



2010 Irrigated Crop Production Update Conference – New Way Irrigation Ltd

Dave Gross – Sales Manager

Watertronics History



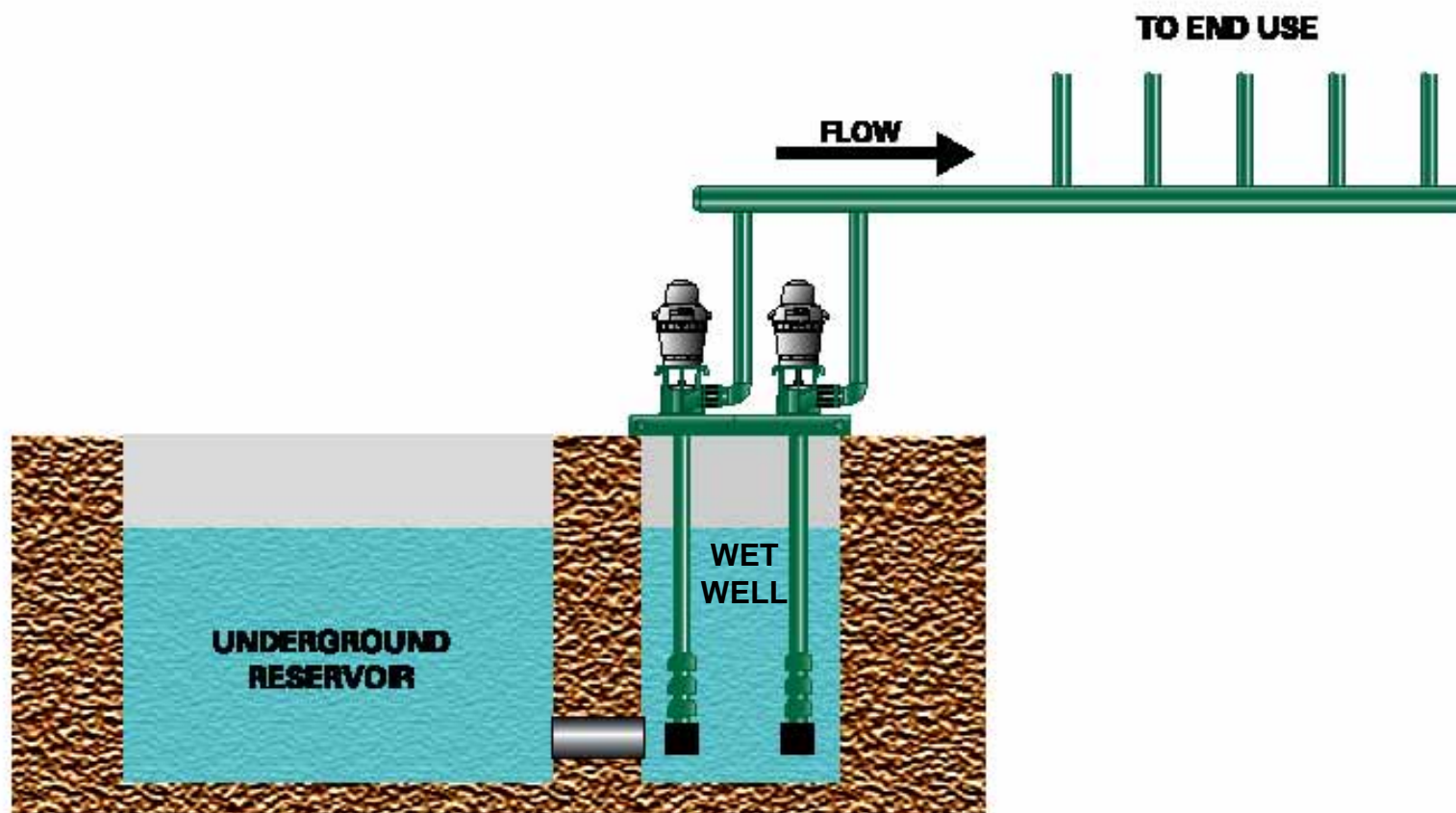
- Watertronics is a Hartland, Wisconsin based company with 80 employees
- In 1987, began manufacturing of and marketing packaged pump stations.
- Watertronics manufactures engineered-to-order packaged water pumping systems for the golf, landscape, municipal/commercial and agricultural markets

- Vertical Turbine Pump Stations
- Centrifugal Pump Stations
- Control Panels
- Pump Telemetry
- Custom Pumping applications
 - Engineered solutions that create most efficient means of operation
 - Multiple pump and control configurations and options
 - Complete pre install testing and operation

