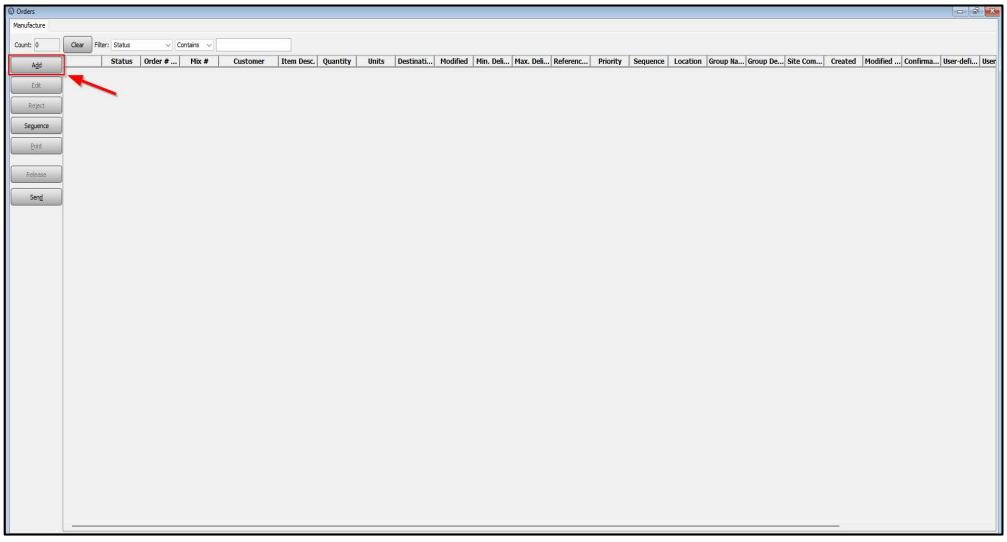
The following steps outline how you would go about creating a liquid blend order within the NGLC interface.

NOTE: If you have NexGen Office (NGO), your liquid blend orders should be coming from there, over to NGLC. This is so you can get NGO delivery tickets and completed order information to other agronomy software.

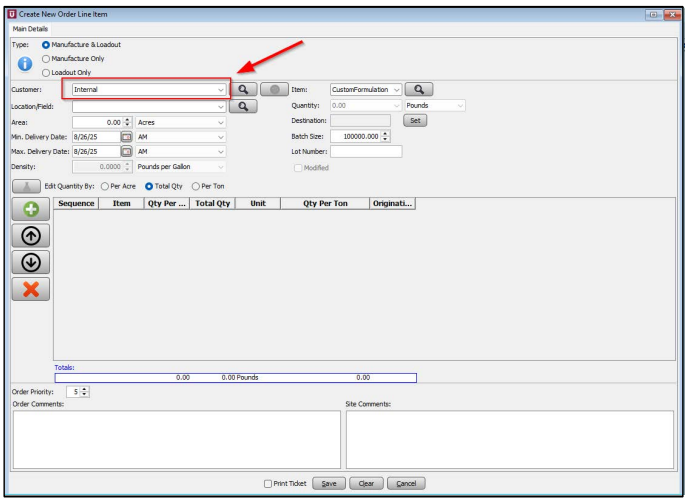
1. Open “Orders.”



2. Choose “Add.”



3. Customer will default to "Internal" or you can select a customer via the drop down menu.



4. With the order creation window open, follow the steps below to create your order:

(See screenshot on next page)

1) Click the "+" button to add as many ingredients as needed to the order.

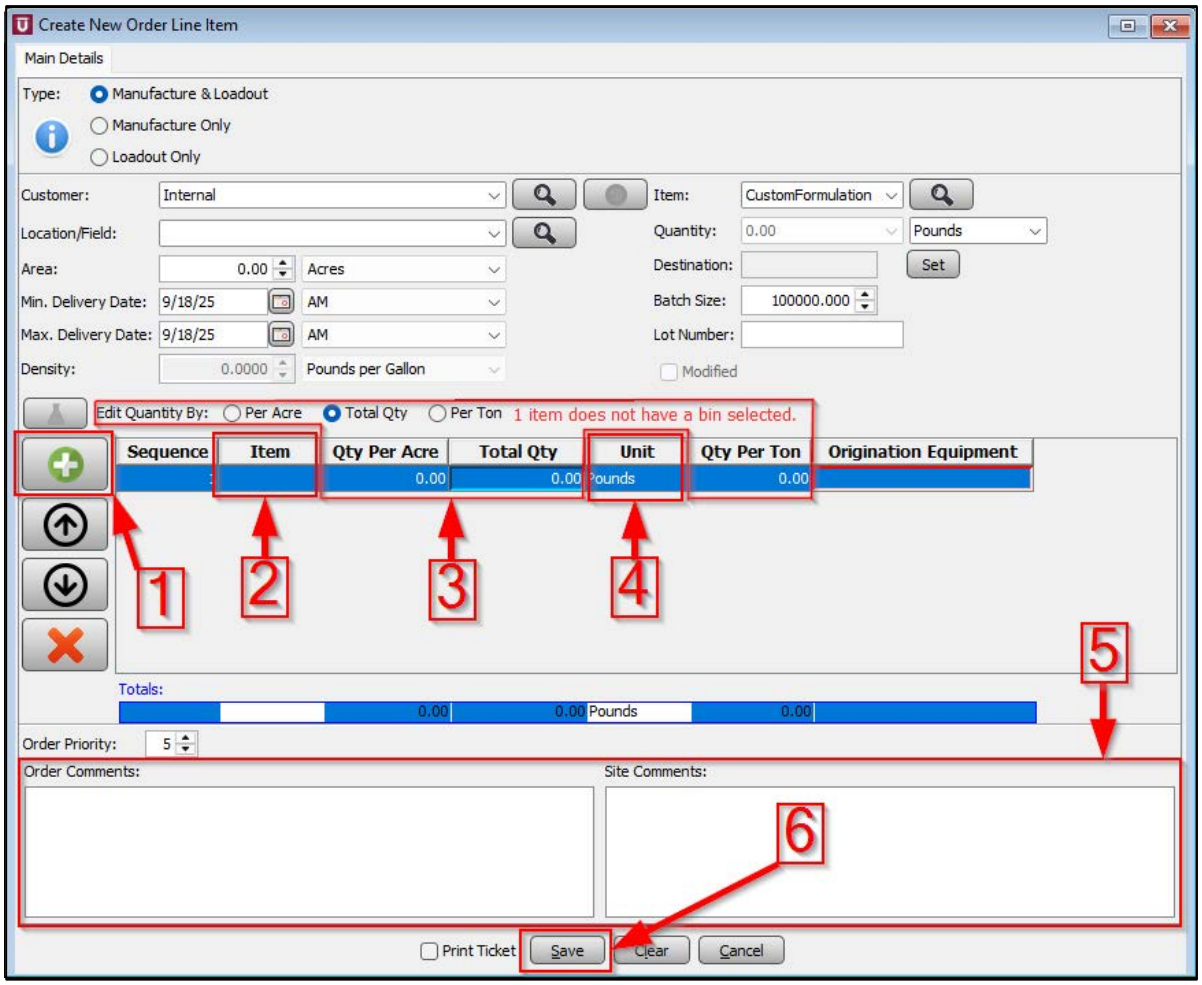
2) Select the appropriate ingredient via the "Item" drop down menu.

3) Enter the desired total quantity for the individual ingredient in the order. You can check either "Per Acre", "Total Qty", or "Per Ton" to determine how you will divide up the ingredients in the order. Depending on which one is checked will determine which "Qty" box you fill out for each ingredient quantity, either "Qty Per Acre", "Total Qty", or "Qty Per Ton."
NOTE: If using the "Per Ton" option, all ingredient quantities located in the "Qty Per Ton" boxes combined must add up to 1 ton (2000 pounds).

4) Choose the desired unit of measurement for the quantity you just entered.

5) Here you can enter any desired comments you'd like to attach with this order in either the order comments or site comments boxes. These would appear on a printed delivery ticket.

6) Click "Save" when done.

