GroundsOpsStaff-ProScheduler Help
Updated 6/1/2014
(Recommend you print this file)

Contents

GroundsOpsStaff-ProScheduler Concept:

GroundsOpsStaff-ProScheduler is an upgrade that allows you to optimally schedule grounds maintenance tasks to weeks in the growing season or performance period. You can manually schedule maintenance tasks or use the automatic scheduling feature. The manual and automatic scheduling features allow you to create a balanced **weekly schedule** for your grounds maintenance tasks based on availability of workers and the **Least Loaded Week/Most Loaded Week protocol**. *GroundsOpsStaff-ProScheduler* uses a **Dynamic Least/Most Loaded Week** protocol to assist you in creating balanced weekly schedules. The manual and automatic scheduling features are explained later in this document.

GroundsOpsStaff-ProScheduler uses the **Time to Perform Report** to create a master schedule. The tasks in the master scheduler are then designated in the master schedule based on the frequency at which they are to be performed within the designated growing season or performance period and the number of weeks in the season or performance period. The task designations are described in the below table.

Task Designations Based on Performance Frequency	
Recurring Tasks • Weekly • Biweekly • Monthly	These are task that are required to be performed on a recurring basis for the entire season or performance period. See the below examples. • A task that is required to be performed 20 times during a 20 week growing season or performance period is a *Weekly* task because the task is required to be performed once per week. • A task that is required to be performed 10 times during a 20 week growing season or performance period is a *Biweekly* task because it is required to be performed once every two weeks. • A task that is required to be performed 5 times during a 20 week growing season or performance period is a *Monthly* task because it is required to be performed once per month. • A task that is required to be performed 15 times during a 30 week growing season or performance period is a biweekly task because it is required to be performed once every two weeks.
Seasonal Tasks • Winter • Spring • Summer • Fall	These are tasks that are required to be performed during a specific season. If the words *Winter, Spring, Summer* or *Fall* appears in the title of the task, then the task is a *Seasonal* task. See the below example: • A task title *Winter planting* is a seasonal task because it has the word *Winter* in its name. • A task title *Spring Preparation [200]* is a seasonal task because it has the word *Spring* in its name • A task title *Summer fertilizer* is a seasonal task because it has the word *Summer* in its name • A task title *Fall Cleanup* is a seasonal task because it has the word *Fall* in its name NOTE: when you create your own local matrices, you should keep the above designation in mind if you wish *ProScheduler* to force performance of certain tasks to specific seasons of the year.
Non-Recurring Task	These are tasks that to not recur on a regular basis and are not seasonal. See example below. • A task that is required to be performed 6 times during a 20 week growing season or performance period and does not have one of the seasons in its title is a *Non-Recurring* task because the task is **not** required to be performed each week of the growing season or performance period. • Snow Removal to be performed 12 times in a 20 week performance period and does not have one of the seasons in its title is a *Non-Recurring* task because the task is **not** required to be performed each week of the growing season or performance period.

IMPORTANT NOTE: The *Dynamic Least/Most Loaded Week* protocol involves many recursive calculations and can take a bit of time when applied to large numbers of grounds areas at once. While you can apply *GroundsOpsStaff-ProScheduler* to your entire inventory at once, it would take at bit of. **It is recommended that you apply *ProScheduler* to your entire inventory at once only when you are interested in an overall view of the entire schedule for the entire grounds inventory.** You will achieve better results if you apply *GroundsOpsStaff-ProScheduler* to only a single crew, or zone, or other logical subset of your inventory.

GroundsOpsStaff-ProScheduler Concept and General Steps
Below are the general steps for using the *ProScheduler*. *See ClickShot Training Exercise PS-1: ProScheduler Scheduling and Balancing in the back of this manual for screenshots of mouse clicks to execute the below steps.* 1. From the *Main Menu,* click the *Inventory and Macro Staffing* button. 2. Click the *File…* button and then click the *Open File* button to open a grounds inventory file into in memory or enter grounds inventory data in the *Inventory and Macro Staffing* worksheet. 3. On the *Main Toolbox*, select the grounds areas within the *Inventory and Macro Staffing* worksheet for which you wish to create a master schedule. To select all grounds areas in the worksheet, on the *Main Toolbox*, click *Records…* and then click *Select All*. 4. On the *Main Toolbox*, click the *Reports…* button. 5. Click the *Time to Perform by Area and by Task for Selected Levels* button. 6. After the *Time to Perform* report is complete, click to the *ProScheduler* button. 7. This will activate the *Master Schedule* worksheet and launch the *GroundsOpsStaff-ProScheduler Toolbox* as shown in the screenshot below. 8. Click the *Load Schedule* button to open up *the Load Master Schedule* Group. 9. Click the *Create from Time to Perform Report* button and click *Yes*. 10. After the *Master Schedule* has been created, read the message on the screen and click *OK*. 11. Click *Set Season Start Week* button to confirm and/or set the *Start Week* for each of the growing seasons or performance periods in your master schedule (how to set the Start Week is explained later in the instructions). 12. Use the buttons in the *Man-1*, *Man-2*, *Actions-1*, *Auto-1*, *Auto-2*, *Auto-3*, *Auto-4*, and *Balancing* tabs to manually and/or automatically schedule the tasks (click in a blank a space in the *ProScheduler Toolbox* and

click the *Tabs* then pause your mouse pointer over the buttons in the *Tabs* to read a screentip about the scheduling options available to you).

13. Use the *Print/Export* button to create *Weekly Schedules* and send to excel or to send the *Master Schedule Chart* to excel. The *Weekly Schedules* are plain English schedules listing all tasks to be performed during the week(s) you select to send to the Excel spreadsheet. Note: It will take a bit of time to send all 52 weeks to the same Excel spreadsheet. For quick output send a few weeks (maybe a month) to the spreadsheet at a time. If you wish to send many weeks at a time, you can do so and work on other thing while *ProScheduler* completes the process.

14. Use Excel normal printing feature to send the *Weekly Schedules* and the *Master Schedule Chart* to the printer. You can freely edit the *Weekly Schedules* and the *Master Schedule Chart* spreadsheets since they are not connected to GroundsOpsStaff after they have been created.

ProScheduler Toolbox Key Components
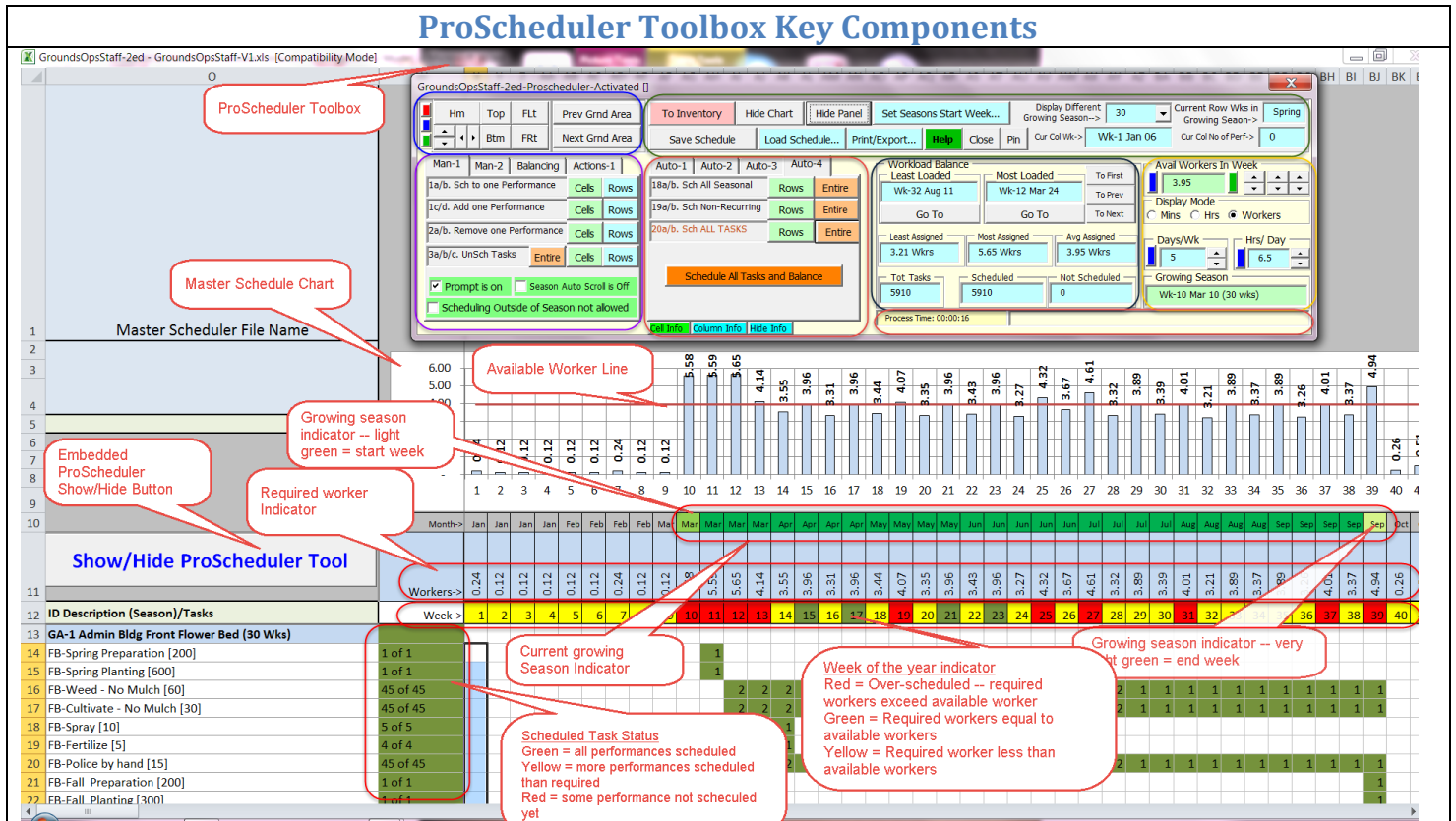
GroundsOpsStaff-ProScheduler One-Click Scheduling and Balancing

