I. Example 1

In Desktop export the **Work Request/Work Order Review** (**ReqsWORev.rpt**) report found in Work Requests.

Use *This Record Only*. Save in the Work folder as **CT_ReqsWORev.rpt**.

Open the report and remove the *Save Data with Report* option.

Remove the ID formula in *Select Expert*.

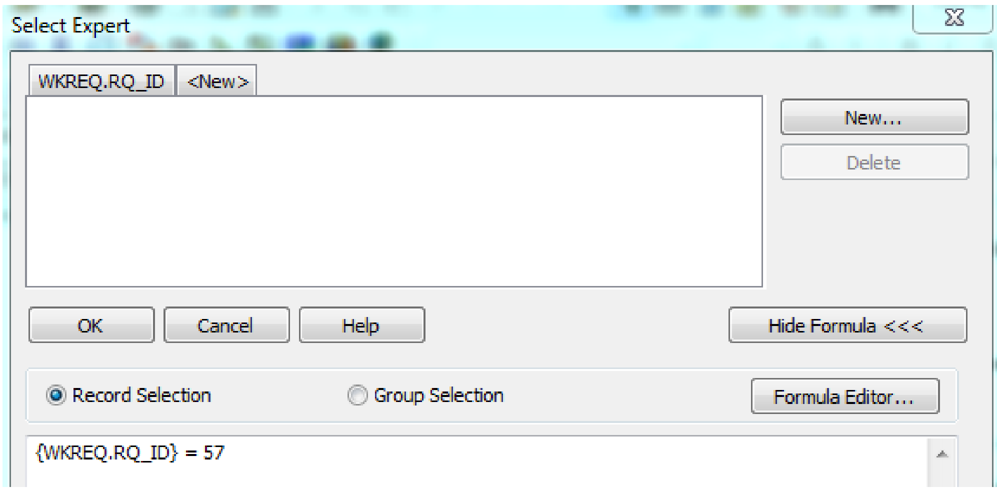
Save.

<u>**Solution**</u>

1. Open **Work** > **Requests**
2. Open Reports .
3. Click *This Record Only*.
4. Click and highlight **Work Request/Work Order Review** (note where the Request reports are located).
5. Click *Export Report.*
6. Select “Crystal Reports” from the *Format:* dropdown.
7. Click *OK*
8. Choose the correct location for the Request Reports.
9. In the “File name:” type in the report name **CT_ReqsWORev.rpt** then click *Save.*
10. Go to the Work reports folder and open **CT_ReqsWORev.rpt** by double clicking.
11. In the Menu Bar click **File** > **Save Data with Report**. This will uncheck the option.
12. Save
13. If The Export was done with *This Record Only* then in the Preview tab you will see one line of data. Open the Select Expert  in the Expert Tools Toolbar.

14. Click *Show Formula>>>*

15. Click and drag over the ID formula to highlight it and press the Delete Key.



16. Click OK

17. Refresh Data. (If you get the ODBC dialog then enter the Password and *Finish*) You should now see a number of lines of data.

18. Save

II. Example 2

In Web export the **Asset Summary Report** (**WOAssetSumWeb.rpt**) found in the Work Order module. Export with *Selected Records*. (Highlight one record)

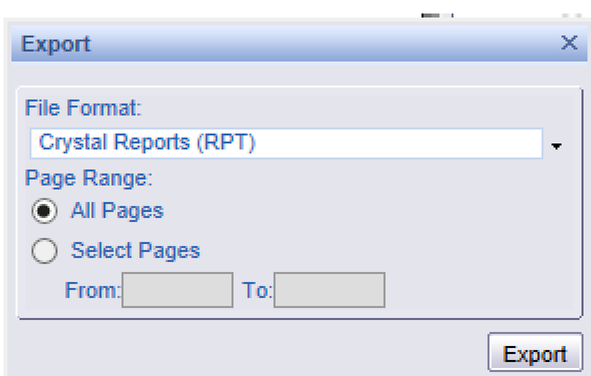
Save in the **CustomLucityWebReports** folder as **CT_WOAssetSumWeb.rpt**. Open the report and remove the *Save Data with Report* option.

Remove the ID formula in the *Select Expert*.

Save.

Solution

1. Open **Work** > **Work Orders**
2. Select one record.
3. Open *Reports* .
4. Click and highlight **Asset Summary Report**
5. Click *Run*
6. Click *Selected Records*
7. Click *Advanced View*
8. Click *Run*
9. In top left corner select *Export this report* 



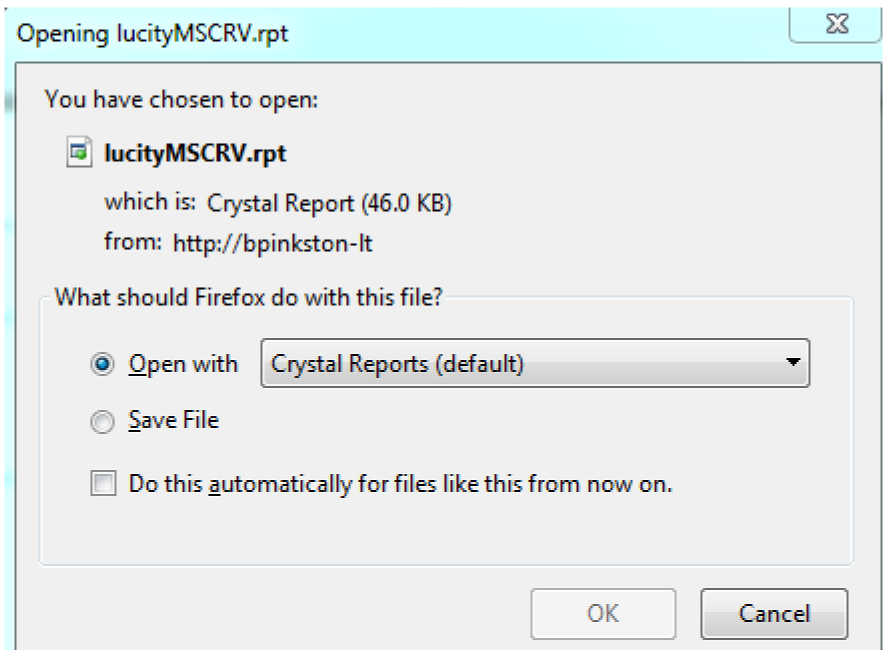
10. File Format is Crystal Reports (RPT)

11. Click *Export*

12. You may see the following (depending on the browser)

    Internet Explorer will show this

    Firefox will show this



13. Select *Open*. Click through any comments such as Invalid Printer or Crystal Reports version.

14. Once the report is open, go to the Menu Bar and click **File > Save Data with Report**. This will uncheck the option.

15. In the Expert Tools Toolbar click on the *Select Expert* .

16. Click on *Show Formula>>>*

17. Click on *Formula Editor*

18. Highlight the formula with the ID field (something like {WKORDER.WO_ID} in [10865]) and press *Delete*.

19. Select *Save and close*

20. Click *OK*

21. Select *Use Saved Data* to let the report run.

22. In the top tool bar select **File > Save as…**

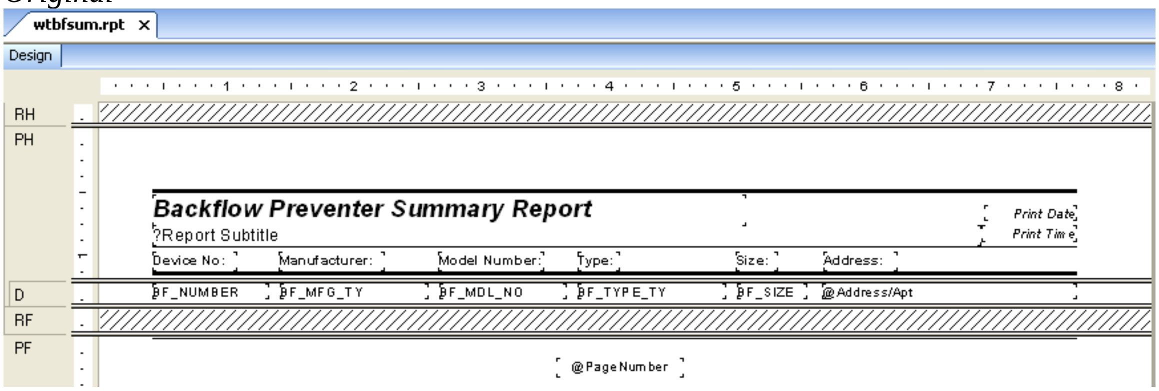
23. Browse to the location for this new custom report. **CustomLucityWebReports** folder

24. For the File name use **CT_WOAssetSumWeb.rpt**

25. Select *Save*

III. Example 3

Original



Report title will be changed, the Address column removed and the Type field widened.

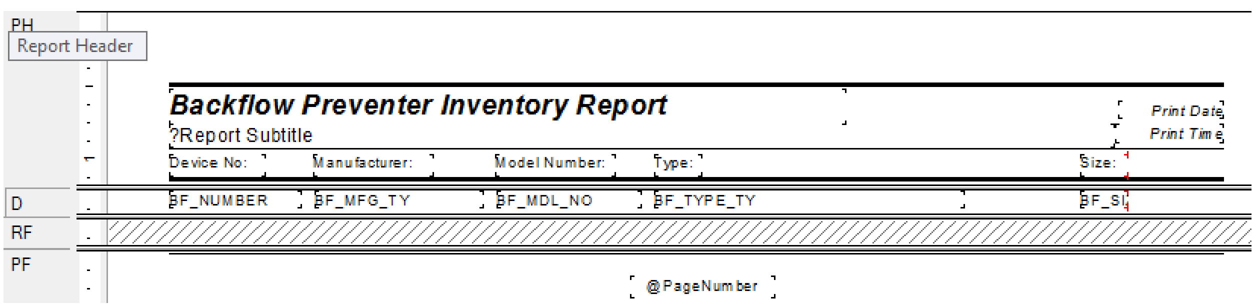
1. In the **Water** Report folder, open **CT_wtbfsum.rpt.** (Double click to open or Right click *Open*.) This is a copy of the Backflow Preventer Summary Report (**wtbfsum.rpt**).

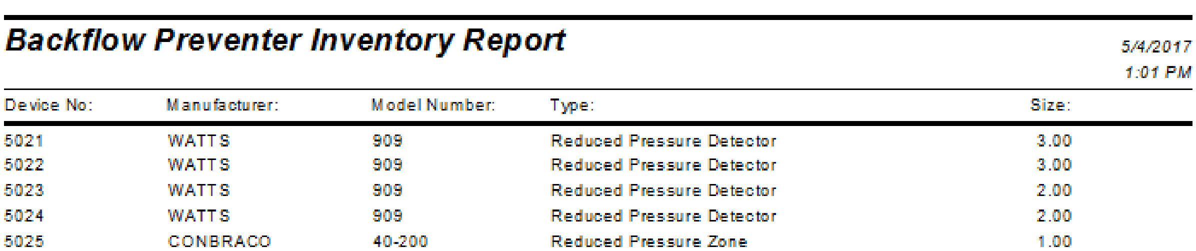
2. Change the title to: **Backflow Preventer Inventory Report.**

3. Remove the **Address** column.

4. Increase the width of the “**Type**” data field (**BF_TYPE_TY**).

5. Save





Backflow Preventer Inventory Report

5/4/2017
1:01 PM

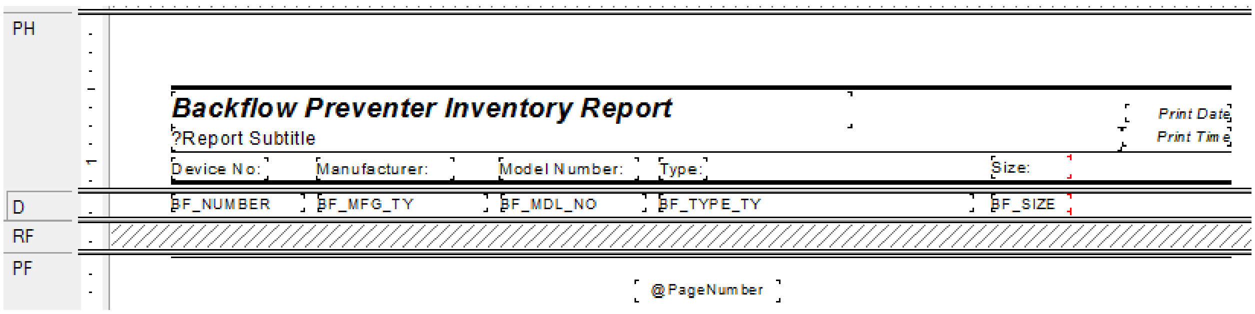
Device No:	Manufacturer:	Model Number:	Type:	Size:
5021	WATTS	909	Reduced Pressure Detector	3.00
5022	WATTS	909	Reduced Pressure Detector	3.00
5023	WATTS	909	Reduced Pressure Detector	2.00
5024	WATTS	909	Reduced Pressure Detector	2.00
5025	CONBRACO	40-200	Reduced Pressure Zone	1.00

Solution

1. To change the title:
    a. Double click the Title text object box.
    b. Click and drag over “Summary” and change to “Inventory”.
2. To remove the Address column header and field:
    a. Click on the column header text object, **Address,** press the Delete key.
    b. Repeat for the **@Address/Apt** field.
3. To increase the Type field:
    a. First the **Size** column needs to be moved to the right to make room for the increase in **Type** field.
        i. Click in the top ruler section near the 5 1/2” mark to set a guideline on the right side of the **BF_SIZE** field**.**
        ii. Drag the **Size** column header to the right to attach to the marker.
        iii. Click and drag the Size marker to about 7”.
        iv. Reduce the **BF_SIZE** field to match the size of the column header.
    b. Click on the **BF_TYPE_TY** field to highlight it.
    c. Place the cursor over the right side of the box and click on the sizing handle, drag to the right (5 7/8”).
4. Save

IV. Example 4

Original

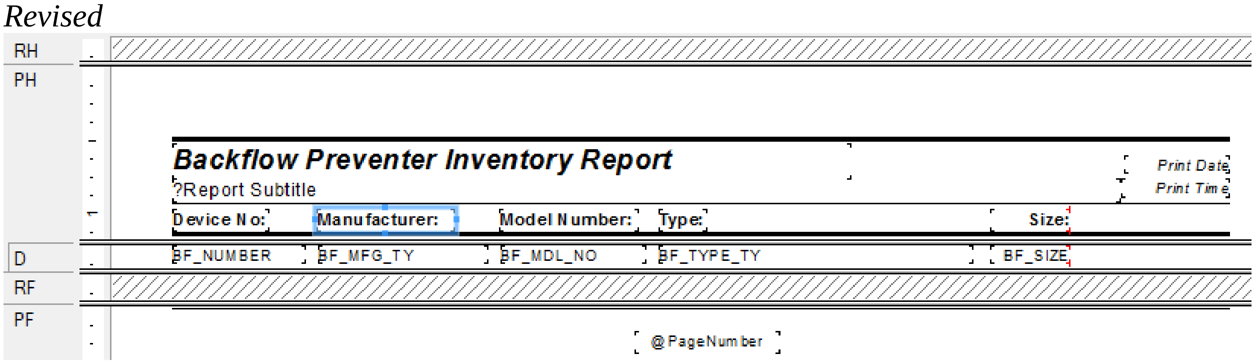


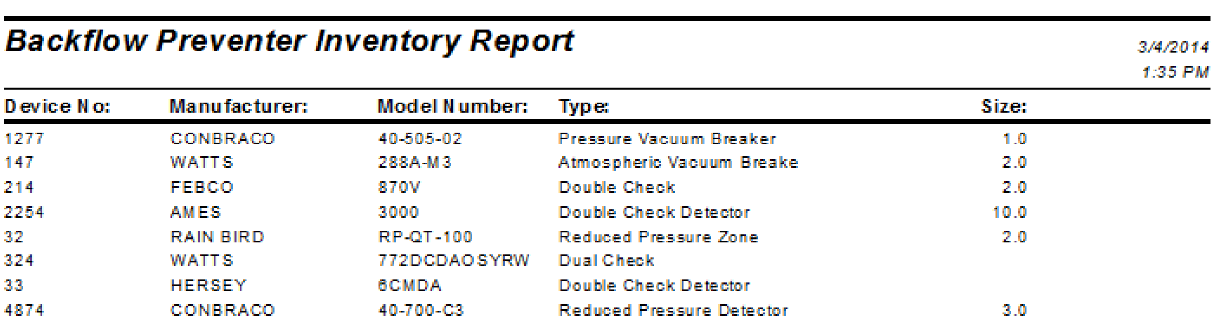
Formatting will be applied to the **Size** number field as well as the Column Header text objects.

Continue revising **CT_wtbfsum**.rpt.

1. Decrease the **Size** numeric field to one decimal place and right align column header and field.
2. Format all Column headings to font size 9 and Bold.
3. Check to see if the Column headings fit in the given box, otherwise resize.
4. Save the report.

