GS-709 IN-SEASON PLAN TEST PLAN

April 9, 2015

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1. Purpose and Scope

This test plan describes the strategy for exercising the functionality **and/or fixes** for the JIRA issues in this release. As features are being designed the test scenarios described in this document will be updated to accommodate the modifications to the plans.

The purpose and scope of this test plan is to list and describe the test strategy for the following Jira Issues:

Issue	User Story	Sprint/Release Schedule
GS-709 **Sub task GS-809**	Display: Current Water Balance Plan (main screen)	Sprint 10
GS-883	Water Balance Weather Toggle	Sprint 11
GS-884	Water Balance Plan Change Proposal Email	Sprint 11

- The focus of this test is from the front end. It is only to examine and access the quality of the general functionality and that the current Fertility functionality has not degraded due to this change.

1.1 Limitations

This test is limited as follows:

To front end testing. There is no back end testing.

Only the features mentioned in the box above is tested, with light testing of the areas of this feature It does not include a full regression test.

Confirming Refill Alert Field Icon coloring:

Once data starts to come in from the probe the Field Icon should reflect the Refill alert colors blue, Red or Green. Be advised this scenario cannot be guaranteed at test time. Applied Invention test environment cannot manipulate the systems to cause these alerts to occur at will in order to fully validate this requirement.

Confirming Probe Update:

. Applied Invention test environment cannot manipulate the systems to verify the data. The test is limited to clicking on the feature. Confirming the icon spins while updating. GS-885 has been entered to add a message to the user to effect of “Updating…” or tooltip to explain what the feature is for.

1.2 Sprint/Release Schedule

Refer to the grid above for sprint schedule information.

1.3 Assumptions and Risks

- Manual tests will be designed to allow any person to execute the test scripts. They will also be designed with the assumption for easy conversion to automated scripts in the future.
- Test Plan for this effort will be available as an attachment against the **Test plan** JIRA issue in pdf format.
- Functionality will be delivered by Engineering on time.
- Required resources will be available i.e. Test environments, Devices i.e. Laptop/iPad etc.
- There are no specification documents. Requirements are given via sprint discussions, email and/or accepted design Wire Frames therefore, test plans are built against these matters.
- Handling Leap year dates: there is no testing in this area; it is assume the code used in JavaScript Date object will know how to determine this situation and present the expect dates. This applies to date control, Date input, Dates in Settings, etc.

2. Test Strategy

The following test strategies will be considered:
Content – is the message being communicated by the page delivered to the user?
Functionality – can users do everything they need to?
Display – does the page look as it should do in terms of style and layout?
A check that the content, functionality and display all work as intended. Verification of the different types of interaction will be exercised if applicable, for example: Navigation, Form filling – are the input boxes behaving as expected?

2.1 Test Flow

The test scenarios designed in this document will flow as described below in each Test Case section:

- User Logs on.
- Selects an Operation or a Farm depending upon access.
- Proceeds to examine the feature under test
    - Confirm the display, design, defaults and expected functionality
    - Some regression will be done on the existing functionality as the Tester examine the surrounding areas of the feature under test.

3. Test Environment

Unless otherwise instructed, testing will be executed against the following environment/ configurations:

