Winnemucca Farms, Inc.

“The Home of Simple Farm Folk”


Winnemucca
Elkо
Valmy
Reno
Las Vegas
Nevada
Winnemucca
Valmy
Elko
Winnemucca to:
Valmy – 33 miles
Elko – 125 miles
Reno – 165 miles
Las Vegas – 470 miles
Map Key
Interstate 80 (E-W)
Highway 95 (N-S)
Union Pacific Railroad (E-W)
Cities/Towns
Valmy Power Station (522 MW)

WINNEMUCCA FARMS, INC.

- Established 1972
- Largest single integrated farming operation in NV
- One of the largest in the U.S.
- Total acres available for farming – ≈28,000 in two valleys
- Actual farmed in any given year – ≈16,000 acres
- 135 pivots with 75 wells
- Main and rotational crops – potatoes; peas; alfalfa; grass and wheat hay; small grains; corn; onions; various seed crops; experimental and soil enhancement cropping
- Worldwide marketing of crops and value added products


WINNEMUCCA
Grown
POTATOES
HONEST EARTH
Creamy Mash
LAS VEGAS DISTILLERY
Nevada Vodka
WINNEMUCCA
Simply Superior Potatoes
Ruffles
Party Size!
Saya
Lay's
Classic
Party Size!


Lay's
Classic
TRY ALL 4 & VOTE!
No sulfites or chemical preservatives, just the great taste of homemade mashed potatoes.
ALL NATURAL
Creamy Mash
18
PKGS
6 SERVINGS
EACH
108 TOTAL
Pringles
Original
HONEST EARTH
Creamy Mash
8

It’s Magic, Just Add Water!

“Lord, What Fools These Mortals Be”

-- “Puck”

A Midsummer Night’s Dream

“What Could Possibly Be A Problem?”

No Water

Nada

Zip

Nothing

or

- Precipitation comes at the wrong time and in the wrong form, which leads to —
- Loss of production — Quantity and Quality, or —
- Inability to farm/ranch, but —
- Input costs and maintenance of capital structure continues or increases, and —
- Revenue and profit decrease or cease.

Note: No consideration of the impact of "Crop Insurance" is given here.

“Drought Demands / Forces Change In Business Models — Esp. Agriculture”

- Adopt conservation practices (such has its limits – “A starving man can only fast for so long”)
- Cease / minimize operations
- Change business model – crop patterns and types – i.e. [potatoes vs. alfalfa vs. peas], and –
- Diversify


Lay's
Classic
Potato Chips
No sulfites or chemical preservatives, just the great taste of homemade mashed potatoes.
ALL NATURAL
Creamy Mash
18
PKGS
6 SERVINGS
EACH
108 TOTAL
HONEST EARTH
Creamy Mash
8
Pringles
Original


HOMEMADE TASTE IN MINUTES
IDAHOAN
ROASTED GARLIC
MASHED POTATOES
HOMEMADE TASTE EVERY TIME
NEW!
IDAHOAN
LOADED BAKED
HOMESTYLE CASSEROLE
NEW!
IDAHOAN
AU GRATIN
HOMESTYLE CASSEROLE
Made with 100% REAL Idaho Potato Slices
ADD MILK AND MARGARINE
NEW!
IDAHOAN
premium
steakhous
SCALLOPED
RED POTATOES
HOMEMADE TASTE IN MINUTES
IDAHOAN
BACON & CHEDDAR
CHIPOTLE
MASHED POTATOES
IDAHOAN
MICROWAVABLE
FOUR CHEESE
MASHED POTATOES
IDAHOAN
MICROWAVABLE
BUTTERY HOMESTYLE
MASHED POTATOES


SNAPEA CRISPS
HARVEST SNAPS
ORIGINAL GREEN PEA CRISPS ★ BAKED
LIGHTLY SALTED
50% LESS FAT ★ GOOD SOURCE OF FIBER ★ LOW SODIUM
COMPARED TO REGULAR POTATO CHIPS
Calbee
SNAPEA CRISPS
HARVEST SNAPS
FLAVORED GREEN PEA CRISPS ★ BAKED
BLACK PEPPER
40% LESS FAT ★ GOOD SOURCE OF FIBER ★ LESS SODIUM
COMPARED TO REGULAR POTATO CHIPS
Calbee
NAPEA CRISPS
HARVEST SNAPS
FLAVORED GREEN PEA CRISPS ★ BAKED
CAESAR
50% LESS FAT ★ GOOD SOURCE OF FIBER ★ LOW SODIUM
COMPARED TO REGULAR POTATO CHIPS
Calbee
SNAPEA CRISPS
HARVEST SNAPS
FLAVORED GREEN PEA CRISPS ★ BAKED
WASABI RANCH
50% LESS FAT ★ GOOD SOURCE OF FIBER ★ LOW SODIUM
COMPARED TO REGULAR POTATO CHIPS
Calbee

Winnemucca Farms, Inc.

Searching out and applying the best possible technologies and practices – But Damn They Are Expensive!

- Best practices cultivation and irrigation
- Well meters – all wells
- Ultra-sonic flow meter monitoring
- Variable frequency drives
- Low pressure nozzle replacement every 3 years
- Telemetry systems connections
- Computerized and central control of integrated system
- Aerial and other overhead monitoring
- On site weather tracking
- Pivot mapping and variable rate irrigation
- Bio-fumigants
- “Hands on” sampling by in-house and contracted agronomists


VALLEY

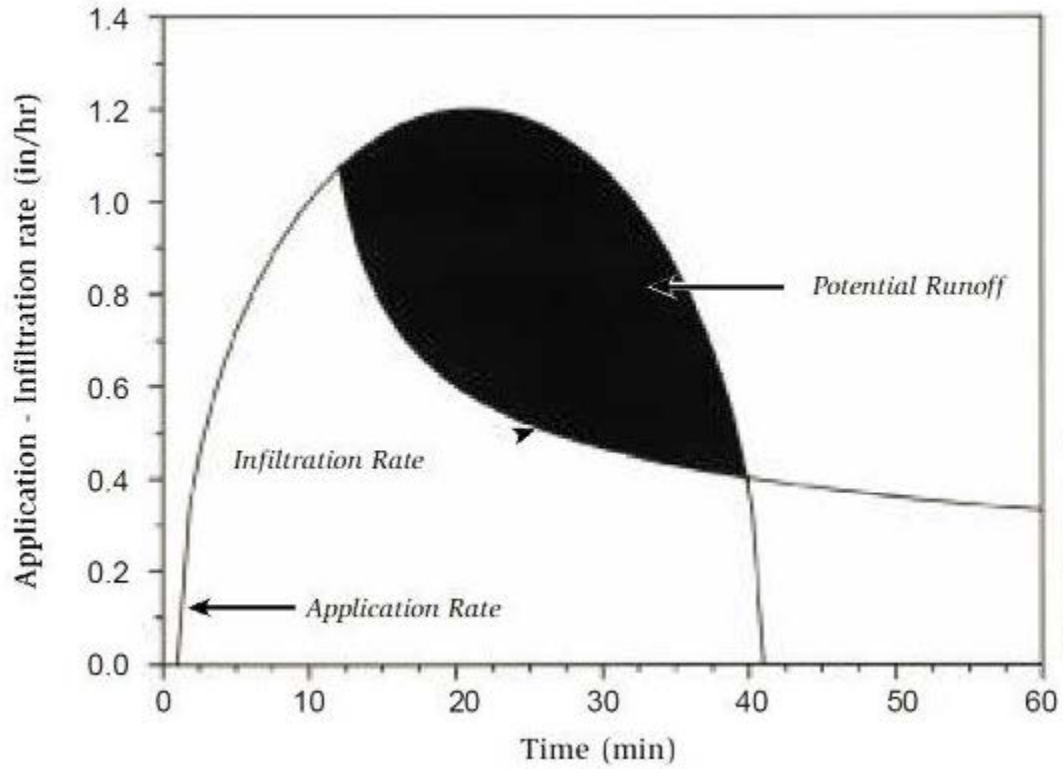


Figure 1.
Graphical representation of how water application rates under a center pivot exceed infiltration rate. Potential runoff is represented by the shaded area.

