

Rain Bird Central Control v8 Map Operators Manual

Contents

Introduction	2
Requirements.....	3
Map Irrigation Views.....	3
Map Layers.....	4
Background Layers	4
Where to Get Background Files	4
Shapefile Layer Styles	5
Scorecards as Background Images.....	5
Importing Background Layer files into Rain Bird Map:.....	6
Irrigation Control Layers	9
Point Layers.....	10
Link Layers.....	10
Map Settings	11
Irrigation Control Symbols	11
Program Run / Edit Mode	13
Run Mode.....	14
Active Program Status.....	15
Edit Mode.....	16
Temporary Adjustments	19
Adjustment Status on Tree-Views	19
Implementing Temporary Program / Schedule Adjustments:	20
Implementing Temporary Station Adjustments:	20
Adjustment Status Visual Indicators on Map	21
Manual Operation of Stations from the Map.....	22
Map Measurement Tools.....	24
Tips on Map Operation	27
Tips on Drawing Irrigation Symbols	29

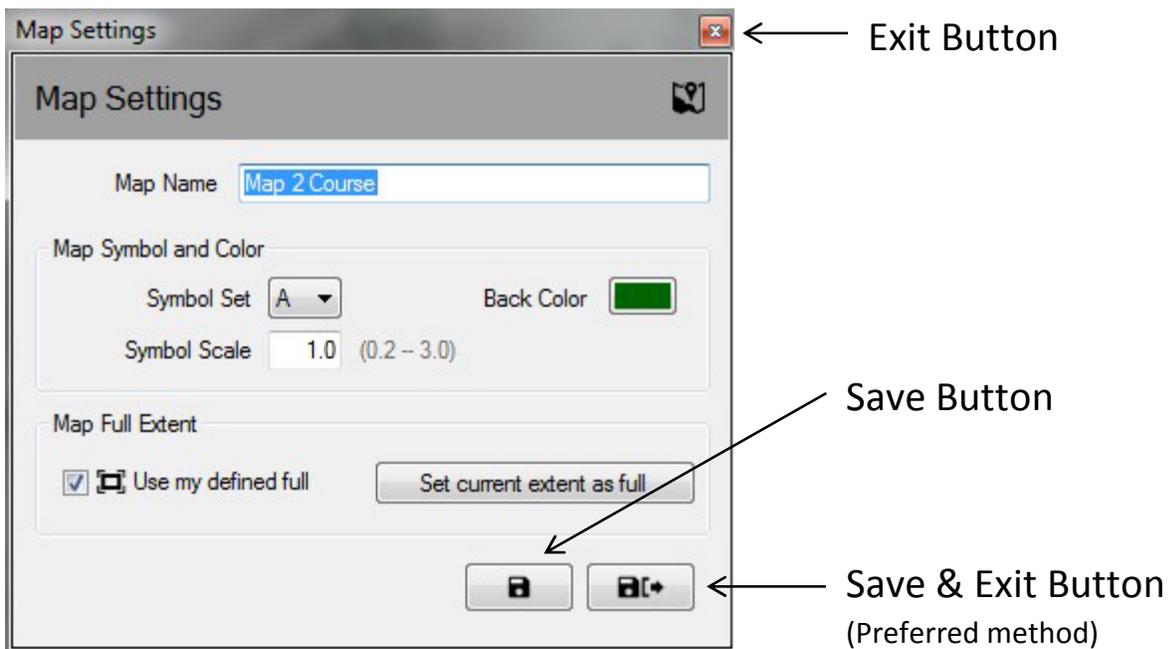
Introduction

Rain Bird Map consists of two applications: Monitor and Designer.

- Rain Bird Map Monitor is primarily used to monitor and control irrigation through your site map.
- Rain Bird Map Designer is primarily used to create and modify locations of irrigation entities in control layers, not for drawing geographic data of background layers.

This manual provides brief descriptions of Rain Bird Map features and how to prepare irrigation maps and some tips of operating Rain Bird Map applications.

The sub-menu's in the Map Monitor function all have common action buttons as defined below.



- **Exit Button** – Closes the sub-menu without saving any recent changes made.
- **Save Button** – Saves the most recent changes made to the menu and refreshes the on-screen map view.
- **Save and Exit** – Saves the most recent changes, exits the sub-menu and refreshes the map. Rain Bird recommends using this selection to assure your changes have been properly saved for future use.

Requirements

Prior to importing a map or creating a new map you must first set up the golf course database in the Rain Bird central-control Front-Office. You will need to create:

- Irrigation stations with defined area-letters and make sure the station addresses are assigned with boxes and/or field controllers.
- Irrigation programs and schedules with map references
 - NOTE – If using a map you must define which map number the program is associated with or the program will not be visible from the Map views
- Flow branches and Flo-zones using Flo-Manager™ (these are only required) if you want to work with flow layers in the map.

Background layer files are required to run Rain Bird Map. These files should be created or imported after the Front-Office setup of the course is complete.

- If background layer files of your irrigation site exist in a previous version of the Rain Bird map application, Rain Bird Map will ask you if you would like to import them for use with the new application.
- If you do not have background layer files, you will want to get background layer files of your irrigation site from a mapping agency. You can also create image files of your site as background layer by yourself. If need help, please ask for your Rain Bird distributor or the Rain Bird GSP service.
- Shape-files (SHP) and/or satellite / aerial-view image files with formats (PNG, JPG, BMP, TIF) can also be used in the Rain Bird Map application as background layers. A world file is optional for each image background file (this associates the image to X,Y coordinates and provides a scale for measurement tools in the map application).

Map Irrigation Views

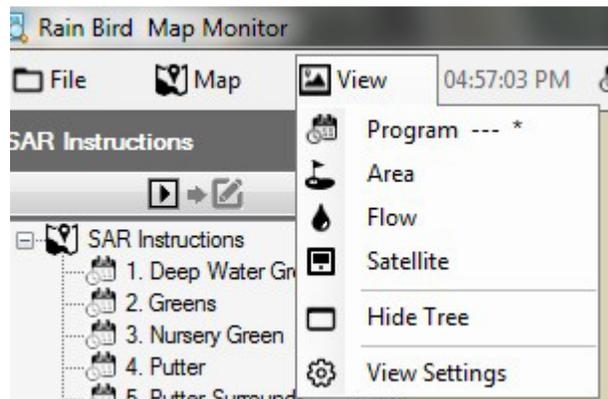
Rain Bird Map introduces four (4) dynamic Irrigation viewing methods for the map:

- Program View – Displays the native site map as well as the program tree
- Area View – Displays Hole and Area makers as well as the area view tree
- Flow View – Displays Pump, Branch, and Flow Zone markers and the flow tree
- Satellite View – Displays Satellite markers and the satellite view tree

Stations and rotors will be hidden from view when the map is zoomed out, for each of these views allowing for improved clarity of the map. Zooming-in to the station or rotor zoom levels will automatically populate the stations and rotors onto the screen as long as those layers are enabled in the Irrigation Control Layer settings, or in the Background Layer Settings menus.

From these tree-views the users can manage irrigation, run individual stations or groups of stations, run or create programs and edit the properties related to any part of the Rain Bird irrigation system. The tree-view window can also be hidden from view by selecting the 'Hide Tree' button from the 'view as' selection or shown by selecting 'Show tree' from the 'view as' selection.

NOTE: Users have the option to select which Background Layers are included or excluded from a particular tree-view through the 'view as' selections in the Background Layer Settings prompt window.



Map Layers

The Rain Bird Map application comprises two layer types, Background Layers and Irrigation Control Layers. Background Layers provide the backdrop of the irrigation map. Irrigation Control Layers (or simply Control Layers) allow you to select the irrigation entities you want to see on the map such as areas, stations or satellites. Control layers also allow you to show how the irrigation entities are linked together; for example, which stations are assigned to greens, fairways, etc.

Background Layers

Shape-files (SHP) as well as four other common image formats (PNG, JPG, BMP, TIF) can be used in Rain Bird Map as background layers. Before activating Rain Bird Map, you need to obtain background layer files of your irrigation site, either from mapping agencies or by developing them on your own. You may consider asking your Rain Bird distributor or Rain Bird GSP for assistance.

- PNG, JPG, BMP and TIF image files have the corresponding world file extensions PGW, JGW, BPW, and TFW. If a valid world file has the same file name as the background image file in is located in the same file folder; the X and Y coordinates in the world file will be used as the coordinates for the Map application. If no world file coordinates are available, the background layer X and Y coordinates will not be world coordinates and the scale reference for measurement tools in the Map application may be erroneous.