Vertical Turbine Stations w/o enclosure



Vertical Turbine Stations with wet well



Vertical Turbine Station Applications and Benefits

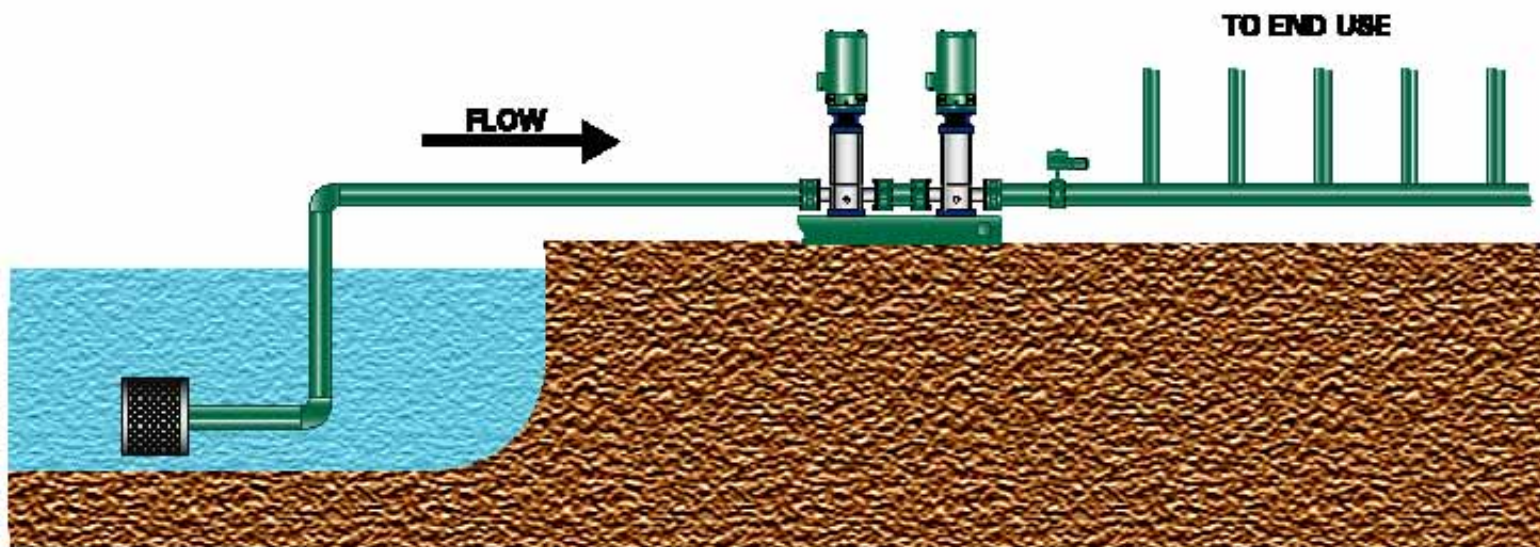
- Surface water applications such as pond, reservoir, or river
- Vertical Turbine pumps offer efficient operation and maintenance
- Do not need to prime
- Pump station can be set up with optional enclosure

Horizontal Centrifugal Pump Stations



- Surface water lift stations or pressure booster applications
- Good efficiency with compact footprint
- Easy to inspect pump element
- Needs to be primed

Centrifugal Suction Lift Pump Station from reservoir



Centrifugal Pressure Booster Station



*Incoming
Pressure*

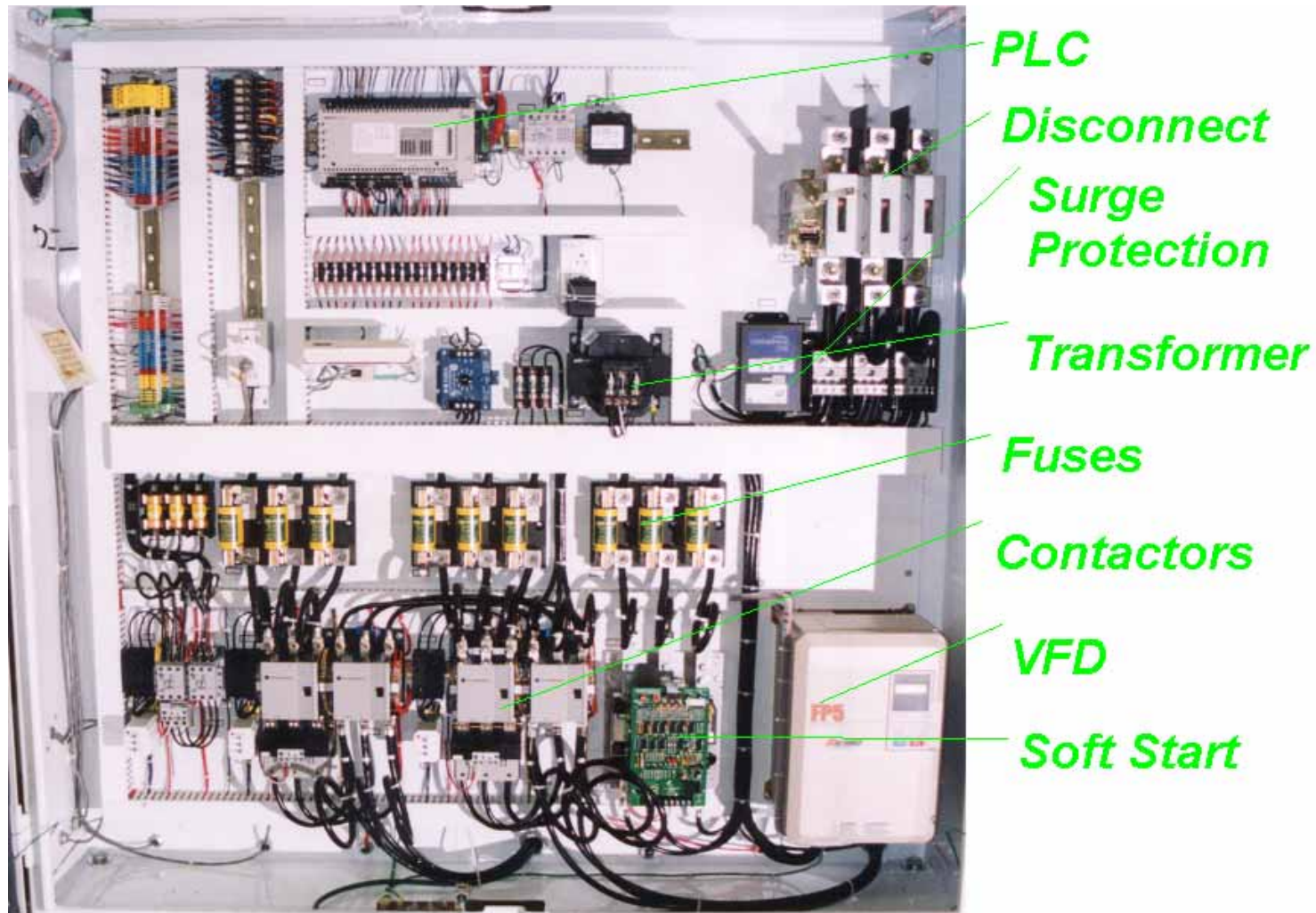


Complete Pump Station with Composite Enclosure



- Corrosion Free structure for extended life –
Will not rust or rot
- Superior Impact Resistance
- Minimize noise of pumps with sound
attenuation