Senninger Irrigation, Inc

16220 E. Hwy 50
Clermont, FL 34711

407-877-5655-ph
407-905-8249-fax

Date: 02/06/2012 | Chart No: Sen-15382-12 |

Dealer:

Nebraska Irrigation-Columbus, NE
Custom Irrigation

Customer:

Winnemucca Farms
Pivot #81 - Valley 8000

Comments:

PO3465

Machine

Mfg:	Valley
Flow:	800.00 gpm
Pivot Pressure:	48.04 psi
Base Press	50.00 psi
End Pressure:	38.97 psi
Spacing:	Span dependent
Length:	1227.08 ft
GPM / Acre:	7.35 gpm
Average Drop:	10.0 ft
End Gun:	No

Pipes

C Factor: 140
Pipe 1: 1201.1 ft, 6.41 inch ID
Pipe 2: 26.0 ft, 5.79 inch ID

Sprinklers

130 XiWob UP3
(23)610 (107)910

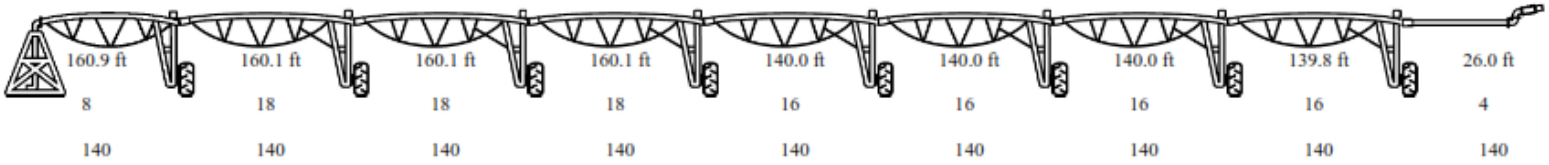
Elevation

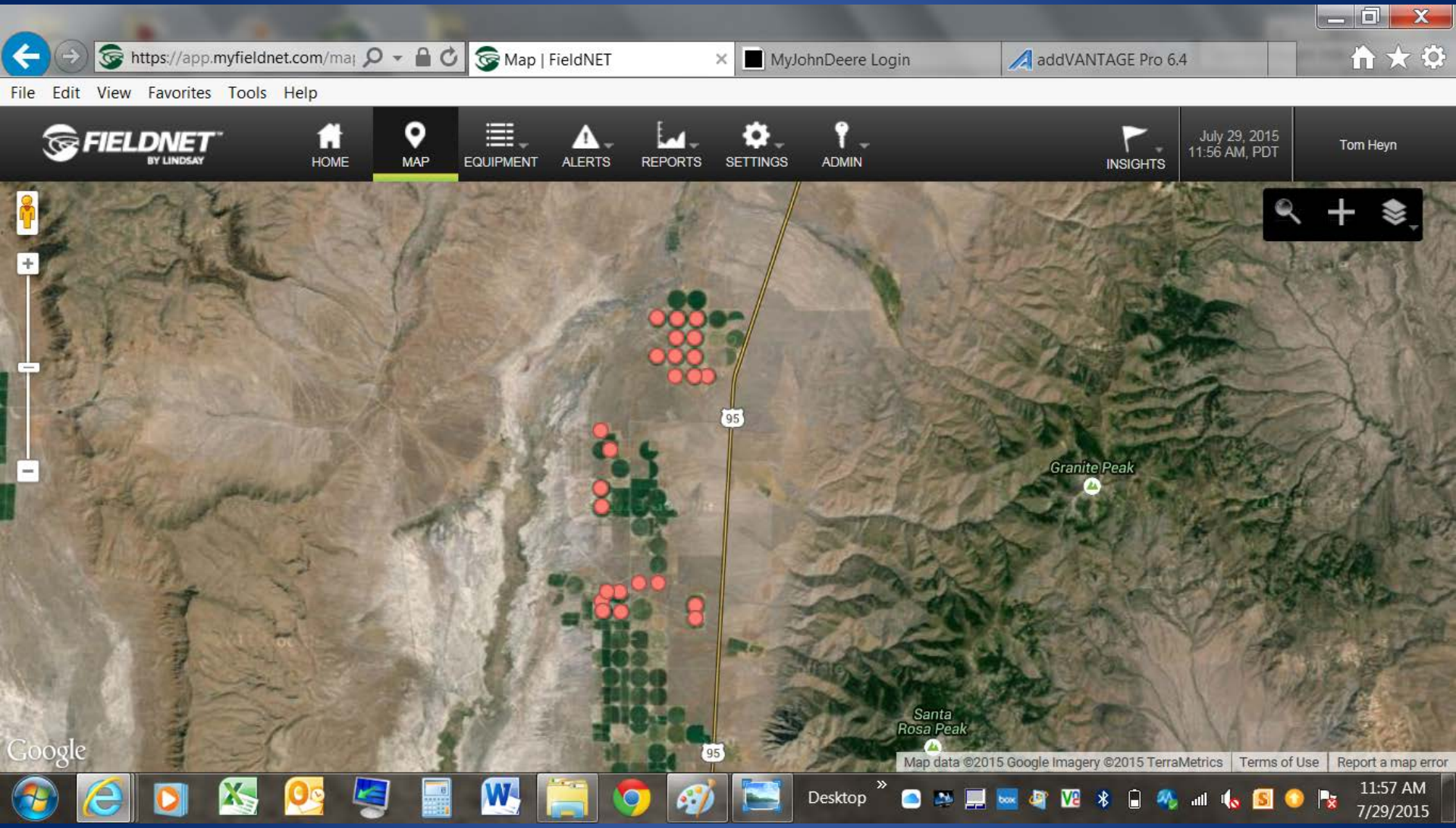
Difference above(+) pivot 0.00
Difference below(-) pivot 0.00
Elevation Rise included in calculations