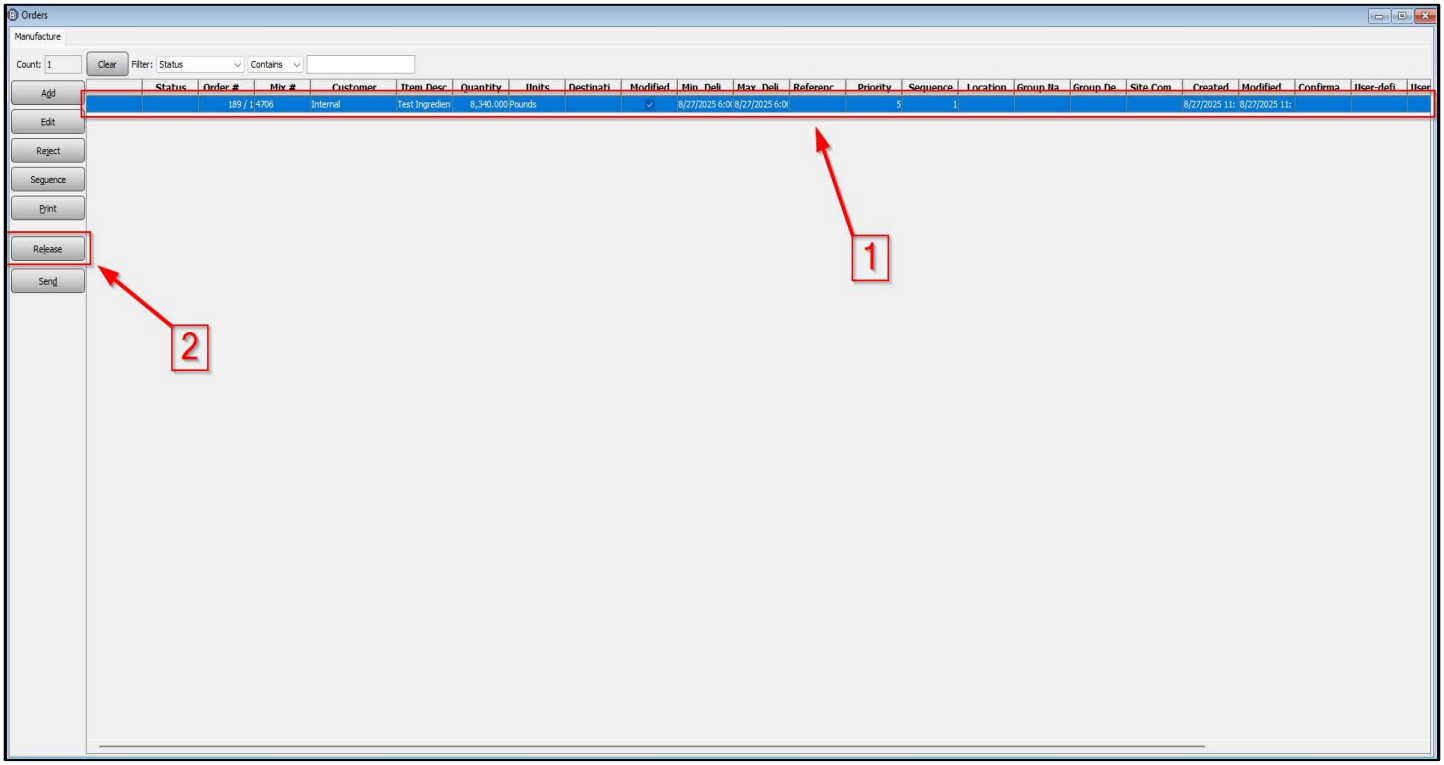

Create New Order Line Item
Main Details
Type:
Manufacture & Loadout
Manufacture Only
Loadout Only
Customer:
Internal
Location/Field:
Area:
0.00
Acres
Min. Delivery Date:
9/18/25
AM
Max. Delivery Date:
9/18/25
AM
Density:
0.0000
Pounds per Gallon
Item:
CustomFormulation
Quantity:
0.00
Pounds
Destination:
Set
Batch Size:
100000.000
Lot Number:
Modified
Edit Quantity By:
Per Acre
Total Qty
Per Ton
1 item does not have a bin selected.
Sequence
Item
Qty Per Acre
Total Qty
Unit
Qty Per Ton
Origination Equipment
0.00
0.00
Pounds
0.00
1
2
3
4
5
Totals:
0.00
0.00
Pounds
0.00
Order Priority:
5
Order Comments:
Site Comments:
6
Print Ticket
Save
Clear
Cancel

Releasing an Order

1. With the "Orders" window open:

    1) Select the order you wish to release by clicking on it.

    2) Click on the "Release" button.
    NOTE: If the order has a "red flag" attached to it, this means there is an issue with the order that will prevent it from being released. If you double click the order or highlight it and click "Edit" on the side of the "Orders" window, you will be able to see what is causing the "red flag" to appear. Most of the time it is due to an ingredient not having an assigned location to run from.
    NOTE: If the order has a "pink flag" attached to it, that just tells you that there is a comment attached to this order. It will not prevent release of the order, rather just notify you there is additional information that is coming along with this order.

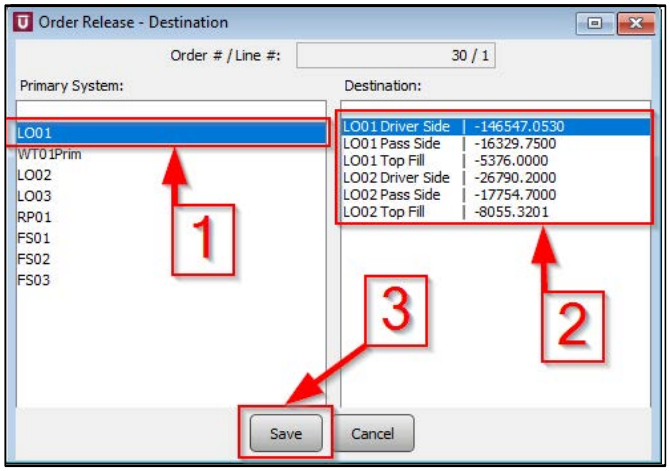


2. With the "Order Release - Destination" window open:

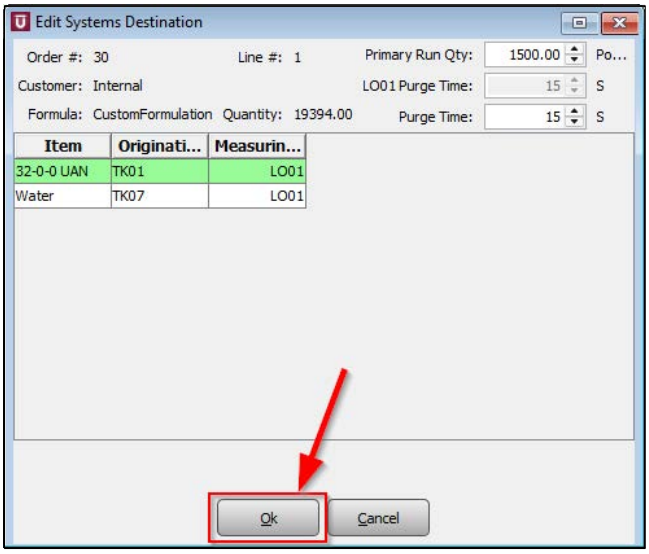
1) Select the system you wish to release the order to by clicking on it. This would represent something like a load-out bay or repack station.

2) Select the destination you wish to release the order to by clicking on it. This would represent the destination load-out valve in the primary system you selected in the previous step.

3) Click the "Save" button.



3. From the "Edit Systems Destination" window, you can make some edits to this individual order such as system air purge time, the primary run quantity, or change the measuring system that one of the ingredients in the order will run from. If there are no last minute edits to make for the order, click the "Ok" button in the "Edit Systems Destination" window.
NOTE: Purge time and primary run quantity are described in the MEASURING SYSTEM CONFIGURATION SETTINGS section.



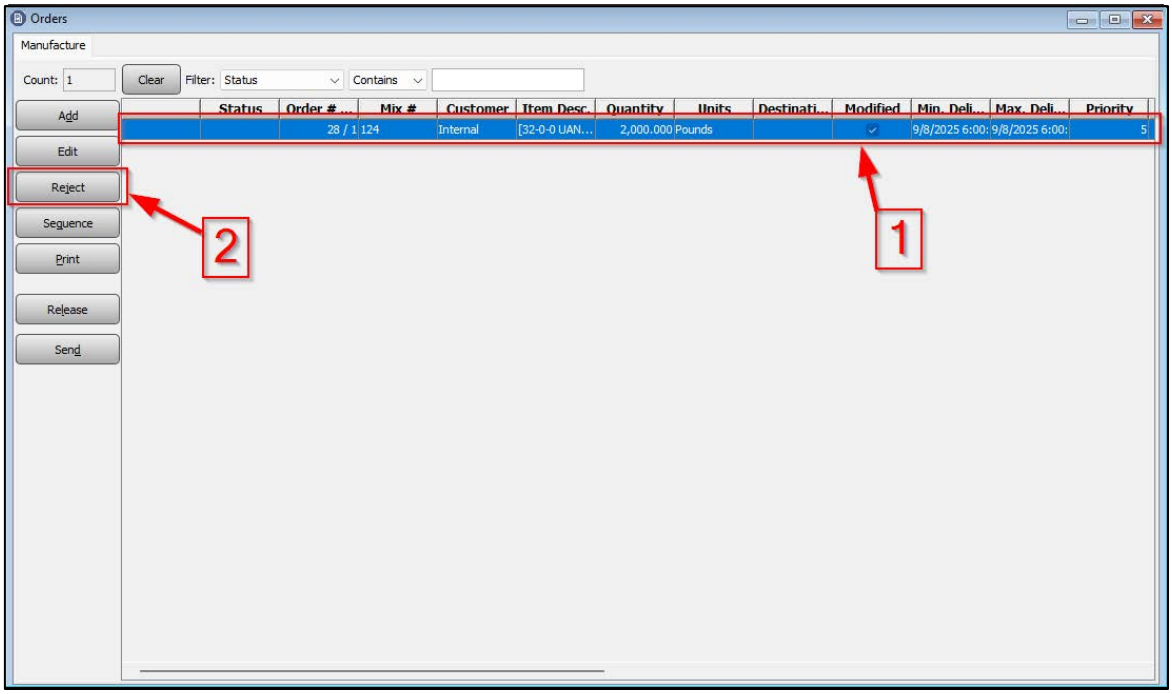
4. Once the order has a status of "Released", you can start the system to run in automatic by either clicking the start button on the respective system load-out HMI page or by pressing the start button on that respective bay's button box as shown below. **IMPORTANT: THE HMI NEEDS TO BE RUNNING WHENEVER AN ORDER FROM NGLC IS RUNNING.**

Rejecting an Order

1. If the order hasn't been released yet, with the "Orders" window open:

    1) Select the order you wish to reject by clicking on it.