Variable Frequency Drive (VFD) Control Panels

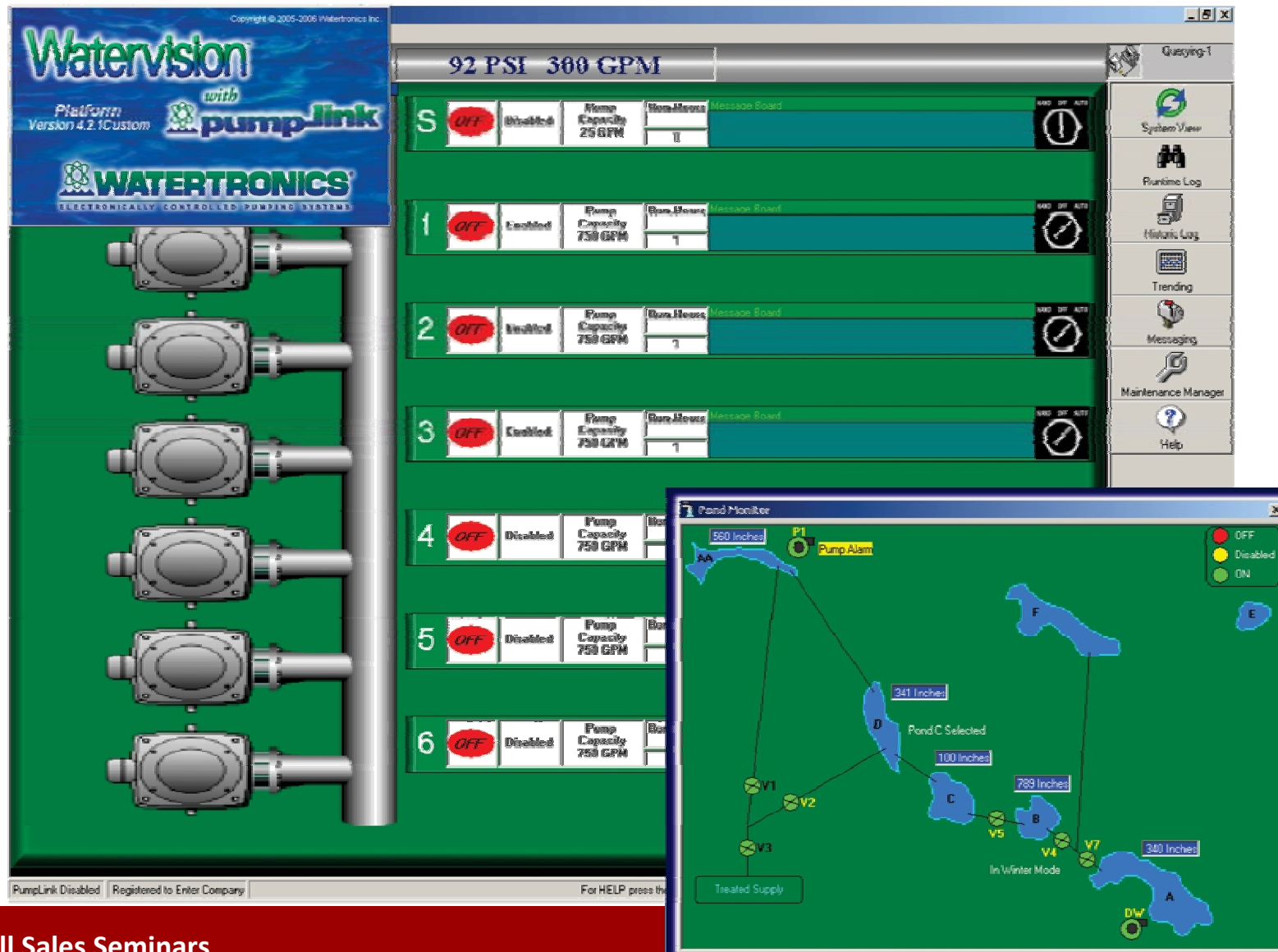


Pump Control Panel benefits



- Graphical Virtual Vision III User Interface displays:
 - Flow and pressure
 - Pump and alarm status
 - Adjustable system pressure set point lowers energy costs
 - Adjustable flushing cycles
- Variable Frequency Drive (VFD) control available
- UL listed NEMA 4 control panel
- Optional sensors for monitoring flow, pressure, and water levels

Watervision Pump Telemetry



Pump Telemetry Applications and Benefits



- Watertronic's Watervision(tm) software package provides remote control and monitoring of pump stations
- View pump stations, maintenance, alarms, and pumping trends from your PC.
- Time and labor savings
- Integration with FieldNET

Market Segment



- Customers who are moving water from a source to a pivot
 - o Pipeline, river / surface water stations
 - o Booster stations
 - o Pump with VFD applications – single or three phase or engine conversion to VFD
- Growers who are linking multiple water sources / pumps with multiple pivots
 - o Take advantage of system automation – system operates at maximum efficiency, time and labor savings
 - o Capitalize on benefits of telemetry – time and labor savings
 - o Larger benefits in energy savings
 - o Safety monitoring of entire water delivery system
- Fit for smaller growers who are using less sophisticated or complex pumping systems, but will still benefit from energy, time or simplicity opportunities created by the system

Competitive Advantage



- We will offer the industries first and only integrated pumping control and irrigation system, joined by common software controls that allow for efficient and automated operation
 - o Water demand driven by the pivot(s)
 - o Pumps automatically managed to provide water through the most efficient means

New Way Solution	Competition
Each pump system is wet well tested prior to shipment for improved quality	System built on site as components arrives on-site
Complete system that has been designed to work together	Built on together components from various suppliers
Full demand-driven integration of pivots & pump network that allows for automated operation	Time frame building unit length
Single, common source for system setup, training, and support	Multiple sources for support making system setup or troubleshooting time consuming and expensive
Integrated safety and security alerts to shut down pumps and / or pivots when there is a system issue	Limited communication between components may prevent system wide alerts