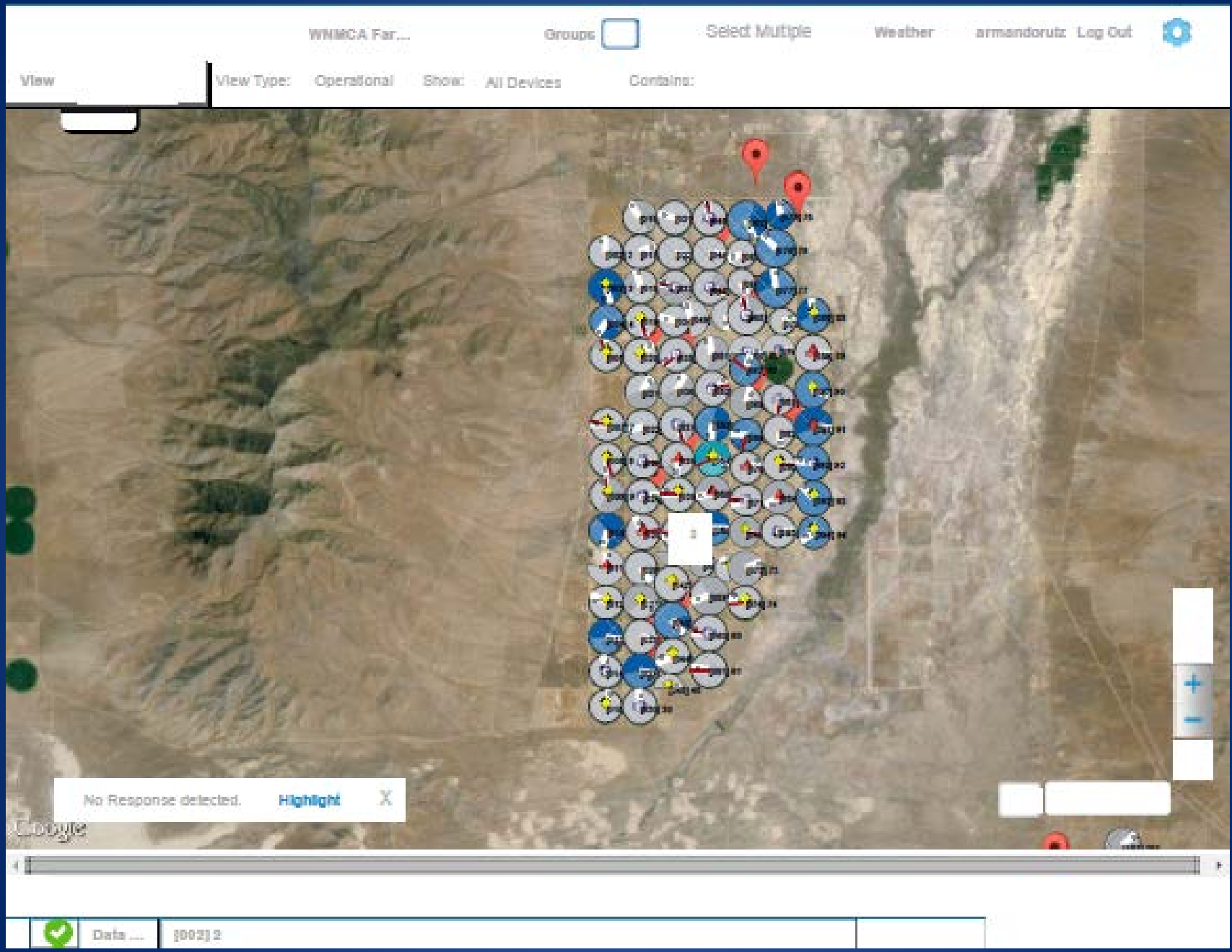
Regs

Position : Bottom
130 PSR-15

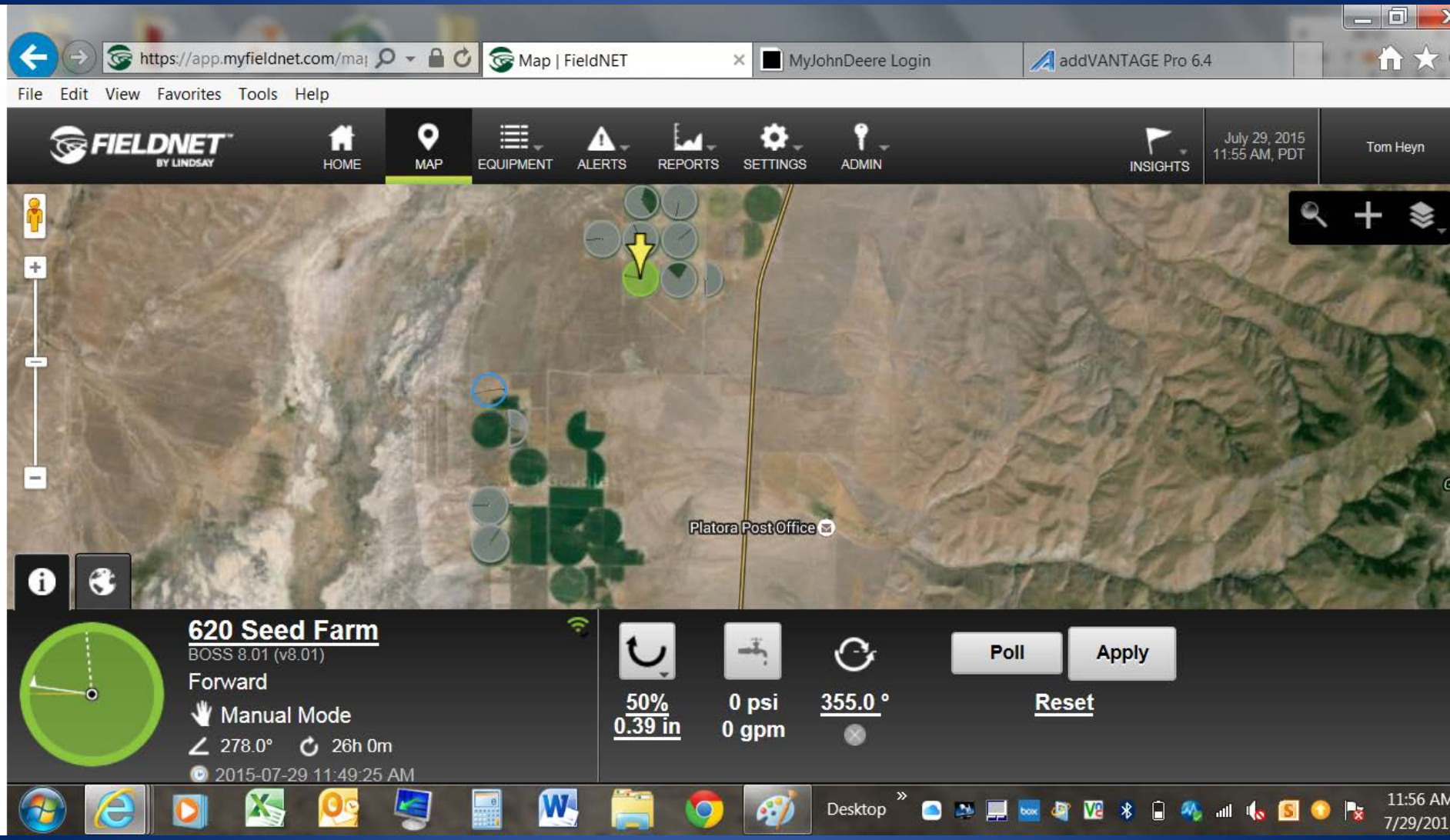
Spans # 8

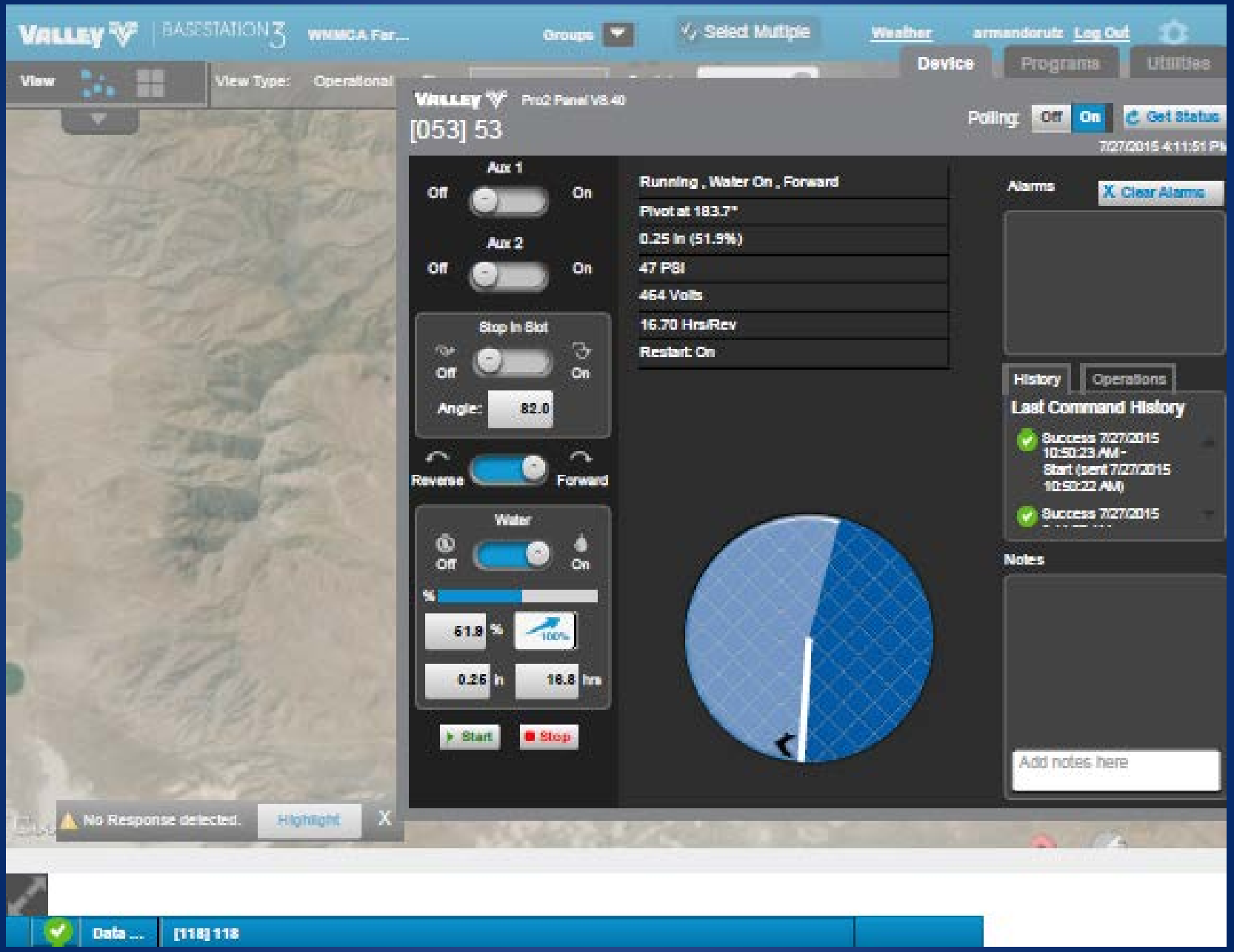



https://app.myfieldnet.com/ma
Map | FieldNET
MyJohnDeere Login
addVANTAGE Pro 6.4
File Edit View Favorites Tools Help
FIELDNET BY LINDSAY
HOME
MAP
EQUIPMENT
ALERTS
REPORTS
SETTINGS
ADMIN
INSIGHTS
July 29, 2015
11:56 AM, PDT
Tom Heyn
95
Granite Peak
Santa Rosa Peak
Google
Map data ©2015 Google Imagery ©2015 TerraMetrics
Terms of Use
Report a map error
Desktop
11:57 AM
7/29/2015


WNMCA Far....
Groups
Select Multiple
Weather
armandoruiz Log Out
View
View Type: Operational
Show: All Devices
Contains:
No Response detected.
Highlight
X
Data ....
[002] 2


WNMCA Far...
Groups
Select Multiple
Weather
armandorutz Log Out
View
View Type: Operational
Show: All Devices
Contains:
No Response detected.
Highlight
X
Google
Data ...
[002] 2


https://app.myfieldnet.com/ma
Map | FieldNET
MyJohnDeere Login
addVANTAGE Pro 6.4
File Edit View Favorites Tools Help
FIELDNET BY LINDSAY