Below are steps for using the *ProScheduler* to quickly generate a balanced schedule with minimum manual effort. *See ClickShot Training Exercise PS-2: ProScheduler One-Click Scheduling and Balancing in the back of this manual for screenshots of mouse clicks to execute the below steps.*

1. Open a grounds inventory file into in memory, or use the inventory data already loaded into memory, or enter grounds inventory data in the *Inventory and Macro Staffing* worksheet.
2. From the *Main Menu,* click the *Inventory and Macro Staffing* button.
3. Select the grounds areas within the *Inventory and Macro Staffing* worksheet for which you wish to create a master schedule.
4. On the *Main Toolbox*, click the *Reports* button.
5. Click the *Time to Perform by Area and by Task for Selected Levels* button.
6. After the *Time to Perform* report is complete, click to the *ProScheduler* button.
7. Click the *Load Schedule* button.

8. Click the ***Create from Time to Perform Report*** button and click ***Yes***.
9. Read the message on the screen and click ***OK***.
10. Click ***Set Season Start Week*** button to confirm and/or set the ***Start Week*** for each of the growing seasons or performance periods in your master schedule (how to set the Start Week is explained later in the instructions).
11. Click ***Auto-4 Tab***. Then click ***20b. All Task For Entire Schedule*** button. This will automatically schedule all tasks in the schedule. You may notice that in the ***Week->*** row in the worksheet, some of the cells are **Red** (Over scheduled for the week), **Yellow** (Under scheduled for the week) or **Green** (exactly scheduled for the week).
12. Enter or verify the number of available workers in the ***Avail Workers In Week*** Input Box. You can click the blue button to the left of the input box to set the number of available workers to the number computed from the ***Time To Perform Report***. You can also use the six up/down arrows to adjust the number of available workers.
    a. To allow ***ProScheduler*** suggest what a balanced number might be for a balance schedule, select the main season from the ***Display Different Growing Season→*** dropdown list (for example select 30)
    b. Look in the ***Workload Balance*** section of the ***ProScheduler Tool*** and find the number in the ***Avg Assigned*** box. Click the green button to the right of the ***Avail Workers In Week*** Input box to make the number of available workers equal to the number in the ***Avg Assigned*** box.
13. Click ***Balancing Tab.*** Then ***9d. Balance All Red Week (Shift Right)*** button. This will reduce the task in ***Red Weeks*** (weeks where the required workers are greater than the available workers) by shifting tasks from the over scheduled week to a later week.
14. If there are still red weeks in the schedule then, click ***Balancing Tab.*** Then click ***9f. Balance All Red Week (Shift Left)*** button.
15. If there are still red weeks in the schedule then repeat steps 13 and 14 until there are no more red weeks or no change in the schedule. There are rare situations where the schedule cannot be perfectly balanced due to large number of recurring and/or seasonal tasks that must be performed during specific weeks. You can also use the manual commands in Tabs
15. Use the ***Print/Export*** button to create ***Weekly Schedules*** and send to excel or to send the ***Master Schedule Chart*** to excel. The ***Weekly Schedules*** are plain English schedules listing all tasks to be performed during the week. Note: It will take a bit of time to send all 52 weeks to the same Excel spreadsheet. For quick output send a few weeks (maybe a month) to the spreadsheet at a time. If you wish to send many weeks at a time, you can do so and work on other thing while ***ProScheduler*** completes the process.
16. Use Excel normal printing feature to send the ***Weekly Schedules*** and the ***Master Schedule Chart*** to the printer. You can freely edit the ***Weekly Schedules*** and the ***Master Schedule Chart*** spreadsheets since they are not connected to GroundsOpsStaff after they have been created.
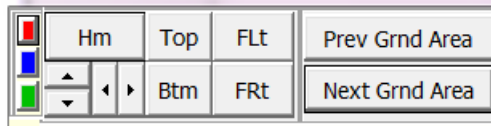
ProScheduler Toolbox Navigation Group

Note: for training purposes complete steps in cells A1-D2 of *ClickShot Exercise PS-1: ProScheduler Scheduling and Balancing* in the back of this manual, then experiment with clicking all the buttons in the **Navigation Group** while observing the screen.

- **Red Collapse/Expand** – use this button to expand and contract the width and length of the **ProScheduler** Toolbox so you can see more or less of the **Master Schedule** worksheet.
- **Blue Width Size button** – use this button to expand and contract the width of the **ProScheduler** Toolbox so you can see more or less of the **Master Schedule** worksheet.
- **Green Width Size button** – use this button to expand and contract the height of the **ProScheduler** Toolbox so you can see more or less of the **Master Schedule** worksheet.
- **Hm button** – move inserting point to the top left cell in the **Master Schedule** worksheet.
- **Top button** – move inserting point to the top row in the **Master Schedule** worksheet.
- **Flt button** – move inserting point to the far left column in the **Master Schedule** worksheet.
- **Vertical Spin button** – move inserting point to the next and previous row in the **Master Schedule** worksheet.
- **Horizontal Spin button** – move inserting point to the next and previous column in the **Master Schedule** worksheet.

Setting the Season/Performance Start week
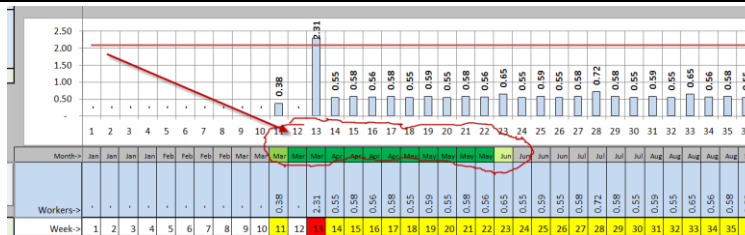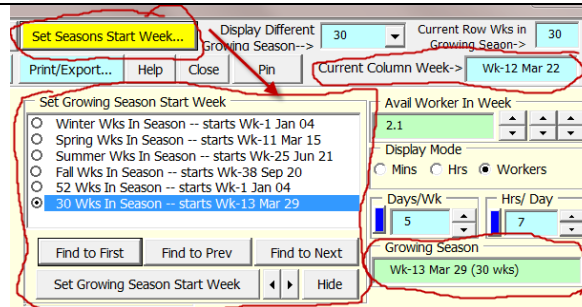
Recall from the user manual that you are allowed to have multiple growing seasons or performance periods in your grounds inventory. For example, for your green space grounds asset your growing season may be 30 weeks and the season may start the third week in March. Your grounds organization might also be responsible for landscape with a performance period of 52 weeks with the start week the first week of January. You might also have grounds tasks that you want to ensure are scheduled in a particular season of the year such as winter, spring, summer, and fall. Since there are slight variations on when people consider these seasons to start, you can set the start week for each season. The number of weeks in each season defaults to 13 weeks and cannot be changed in the current release of **GroundsOpsStaff**.

- Steps for setting the start week for growing seasons or performance period: *See ClickShot Training Exercise PS-3: Setting Season Start Week in the back of this manual for screenshots of mouse clicks to execute the below steps.*
  - Click the **Set Seasons Start Week** button to launch the **Set Growing Season Start Week** menu.

- In the **Set Growing Season Start Week** menu, click desired growing season or performance period.
- Observe the **Growing Season** textbox that displays the currently selected growing season or performance period.
- Observe the **Current Column Week** textbox that displays the week of the currently selected column in the worksheet.
- Click inside of the worksheet in the "Month-- >" row on the week you want to designate as the start week for the desired growing season or performance period.
- Click the **Set Growing Season Start Week** button.
- Observe the green highlighted cells in the "Month-- >" row of the worksheet. This gives you a visual representation of the growing season or performance period.
- Repeat for all growing season and performance period.
- Save the **Master Schedule** to disk to preserve the start week settings. The **Start Week** settings will be preserved in the saved **Master Schedule** file and you do not have to set them each time you load the **Master Schedule**.
- You can now use the **Tab Commands** to manually and/or automatically schedule tasks.