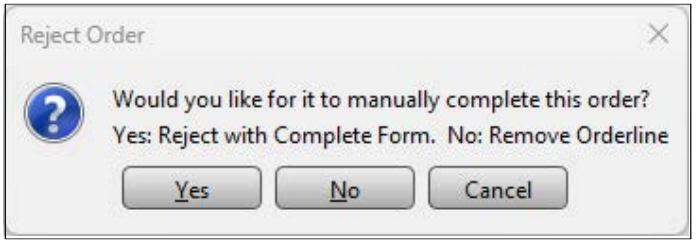
    2) Click on the "Reject" button.



2. With the "Reject Order" popup open:

    1) Select "No" to remove the selected order from the "Orders" window.

    2) Select "Yes" to manually complete the order in NGLC.



3. If the order to be rejected has already been released, perform the following:

   1) Go to the HMI page for the system the order to be rejected has been released to, and click the "End Run" button.

   2) Alternatively, you can also press the "Finish" button on the respective system's physical button box.

4. The rejected order should now be removed from the NGLC orders window. If the order was never started, it should show a "Rejected" status in NexGen Office (NGO). If any product was ran for the rejected order, that order will be moved to NGO history with run data for whatever ran in that order.

MEASURING SYSTEM CONFIGURATION SETTINGS

The following are some system settings that are configurable by the user. These are usually setup at install, but they can be changed at anytime as necessary.

A) **Primary Run Quantity**: The amount of product that must run through the main line before secondary injection ingredients will run.
NOTE: THIS MAY ALSO BE EDITED BEFORE RELEASE OF A SPECIFIC ORDER IF NEEDED (DONE IN THE "EDIT SYSTEM DESTINATIONS" WINDOW. SEE PAGE 10)

B) **Purge Time:** The amount of time, in seconds, that the air purge will run for after all ingredients in that system are done running.

C) **Purge Cycles:** The amount of times the purge will run after all ingredients in that system are done running with a small delay between cycles.

D) **Flush Item:** The ingredient that is used to flush the system after all ingredients in that system have finished running (usually set to WATER).

E) **Origination:** The ingredient location from which the flush ingredient will run.

F) **Flush Quantity:** The amount of flush ingredient that will run when the system flush is activated.

G) **Flush Unit:** The unit of measurement for the flush quantity.

H) **Holdback Quantity:** The amount of product remaining to run in the main line that the system will hold off on running until all of the secondary injection ingredients are finished running. This leaves some amount of product to run through the main line system to finish carrying the secondary injection ingredients to the destination.

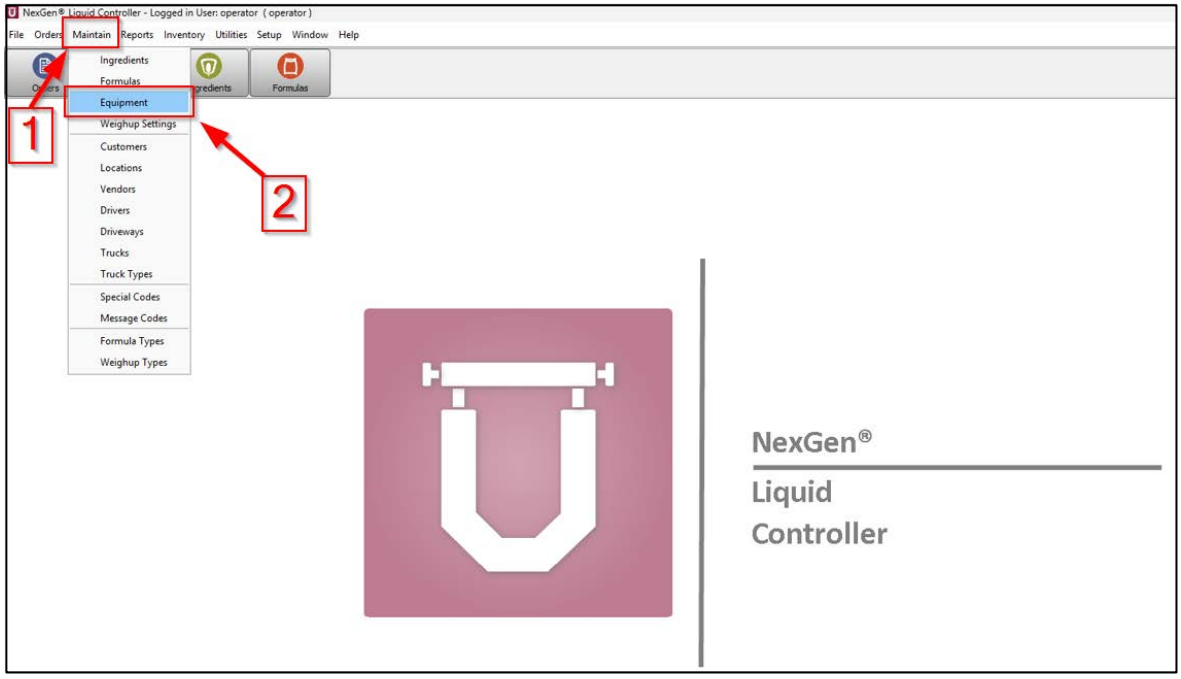
I) **Holdback Unit:** The unit of measurement for the holdback quantity.

(See screenshots in the following pages of this section)

1. To access these different settings, perform the following:

   1) Click on "Maintain."

   2) Click on "Equipment."

