

Computerized Maintenance Management System — User Manual

City of Manteca, CA — CMMS

Log Out
Set Preferences
Launch Dashboard
Help
Administration
Document Link
Service Requests
Work Orders
Sanitary Sewer
Storm Drain
Water

Getting Started:
Read the Getting Started section in Help or just start exploring the map.

To Select or Locate Assets:
Use the select tools above to map or the search button above.

To Locate an Address:
Enter full or partial address information below to center the map at the address specified.

Owner:

No: Street:

Abutters Locate
Service Calls Work Orders

Help
Clear

APN

Previous Next Extents Selected

5815

6091 6092 6161 6159 6160 6227 6228 6229 6295 6296 6297 6363 6364 6365 6431 6432 6433 6499 6500 6501 6558 6559 6560 6561 6562 6563 6564 6565 6566 6567 6568 6569 6633 6637

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Prepared for :
**Department of Public Works
City of Manteca**

0 7,900 Feet

Local intranet | Protected Mode: Off 100%

N: 2131278 - E: 6353935

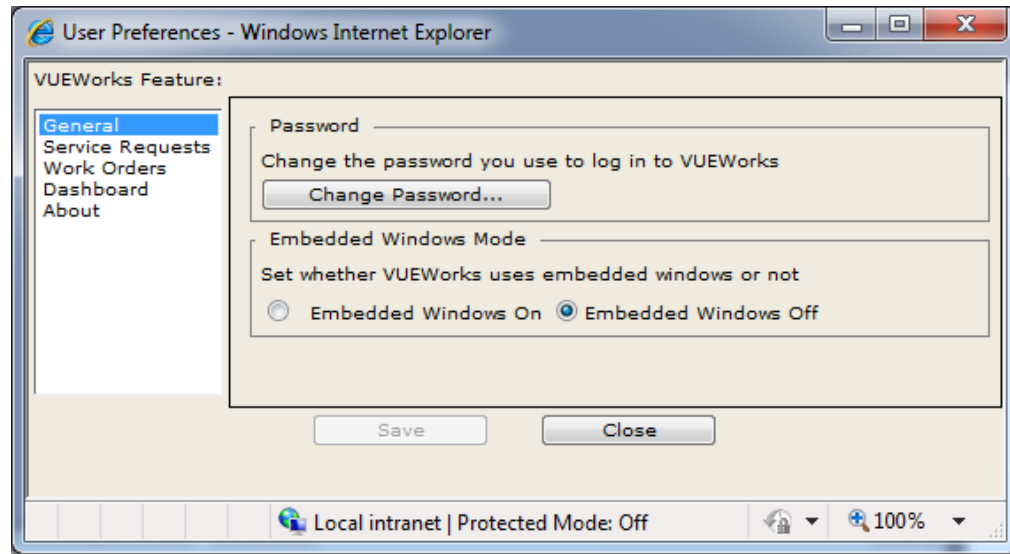
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Technical Support

Charles Brown
Customer Support Manager
VUEWorks, LLC
3680 Avalon Park Blvd, Suite 200, Orlando, FL 32828
407.608.7223
charles.brown@vueworks.com
Vueworks Path: <http://gis-server/vueworks>

Mario Osorio
GIS Analyst
Kennedy/Jenks Consultants
303 Second St., Suite 300 South, San Francisco, CA 94107
415.243.2532
marioosorio@kennedyjenks.com



Charles Brown
 Customer Support Manager
VUEworks, LLC
 3680 Avalon Park Blvd, Suite 200, Orlando, FL 32828
 407.608.7223
 charles.brown@vueworks.com
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Mario Osorio
 GIS Analyst
Kennedy/Jenks Consultants
 303 Second St., Suite 300 South, San Francisco, CA 94107
 415.243.2532
 marioosorio@kennedyjenks.com
 Vueworks Path: <http://kvue.kennedyjenks.com/manteca>

Core Functionality

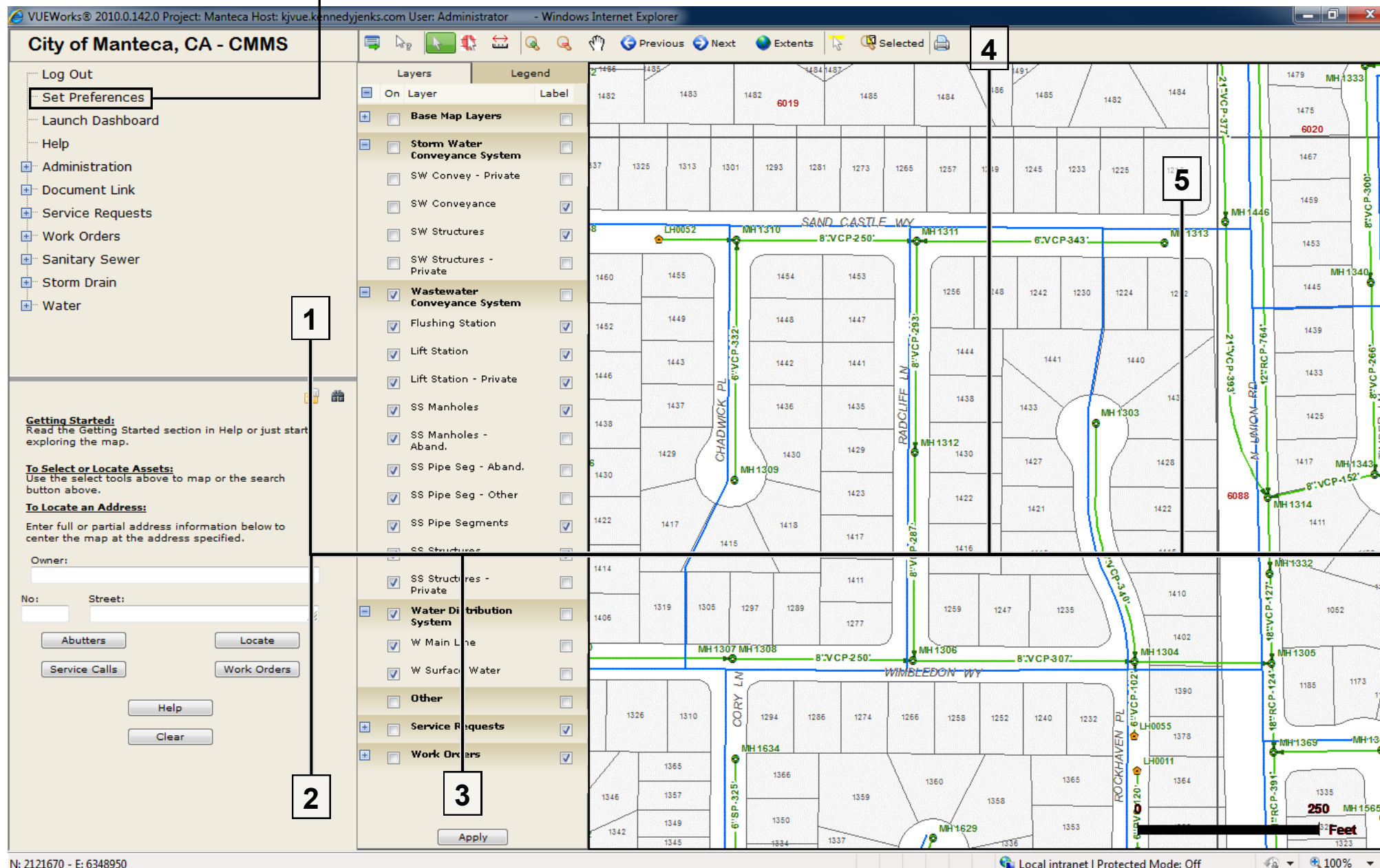
Set Preferences Window

When the user selects 'Set Preferences' from the 'Menu Window', the resulting window gives the user the capability to change their own password and change the default user settings for either Service Calls or Work Orders.

Mario Osorio
 Kennedy/Jenks Consultants
 303 Second St., Suite 300 South
 San Francisco, CA 94107
 415.243.2532
 marioosorio@kennedyjenks.com
 Vueworks Path: <http://kvue.kennedyjenks.com/manteca>

Vueworks is a software designed to extend the use of GIS data for infrastructure asset management and more. Its modular design can help an organization cost effectively manage operations with GIS technology.

Vueworks modules are grouped into three main categories: Core functionality, work management, and infrastructure asset management. The core functionality of Vueworks is to view, report, edit and share data. The Service Call, Work Order, and Resource Manager modules extend Vueworks capabilities to include work management. Lastly infrastructure asset management is made available through the Valuation, Sanitary Sewer, Storm Drain, Water, and CIP* modules.



Vueworks User Interface

1. Menu Window

This window displays the modules that are available to the user. If the user is an Administrator then an Administration section will be visible giving the user access to all sections of the software.

2. Address Window/Data Viewer

If no map features are selected, the Address Window will be displayed allowing the user to search for an address and then either locate the address on the map or open a new Service Call or Work Order automatically associated with the address.

3. Layers/Legend Window

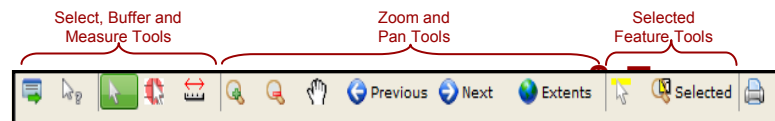
This window is displayed by clicking the Toggle Layers tool in the Map Toolbar. The resulting window allows the user to turn map layers on or off, display feature labels, or view the symbols associated with each feature type displayed on the map.

4. Interactive Map Toolbar

This toolbar gives the user a set of tools to interact with the map. The user can select features, zoom, pan, and print. The Highlight Selected and Zoom Selected tools automatically highlight and/or zoom to selected features.

5. Map Window

This window displays the GIS map.