HOME
MAP
EQUIPMENT
ALERTS
REPORTS
SETTINGS
ADMIN
INSIGHTS
July 29, 2015
11:55 AM, PDT
Tom Heyn
Platora Post Office
620 Seed Farm
BOSS 8.01 (v8.01)
Forward
Manual Mode
278.0°
26h 0m
2015-07-29 11:49:25 AM
50%
0.39 in
0 psi
0 gpm
355.0 °
Poll
Apply
Reset
Desktop
11:56 AM
7/29/201

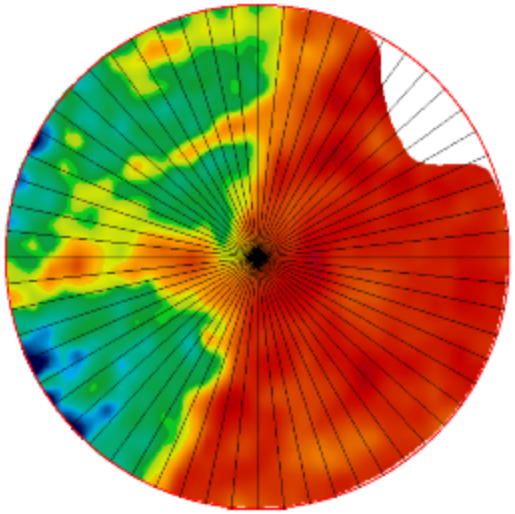

VALLEY
BASESTATION 3
Groups
Select Multiple
Weather
armandorute
Log Out
Device
Programs
Utilities
View
View Type:
Operational
VALLEY
Pro2 Panel V8.40
[053] 53
Polling:
Off
On
Get Status
Aux 1
Off
On
Aux 2
Off
On
Stop In Slot
Off
On
Angle:
82.0
Reverse
Forward
Water
Off
On
%
61.8
%
100%
0.25
in
18.8
hrs
Start
Stop
Running , Water On , Forward
Pivot at 183.7°
0.25 in (51.9%)
47 PSI
464 Volts
16.70 Hrs/Rev
Restart: On
Alarms
Clear Alarms
History
Operations
Last Command History
Success 7/27/2015 10:50:23 AM - Start (sent 7/27/2015 10:50:22 AM)
Success 7/27/2015
Notes
Add notes here
No Response detected.
Highlight
X
Data ...
[118] 118


Kawasaki

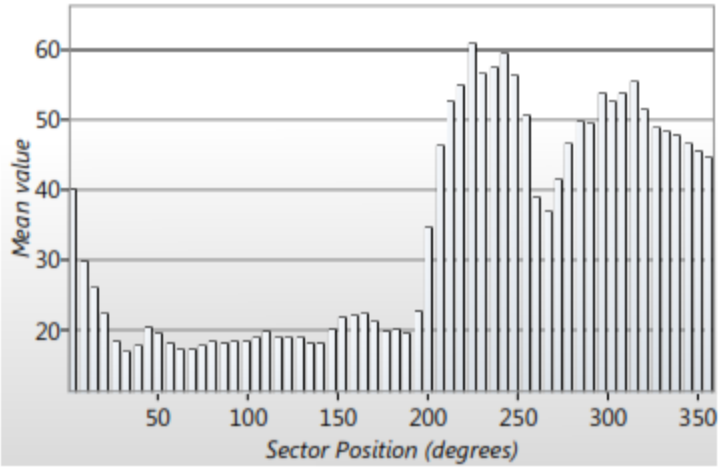
Field variability:

