

SECTION 1 – INSTALLATION AND STARTUP

1.1 INSTALLATION

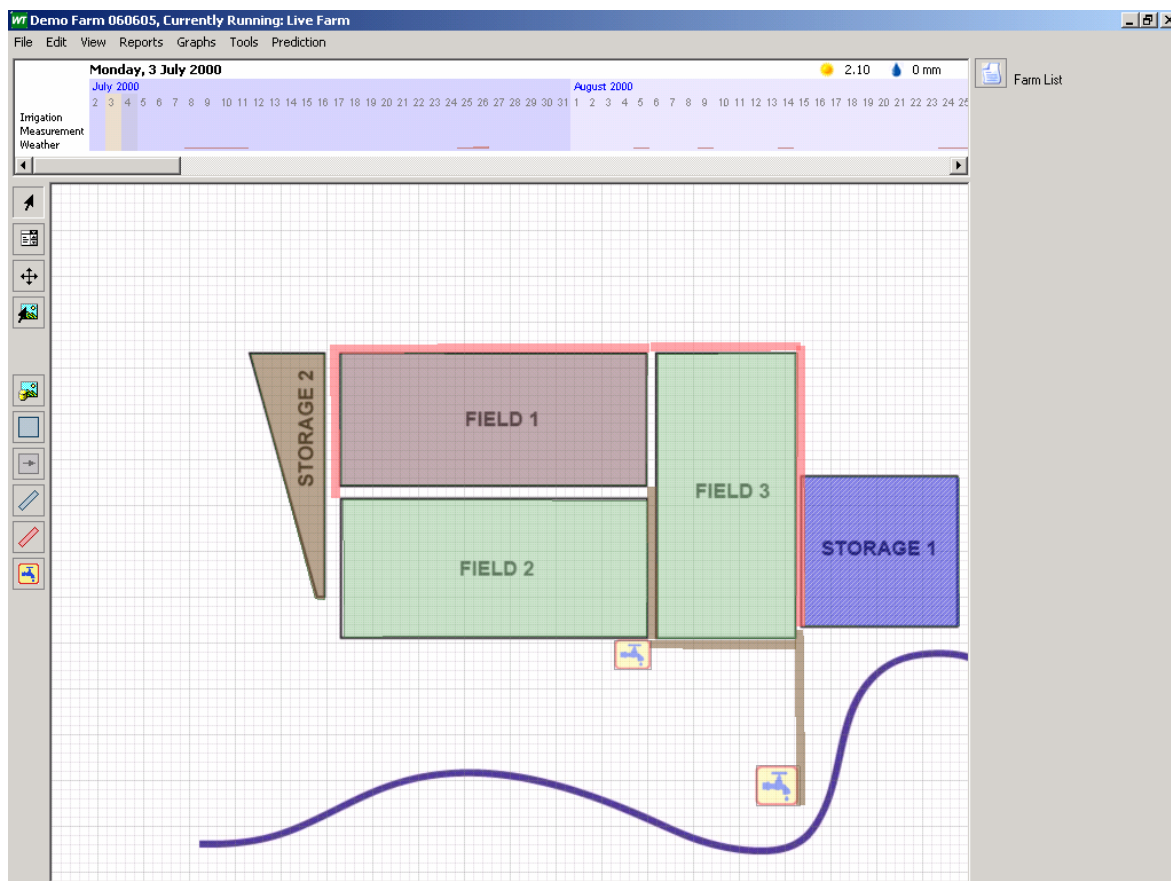
- ◆ Double click the wtsetup.exe file to begin the installation process.
- ◆ Follow installation instructions.

1.2 GETTING STARTED

- ◆ Double click the Watertrack™ icon on your desktop.
- ◆ Alternatively go Start > Programs > Watertrack Beta.
- ◆ WaterTrack™ will open in a window as below showing the farm layout.



WaterTrack
Demo



SECTION 2 - USING WATERTRACK™

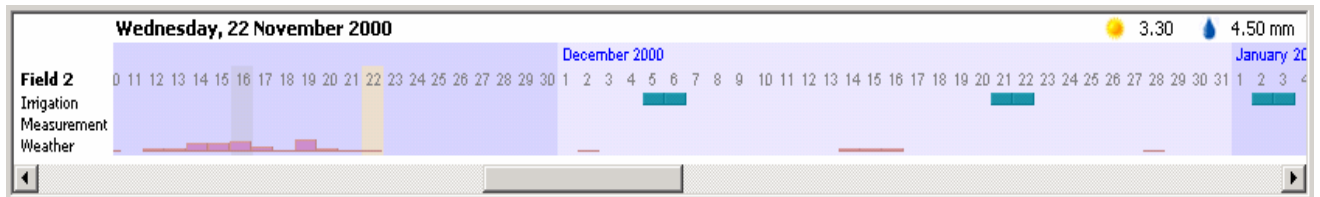
WaterTrack™ operates in 4 modes that are chosen by the buttons on the left side of the screen, they are Operational Mode, Setup Mode, Design Mode and Background Adding and Modifying. By choosing the desired mode, and selecting the element of interest on the screen the user is able to change its appearance, its characteristics and view the data associated with that element on any given day within the loaded weather set.