Initial System Startup



- Each pump station system arrives on a skid, fully assembled and ready for placement on a concrete pad or other mounting structure
- Defined pre-start checklists for each product line
 - o what to do when the system arrives on-site, before attempting to start system
- Structured start up documents for each product line
 - o what to do when the system is installed to ensure safe and reliable system initialization
- Pump Support Network service provider arrives on-site to perform startup tasks



Initial System Startup



Pump Service Network (PSN)

- PSN is the national network of trained service partners providing service for Watertronics pump stations and all other brands of pump stations regardless of configuration, age or brand
 - o Setup an startup coordination
 - o Technical phone support for customers and service providers
 - o After market parts sales and ordering one stop
 - o Complete check list of start up and master book of station provided to customer includes: manual, CAD drawings; Back of VFD programs



Maintenance



Station retrofit



Installation



Start up



Stardust Dairy Project—Ready to Ship



Stardust Dairy Project—Control Panel



Stardust Dairy Project— Installed



Stardust Dairy Project



- Performance: 600 GPM at 60 PSI
- Drawing from 3 different ponds
- Advantage: One power line to station
- Floating HDPE suction lines with 180 degree flexible hose connection at shore
- Electric vacuum pump to prime suction line

Stardust Dairy Project--Installed



Stardust Dairy Project—Pond #1



Stardust Dairy Project—Pond #2



A. J. Ochoa Phase I Pump Station:



1. Vertical Turbine Station over Wet Well
2. 480 volt 3 phase incoming power available
3. Splitter manifold on discharge to 4 pivots
4. EBV's for flow efficiency, VFD back-up, etc.
5. 6600 GPM at 135 TDH performance
6. Pressure maintenance pump
7. Pressure regulation
8. Variable Frequency Drive (VFD) control panel
9. Watervision control monitoring
10. Ready for future FieldNet Enterprise control package
11. Sun Shade canopy



Test Process



Each Pump Station is Wet Cell Tested on a 60,000 Gallon test pit to meet your pumping needs.

A. J. Ochoa Phase I, Field Site Photos:



A.J. Ochoa Phase I Field Set:



A.J. Ochoa Phase I Field Set:



A. J. Ochoa Phase I Field Operational:



A.J. Ochoa Phase I Field Operational:



A.J. Ochoa Phase I Field Operational:



Success of First Phase has led to repeat sales



Phase II Sales Includes: 19 pivots, 4 Pump Stations

Lindsay's Irrigation Solutions



Pivots Improve Irrigation Efficiencies



- Apply correct amount of water when needed
 - Pivots save labor and efficiently apply water
 - Simple to operate
 - Powerful money savings options such as, FieldNET
- Boss, Vision, or Basic



Technology Product Portfolio



Center Pivot Controls



Precision Application

Remote Controls





Manage all your pivots from the Internet or your cell phone.

- Simple
- Reduce rising fuel and labor costs
- Improve productivity

SMART TECHNOLOGY WITH MECHANIZED IRRIGATION

Varied Crops



Wheat

Varied Crops



Potatoes



Alfalfa

Laterals



Field Net Presents

The screenshot displays the FieldNET web application interface. At the top, the 'FieldNET' logo is on the left, a landscape image is in the center, and the 'GROWSMART' logo is on the right. Below the logo area is a navigation bar with buttons for 'Home', 'Devices', 'Reports', and 'Alerts'. To the right of these buttons are links for 'Support', 'Account', and 'Log-out'. A secondary navigation bar contains 'List', 'Groups', and 'Communication'. Below this is a search bar with the placeholder text 'Enter Location' and a 'SEARCH' button. To the right of the search bar are buttons for 'CONFIGURE', 'SAVE VIEW', and 'MAP ALL'. The main content area features a map with several circular icons representing pivot points. These icons are color-coded: red, blue, green, and grey. A legend on the left side of the map shows 'Map', 'Hybrid', and 'Satellite' options. At the bottom of the map area, there is a copyright notice: '© 2007 Yahoo! Inc.' and 'Imagery © 2007 InRoads, Data © 2007 InRoads, TeleAtlas'. Below the map area are three view options: 'LIST VIEW', 'THUMBNAIL VIEW', and 'MAP VIEW' (which is selected). At the very bottom, the 'LINDSAY' logo is displayed.

Map View indicates by color the status of each pivot.

FieldNET Case Study

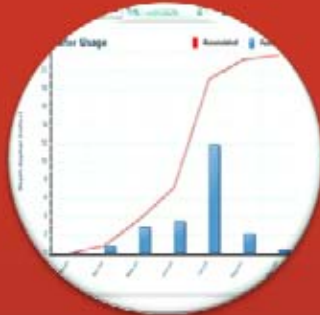


- Time Savings of 75%
- 75% reduction in vehicle fuel usage

A breakthrough in irrigation management.