Map: DualEM Subsoil
a= 126.1ac
r= 1322ft

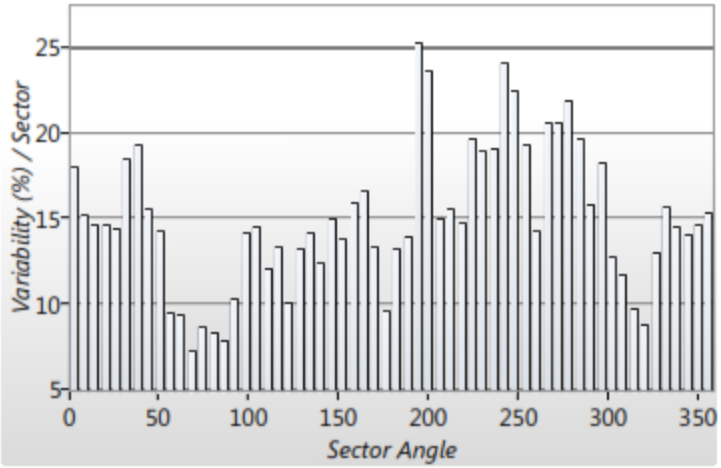
Powered by pct-ag.com



Mean values by pivot sector



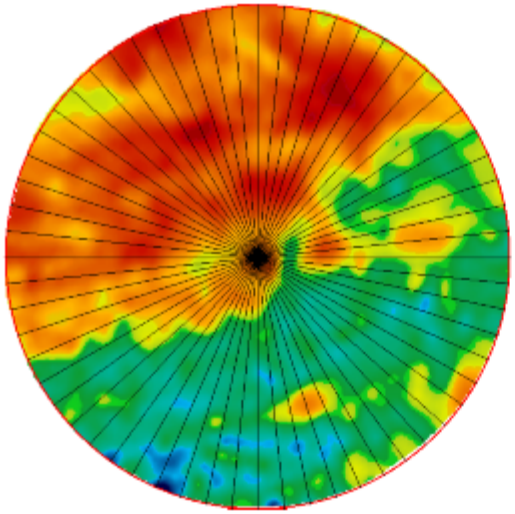
Within sector variability



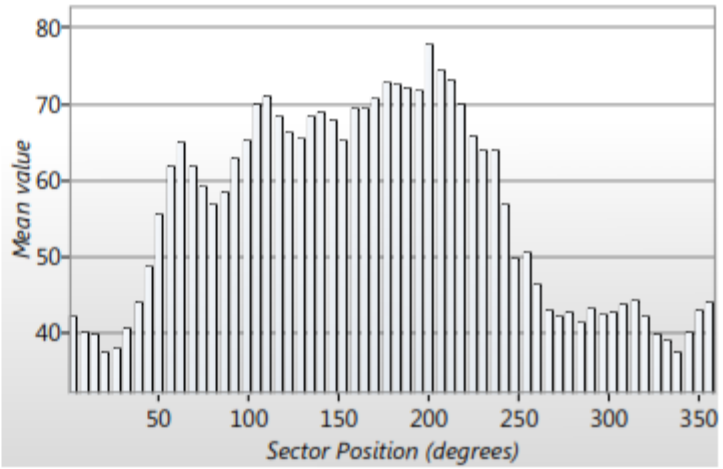
Field variability:

Map: DualEM Subsoil
a= 124.8ac
r= 1316ft

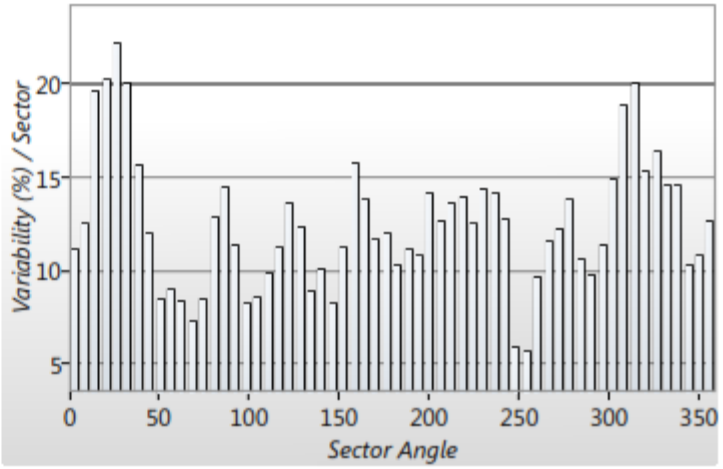
Powered by pct-ag.com



Mean values by pivot sector



Within sector variability



How Does Speed Control Work?

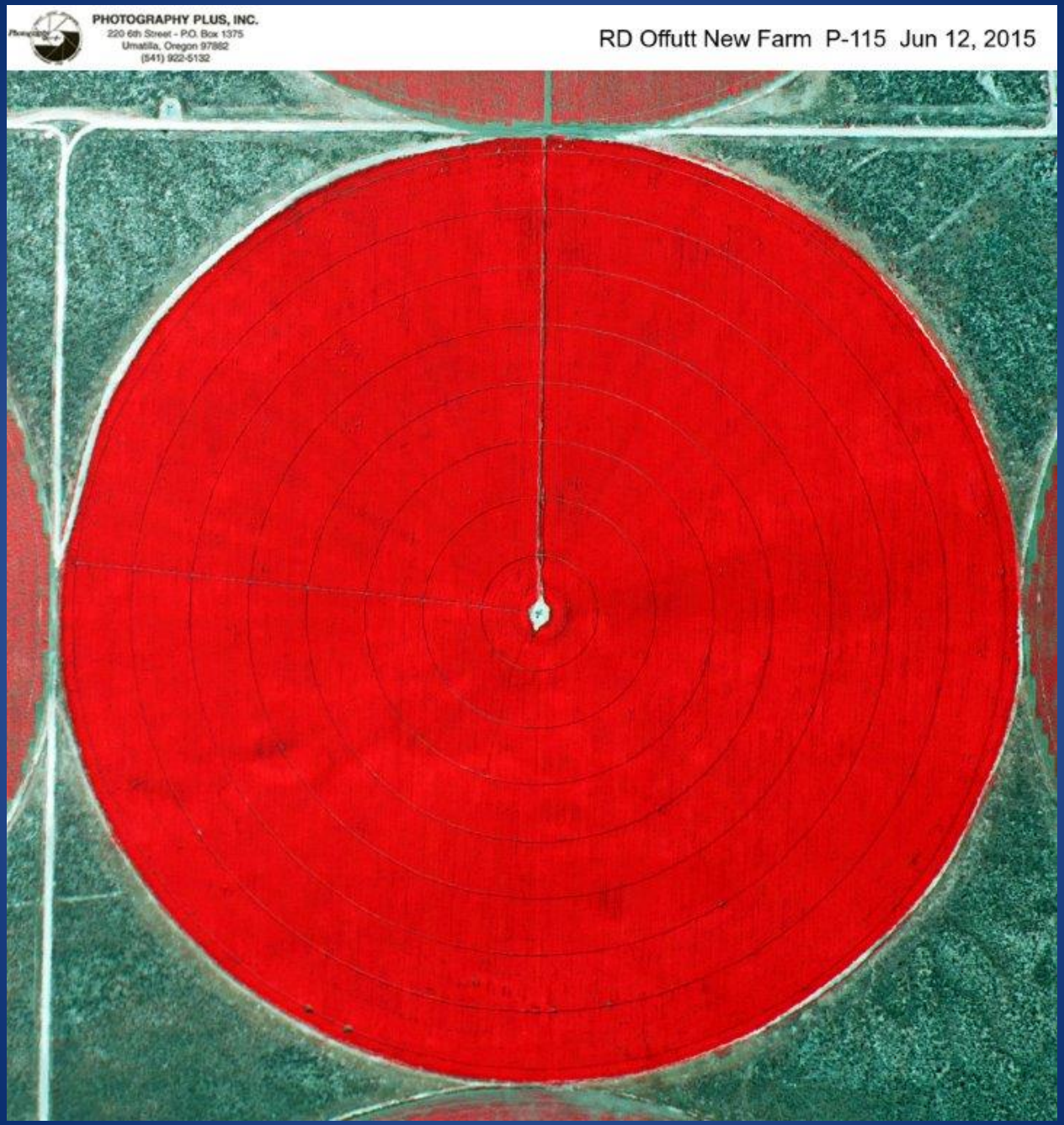
- With Speed Control, your field is divided into a maximum of 180 sectors with optimized water application throughout
- A customized, uploaded VRI prescription speeds up or slows down the center pivot to achieve the desired application depth across each sector
- Additional hardware is not needed to upload prescriptions
- Utilizes your new or existing sprinkler package

When Should You Use Zone Control?