Revised





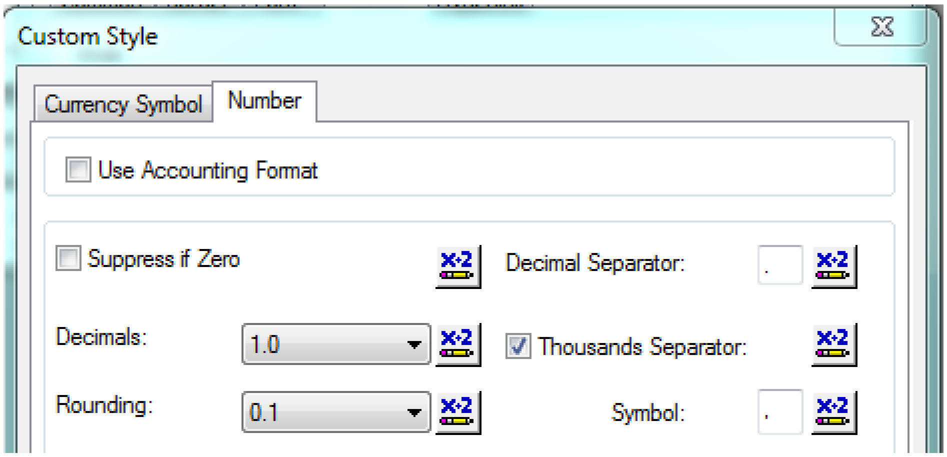
Backflow Preventer Inventory Report

3/4/2014
1:35 PM

Device No:	Manufacturer:	Model Number:	Type:	Size:
1277	CONBRACO	40-505-02	Pressure Vacuum Breaker	1.0
147	WATTS	288A-M3	Atmospheric Vacuum Breake	2.0
214	FEBCO	870V	Double Check	2.0
2254	AMES	3000	Double Check Detector	10.0
32	RAIN BIRD	RP-QT-100	Reduced Pressure Zone	2.0
324	WATTS	772DCDAOSYRW	Dual Check	
33	HERSEY	6CMDA	Double Check Detector	
4874	CONBRACO	40-700-C3	Reduced Pressure Detector	3.0

<u>Solution</u>

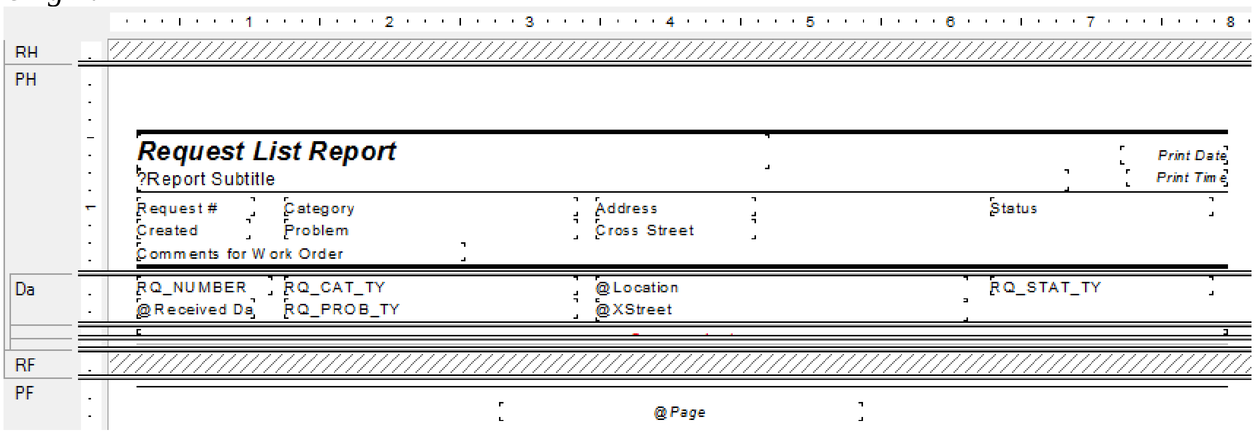
1. To change the **Size** number formatting:
    a. Right Click on the **BF_SIZE** field to highlight and open the options. Select *Format Field….*
    b. Click *Customize…*
    c. Use the drop down boxes to choose the Decimals and Rounding options.



    d. Click *OK*
    e. Click *OK*
2. To right align the column header and field:
    a. Click on the **Size** column header then push shift and click on the **BF_SIZE** field.
    b. In the Formatting Toolbar click *Align Right*.
3. To change the Column Headers:
    a. Click **Device No** then hold the shift key down clicking on each of the column headers.
    b. In the Formatting Toolbar click the **B** and use the drop down arrow to pick the font size of 9.
4. Save

V. Example 5

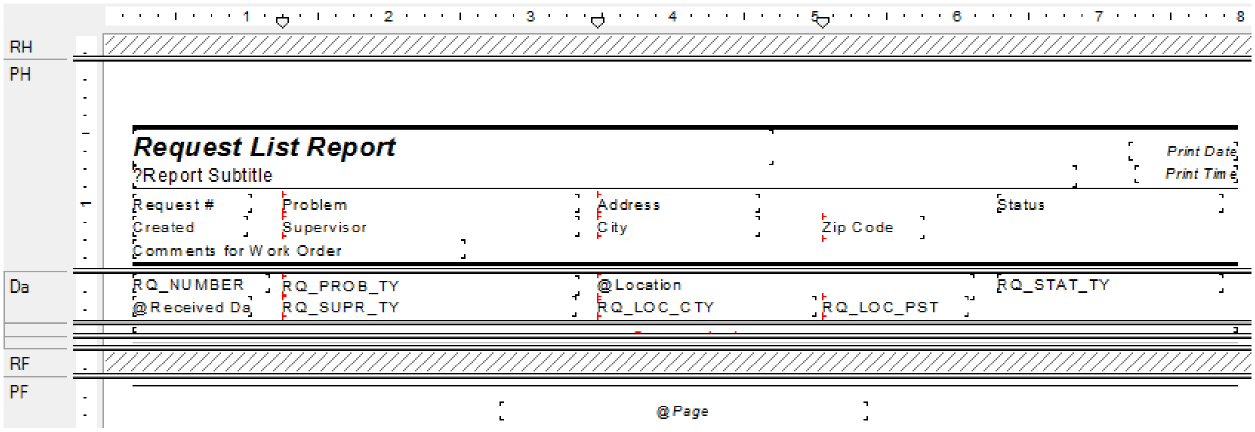
Original



Report fields will be moved, removed and added. Text objects will be added and revised. Align fields. See the Revised screen shot for field placement.

1. In the **Work** Report folder, open **CT_ReqList.rpt.** (Double click to open or Right click *Open*.) This is a copy of the Request List Report (**ReqList.rpt**).
2. Add vertical guidelines to the left edges of the **Category/Problem** fields and the **Address/Cross Street** fields.
3. Remove the Cross Street field (**@XStreet**).
4. Add Column Headers for **City** and **Zip Code**.
5. Bring into the *Detail a* section the **Loc City** and **Loc Zip Code** fields.
6. Remove the **Category** field (**RQ_CAT_TY**).
7. Move the **Problem** field (**RQ_PROB_TY**) into the space where the Category field had been.
8. Bring in the **Supervisor** text field (second tab in Request) and place under the **Problem** field. Size to match the Problem field.
9. Change the column headers to reflect the field changes.
10. Align fields and Save.

Revised



Request List Report

3/5/2014
10:55 AM

Request # / Created / Comments for Work Order	Problem / Supervisor	Address / City	Zip Code	Status
2006-00013 4/5/2006 WILL CALL BACK -	INFO REQUEST - COMMERCIAL BROOK PARSON	 Olathe	 66202	Completed
2006-00022 4/5/2006	COM - 40 YD ROLLOFF SERVICE / F HAROLD JUMP	625 W GUADALUPE RD Your Town	 66212	Completed

<u>Solution</u>

1. In the Work Report folder, open **CT_ReqList.rpt**. (Double click to open or Right click Open.)

2. Add vertical guidelines for the left edges of the **Problem/Category** fields and **Address/Cross Street** fields:
   - Click in the top ruler bar close to where the guideline markers should be placed. (If the ruler is not there, then go into *File* > *Options…* > *Layout* and make sure *Rulers* is checked for the Design View.) The Category/Problem marker should be about 1 ¼” and the Address/Cross Street about 3 ½”.

3. Remove the **@XStreet** field:
   - Click on **@XStreet** and press the *Delete* key.

4. Modify Column Header:
    a. Double click the **Cross Street** text object.
    b. Click and drag over **Cross Street**, type **City**.
    c. Click out of the box.

5. Add Column Header:
    a. Click on *Insert Text Object* in the Insert Tools Toolbar.
    b. Place (click) the plus sign indicator to the right of **City**.
    c. Type **Zip Code**.
    d. Click out of the box. (If bold, depending on your Options set up, make unbold by clicking the **B** in the Formatting Toolbar.)

6. Add **City** and **Zip Code** fields:
    a. In the Request module, *Request* tab.
    b. Ctrl right click in the **Loc City** box.
    c. Click *Field Definition*.
    d. Note *Field Name* – **RQ_LOC_CTY**.
    e. Repeat for **Loc Zip Code**. **RQ_LOC_PST**
    f. In Field Explorer, open *Database Fields* > ***WKREQ***.
    g. Click and drag the **RQ_LOC_CTY** field into the *Detail a* section under **@Location**.
    h. Click and drag the **RQ_LOC_PST** field into the *Detail a* section to the right of the City field.

7. Remove the **Category** field:
    - Click on the **RQ_CAT_TY** field and press the *Delete* key.

8. Move the **Problem** field:
    - Click and Drag the **RQ_PROB_TY** field up to where **RQ_CAT_TY** field had been. The marker helps keep the column alignment.

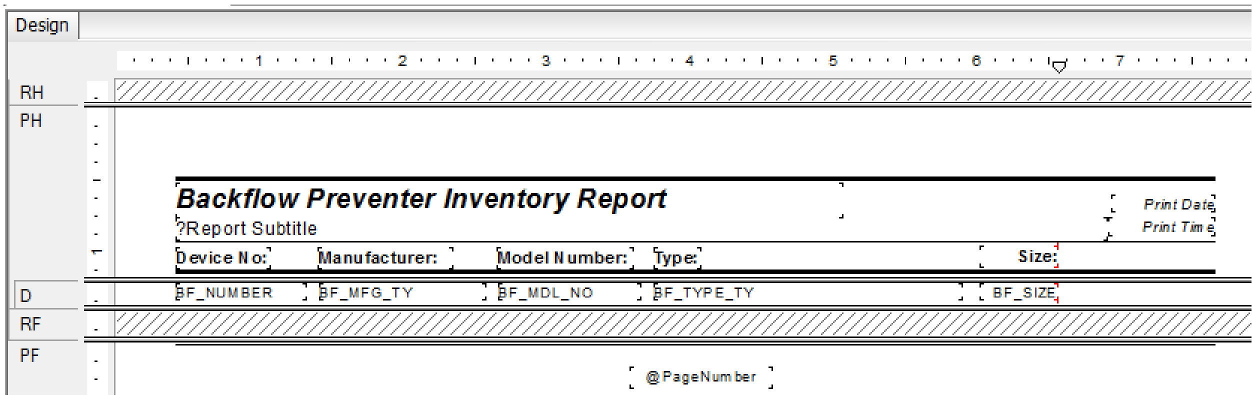
9. Bring in the **Supervisor** field.
    a. In the Request module, *Request* tab.
    b. Ctrl right click in the **Supervisor** text box.
    c. Click *Field Definition*.
    d. Note *Field Name* – **RQ_SUPR_TY**.
    e. In Field Explorer, open *Database Fields* > ***WKREQ***.
    f. Click and drag the **RQ_SUPR_TY** field into the *Detail a* section under **RQ_PROB_TY**.
    g. Click and drag the right sizing handle so the right edge matches the **Problem** field edge.

10. Change the Column Headers.
    a. Double click the **Problem** text object.
    b. Click and drag over **Problem**, type **Supervisor**.
    c. Double click the **Category** text object.
    d. Click and drag over **Category**, type **Problem.**

11. Align Fields:
    a. For the Column Headers, shift and click on **Zip Code** and **City**.
    b. Right click in **City**.
    c. Align > Tops
    d. Repeat the steps for **RQ_PROB_TY** aligned to **RQ_NUMBER.**
    e. Repeat the steps for all of the fields in the bottom row, align to the **@Received Date** field.

12. Save

VI. Example 6



A Date field and line will be added.

1. From the **Water** Report folder, open **CT_wtbfsum.rpt.**

2. Add an **Installation Date** Column heading to the right of Size.

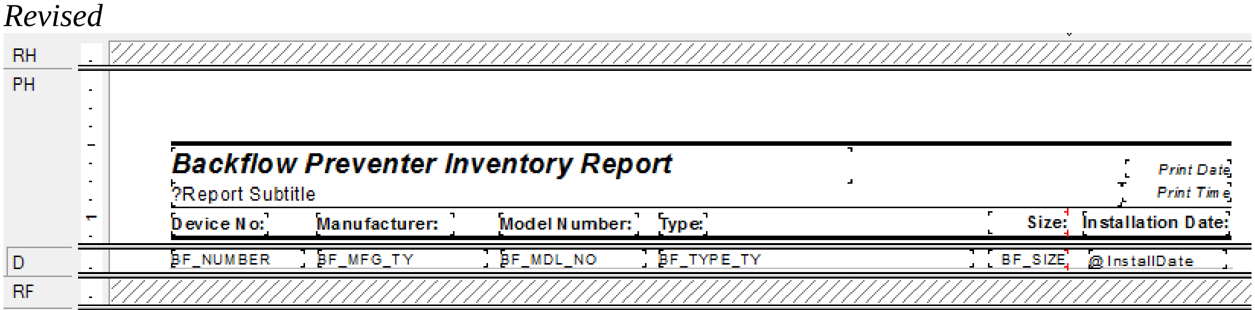
3. Create a formula for the Installation Date and place it beneath the new Column heading.

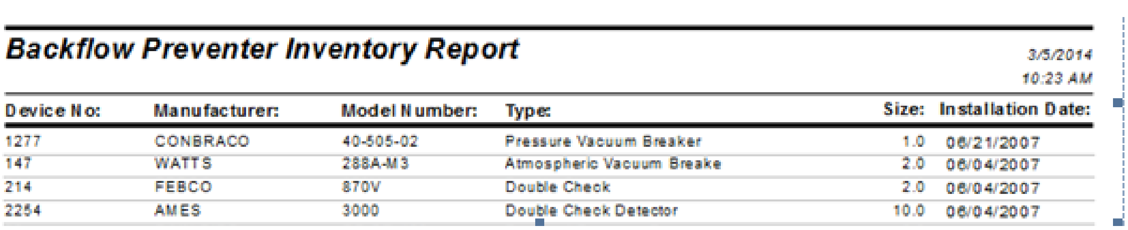
4. Format the date field like this: 

5. Add a line beneath the data in the Detail section and select the "Move to Bottom of Section when Printing" option.

6. Save

Revised





Solution

1. Add Column header for **Installation Date**:
    a. Add a text object to the right of **Size**.
    b. Type in **Installation Date:**
2. Find the field definition of the **Installation Date**.
    - In the **Backflow Inventory** module > Attributes (first) tab, Ctrl right click the **Installation Date** field. Select *Field Definition*. Note: Field Name- **BF_INST_DT**
3. Create a *Date* formula
    a. In *Field Explorer* right click on *Formula Fields* and select *New…*
    b. Give the formula a name (**InstallDate**).
    c. Open *Functions* in the Functions Tree box.
    d. Open *Date and Time.*
    e. Open *Date.*
    f. Double click *Date (dateTime).*
    g. In the Field Tree box open GBAWater001
    h. Open **WTBKFLOW**
    i. Double click the **BF_INST_DT** field (This will drop the date field within the parenthesis)
    j. Save and close
4. Drag the **InstallDate** formula field into the *Detail* section under the appropriate Column header.

5. Format the Date formula field.

    a. Right click on **@InstallDate** , select *Format Field…*

    b. Click on the *Date* tab and select **03/01/1999.**

    c. *OK*

6. Add a line

    a. In the Insert Tool Toolbar click and release on *Insert Line*.

    b. Click just below the **BF_NUMBER** field on the left edge of the field then drag across to the right side of the row and release.

    c. Right click on the line and select *Format Line…*

    d. Change *Color* to **Silver.**

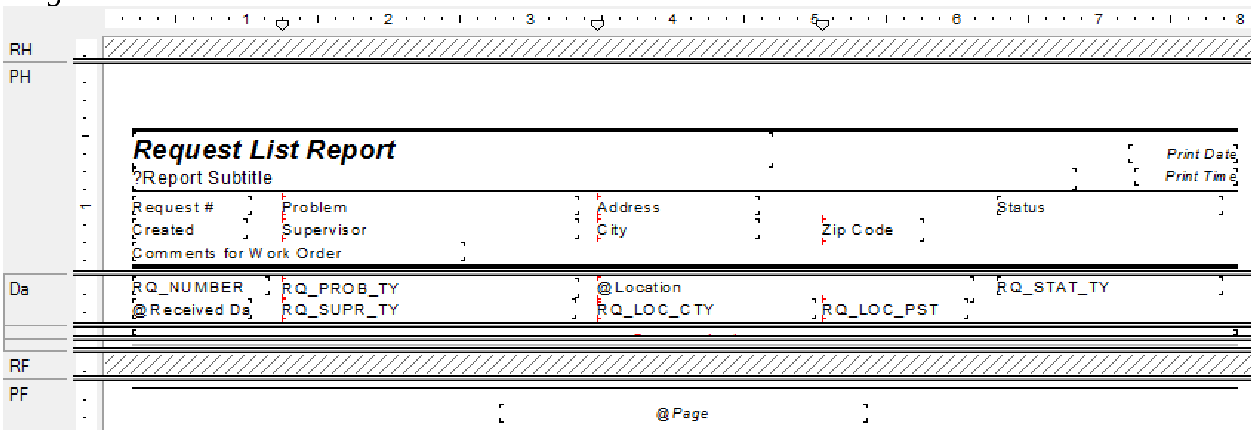
    e. Click to check the box next to *Move to Bottom of Section when Printing*. (This will allow for growing fields).

    f. *OK*

7. Save

VII. Example 7

Original



We will add a date field, time field, a box and use the formatting for comments. (See next page for placement of fields.)