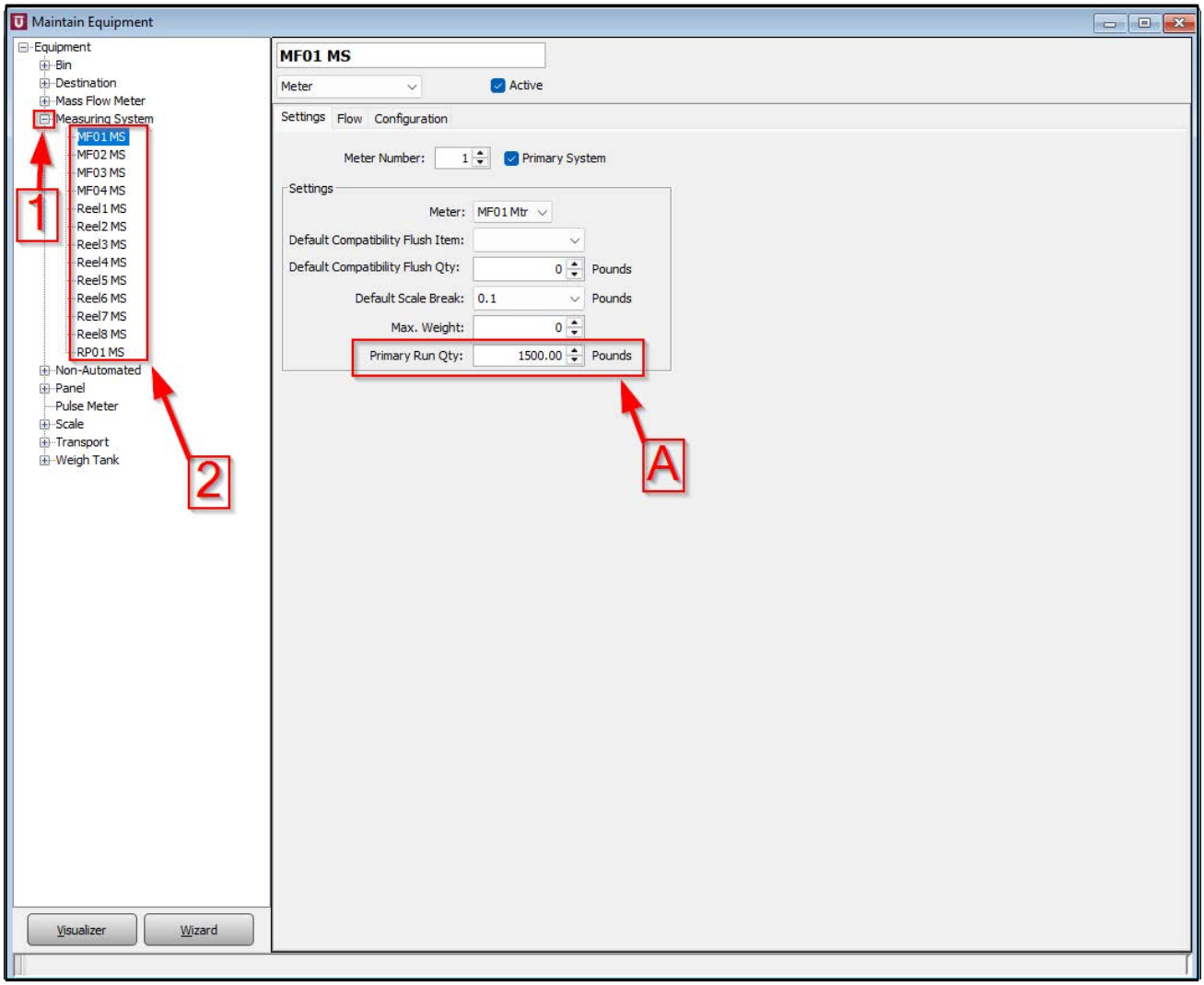


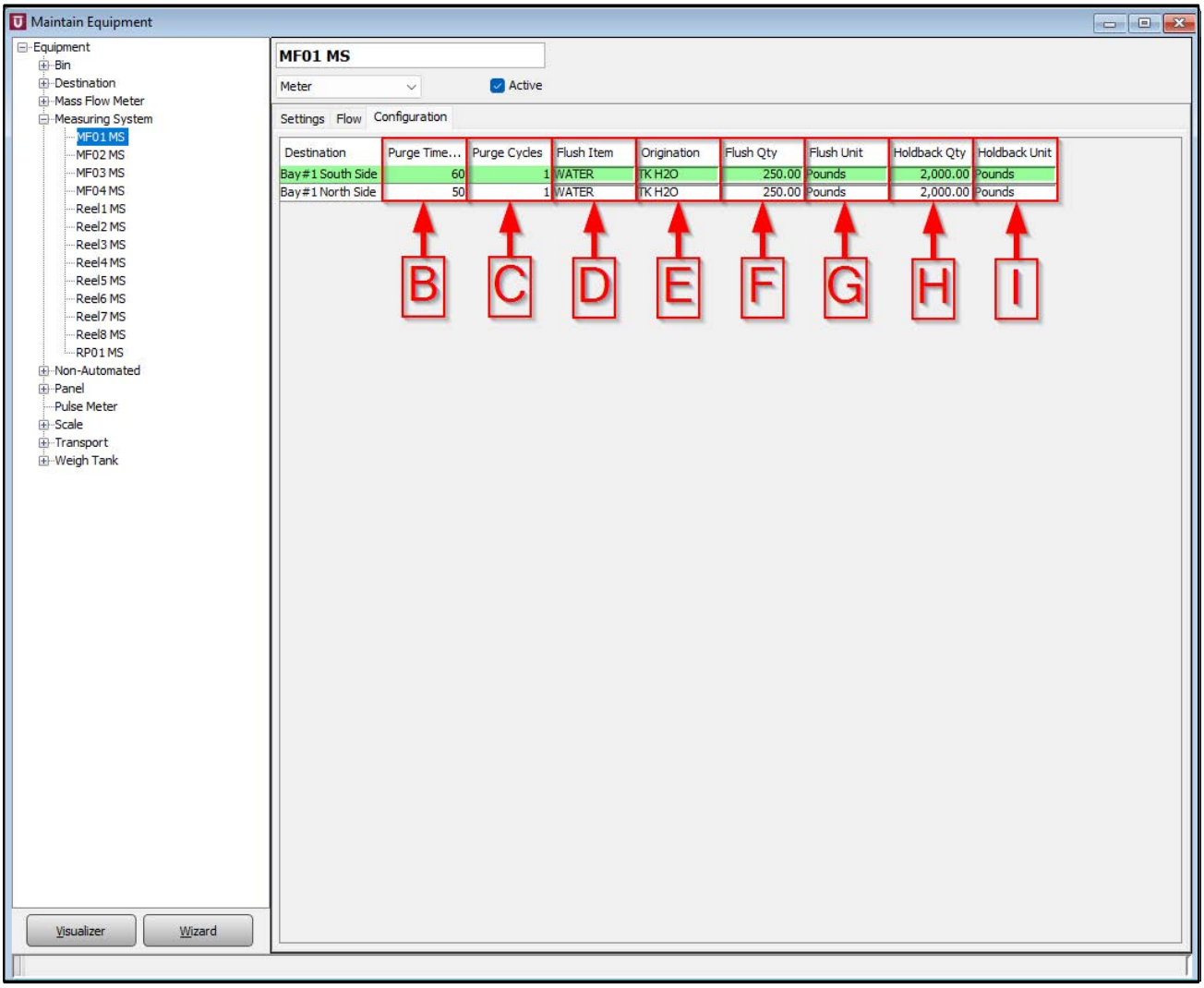
2. With the "Maintain Equipment" window open:

   1) Expand the "Measuring System" node.

   2) Select the measuring system you would like to adjust settings for.

3. Setting "A" is under the "Settings" tab and settings "B"-"I" are under the configuration tab.



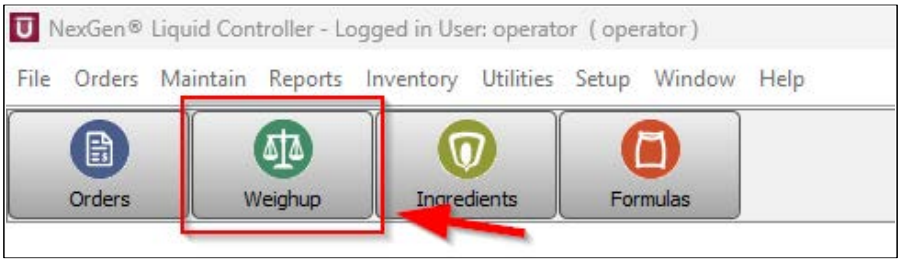

Maintain Equipment
Equipment
Bin
Destination
Mass Flow Meter
Measuring System
MF01 MS
MF02 MS
MF03 MS
MF04 MS
Reel1 MS
Reel2 MS
Reel3 MS
Reel4 MS
Reel5 MS
Reel6 MS
Reel7 MS
Reel8 MS
RP01 MS
Non-Automated
Panel
Pulse Meter
Scale
Transport
Weigh Tank
MF01 MS
Meter
Active
Settings
Flow
Configuration
Destination
Purge Time...
Purge Cycles
Flush Item
Origination
Flush Qty
Flush Unit
Holdback Qty
Holdback Unit
Bay#1 South Side
60
1
WATER
TK H2O
250.00
Pounds
2,000.00
Pounds
Bay#1 North Side
50
1
WATER
TK H2O
250.00
Pounds
2,000.00
Pounds
B
C
D
E
F
G
H
I
Visualizer
Wizard

ADJUSTING WEIGH UP SETTINGS

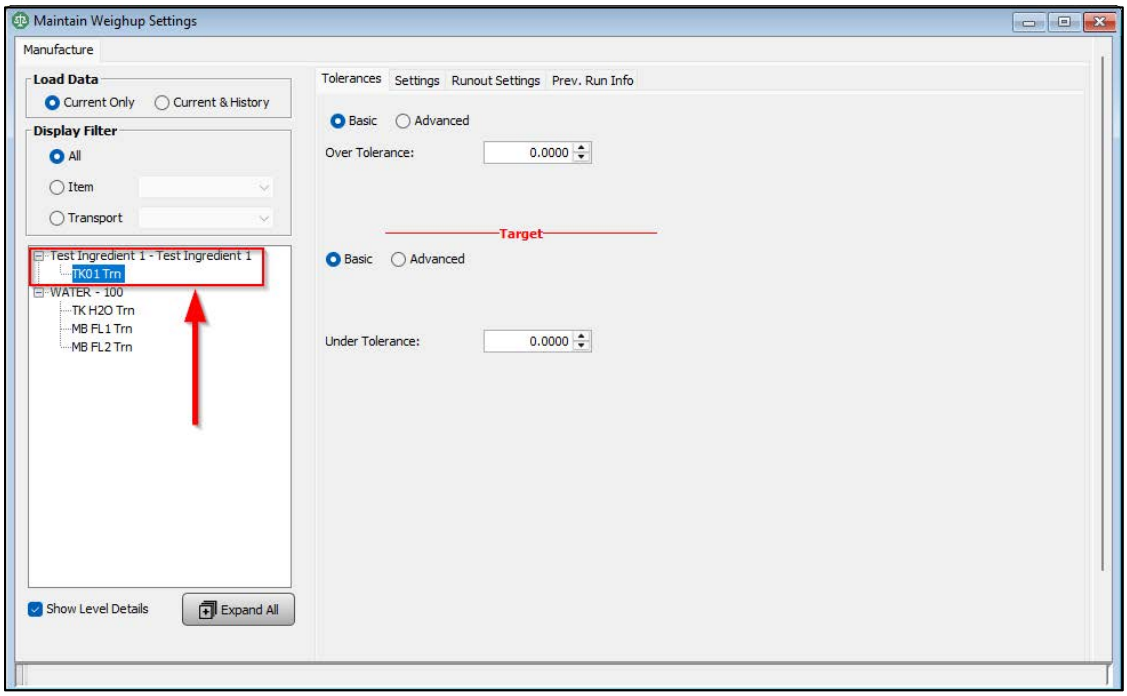
Weigh up settings determine how an ingredient runs from its specific set location. The following list are current weigh up settings that are used and configured from NGLC:

A) **Freefall:** This number represents the run amount away from the target quantity that the pump will stop running at. It represents the amount of product, in pounds, that the system expects to flow through its respective flowmeter after the pump stops.