Test Environment: https://gmctest.east.pioneer.com/

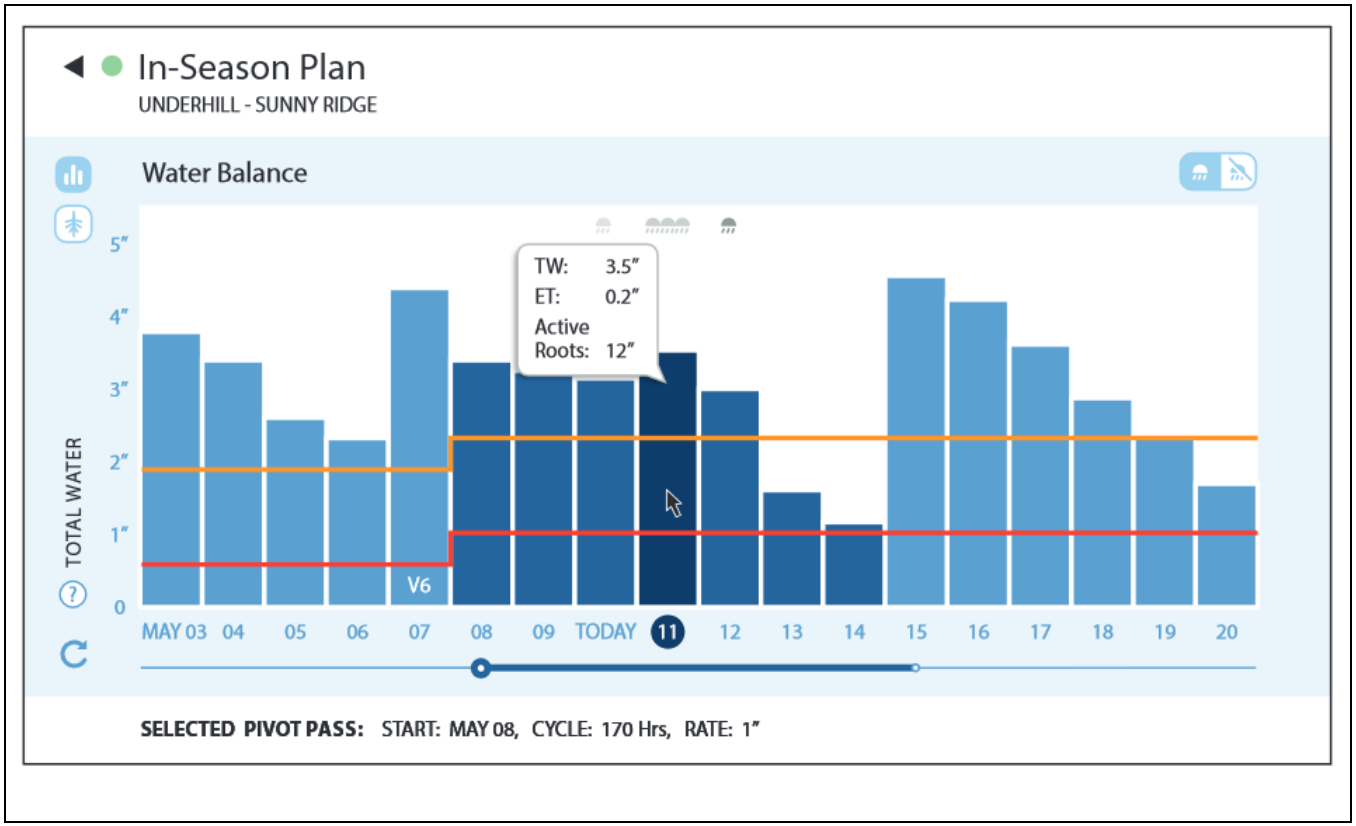
3.1 Supported Devices and Browsers

Device: Laptop
O/S: Win 8.1
Screen Resolution: 1366 X 768
Browsers:
~~IE 9 (IE10 will also be examined)~~
IE 10 and current IE version
Firefox latest version (currently Version 36x)
Chrome latest version (currently Version 41.0.2272.118 m)

Device: IPad
O/S: Latest Version TBD at time of test and will be noted in JIRA
Screen Resolution: 768 X 1024
Browser:
Safari/Latest version

4. Test Case: Verify the current Water Balance Plan (main screen); In-Season Water Balance Design and Defaults (GS-709).

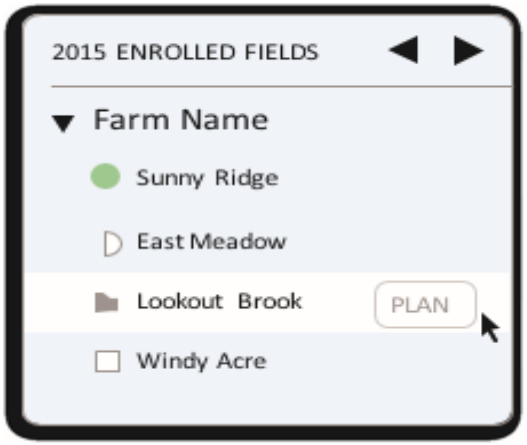
The test scenarios presented in this test case will exercise the JIRA issue GS-709 with accompany sub tasks. **(See** Purpose and Scope**,** Limitations, Risks and Assumption section above).



Details shown here may be out dated. It is only an example.
Please check JIRA for the most recent information for this issue.

4.1 Test Case: Verify navigation to the Water Balance In-Season Plan; confirm the Navigation panels are designed and functions as expected.