Customer
Care
Center



Water
Usage
Reports



Voice
Portal for
Mobile
Access



Alerts
Direct to
your
Phone

← **FieldNET....the easy way to manage your irrigation** →

FieldNET Product Options



Cellular RTU

- Easiest installation
- Doesn't require a Bridge

Radio RTU

- Lowest service fees
- Very fast RTU access
- Repeaters increase range

Internet Bridge

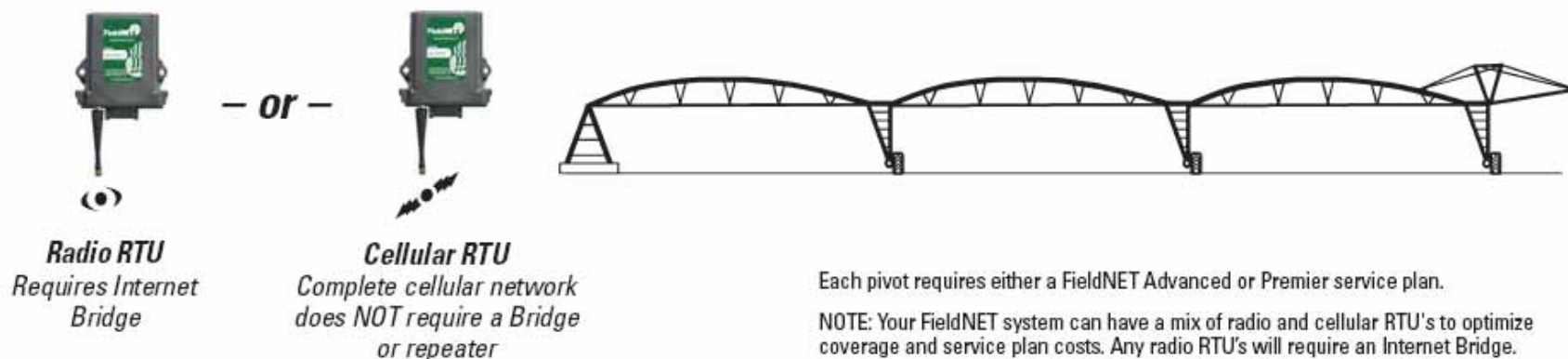
- Bridges radio technology to Internet
- Could be shared by customers and split into separate account



How FieldNET Works.



C. Pivot RTU (remote telemetry unit) – Choice of either radio or cellular communication

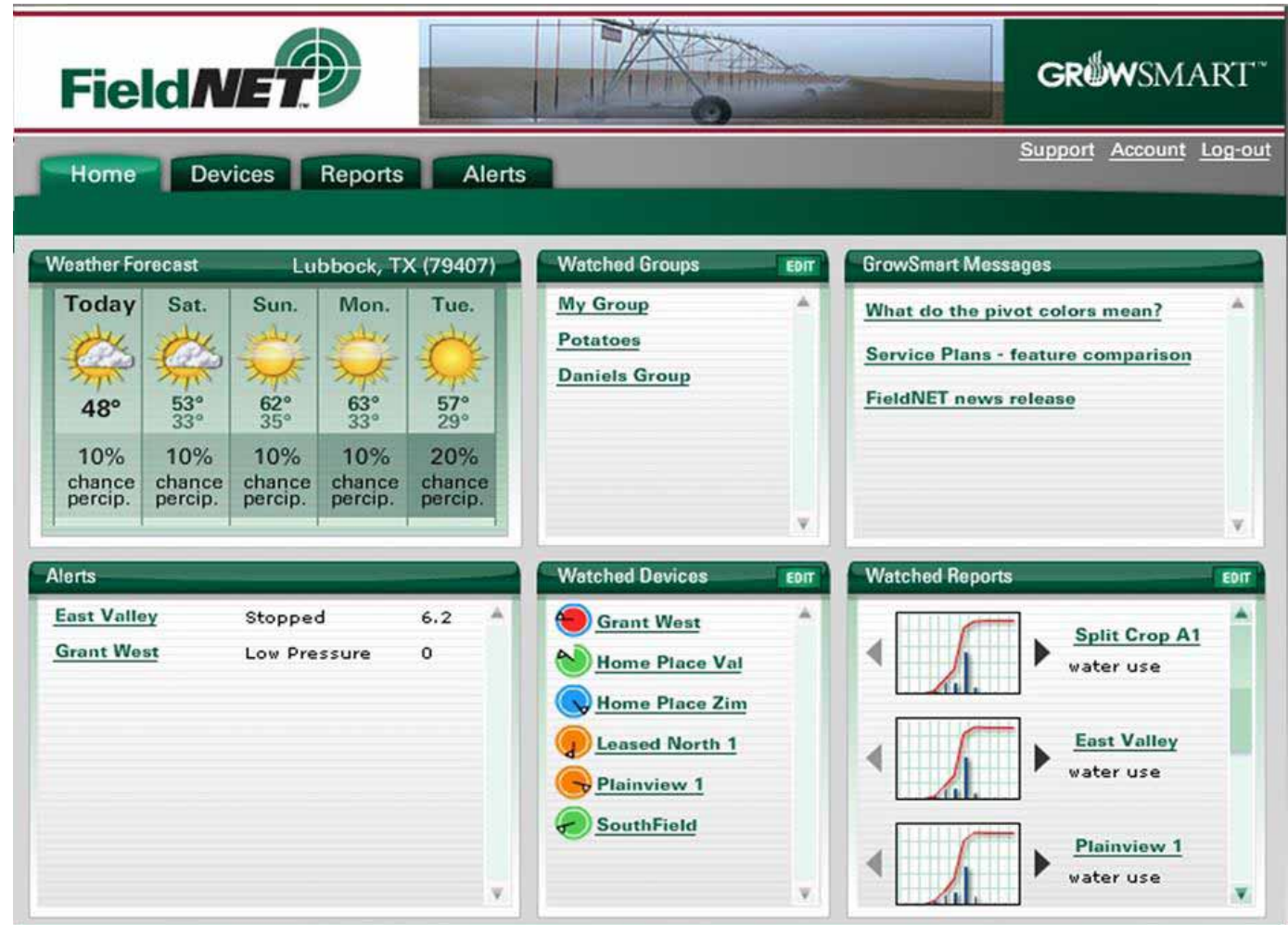


Irrigation System Monitoring



Home Page

- Weather forecast
- Shortcut to groups
- Watch important devices
- Open alerts
- Thumbnail of water usage



Irrigation System Monitoring



Device List

- Current status
- Duration
- Previous status
- Control multiple systems with one click

Home

Devices

Reports

Alerts

[Support](#)
[Account](#)
[Log-out](#)