1. In the **Work** Report folder, open **CT_ReqList.rpt**.

2. Add new Column Headers under **Status** for **Status Date** and **Status Time**. Add guidelines and align.

3. Create a Date formula for Status Date. (**Status Date**)

4. Create a Time formula for Status Time. (**Status Time**)

5. Bring the new formula fields into the *Detail a* section to line up with the appropriate Column Headers. Align.

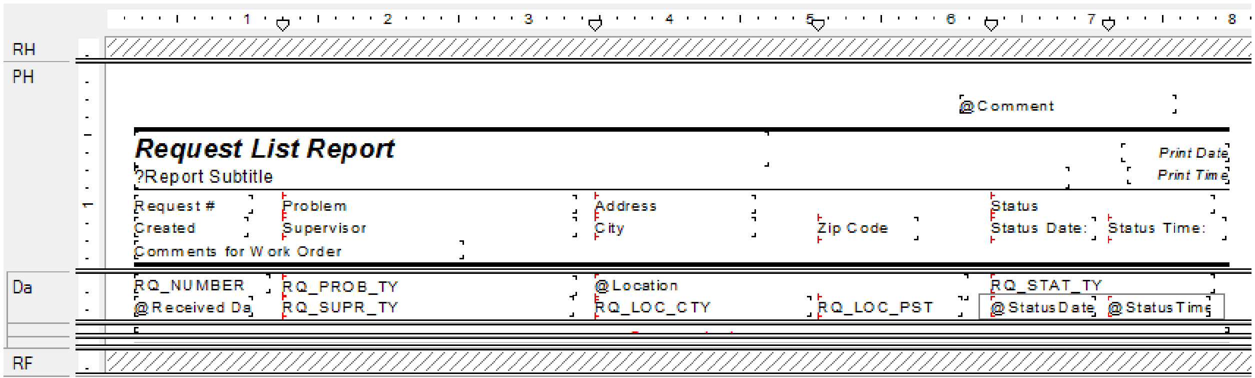
6. Place a box around the Status Date and Time fields.

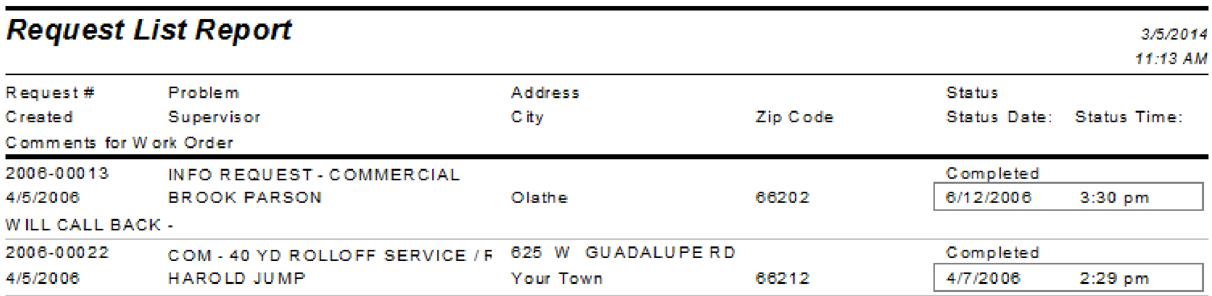
7. Format the box border to *Gray*.

8. Create a formula that is strictly a comment describing the changes in the report. (ie. Added Supervisor, City, Zip, Status Date and Time.) Bring into the *Page Header* section.

9. Save

Revised





Request List Report 3/5/2014 11:13 AM

Request # / Created	Problem / Supervisor	Address / City	Zip Code	Status / Status Date:	Status Time:
Comments for Work Order					
2006-00013	INFO REQUEST - COMMERCIAL			Completed	
4/5/2006	BROOK PARSON	Olathe	66202	6/12/2006	3:30 pm
WILL CALL BACK -					
2006-00022	COM - 40 YD ROLLOFF SERVICE / F	625 W GUADALUPE RD		Completed	
4/5/2006	HAROLD JUMP	Your Town	66212	4/7/2006	2:29 pm

<u>Help with new items…</u>

1. To create a Time formula:
    a. In Field Explorer, right click on *Formula Fields*.
    b. Select *New* and give it a name (**Status Time**)
    c. *OK*
    d. Open the Function Tree.
    e. Open *Date and Time*.
    f. Open *Time*.
    g. Double click *Time(dateTime).*
    h. In the Field Tree open **GBAWork001**.
    i. Open **WKREQ**.
    j. Double click **RQ_STAT_TM**.
    k. *Save and close*
    l. Drag the field under the **Status Time** column header.

2. To create a box:
    a. Click and release on *Insert Box* in the Insert Tools Toolbar.
    b. Click (and hold) where the top left corner of the box is to be placed – just above and to the left of **@StatusDate**. Drag diagonally to the bottom right corner to form a box.
    c. Right click on the box outline and select *Format Box…*
    d. From *Border Color* select **Gray**.
    e. *OK*

3. A comment formula is created within the formula workshop by using double forward slash // before each line.

VIII. Example 8

A Detail report will be revised by removing sections and moving fields.

1. From the **Work** reports folder, open **CT_ReqWOComment**.

2. Add a section below *Detail a* and then switch places so the *Detail a* section is blank.

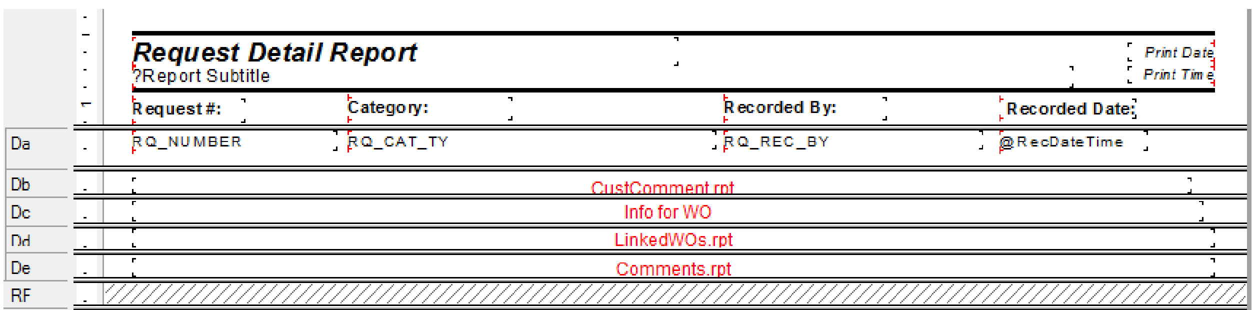
3. Increase the *Page Header* section to add column headers.

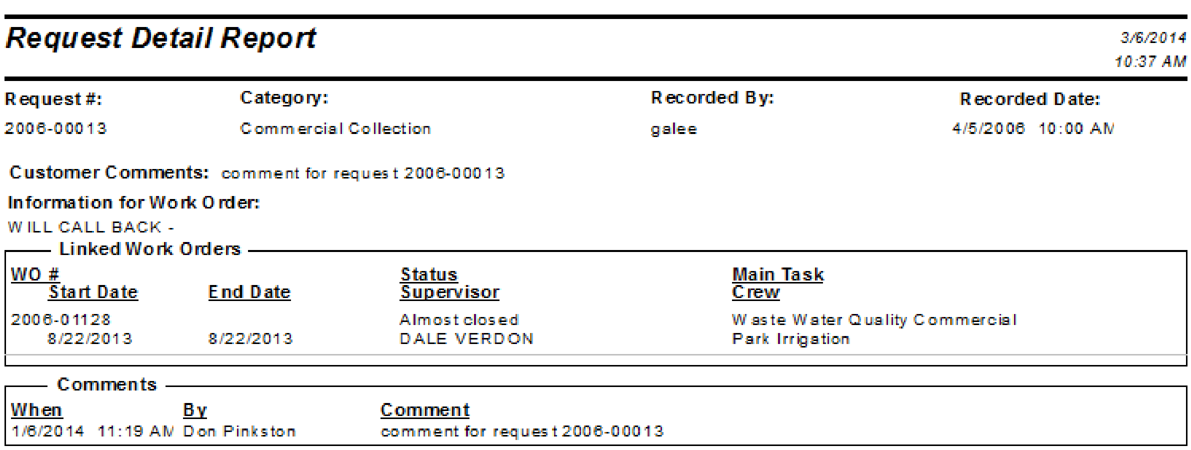
4. Drag in the text objects to the *Page Header* and the fields to the *Detail a* section.

    - Request # (change Font and Boldness to match other fields.)
    - Category
    - Recorded By
    - Recorded Date

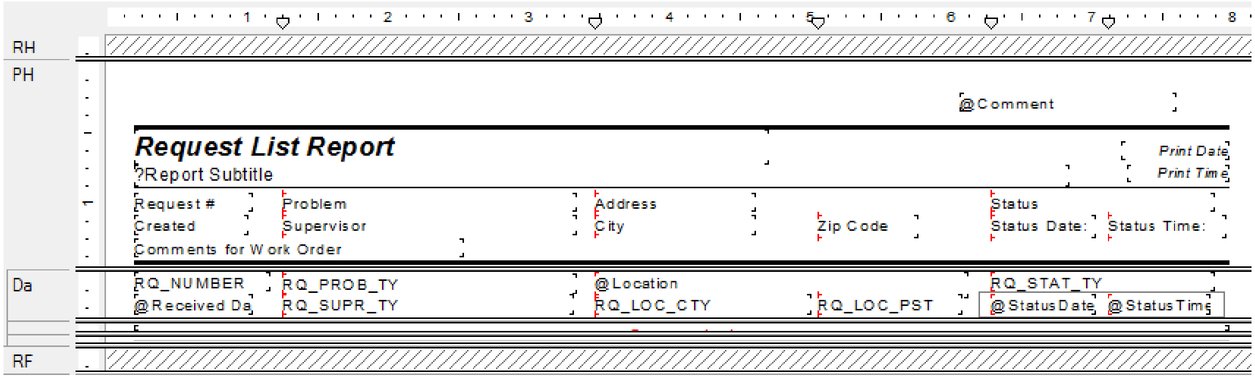
5. Remove all sections except the ones containing **CustComment.rpt** (in red), **Info for WO** (in red), **LinkedWOs.rpt** (in red) and **Comments.rpt** (in red).

6. Save





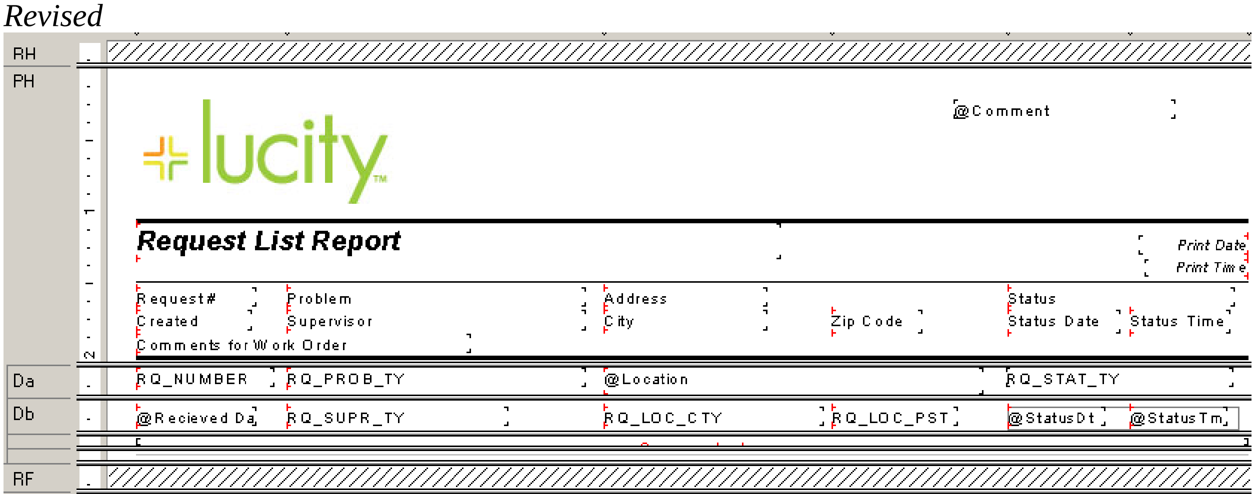
IX. Example 9



We will use the Can Grow option, remove a parameter type field, insert a logo, add the report to the Desktop module, convert the report for Web and add to the Web module.

1. From the **Work** reports folder, open **CT_ReqList.rpt**.
2. The Problem field is cutting off so format to *Can Grow*.
3. To accommodate the *Can Grow* feature, split the *Detail a* section just below the Request Number field.
4. Remove the **Report Subtitle** parameter field.
5. Insert the Lucity Logo (**Lucity.png**) into the Page Header. (Logo located at C:\temp\)
6. Add the report to the Request module list of reports in Desktop.
7. Convert the report for Web.
8. Add the report to the Request module list of reports in Web.

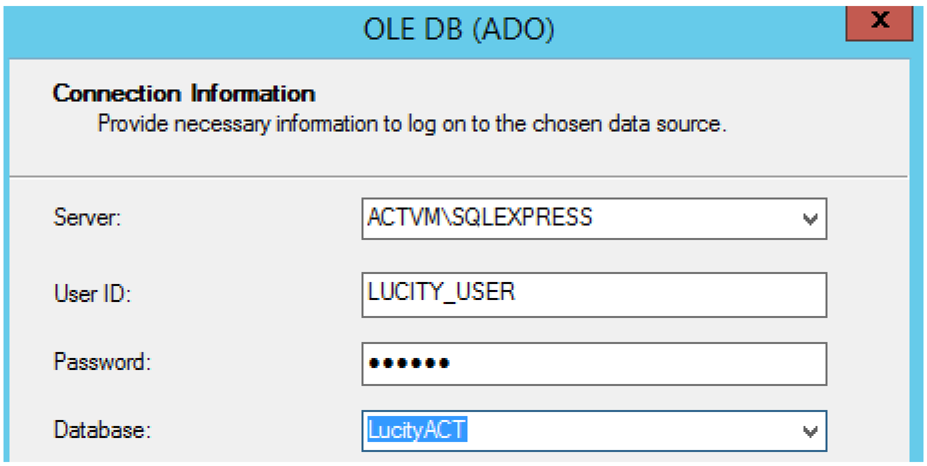
Revised



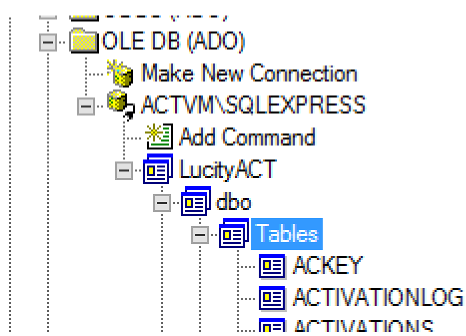
Solution

1. Format the Problem field to grow vertically.
    a. Right click in the **RQ_PROB_TY** field and select *Format Field…*
    b. Click on the *Common* tab.
    c. Click to check the box next to *Can Grow.*
    d. *Ok*
2. Split the *Detail a* section.
    a. Place the curser on the right edge of the vertical ruler just below the **RQ_Number** field. Click, hold – it should turn into a line with two arrows
    b. Pull to the right off of the ruler. The *Detail a* section should now be split into *Detail a* and *b* sections.
3. Remove the **Report Subtitle** parameter field.
    a. Click on **?Report Subtitle**.
    b. Press the *Delete* key.
4. Add logo.
    a. Just above the **Request List Report** title, in the left ruler, click and pull to the right to create two *Page Header* sections.
    b. Increase the *Page Header a* section to allow the logo.
    c. Click on *Insert Picture* from the Insert Tools Toolbar.
    d. Go out to the picture location (C:\temp\) double click **Lucity.png**.
    e. Click in the *Page Header a* section where the left top corner of the logo should be placed. Click and drag to correct location if necessary.
    f. Right click in the *Page header a* section and select *Merge Section Below*.
5. Save
6. Add report to the Work Request module.
    a. In the **Work Requests** module, open the Report Dialog.
    b. Click *Add.*
    c. In *Report File Path* browse out to the report file location.
    d. Double click on the correct report (**CT_ReqList.rpt**).
    e. Type in the **Report Name**, **Description** and *Save.*

7. Convert the report for Web
    a. Make a copy of the **CT_ReqList.rpt** report and place it in the **CustomLucityWebReports** folder. Rename it **CT_ReqListWeb.rpt**
    b. Open the Web report and click on Database in the top bar.
    c. Select Set Datasource Location.
    d. In the loser window (Replace with:) select Create New Connection.
    e. Expand OLE DB (ADO)
    f. Click on Microsoft OLE DB Provider for SQL Server
    g. Next
    h. Enter Connection Information (Password: LUCITY)



    i. *Finish*
    j. Expand Tables



    k. Update tables by selecting each table in the top window (*Current Data Source*) to the same table in the lower window (*Replace with*) and then clicking on ***Update***.
    l. Close
    m. Save and close report

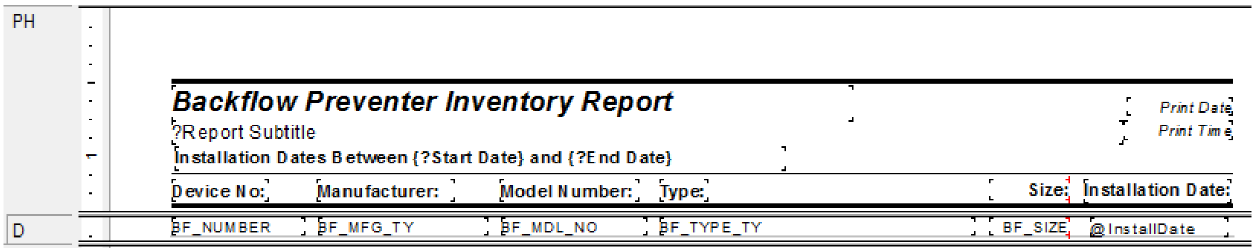
8. Add Web report to the Request module in Web.
    a. Open the Request Module
    b. Click on the Reports icon to open the Reports Dialog
    c. Select Add
    d. Type in a **Report Name** (Required)
    e. Type in a **Report Description** (Required)
    f. Skip Subdirectory and *Browse* to the location of the new report.
    g. Save

X. Example 10

We will add Date parameters, select records with the parameters and add a title that uses the parameters.