Toggle Layers/Legend
 Display asset data in pop-up by hovering over the map
 Select assets by clicking on the map
 Select assets using the buffer tool
 Measure tool
 Zoom In
 Zoom Out
 Pan
 Zoom Previous
 Zoom Next
 Zoom to Map Extent
 Highlight assets as they are selected
 Automatically zoom to selected assets
 Print Map

Layers	Legend	
On	Layer	Label
<input type="checkbox"/>	Base Map Layers	<input type="checkbox"/>
<input type="checkbox"/>	Storm Water Conveyance System	<input type="checkbox"/>
<input type="checkbox"/>	SW Convey - Private	<input type="checkbox"/>
<input type="checkbox"/>	SW Conveyance	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SW Structures	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SW Structures - Private	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Wastewater Conveyance System	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Flushing Station	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Lift Station	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Lift Station - Private	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	SS Manholes	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	SS Manholes - Aband.	<input type="checkbox"/>
<input checked="" type="checkbox"/>	SS Pipe Seg - Aband.	<input type="checkbox"/>
<input checked="" type="checkbox"/>	SS Pipe Seg - Other	<input type="checkbox"/>
<input checked="" type="checkbox"/>	SS Pipe Segments	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	SS Structures	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	SS Structures - Private	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Water Distribution System	<input type="checkbox"/>
<input checked="" type="checkbox"/>	W Main Line	<input type="checkbox"/>
<input checked="" type="checkbox"/>	W Surface Water	<input type="checkbox"/>
<input type="checkbox"/>	Other	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Service Requests	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Work Orders	<input checked="" type="checkbox"/>

Apply

Select, Buffer and Measure Tools

This collection of tools provides the user a method to interact with the map.

This tool allows the user to hover over a map feature and see a pre-defined set of feature attributes in an on-screen pop-up.

This tool allows the user to select features for display in the data viewer window. If multiple features are selected the user can toggle through each feature systematically to review the associated attribution.

This tool allows the user to select features on the map by applying a buffer to the current selection. Features from the chosen layer(s) that fall within the buffer distance will be selected.

This tool allows the user to measure distances and areas on the map by clicking points that define the limits of measurement.

Zoom and Pan Tools

The Zoom and Pan tools enable the user to zoom in and out and pan around the map.

Selected Feature Tools

These two buttons define what will happen when features are selected through a search. Highlight Selected will highlight the features in yellow. Zoom Selected will move the map to location of the selected features.

Print

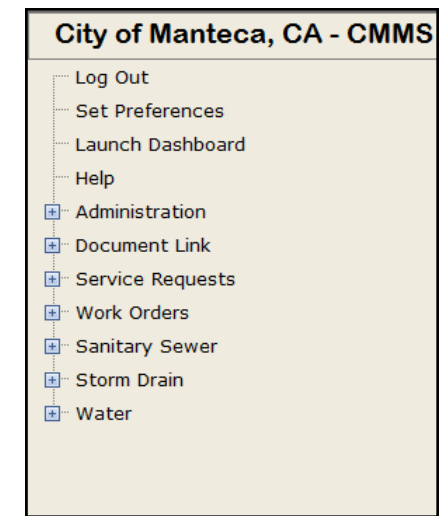
This tool allows the user to print the current map view.

Toggle Layers/Legend

When clicked, this button will display a window (seen to the left) which allows the user to show or hide various data layers in the map and also show or hide the labels associated with a given layer. Once the user has made his or her selections, the user then clicks 'Apply' to redraw the map. On the second tab in this Window (Legend), the user can see a legend depicting the features that are turned on in the current map window. If a layer is not visible, its corresponding legend entry will also not be seen.

nu Window

This window offers the user links to the various components of Vueworks. The first three items, 'Log Out', 'Set Preferences' and 'Help' provide a method for the user to exit Vueworks gracefully when finished with the current session; set individual user settings; and view the extensive help system that explains the capabilities of the software in far greater depth that seen here.

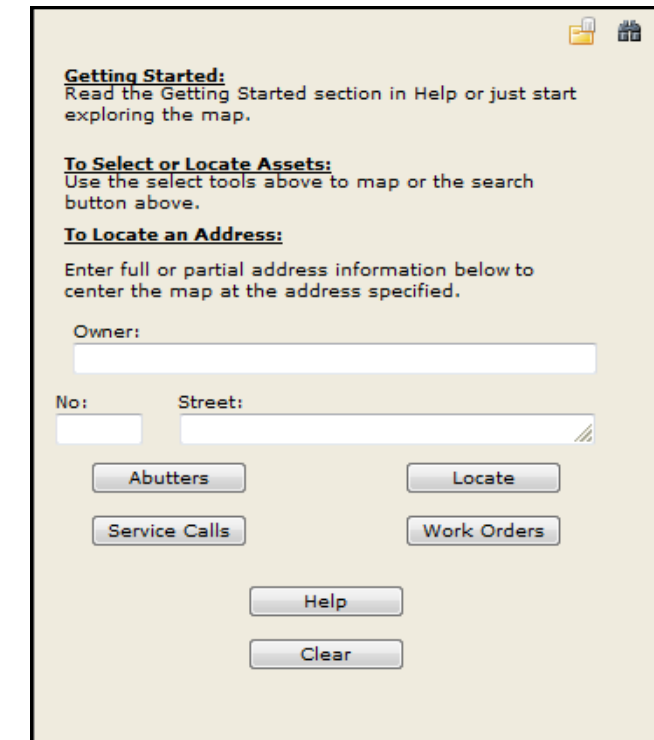


The remaining items in the menu provide user access to the modules installed with Vueworks. Individual user rights, which provide access to the various components of Vueworks, are governed by roles which are set

by a system administrator. For example, if a user does not have the ability to create new Service Calls or Work Orders, the system administrator will need to elevate the user to a user group which does have the necessary credentials (roles) to perform a given task. This change is performed within the Administration module and is only available to users who are designated as administrators. If the user does have Administrator rights, the user will see a line item for 'Administration' which allows the user to set system-wide settings that effect the experience of each user when they log into Vueworks.

Address Window/Data Viewer
 The Address Window/Data Viewer is a window which displays either an Address Finder window when no features have been selected in the map. However, when a feature has been selected, the Address Window

changes to the Data Viewer. This window displays the attributes associated with the selected feature. If multiple features are selected, the user can view the attributes of a single feature by selecting the feature of choice from the list of selected features.



The Vueworks Address Finder incorporates task buttons that center the map on an asset after executing a command. Functions that are commonly placed on the Address Finder window include Locate, Abutters, Service Calls, and Work Orders.

Abutters is a button that will apply a buffer (search radius) to the parcel associated with the address or owners name and select the parcels that are with the given search radius. The user then has the opportunity to create various reports based on the resulting selection.

Locate is a button that will simply locate and select the parcel that corresponds to the address or owners name.

Service Calls is a button which will locate, select, and create a new Service Call that will be automatically associated with the selected parcel.

Work Order is a button which will locate, select, and create a new Work Order, which will be automatically associated with the selected parcel.

The two buttons at the top of the window are 'Save/Restore Selection sets' and 'Search for assets using attribute values'.

Getting Started:
Read the Getting Started section in Help or just start exploring the map.

To Select or Locate Assets:
Use the select tools above to map or the search button above.

To Locate an Address:
Enter full or partial address information below to center the map at the address specified.

Owner:

No: Street:

Buttons: Abutters, Locate, Service Calls, Work Orders

A

City Parcels and Street Numbers: 26765

Attributes Documents **Service Calls** Work Orders

Buttons: Set as Selection List, New

ID	Date	Service Request
0526113	5/26/2011 4:00:00 PM	Investigate & Respond

B

Creating a New Service Call

When a City employee receives a request for service from either an external customer or another City employee a new Service Call will be generated at the time of the request. To create a new Service Call the employee has numerous options. If they are given an address, they can search for it in the Address Window (see image A) and then click the 'Service Call' button. A second method (see image B) would be to select a feature on the map, click on the Service Call tab in the Data Viewer, and then click 'New'. A third method (see image C) would be to select 'Add New Service Call' from the Service Call item listed in the Menu Window.

Service Requests

- Add New Service Request
- Find / Manage / Report
- Open My Notifications
- Archive / Restore / Undelete
- Administer Settings

C

These methods will all create a new Service Call similar to the one seen below. The first two will automatically associate the new Service Call with a feature in the map. The third method will not be associated with a map feature, but can later be associated by clicking the 'Assets' tab and creating a manual association.

"The Service Call module enables you to record service calls, manage duplicate calls, attach calls to parcels and assets, create reports, set up parameters, and more. All Service Call functions are available through the Service Call Manager. Service Calls can be created quickly and easily by clicking on the Service Call button from the home page of the Data Viewer. Simply enter the address and/or the name of the calling party, press the Service Call button, and select from the drop down controls to quickly create the service call while talking to the caller." (Vueworks, 2009)

The following sheet is provided as a quick reference guide to help orient the user with the Vueworks Service Call module.