1. To access weigh up settings, click on the "Weighup" button in the header.



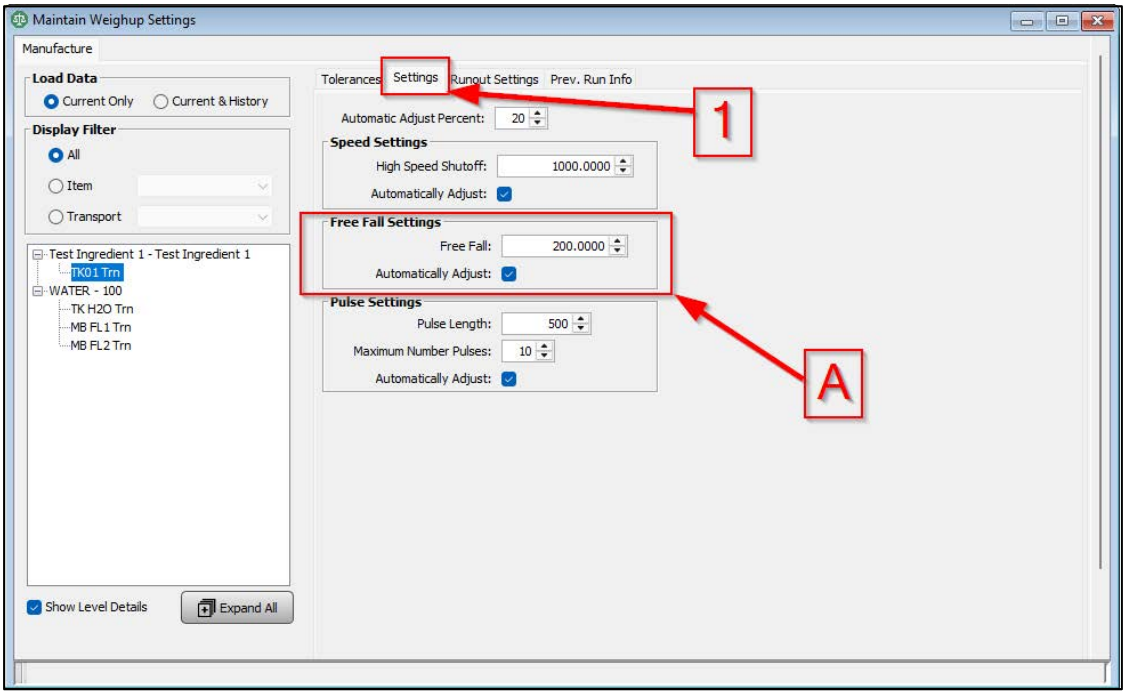
2. With the "Maintain Weighup Settings" window open, expand the node for the ingredient you're trying to adjust settings for and select the desired ingredient location.



3. To access the freefall setting, perform the following:

1) With the "Maintain Weighup Settings" window open and the desired ingredient location selected, click on the "Settings" tab.

2) Freefall is then adjusted in the location marked by "A" in the screenshot below. Additionally, with the "Automatically Adjust" box checked, the freefall will adjust automatically as orders are ran through the system based off of their final tare weights/volumes taken by their respective flow meter.



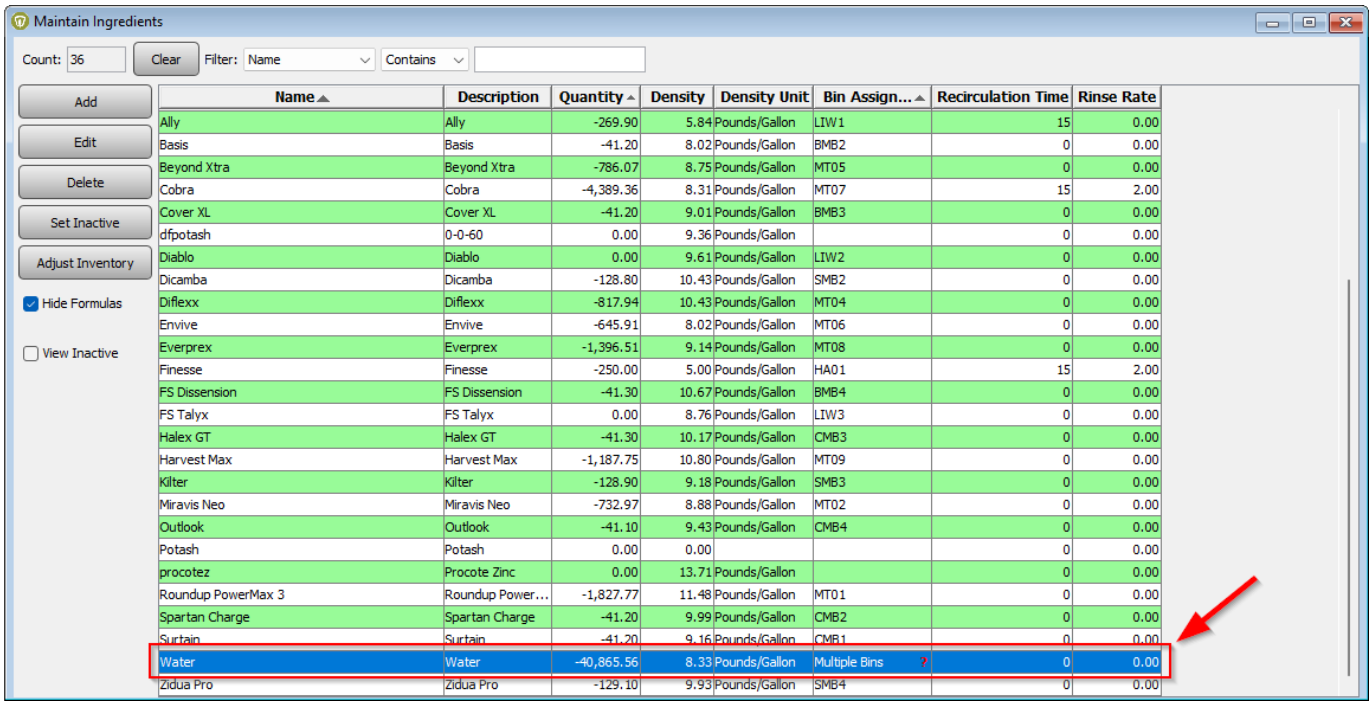
ITEM INCOMPATIBILITY

Some ingredients may not be compatible with each other and could cause adverse reactions when mixed directly together. To prevent this direct mixing, we can setup item incompatibility settings to flush between running products.

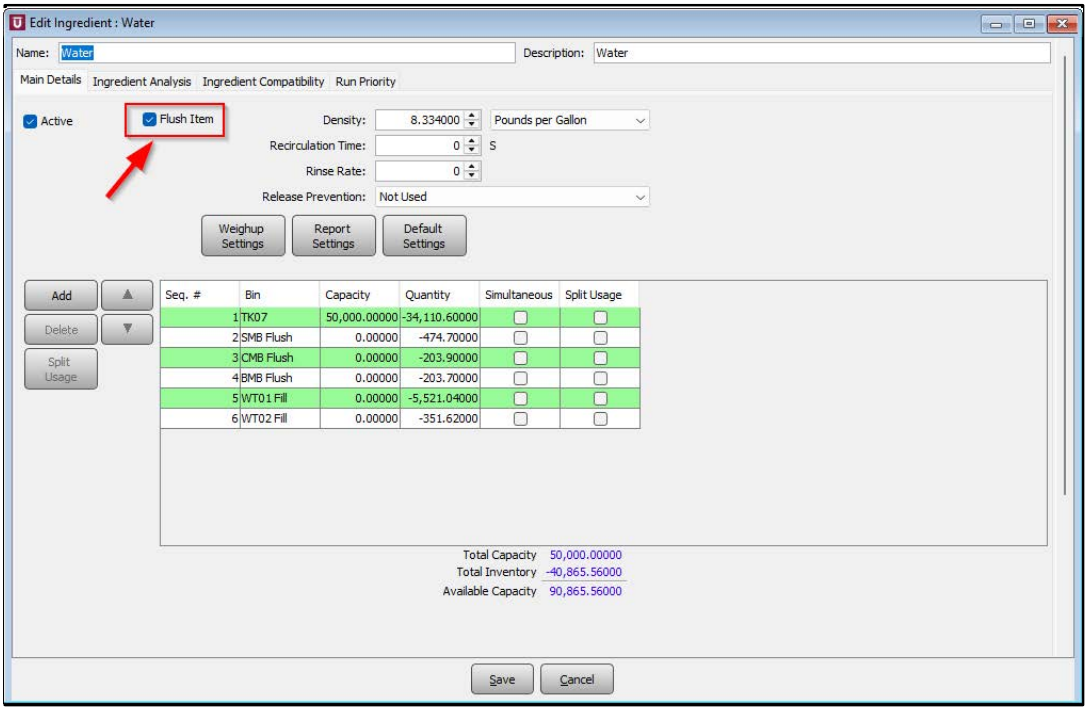
Setting Up A Flush Ingredient

1. Open the "Ingredients" window.

2. Select the ingredient you wish to setup as a flush and either double click it or click the "Edit" button with the ingredient highlighted.