List

Groups

Communication

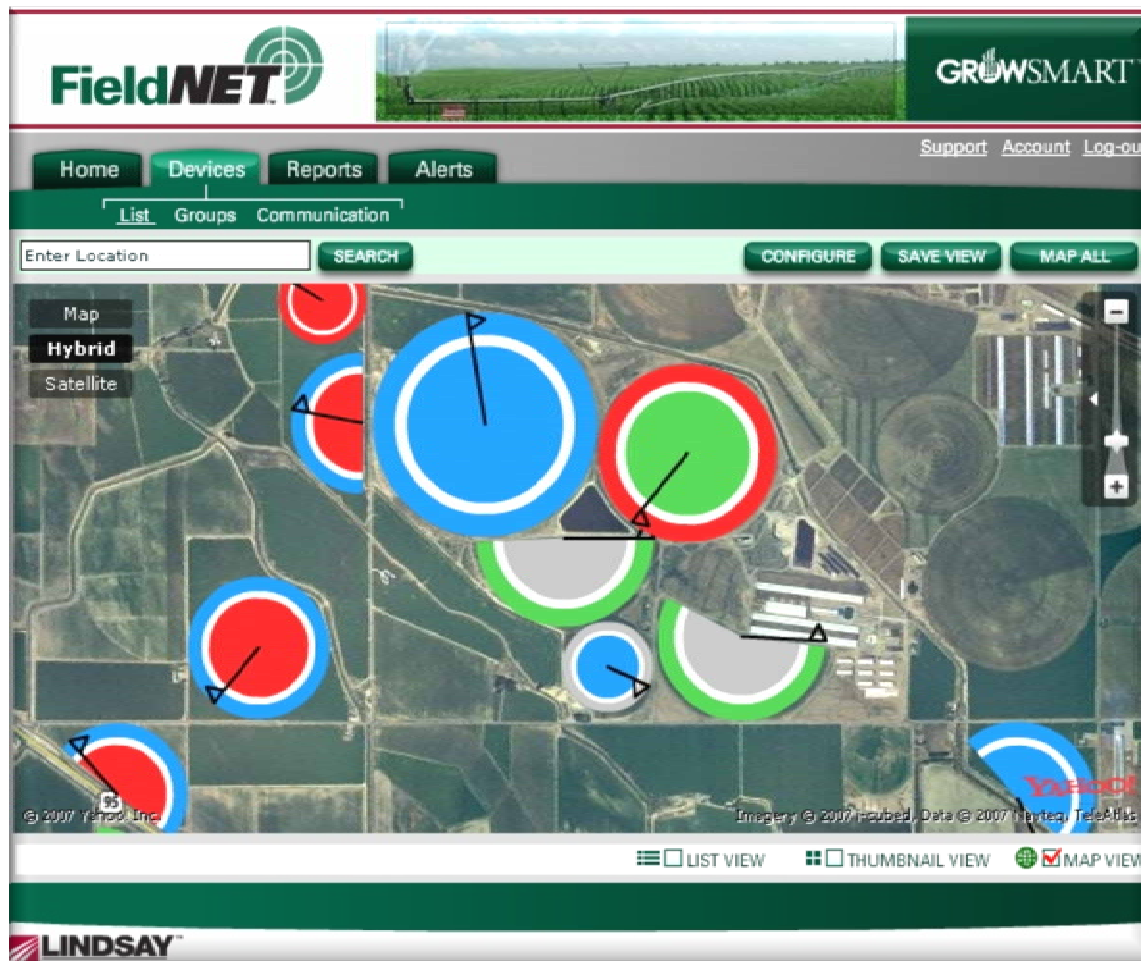
NAME	CURRENT STATUS	DURATION	LAST CHANGE	PREVIOUS STATUS	GROUP
<input type="checkbox"/> Dairy Pivot		0.4 hrs.	Dec 7 2:50 pm		My Group
<input type="checkbox"/> East Valley	Stopped	29.3 hrs.	Dec 6 9:56 am	Stopped	Daniels Group
<input type="checkbox"/> Grant North	Forward dry	1 hrs.	Dec 7 2:16 pm	Reverse dry	Daniels Group
<input type="checkbox"/> Grant South	Service stop	3.2 hrs.	Dec 7 12:03 pm	Forward wet	Daniels Group
<input type="checkbox"/> Grant West	Low Pressure	0 hrs.	Dec 7 3:14 pm	Pressure recovery	Daniels Group
<input type="checkbox"/> Home Place Val	Reverse wet	4.6 hrs.	Dec 7 10:39 am	Reverse wet	Daniels Group
<input type="checkbox"/> Home Place Zim	Reverse wet	4.3 hrs.	Dec 7 11:01 am	Reverse wet	Daniels Group
<input checked="" type="checkbox"/> Leased North 1	Forward wet	29.6 hrs.	Dec 6 9:42 am	Forward wet	Potatoes
<input checked="" type="checkbox"/> Plainview 1	Forward wet	4.7 hrs.	Dec 7 10:32 am	Forward dry	Potatoes
<input type="checkbox"/> SouthField	Stopped	23.8 hrs.	Dec 6 3:29 pm	Reverse wet	Potatoes
<input type="checkbox"/> Split Crop A1	Reverse wet	4.6 hrs.	Dec 7 10:37 am	Restart Delay	Potatoes

☐ Stop Selected | APPLY

☒ LIST VIEW

☐ THUMBNAIL VIEW

Irrigation System Monitoring



Map View
indicates
by color the
status of each pivot.

Irrigation System Monitoring



Vision Zone

- Full control and programmability with Premier
- Stop or start a pivot in just seconds
- Monitor pressure, voltage, flow and temperature

The screenshot displays the FieldNET web interface for a RICE PIVOT system. The interface includes a navigation bar with tabs for Home, Devices, Reports, and Alerts. The main content area shows the Vision Zone for the RICE PIVOT, which is currently in a Service stop state. A circular diagram represents the pivot system's layout, with a position indicator at 272. A table of system parameters is displayed, including Rate (29.47% | .70"), Duration (17.1 hrs), Last Change (Jul 20 2:06 pm), Pressure (0 psi), Volts (519), Temp (69 F), Flow (0 gpm), and Total Gallons. Control buttons for START/STOP, H2O, CHEM, ACC.1, ACC.2, AUTO-REVERSE, and AUTO-RESTART are visible. The interface also shows a status bar indicating the device was last polled on Jul 21 2:47 am.