Fields before and after Setup



Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have not been set up - Fields that will not have a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open **Jira to GS-709** https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements Review and have the most recent wireframe nearby for reference. (***Note to Tester***: Also **review the comments** for updates to this spec.)	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	**Test Set up:** Log in as the User with an Operation as detailed in the Pre-requisites step.	**Able to follow instructions**: The User has at least 1 Farm 1 field setup for Water. - Successfully logged in - Landed on the expected page.		
5.	**From** the Water page. Select a field that has not been setup for testing that **has a probe** in the ground. (***Note to Tester:*** Water Dev – Jalai or Kelcey)	- Able to do as instructed. - Selected a a Field that has not been setup that has a probe in the ground i.e. probe data coming in.		
6.	**Confirm** the crop zone status Button label is correct: - Verify a Field that has **NOT** been setup.	- For fields that have not been setup the Crop Zone status button's labeled is "**Setup".**		
7.	**Confirm** the Field's Icon displays a grey outline and is white filled.	- The field's icon coloring is as expected.		
8.	**Click or Tap** on its Setup button.	- The Setup Step 1 Panel is displayed.		
9.	**Setup** the Field by completing each Setup Step panel. Click Save when done.	- Able to successfully setup the field.		
10.	**Confirm** the Field's crop zone status button updated to the correct status	- For fields that have been setup the Crop Zone status button's label is "**Plan".**		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
11.	**Confirm** for the Field under test its Icon now appears "Grey". ***Note to Tester:*** Review the Test Limitation section for **Refill Alert Field Icon coloring**	- The field's icon coloring appears Grey as expected. - - Tester is familiar with the refill Alert testing limitation.		
12.	**Now click** or Tap on the Field's Plan button .	- Page display is as expected for fields that are I**n-Season.** - The **In-Season Plan Page** opens defaulting to Water Balance screen.		
13.	**Confirm** the **In- Season Plan** is available.	The I**n-Season Plan Page** opens **defaulting to** the **Water Balance** screen.		
14.	**From** the Water page. Select a field that has not been setup for testing that **does not have probe** in the ground. (***Note to Tester:*** Water Dev – Emils or Enosh)	- Able to do as instructed. - Selected a un-setup Field that DOES NOT have a probe in the ground i.e. no probe data coming in.		
15.	**V**erify for this field type that its crop zone status button is as expected	- For fields that have not been setup the Crop Zone status button's label is "**Setup".**		
16.	**Click or Tap** on the field under test Setup button.	- The Setup Step 1 Panel is displayed.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
17.	**Setup** the Field by completing each Setup Step panel. Click Save when done.	- Able to successfully setup the field. - The field's icon coloring appears Grey as expected. - For fields that have been setup the Crop Zone status button's label is "**Plan".**		
18.	**Now click** or Tap on the Field's **Plan** button .	- Page displays as expected for fields that are in the pre-season, with no probe in the ground. - The **Pre-Season Plan Page** opens.		
19.	**AD – HOC TEST:** - Test the surrounding areas of this function:	Able to do as instructed.		
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

4.2 Test Case: Verify the Water Balance In-Season Plan is designed as expected (Read –Only).

Scenarios will examine and focus on the In-Season Plan design and default settings.

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		
5.	**Test Set up:** Log in as the User with an Operation as detailed in the Pre-requisites step.	**Able to follow instructions**: The User has at least 1 Farm 1 field setup for Water. - Successfully logged in - Landed on the expected page.		
6.	**From** the Water page. Select a field for testing	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
7.	**Now click** or Tap on the Field's Plan button .	- The **In-Season Plan Page** opens *defaulting* to Water Balance screen. - By default the "*bar chart"* is displayed representing the setup for the water balance.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
8.	Confirm the Page header (Title Area) is correct.	- There is a (**Back)** Arrow - The **Title** of the page is shown in the header and appears as expected. - The name of **Farm and Field** (Crop zone) is available and formatted correctly (consult wireframe.) - The **Crop zone Icon** is present and is as expected: represents the "shape" of the actual crop zone and its Icon coloring is correct for the stage it is in. - There is an **Edit Setup** button on the right side of page.		
9.	**Click or Tap** on the **Back** arrow.	- Clicking the Back arrow returns the user to the Water Page.		
10.	**Return** to Field under test In- Season Plan again (to continue testing the In-Season Plan Page.	- Able to return to In-**Season Plan Page** to continue testing.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
11.	Confirm to the Right of the Plan View there is an **Icon** representing the Water Balance Bar Chart.	- The **Water Balance Icon** is available and positioned as expected. - The Icon resembles a "Bar Chart" and is legible on the device/browser under test. See the Support and Browser section - The Bar Chart Icon is highlighted in such a way that conveys to the User it is has the focus because the Water Balance is the default (active) screen.		
12.	Confirm to the Right of the Plan View there is an Icon representing the **Soil Depth**.	- The **Soil Depth Icon** is available and positioned as expected. - The Icon resembles "*Roots"* and is legible on the device/browser under test. - It does not have the focused (since it is not the active the currently active display). ***Note to Tester:*** Refer to the Supported Devices and Browsers section		
13.	**Confirm Chart Selection:** Verify the user can view the Total Water by Soil Depth chart. - **Click or Tap** on the "Roots" icon.	- Clicking on the Soil Depth icon displays the Total Water (TW) chart. - The "Roots" Icon is now highlighted. - The "Bar Chart" Icon becomes un-high-lighted.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
14.	**Return** to the Water Balance Chart via the toggle. - **Click or Tap on the "Bar Chart"** Icon**.**	- Clicking on the "Bar Chart" icon displays the Water Balance chart. - The Icon is now highlighted. - The Roots Icon becomes un-high-lighted.		
15.	Examine and confirm the Water Balance Panel is as expected on default.	- The Panel's Label "Water Balance" is available and is positioned correctly. - There is a Chart representing the field's water balance variables.		
16.	Confirm the **Page footer** is available and designed as expected.	The page footer is as expected: - There is text available detailing the current day pivot pass stats: The Start, Cycle and Rate stats are shown (consult the current wireframe.)		