Manage Service Requests - Windows Internet Explorer

Filter is OFF - Current list contains 236 out of 236 Service Requests

Buttons: - Select Field - Apply

Tabs: Form View, Table View, Filter, Reports, Assets

ID: 0628113 Logged By: Administrator 6/28/2011 12:49 PM

Type* Priority 2 - Outside Svc Call

Department* Public Works -WQCF

Issue* Sewer Collection

Assist

Description:

Status: Open

Date / Time Issue Occurred: 06/28/2011 12:49 PM

Date / Time Issue Response: Now

Response Time:

Response:

Buttons: Notify, History

Caller Info: Name of Caller, Address of Caller, Relation to Owner, Phone, Email

Service Request Location: Occupant, Address, Phone, Email

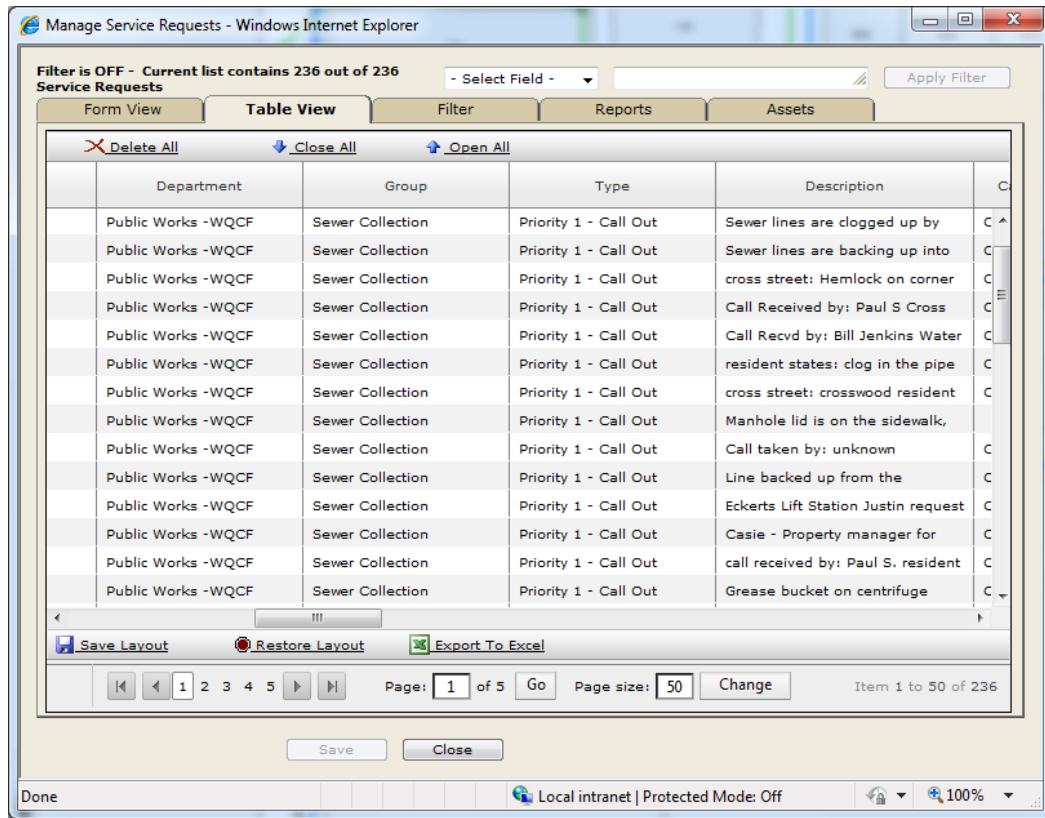
Owner information: Owner, Address, Phone

Buttons: Save, Delete, New, Print..., Close

Record 1 of 236

Local intranet | Protected Mode: Off

- 1. Date Stamp and Required Fields**
When a new Service Call is created, Vueworks will automatically assign a unique ID and stamp the Service Call with the date, time, and name of the user who created the Service Call. The minimum information necessary to be able to save the new Service Call is Type, Department, and Issue (highlighted in red on the Service Call form).
- 2. Service Call Information Fields**
The body of the form is completed by the user with information provided by the customer or City employee requesting service. If a Service Call is created from the Address Window (using the Service Call button), address and owner information will be populated automatically from the address search.
- 3. Work Orders**
Work Orders can be created directly from the new Service Call by clicking 'Add New' in the Work Order area. The new Work Order will be automatically associated (a child) of this Service Call and will be displayed as a link in this window when the user views the Service Call form.
- 4. Status**
This area shows the status of the Service Call (Open/Closed). The Service Call cannot be Closed (work completed and customer notified) until all associated Work Orders have also been Closed.
- 5. Service Call Tabs**
The tabs along the top of the Service Call window allow the user to see a table of all or selected Service Calls; Filter the Service Calls based on the choices of the user; create Reports based on the selected Service Calls, and associate Service Calls with system Assets. Service Calls associated with system Assets will also appear in the Data Viewer on the Service Calls tab when the feature is selected.



Along the top of the Service Call form the user will see a number of tabs. If the user has created a new Service Call, five (5) tabs will be displayed along the top of the form: Service Call Form, Service Call Table, Filter, Reports, and Assets. If the user opens an existing Service Call then only two (2) tabs will be displayed: Service Call Form and Assets.

Service Call Form

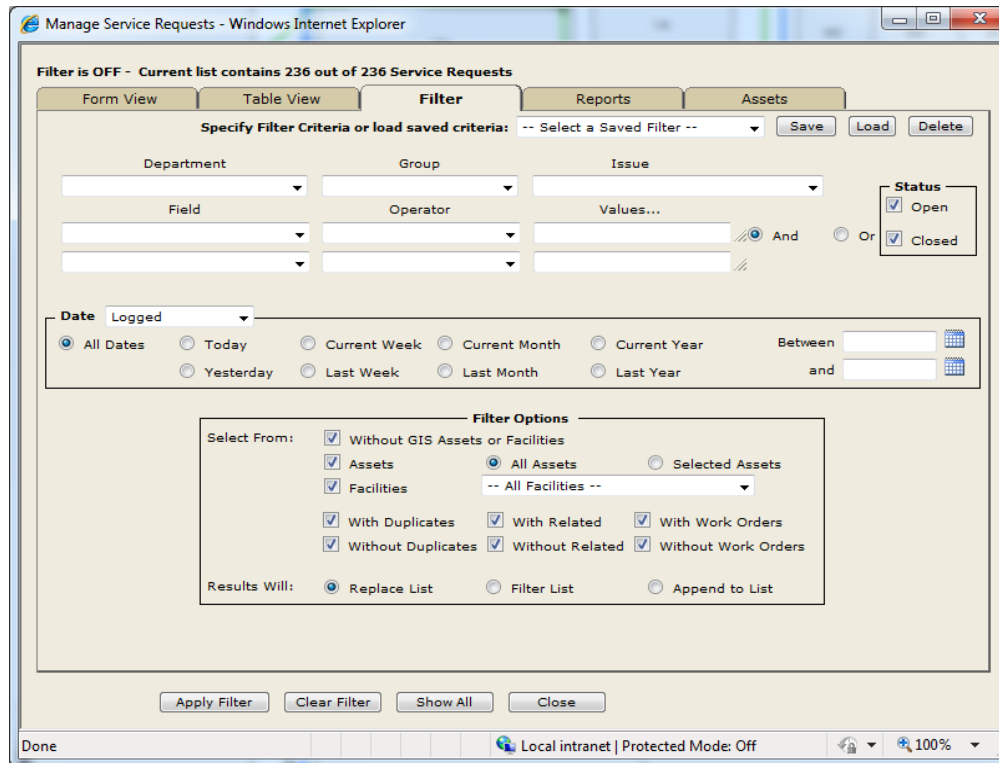
The 'Service Call Form' tab displays the fields that will be or have been filled in by the employee who received the request for service from the customer. An image of that screen can be found on the previous page.

Service Call Table

The 'Service Call Table' tab displays a list of all of the Service Calls that have been created to date in this installation of Vueworks. Of course this will present a problem fairly quickly as the number of Service Calls begins to grow. To help the user find a specific group or individual Service Call, the user can apply a filter to pare down the number of Service Calls being displayed in the table to a more manageable number. If a filter has been applied, the message at the top right of the window will inform the user that a filter has been applied and the number of Service Calls being displayed based on that filter. To create the filter, the user clicks on the 'Filter' tab and makes the appropriate selections.