Where to Get Background Files

- If you have a map that was being used in a previous version of Rain Bird's mapping software (Version 7 or older) on the computer, Version 8's mapping software will ask you if you would like to import this map into the new software for continued use. You may import your version 7 map files and utilize those files for your background.

- Image files showing a satellite / aerial view image of the facility may also be used as a background layer. Image files may be acquired from a mapping agency and will be accompanied by a world file. The world file will contain GPS information for the image file, allowing the map layer to be geo-referenced. Using the world file, your map will have X, Y coordinates. The world file's extension may be PGW, JGW, BPW, or TFW these correspond to the file formats of PNG, JPG, BMP, or TIF. The world file associated to the layer should be located in the same file folder as your image file.
- You may also create image files of your site for use as the background layer. For example, you can draw your site map using an application such as Windows Paint and save this in one of the previous file types.

Shapefile Layer Styles

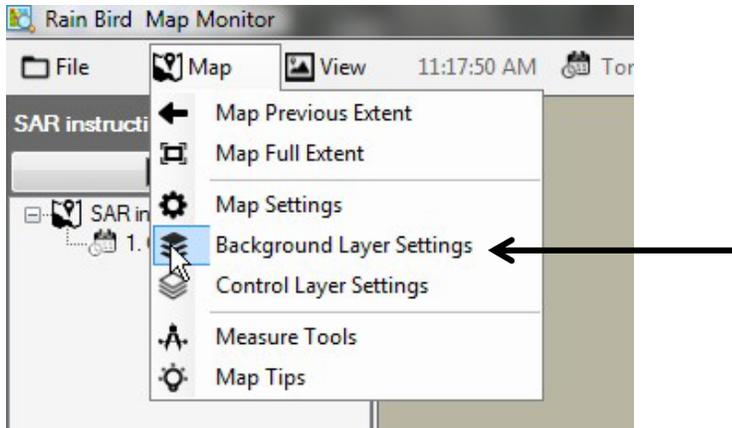
- Shapefiles (.SHP) are most commonly used as background layers. These can be composed of multiple layers outlining or filling different areas of the site (e.g. greens, bunkers, fairways, water features, wire paths, surge devices etc.). These layers may also be made transparent or visible to meet the customer needs. Once these are imported into the Rain Bird Map software you need to select the active layers you want to use and work with, as well as at what level.

Scorecards as Background Images

- Scorecard shapefiles were used in previous Rain Bird Mapping software versions as an alternative for background layers. These are used with sites that had no background map files such as shapefiles or satellite/aerial view images. If you use these scorecard background layers and want to continue using them, the Rain Bird Mapping software used in Version 8 can import and operate these scorecard maps, in the same way we can import and any previous map.
- If you choose to use a scorecard map as the background layer over a satellite or areal image, you can find a set of default scorecard images in the following folder on your PC: "C:\RainBird\Map\Scorecards". For an 18-hole golf course, you can use either Scorecard_18Holes_6x3.jpg or Scorecard_18Holes_9x2.jpg.
- You can also make your own scorecard image. For example, open a default scorecard image using the Windows Paint application. Here you can copy, paste, cut, or rotate any part of an image to meet the needs of the site. Save the image as a JPG file with a new file name. In the "C:\RainBird\Map\Scorecards\DrawParts" folder, you will find several images to use to build a custom scorecard. Please note, each individual golf hole image is only a part of the whole scorecard image, to complete the course scorecard map you need all holes represented. Note: Hole images cannot be directly added to your background layer list to make a background layer.

Importing Background Layer files into Rain Bird Map:

Any image files (SHP, PNG, JPG, BMP, TIF) used for the background layers will be saved in the RainBird\Map\site.xxx\Map1 directory on your computer by the mapping application after import. Image files stored on external media or in another directory on your computer can be imported and will be saved in the Map files location by adding them through the Background Layer Settings Utility. By clicking on the Map menu bar item, you will then select **Background Layer Settings** to bring up the Background Layer Settings prompt screen.

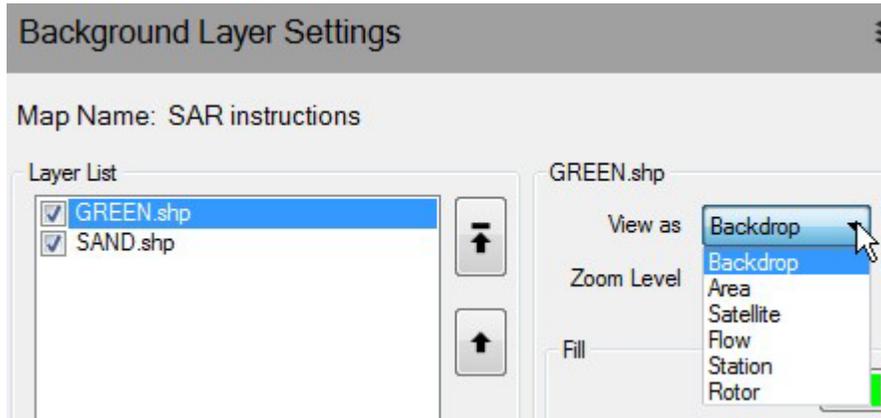


Using the Rain Bird Map Background Layer Settings prompt screen you can add or remove background layer files to compose the background map for your irrigation site. For example, click on the Plus (+) symbol to browse and select an image file to add from any available file location.

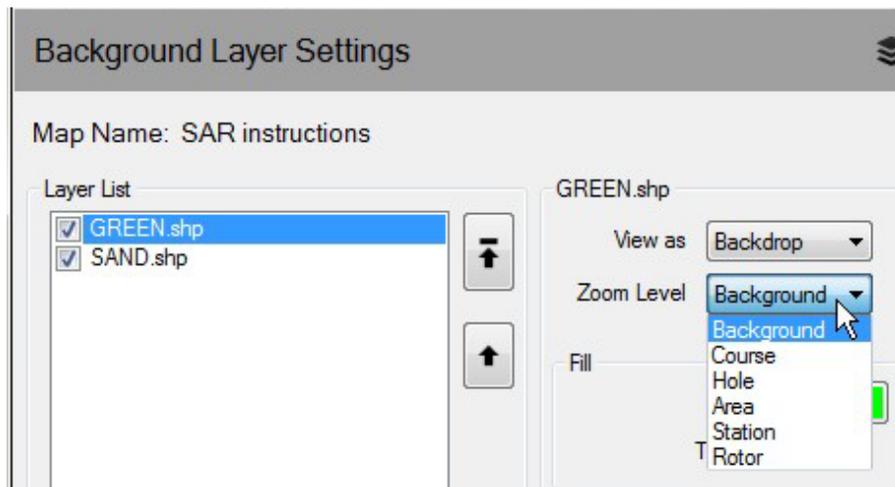


Added layers will show in the Layer List. Selected Layers with a check (✓) mark will be displayed on your map and those without a check mark will not be displayed.