FieldNET Mike McCarty | Mike McCarty **GROWSMART™**

Support Account Log-out

Home Devices Reports Alerts

List Groups Communication

NAME: RICE PIVOT TYPE: FieldBOSS ID: 0 GROUP: My Group POLL

Revolution Time: 37 hrs 30 min

Position: 272

Status	Service stop
Rate	29.47% .70"
Duration (hrs)	17.1
Last Change	Jul 20 2:06 pm
Pressure (psi)	0
Volts	519
Temp (F)	69
Flow (gpm)	0
Total Gallons	

Set Rate 29.47% .70 in.

Stop CLEAR

Set Service Stop 0

CONTROL START/STOP H2O CHEM ACC.1 ACC.2 AUTO-REVERSE AUTO-RESTART

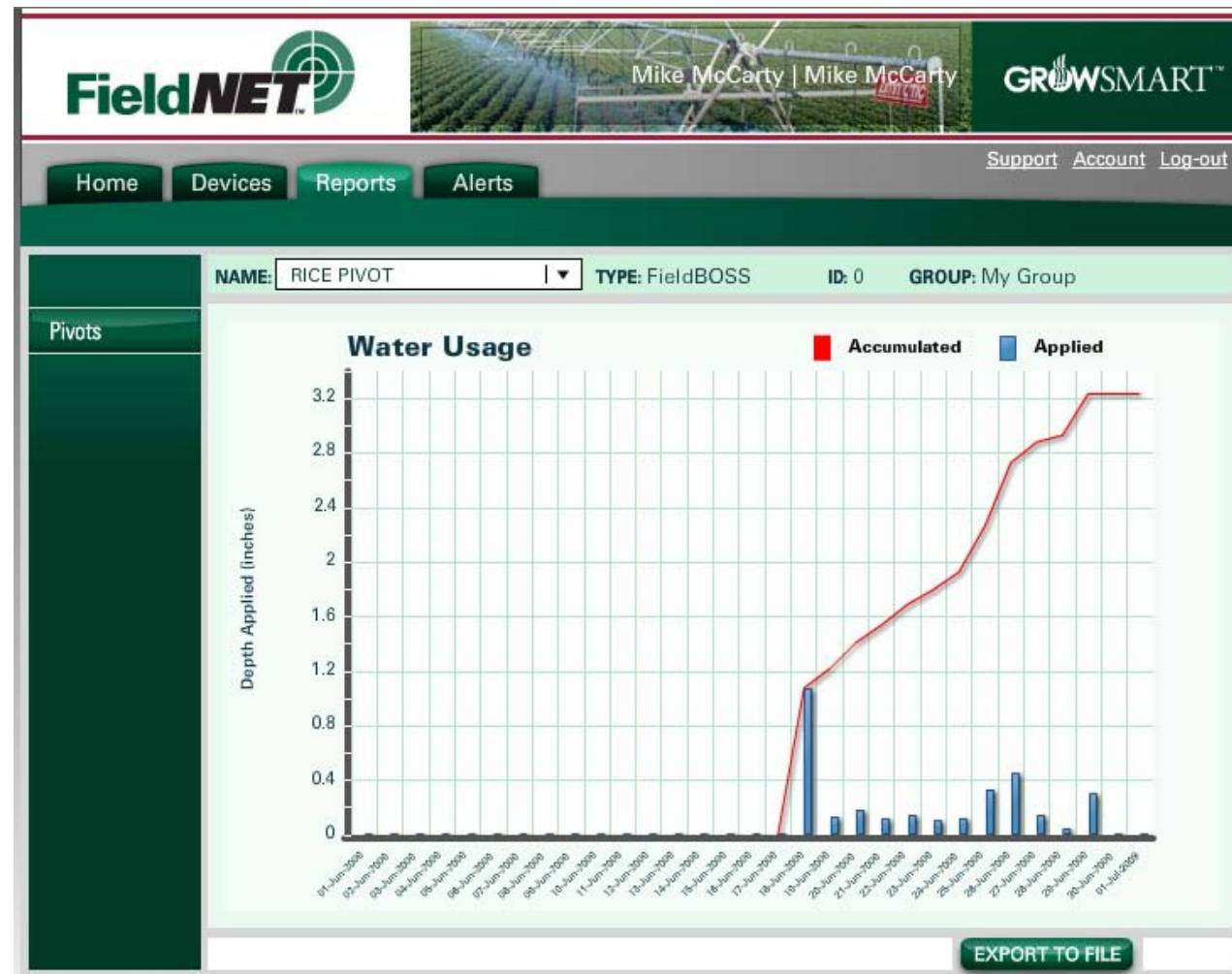
Device was last polled on Jul 21 2:47 am APPLY CANCEL

Irrigation System Monitoring



Reports

- Monitor water use of each pivot
- Selectable date range
- Report monthly / weekly totals
- Report accumulated totals
- Information based on hour meters or flow sensor



Irrigation System Monitoring



Alerts

- Setup unlimited users
- Send message alerts directly to your phone
- Group pivots by manager or crop