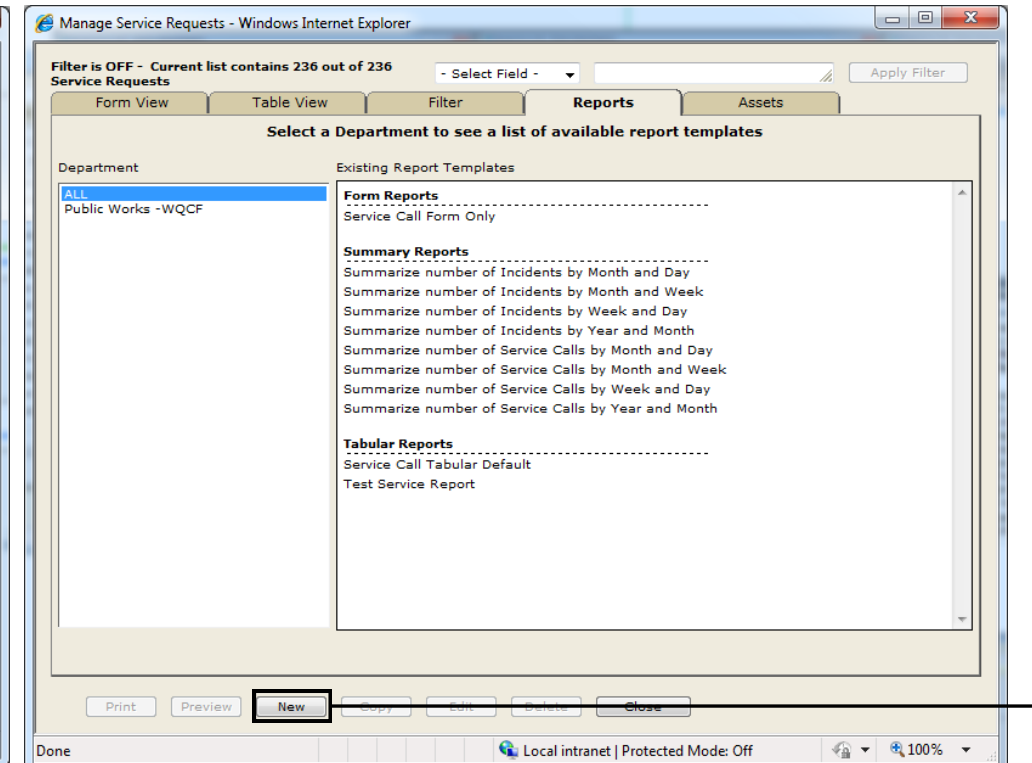
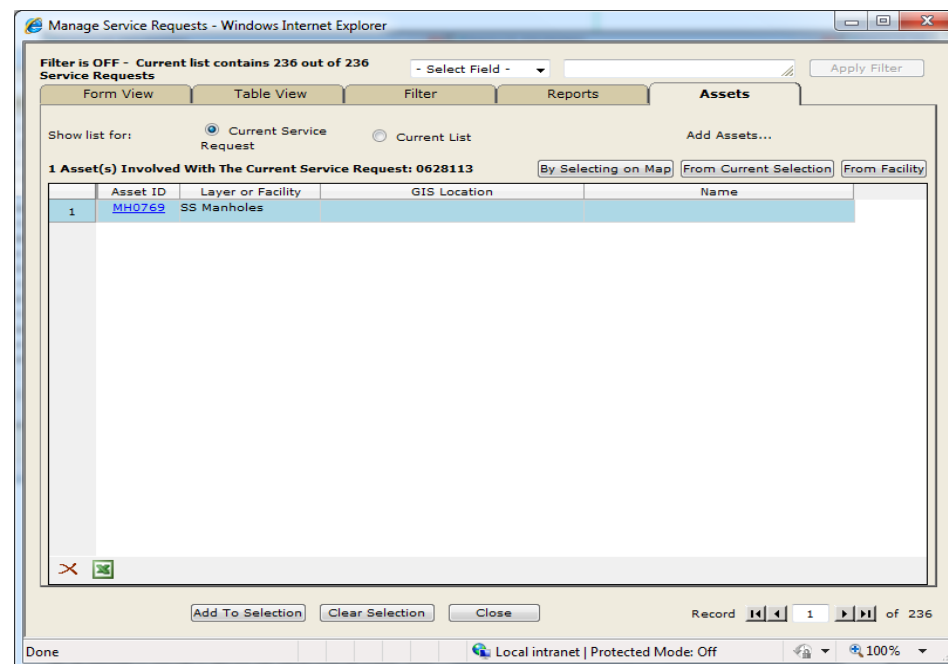
Assets

The 'Assets' tab of the Service Call form allows the user to associate the Service Call with specific map features. These spatially located Service Calls can be displayed on the map to help the user identify potential problem areas in the system.



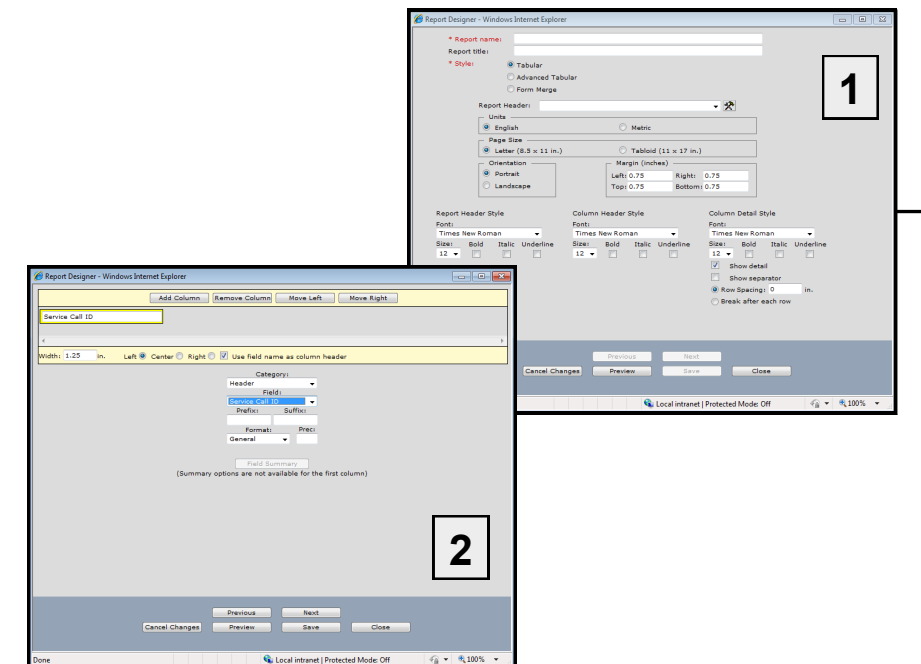
Filter

The 'Filter' tab allows the user to create a subset (selection) of Service Calls based on the criteria specified by the user. The user can select Service Calls based on all of the information entered into the Service Call form (Department, Group, Issue, Address, Owner Name, Open/Closed, etc.). After creating the subset of Service Calls, the user can return to the Service Call Table to review the items that have been selected. If more filtering is necessary, a new filter can be applied to the subset of Service Calls further refining the selection set. If a user knows that they will want to review a particular set of Service Calls in the future, the filter that was used to create that selection set can be saved and applied again at any time. To save a filter, the user just needs to click the 'Save' button after the filter has been built. In order to recall the filter later, the user



clicks the 'Load' button and chooses the saved filter from the resulting list. **Reports**

The 'Reports' tab allows the user to create Service Call reports. Vueworks comes preloaded with various 'canned reports' to help summarize and tabulate the selected information from the Service Calls and to print the input form. The information in these reports is based on the forms being displayed in the Service Call Table. As such, if no filter has been applied, then the reports will be based on all Service Call information or on a subset of Service Calls if a filter has been applied. Clicking 'New' will allow the user to create a custom report that can be saved and reused as necessary. When the 'New' button is clicked a window will appear (image 1 below) that allows the user to format the various elements of the report (header, footer, page format, fonts, etc.). After



Work Orders

Getting Started:
Read the Getting Started section in Help or just start exploring the map.

To Select or Locate Assets:
Use the select tools above to map or the search button above.

To Locate an Address:
Enter full or partial address information below to center the map at the address specified.

Owner: _____

No: _____ Street: _____

Buttons: Abutters, Locate, Service Calls, Work Orders

City Parcels and Street Numbers: 26765

Attributes Documents Service Calls Work Orders

Buttons: Set as Selection List, New

ID	Date	Service Request
0526113	5/26/2011 4:00:00 PM	Investigate & Respond

Creating a New Work Order

Similar to Service Calls, VUEWORKS offers numerous options when an employee needs to create a new Work Order. If they are given an address, they can search for it in the Address Window and then click the 'Work Order' button (see image A). A second method would be to select a feature on the map, click on the Work Order tab in the Data Viewer (see image B), and then click 'New'. A third method would be to select 'Add New Work Order' from the Work Order item listed in the Menu Window (see image C). The fourth and fifth method (see image D) would be to create a new Work Order from inside the Service Call or Work Order by selecting 'Add New' from the Work Order Window. These are the preferred methods given that the Work Order will be automatically associated with the Service Call or Work Order creating a Parent/Child relationship. The Service Call or Work Order will not be able to be 'Closed' until the Work

Work Orders

- Add New Work Order
- Find / Manage / Report
- Open My Notifications
- Open Work Order Calendar
- Archive / Restore / Undelete
- Administer Settings

Work Orders Window: Add New | Add Existing

071910003 Maintenance

Remove Checked

"The VUEWORKS Work Order Module provides a rich set of features for managing all types of work activities. The system is designed to enable you to easily start to create Work Orders within a few minutes, and rich enough to allow you to create your own custom forms, replace default terms with your own, place work order points on a map, send email notifications, view work orders on a calendar, track costs, set up recurring work orders and more. If your organization has implemented the Resource Module you will also be able track your Labor, Equipment, and Inventory costs associated with all work activities. Robust reporting features allow you to set up all kinds of reports using all the information entered into your Work Orders along with attached assets, documents, assets and summary data." (VUEWORKS, 2009)

The following sheet is provided as a quick reference guide to help orient the user with the VUEWORKS Work Order module.

Manage Work Orders - Windows Internet Explorer

Filter is ON - Current list contains 256 out of 257 Work Orders

Buttons: - Select Field - Apply Filter

Views: Form View | Table View | Filter | Reports | Assets

ID: 062911002 | Logged By: Administrator | 06/29/2011 11:17 PM

Type* _____

Department* _____

Activity Description* _____

Group* _____

Location: _____

Status: Open | Priority: 1

Begin Date / Time: 06/29/2011 8:00 AM

End Date / Time: 06/29/2011 9:00 AM

Buttons: Notify, Set Recurring, Calendar, History

Notes

Location Description

Supervisor: _____

Crew: _____

Vehicle: _____

Contractor: _____

Conditions Upon Arrival: _____

Conditions Upon Departure: _____

Length Serviced: 0.00 ft. | Debris Removed: 0.00 yds.

Document Attachments: Link Document

Linked Work Orders: Add New | Add Existing

*Required Fields

Buttons: Save, Delete, New Copy, New, Print..., Close

Page: 1 of 256

Local intranet | Protected Mode: Off

1. Date Stamp and Required Fields

When a new Work Order is created, VUEWORKS will automatically assign a unique ID and stamp the Work Order with the date, time, and name of the user who created the Work Order. The minimum information necessary to be able to save the new Work Order is Type, Department, Group and Activity Description (highlighted in red on the Work Order form).

2. Work Order Information (Details, Costs, Labor, Equipment and Inventory)

The 'Details' tab of the Work Order form is a completely customizable collection of input fields, which can be made from scratch to replicate existing forms. Data from an associated Service Call can be passed directly to the Work Order using this method of customization. If the Resource Manager module has been loaded and configured, estimated and actual costs for the work being performed can be automatically calculated and presented to the user on the 'Costs' tab. The 'Labor', 'Equipment', and 'Inventory' tabs allow the user to enter and manage information regarding the specifics of the job (for example number of employees, hours to complete the work, specific equipment and inventory used to complete the work).