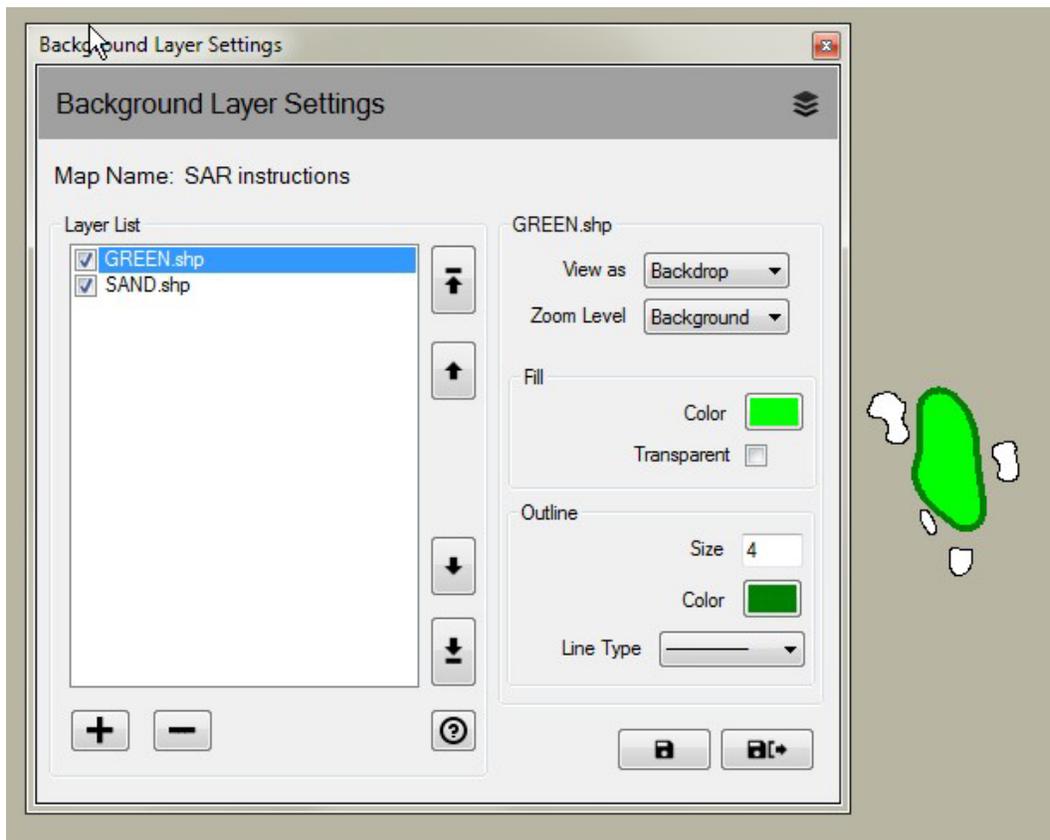
- If you want a shapefile background layer as a part of an Irrigation-View, select a view-name in the 'View As' selection drop down menu. Selecting Backdrop with show that background layer in all Irrigation-views. Selecting any other choice (Area, Satellite, Flow, Station or Rotor) will make that layer visible only when the chosen view is selected.



- If you desire a shapefile background layer to be visible at closer zoom-levels based on the full extent, you can define the desired zoom level for that layer using the 'Zoom Level' selection in the dropdown picklist. For example, if you have a flow-branch shapefile, and you select Station level for it to be viewed; the layer will only populate on the map when zoomed into the Station or Rotor zoom levels. When viewing the Course, Hole or Area zoom levels the flow-branch shapefile will be hidden.



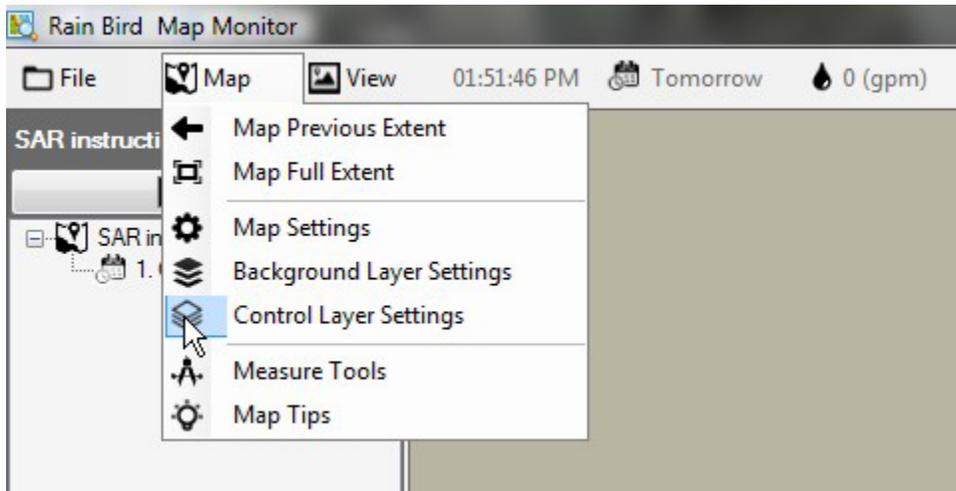
- If shape-files are used as background layers, you can compose beautiful background layers by selecting fill and outline colors, outline types for shapes. You can also make a background layer transparent.



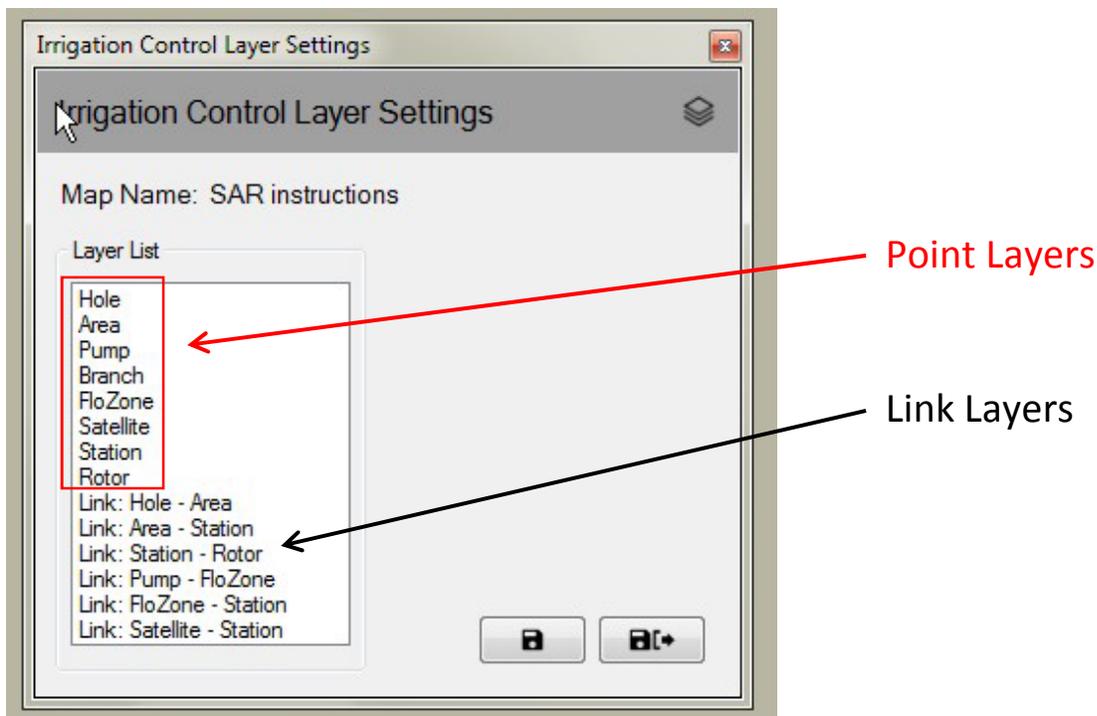
Irrigation Control Layers

Irrigation Control Layers were called System Layers in earlier version of Rain Bird map. By clicking on the Map menu bar item, you will then select **Control Layer Settings** to bring up the Control Layer Settings prompt screen. The Irrigation Control layers consist of two layer groups, point layers and link layers.

In Irrigation Control Layer Settings the prompt screen allows you to customize your control layers by setting layer transparency, size, color, and line type for symbols, texts, and lines. In addition you can change the scale for each type of irrigation control entity point layer marker on the map.

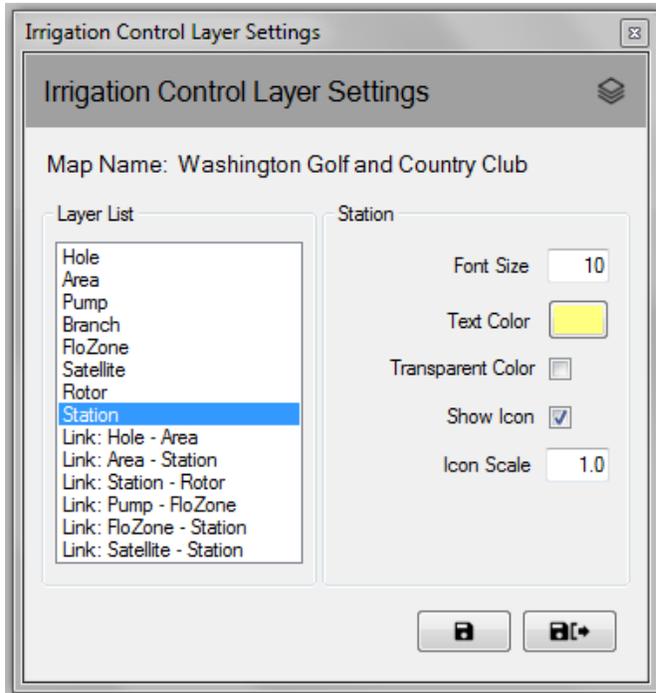


The Irrigation Control layers consist of two layer groups, point layers and link layers.