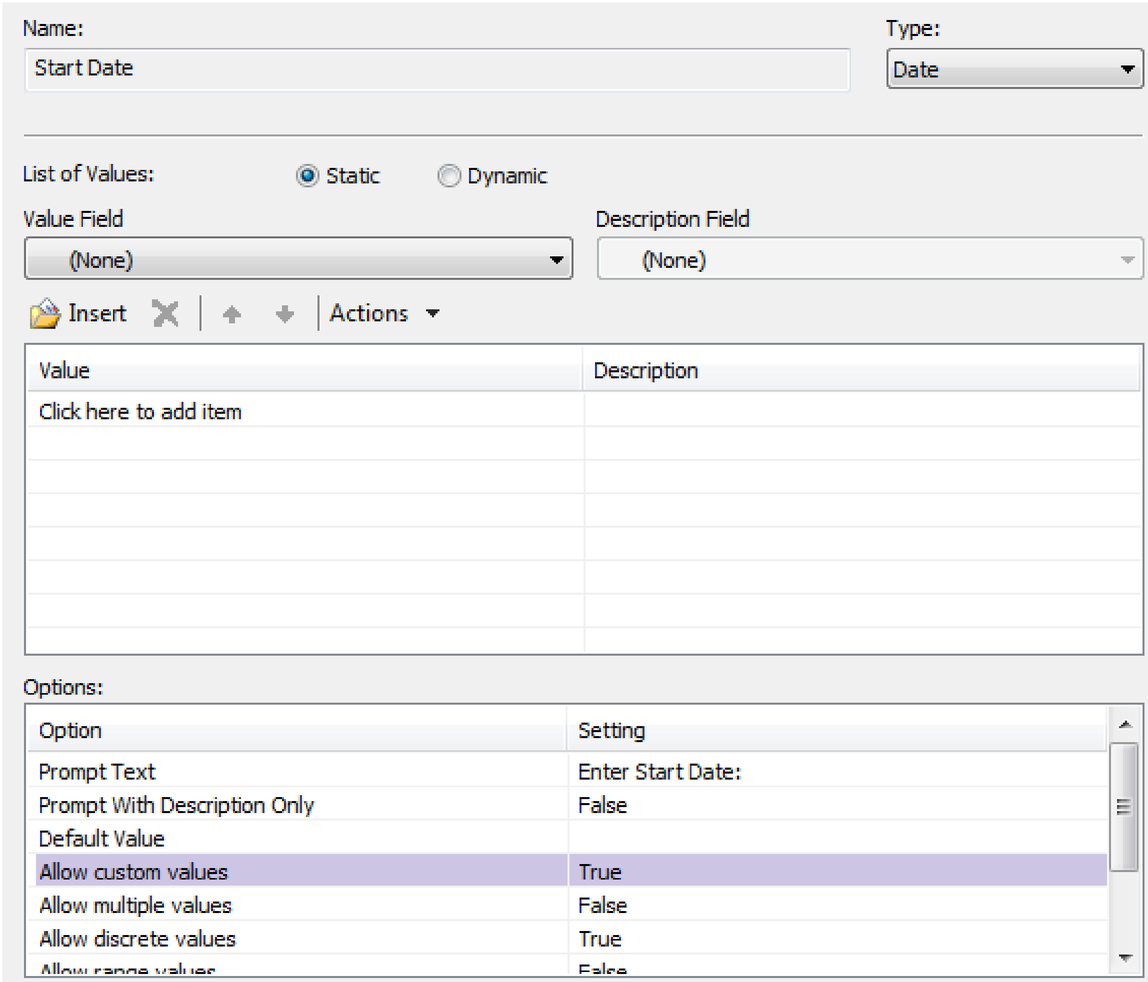
1. In the **Water** Report folder, open **CT_wtbfsum.rpt.**
2. Add date range parameters (Start and End) for the **Installation Date**.
3. Use the date parameters in the selection criteria.
4. Bring the date parameters into the *Page Header* in a text object.
5. Save

Revised



<u>Solution</u>

1. In *Field Explorer* right click on *Parameter Fields*, select *New…*
2. Type in a Name for the Start Date parameter. (**Start Date**)
3. Select the parameter *Type:* **Date**.
4. *List of Values* should be **Static**.
5. In Options don’t allow multiple values.
6. *OK*.



7. Repeat for the End Date.

8. Click on the **@InstallDate** field and then click *Select Expert*.

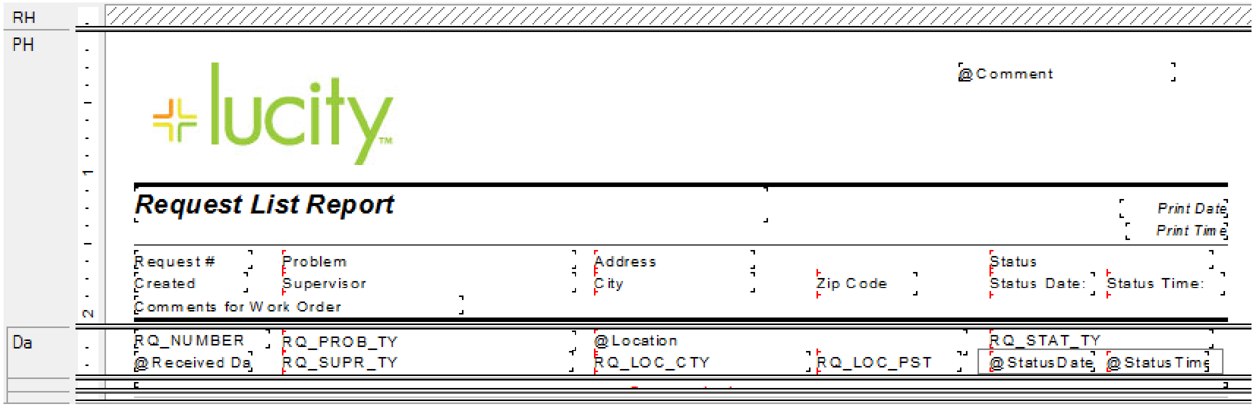
9. Use the drop down boxes to select the correct fields to create the following formula:

   {@InstallDate} in {?Start Date} to {?End Date}

10. Add a text object below the **?Report Subtitle** field. Type in “**Installation Dates Between and** ”.

11. Drag the **?Start Date** and **?End Date** parameter fields into the text object.

XI. Example 11

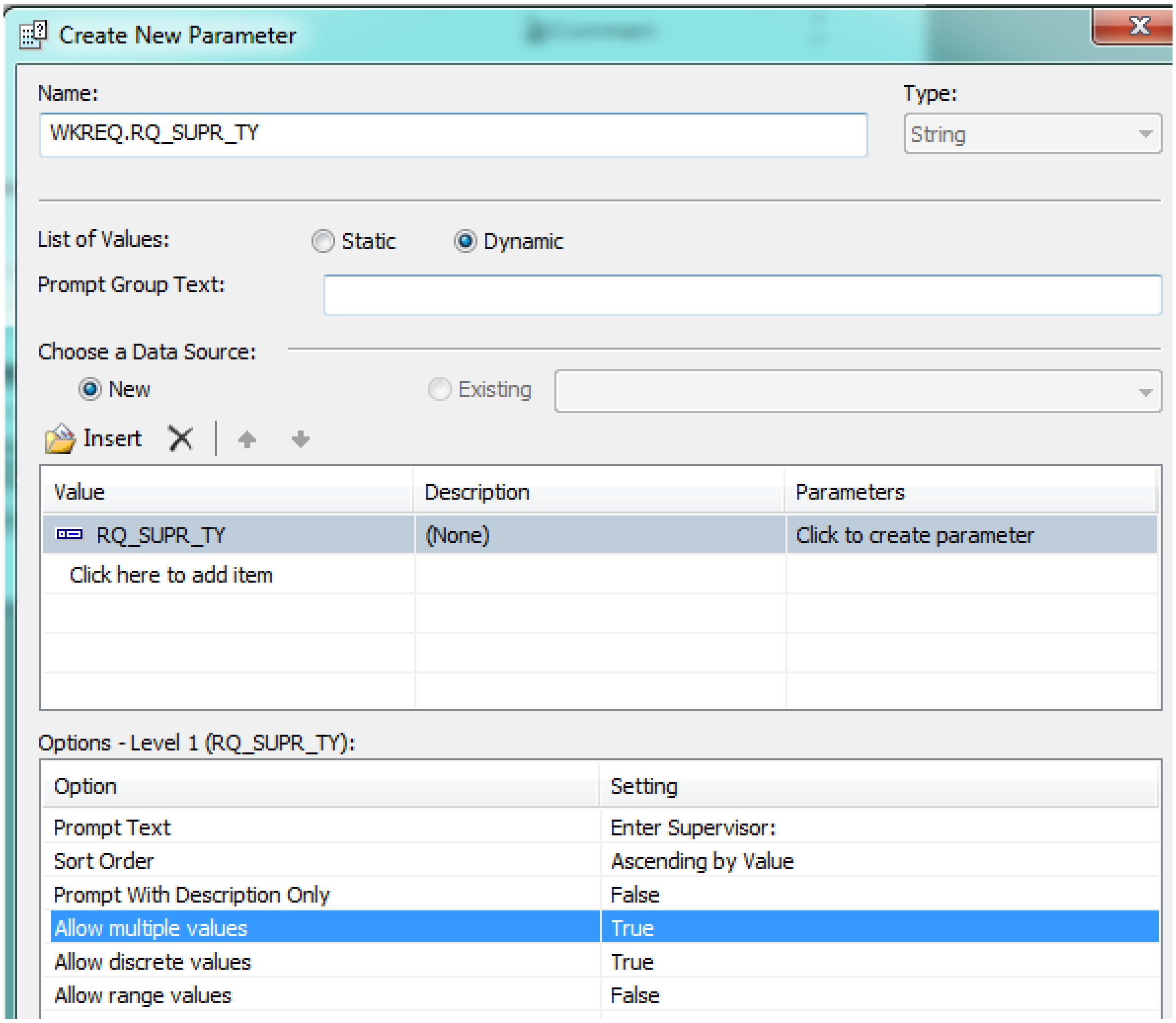


We will add a dynamic parameter to choose records.

1. From the **Work** Report folder, open **CT_ReqList.rpt**.
2. Add a dynamic parameter to choose the Supervisor (**RQ_SUPR_TY**).
3. Use the Parameter to select records.

<u>Solution</u>

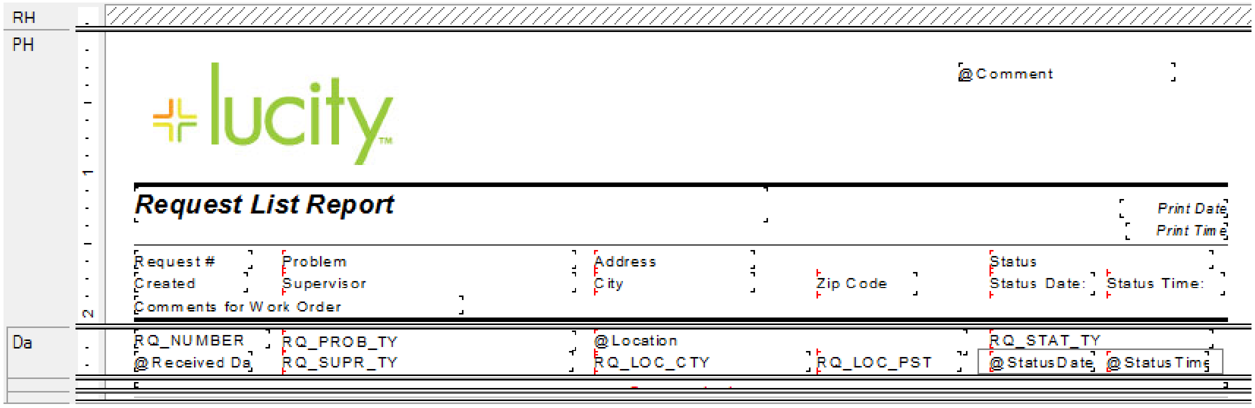
1. In *Field Explorer* right click on *Parameter Fields* and select *New…*
2. In *Name* type in **WKREQ.RQ_SUPR_TY**.
3. Select **String** for *Type*.
4. For *List of Values:* select **Dynamic**.
5. Click *Insert* and click on the **RQ_SUPR_TY** field.
6. In Options change the *Prompt Text* to **Enter Supervisor**.
7. In Options allow multiples.
8. *OK*



9. In Select Expert add a formula using the Supervisor field and the parameter field.

{WKREQ.RQ_SUPR_TY} = {?WKREQ.RQ_SUPR_TY}

XII. Example 12

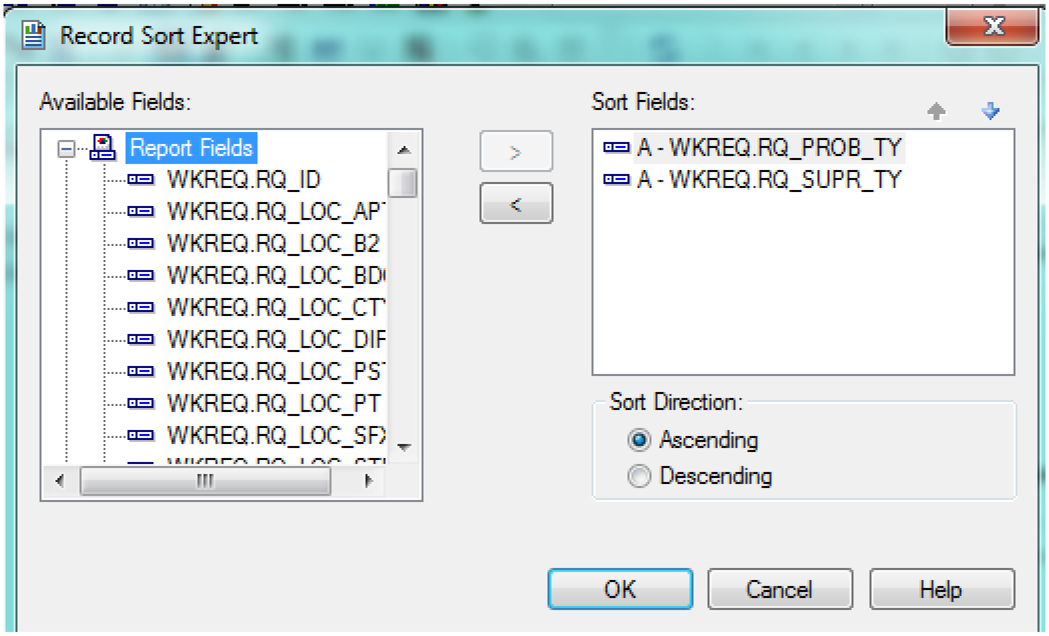


We will add a sort.