Testing is completed for this section

Record Time it took to execute this test:_____

(This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)

4.2.1 Test Case: Verify the Water Balance Chart is designed and defaults as expected.

Scenarios will examine and focus on the Water Balance Chart design and default settings.

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
5.	**Test Set up:** Log in as the User with an Operation as detailed in the Pre-requisites step.	**Able to follow instructions**: The User has at least 1 Farm 1 field setup for Water. - Successfully logged in - Landed on the expected page.		
6.	**From** the Water page. Select a field for testing.	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
7.	**Now click** or Tap on the Field's Plan button. .	- The **In-Season Plan Page** opens. - The Water Balance Chart is displayed.		
8.	**Verify** the Water Chart design and defaults.	- There are bars representing the daily metrics for the water moisture balance. - The Bars show the current days metrics in a darken state. - The past and future days bars appear lighter. - There are 3 Precipitation forecast Icons resembling clouds above the bars. - There are 2 lines within the Bars : o Orange line - Refill point o Red line - Stress point.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
9.	Confirm the **Y-axis** default view : - Verify the Y-axis is as expected	- The Y—axis displays a label "Total Water". - There is an Icon resembling an encircled question mark beneath the label. - The Y-axis is composed of 1 inch markers going up to 5 inches starting with 0 as the first marker.		
10.	**Click or Tap** on the encircled **"?".**	- A dialog opens displaying the Chart Legend. - It is design as expected.		
11.	**Click or Tap** on the Chart legend close button.	- Clicking on the encircled "X" button closed the dialog.		
12.	Confirm the **X-axis** default view : - Verify the chart displays the Daily Metrics are as per requirements.	- The **X—axis** displays Markers beneath the bars. - The Current Day Marker is the default. - The Text "TODAY" appears next to the current day. - The additional Markers displays dates that are7 days prior to the Current day. - And, 10 days past the Current day.		
13.	- Verify the Markers display the **month** of the first day in the daily metric.	- The month of the first date is displayed and is abbreviated under the first bar in the metrics.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
14.	- Verify the Marker displays the **date** of the month.	- The date of the month is shown for each day in the bar metric. - The current date is highlighted.		
15.	- Verify the **Pivot Pass time line** is available and defaults to the current day and appears as expected.	- Pivot Pass time line is available and positioned on the screen as expected. - It defaults to the current day. - The selected timeline is darken and its line appears thicken to convey it is the selected time line. - It is not editable.		
16.	- Verify the Probe data Update Icon is available	- There is an Update Icon appearing beneath the encircled question.		
17.	- **Click or Tap on** the Icon	- The Icon spins while the update is in process**.** - A message is displayed to effect of "Updating. Please Wait…" (**GS-885)** - When this process is over the message disappears.		
18.	- Verify the Probe data Update ***Note to Tester:*** *See Test limitation section for* **Confirming Probe Updates.**	- There is an Update Icon appearing beneath the encircled question. - Triggering an update causes the Icon to spin while the update is in process (See **GS-885)**		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
19.	**AD – HOC TEST:** - Test the surrounding areas of this function	Able to do as instructed.		
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

4.2.2 Test Case: Verify the Daily and Pivot Pass Metrics Selection is designed and defaults as expected; examine Selection Highlighting.

Scenarios will examine and focus on the Daily /Pivot Metrics design expectations and default settings. And, review the Highlighting feature.