Point Layers

A point Irrigation Control layer allows you to control the appearance of the entities on the map, for example, stations or satellites. If the entity is selected to be shown on the map you can use the mouse to interact with the Irrigation Control symbols to monitor, edit and control your irrigation on your site from the map.



Link Layers

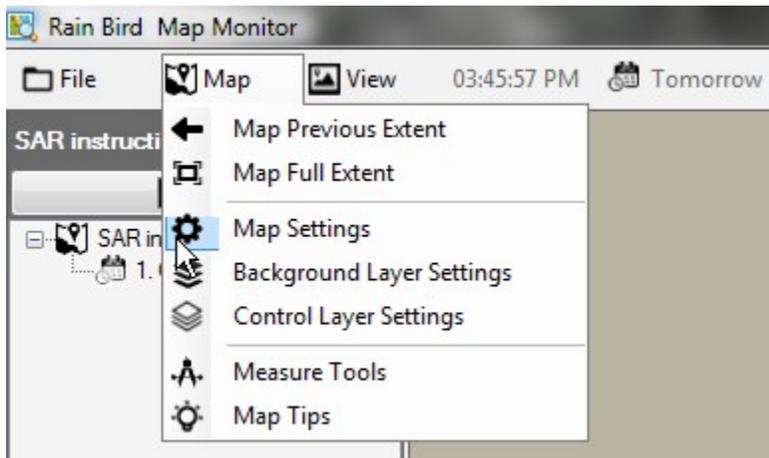
A link represents the relationship between two irrigation entities on the map. For example, you can use a line to link a station symbol to the area symbol for which the station belongs to.



The Irrigation Control layers are not always shown. Layers will automatically appear when you zoom-in on the map at increasing zoom levels. Likewise, layers will progressively disappear when you zoom-out on the map. This function will show only a few symbol details on the map when zoomed out, and will allow you greater detail when zoomed in on an area of interest on the map.

Map Settings

Map Settings allow you to select and manage the irrigation control symbols you would like to view on the map. The map settings also allow you to define the following items: your background map color, Default or User Defined Extent (default zoom level for the map) and the global Icon Size (icon scale for all map entities). The map settings prompt screen can be reached by clicking on the Map menu bar item, you will then select **Map Settings** to bring up the Map Settings prompt screen.



Irrigation Control Symbols

Icon symbols are used to represent irrigation control entities on the map. Here are some common symbols for irrigation control entities.



Symbol for an area that is controlled by an irrigation program
Symbol for a station that is controlled by an irrigation schedule within a program



Symbol for a paused station, slow flashing/twinkling



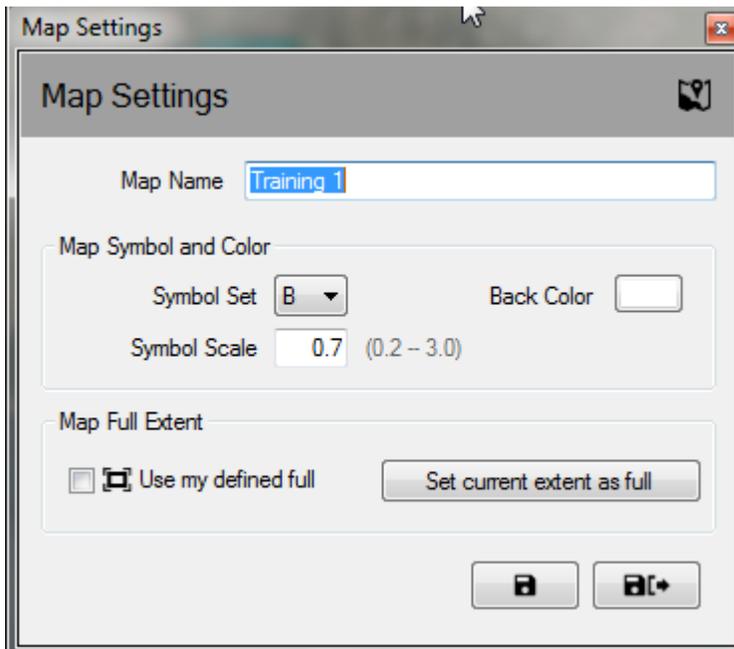
Symbol for a soaking station, slow flashing/twinkling



Symbol for a running station, spinning as station is running this is a GIF file and can also be user defined

There are four default icon styles shipped with Rain Bird Map. Changing between the styles can be done by selecting Icon Style A, B, C or D from the Map Settings prompt screen. Previewing the icon styles on the map may be accomplished by selecting the symbol set and pressing the 'Save' button. Once the preferred set is selected choose 'save and exit' to implement your selection.

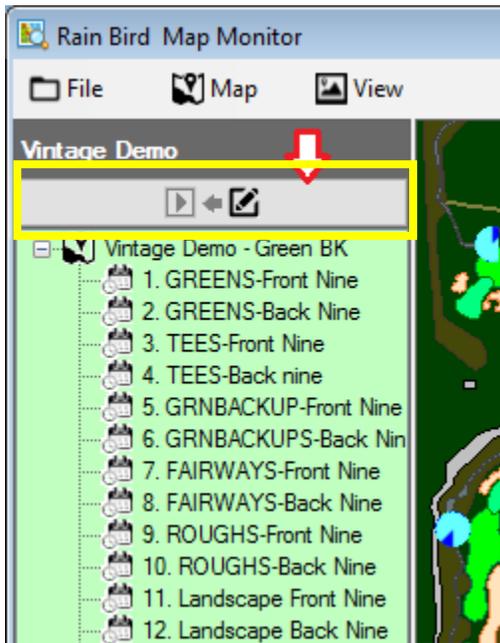
Rain Bird Map also provides the ability to customize the irrigation control entity icons on the map via user defined PNG or GIF files. Please contact your Rain Bird distributors or Rain Bird GSP for details on how to create and utilize custom icons if desired.



Note: Placing or moving the geographic locations of the control symbols on the map can be accomplished through Rain Bird Map Designer. This mode can be entered by clicking the file menu and selecting 'Map Design'.

Program Run / Edit Mode

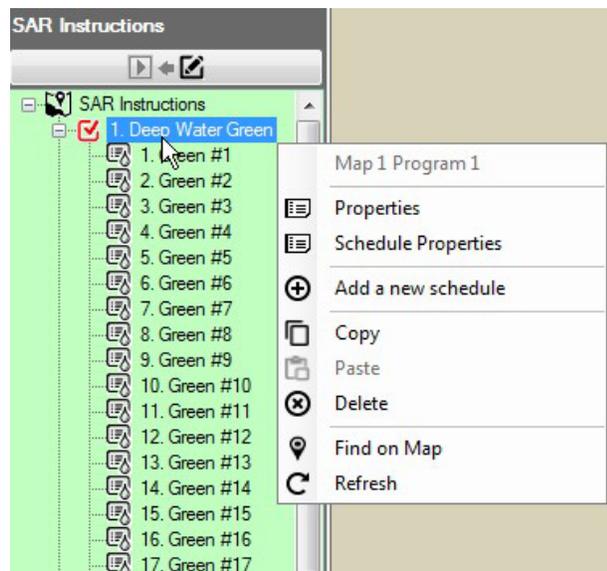
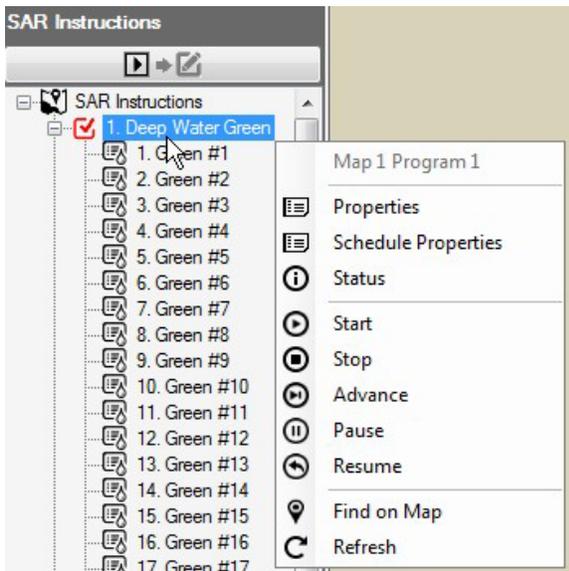
In the Map Monitor application, the Program Tree-View can be operated in either 'Run Mode' for operation and editing of existing programs or in 'Edit mode' to edit or create new programs. In the 'Edit mode' users can create either a standard program or a Quick-Irr program directly from the map window. Users may switch between modes by clicking the mode icons displayed at top of the Program Tree window.