3. Status

This area shows the status of the Work Order (Open/Closed, time work started/finished). The user also has buttons available to notify other users of the work order, set the work order to repeat at defined intervals or triggers, add to the VUEWORKS calendar, and see the work order history.

4. Work Order Tabs

The tabs along the top of the Work Order allow the user to see a table of all or selected Work Orders; Filter the Work Orders based on the choices of the user; create reports based on the selected Work Orders, and associate Work Orders with system assets. Work Orders associated with system assets will also appear in the Data Viewer on the Work Orders tab when the feature is selected.

Estimated Costs (In Activity Year Dollars)

Item	Cost	Rollup Cost
Labor	\$0.00	\$0.00
Inventory	\$0.00	\$0.00
Equipment	\$0.00	\$0.00
Vendor	\$0.00	\$0.00
Other	\$0.00	\$0.00
Total	\$0.00	\$0.00

Actual Costs (In Activity Year Dollars)

Item	Cost	Rollup Cost
Labor	\$0.00	\$0.00
Inventory	\$0.00	\$0.00
Equipment	\$0.00	\$0.00
Vendor	\$0.00	\$0.00
Other	\$0.00	\$0.00
Total	\$0.00	\$0.00

Fund Sources

Fund Source	Amount	Rollup Amount

The tabs along the top of the Work Order (item 4 on page 1) are similar in form and function to those along the top of the Service Call. For a description of these tabs, please refer to page 2 on the Service Calls Sheet. The following discusses the tabs in the body of the Work Order.

Details

The 'Details' tab displays the fields that will be or have been filled in by the employee who creates the Work Order. An image of that screen can be found on the previous page.

Order	Completed	Task Description	Notes	Date

Costs

The 'Costs' tab provides a summary of the costs, both estimated and actual, associated with completing the work. The numbers are derived from the remaining tabs in this section of the work order. There are also areas here to give a brief description of costs and also the source of the funding to perform the work.

Tasks

The 'Tasks' tab of the Work Order form allows the user to define the tasks necessary to complete the work. The person creating the work order can also define the order in which the tasks should be completed and as each task is completed, the person completing the work can check the 'Completed' box so that the manager can track overall progress.

Labor

If Resource Manager is installed and has been configured, personnel can be added to the labor tab by clicking the 'New' button in the lower left corner of the window. When the 'New' button is clicked, a new window will open, which will allow the user to select the personnel tasked with completing the work. Adding hours for each person will force a calculation based on the appropriate rate. Labor hours from this screen are totaled and presented on the 'Costs' tab.

X	Employee Number	First Name	Last Name	Department
<input checked="" type="checkbox"/>	1234	Mike	Wottrich	KJ SFO

Equipment and Inventory

Also contained in Resource Manager are capabilities to manage Equipment and Inventory. Equipment would be defined as the mechanical tools and equipment necessary to complete the work, whereas Inventory would be the parts required. Both tabs employ a similar methodology as the Labor tab where the user clicks on the 'New' button and selects necessary equipment and inventory to complete the work. Entering usage values for each item selected will force a calculation based on the appropriate rate(s). Equipment and Inventory costs from these screens are also totaled and presented on the 'Costs' tab.

Number	Name	Department	Date	Hours	Rate Type	Rate	Cost	Notes
1	Honda1	Honda Accord	KJ SFO	7/19/2010	1.00	Standard	\$150.00	\$150.00
				Total	1.00		\$150.00	

Number	Name	Department	Date	Quantity	Units	Rate Type	Rate	Cost	
1	12345	Light Bulb	KJ SFO	7/19/2010	4.00	10	Unit Charge	\$2.00	\$8.00
				Total				\$8.00	

City of Manteca, CA - CMMS

- Log Out
- Set Preferences
- Launch Dashboard
- Help
- Administration
- Document Link
- Service Requests
- Work Orders
 - Add New Work Order
 - Find / Manage / Report**
 - Open My Notifications
 - Open Work Order Calendar
 - Archive / Restore / Undelete
 - Administer Settings
- Sanitary Sewer

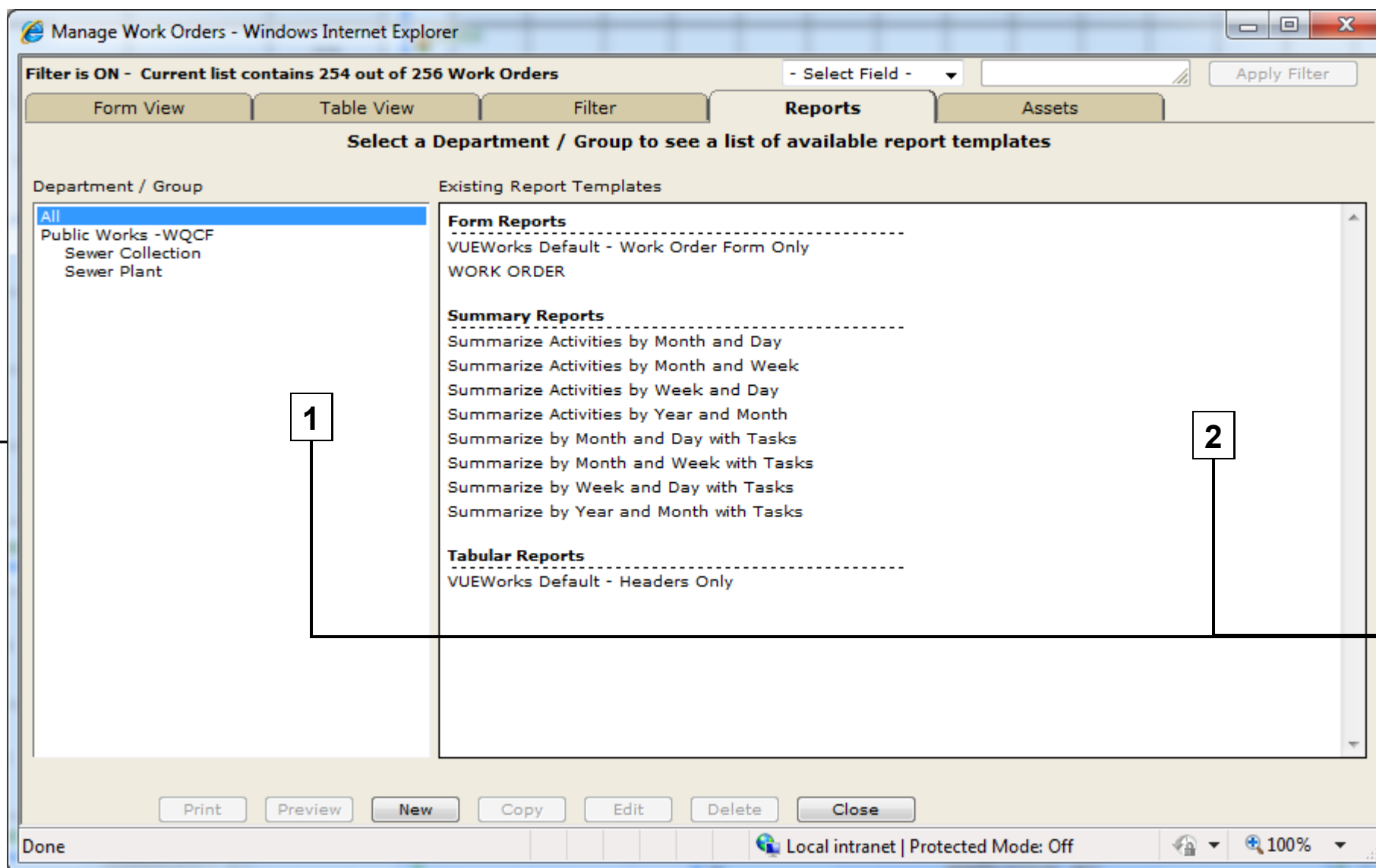
Accessing Reports and Report Manager

There are multiple methods to run reports and access the Report Manager in Vueworks. The easiest, and most direct is to find the link under each module in the Menu Window (upper left of Vueworks screen). Each module will have a link to access to the reporting capabilities of that module. For example, the image to the left shows the expanded menu for Work Orders with 'Find / Manage / Report' selected (see image to the left). Clicking this will open the Work Order Manager window with the 'Filter' tab pre-selected. From here the user can apply a filter to select only certain Work Orders and then click on the Reports tab to run existing or create new reports (see image below).

"The Vueworks Report Manager is found in most Vueworks modules. It provides a list of report templates from which you can generate reports against any data layer, department, program, or external source of data depending on which module you are in. Report templates are created in the Report Designer and are made available within their respective Report Manager. The Attribute Report Manager enables you to create reports using any data from the GIS and Data Link tables. The Report Managers in Service Calls, Work Orders, and Resource Manager create reports from data available in each module. Work Order Report Manager also enables you to create reports with embedded Attribute reports. Report Managers are also available in each sub section of the Resource Manager for creating time, personnel, equipment, and inventory reports." (Vueworks, 2009)

"Each module's Report Manager provides options to create different styles of reports specific to the module. For instance, the Attribute Report Manager includes Avery Label styles that can be used to create mailing labels while other Report Managers include form and summary report styles. All Report Managers include tabular reports with summary and grouping options. Reports can be generated in PDF, RTF, TIFF, and Excel formats." (Vueworks, 2009)

The following sheet is provided as a quick reference guide and is intended to help orient the user with Vueworks reporting capabilities.