- **Find First button** – find the first grounds area with the currently selected growing season. If the selected growing season is winter, spring, summer or fall this will find the first corresponding task.
- **Find Previous button** – find the previous grounds area with the currently selected growing season. If the selected growing season is winter, spring, summer or fall this will find the previous corresponding task.
- **Find Next button** – find the next grounds area with the currently selected growing season. If the selected growing season is winter, spring, summer or fall this will find the next corresponding task.
- **Right and Left Arrow button** – shift the start week of the growing season or performance period left or right.

NOTE: Use the "*My PS-3 Training File*" that you saved in the above exercise to experiment with the remaining features described in this manual.

ProScheduler Toolbox Commands and Display Group

| To Inventory | Hide Chart | Hide Panel | Set Seasons Start Week... | Display Different Growing Season--> | 52 | ▼ | Current Row Wks in Growing Seaon-> | 52 |
| Save Schedule | Load Schedule... | Print/Export... | Help | Close | Pin | Cur Col Wk-> | Wk-7 Feb 17 | Sch Tsks | 20 |

- **To Inventory button** – Deactivate the **Master Schedule worksheet**, close the **ProScheduler Toolbox** and return to the Inventory and **Macro Staffing worksheet**.
- **Hide/Show Chart button** – hide or show the **Master Schedule Chart** to see more or less of the **Master Schedule** worksheet data.
- **Hide/Show Panel button** – hide or show the **Master Schedule Panel** (tall gray area at the top of the worksheet) to see more or less of the **Master Schedule** worksheet data.
- **Set Season Start Week** – launch the **Set Season Start Week menu** to allow you to set the start week for each of the growing season or performance periods contained in your master schedule. Use of this feature is explained later in this manual
- **Display Different Growing Season Dropdown button** – allows you to select which growing season or performance period will be displayed on the **Growing Season/Performance Period Indicator Row**. The season is indicated by the green background in the indicator row. The start week and the ending week are indicated by a different background. See the indicator row in the screenshot above in the **GroundsOpsStaff-ProScheduler Concept and General Steps** section. Note that the currently select Growing Season/Performance Period starts with Week 11 and end with Week 23 of the year or the third week of March and the first week of June.
- **Current Row Wks in Growing Season Textbox** – indicates the number of week in the growing season or performance for the currently selected row of the **Master Schedule** worksheet. This textbox keeps you informed of the number of week in the growing season for each task in the **Master Schedule**.

| To Inventory | Hide Chart | Hide Panel | Set Seasons Start Week... | Display Different Growing Season--> | 52 ▼ | Current Row Wks in Growing Seaon-> | 52 |
| Save Schedule | | Load Schedule... | Print/Export... | **Help** | Close | Pin | Cur Col Wk-> | Wk-7 Feb 17 | Sch Tsks | 20 |

- **Save Schedule button** – Save the **Master Schedule worksheet** that is in memory to disk. The default save location is the **C:\GroundsOpsStaff Data** folder. The file name you enter will be appended with '**-HEGS-SCH.xls'.** Do not type this extension – it will be added automatically. You can browse to a save to a different location including a network drive if you wish. You can also change the default location from the Configuration Form if you wish.
- **Load Schedule button** – launch the **Load Schedule** menu which allows you to (1) create a master schedule from the **Time to Perform** report in memory; or (2) load a **Master Schedule** from the disk.
- **Print/Export button** – launch the **Print/Export** menu which allows you to (1) export the **Master Schedule Chart** to Excel; or (2) create **Weekly Schedules** and send them to Excel.
- **Help button** – opens this help document which is stored in the **C:\GroundsOpsStaff Program Files** folder.
- **Close button** – Closes the **ProScheduler** Toolbox. You can reopen the **ProScheduler** Toolbox by clicking the embedded **Show/Hide ProScheduler Tool** button found in the first column below the **Panel** in the **Master Schedule worksheet.**
- **Pin button** – allow you to pin the ProScheduler Toolbox to its current location in the screen.
- **Current Column Week (Cur Col Wk->) textbox** – indicates week number of the year and the date of the currently select column in the **Master Schedule worksheet**. The date given is always the Monday of the week. The above screenshot indicates that the insertion point is now in the columns for Week 32, which is the week of Monday August 9.
- **Number of Scheduled Tasks in Selected Week (Sch Tsks)** – displays the number of tasks that have already been scheduled in the selected week.

Manual Scheduling Command Set – (Manual-1 Tab)

Old Group Toolbox	Old Group Toolbox (May 2014)

The Manual-1 Tab (Man-1) contains command buttons to allow you to manually schedule task in the **Master Schedule worksheet.** To use these command buttons you would first select cells in the **Master Schedule worksheet** then click the desired command button.

- **1a. Sch to one Performance Cells button** – Select the cells in the **Master Schedule worksheet** for which you wish to schedule a task. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes**. The following will occur:
  - o The number '1' will be place in the cell.
  - o The background will become green.
  - o The **Master Schedule Chart** will reflect the required staffing for the appropriate week.
  - o **The Week Number Indicator Row** will reflect a **White**, **Red** or **Yellow** for the appropriate week.

White means that now tasks have been scheduled for this week. *Red* means that the required staffing has exceed the available staffing for this week. *Yellow* means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.

- **1b. Sch to one Performance Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule tasks. Then this button. If the *Prompt is on* checkbox is check, then click *Yes*. The following will occur:
  - The number '1' will be place in the cells for the selected row for the entire season or for all 52 week if the *Scheduling Outside of Season allowed* checkbox is checked.
  - The background will become green.
  - The *Master Schedule Chart* will reflect the required staffing for the appropriate weeks.
  - *The Week Number Indicator Row* will reflect a *White*, *Red* or *Yellow* for the appropriate weeks. *White* means that now tasks have been scheduled for this week. *Red* means that the required staffing has exceed the available staffing for this week. *Yellow* means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.
- **1c. Add one Performance Cells button** – Schedule the selected task(s) to be performed one **more** time in the selected weeks. The number already in the cells will be increased by one and the *Master Schedule Chart* will reflect the increased staffing for the appropriate weeks.
- **1d. Add one Performance Rows button** – Schedule the task(s) in the selected rows to be performed one **more** time for the entire season. The number already in the cells will be increased by one and the *Master Schedule Chart* will reflect the increased staffing for the appropriate weeks.
- **2a. Remove one Performance Cells button** – Schedule the task(s) to be performed one **less** time in the selected cells. The number already in the cell will be decreased by one and the *Master Schedule Chart* will reflect the decrease staffing for the appropriate week.
- **2b. Remove one Performance Rows button** – Schedule the task(s) to be performed one **less** time in the selected Rows. The number already in the cells of the selected rows will be decreased by one and the *Master Schedule Chart* will reflect the decrease staffing for the appropriate week.
- **3a. UnSch Tasks Entire button** – unscheduled all tasks in the **Entire** Master Schedule. You will always be prompted to confirm this action since it unscheduled all tasks for the entire master schedule and there is no undo feature.
- **3b. UnSch Tasks Cells button** – Un-Schedule the task (s) in the selected cells. The number already in the cells will become blank, the cell background will become white and the *Master Schedule Chart* will reflect the decrease staffing for the appropriate weeks.
- **3c. UnSch Tasks Rows button** – Un-Schedule the task (s) in the selected rows. The number already in the cells will become blank, the cell background will become white and the *Master Schedule Chart* will reflect the decrease staffing for the appropriate weeks.
- **Season Auto Scroll is on/ Season Auto Scroll is off checkbox** – turns on, or turns off season auto scroll. When season auto scroll is on the *Master Schedule worksheet* will scroll the start week of the select task's growing season to the first column of the worksheet. This is intend to help you keep a good visual of the growing season for each task by observing the background color of the *Growing Season/Performance Period Indicator Row*.
- **Scheduling Outside Season Allowed/Scheduling Outside Season not Allowed checkbox** – turns on or off scheduling outside the growing season or performance. When off, you cannot schedule a task outside of its designated season or performance period – this is the default is the mode that you would most likely use until you are ready to make minor manual adjustments to your schedule that require moving tasks outside of their designated season or performance period.

Manual Scheduling Command Set (Manual-2 Tab)

Old Group Toolbox	Old Group Toolbox (May 2014)

The Manual-2 Tab contains command to adjust the weeks the tasks are scheduled in to help achieve balance in the schedule.

- **6. Shift Tsks In Sel Rows Left button** – Select the rows in the Master Schedule worksheet for which you wish to shift the schedule to the left by one week then click this button. If there is not room in the growing season or performance period to shift the schedule you will receive a message informing you that the shift was not successfully. You cannot shift tasks outside of their designated growing season or performance if the **Scheduling Outside Season Allowed/Scheduling Outside Season not Allowed checkbox** is not checked.
- **7. Shift Tsks In Sel Rows Left button** Select the rows in the Master Schedule worksheet for which you wish to shift the schedule to the right by one week then click this button. If there is not room in the growing season or performance period to shift the schedule you will receive a message informing you that the shift was not successfully. You cannot shift tasks outside of their designated growing season or performance period if the **Scheduling Outside Season Allowed/Scheduling Outside Season not Allowed checkbox** is not checked.
- **8a. Shift Sel Tsks (1-Fq) Left button** – Select the cells of the tasks you would like to shift then click this button. **One** occurrence (frequency) of the task will be shifted one week to the left.
- **8b. Shift Sel Tsks (1-Fq) Right button** – Select the cells of the tasks you would like to shift then click this button. **One** occurrence (frequency) of the task will be shifted one week to the right.
- **9a. Shift Sel Tsks (all-Fq) 1-week Left** – Select the cells of the tasks you would like to shift then click this button. **All** occurrences (frequencies) of the task will be shifted one week to the left.
- **9b. Shift Sel Tsks (all-Fq) 1-week Right** – Select the cells of the tasks you would like to shift then click this button. **All** occurrences (frequencies) of the task will be shifted one week to the right.