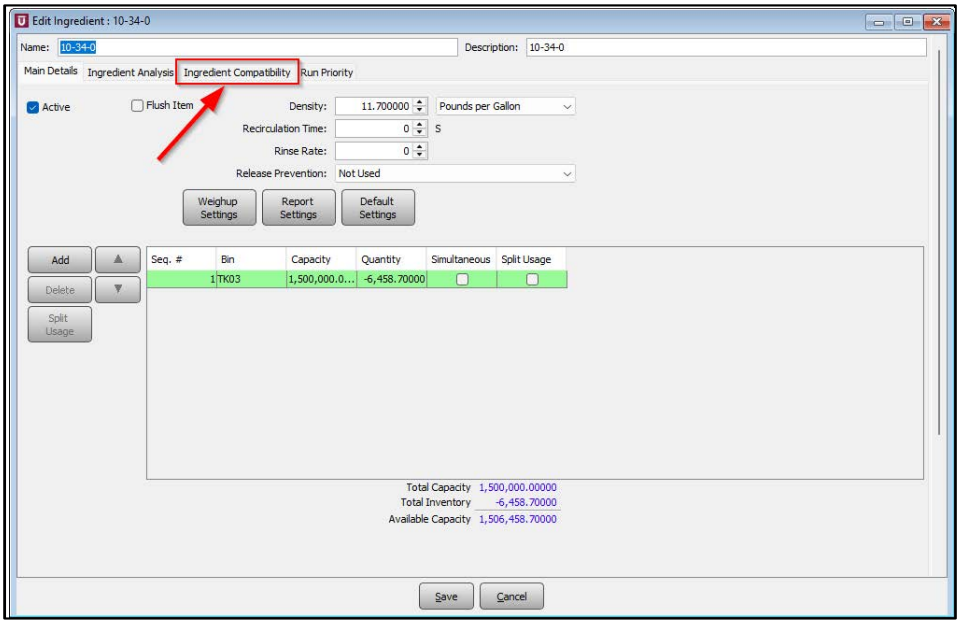
3. Check the "Flush Item" box in the selected ingredients "Edit Ingredient" window. Click the "Save" button when done.



Setting Up Incompatible Items

1. Navigate to the ingredient's "Edit Ingredient" window. From there, select the "Ingredient Compatibility" tab.

NOTE: See "Setting Up A Flush Ingredient" as a reference to navigating to this window.



2. In the "Ingredient Compatibility" tab, you can setup incompatibility settings as described below:

(See screenshots on the next page)

A) **Add:** Press this button to add an additional incompatible ingredient to pair with this ingredient.

B) **Ingredient:** Choose the ingredient that is incompatible with the currently edited ingredient. If this is set to "All" it will always run a flush with this ingredient.

C) **Flush Item:** Choose the ingredient that will be used to flush between incompatible ingredients. Only ingredients marked as "Flush Items" will show up here.

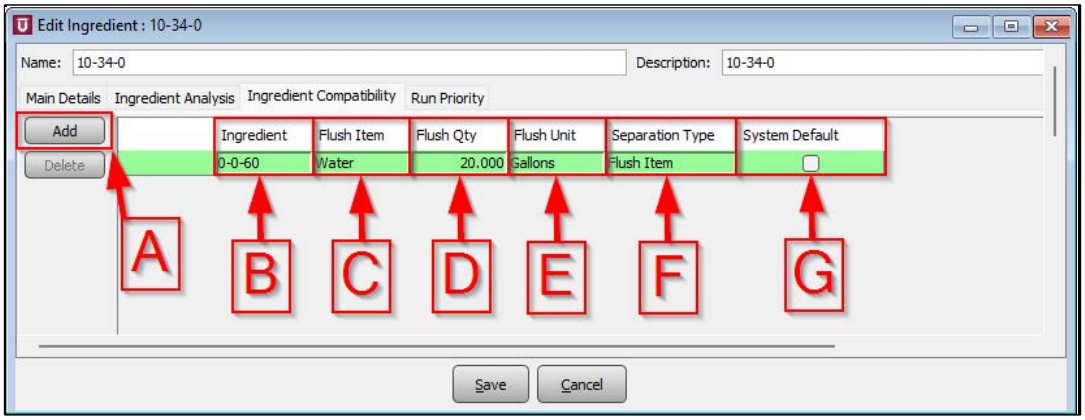
D) **Flush Quantity:** Choose the amount of flush ingredient to run between incompatible ingredients. The "Default Compatibility Flush Quantity" for the measuring system in the second screenshot is ONLY in the legal for trade unit of measurement for that system.

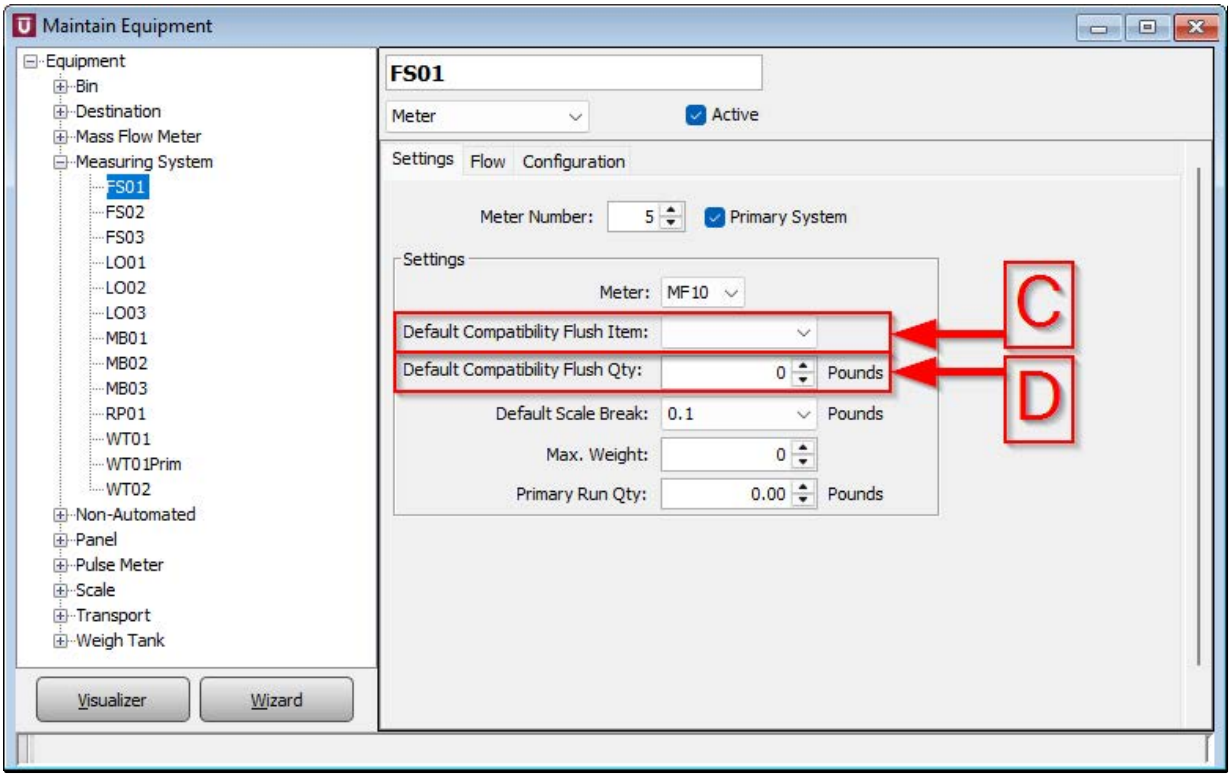
E) **Flush Unit:** Choose the unit of measurement of the flush quantity.

F) **Separation Type:** For an ingredient that is NOT a hand add, if set to "Flush Item", it will run the flush item designated in this specific incompatible setting. If set to "Ingredient", it will run one of the other ingredients in the same measuring system as the flush item if there is another ingredient in the same system to run in the same order. If there isn't another compatible ingredient, it will run the flush item ingredient instead.

   For an ingredient that IS a hand add, this doesn't matter as the weigh tank will discharge after each incompatible hand add ingredient addition is marked as completed.

G) **System Default:** If this is checked, it will use the default incompatibility flush settings that are setup for the measuring system that the edited ingredient is being run from. These settings are located under "Maintain", "Equipment", "Measuring System", and select desired measuring system.


Edit Ingredient : 10-34-0
Name: 10-34-0
Description: 10-34-0
Main Details
Ingredient Analysis
Ingredient Compatibility
Run Priority
Add
Delete
Ingredient
Flush Item
Flush Qty
Flush Unit
Separation Type
System Default
0-0-60
Water
20.000
Gallons
Flush Item
A
B
C
D
E
F
G
Save
Cancel


Maintain Equipment
Equipment
Bin
Destination
Mass Flow Meter
Measuring System
FS01
FS02
FS03
LO01
LO02
LO03
MB01
MB02
MB03
RP01
WT01
WT01Prim
WT02
Non-Automated
Panel
Pulse Meter
Scale
Transport
Weigh Tank
Visualizer
Wizard
FS01
Meter
Active
Settings
Flow
Configuration
Meter Number: 5
Primary System
Settings
Meter: MF10
Default Compatibility Flush Item:
Default Compatibility Flush Qty: 0 Pounds
Default Scale Break: 0.1 Pounds
Max. Weight: 0
Primary Run Qty: 0.00 Pounds
C
D

WEIGH TANK SETTINGS

If your system has a chemical weigh tank included, the following information will list where the configuration settings are located and what they represent.

Weigh Tank Configuration Settings

1. Navigate to your weigh tank settings by going to "Maintain", then to "Equipment", then expand the "Weigh Tank" node and select the weigh tank you want to adjust settings for. The following is an explanation of those settings:

(See screenshot on next page)

A) **Start Rinse Weight:** This is only used when discharging product from the weigh tank. This is the amount of weight left in the weigh tank after the contents have already started dispensing that the discharge rinse will start. If the weigh tank is not fully cleaning out, increasing this value so the rinse starts earlier can help to improve clean out of the tank. Decreasing this value will reduce the amount of additional water added to the overall blend.