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		

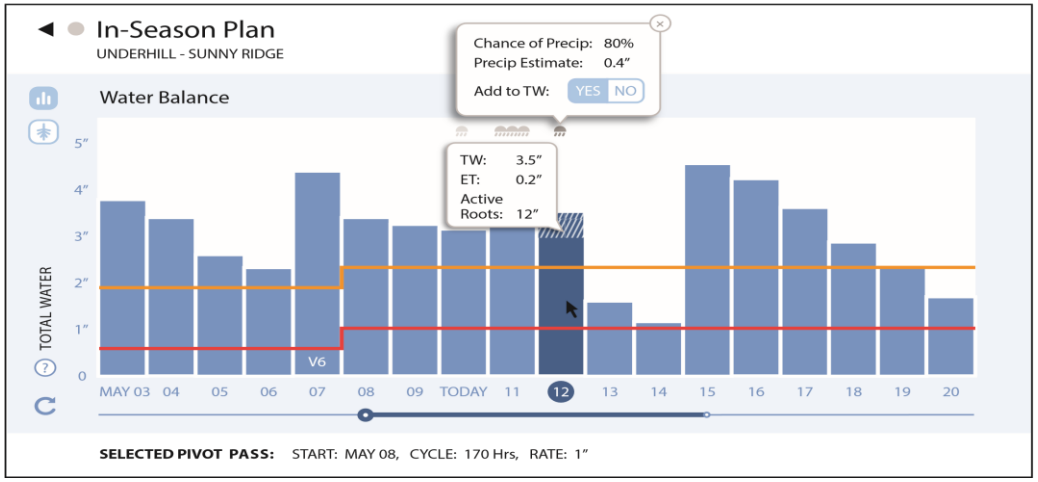
Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		
5.	**After** Successfully logging in. **From** the Water page. Select a field for testing	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
6.	**Now click** or Tap on the Field's Plan button .	- The **In-Season Plan Page** opens. - The Water Balance Chart is displayed.		
7.	**Confirm that** the user can view a day's metrics as follows: - by clicking within the rectangular chart box - by clicking below it on the pivot pass line **Perform** these actions to verify the expected results noted in the "Expected Results" box to the right.	- The Users can view a given daily metric as expected. - The selected date bar darkens. - A bubble-shaped dialog appears.		
8.	Verify the **Daily Water Balance Overlay** displays the TW, ET, and Active Roots.	- The dialog displays the TW, ET, and Active Roots.		
9.	**Click or Tap on** any date in the X-axis	- The dialog displays the TW, ET, and Active Roots for **that** day.		
10.	**AD – HOC TEST:** - Test the surrounding areas of this function: - **Selection Highlighting** refer to the wireframe for scenarios.	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

4.2.3 Test Case: Verify the Precipitation Forecast components design and defaults as expected.

Scenarios will examine and focus on the design expectations and default settings for precipitation forecasting.

In-Season Precipitation Overlay



Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		
5.	**After** Successfully logging in. **From** the Water page. Select a field for testing	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
6.	**Now click** or Tap on the Field's Plan button .	- The **In-Season Plan Page** opens. - The Water Balance Chart is displayed.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
7.	Precipitation during a single day is indicated by the presence of three cloud icons in the area above the bar. Confirm they are defaulting and designed as expected.	- The Y-axis component **do not** obscure the Cloud Icons. - The volume of rain forecast is portrayed by the darkness value of the cloud icon. - The amount of rain is conveyed by the number of cloud icons (one, two or three).		
8.	**Click or Tap** on the cloud icons	- Clicking on each cloud icon displays a small popup with number values for percentage and amount of rain expected.		
9.	**Confirm** there is a toggle for adding to the Total Water. ***Note to Tester:*** *For the following steps* Consult **GS-883** for specs.	- To **the right of the chart** is a toggle for setting the value to add to the total water. - It is easily identifiable by the user without having to guess what it is far. - It has 2 settings exclude or include precipitation. **See GS-883** - The default value is set to exclude.		
10.	**Set the TW toggle** to Include (On)	- Able to do as instructed.		

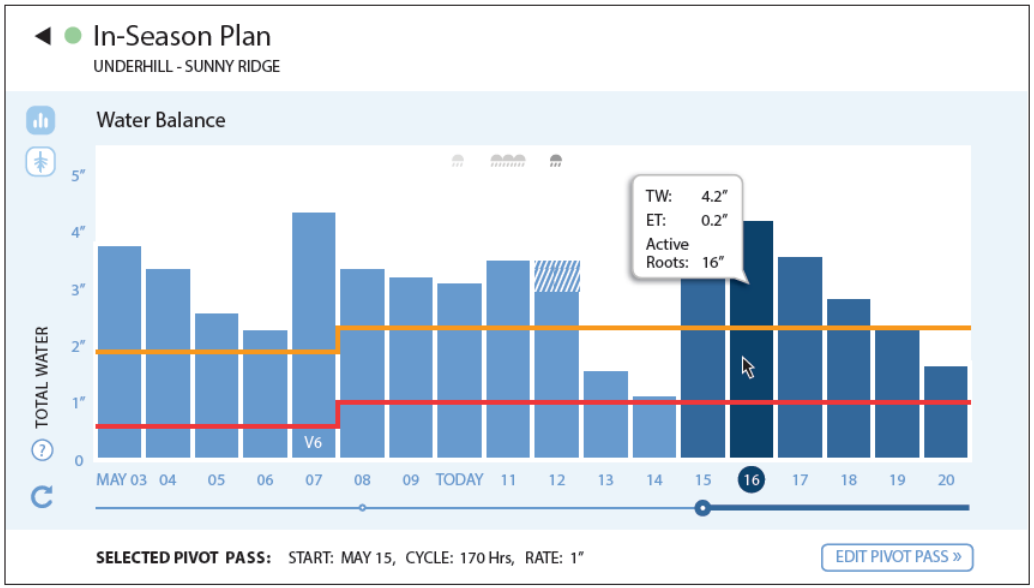
Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
11.	**With** the Precipitation Overlay opened:	- The **y-axis height** of the event's bar will increase so the estimated amount is added. - The **bar area** that represents precipitation increase having a pattern of diagonal striping. - The **background color** of the diagonal pattern will match the bar color.		
12.	Select a date metric that is in the past.	- Once precipitation events are in the past the cloud icon vanished. - The "Chance of Precip" line also vanished (once the precipitation has occurred.) - The "Precip Estimate" line will change to "Precip Total" and its value now equals the reported amount of the precipitation.		
13.	Set the Weather Toggle to Exclude (Off).	- The diagonal pattern is not displayed.		
14.	**Click or Tap** on the Overlay	- Once the overlay was clicked it is no longer displayed.		
15.	**AD – HOC TEST:** - Test the surrounding areas of this function:	Able to do as instructed.		-