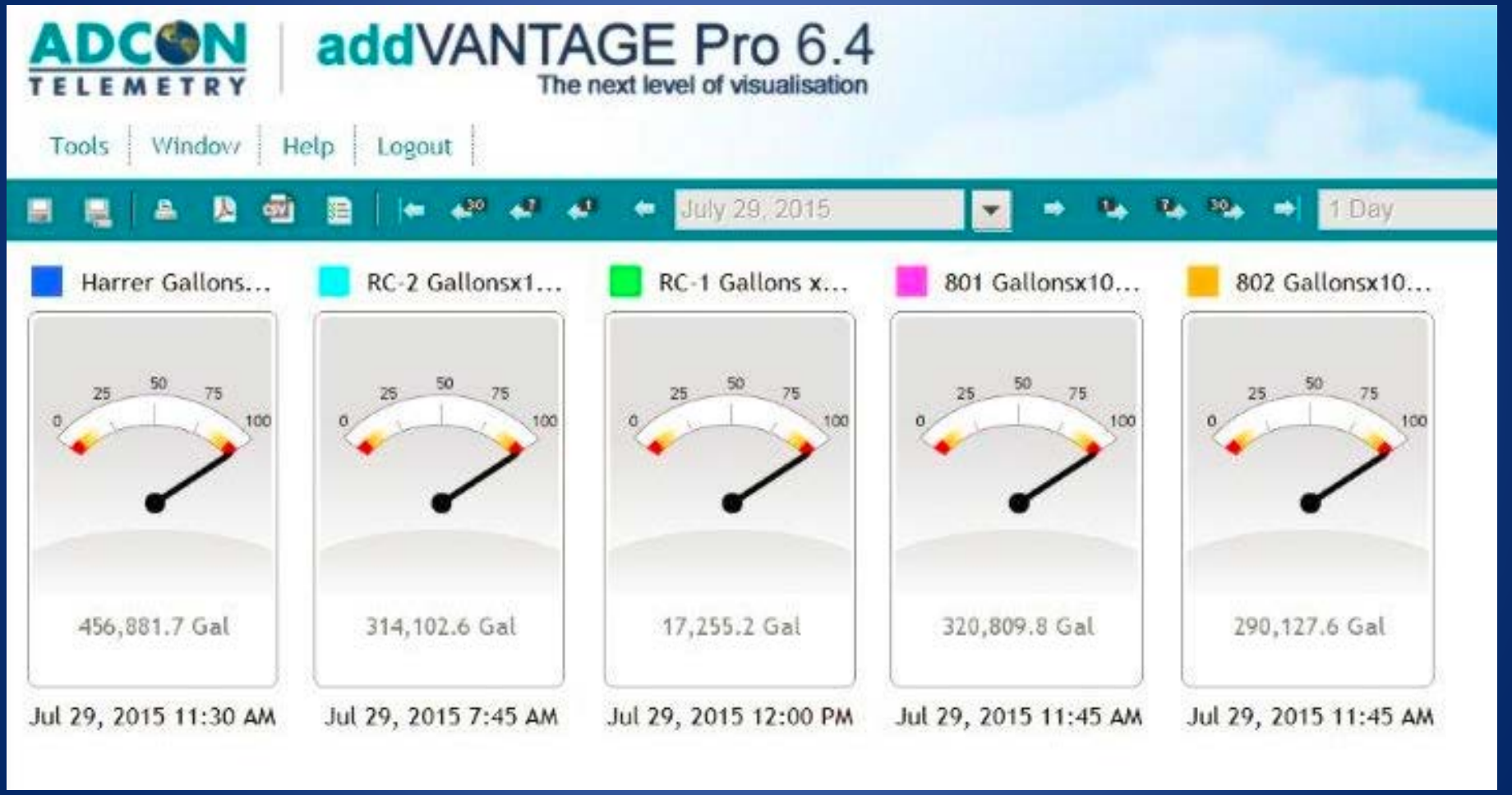
Zone Control is ideal for those of you who want to maximize your water application efficiency in more challenging fields, such as those with differing topography.

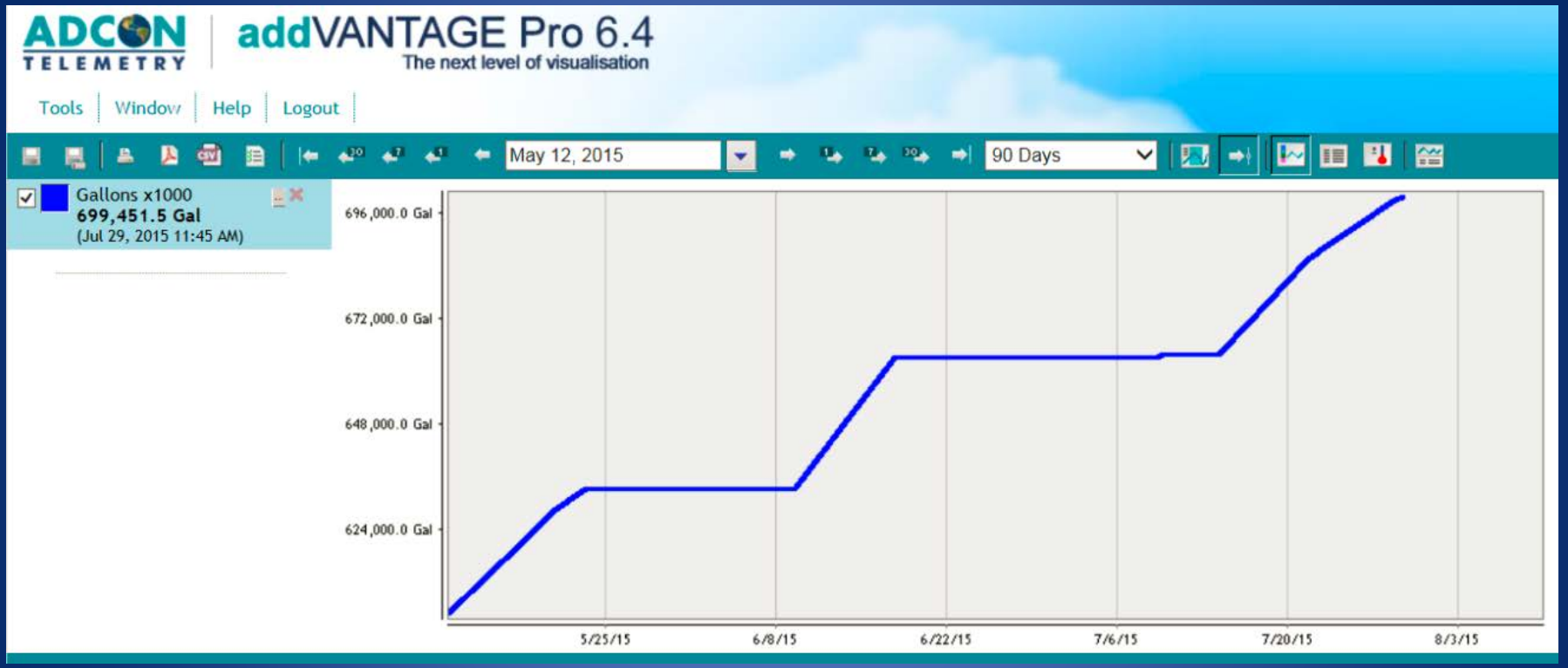
How Does Zone Control Work?