B) **Stop Rinse Weight:** This is the amount of weight left in the weigh tank after the contents have already started dispensing that the discharge rinse will stop. If there is an issue where the weigh tank isn't emptying properly, increasing this value can ensure the rinse stops earlier to allow the discharge pump removes the material in the weight tank. At the same time, decreasing this value could help improve clean out but also extend discharge based off of the filling to discharging ratio.

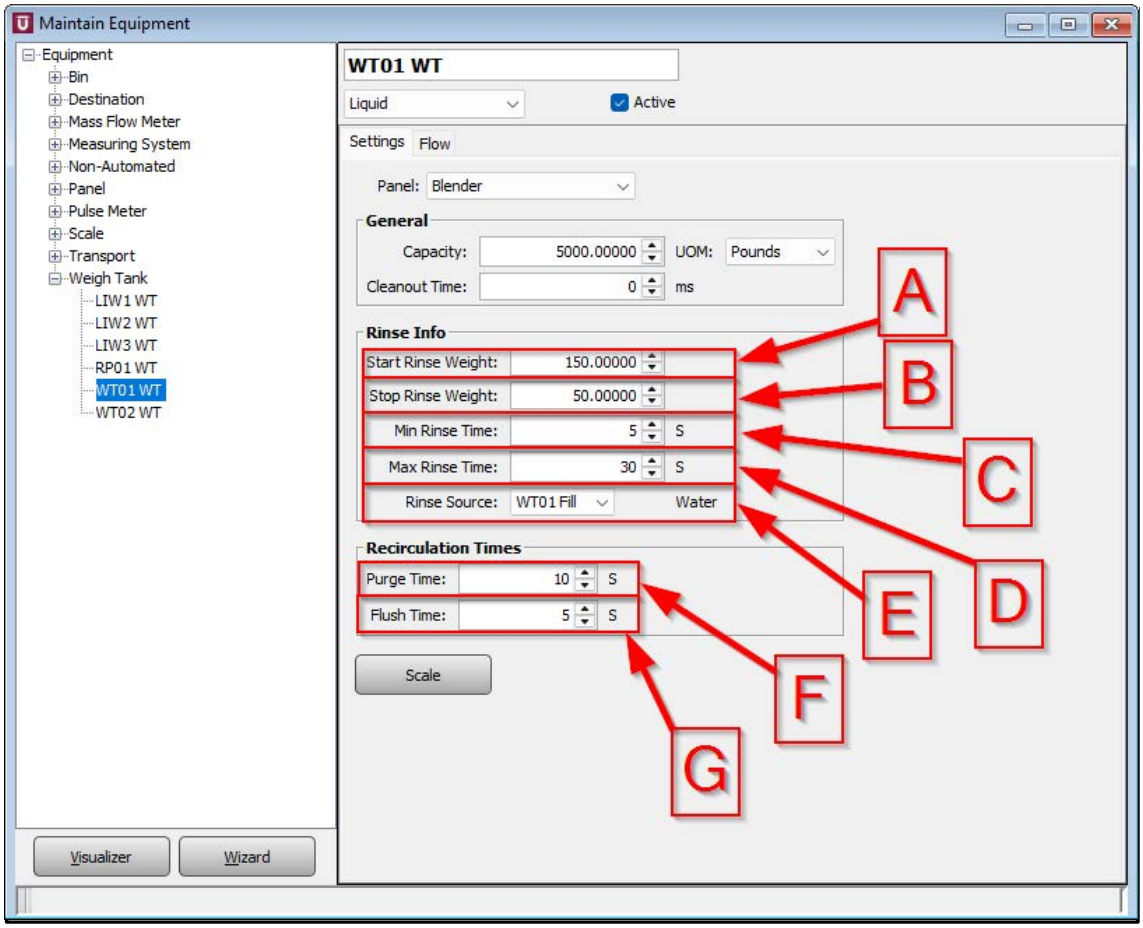
C) **Min Rinse Time:** This is the minimum amount of time in seconds that the discharge rinse will run for. This ensures there is a rinse to clean out for every discharge.

D) **Max Rinse Time:** This is the maximum amount of time in seconds that the discharge rinse will run for. This setting is used to limit the added volume of water into blends as well as preventing discharge from running to longif the rinse fills faster than the tank can discharge.

E) **Rinse Source:** This is the source of your discharge rinse.

F) **Purge Time:** This is the amount of time in seconds that your air purge will run in between recirculation cycles. This should be long enough to ensure a proper clean out of the recirculation piping (if applicable), but not too long as to impact system efficiency.

G) **Flush Time:** This is the amount of time in seconds that the flush ingredient will run in between recirculation cycles. This should be long enough to ensure proper clean out of the recirculation piping (if applicable), but not too long as to impact additional water inclusion in the liquid order blend.

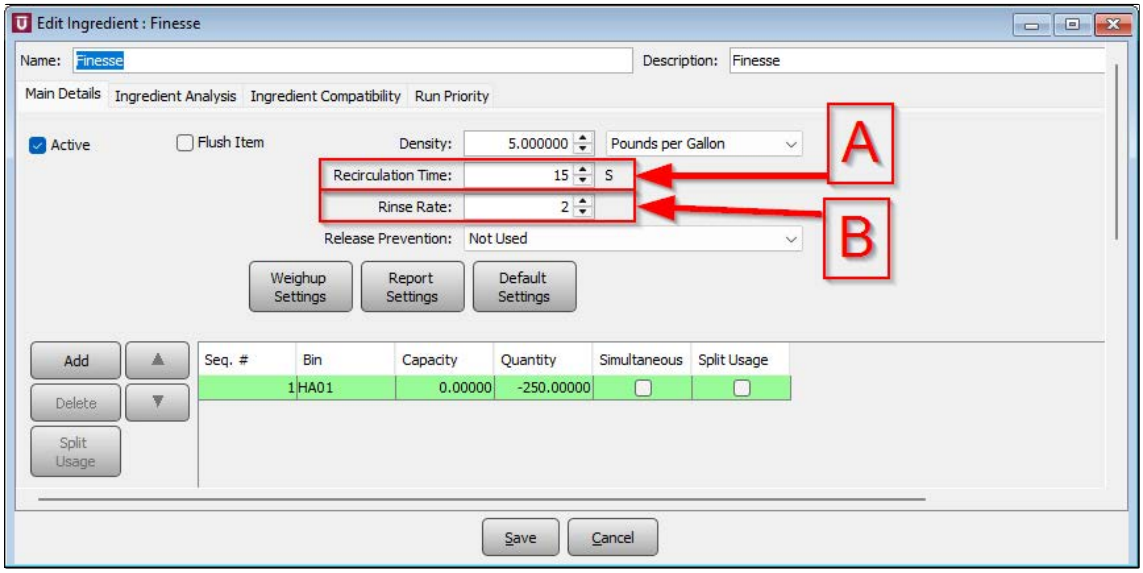


Weigh Tank Ingredient Settings

1. Navigate to the "Edit Ingredient" window for the hand add ingredient you're trying to adjust the settings for by opening the "Ingredients" window, selecting the ingredient, and either double clicking it or hit the "Edit" button on the side of the "Ingredients" window with the ingredient highlighted.

A) **Recirculation Time:** This is the amount of time in seconds that the selected ingredient will recirculate in the weigh tank after it has been acknowledged as being added.