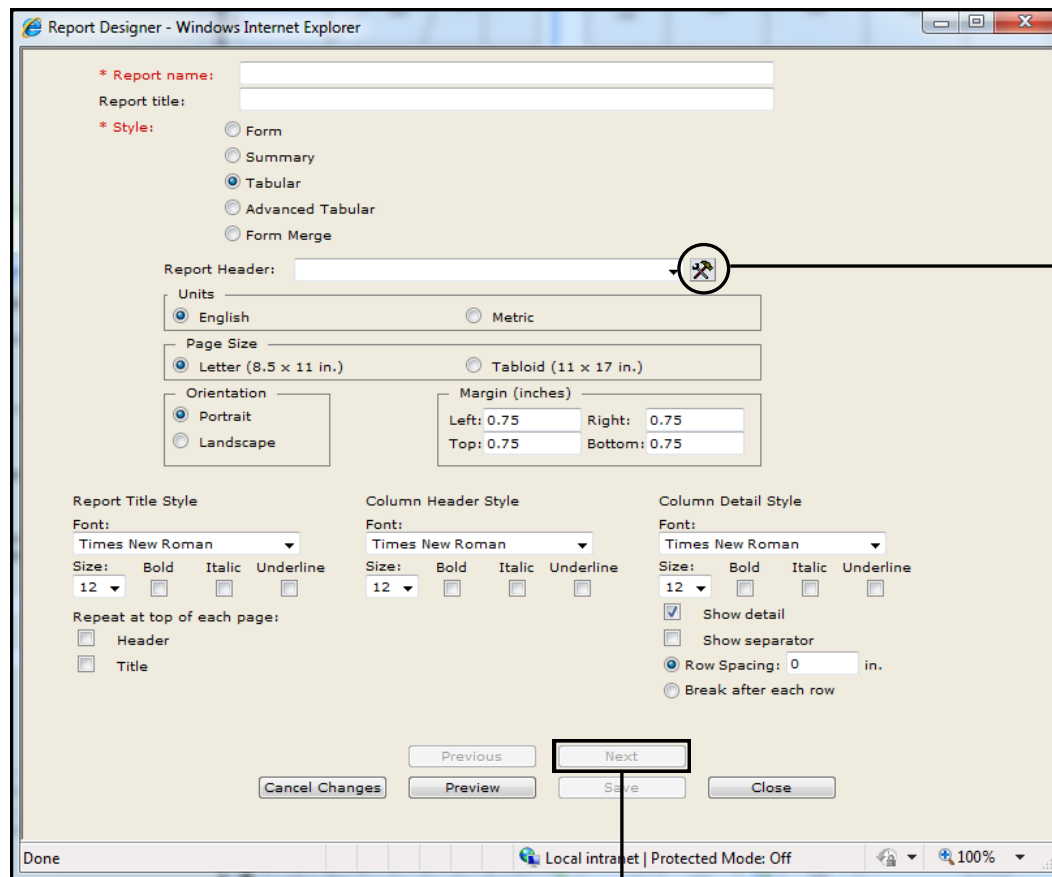
When selecting the Reports table of the Module Manager (Work Order Manager shown below), the resulting window is split into two frames. The first frame shows a list of the department and groups that have been set up in Vueworks. The second frame shows the reports that are available.

1. Department / Group

Since not all users are likely to use Vueworks for exactly the same purposes, they can be readily divided into Departments and Groups to help organize the system. Custom reports can be developed and made available to the members of a particular Department or Group as necessary. Each user can easily find report templates that have been developed for them by clicking on their Department or Group in left frame. This will update the list of available reports displayed in the frame on the right.

2. Existing Report Templates

The window titled 'Existing Report Templates' displays a list of the available report templates that are ready to be run. Vueworks comes pre-loaded with some canned reports for displaying module information, which may or may not serve the purposes of the user. If a user prefers to create custom reports, they can click the 'New' button and go through the process of creating a report (see page 2). Once the report has been saved, it will appear in the list as an available report template the next time the user needs to run the report.



Clicking the 'New' button on the Report Manager form will bring the user to the Report Designer (shown here to the left).

Report Designer (Page 1)

The 'Report Designer' presents the user with the custom settings to build the framework of the report. The user must give the report a name and select a style (both highlighted in red) at a minimum before the custom report can be saved. Ideally the name will be descriptive to make it easy to identify in the list of available reports. The style of the custom report is based on the requirements of the report. Most often the user will select 'Form' or 'Tabular' to define the report style. These will produce reports that mimic the look of the input form ('Form') or a standard report based on rows and columns of data ('Tabular'). If desired, the user can select or create a custom header for the report. The next items to be configured in this window are the page units, size, orientation and margins. Finally the user can select particular fonts and styles for the report header, column header, and column detail displayed in the report.

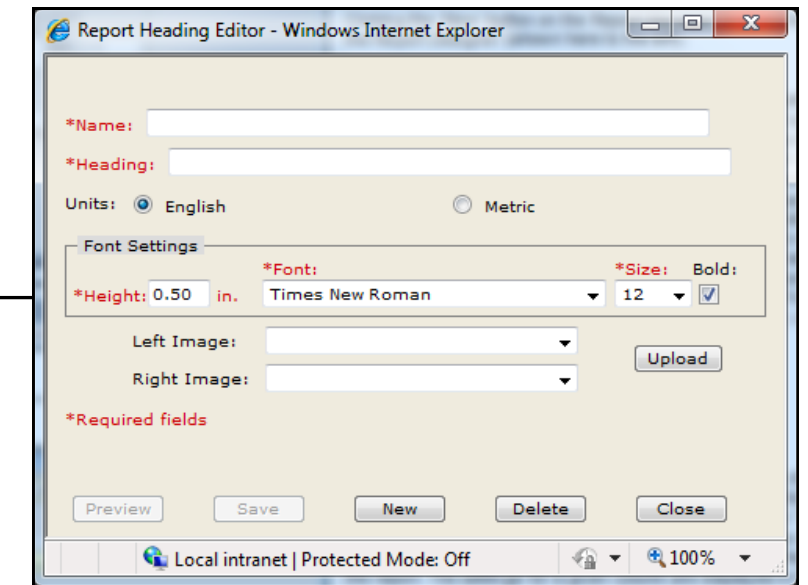
Report Designer (Page 2)

Clicking 'Next' in the 'Report Designer' window will display the second page of the 'Report Designer' window (seen to the left) which allows the user to select the information to be presented in the report. The four buttons at the top of the page allow the user to add or remove columns and to move columns left or right potentially changing the order they appear in the report. The settings for a given column are displayed in the controls that are available on the form when the column is selected by the user. The selected column will be highlighted in yellow.

Below the list of columns to be displayed are settings to control the width and alignment of the column and also the source of the information being presented in the report. The source of the information in the report depends on the type of information being presented. The drop-down menus will display the available options for the user to create the custom report.

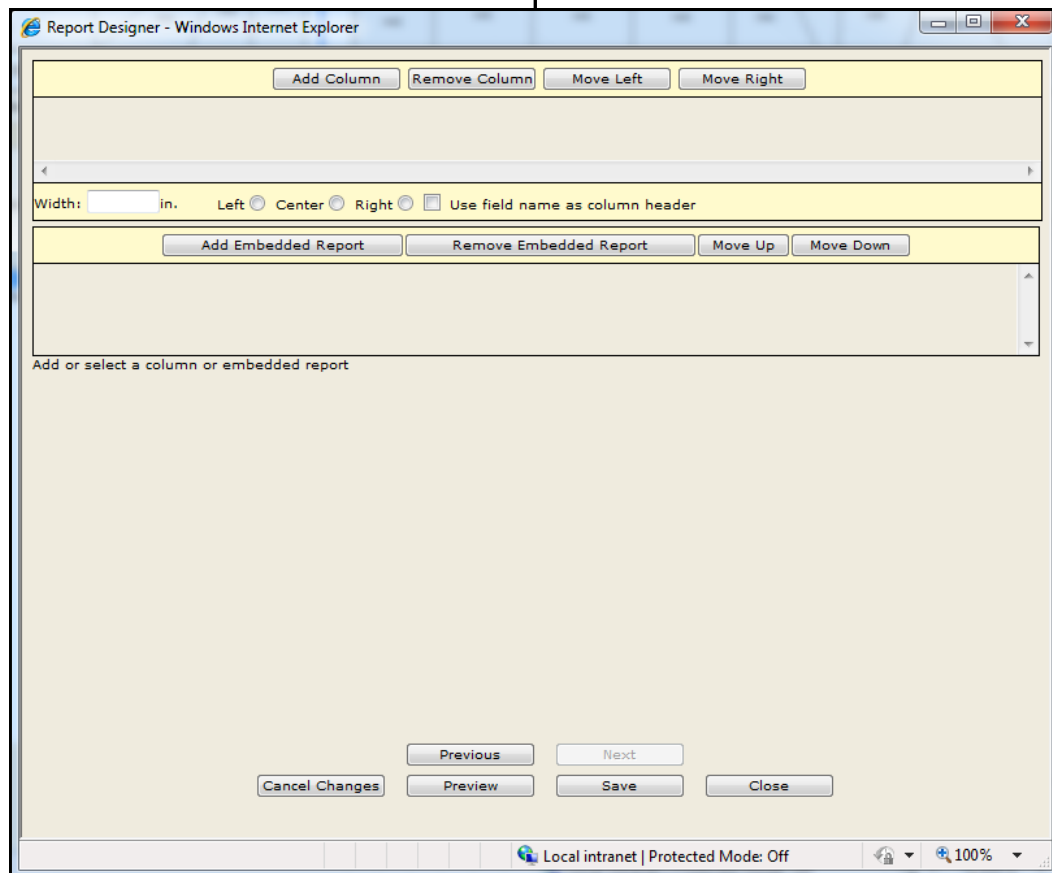
The 'Field Summary' button allows the user to add summary information (total, average, etc.) about the selected column to the report. As stated in the Report Designer window, "Summary options are not available for the first column".