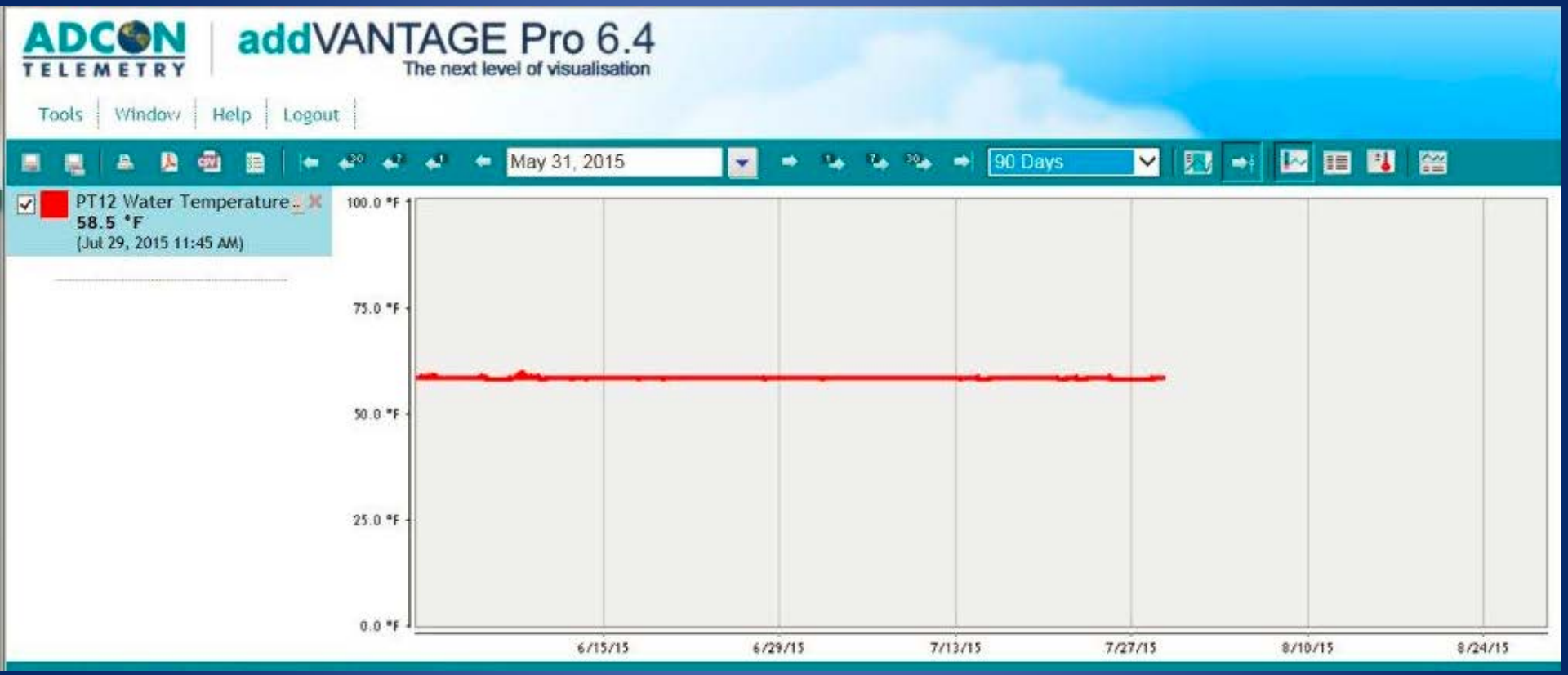
- Your field is divided into more than 5,000 zones with optimized water application in every single zone
- A customized, uploaded VRI prescription pulses the sprinkler control valves along the center pivot zones to achieve the desired application depth
- Can also be used for on/off control for areas in your field that don't need to be irrigated
- Utilizes your new or existing sprinkler package

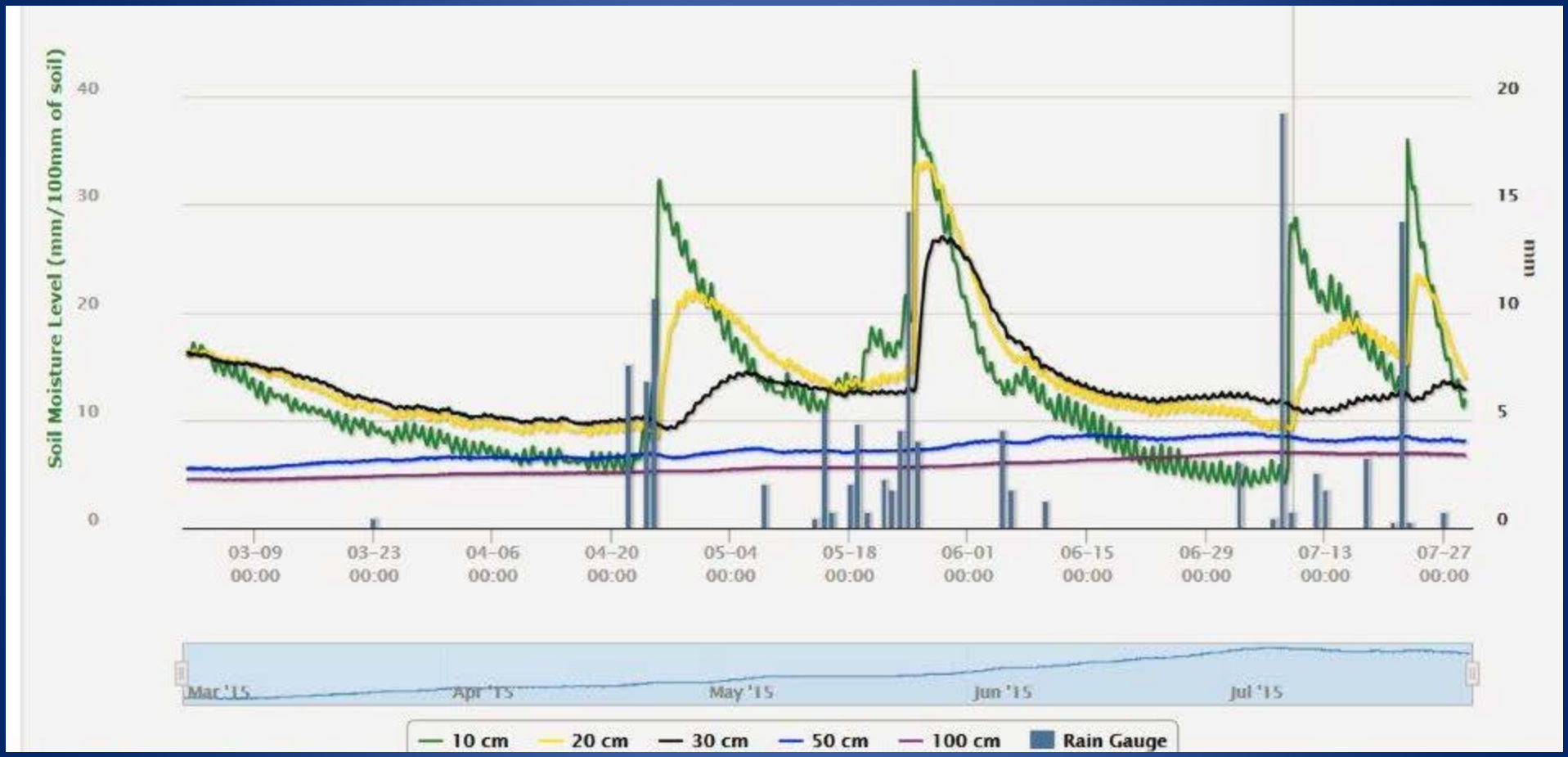

PHOTOGRAPHY PLUS, INC.
220 6th Street - P.O. Box 1375
Umatilla, Oregon 97882
(541) 922-5132
RD Offutt New Farm P-115 Jun 12, 2015