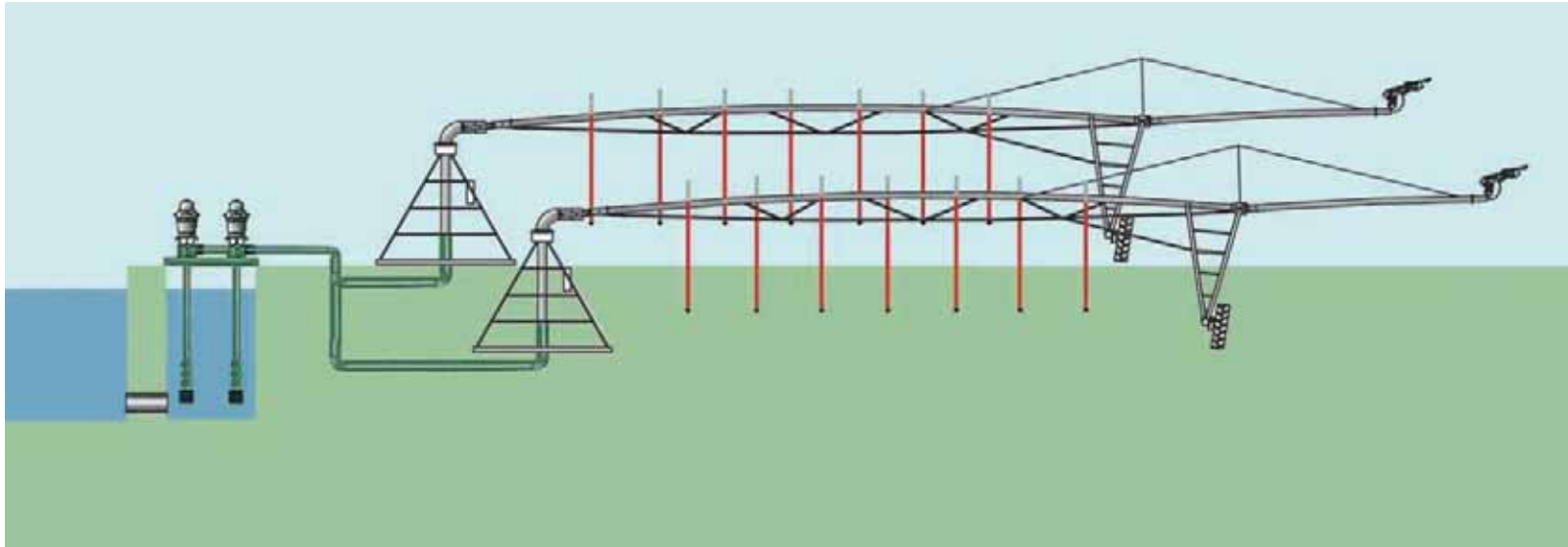
Watertronics Pump Stations



- Complete integrated pump station to maintain consistent water delivery
- Precision variable Frequency Drives for energy savings
- Each pump station engineered to specific field needs
- Factory tested to ensure superior quality
- Continuous surge-free pressure regulation for longer system life
- Horizontal and vertical pump stations available



Watertronics Pump Stations



Integrated Solutions



Home > Device Group > Greene Pointe DDC > Dashboard



Help is on

August 7, 2009, 7:47 am

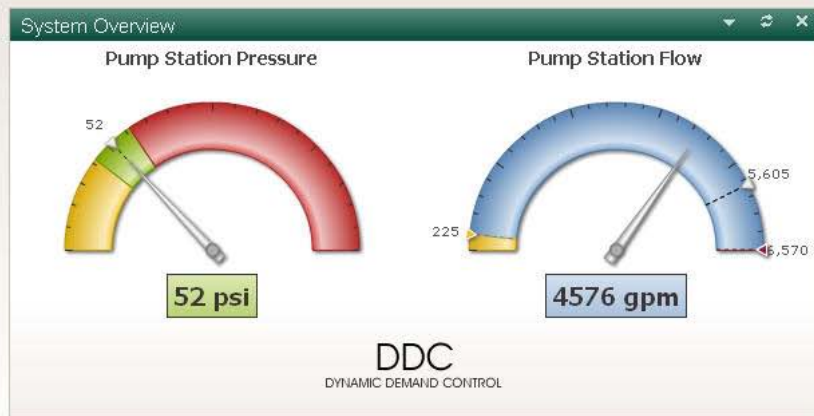
Logged in as Administrator

My Account | Log Out

Device Group Dashboard

Greene Pointe DDC Edit Device Group

Refresh



Pump Station Details

System Type	Vertical Turbine
Low Water Level Setpoint	32 in
Low Pressure Window	20 psi
RTU	My RTU (000023C3)
Signal Strength	<div style="width: 100%; height: 10px; background-color: green;"></div>
Is Online	Yes
Quiet Mode	No

Pump Station Alerts

There are no active alerts at this time.

RESET

3 Restarts Remaining

DDC Status

Pump Station	A1 Ochoa Pump Station by Watertronics
Pivot Demand	5,605 gpm @ 52 psi
Pump Station Pressure	52 psi : variance of 0 psi (0%)
Pump Station Flow	4,576 gpm : variance of -1029 gpm (22%)
Total Volume	303,033 galX1000
Inlet Pressure	0 psi
Water Level	68 in
Regulate Mode	Single Setpoint

Pivot Status

Pivot	PM Id	Water Status	Flow Required	Pressure	Pressure Required
34-1 (Pivot)	Stopped	Dry	1,000 gpm	5 psi	52 psi
34-2 (Pivot)	Forward	Wet	1,198 gpm	44 psi	52 psi
34-3 (Pivot)	Stopped	Dry	225 gpm	4 psi	52 psi
34-4 (Pivot)	Forward	Wet	430 gpm	44 psi	52 psi
34-5 (Pivot)	Forward	Wet	1,251 gpm	42 psi	52 psi
34-6 (Pivot)	Forward	Wet	1,251 gpm	44 psi	52 psi
34-7 (Pivot)	Forward	Wet	1,250 gpm	42 psi	52 psi
34-8 (Pivot)	Forward	Wet	225 gpm	44 psi	52 psi

Pump Status

Pump	Enabled	Running	Hours	Capacity	HOA
S	Enabled	Off	10 hr	43 gpm	Auto
01	Enabled	Running	1,040 hr	2,190 gpm	Auto
02	Enabled	Off	911 hr	2,190 gpm	Auto
03	Enabled	Running	948 hr	2,190 gpm	Auto

Reduce Total Cost



- **FieldNET**
 - Remote monitoring and control – reduced drive times, fuel, irrigation labor, scheduling
 - Proactive monitoring alerts – know about problems before they become costly
 - Water and chemical usage reports
- **Water Use**
 - Increase monitoring and efficiencies
- **Energy Use - Watertronics/pumping**
 - Precision energy efficiency Variable Frequency Drive provides immediate energy savings
 - Simple monitoring and control
 - Continuous surge-free pressure regulation for enhanced efficiencies
- **Cost of ownership and operation**
 - Energy efficiency
 - Costs of operation / labor
 - Risk management



Thank you for your interest and support

New Way Irrigation

Dave Gross, Sales Manager