Manual Scheduling Command Set (Actions-1 Tab)

The Actions-1 Tab contains miscellaneous commands for appearance of the chart and temporary file management.
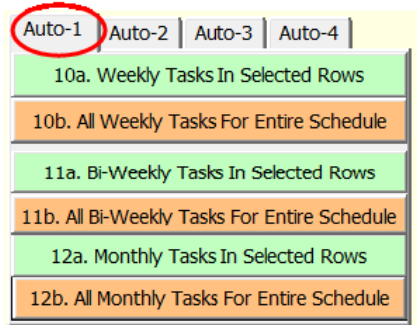
- **Chart Data Labels button** – Hide or show the data label on the **Master Schedule Chart**.
- **Chart Minor Grids button** – Hide or show the minor grid lines on the **Master Schedule Chart.**
- **Delete all Closed Temporary Files button** – delete all the temporary files that GroundsOpsStaff create when you export to Excel. These files are not intended for permanent storage of information. If you want to retain any information that you export to Excel, you should use Excel Save As command to save the file under a different name. All temporary file created by the GroundsOpsStaff Export to Excel feature will have

the name **GroundsOpsExportTempX.xls** where **X** is a number that s incremented each time you export to Excel. **GroundsOpsStaff** deletes all of the files each time it start-up. However, during the session you may have cause many temporary files to be created via your export activity. Use this button to delete them during your session. You must close any open temporary file before you can delete it.
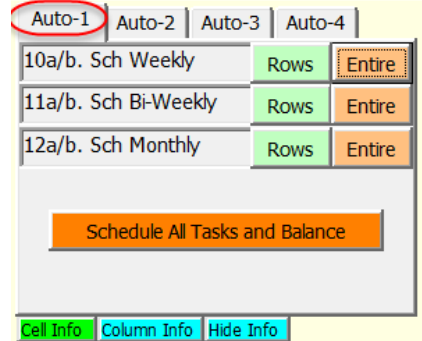
- **Gray Area** – reserved for future features based on user feedback.

<table>
<tr><td colspan="2" align="center">Automatic Scheduling Command Set (Auto-1 Tab)</td></tr>
<tr><td align="center">Old Group Toolbox</td><td align="center">New Group Toolbox (May 2014)</td></tr>
<tr>
<td>

Auto-1 | Auto-2 | Auto-3 | Auto-4

10a. Weekly Tasks In Selected Rows
10b. All Weekly Tasks For Entire Schedule
11a. Bi-Weekly Tasks In Selected Rows
11b. All Bi-Weekly Tasks For Entire Schedule
12a. Monthly Tasks In Selected Rows
12b. All Monthly Tasks For Entire Schedule

</td>
<td>

Auto-1 | Auto-2 | Auto-3 | Auto-4

10a/b. Sch Weekly   Rows Entire
11a/b. Sch Bi-Weekly Rows Entire
12a/b. Sch Monthly   Rows Entire

Schedule All Tasks and Balance

Cell Info | Column Info | Hide Info

</td>
</tr>
</table>

The **Auto-1 Tab** contains command buttons to allow you to automatically schedule task in the **Master Schedule worksheet.** To use these command buttons you would first select rows in the **Master Schedule worksheet** then click the desired command button.

- The following will occur:
  - The number '1' will be place in the cell for all the scheduled weeks.
  - The background will become green in the scheduled weeks.
  - The **Master Schedule Chart** will reflect the required staffing for the appropriate weeks.
  - **The Week Number Indicator Row** will reflect a **White**, **Red** or **Yellow** for the appropriate week **White** means that now tasks have been scheduled for this week. **Red** means that the required staffing has exceed the available staffing for this week. **Yellow** means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.

- **10a. Sch Weekly Rows button** – Select the cells in the **Master Schedule worksheet** for which you wish to schedule any weekly tasks. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes**. All **Weekly** Tasks for the selected rows will be scheduled.
- **10b. Sch Weekly Entire button** – Click anywhere inside the Master **Schedule worksheet**. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes**. All Weekly Task in the **entire** schedule for the **entire** year will be scheduled.
- **11a. Sch Bi-Weekly Rows button** – Select the cells in the **Master Schedule worksheet** for which you wish to schedule **BI-Weekly** tasks. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes.** All **Bi-Weekly** Tasks scheduled for the selected rows.
- **11b. Sch Bi-Weekly Entire button** – Click anywhere inside the Master **Schedule worksheet**. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes**. All **Bi-Weekly** Tasks in the **entire** schedule for the **entire** year will be scheduled.
- **11a. Sch Monthly Rows button** – Select the cells in the **Master Schedule worksheet** for which you wish to schedule **Monthly** tasks. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes.** All **Monthly** Tasks scheduled for the selected rows.
- **11b. Sch Monthly Entire button** – Click anywhere inside the Master **Schedule worksheet**. Then click this button. If the **Prompt is on** checkbox is check, then click **Yes**. All **Monthly** Tasks in the **entire** schedule for the **entire** year will be scheduled.

Automatic Scheduling Command Set (Auto-2 Tab)	
Old Group Toolbox	New Group Toolbox (May 2014)

The **Auto-2 Tab** contains command buttons to allow you to automatically schedule task in the *Master Schedule worksheet*. To use these command buttons you would first select rows in the *Master Schedule worksheet* then click the desired command button.

- The following will occur:
    - The number '1' will be place in the cell for all the scheduled weeks.
    - The background will become green in the scheduled weeks.
    - The *Master Schedule Chart* will reflect the required staffing for the appropriate weeks.
    - *The Week Number Indicator Row* will reflect a *White*, *Red* or *Yellow* for the appropriate week *White* means that now tasks have been scheduled for this week. *Red* means that the required staffing has exceed the available staffing for this week. *Yellow* means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.

- **13a. Weekly, Bi-Weekly, and Monthly Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule all recurring tasks (Weekly, Bi-Weekly, and Monthly). Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Recurring* tasks for the selected rows will be scheduled.
- **13b. Weekly, Bi-Weekly, and Monthly Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Recurring* Task in the **entire** year for the **entire** year will be scheduled.
- **14a. Sch Winter Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule *Winter* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *Winter* Tasks for the selected rows will be scheduled.
- **14b. Sch Winter Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Winter* Tasks in the **entire** schedule for the **entire** year will be scheduled.

Automatic Scheduling Command Set (Auto-3 Tab)	
Old Group Toolbox	New Group Toolbox (May 2014)

The **Auto-3 Tab** contains command buttons to allow you to automatically schedule task in the *Master Schedule worksheet.* To use these command buttons you would first select rows in the *Master Schedule worksheet* then click the desired command button.

- The following will occur:
  - o The number '1' will be place in the cell for all the scheduled weeks.
  - o The background will become green in the scheduled weeks.
  - o The *Master Schedule Chart* will reflect the required staffing for the appropriate weeks.
  - o *The Week Number Indicator Row* will reflect a *White*, *Red* or *Yellow* for the appropriate week *White* means that now tasks have been scheduled for this week. *Red* means that the required staffing has exceed the available staffing for this week. *Yellow* means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.

- **15a. Sch Spring Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule *Spring* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *Spring* Tasks scheduled for the selected rows.
- **15b. Sch Spring Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Spring* Tasks in the entire schedule for the entire year will be scheduled.
- **16a. Sch Summer Rows button** – Select the cells in the *Master Schedule worksheet* for which you wish to schedule *Summer* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *Summer* Tasks scheduled for the selected rows.
- **16b. Sch Summer Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Summer* Tasks in the entire schedule for the entire year will be scheduled.
- **17a.Sch Fall Rows button** – Select the cells in the *Master Schedule worksheet* for which you wish to schedule *Fall* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *Fall* Tasks scheduled for the selected rows.
- **17b. Sch Fall Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Fall* Tasks in the entire schedule for the entire year will be scheduled.

Automatic Scheduling Command Set (Auto-4 Tab)
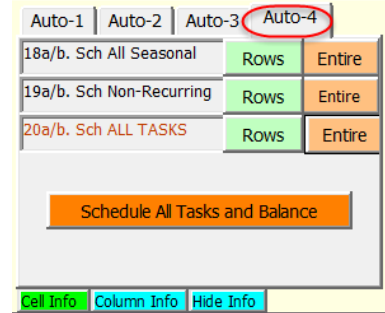
The **Auto-4 Tab** contains command buttons to allow you to automatically schedule task in the *Master Schedule worksheet.* To use these command buttons you would first select rows in the *Master Schedule worksheet* then click the desired command button.