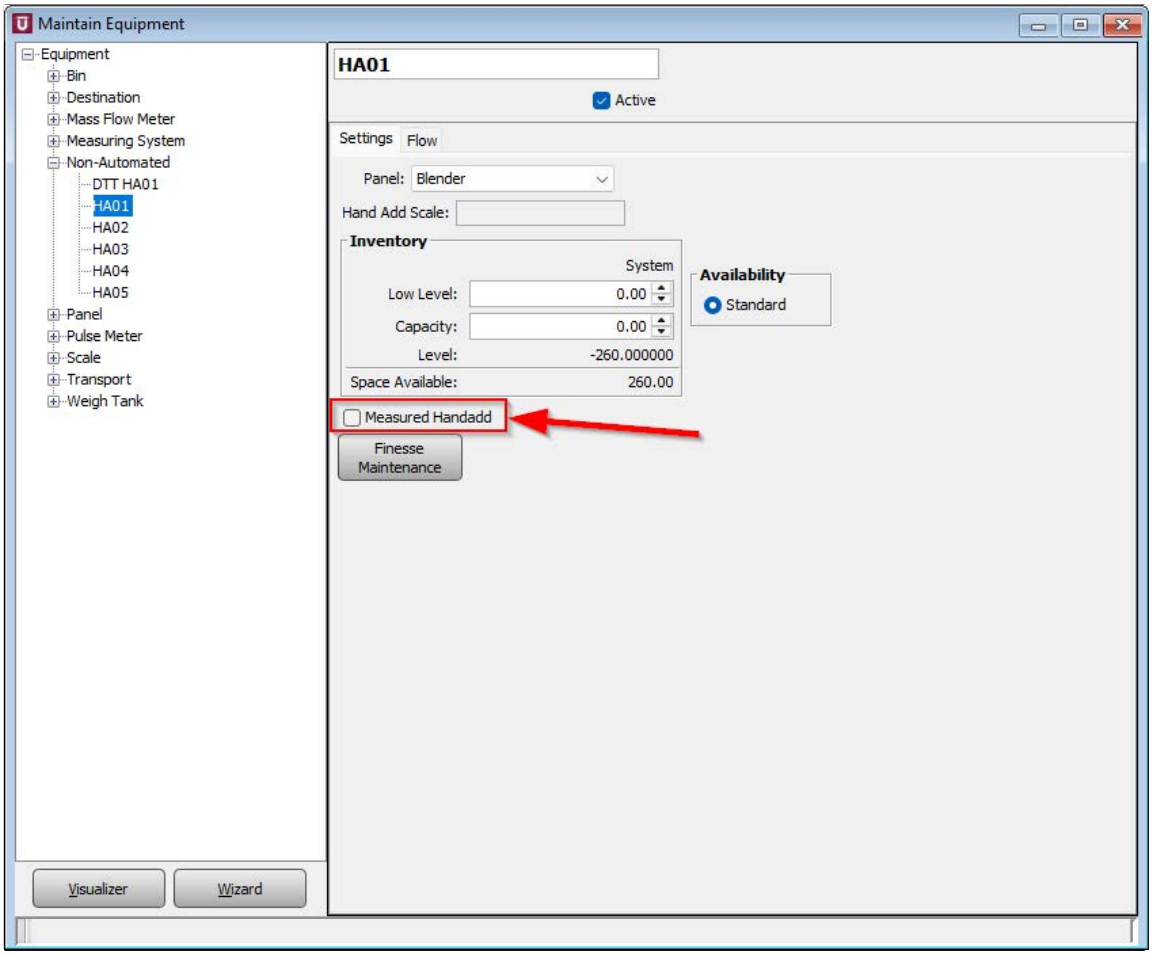
B) **Rinse Rate:** This is the ratio of flush ingredient to target quantity of selected ingredient that will run into the weigh tank before it is time to add the selected hand add ingredient. For example, if rinse rate is set to 2 and you are requesting 10 pounds of the selected hand add ingredient, then it will run 20 pounds of water into the weigh tank before it is time to add the hand add ingredient.



2. You can select whether a hand add ingredient is "measured" or "unmeasured" by navigating to the hand add location that ingredient is set to under "Maintain", "Equipment", expand the "Non-Automated" node, and select the desired hand add location.

If a hand add ingredient is "measured" than an initial tare weight and final tare weight will be taken for the ingredient when it is time to be added to the weigh tank so its actual added amount is recorded in the order information.
NOTE: Be careful not to lean on or place any weight on the scale when those initial and final tares are taken otherwise that will be reflected in the final order information.

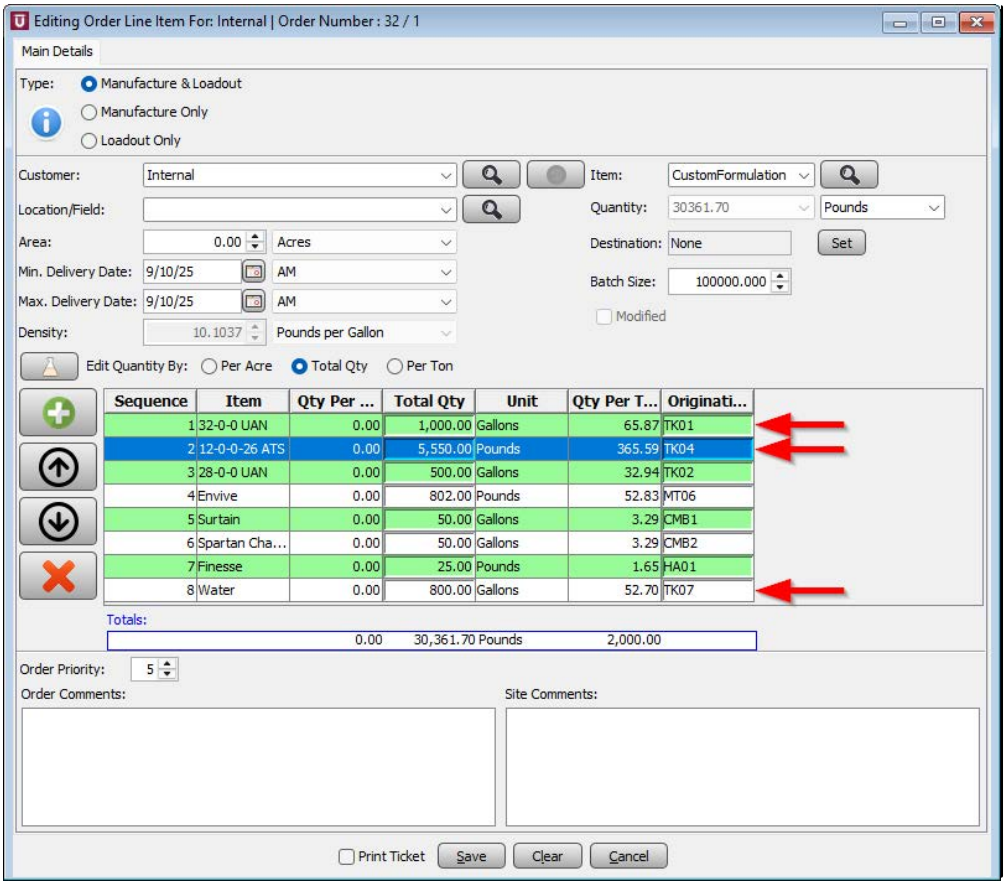
If a hand add ingredient is "unmeasured" than when the ingredient is requested to be added and then subsequently acknowledged, it will record the requested target amount as the ran amount in the final order information.



ITEM PRIORITY

Item priority is used to control the order in which all ingredients run in the different measuring systems they're assigned to.

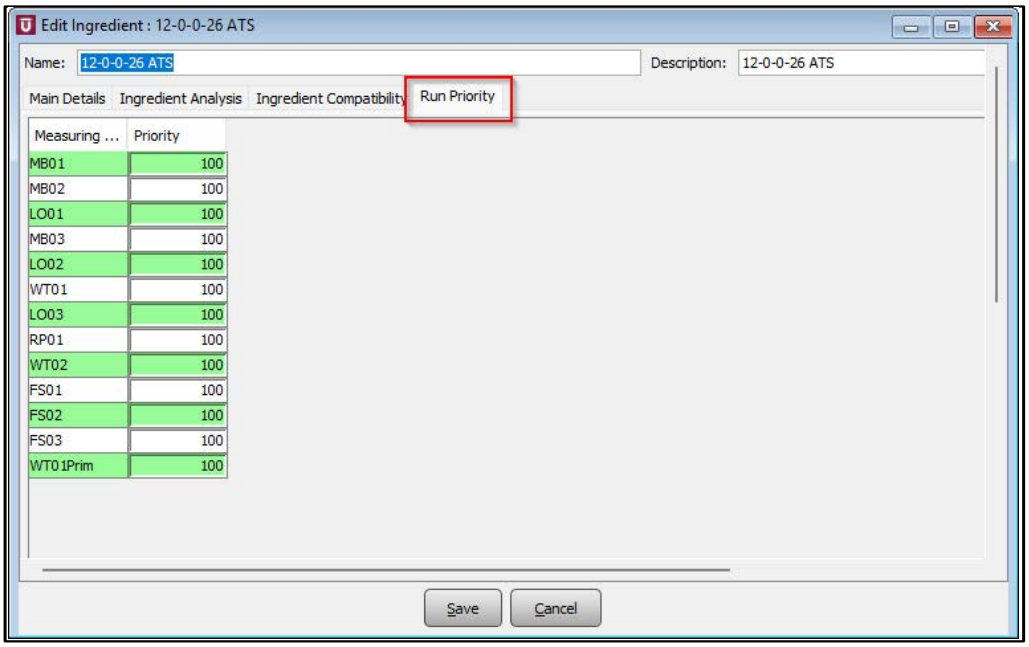
By default, all ingredient priorities are set to "100" which means they will run in sequence of how they are listed in the order. For example, in the order below, we know that the three ingredients pointed out are ran through the same measuring system. If none of those ingredient's item priority was changed from default, then they will run in the order they're listed in.
NOTE: The sequence may also be affected by incompatible flushes and other flush settings.



If you wanted to run the second listed ingredient before the first, then you could select that second ingredient and then click on the "Up Arrow" button on the left side of that "Edit Order Line" window. This will now place that ingredient above the first in sequence and it will run first when that measuring system's ingredients are called to run. This sequence would ONLY be for this specific order.

If you wanted to make it so an ingredient in a specific measuring system always runs either before or after a different ingredient in that same system, regardless of the order sequence listed in its "Edit Order Line" window, than you would set that up as follows:

1. Open the "Ingredients" window, select the desired ingredient, either double click it or click the "Edit" button on the left side of the window, and select the "Run Priority" tab right below the ingredient name in the "Edit Ingredient" window.



2. If you want the ingredient to run AFTER the other ingredients in a specific system, you would select the priority number for the given system and then increase that to a number above the other ingredients in the system.

Because all ingredients are set to a priority of "100" by default, increasing the priority number to "101" here would make it so this ingredient will run after all the other ingredients in this specific system when the ingredients of this system are called to run.

If you wanted to make sure an ingredient ran BEFORE other ingredients in a specific system, you would want its priority number to be LOWER than the other ingredients in that measuring system.