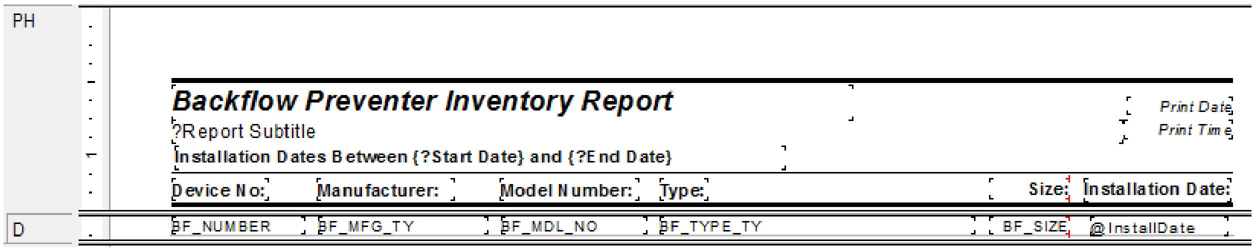
1. From the **Work** Report folder, open **CT_ReqListSort.rpt**.
2. Remove the current sort on the Request Number (**RQ_NUMBER**).
3. Add a sort on the **Problem** – Ascending.
4. Add a sort on the **Supervisor** – Ascending.
5. Save.

<u>Solution</u>

1. In the *Expert Tools Toolbar* click on *Record Sort Expert*.
2. In the *Available Fields:* box click on the **RQ_PROB_TY** field and use the arrow to move to the *Sort Fields:* box.
3. Click **Ascending**.
4. Repeat for the **RQ_SUPR_TY** field. (See next page)

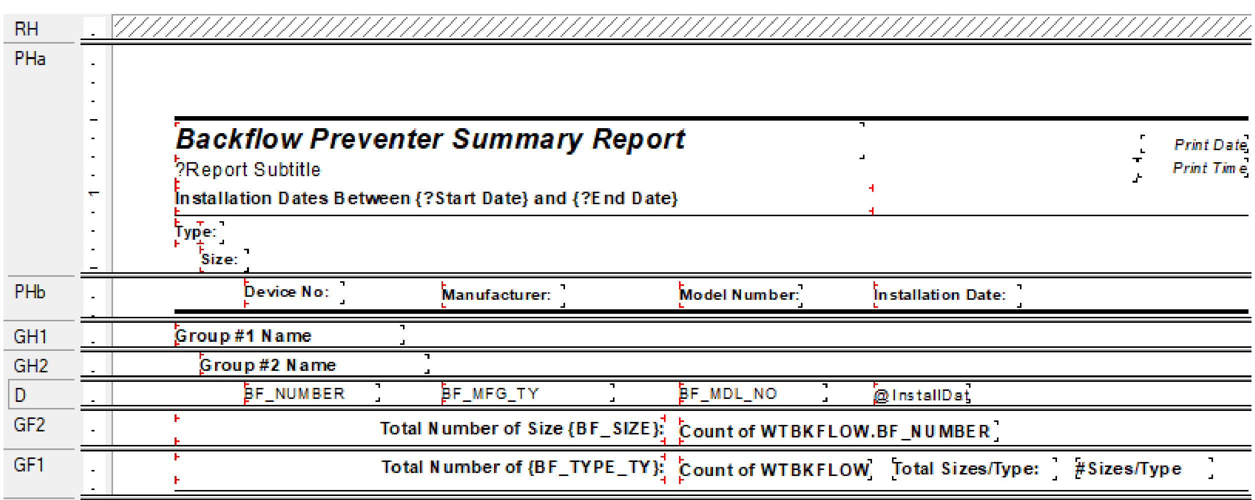

Record Sort Expert
Available Fields:
Report Fields
WKREQ.RQ_ID
WKREQ.RQ_LOC_AP
WKREQ.RQ_LOC_B2
WKREQ.RQ_LOC_BD
WKREQ.RQ_LOC_CT
WKREQ.RQ_LOC_DIF
WKREQ.RQ_LOC_PS
WKREQ.RQ_LOC_PT
WKREQ.RQ_LOC_SF
Sort Fields:
A - WKREQ.RQ_PROB_TY
A - WKREQ.RQ_SUPR_TY
Sort Direction:
Ascending
Descending
OK
Cancel
Help

XIII. Example 13



We will add two groups, a summary and a running total.

1. From the **Water** Report folder, open **CT_wtbfsum.rpt**.
2. Create a group for **Type**.
3. Create a group for **Size**.
4. Move the Column headers for **Type** and **Size** to the left to align with the Group Headers.
5. Remove the **Type** and **Size** fields from the Detail section.
6. Add guidelines and rearrange the columns to close up the space.
7. Summarize the number of each **Size**. Place in Size *Group Footer*.
8. Create a Running Total to total the number per **Type**. Place in Type *Group Footer*.
9. Save



Backflow Preventer Summary Report

5/28/2019
1:35 PM

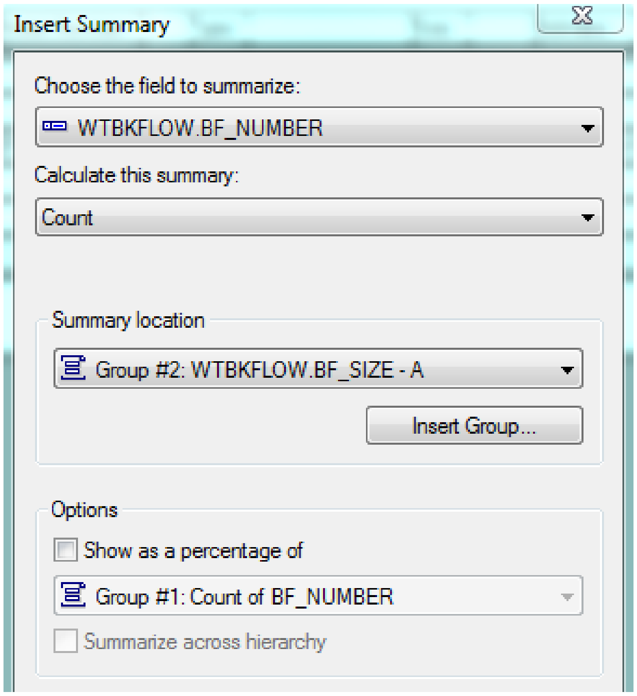
Installation Dates Between 1/1/2000 and 5/1/2019

Type: / Size: / Device No:	Manufacturer:	Model Number:	Installation Date:		
Atmospheric Vacuum Brea					
2.00					
147	WATTS	288A-M3	6/4/2007		
	Total Number of Size 2.00:	**1**			
	Total Number of Atmospheric Vacuum Breake:	**1**		**Total Sizes/Type:**	**1**
Double Check					
2.00					
214	FEBCO	870V	6/4/2007		
	Total Number of Size 2.00:	**1**			
	Total Number of Double Check:	**1**		**Total Sizes/Type:**	**1**
Double Check Detector					
10.00					
2254	AMES	3000	6/4/2007		
	Total Number of Size 10.00:	**1**			
	Total Number of Double Check Detector:	**1**		**Total Sizes/Type:**	**1**
Pressure Vacuum Breaker					
1.00					
1277	CONBRACO	40-505-02	6/21/2007		
AF6119	FEBCO	765	3/5/2007		
	Total Number of Size 1.00:	**2**			
	Total Number of Pressure Vacuum Breaker:	**2**		**Total Sizes/Type:**	**1**

Solution

1. To create the group on Type, click on the **BF_TYPE_TY** field.
2. Click on *Insert Group* in the Insert Tools Toolbar.
3. *OK*
4. Repeat for the **BF_SIZE** field.
5. To summarize the number of devices of the grouped size, click on the **BF_Number** field.
6. Click on *Insert Summary* from the Insert Tools Toolbar.
7. Use the drop down arrow for *Calculate this summary* and select *Count*.
8. Use the drop down arrow for *Summary location* and select **Group #2 BF_SIZE.**
9. *OK*

10. The summary field is automatically placed in the *Group Footer 2* section. It can be moved to a different location within the section.



11. Repeat to summarize the number of devices for the **Type**. Summary location, **Group #1**.

12. To create the Running Total of sizes per Type, right click on *Running Total Fields* in Field Explorer. (See next page)

13. Select *New…*

14. Type in a name for the *Running Total* formula. (**Sizes/Type**)

15. Move **BF_SIZE** to the *Field to summarize* box.

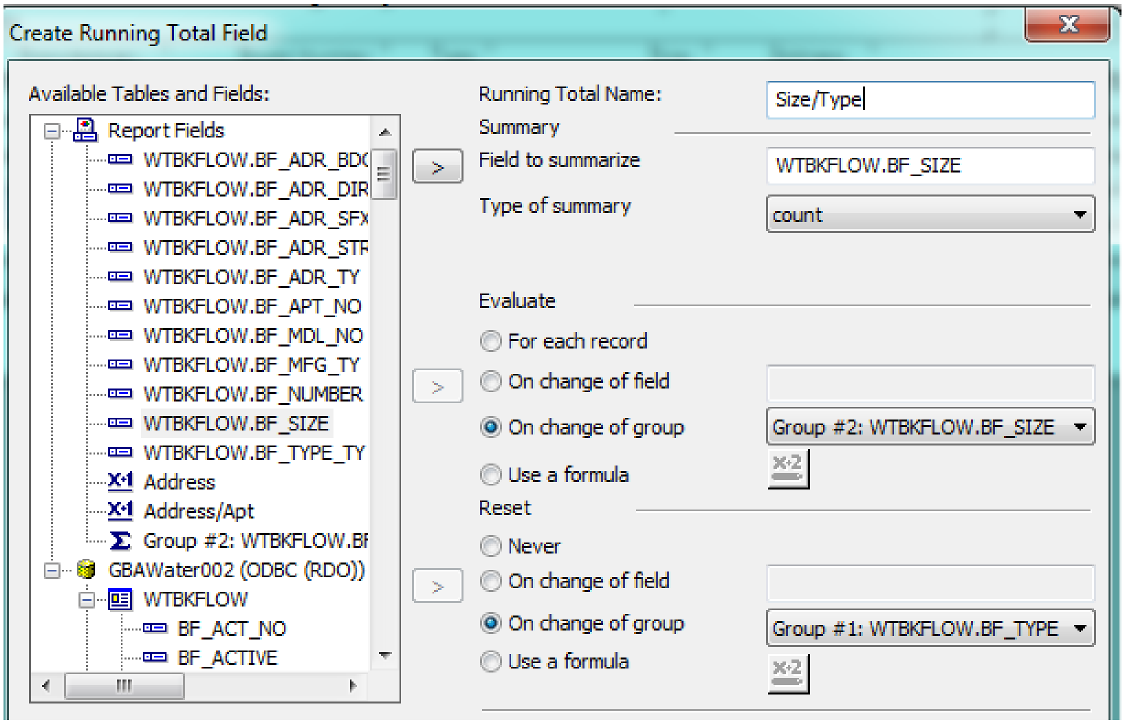
16. In *Type of summary* use the drop down arrow and select *count*.

17. *Evaluate On change of group*, **BF_SIZE**

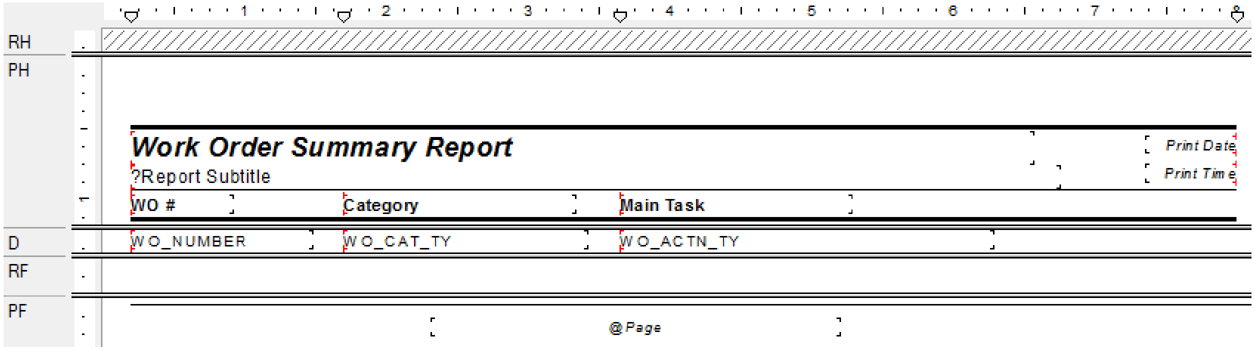
18. *Reset On change of group*, **BF_TYPE**

19. *OK*

20. Drag the running total field into the *Group Footer 1* Section.


Create Running Total Field
Available Tables and Fields:
Report Fields
WTBKFLOW.BF_ADR_BDC
WTBKFLOW.BF_ADR_DIR
WTBKFLOW.BF_ADR_SFX
WTBKFLOW.BF_ADR_STR
WTBKFLOW.BF_ADR_TY
WTBKFLOW.BF_APT_NO
WTBKFLOW.BF_MDL_NO
WTBKFLOW.BF_MFG_TY
WTBKFLOW.BF_NUMBER
WTBKFLOW.BF_SIZE
WTBKFLOW.BF_TYPE_TY
Address
Address/Apt
Group #2: WTBKFLOW.BF
GBAWater002 (ODBC (RDO))
WTBKFLOW
BF_ACT_NO
BF_ACTIVE
Running Total Name:
Size/Type
Summary
Field to summarize
WTBKFLOW.BF_SIZE
Type of summary
count
Evaluate
For each record
On change of field
On change of group
Group #2: WTBKFLOW.BF_SIZE
Use a formula
Reset
Never
On change of field
On change of group
Group #1: WTBKFLOW.BF_TYPE
Use a formula

XIV. Example 14



Add subtasks and their costs.

1. From the **Work** Report folder, open **CT_WOSumTsk.rpt**.

2. Group on **Work Order # (WKORDER.WO_NUMBER)** field.

3. Suppress or delete the actual Group name field (Group #1 Name).

4. Move the fields from the *Detail* section to the *Group Header 1* section.

5. Create a formula (**Subtask**) combining Subtask Code (**WT_TASK_CD**) and Text (**WT_TASK_TY**) fields.

```
if isnull({WKWOTSK.WT_TASK_CD}) then"" else {WKWOTSK.WT_TASK_CD}&"  "&
if isnull({WKWOTSK.WT_TASK_TY}) then"" else {WKWOTSK.WT_TASK_TY}
```

6. Group on **Subtask Code (WKWOTSK.WT_TASK_CD)** field. Suppress both *Header* (*GH2*) and *Footer* (*GF2*) sections for this group.

7. Group on **Subtask ID (WKWOTSK.WT_ID)** suppress or delete the actual Group name field (Group #3 Name)**.**

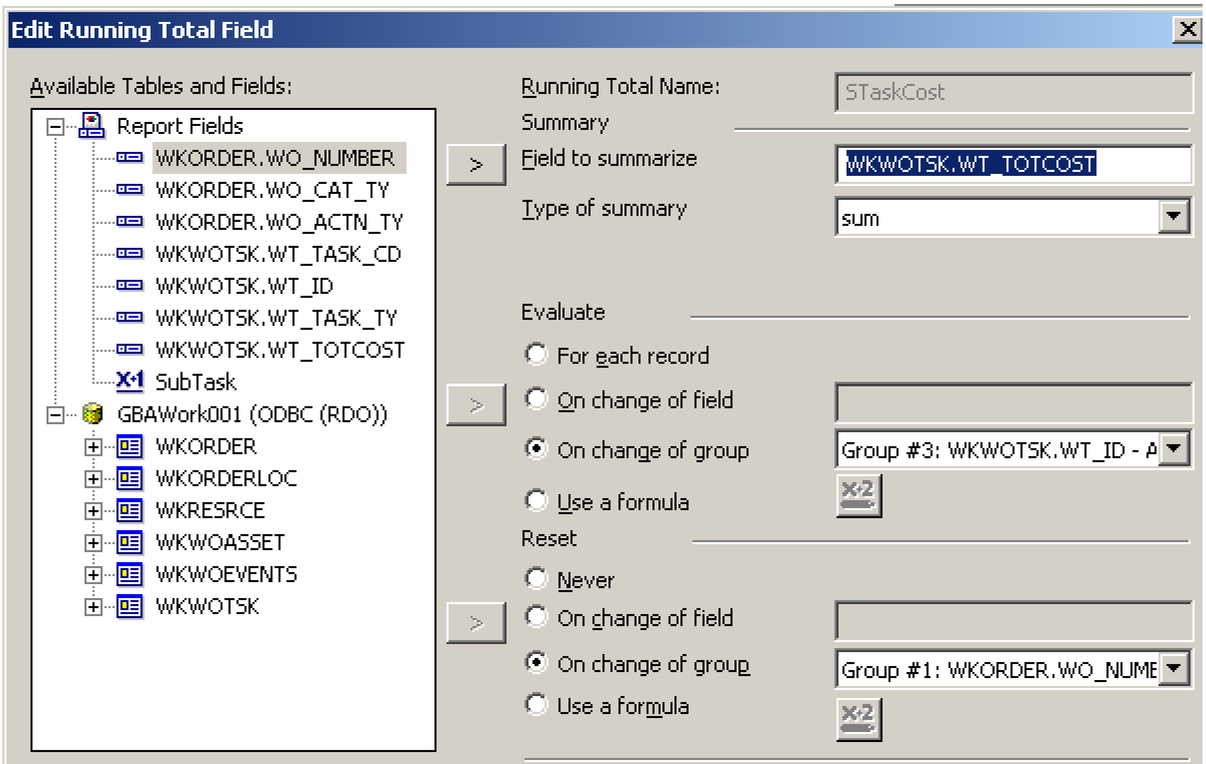
8. Add a section to the *Group Header 1* section – new section ***GH1b***.