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

5. Test Case: Verify the In-Season Plan functionality is as expected (Edit Mode).

The test scenarios presented in this test case will exercise the Editing capabilities of JIRA issue GS-709 .**See** Purpose and Scope**,** Limitations, Risks and Assumption section above before testing.

In-Season Selection of Future Pivot Pass



5.1 Test Case: Verify the editing the In-Season Plan functionality is working as expected.

Scenarios will exercise the Selection of Future Pivot Pass functionality and editing the In-Season Plan.

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		
5.	**After** Successfully logging in. **From** the Water page. Select a field for testing	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
6.	**Now Click or Tap** on the Plan button.	- The **In-Season Plan Page** opens. - The Water Balance Chart is displayed.		
7.	**Confirm** future Pivot Pass can be edited: - Select a pivot pass that is in the future	- The Page updates as expected – the footer, chart, overlays etc. - The selected Pivot Pass timeline is darken and its line appears thicken. - The **Edit Pivot Pass** button appears: the button is designed as expected.		
8.	**Click or Tap on** the **Edit Pivot Pass** button	- The X-axis shorten horizontally displaying only the current day and the 10 day forecast. - The calendar dates and pivot pass line adjust accordingly - The Edit Future Pivot Plan panel opens to the right.		
9.	**Verify** the Chart buttons in Edit mode	- The **Cancel Edit button** is available - The **Compare Button** is available.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
10.	**Confirm** the Field Level Settings button is hidden while in edit or comparison mode.	- The **Settings Gear Icon** button is not available.		
11.	**Confirm** the Soil Depth Icon is hidden while in edit or comparison mode.	- The **Soil Depth Icon** button is not available.		
12.	**Confirm** the Edit Future Pivot panel is designed and defaults as expected. ***Note to Tester:*** *review the settings from the Setup Step 2 panel.*	- The **Panel label** is available and position correctly. Its text is correct. - **Pivot Pass Start Date** control is available and defaults to the selected date of the Pivot Cycle. The Pivot Pass Rate displays - **Pivot Pass Cycle** input box is available; its value defaults to the selected Pivot Pass value. There is a radio button next to it and it is checked by default. - The **Pivot Pass Rate** radio is available displaying the selected rate.		
13.	**Confirm** editing the Pivot Pass Cycle value works as expected. - Test to try: ○ Enter the min values ○ Enter the max values ○ Enter invalid values.	- The input is accepted if it is a valid value else an error alert is issued.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
14.	**Confirm** editing the Pivot Pass Rate value works as expected. -As you perform the test in the step above confirm the Expected Results column accordingly.	- The value shown is as expected which is derived from the Pivot Pass Cycle value. - The value is formatted correctly and as expected. - As the Pivot Pass Cycle value is updated it updates accordingly and is correct		
15.	**Pausing the pivot.** Since a pivot date that is in the future was selected in the previous step. - **Confirm** creating an Irrigation pause works as expected:	- A break is shown in the pivot timeline. Any irrigation that occurs beyond the end of that Plan will be truncated. ***Note to Tester**: consult the wireframe.*		
16.	- **Click or Tap** the **Cancel Edit** button	Any edits made are cancelled and not seen in the Chart.		
17.	- **Verify** if a new month occurs within the 18-day range, the new month's abbreviation appear underneath the bar for the first of the month**.**	Able to setup a case to test this.		
18.	- **Confirm** a maturity marker will appear at the base of a bar when the maturity stage changes. -	Able to setup a case to test this.		
19.	**AD – HOC TEST:** - Test the surrounding areas of this function: - **Selection Highlighting** refer to the wireframe for scenarios.	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

5.1.1 Test Case: Verify the editing the In-Season Plan with Apply Cycle/Rate Toggle and Comparison functionality is working as expected.

Scenarios will exercise the editing and Comparison the In-Season Plan functionality.