2.1 OPERATIONAL MODE



Once loaded, the demo farm is automatically in operational mode. The characteristics of the farm are pre-defined and WaterTrack™ is able to show data on each element, each day. To view this daily calculations simply select an element for example a field, then move the calendar bar to the desired day by clicking on it.



The values for the chosen element that are calculated by WaterTrack™ for that given day will be shown in the Daily calculations panel on the lower right hand side of the screen.

Reports for each element are available by having that element selected, which will change it to a darker colour on the screen, select the drop down reports menu and choosing the Report that matches the chosen element, be it Field, Channel or Storage. The user will then be prompted to choose a time frame to be shown in the report and the report will appear on the screen.

Daily Calculations	
Volume (ML)	0.00
Upper Pro. (mm)	68.30
Lower Pro. (mm)	200.00
Inflows (ML)	
Irrigation	0.00
Rainfall	2.03
Outflows (ML)	
Irrigation	0.00
Rainfall	0.00
Losses (ML)	
Seepage	0.00
Transpiration	1.01
Evaporation	0.47
Profile Fill	0.54

2.2 SETUP MODE



Setup mode allows the user to alter the characteristics of each element. Changes can be made to field size, storage volumes, soil characteristics, channel and drain widths and lengths. Channels and drains can also be associated with fields and pumps for different irrigation operations. All these options and more are available simply by selecting the desired element whilst in setup mode.

Soils are classified by the USDA standard, a table is provided in the full version to aid the user in classification, and parameters are set for the water holding capacity in both the upper and lower soil layers. Pumps are given a maximum flow rate and storages are given a maximum inflow to dictate how much water the farm can intake.

Water allocation is also input in the setup mode for River pumps and Bores. When running a prediction this allows WaterTrack™ to report whether or not it was able to supply adequate water to the farm inside the given allocation.

The screenshot shows a 'Farm List' dialog box with a 'Storage Setup' section. The 'Name' field is set to 'Storage 1'. The 'Soil' field is set to 'Soil Type C'. The 'Volume to Area' field is set to 'Volume To Area'. The 'Max Capacity' field is set to '500.00' ML. The 'Starting Volume' field is set to '263.00' ML. The 'Daily Inflow Capacity' field is set to '80.00' ML. The 'Overflow Catchment' field is set to 'Storage 2'. The 'Soil Profile at Start' section has 'Upper' set to '70.00' mm and 'Lower' set to '200.00' mm.

2.3 DESIGN MODE



Design mode allows the user to add new elements (except fields in this demo version) to the farm and alter the appearance of existing elements. Selecting an existing item will show all corners or endpoint's of elements as circles that can be moved, using click and drag, to change shapes or locations of elements.

Using the Design toolbar allows the user to select an element and then add that element to the design. The buttons are, from the top down, Modify Background, Add Storage, Add Field, Add Supply Channel, Add Drain and Add Off-Farm Pump. All these elements are drawn by left clicking at vertices and clicking on vertices already created to end.



2.4 IMPORT BACKGROUND



This feature allows the user to import a background picture that may be in any picture format. Aerial photos can even be used where a map is unavailable. This background picture forms the basis of the farm layout but does not need to be to scale as all dimensions are entered in the setup mode.

2.5 REPORTS



Reports are the real strength of WaterTrack™, with the most important being the Whole Farm Water Balance Report. This along with all the other reports can be found in the drop down menu under Reports. For a report on an individual item simply highlight that item in operational mode, then select the report you would like from the drop down menu, select the time period for the desired report when prompted, and after a brief calculation period it will be displayed. Reports are available for Storages, Fields, Channels and Drains, as well as three whole farm reports that summarise the performance of water use around the farm.

2.6 GRAPHS

Graphs are available to show both volume of water stored on a surface, which will allow users to follow storage volumes, and volume of water stored in the soil profile. Both these graphs are found by selecting the desired element, choosing a graph and then the dates between which the graph will show.

2.7 PREDICTION MODE

Prediction mode allows WaterTrack™ users to analyse different weather and planting scenarios, with WaterTrack™ doing the irrigation and pump scheduling according to available water, including supplementary flows. Although prediction mode is disabled in this demo version, it will give WaterTrack™ users the power to test different cropping options against different weather scenarios.