9. Add column headers for the **Subtask** and Subtask **Cost** (Underline, Not Bold and *Italic*) in the *Group Header 1b* section (***GH1b***).

10. Add the **Subtask** formula into the *Group Header 3* section (***GH3***) under the **Subtask** column header.

11. Add the **Subtask Total Cost (WKWOTSK.WT_TOTCOST)** field into the *Group Header 3* section (***GH3***) under the **Cost** column header.

12. Create a Running Total on the **Task Cost** and place in the Work Order group footer (***GF1***).



a. ***Evaluate*** *on change of group* **WT_ID**
b. ***Reset*** *on change of group* **WO_NUMBER**.

13. Add a Text field to describe the Total Cost field. (**WO Subtask Total Cost**) (***GF1***)

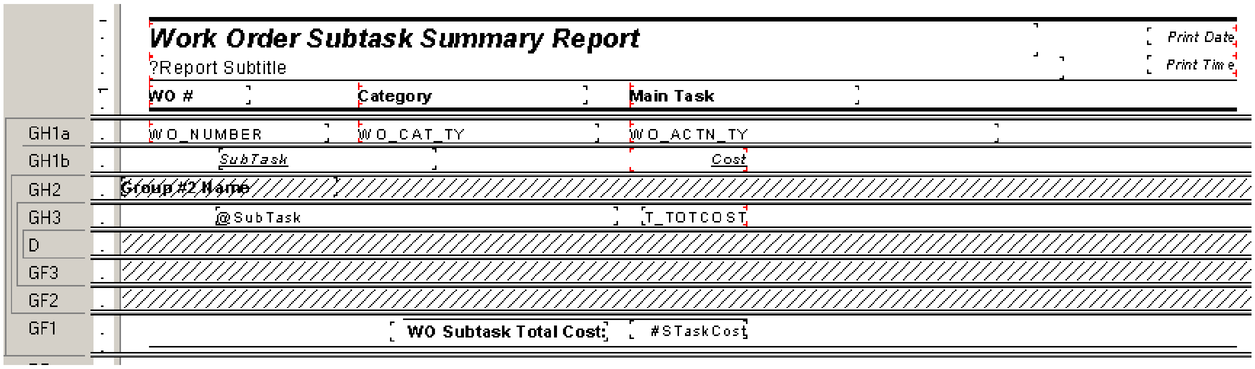
14. Change the title. (**Work Order Subtask Summary Report**)

15. Add a line at the bottom of the ***GF1*** section to separate Work Orders.

16. Add a line above the **WO Subtask Total Cost** text box and field (***GF1***).

17. Format the cost fields with **$**.

18. Save.



Work Order Subtask Summary Report

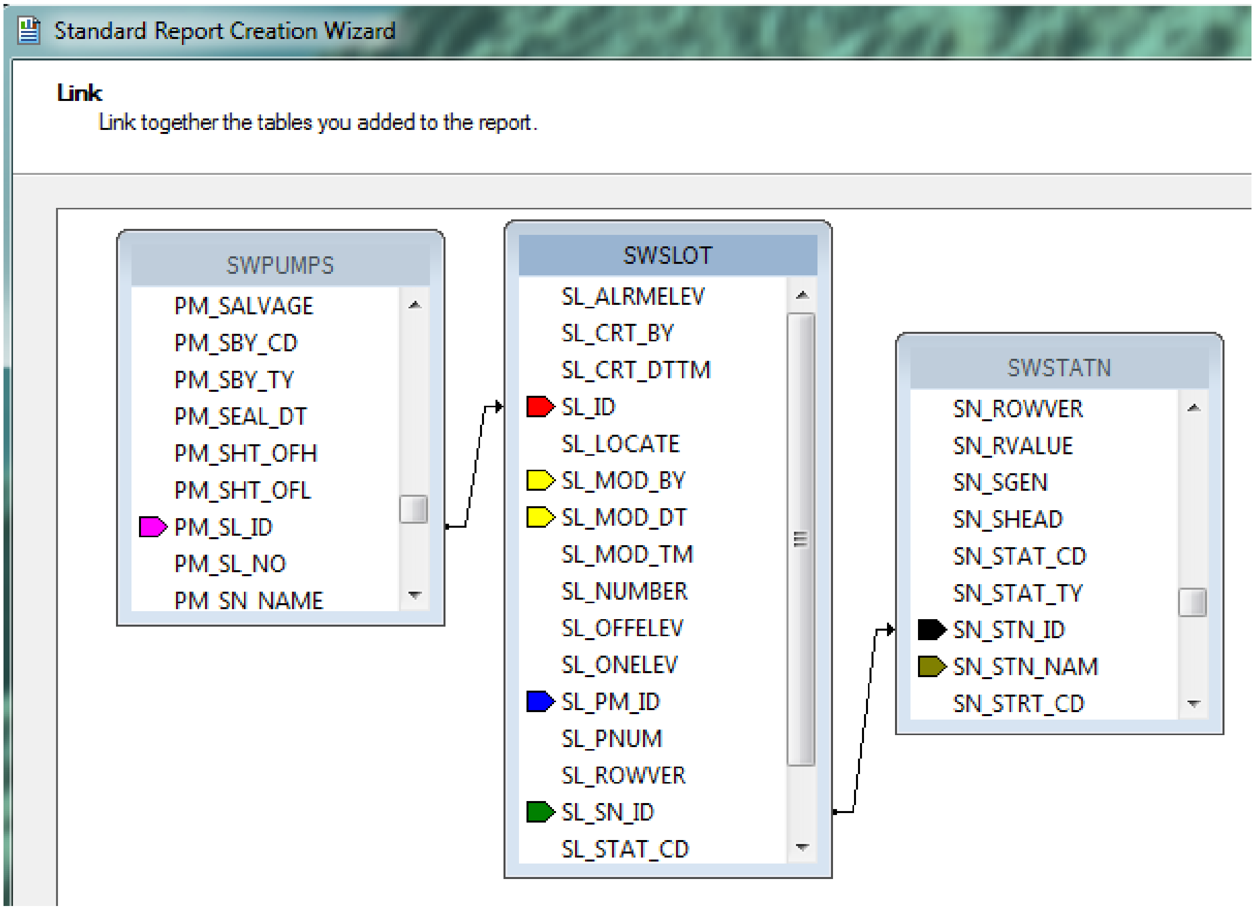
4/15/2015
12:13 PM

WO #	Category	Main Task
2006-01128	Sewer Service	Waste Water Quality Commercial

SubTask		*Cost*
ENGTR05	Work Zone	$85.57
WWQC00	Waste Water Quality Commercial	$121.12
	WO Subtask Total Cost:	$206.69

XV. Example 15

1. Create a new Sewer report from Crystal's **Standard Report Wizard** option called **Sewer Pump List**, to be saved in the Sewer report folder as **CT_SWPumpList.rpt**.
   Use the following tables:
   - SWPUMPS
   - SWSLOT
   - SWSTATN



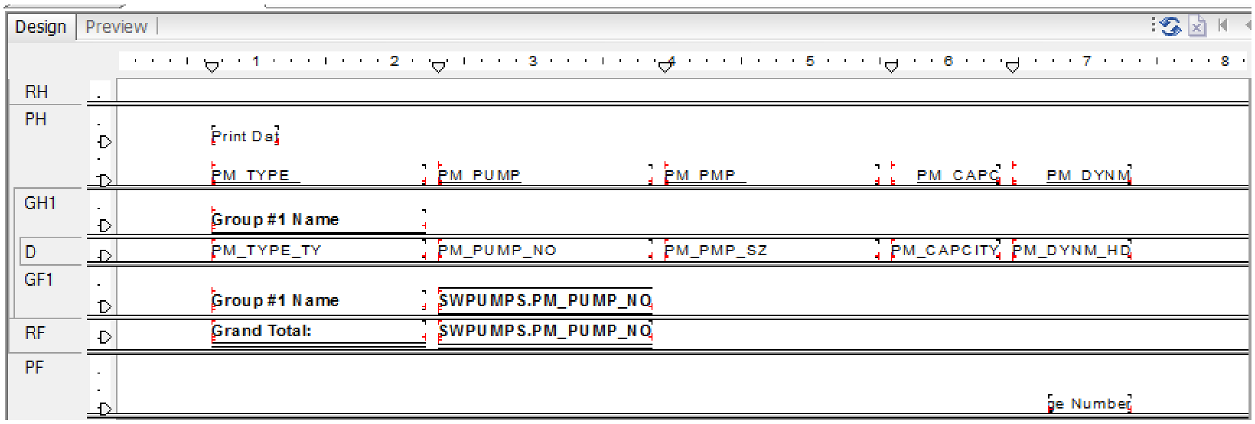
2. Bring in the following fields.
   - Pump Capacity (**PM_CAPCITY**)
   - Total Dynamic Head (**PM_DYNM_HD**)
   - Pump Size (**PM_PMP_SZ**)
   - Pump Number (**PM_PUMP_NO**)
   - Pump Type text (**PM_TYPE_TY**)

3. Group on **Pump Type** (**PM_TYPE_TY**).

4. Put in a count summary on the Pump Number field (**PM_PUMP_NO**).

5. Remove any other summaries that Crystal has guessed you might want in your report.

6. No Group Sort, Chart, Record Selection or Template.



3/5/2014

PM_TYPE_TY	PM_PUMP_NO	PM_PMP_SZ	PM_CAPCITY	PM_DYNM_HD
Horizontal Centrifugal				
Horizontal Centrifugal	205b	5	26.00	11.00
Horizontal Centrifugal	304	56	65.00	25.00
Horizontal Centrifugal	**2**			

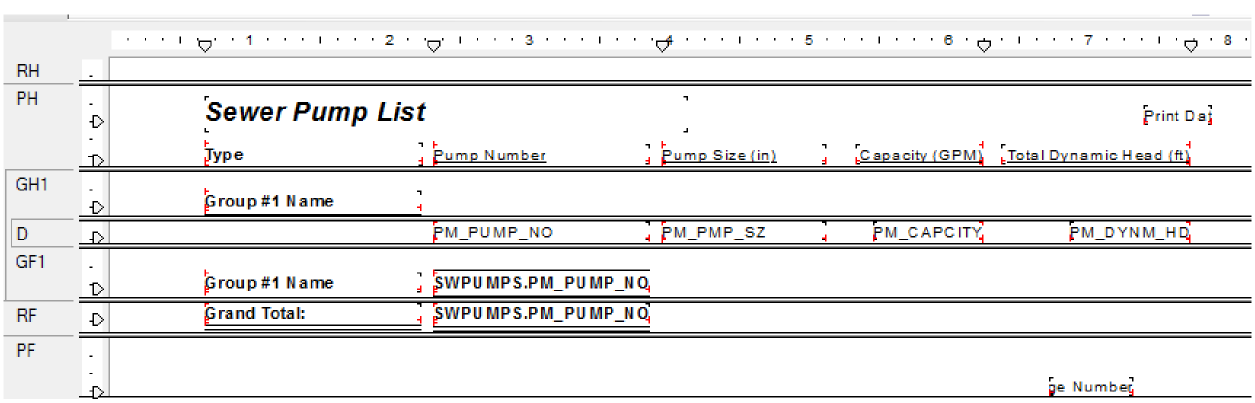
7. Move the **Print Date** field to the right.

8. Add the Title – **Sewer Pump List**.

9. Remove the **PM_TYPE_TY** field from the *Detail* section since this field is being grouped on.

10. Change the Column headers to be more descriptive (see example).

11. Add a text object for **Type**. Place in the *Page Header* section, under the title.



Sewer Pump List

3/5/2014

Type	Pump Number	Pump Size (in)	Capacity (GPM)	Total Dynamic Head (ft)
Horizontal Centrifugal				
	205b	5	26.00	11.00
	304	56	65.00	25.00
Horizontal Centrifugal	**2**			

XVI. Example 16

1. Create a new Work report from Crystal's **Blank Report** option called **Work Order Summary**, to be saved in the Work report folder as **CT_WOSumCat.rpt**.
   Use the following tables:

   - WKORDER
   - WKORDERLOC
   - WKRESRCE
   - WKWOASSET
   - WKWOTSK

2. Select on New Work Orders, **WO_STAT_CD** = 2.

3. Bring in the following fields.

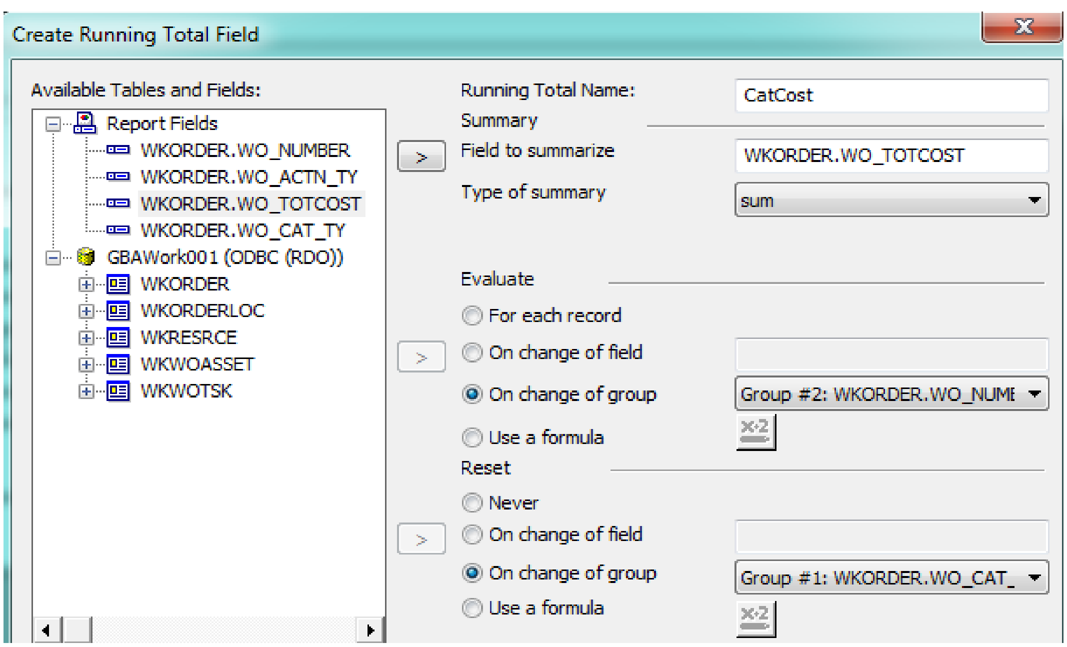
   - WO Number (**WO_NUMBER**)
   - Category text (**WO_CAT_TY**)
   - Main Task text (**WO_ACTN_TY**)
   - Total Cost (**WO_TOTCOST**)

4. Group on **Category.**

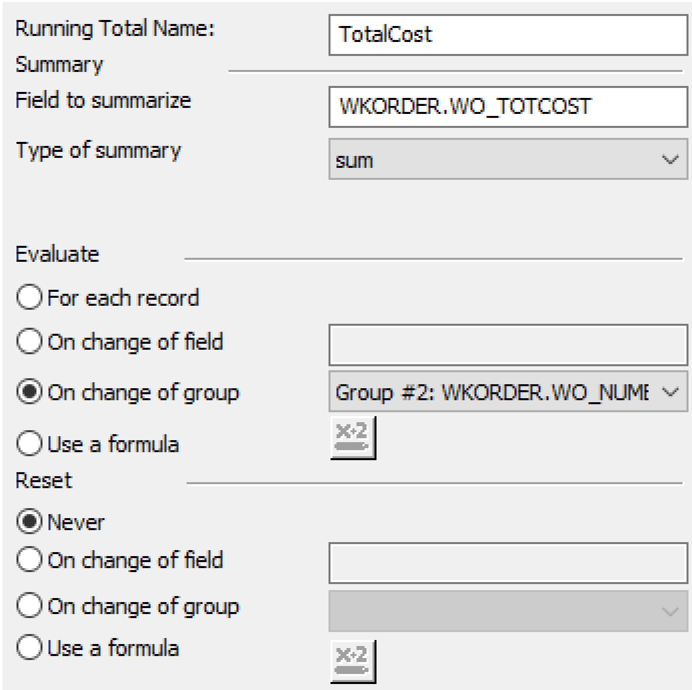
5. Group on **WO Number.**

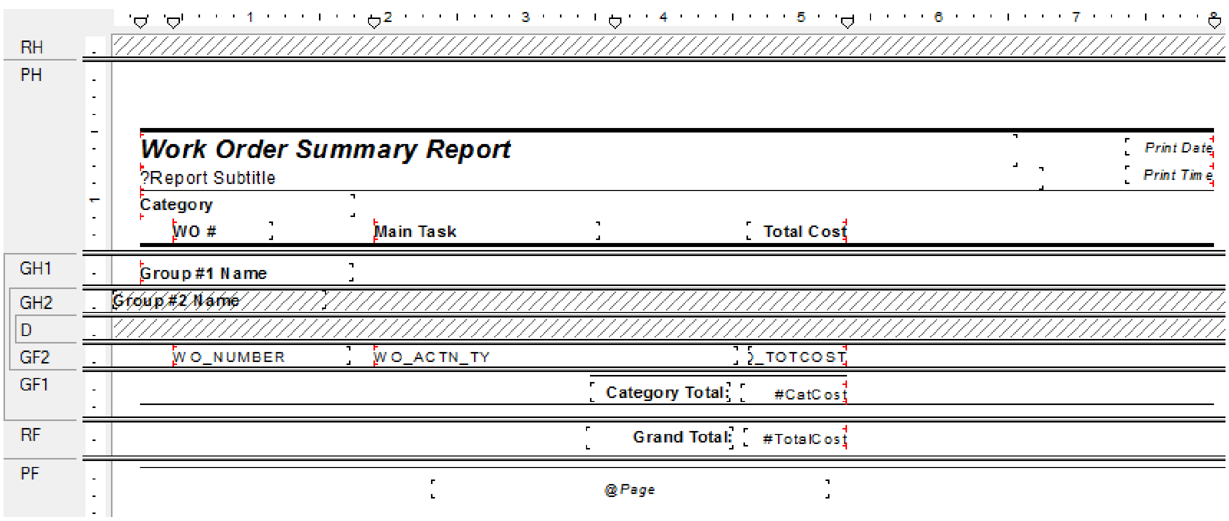
6. Move fields to *GF2* section.