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		

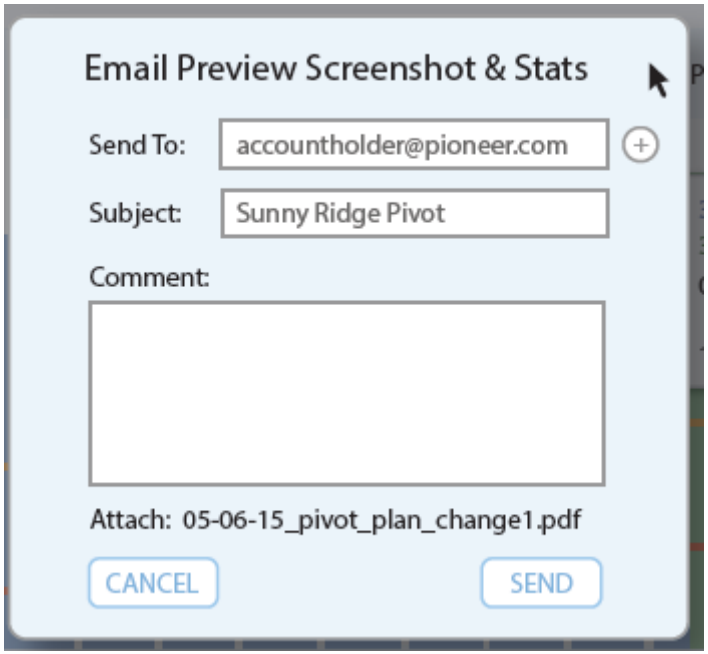
Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	***Note to Tester:*** Refer to the Wire Frames. Observe and confirm any differences with JIRA/Owner expectations.	The latest wireframes will be referenced as instructed. Able to continue testing.		
5.	**After** Successfully logging in. **From** the Water page. Select a field for testing	- Able to do as instructed. - Selected a Field that has been setup that has a probe in the ground i.e. probe data coming in.		
6.	**Now Click or Tap** on the Plan button.	- The **In-Season Plan Page** opens. - The Water Balance Chart is displayed.		
7.	- Select a pivot pass that is in the future **Click or Tap on** the **Edit Pivot Pass** button	- The **Edit Pivot Pass** button appears: the button is designed as expected.		
8.	- Change the Pivot Pass Rate value	- The edit is accepted. The Apply Cycle/Rate line do not appear		
9.	- Cancel the Edit.	- The Pivot Pass Rate value is not edited.		
10.	- Change the Pivot Pass Cycle value only	- The edit is accepted. The Apply Cycle/Rate line do not appear		
11.	- Now, make edits for both the Pivot Pass Rate and Cycle values	- The Apply Cycle/Rate to appear.		
12.	Click the "**This**" Pass option	- The pivot pass timeline updates as expected.		
13.	Click the "**Every**" Pass option	- The pivot pass timeline updates as expected.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
14.	- **Click or Tap** the **Compare Plan** button	- The In-Season redraws displaying both plans: - In top area of the plan is: ○ **New Plan** with a Green Icon ○ **Current Plan** with a Blue icon ○ There is an **Email** icon displayed ○ The **Water,Soil depth,Settings** icon are not available. ○ The **Question mark and Update** objects are still available. ○ There is Pivot Pass Time Line Green and Blue representing each plan.		
15.	- **Verify** you can go back to the edit - **Click or Tap** the Back to Edit button	Able to return to the edit. The page appears as expected.		
16.	- **Click or Tap** on the Compare Plan button. - **Now, Save** the Plan. - **Click or Tap** on the **Save New Plan button**	Able to do as instructed. The Plan is saved.		
17.	- **Confirm** a maturity marker will appear at the base of a bar when the maturity stage changes.	Able to setup a case to test this.		
18.	**AD – HOC TEST:** - Test the surrounding areas of this function: - **Selection Highlighting** refer to the wireframe for scenarios.	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				

6. Test Case: Verify the In-Season Plan Email functionality is as expected.

The test scenarios presented in this test case will exercise Email feature of JIRA issue GS-709 .**See** Purpose and Scope**,** Limitations, Risks and Assumption section above before testing.



Details shown here may be out dated. It is only an example.
Please check JIRA for the most recent information for this issue.

6.1.1 Test Case: Verify the Email functionality is working as expected.

Scenarios will exercise the In-Season Email functionality.