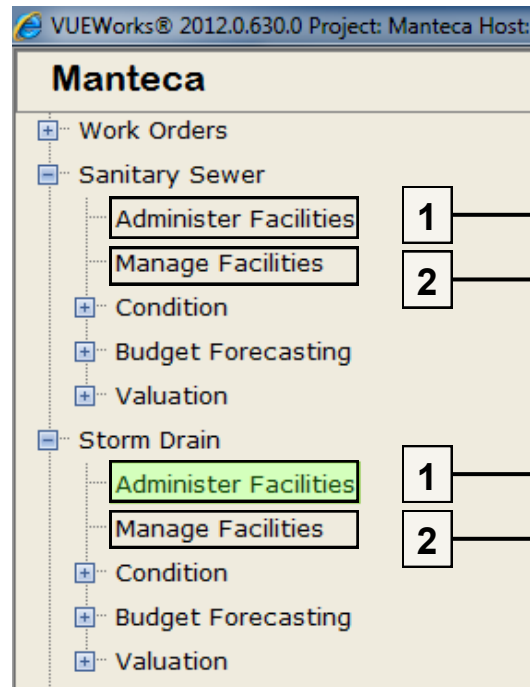
While developing a report, inevitably there will be some tweaking involved to get the report to display correctly. To help during the development process, VUEWORKS provides a 'Preview' button to show the report directly from the 'Report Designer' window.



Report Heading Editor

If the user would like to create a custom header for the report, they can click on the button beside the Report Header dropdown list and create the custom header. Clicking the button opens the 'Report Heading Editor' window. Required items are highlighted in red, as they are throughout VUEWORKS, and the custom header cannot be saved until all of the required fields have been entered. The user must give the custom header a name and a heading and select the font height and style of the header. A custom logo or image can be used in the header by uploading the file using the upload button and selecting its placement in the header using the 'Left Image'/'Right Image' dropdown menus. When the custom header settings are complete, the user just clicks 'Save' and 'Close' to return to the 'Report Designer' window.





1. Administer Facilities

This tool is used to create Facility Templates using Containers and Asset Types. It is also used to set up attributes, tabs and alternate views.

2. Manage Facilities

This tool that is used for day to day operations, track information and maintenance related to equipment within the facilities.

"The Facilities Module provides the ability to inventory and manage assets using a flexible hierarchical structure. The most common uses are for the inside of pump stations, plants, buildings, fleet and other infrastructure where GIS is not traditionally used."

This Module has been configured for Wastewater and Stormwater System Facilities. It provides an "Administer Facilities" tool for setting up Facility templates and a "Manage Facilities" tool that is used for day to day operations.

The Facilities Types included in the Wastewater System Facilities Module are Lift Stations & Treatment Plant.

The Facilities Types included in the Stormwater System Facilities Module are Pre-treatment Vault, Pump Stations & Retention Basins.

The following sheet is provided as a quick reference guide to help orient the user with the Facilities module.

Key Definitions — The following definitions provide key information for understanding how the Facilities module works.

Facility Templates

Define a hierarchy using Containers and Asset Types while the template itself defines a Facility Type. Attributes, icons, and data tabs are also defined here. Once the template is built you can create as many Facility instances as required from the same template. So if there are 50 pump stations, all you have to do is build one template and then create 50 instances.

Facility Type

A Facility Type is automatically created at the top level of each Facility Template in the Facilities Administrator. Every Facility Instance is associated with a Facility Type.

Facility Instance

A Facility Instance is created from a Facility Template and therefore each Instance is of a specific Facility Type. Facility Instances are what users interact with in the Facility Manager.

Containers

Containers are defined in the Facility Administrator for organizational purposes within the facility hierarchy. In their simplest form they are similar to folders for grouping similar or related data - in this case Asset Types and other Containers. Containers also provide a point in the hierarchy to roll-up or summarize asset information below it. For instance, if condition assessments are made with the Condition module, you can use a Container to view the weighted average Condition of all the assets under it. Although Containers can have attributes, they are not Asset Types. Placing Asset Types within a Container while building a template tells VUEworks which Asset Types are allowed within the Container. Containers may be placed inside other Containers and inside of Asset Types.

Asset Types

Asset Types have the same meaning whether they originate in the GIS or in Facilities being that they are always one level below the Asset Class as a group of very similar assets. In VUEworks settings for Condition, Risk, Project Jobs, and Budget Forecasting are all set at the Asset Type level. Asset Types can be placed within a Container or within another Asset Type.

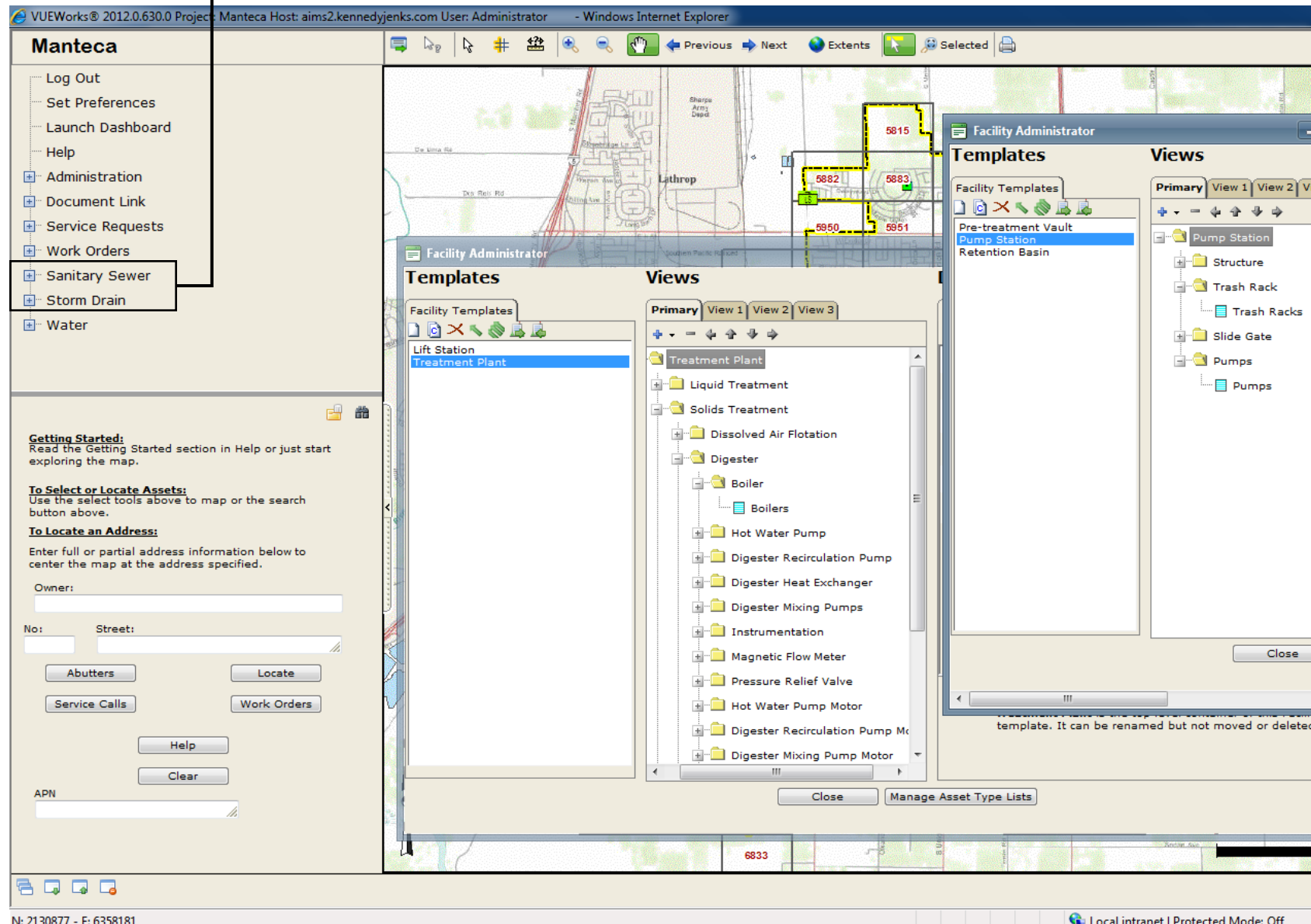
Asset Instance

An Asset Instance represents an actual physical instance of an Asset Type. In other words an Asset Instance is an Asset. Work Orders, documents, condition and more can be attached to an Asset Instance. Asset Instances are created in the Facility Manager by right-clicking on a Container and selecting the Asset Type from the list. The Container determines which Asset Types are available from the template as set up in the Facility Administrator. You can add as many Asset Instances of the same Asset Type as necessary within a Container.

For example, it is common to have multiple pumps of the same type within a pump station. To capture them all first define an Asset Type under a Container in the Facility Administrator. Then, in Facility Manager right-click on the Container where the Asset Type was defined and select 'Add a Pump' where Pump was defined as an Asset Type within the selected Container previously in Facility Administrator.

Linked and Local

Local (the default) means that the Asset Type exists ONLY at the location where it is defined within the Facility Type - Container hierarchy. **Linked** means that one or more instances of the same Container or Asset Type exists elsewhere - either in the same Facility Type or another Facility Type. When the Details (attributes etc) is changed on one instance of a linked item the same change is reflected in all items linked to it. If a Container is linked all Containers and Asset Types below it are also linked. See the Facility Administrator to learn how to work with linked Containers and Asset Types.



Wastewater Facilities Hierarchy Structure

1. Lift Stations
2. Treatment Plant

The screenshot shows the VUEWorks interface with the 'Facility Administrator' window. The 'Templates' pane on the left shows a tree view where 'Lift Station' is selected. The 'Details' pane on the right shows the properties for the selected 'Lift Station' template, including Name, Plural Form, GIF files, and Default Weight. The 'Views' pane shows a tree view of the 'Lift Station' template's structure, including Structure, Pump, Standby Generator, Motor Control Center, and Instrumentation. The 'Treatment Plant' template is also visible in the tree view.