Right mouse clicking a program on the program tree-view will bring up the available actions menu in either Run or Edit modes. Examples of available program actions in the run and edit modes are shown below.

Run Mode Control Menu View

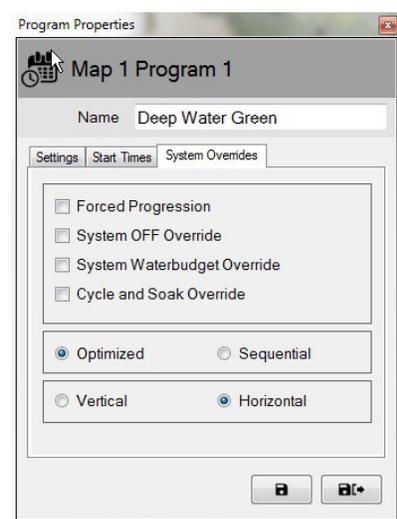
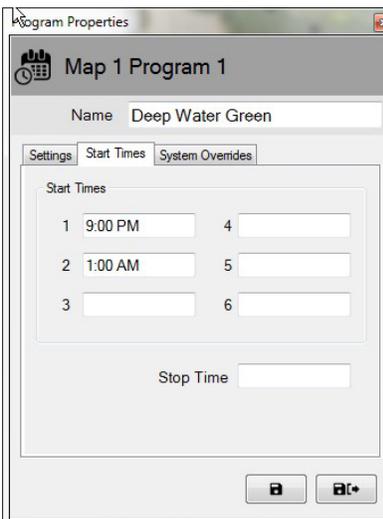
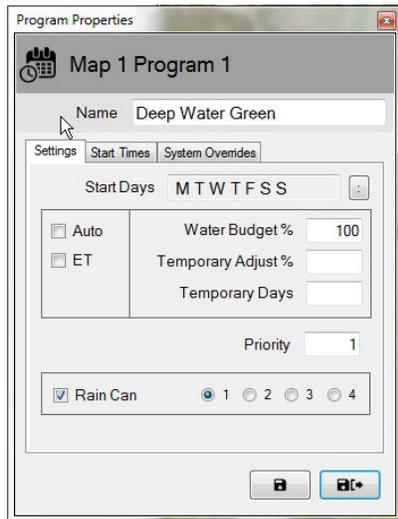
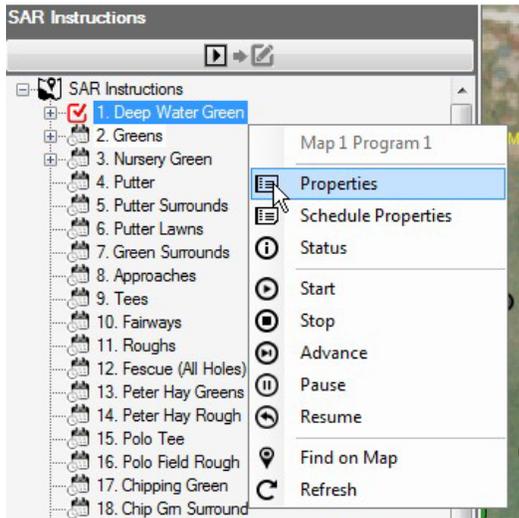
Edit Mode Control Menu View



Run Mode

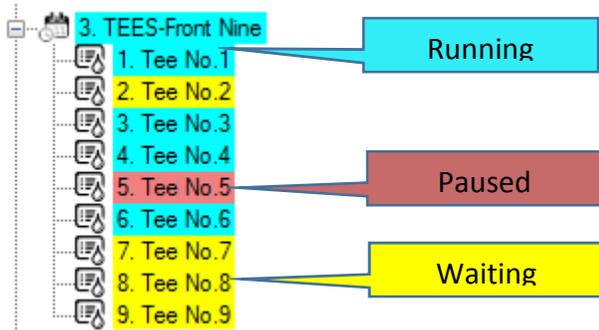
The Program 'Run Mode' tree-view background will be white when the map is in Run mode. Users have the ability to view and make adjustments to program properties, start, stop, pause, or resume programs or schedules.

From the properties sub-menu you can make adjustments to Program Start Times as well as System Override characteristics such as System OFF Override, Sequential, or Cycle and Soak Override. Changes will be immediately saved in the database once either Save or Save & Exit from the Station Properties sub-menu is selected.



Active Program Status

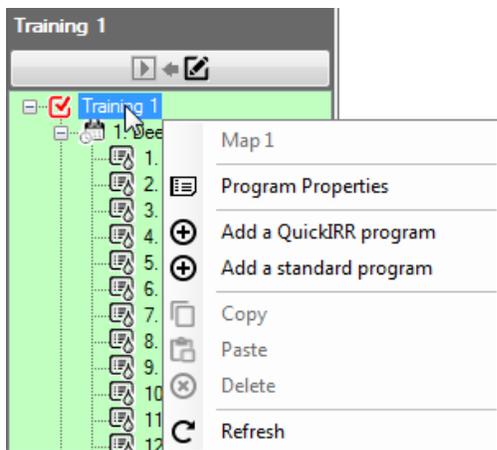
In the Map Monitor application, an active program or schedule may be running, paused, or waiting. The active status is visually indicated by different colors: *Aqua/Light Blue* – *Running or Active*; *Yellow* – *Waiting (for resources to become available in the Flo-Manager)*; *Coral* - *Paused*. Below is an example of what visual indicators you might see on an active program '3. TEES-Front Nine' and its associated schedules are shown below.



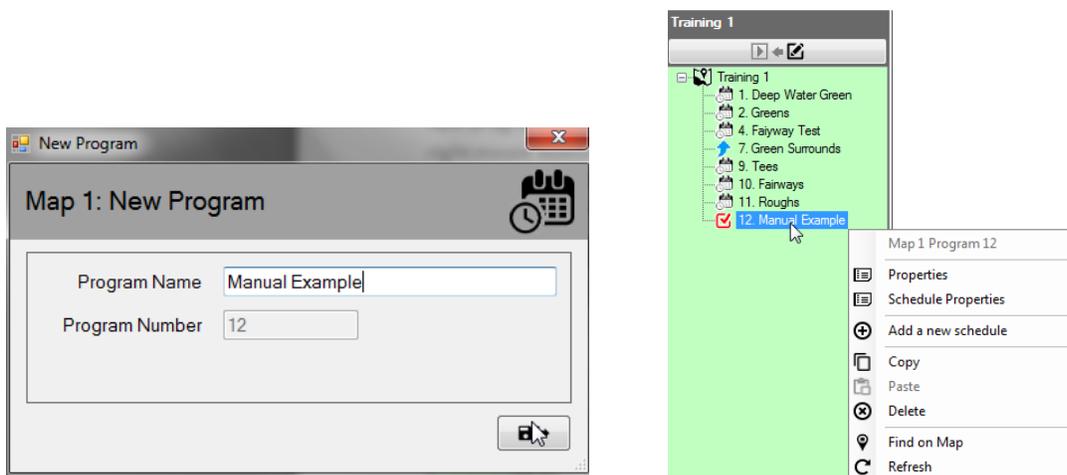
Edit Mode

When the Program Tree-View is in 'Edit mode' the background of the tree-view is presented in a light green color. This is a visual indicator that programs can be edited through this screen. In 'Edit mode' users may create, copy, or **delete** programs or schedules, similar to the operations that are performed through the Front Office Program Detail menu.

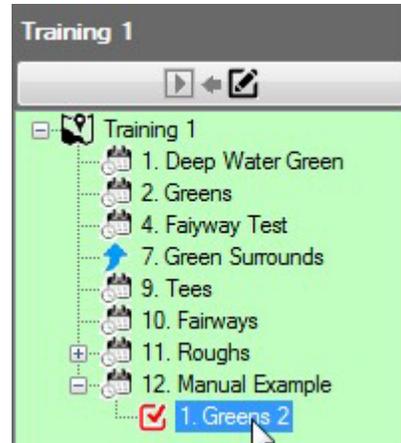
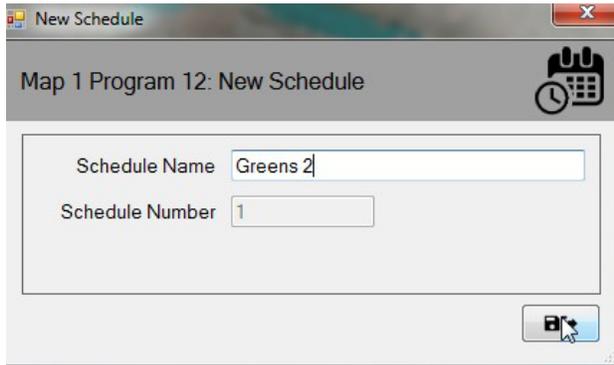
Users have the ability to create a new program and schedule directly from the map when in the Program Tree-View Edit Mode. Before a program is created, please make sure the Front Office screens for Program Detail, Station Detail, QuickIRR and Course Monitor are closed. To create a new program select the name of the course the program will be associated with and press the right mouse button to bring up the action menu. Next, left click on the type of program you wish to create, QuickIRR or a Standard Program. If choosing QuickIRR the QuickIRR menu will appear and allow the user to create the program the same way they would in the front office.