- The following will occur:
  - The number '1' will be place in the cell for all the scheduled weeks.
  - The background will become green in the scheduled weeks.
  - The *Master Schedule Chart* will reflect the required staffing for the appropriate weeks.
  - *The Week Number Indicator Row* will reflect a *White*, *Red* or *Yellow* for the appropriate week *White* means that now tasks have been scheduled for this week. *Red* means that the required staffing has exceed the available staffing for this week. *Yellow* means that tasks have been scheduled for this week and the required staffing does not exceed the available staffing – in other words, there is still available staffing to schedule more tasks in this week.

- **18a. Sch All Seasonal Rows button** – Select the cells in the *Master Schedule worksheet* for which you wish to schedule *All Season* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *All Season* Tasks scheduled for the selected rows.
- **18b. Sch All Seasonal Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. *All Season* Tasks in the entire schedule for the entire year will be scheduled.
- **19a. Sch Non-Recurring Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule *Non-Recurring* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* All *Non-Recurring* tasks scheduled for the selected rows.
- **19b. Sch Non-Recurring Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. All *Non-Recurring* tasks in the **entire** schedule for the **entire** year will be scheduled.
- **20a. Sch ALL TASKS Rows button** – Select the rows in the *Master Schedule worksheet* for which you wish to schedule *All* tasks. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes.* *All* tasks will be scheduled for the selected rows.
- **20b. Sch ALL TASKS Entire button** – Click anywhere inside the Master *Schedule worksheet*. Then click this button. If the *Prompt is on* checkbox is check, then click *Yes*. *All* Tasks in the **entire** schedule for the **entire** year will be scheduled.

Current Cell Information Group

The Current Cell Information Group is used to provide information about a selected task in a selected week. To use the Cell Information group perform the below steps:

- Click the *Cell Info* button
- Click inside any cell in the *Master Schedule* worksheet
- Observer the Current Cell Information Group text boxes:
  - *No of Perf* – the number of times the currently selected task has been scheduled to be performed in the currently selected week
  - *Hours* – the number of hours required to perform the performances already scheduled for the selected task in the currently selected week
  - *Minutes* – the number of minutes required to perform the performances already scheduled for the selected task in the currently selected week
  - *Wrks per wk* – the number of workers required to perform the performances already scheduled for the selected task in the currently selected week
  - *Task Period* – the type of period the task is associated with (Weekly, Biweekly, Monthly, Seasonal, or non-recurring")

Current Column Information Group

The Current Column Information Group is used to provide information about a column/week. To use the Column Information group perform the below steps:

- Click the *Column Info* button
- Click inside any column in the *Master Schedule* worksheet
- Observer the Current Column Information Group text boxes:
  - *Wkly* – number of *Weekly* tasks scheduled for the selected column/week
  - *BiWkly* – number of *Biweekly* tasks scheduled for the selected column/week
  - *Win* – number of *Winter* tasks scheduled for the selected column/week
  - *Spr* –n umber of *Spring* tasks scheduled for the selected column/week
  - *Sum* – number of *Summer* tasks scheduled for the selected column/week
  - *Fall* – number of *Fall* tasks scheduled for the selected column/week
  - *Non-Recur* – number of *Non-Recurring* tasks scheduled for the selected column/week
  - *Total* – total number of tasks scheduled for the selected column/week

Aborting Auto Scheduling Process

- If you change your mind about completing one of the auto-scheduling processes you have started, you can abort the process by clicking the red **ABORT AUTO SCHEDULING** button.
- You might want to do this if the process is taking longer than you expected.
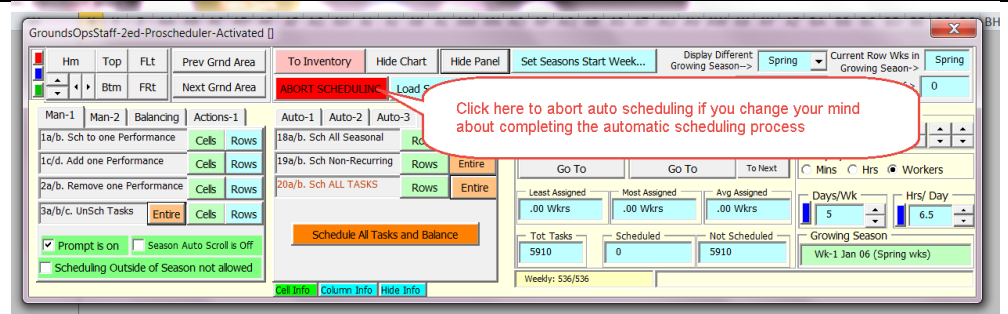
Workload Balance Group

The **Workload Balance Group** is used to help you create a balanced schedule. This group provides you with information you need to make fine adjustments to your schedule to ensure tasks are scheduled in a balance way.

- The follow items are described below:
  - *Least Loaded textbox* – indicates the week that is least loaded and therefore requires the least staffing in the currently selected growing season or performance period.
  - *Least Loaded Go To button* – move to the *Least Loaded Week* in the worksheet.
  - *Most Loaded textbox* – indicates the week that is most loaded and therefore requires the most staffing in the currently selected growing season or performance period.
  - *Least Loaded Go To button* – move to the *Most Loaded Week* in the worksheet in the currently selected growing season or performance period.
  - *To First button* – go to the first unscheduled task in the *Master Schedule*.
  - *To Prev button* – go to the previous unscheduled task in the *Master Schedule*.
  - *To Next button* – go to the next unscheduled task in the *Master Schedule*.
  - *Least Assigned textbox* – the number of workers, hours, or minutes assigned to the *Least Loaded Week* in the currently selected growing season or performance period.
  - *Most Assigned textbox* – the number of workers, hours, or minutes assigned to the *Most Loaded Week* in the currently selected growing season or performance period.
  - *Avg Assigned textbox* – the average number of workers, hours, or minutes assigned for the currently selected growing season or performance period*.
  - *Total Tasks in Schedule* – the total number of grounds tasks in the *Master Schedule*.
  - *Scheduled* – the number of grounds tasks in the *Master Schedule* that has already been scheduled
  - *Tasks Not Scheduled* – the number of grounds tasks in the *Master Schedule* that have not been scheduled yet.

Productivity Group

The **Productivity Group**.

- The follow items are described below:
  - ○ *Avail Workers In Week textbox* – indicates number of worker available per week. You will enter this number and/or use the up down arrow to adjust this value. You can use the Blue button to set number of worker available per week to the number computed by the ***Time To Perform*** report. You can use the **Green** button to set number of worker available per week to the number from the ***Avg Assigned*** box in the ***Workload Balance*** section of the ***ProScheduler*** tool. The ***Avg Assigned*** number represents the average number of workers required for the season currently displayed in the ***Display Different Growing Season ➔*** box.
  - ○ *Display Mode Frame* – Allows you to switch to displaying staffing in Minutes, Hours, or number of workers.
  - ○ *Days/Wk frame* – indicates the number of days per week being used by ***ProScheduler*** to create the Master Schedule. Click the **Blue** button to set to the number in your configuration form.
  - ○ *Hrs/Day frame* – indicates the number of productive hours per day for the grounds workers. Click the **Blue** button to set to the number in your configuration form

Using the Master Schedule Chart and Color Coding
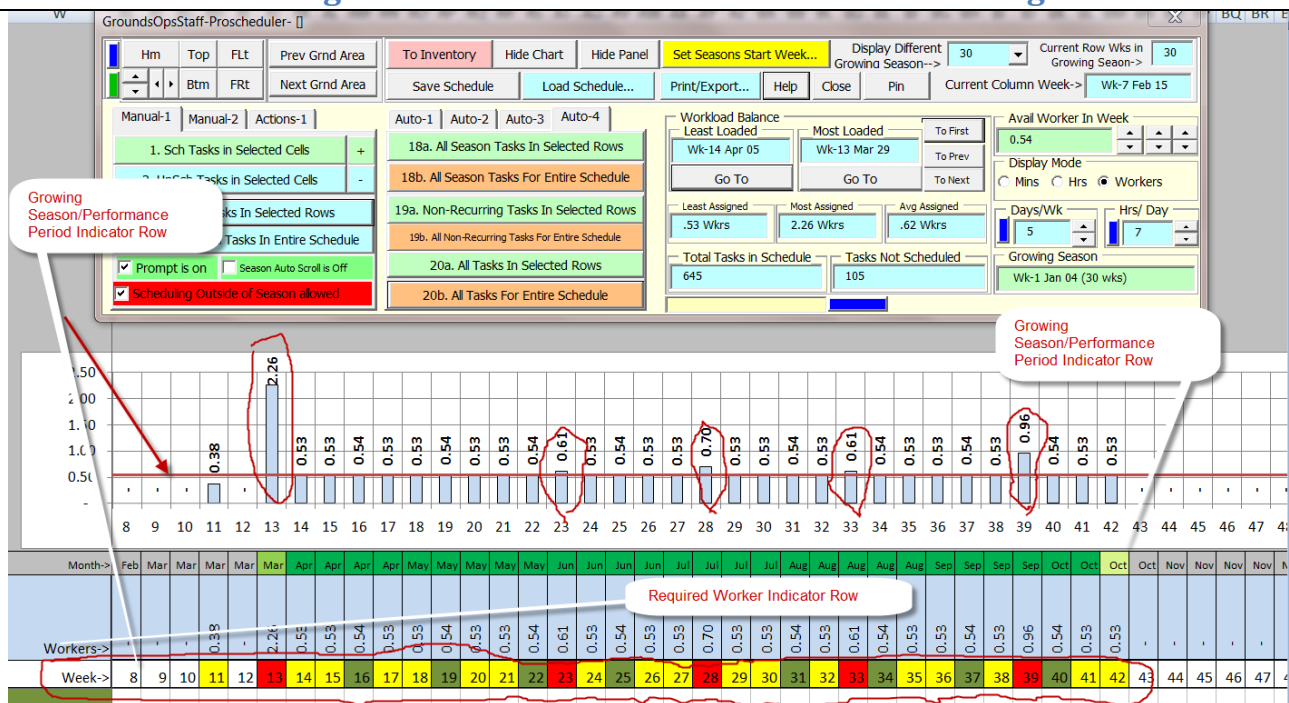
The **Master Schedule Chart,** the *Growing Season/Performance Period Indicator Row* and *Required Worker Indicator Row* provides a complete visual of your schedule results and quickly point out to you where your schedule has assigned more tasks than there are available workers and when you have workers available in certain weeks.