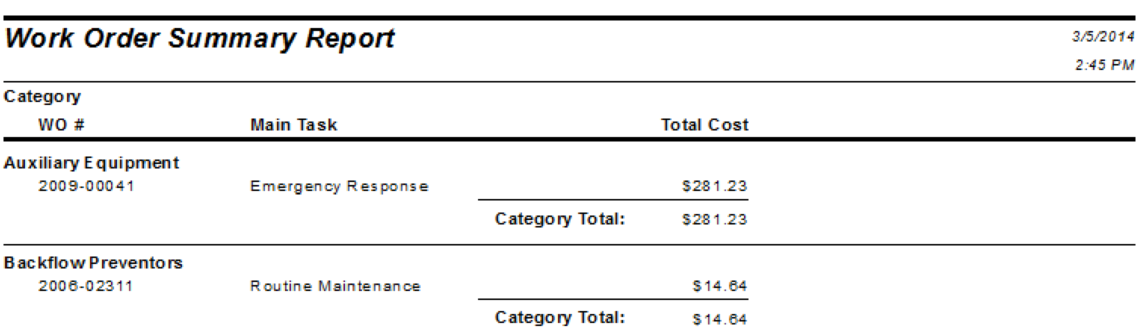
7. Put in a cost subtotal for Category using a Running Total.



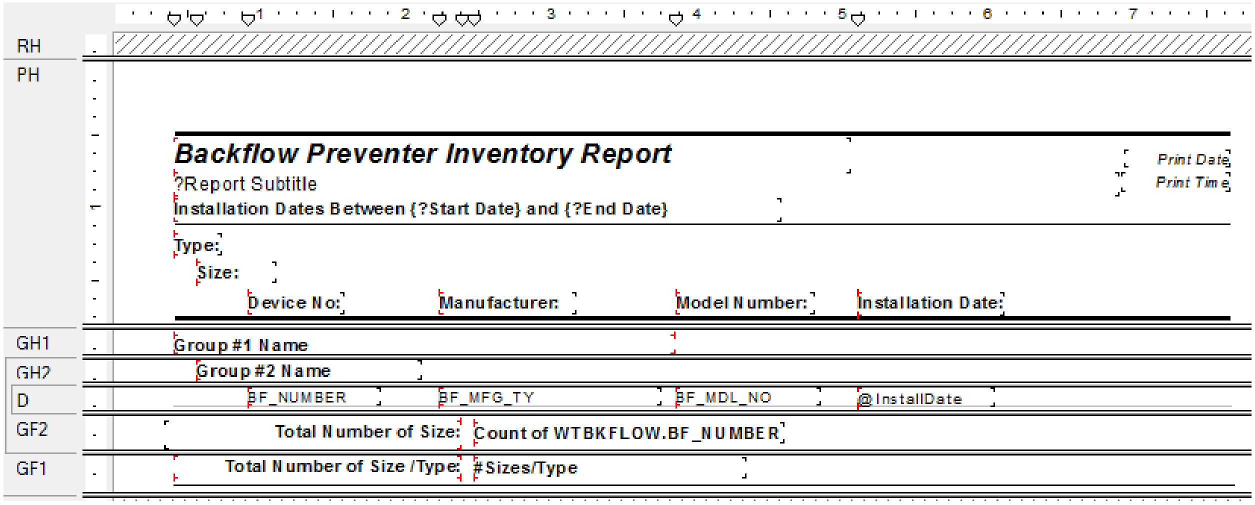
8. Put in a cost Grand Total using a Running Total.







XVII. Example 17

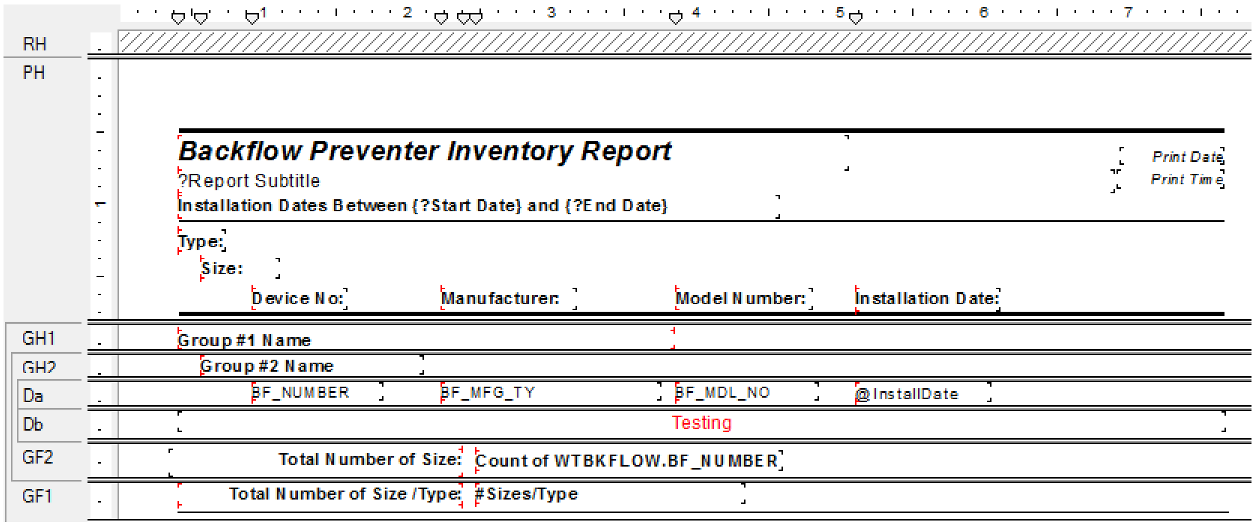


From the Backflow Preventer module we would like to add the Testing information. This could be done with additional grouping on the Device and then the Testing ID but usually this child type information is brought in as a subreport.
The subreport will be placed in its own section so blank subreport spacing can be suppressed.

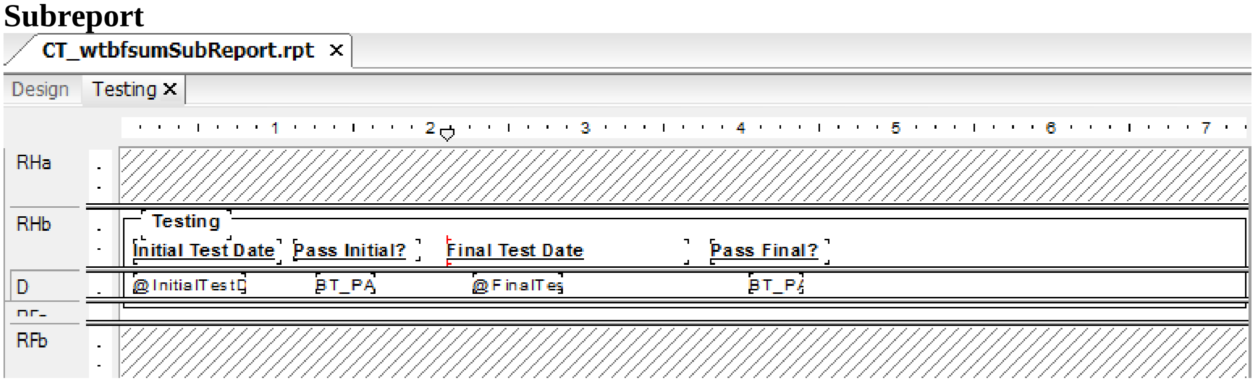
1. From the **Water** Report folder, open **CT_wtbfsumSubReport**.
2. Add an additional *Detail* section.
3. Add a subreport (call it **Testing**) Use table **WTBFTEST.**
4. Link the subreport.
5. Format the subreport – Especially the *Suppress Blank Subreport* option.
6. Open the subreport and Add a subreport Title – **Testing**.
   a. Add Testing fields.
      - Initial Test Date **BT_DATE_A**
      - Pass Initial? **BT_PASS_I**
      - Final Test Date **BT_DATE_B**
      - Pass Final? **BT_PASS_F**
   b. Add a box around the data, top in the *report header* section and the bottom in the *report footer* section.
   c. Delete or suppress unused sections.
7. Preview the report – notice the empty space for a record with no testing.

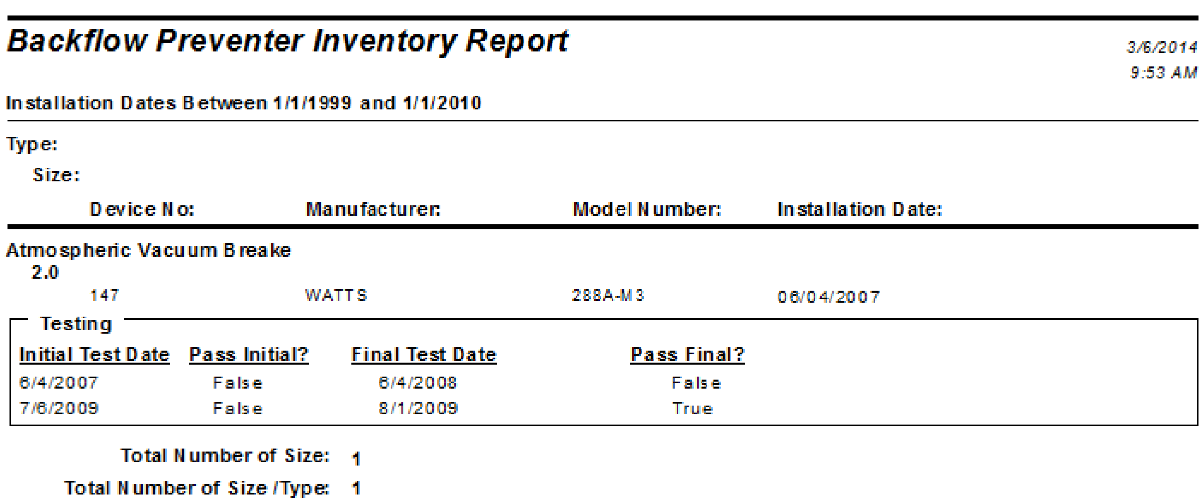
8. In the Detail *Section Expert* make sure the section with the subreport has the *Suppress Blank Section* option checked.

9. Save



Subreport





Backflow Preventer Inventory Report

3/6/2014
9:53 AM

Installation Dates Between 1/1/1999 and 1/1/2010

Type:
Size:

Device No:	Manufacturer:	Model Number:	Installation Date:

Atmospheric Vacuum Breake
2.0

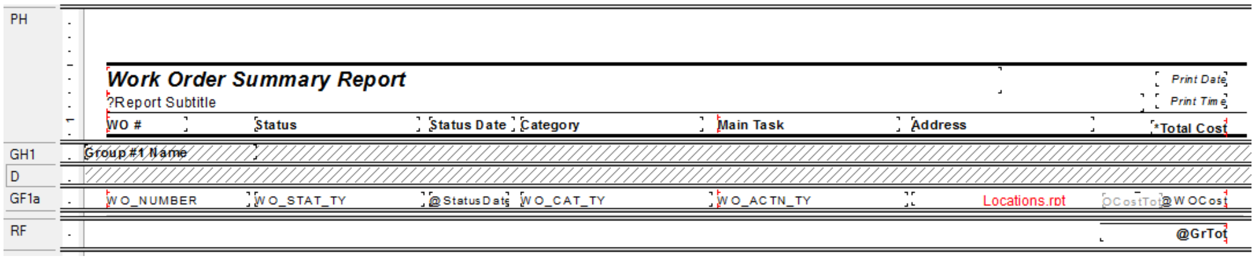
147	WATTS	288A-M3	06/04/2007

Testing

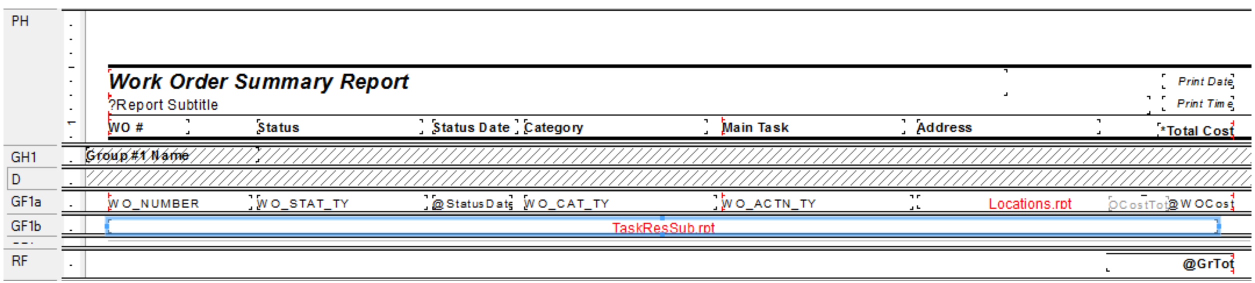
Initial Test Date	Pass Initial?	Final Test Date	Pass Final?
6/4/2007	False	6/4/2008	False
7/6/2009	False	8/1/2009	True

Total Number of Size: 1
Total Number of Size /Type: 1

XVIII. Example 18



Add the Task/Resource subreport from the Work Order Detail report (**WODetail.rpt)** to the Work Order Summary Report (**WOSum.rpt)**.



<u>Solution</u>

1. From the **Work** Report folder, open **WODetail.rpt.**

2. Right click on the **TaskRes.rpt** subreport and select *Save Subreport As…*
   a. Select the correct location to put the subreport in (Work).
   b. Give it a File name. (**TaskResSub.rpt**)
   c. Save
3. Close the **WODetail.rpt** report.