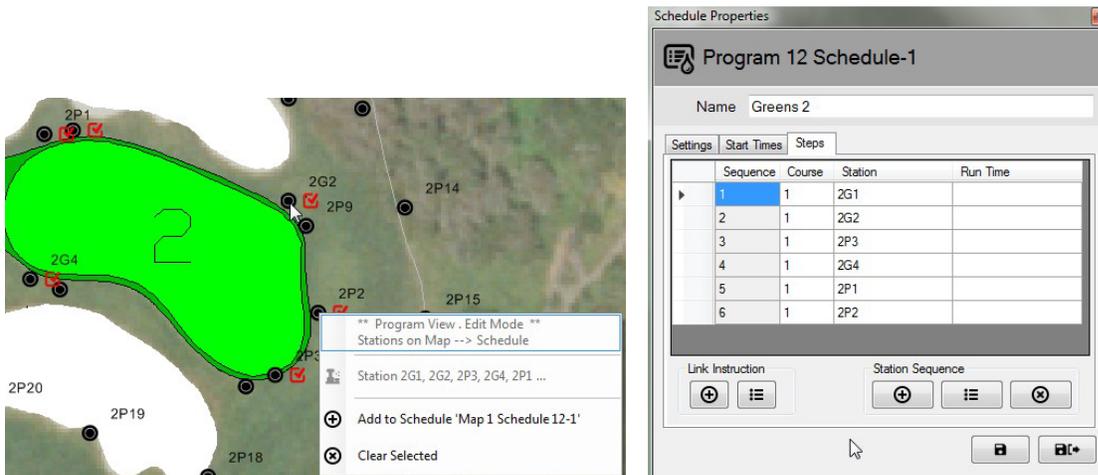
Creating a standard program involves a few easy steps. After Selecting Standard Program the user will be prompted to enter a program name then Save & Close the window. A new program will appear in the Program Tree-View.



Next, select the new program and right click to open its action window, selecting 'Add a new schedule'. After selecting 'add a new schedule' the user will be prompted to enter a schedule name then Save & Close the window. A new schedule will appear in the Program Tree-View and it is recommended that you select that new schedule by left clicking on the schedule so the red check mark box is shown next to the newly created schedule.



With the new schedule selected choose the stations you wish to add to the schedule from the map by holding the 'CTRL' key and left clicking on the desired stations in the order you want them to appear in the schedule being created. When selected, stations will have a red check box next to them. After all stations are selected right mouse click on any of the selected stations and choose 'Add to Schedule'. NOTE that the menu will also indicate which schedule you have checked in the Program Tree-View that the stations are being added to.



Viewing the schedule properties and selecting the 'Steps' tab allows the user to view the stations and their order of operation. NOTE: If the Run Time is blank (as in the example above) this indicates the stations will run for the default station run time as defined for each station in the front office.

Additional information related to Edit Mode:

- 1: In the Map-Designer view the Program Tree-View works only in Edit mode.
- 2: The software does not support creation of irrigation programs from the Map Monitor / Designer view and from the Front Office simultaneously.
- 3: If users desire to delete a program from the Central Control System it can also be done from the map. First make sure the program is not 'active' or running, and then it may be deleted. Warning deleting a program in either the Front Office or through Map Monitor will delete it permanently from the database.
- 4: If a program that is running and deleted from the database, the program and it's activity will no longer show on the Program tree-view. However, it will continue to run in the system, and its stations will remain active on the map and in operation until the program finishes.

Temporary Adjustments

Rain Bird Map Monitor provides users the ability to make temporary adjustments to programs, schedules, and / or stations directly from the Map or from the tree-view (through Area view or Program view).

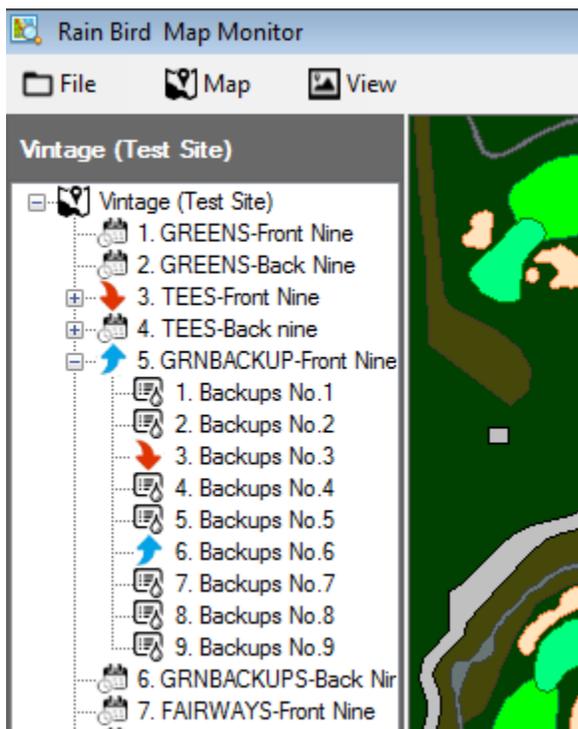
Adjustment Status on Tree-Views

If a program, schedule, or station has any associated temporary adjustments, an arrow symbol will show the adjustment status on the corresponding node in the tree-view.

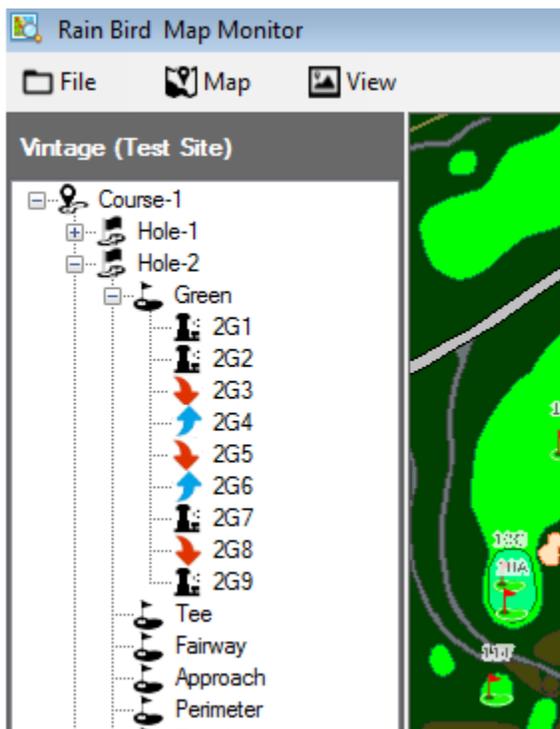
-  Temporary Reduction or Reduced Watering: The temporary adjustment value is reduced from the base or default runtime value.
-  Temporary Increase or Increased Watering: The temporary adjustment value is increased above the base or default runtime value.

Screenshots below demonstrate the visual indicators for temporary program and schedule adjustment status in the Program Tree-View, and temporary station adjustment status in the Area Tree-View.