- The follow items are described below:
  - o **Master Schedule Chart** – the bars in the chart are the number of staffing required by the schedule expressed in *number of worker*, or *hours*, or *minutes*. The red line in the chart represents the number of workers available in *number of worker*, or *hours*, or *minutes.* You can quickly see where tasks need to be shifted to achieve a more balance schedule.
  - o *Week Indicator Row* – The color code for this row provides another visual of the level of balance of your schedule. *Red* means more tasks are scheduled than there are available workers. *Yellow* means that there are still available workers to assign more work to. Green means that the tasks scheduled is roughly equal to the number of workers available. *White* means that no tasks have been scheduled for the week.

Schedule Balancing Tab (Final Schedule Balancing)		
	Old Group Toolbox	**New Group Toolbox (May 2014)**
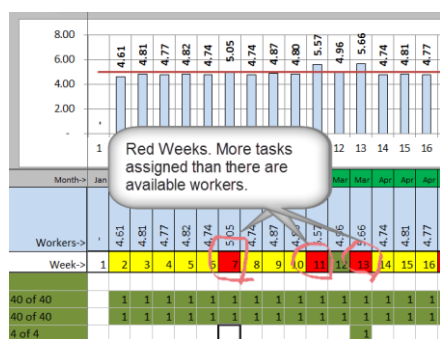
Once the Master Schedule has been completed either manually or automatically there may be a need to further balance the schedule. Some weeks may have more tasks assigned to them than there are available workers. When this occurs, the week number indicator cell will have a red background. Use button 9c, 9d, 9e, and 9f to automatically shift non-recurring tasks to the right or left.

- Use the following technique to balance the schedule.
  - o *9c. Balance Selected Red Week (Shift Right)* – click inside the worksheet on a week with a red background in the week indicator row. Then click this button. Non-recurring tasks starting from the top will be shifted to the right to an available week until the week is no longer over loaded.
  - o *9d. Balance All Red Weeks (Shift Right)* – Non-recurring tasks starting from the top will be shifted to the right to an available week until the week is no longer over loaded for **all** red weeks. The process can be aborted by click this button again if you decide not to process remaining red weeks.
  - o *9e. Balance Selected Red Week (Shift Left)* – click inside the worksheet on a week with a red background in the week indicator row. Then click this button. Non-recurring tasks starting from the top will be shifted to the left to an available week until the week is no longer over loaded.
  - o *9f. Balance All Red Weeks (Shift Left)* – Non-recurring tasks starting from the top will be shifted to the left to an available week until the week is no longer over loaded for **all** red weeks. The process can be aborted by click this button again if you decide not to process remaining red weeks.
- *NOTE:* After you complete balancing your schedule, you must check to be sure *ProScheduler* did not shift tasks into periods your do not want them for operational reasons or for other special considerations that you have about the tasks.

Using Print/Export to Export the Chart and the Weekly Schedules to Excel for Printing
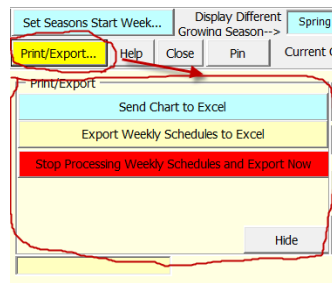
The **Print/Export** menu is used to send the **Master Schedule** and the **Master Schedule Chart to Excel.** Once these two items are exported to Excel, you may use all of the Excel features to edit the output, add notes, change format and send to the printer. By exporting these two item to Excel, you gain all the power and flexibility of Excel to act on the output including printing, sending as an attachment in an email, converting to acrobat format and so on.

- **Exporting the Master Schedule Chart** – follow the below steps:
  - Click the *Print/Export* button
  - Click the *Send Chart* to Excel button
  - Click "Yes" to confirm
  - The Chart will be sent to a temporary Excel workbook *GroundsOpsExportTempX.xls* (*X* is a number).
  - The temporary workbook will might appear on the screen depending on what other programs you have running. If not, activate it by clicking on it in the task bar or using the ALT-TAB key combination.
  - When you are finished viewing and or editing the temporary workbook; (1) you can close it without saving it; (2) save it under a different name and close it; (3) leave it open for later viewing during this session without saving it; or (4) save it under a different name and leave it open. Recall that all workbooks with a file name beginning with "*GroundsOpsExportTemp*" will be delete the next time your start up *GroundsOpsStaff*.

- **Creating and Exporting the Weekly Schedules** – follow below steps:
  - Click the *Print/Export* button
  - Click the *Export Weekly Schedules to Excel* button.
  - Click "Yes" to confirm.
  - Select the Week or Weeks from the *Week Selector* box as show in the screenshot to the left.
  - Click the *Accept* button.
  - The first worksheet in the Weekly Schedule workbook will look like the below screenshot and there will be a worksheet for each week you selected.
  - The *List of Scheduled Weeks cells* contain hyperlinks you make it easier for you to navigate to the various weekly schedule worksheets.

- **Stopping the Weekly Schedules Processing**– the weekly scheduling process might take a long time to process depending on how many weeks, areas, and tasks are involved in the processing. If you select many weeks to export and change your mind because you do not wish to wait for all the weeks to be process you can click the "*Stop Processing Weekly Schedules and Export Now*" button to stop the processing. The week in process at the time you click the stop button will be incomplete and will contain the note "*Caution: The user stopped processing before the schedule was complete*" in cell A5.
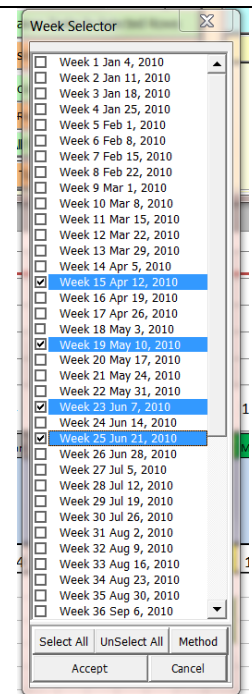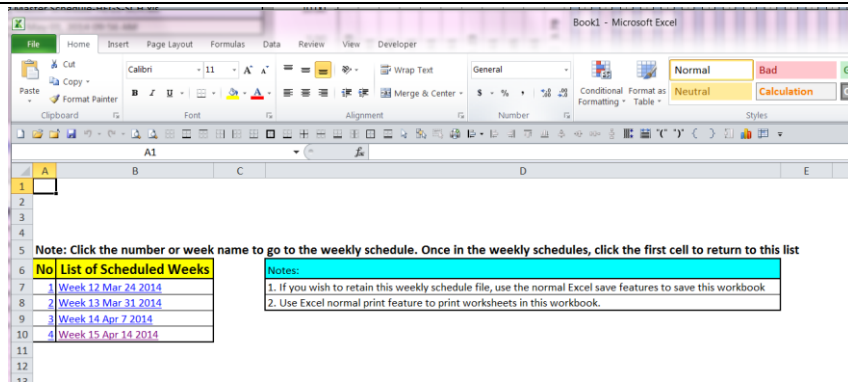
Exported Weekly Schedule (complete)

Exported Weekly Schedule (Incomplete due to stop button)

Exported Chart

GroundsOpsExportTemp1.xls [Compatibility Mode] - Microsoft Excel

ProScheduler Grounds Schedule [C:\Drive_H\$$$ Duke GroundsOpsStaff Training\Duke Training Master Schedule-HEGS-SCH.xls] Last Saved May 01, 2014 09:56 AM				
Productivity Data		Staffing for The Year		Staffing for Selected Season	
Days per week	5.00	Least Required Workers per Week	0.61	Least Required Workers per Week	12.45
Productive Hrs Per Days	6.00	Least Loaded Week	Wk-2 Jan 13	Least Loaded Week	Wk-17 Apr 28
Avail Workers	6.00	Most Required Workers per Week	13.20	Most Required Workers per Week	13.20
		Most Loaded Week	Wk-28 Jul 14	Most Loaded Week	Wk-28 Jul 14
		Avg Required Workers	8.18	Avg Required Workers	12.94

Series "Req Staffing" Point "29"
Value: 12.63

Training Exercises

NOTE: Click item in order as marked by the item number in each screen shot. Click 'Yes' and 'Ok' when prompted to do so. Observe the screen, worksheet and read all prompts and messages after each mouse click. Wait until the next needed toolbox to appear. Do not click while ProScheduler is processing your last step.