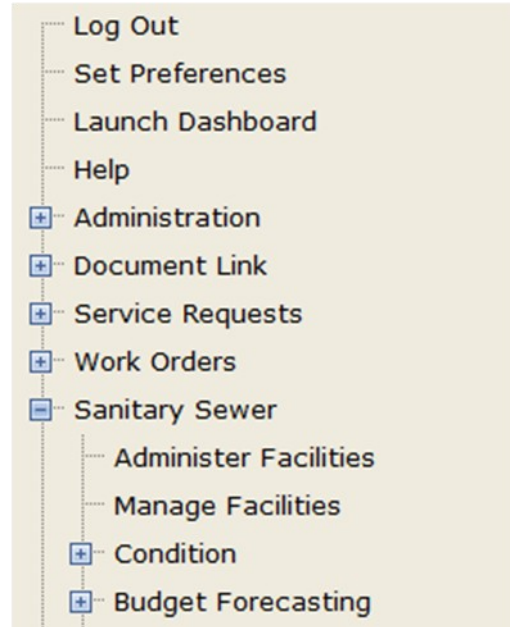
Stormwater Facilities Hierarchy Structure

1. Pre-treatment Vault
2. Pump station
3. Retention Basin

The screenshot shows the VUEWorks interface with the 'Facility Administrator' window. The 'Templates' pane on the left shows a tree view where 'Pre-treatment Vault' is selected. The 'Details' pane on the right shows the properties for the selected 'Pre-treatment Vault' template. The 'Views' pane shows a tree view of the 'Pre-treatment Vault' template's structure, including Structure, Trash Rack, Slide Gate, and Pumps. The 'Pump Station' and 'Retention Basin' templates are also visible in the tree view.

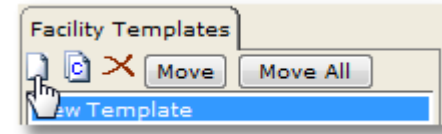
How to access the Facility Administrator

The Facility Administrator is accessed by selecting the 'Administer Facilities' menu item under the Asset Class where you intend to place the Facility Type.



Templates section

All Facility Templates that you have permission to access under the selected Asset Class are listed here. The hierarchy with all Containers and Asset Types will be displayed in the Views section when you select a Facility Type.



The following describes the purpose of each button in the Facility Templates section

Add New Facility Template Press this button to add a new Facility Template. VUEworks will prompt you to define a name in both singular and plural forms. The new Template will then appear in the list of available Facility Templates.

Copy Facility Template Press this button to Copy the selected Facility Template to a new Facility Template. Facility Templates can only be copied within the same Asset Class, however you can Move Facility Templates between Asset Classes.

Delete Facility Template Press this button to delete the selected Facility Template. A confirmation dialog will display to confirm this is the action you wish to take. Only Facility Templates that are not in use can be deleted. If Facility Instances have been created from the selected template a message will inform you that the template is in use and can not be deleted.

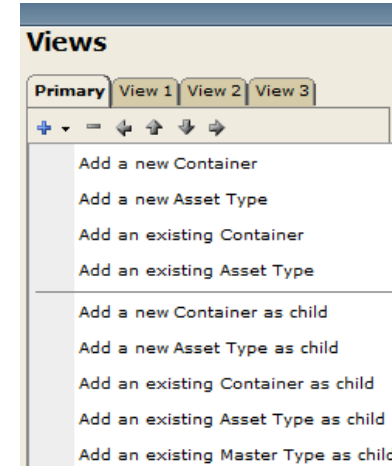
Move button Press this button to move the selected Facility Template to another Asset Class that you have Administer rights to. Any Facility Instances created from the selected Facility Template will also be moved to the selected Asset Class.

Move All button Works the same as the Move button but works for all Facility Templates in the list.

Views section

The Views section is where Facility Templates are built using Containers and Asset Types. Select a Facility Template in the Template section and then build or modify it within the Views section. Use the button bar or the right-click menu to add or remove Asset Types and Containers. You will find that many operations work with the Details section.

Important: Facilities must be first set up in the primary view before the alternate views. For buildings and plants is highly recommend that the primary view be set up in terms of systems (HVAC, electrical, plumbing, etc) while the alternate views be used for location (rooms and floors). Asset Types must be defined in the primary view before they can be placed in an alternate view.



Add button - Right-click menu

Either select the Add button or right-click on an item within the View section to reveal the Add menu.

Add New Container - Add New Asset Type

Adds a New Container or Asset Type at the same level of the hierarchy as the currently selected item unless the currently selected item is the Facility Type at the top level of the hierarchy - then it adds the item one level below the top level. The Container or Asset Type added will be Local. The Details Section will be updated to reflect the settings for the new item. It is designed so that you can simply type in the name of the item without the need to select the Name field in the Details section.

Add Container from List - Add Asset Type from List

This action opens the Container or Asset Type Selector so that you can add a new Container or Asset Type that has already been defined at the current level in the hierarchy.

Use the Template Filter at the top of the Selector to filter the list. Select a row, decide if you want the item to be Linked or a Local Copy, and then press OK. All Attributes and other settings will come with the item whether it is Linked or Local. Press Cancel to exit the Selector without adding a new Item.

Add Child menu items

The Add Child menu items are the same as their counter parts except they add the item one level below in the hierarchy

Remove Item

Select this to remove the currently selected item (Container or Asset Type) from the hierarchy. You will be prompted to confirm. This command also deletes all instances of the item along attribute and historical data. Use with caution.

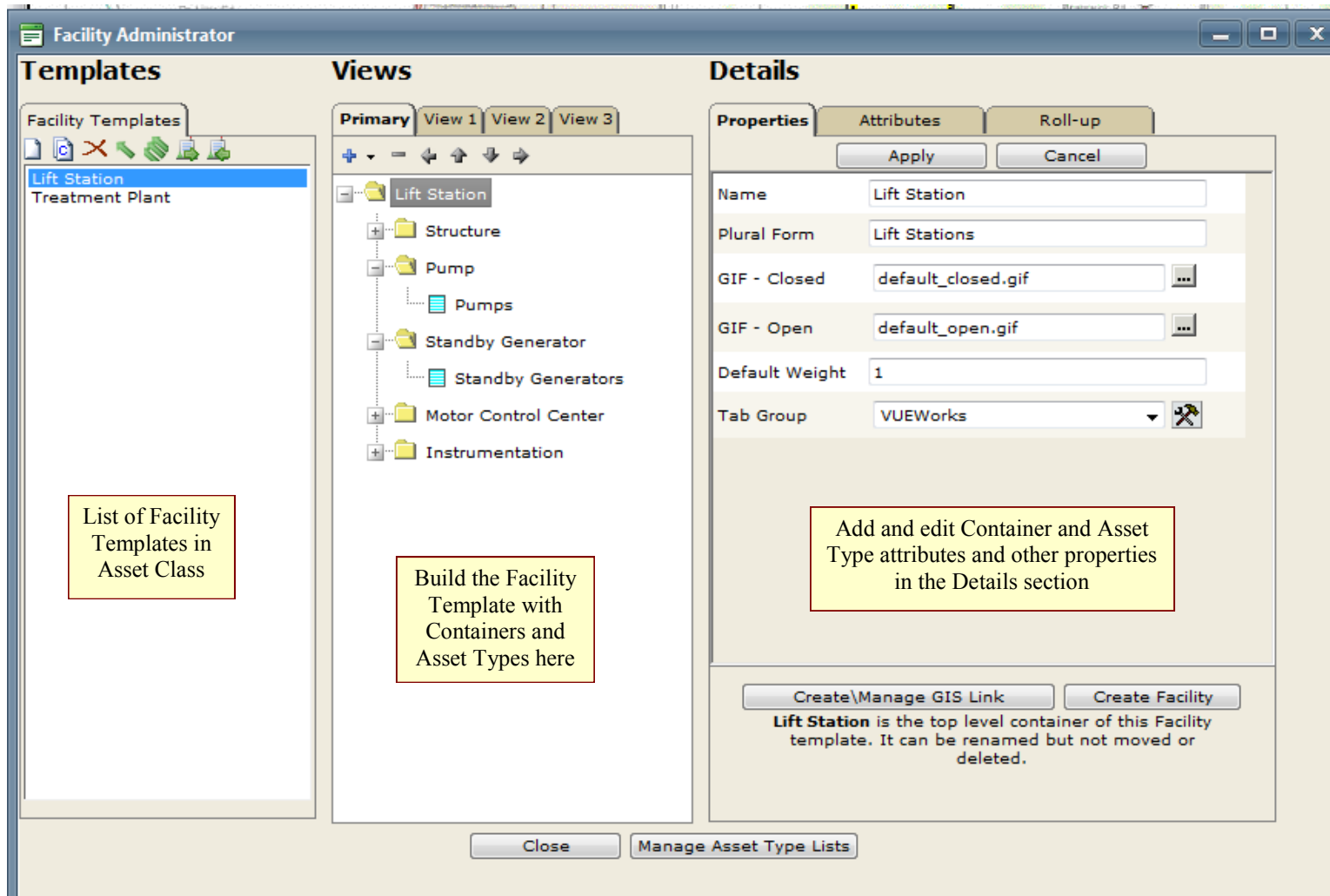
Alternate Views 1 2 and 3

Alternate Views allow you to rearrange the Asset Types defined in the Primary View within different Containers. For instance, if the Primary View is arranged by process, an alternate view can be used to rearrange by location, such as a floor number or building section identifier.

Details Section

After or during the process of setting up the facility hierarchy you will most likely need to provide for additional information about the Container or Asset Type. This is done in the Details section. Here you can provide:

- A Name
- an Icon graphic (GIF)
- A default Condition Weight
- A Tab Group
- Attributes



Parts of the Facility Administrator

The Facility Administrator provides three main sections that you use together to build Facility Templates.