Program Tree-View



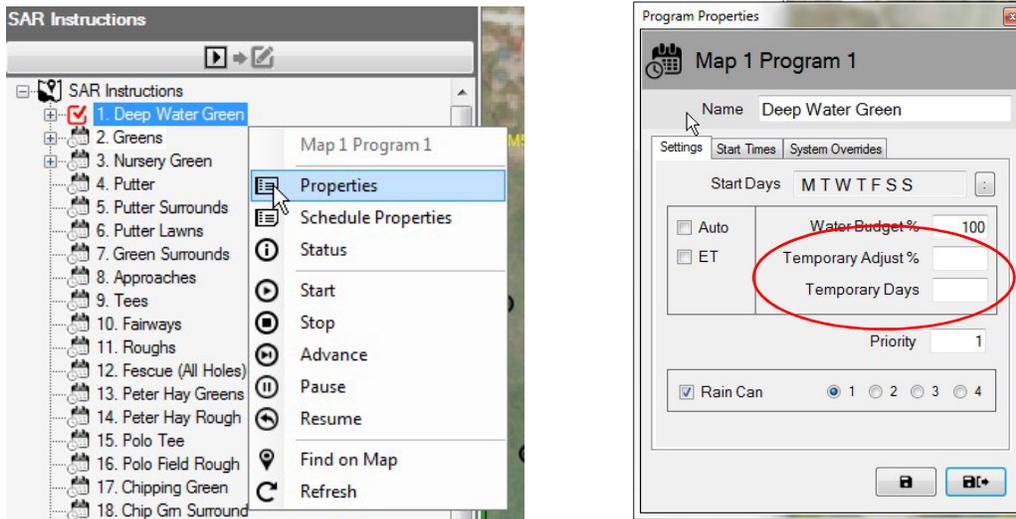
Area Tree View



Implementing Temporary Program / Schedule Adjustments:

Making Temporary program adjustments from the Program Tree-View is also fast and easy.

From the Program Tree-View, navigate to the program you want to make the temporary adjustment to. Right click on the Program name and select 'Properties' to bring up the Program Properties sub-menu. From the Program Properties sub-menu; input the desired adjustments in the Temporary Adjust % box and Temporary Days box.



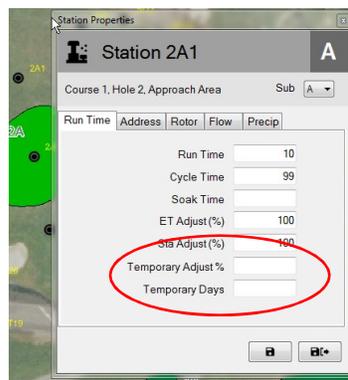
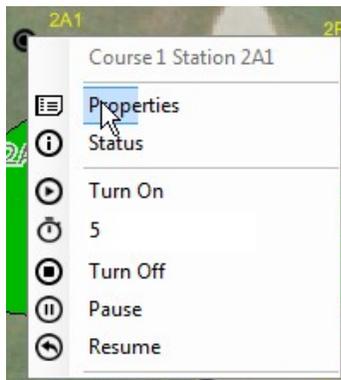
NOTE: To remove the Temporary Program Adjustments follow the same process to bring up the Program Properties sub-menu. Once opened enter zero (0) in the 'Temporary Days' box and press the Save or Save & Exit buttons. These adjustments may also be made from the Front Office.

Implementing Temporary Station Adjustments:

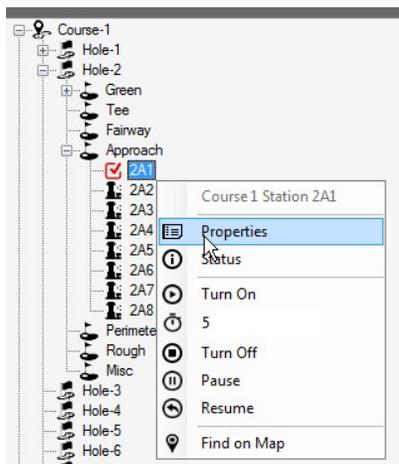
Temporary station adjustments from the Map application are quick and easy; just find the map entity, icon, or symbol for the station you wish to adjust.



Right click on the station icon and select 'Properties' from the control menu to bring up the Station Properties sub-menu. From the Station Properties sub-menu make the desired adjustments to the boxes for Temporary Adjust % and Temporary Days. These changes will be immediately entered into the database as soon as you select Save or Save & Exit from the Station properties sub-menu. Another option is to open the Area-View in the view tree and navigate to the desired station for adjustment. From here you can right click and open the properties sub-menu in the same way as through the map.



The Station Properties sub-menu may also be reached through the Area, Flow or Satellite Tree Views by opening the tree down to the station level then navigating to the desired station.



NOTE: In order to remove temporary adjustments you have made, you follow the same process to bring up the Station Properties sub-menu. Once opened you simply enter zero (0) in the 'Temporary Days' box and press the save or save and exit buttons. You may also make these adjustments from the Front Office either through the Course Monitor screen or through the Station Detail screen.

Adjustment Status Visual Indicators on Map

If a station has a temporary station adjustment applied, its symbol on the map will change from its default color. These will be based on the adjustment used. The following colors are used to visually indicate what adjustments have been made to individual stations.



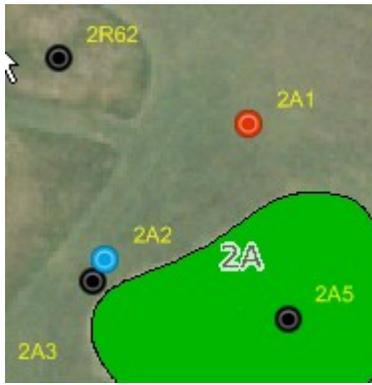
Normal Watering: No temporary adjustment.



Less Watering: The temporary adjustment value is less than base value.



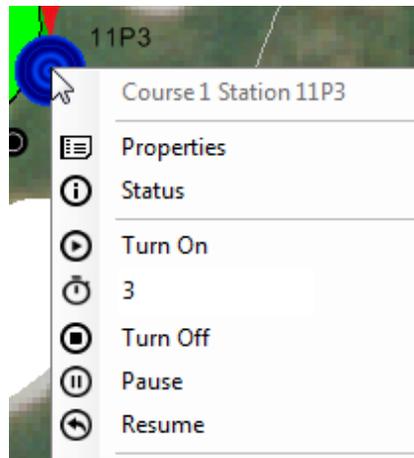
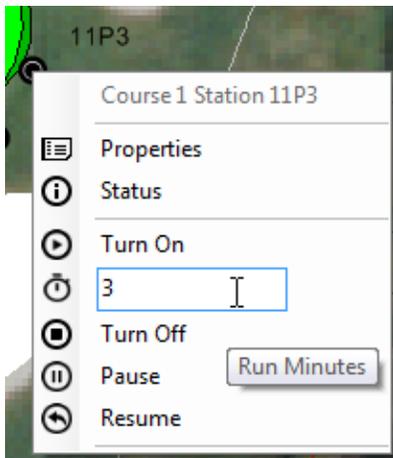
More Watering: The temporary adjustment value is greater than base value.



NOTE: Your map icons may be different, for example, ,  or a custom icon depending on the map symbol set you have chosen in the Map Settings menu.

Manual Operation of Stations from the Map

Users have the ability to manually operate stations directly from the map. Although manual operation is easiest to manage in the Area View it can be done from any of the available views. To manually turn on a single station, right click on the desired station to bring up the sub-menu, select the Run Minutes (3 in the example below) then select 'Turn On'. To turn the station off you can select the active station and choose 'Turn Off'.



Turning on an entire area of stations is just as simple. Choose the area marker and bring up the sub menu for the area, select the run minutes and turn the area on. With an area active users may pause or stop any individual running station by right clicking on any active station or take the same actions on the entire area by right clicking on the area marker.



Turning on multiple stations within an area can be achieved by holding the CTRL key and selecting the individual stations the user desires to activate. NOTE: Only stations within a single area can be manually selected to activate simultaneously. Stations located in multiple areas must be selected and turned on separately. For Example, If a user wants to turn on three sprinklers from a green area and two from an approach area then the three green sprinklers can be selected and activated, then the approach stations can be selected and activated.

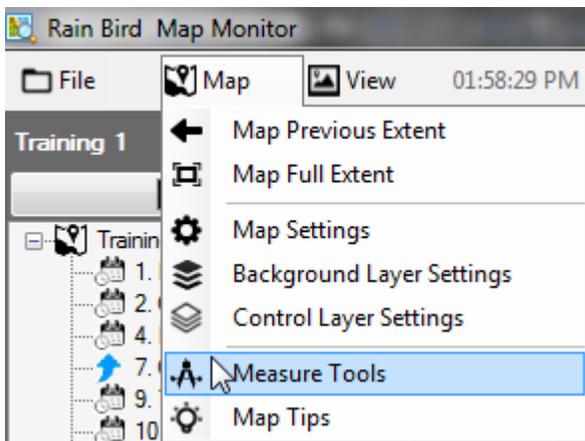


Should a user want to turn off the partial area manual irrigation it is easiest to select the area marker and choose the 'Turn Off' option for each area separately.