	1	2	3
A	Starting GroundsOpsStaff		
B	Switching from Demo Mode and navigating to the inventory worksheet	Opening the "Sample-4 Training File"	
C	Selecting the records for "Zone 1"	• Run "Time to Perform" report • Activation ProScheduler Toolbox	

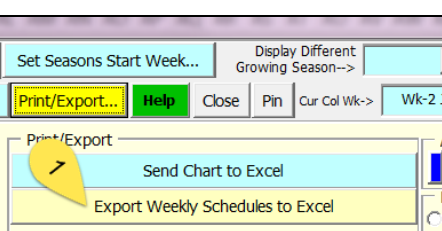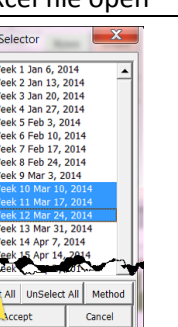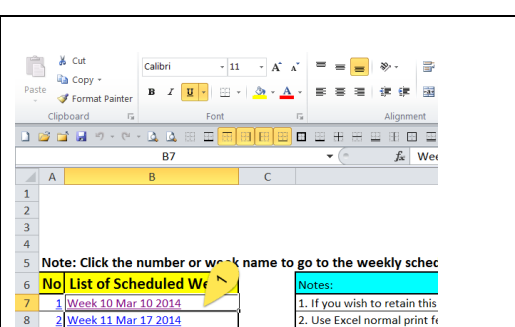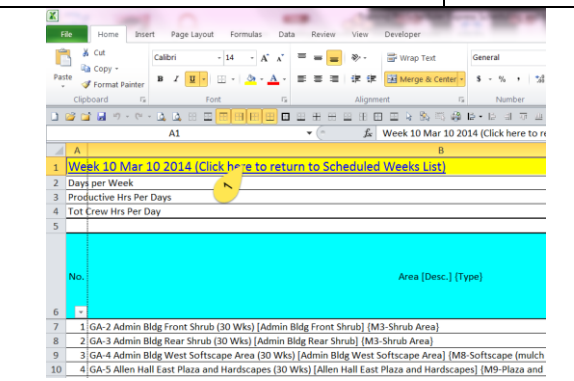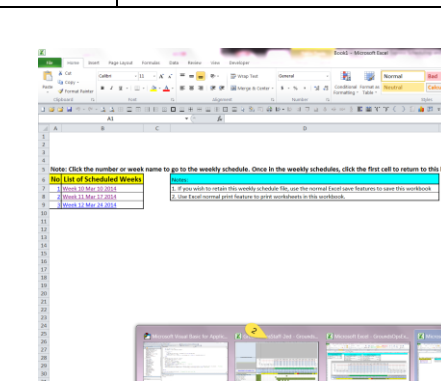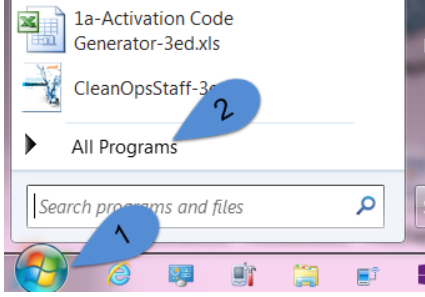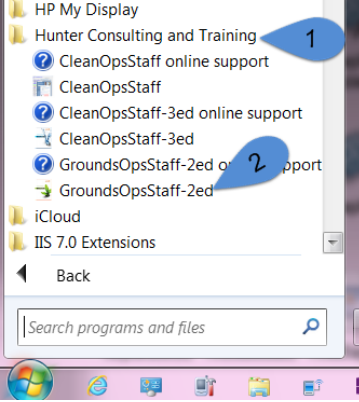|			
D	Creating "Master Schedule" from "Time to Perform" report	Schedule all task for the entire Master Schedule	• Shift half of the BiWeekly Task one week to left • Shift tasks for all over-scheduled weeks right until the weeks are no longer over-scheduled
D	Send the Master Schedule Chart to an external Excel file	Return to GroundOpsStaff-2ed leaving the newly creately External Excel file open	
E	Start to export Weekly Schedules an external Excel file	Select weeks to export to external excel file	Navigate to desired week in the external Excel workbook
F	Review weekly schedule and then return to the index worksheet of the external Excel workbook	Return to GroundsOpsStaff-2ed leaving the External Excel file open	Unschedule all tasks in master schedule to prepare for next exercise
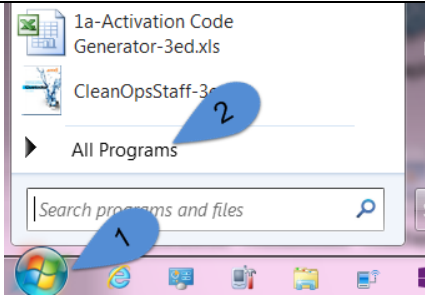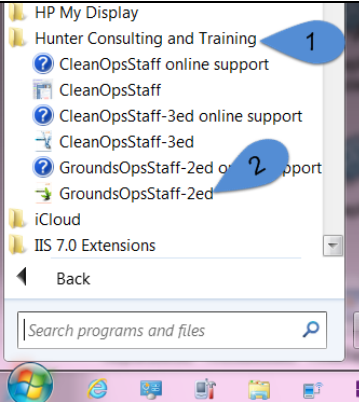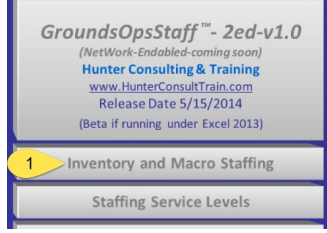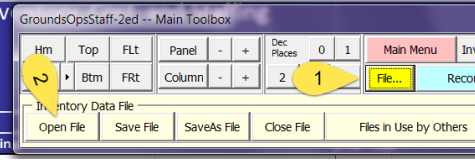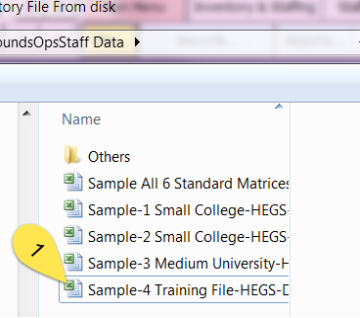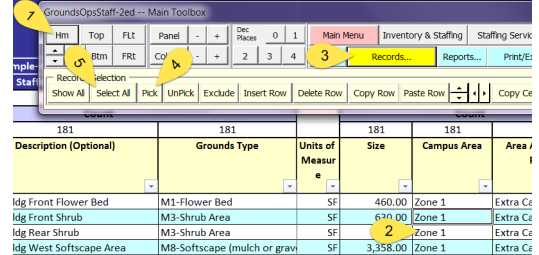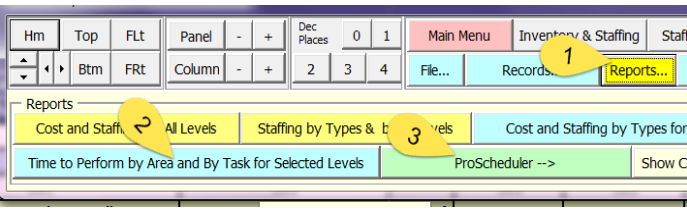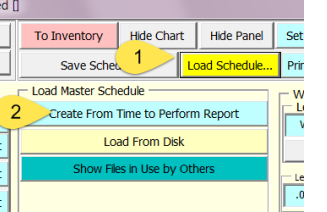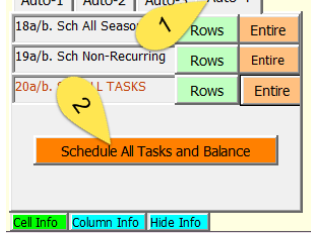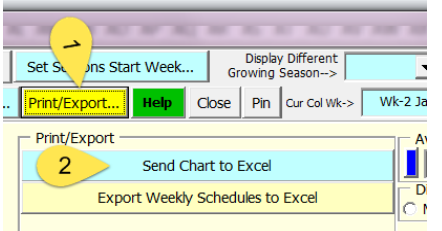
NOTE: Click item in order as marked by the item number in each screen shot. Click 'Yes' and 'Ok' when prompted to do so. Observe the screen, worksheet and read all prompts and messages after each mouse click. Wait until the next needed toolbox to appear. Do not click while ProScheduler is processing your last step.

NOTE: Skip to step D2 if you are continuing from ClickShot Exercise PS-1 above.