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
1.	**Instructions:** - See the **Test Environment Supported Devices and Brower** section of this test plan for details. - Enter Browser/Device:	Able to follow instructions.	n/a	
2.	**Pre-requisites:** **Clear** the cache of the browser under test before execution. **To execute the scenarios** in this test case access to an Operation/Farm must contain at least 1 farm setup with the Water Irrigation Feature. The following field configuration must also available. - Fields that have been set up with a probe in the ground.	Test pre-requisites are met. Familiar with the JIRA story.		
3.	- Open Jira to GS-709 https://jira.appliedinvention.com/browse/GS-709 Review the specification stated in this: Google Doc Water Balance Requirements	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
4.	**After** Successfully logging in. **Prepare** a Field's In-Season plan to test the email functionality. - **Open** the plan - **Navigate** to the Email functionality. ***Note to Tester:*** If you ran the previous test section you may use the plan that was set there for this test.	- Able to do as instructed.		
5.	- **Click or Tap** on the Email icon button.	- The Email pop-up opens. - .		
6.	Examine and confirm the Email pop-up is as expected on default.	- The screen beneath the pop-up dims. - The Pop-up title is available and is correct. It is position as expected. - The Email Pop-up is designed as expected. - All of the fields are available.		
7.	**Verify** the Send To Field	The Send to field is blank.		
8.	**Verify** the Subject Field	The subject line is pre-populated with the field name concatenated with the text "Pivot".		
9.	**Verify** the Comment box	- The Comment field is initially blank.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
10.	**Verify** there is information regarding the attached file.	- There is a section in the footer with a label. - The name of the plan attached is available. - The current date is appended with a number representing the amount of the previews sent that day. - **For example**, if this is the first preview sent today the number appended would 1: - <mm-dd-yy>_pivot_plan_change**1**.txt		
11.	**Click or Tap** outside of the pop-up	The Email popup closes.		
12.	**Re-Open the** Email pop-pup	Able to do as instructed.		
13.	**Click or Tap** on the **+** encircled icon	Another Recipient entry field is displayed.		
14.	**Click the** + icon 4 times	- Three additional Recipient entry fields are added. - The **encircle icon disappear** after more than 5 recipients are added.		
15.	**Click or Tap** on the Cancel button	The Email popup closes.		
16.	Open the Email pop-up	The Email popup opens with its original defaults. Edits were not retained.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
17.	Using **an invalid** email address format- Enter an email recipient	Able to do as instructed.		
18.	Click the Send button	The user is prompt to enter a valid email address.		
19.	Using **an valid** email address format- Enter an email recipient	Able to do as instructed.		
20.	Click the Send button	The file was successfully sent.		
21.	**Verify** the file sent is as expected.	- The file includes a screen shot of the comparison bar chart, as well as full stats for the current plan vs. the new plan, including any load balancing changes.		
22.	**Re-Open the** Email pop-pup ***Note to Tester:*** *See GS-884 also*	- The Email popup opens with its original defaults. - The previously used email address is retained. See **GS-884** - - **The Attach section** is as expected: The current date is appended with a number representing the amount of the previews sent that day. - For example, if this is the second preview sent today the number appended would **2**: - <mm-dd-yy>_pivot_plan_change**2**.txt		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. PFB = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
23.	**Click or Tap** on the **+** encircled icon 4 times	4 additional Recipient entry fields are displayed.		
24.	Enter 5 email recipients then Send the file to those recipients.	- The file was successfully delivered to the five recipients. - The files sent are as expected.		
25.	**Re-Open the** Email pop-pup	The Email popup opens with its original defaults. The previously used email address is retained.		
26.	**Enter** an Email Recipient	Able to do as instructed.		
27.	**Verify** the Subject Field can be edited Change the text to something other than the default.	- The field can handle the input: - The (min/max) characters entered were accepted posing no display issues. - Characters entered were accepted posing no display issues. - Any datatypes used are treated as text and pose no undesirable issues.		

Step	Perform Action	Expected Results	P F B	Remarks: Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
28.	**Verify** the Comment box data entry - Enter a long string into the text box using various datatypes i.e. numbers, symbols, html markup etc. - Keep a copy of the string entered and amount for reference.	- The Comment field can handle the input of multi-line text: The (min/max) characters entered were accepted posing no display issues. - Characters entered were accepted posing no display issues. - Any datatypes used are treated as text and pose no undesirable issues.		
29.	Click the Send button to send the file.	The file was successfully sent.		
30.	**Verify** the sent email with a focus on the **Subject** and **Comment** text.	- The Subject line is as expected. - The text of the email is as expected. - Both fields are legible posing no undesirable [display] issues. - The file sent is as expected.		
31.	**Re-Open the** Email pop-pup	The previously used email address is retained.		
32.	**AD – HOC TEST:** - Test the surrounding areas of this function: - **Selection Highlighting** refer to the wireframe for scenarios.	Able to do as instructed.		

Step	Perform Action	Expected Results	P F B	**Remarks:** Use this section to add comments or notes. Or, actual results if feature was not as expected. You may also reference JIRA bug issue if a defect was written. **PFB** = (P) assed, (F) ailed or (B) ypassed. The step was bypassed.
Testing is completed for this section **Record** Time it took to execute this test:_____ (This includes time it took for test setup. It does not include down time i.e. pauses in execution related to taking a break, attend a meeting, etc.)				