4. From the **Work** Report folder, open **CT_WOSumTaskResource.rpt**.

5. Add a new Group footer section beneath *GF1a*.

6. Insert a subreport selecting *Choose an existing report* option.

7. Browse out to the **TaskResSub.rpt** report that was saved in the Work folder.

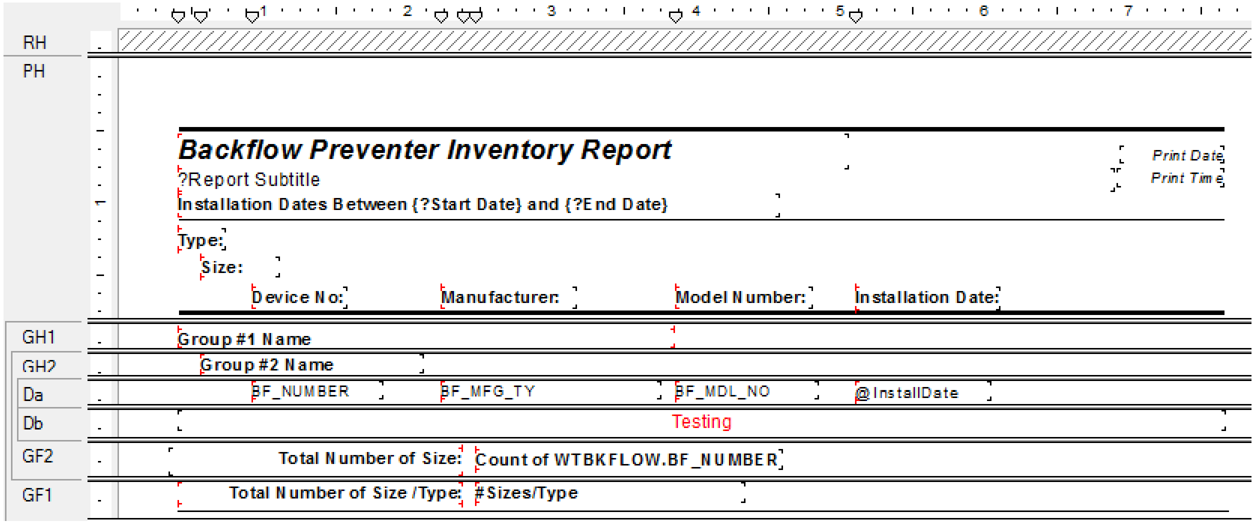
8. Double click on the file. *OK*

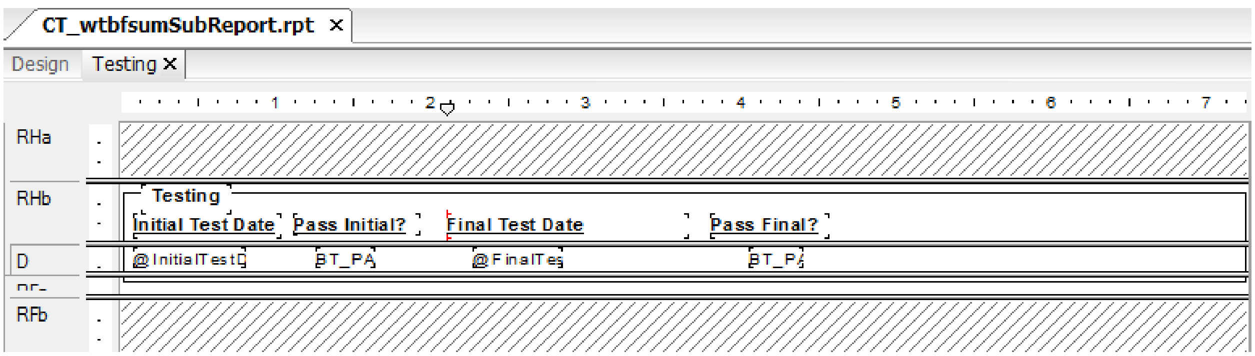
9. Format the subreport.

   - In the ***Common*** tab, Uncheck “Keep Object Together”. It depends on the amount of data that will show in the subreport as to whether this is checked or not.

10. Link the subreport.
11. Open the subreport and remove the blank sections (*Header and Footer*).
12. Open the subreport's *Select Expert* and remove the additional linking formula.
13. In *Section Expert* check the **Suppress Blank Section** option for the *Group Footer 1b* section.

XIX. Example 19

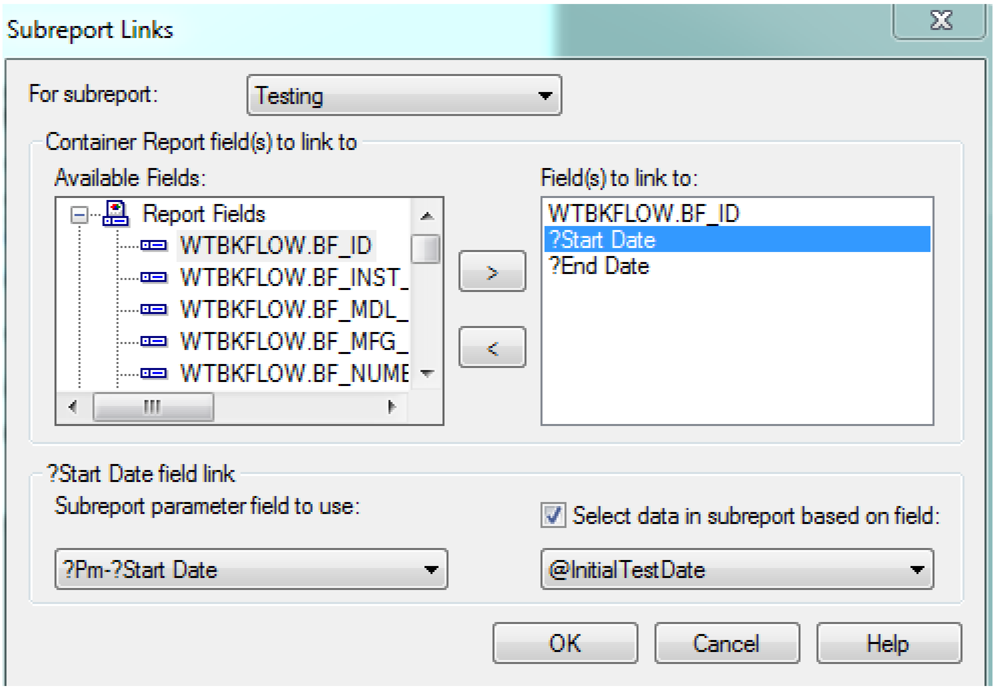




Set the report up to query for a date range that will be used with the Initial Test Date in the subreport. Use the existing Date parameters.

Solution

1. From the **Water** Report folder, open **CT_wtbfsumSubTestDt.rpt.**
2. The **Start Date** and **End Date** parameters already exist for the Installation Date selection. Remove this formula from the Select Expert.
3. Right click on the **Testing** subreport and select *Change Subreport Links…*
4. Move both the **[?] Start Date** and **[?] End Date** parameter fields from the *Available Fields:* into the *Field(s) to link to:* box.
5. In the right lower box use the drop down arrow and select **@InitialTestDate** for both the **?Start Date** and **?End Date**. (see next page)



6. OK

7. Open the Testing subreport.

8. Click *Select Expert > Show Formula > Formula Editor…*

9. Change the formula from:

   {@InitialTestDate} = {?Pm-?Start Date} and
   {@InitialTestDate} = {?Pm-?End Date} and
   {WTBFTEST.BT_BF_ID} = {?Pm-WTBKFLOW.BF_ID}

   To this:

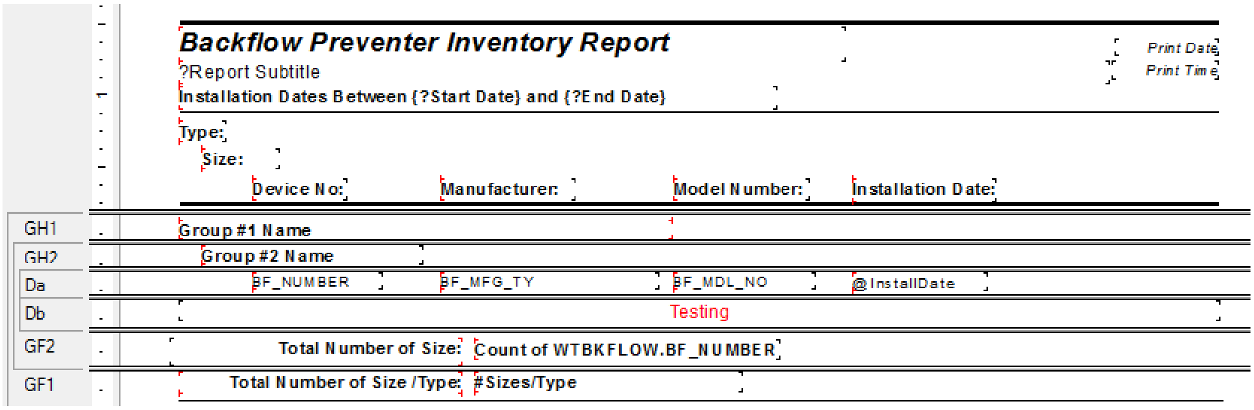
   {@InitialTestDate} in {?Pm-?Start Date} to {?Pm-?End Date} and
   {WTBFTEST.BT_BF_ID} = {?Pm-WTBKFLOW.BF_ID}

10. *Save and close*

11. *OK*

12. Change the Date Title to read **Initial Test Dates Between ?Start Date and ?End Date**

XX. Example 20



Add a General Comment subreport below the Testing subreport in its own section.

Solution

1. From the **Water** Report folder, open **CT_wtbfsumSubComment.rpt.**
2. Add a new *Detail* section under *Detail b*. (This new section is *Dc*)
3. Click *Insert Subreport.*
4. Give it a *New report name*. (**Comment**)
5. Click *Report Wizard…*
6. In *Data Source Selection* choose **GBAWater001.** *Finish*
7. Select **WTMEMO** in the *Available Data Sources:* and use the arrow (>) to move it to *the Selected Tables:*
8. *Finish* and *OK*
9. Drop the subreport box into the *Detail c* section.
10. Format the subreport.
11. Link the subreport by right clicking on it and selecting *Change Subreport Links…*
12. Move the **BF_ID** field to *Field(s) to link to:*
13. In the lower right box select **CO_REC_ID**.

14. Open the **Comment** subreport.
    a. Add a text field to the *Detail* section. (**Comment:**)

    b. Bring in the **CO_TEXT** field and place it next to **Comment:**.

    c. In the subreport's *Select Expert* click *New*.

    d. Click on **CO_FIELD**

    e. *OK*

    f. Use the drop down box to select *is equal to*.

    g. In the right box select **BF_MEMO1**.

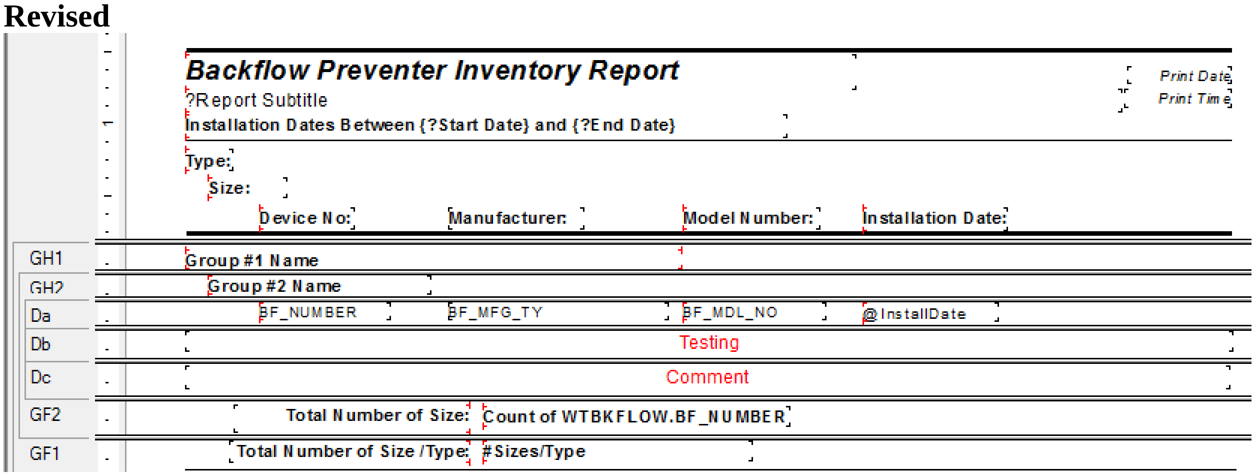
    h. *OK*

    i. Suppress empty sections.

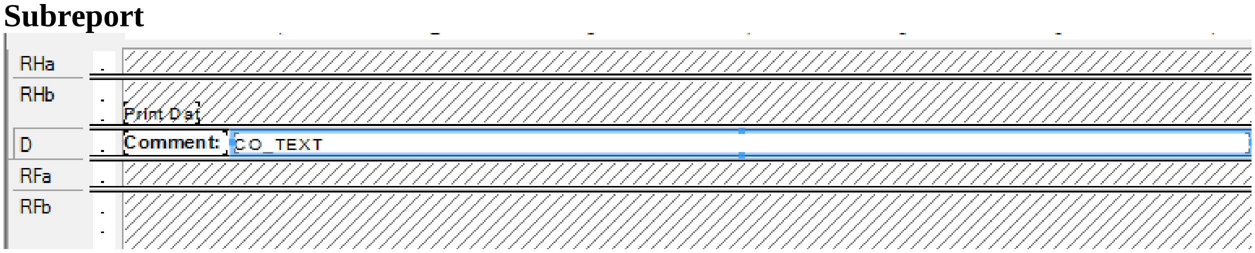
15. In the main report's *Section Expert* click on *Details c* and then click to check the *Suppress Blank Section* option.

16. *OK*

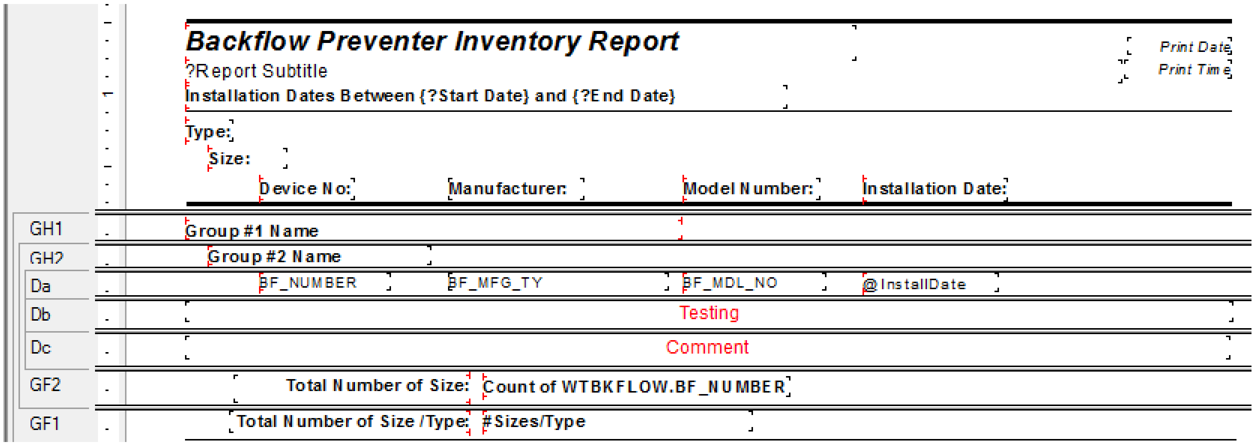
Revised



Subreport



XXI. Example 21



Add a Dated Comment subreport below the Comment subreport in its own section.

__Solution__

1. From the **Water** Report folder, open **CT_wtbfsumSubComment.rpt.**
2. Add a new *Detail* section under *Detail c.* (***Dd***)
3. Click *Insert Subreport.*
4. Give it a *New report name*. (**Dated Comment**)
5. Click *Report Wizard…*
6. In *Data Source Selection* choose **GBAWater001.** *Finish*
7. Select **WTGDMEMO** in the *Available Data Sources:* and use the arrow (>) to move it to *the Selected Tables:*
8. *Finish* and *OK*
9. Drop the subreport box into the ***Detail d*** section.
10. Format the subreport.
11. Link the subreport by right clicking on it and selecting *Change Subreport Links…*
12. Move the **BF_ID** field to *Field(s) to link to:*
13. In the lower right box select **GM_PAR_ID**. *OK*

14. Open the **Dated Comment** subreport.

    a. In the subreport's Select Expert click *New*.

    b. Click on **GM_PARENT**

    c. *OK*

    d. Use the drop down box to select *is equal to*.

    e. In the right box select the table name, **WTBKFLOW**.

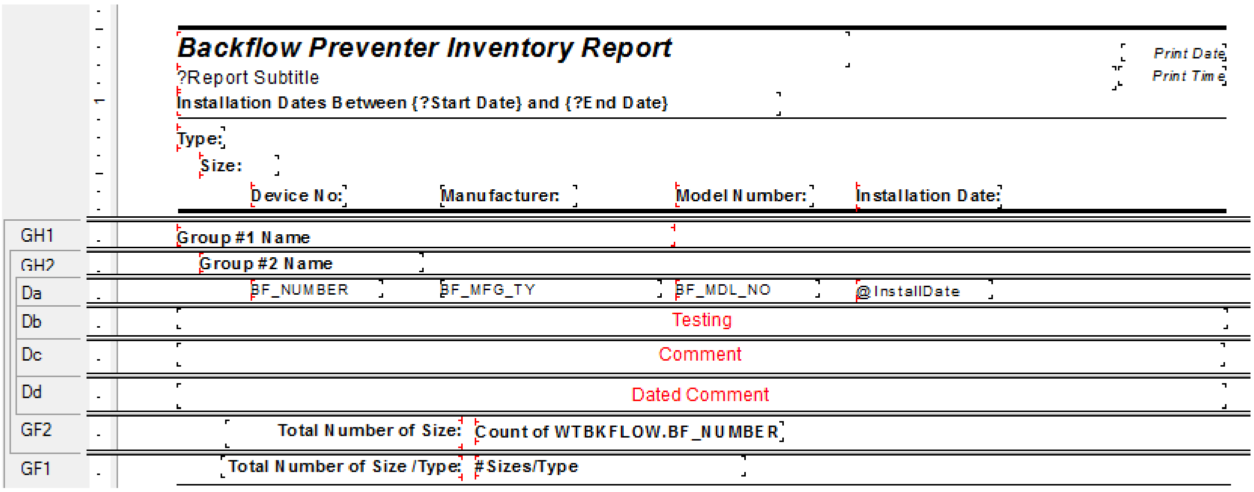
    f. *OK*

    g. Bring in the Column Headers and Fields.

15. In the main report's *Section Expert* click on *Details d* and then click to check the *Suppress Blank Section* option.

16. *OK*

Revised



Subreport