	1	2	3
A	Starting GroundsOpsStaff (Skip if GroundsOpsStaff-2ed is already running)	(Skip if GroundsOpsStaff-2ed is already running)	(Skip if GroundsOpsStaff-2ed is already running)
B	Switching from Demo Mode and navigating to the inventory worksheet (Skip if already viewing Macro Staffing and Inventory worksheet)	Opening the "Sample-4 Training File" (Skip if Sample-4 Training file is already open)	(Skip if Sample-4 Training file is already open)
C	Selecting the records for "Zone 1"	• Run "Time to Perform" report • Activation ProScheduler Toolbox	
D	Creating "Master Schedule" from "Time to Perform" report	With one mouse click, schedule all tasks for the entire Master Schedule and automatically balance by shifting half of the BiWeekly Tasks one week to the left and shifting tasks for all over-scheduled weeks to the right until the weeks are no longer over-scheduled	
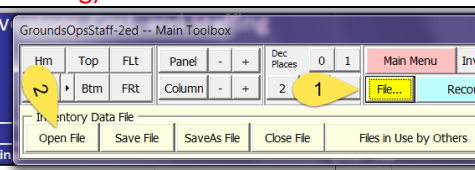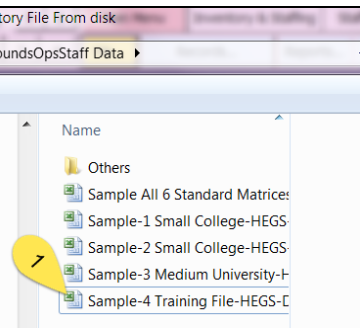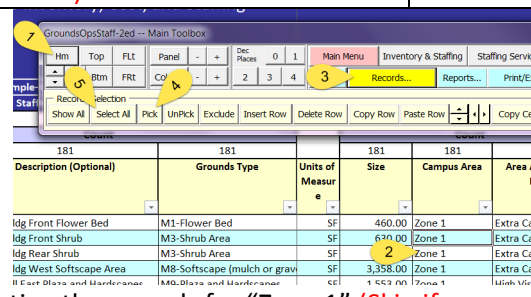
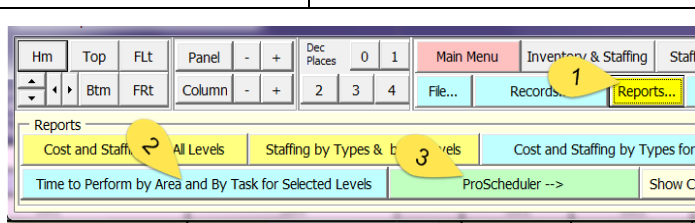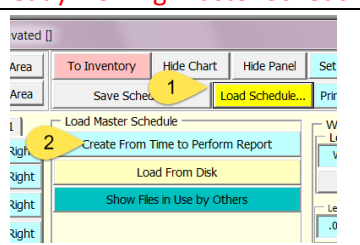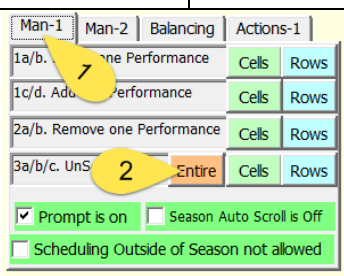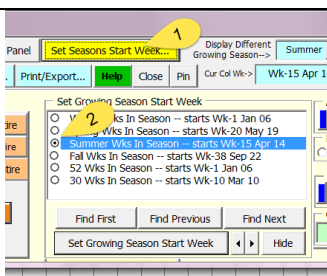|		
D	Send the Master Schedule Chart to an external Excel file	Return to GroundOpsStaff-2ed leaving the newly creately External Excel file open
E	Start to export Weekly Schedules an external Excel file	Select weeks to export to external excel file Navigate to desired week in the external Excel workbook
F	Review weekly schedule and then return to the index worksheet of the external Excel workbook	Return to GroundsOpsStaff-2ed leaving the External Excel file open

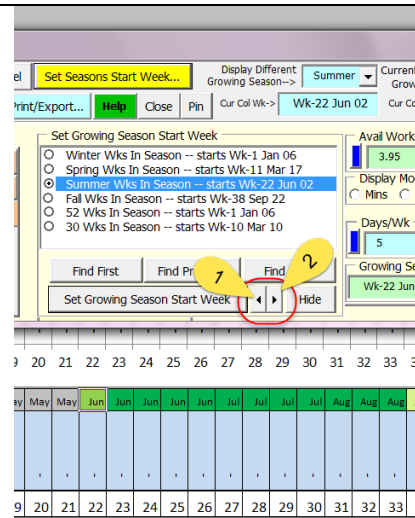## ClickShot Exercise PS-3: Setting Season Start Week

NOTE: Click item in order as marked by the item number in each screen shot. Click 'Yes' and 'Ok' when prompted to do so. Observe the screen, worksheet and read all prompts and messages after each mouse click. Wait until the next needed toolbox to appear. Do not click while ProScheduler is processing your last step.

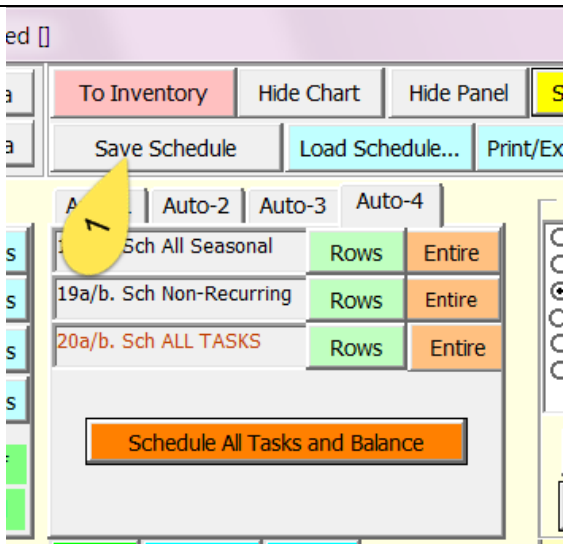|	1	2	3
A	Starting GroundsOpsStaff (Skip if GroundsOpsStaff-2ed is already running)	(Skip if GroundsOpsStaff-2ed is already running)	(Skip if GroundsOpsStaff-2ed is already running)
B	Switching from Demo Mode and navigating to the inventory worksheet (Skip if already viewing Macro Staffing and Inventory worksheet)	Opening the "Sample-4 Training File" (Skip if Sample-4 Training file is already open)	(Skip if Sample-4 Training file is already open)
C	Selecting the records for "Zone 1" (Skip if you are already viewing Master Schedule)	(Skip if you are already viewing Master Schedule) • Run "Time to Perform" report • Activation ProScheduler Toolbox	
D	(Skip if you are already viewing Master Schedule) Creating "Master Schedule" from "	Unschedule all tasks in the Master Schedule	• Open Set Seson Start Week group • Select season to change start week
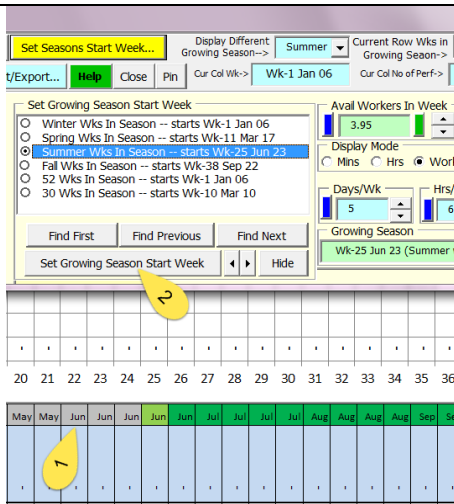
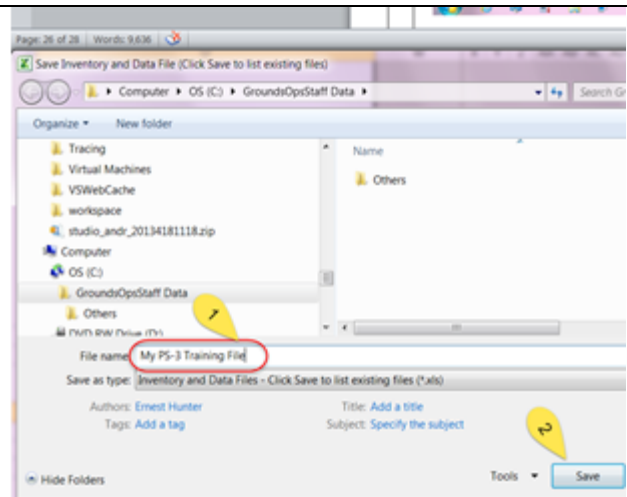|		
D	 • Click on First week in June (Week 22) as new start week for Summer Season • Click Set Growing Season Start Week button and observe the green highlight in the "***Month->***" row of the worksheet shift to indicate the new start week.	 • Use Right and Left arrow to set the start week by moving the season. • Use the arrows to move the start week back to Week 24
E	 Start to save Master Schedule	 Save file as "***My PS-3 Training File***"