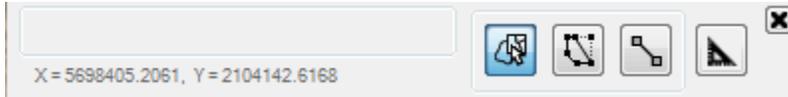


Map Measurement Tools

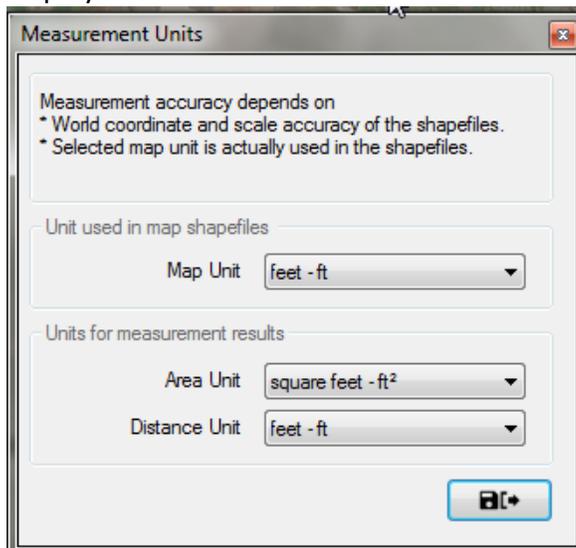
In order to bring up the Map Measurement Tools; navigate to the Map Menu on the toolbar, from the sub-menu you select 'Measure Tools', once selected it will toggle the measurement tools on.



When the 'Measure Tools' are activated all active map entities in the Area View will be visible on the map and the view tree will be hidden. Active stations will be hidden on the map but their activity can still be viewed from the front office. The Measurement toolbar will also appear in the upper right corner of the map. To make a measurement choose the measurement tool buttons from the measurement toolbar you wish to use.



 **'Measurement Units'**. Before starting a measurement, please set both the units used for the map shapefiles, as well as the units for the measurement results to be displayed in.



 **'Select Areas to Measure' Measure shape-layers:** If the map uses shapefile layers (e.g. green.shp), you may move the mouse pointer over the desired layers and right-mouse click to show the control sub-menu. You can measure either a single area or all areas of a shapefile layer. Measurement results will show both on the area(s) being measured as well as on measurement toolbar.

 **'Draw Area to Measure':** Using the left-mouse button click around an area to outline it for measurement. Begin by left-mouse clicking at the desired starting point, and then click the mouse pointer around an area to outline it. Double click to close the drawing and the measurement results will be displayed on both the area and measurement toolbar. Press the ESC key to cancel current drawing and remove labels from the map.

 **'Draw line to Measure'**. Using the left-mouse button click to draw a line on the map between two points to the measure distance. Left-mouse click on the desired starting point, then move the mouse pointer to the next point, and next point etc...

Double click to end the drawing and the measurement result will show both on the line and on the measurement toolbar. Press ESC key to cancel current drawing and remove labels from the map.

- NOTE: Measurement accuracy depends on the World File coordinate and scale accuracy of the shapefiles or background layers being measured.
- The selected map units must match the units in the associated shapefiles.

Tips on Map Operation

OPERATION	HOW
Pan	Drag/move map screen by clicking and holding the left-mouse pointer while you move/pan around the map.
Zoom-in	Scroll the mouse wheel in an upward direction (away from the user) or press Ctrl-Key and '+' Key on the number pad. Pinch out to zoom-in on a touch sensitive device.
Zoom-in on an Area	Press and hold the Shift-Key and draw a rectangle around the desired area on the map by clicking and holding the left-mouse pointer and dragging the pointer across the area.
Zoom-out	Scroll mouse wheel in a downward direction (toward the user) or press Ctrl-Key and '-' Key on the number pad. Pinch in to zoom-out on a touch sensitive device.
Full Extent	Click on the 'Map' menu on the toolbar and select 'Map Full Extent' from the submenu; or right-mouse click an empty place on the map and click 'Map Full Extent' from the menu. This will show either a full map view or whatever the user has defined as the Full Extent.
Selecting Node on Tree-View	Right-Mouse click on a node in the tree-view to show the control menus, then choose a menu item. The node could be anything such as an area, station, satellite, or flow-zone.
Select Irrigation Symbol on Map	Right-Mouse click on an irrigation symbol such as an area, station, satellite, or flow-zone on the map to show the control menus, and then choose a menu item. There is no selection or interaction with background symbols.
Map Pin	When you right-mouse click on a node in the tree-view and select "Find on Map" menu, a map pin icon or marker will indicate where the desired target is on map. When you work (e.g., send command, get status, or show properties) on a target in the tree-view or on the map, the map pin will show the last location in the interaction on the map.
Clearing Markers from Map	Press the 'ESC' key to clear any map pin, check marker, and/or program's symbols from the map. This can be used to remove stations from an irrigated group, using the Multi-Station Commands.

View Properties	<p>Right-Mouse click on a node and select the 'Properties' item from the context menu to show the properties form of the node, such as area, station, program, or flow-zone. If the properties prompt is shown, left-mouse clicking on any other node on the tree-view or on a map entity will bring up the properties information for that node or entity without having to reopen the properties prompt.</p>
Programming	<p>In Map-Monitor, the Program Tree-View can be selected from the 'View' menu on the toolbar. This view can be shown in either Run Mode (used for program operation) or Edit modes (Used to edit programs). You can switch between modes by clicking the Mode button at Top of the Program Tree.  When in the Run mode, you can start, stop, or adjust some operations in a program. In Edit mode, you can create, copy, or delete programs similar to the Front Office. In Map Designer, you can only create, copy, or delete programs.</p>
Add Stations to Schedule	<p>In Map-Monitor mode, toggle to the Edit Mode for the Program Tree-View, select or create a schedule on tree-view. Then press and hold the Ctrl-Key and Left-Mouse click on a station symbol on the map to select it, repeat this action to select the desired other stations you wish to include in the schedule. Right-mouse click on one of the selected station symbols to bring up the control menu, then click "Add to schedule 'xxx'" in the control menu. The selected stations will be added to the schedule. You can also do perform this action in the Map-Designer mode.</p>
Multi-Stations Commands	<p>In Map-Monitor mode, press and hold the Ctrl-Key and Left-Mouse click on a station symbol on the map to select it, repeat this action to select any other desired stations you wish to include. When using Multi-Station Commands you can only select multiple stations in the same area (e.g. green, rough, fairway, etc.) for a command. To send a command for the selected stations, right-mouse click on one of the selected station symbols to bring up the control menu, then adjust to the desired runtime and send commands.</p>
Unselecting Selected Stations	<p>Press the 'ESC' key to clear any selected station symbols or right-mouse click on one of the selected station symbols to bring up the control menu and click on the 'Clear Selected' button.</p>
Dual Monitor	<p>If you have two monitors, you can show the map monitor or map design screen and Front-Office screen on different monitors in order to interact with both simultaneously.</p>

Tips on Drawing Irrigation Symbols

OPERATION	HOW
Zoom Levels	The map has zoom levels for different irrigation symbols these include Course, Hole, Area, Station, and Rotor. Irrigation symbols only show at their defined zoom levels. The default full extent is at the 'Hole' zoom level.
Drawing a Symbol	Before applying or adding symbols, please zoom in to the Station or Rotor level using the mouse scroll, pinch method on a touchscreen or by pressing the Ctrl-Key and pressing the '+' Key on the number pad four times. Hold the left-mouse button to drag an irrigation object (e.g., a station or an area) from the Tree-View (left panel) and release when in the correct position in order to place it on the map.
Drawing a Rotor	Right-Mouse click on a station symbol on the map to show the control menu. Select the 'Draw Rotor' button from the menu. Move the mouse pointer to a location on the map you want to place the rotor, and then click the map. A rotor will then be drawn on the map and linked to the selected station.
Moving a Map Entity	Press and hold the Alt-Key and click and hold the left-mouse button to drag the selected irrigation symbol (e.g., a station, an area, or a rotor) on the map. Move the mouse pointer to the new location on the map and drop the entity by releasing the mouse pointer. NOTE: After grabbing the map entity you can release the Alt-Key.
Deleting a Symbol	Right-Mouse click on an irrigation entity (point or line) on the map to show the control menu. Click 'Delete Symbol' in the menu to delete the entity. NOTE: Only the entity on the map will be deleted, the object represented by the map entity is not affected simply the visual entity (e.g., station, satellite, or rotor) Will Not be deleted in the central-control database.