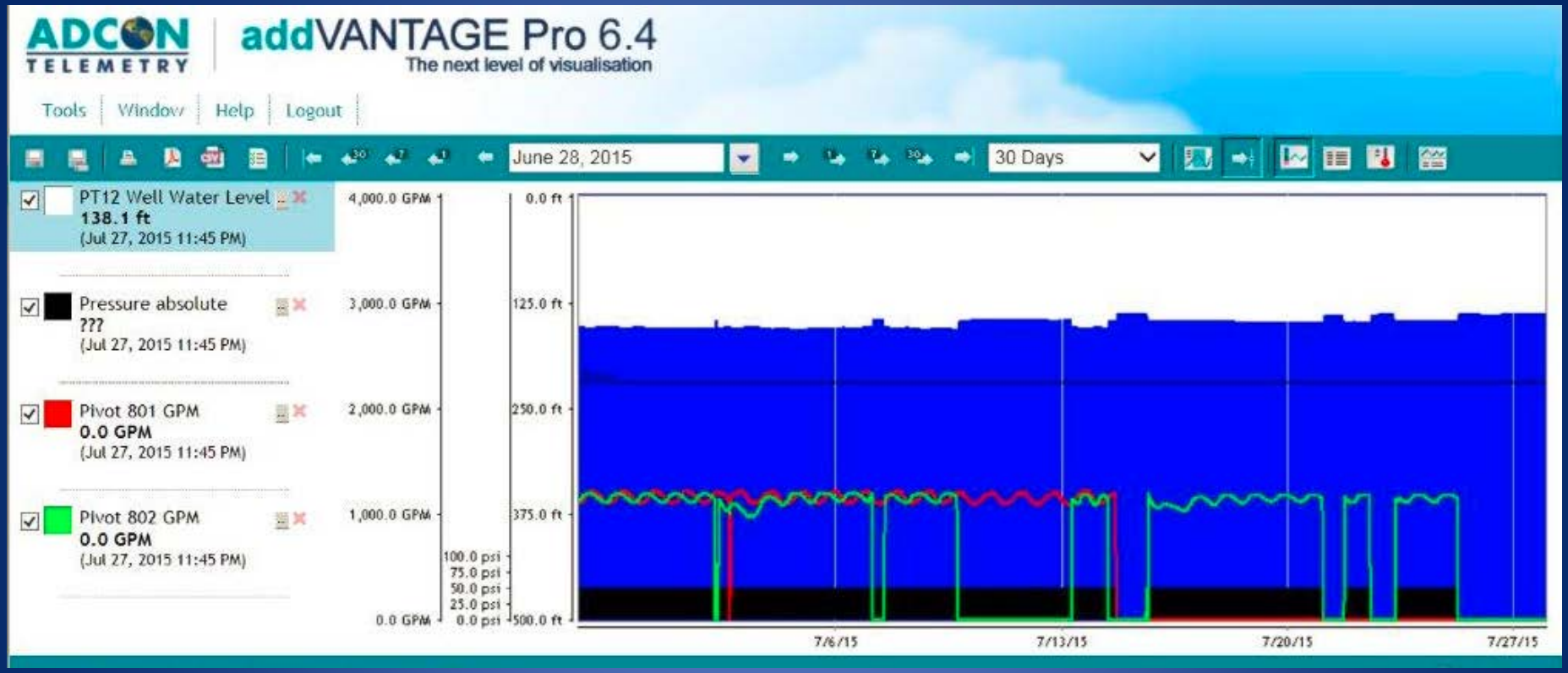

POWER
SHUT OFF
93
92
cams
AUXILIARY LINK
POWER
SHUT OFF
DANGER


ADCON TELEMETRY
addVANTAGE Pro 6.4
The next level of visualisation
Tools
Window
Help
Logout
July 29, 2015
1 Day
Harrer Gallons...
RC-2 Gallonsx1...
RC-1 Gallons x...
801 Gallonsx10...
802 Gallonsx10...
0
25
50
75
100
456,881.7 Gal
314,102.6 Gal
17,255.2 Gal
320,809.8 Gal
290,127.6 Gal
Jul 29, 2015 11:30 AM
Jul 29, 2015 7:45 AM
Jul 29, 2015 12:00 PM
Jul 29, 2015 11:45 AM
Jul 29, 2015 11:45 AM


ADCON TELEMETRY
addVANTAGE Pro 6.4
The next level of visualisation
Tools
Window
Help
Logout
May 12, 2015
90 Days
Gallons x1000
699,451.5 Gal
(Jul 29, 2015 11:45 AM)
696,000.0 Gal
672,000.0 Gal
648,000.0 Gal
624,000.0 Gal
5/25/15
6/8/15
6/22/15
7/6/15
7/20/15
8/3/15


ADCON TELEMETRY
addVANTAGE Pro 6.4
The next level of visualisation
Tools
Window
Help
Logout
May 31, 2015
90 Days
PT12 Water Temperature
58.5 °F
(Jul 29, 2015 11:45 AM)
100.0 °F
75.0 °F
50.0 °F
25.0 °F
0.0 °F
6/15/15
6/29/15
7/13/15
7/27/15
8/10/15
8/24/15


Soil Moisture Level (mm/100mm of soil)
40
30
20
10
0
20
15
10
5
0
03-09 00:00
03-23 00:00
04-06 00:00
04-20 00:00
05-04 00:00
05-18 00:00
06-01 00:00
06-15 00:00
06-29 00:00
07-13 00:00
07-27 00:00
Mar '15
Apr '15
May '15
Jun '15
Jul '15
10 cm
20 cm
30 cm
50 cm
100 cm
Rain Gauge


ADCON TELEMETRY
addVANTAGE Pro 6.4
The next level of visualisation
Tools
Window
Help
Logout
June 28, 2015
30 Days
PT12 Well Water Level
138.1 ft
(Jul 27, 2015 11:45 PM)
Pressure absolute
???
(Jul 27, 2015 11:45 PM)
Pivot 801 GPM
0.0 GPM
(Jul 27, 2015 11:45 PM)
Pivot 802 GPM
0.0 GPM
(Jul 27, 2015 11:45 PM)
4,000.0 GPM
3,000.0 GPM
2,000.0 GPM
1,000.0 GPM
0.0 GPM
100.0 psi
75.0 psi
50.0 psi
25.0 psi
0.0 psi
0.0 ft
125.0 ft
250.0 ft
375.0 ft
500.0 ft
7/6/15
7/13/15
7/20/15
7/27/15

VALLEY

Refresh Print

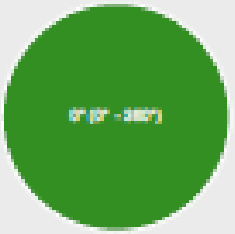
Water Applied Depth In Inches: [002] 2

Report Generated 07/29/2015 01:19:59 p.m.

Total Water Applied

Water Applied with Chemicals

Water Applied with Fertilizer



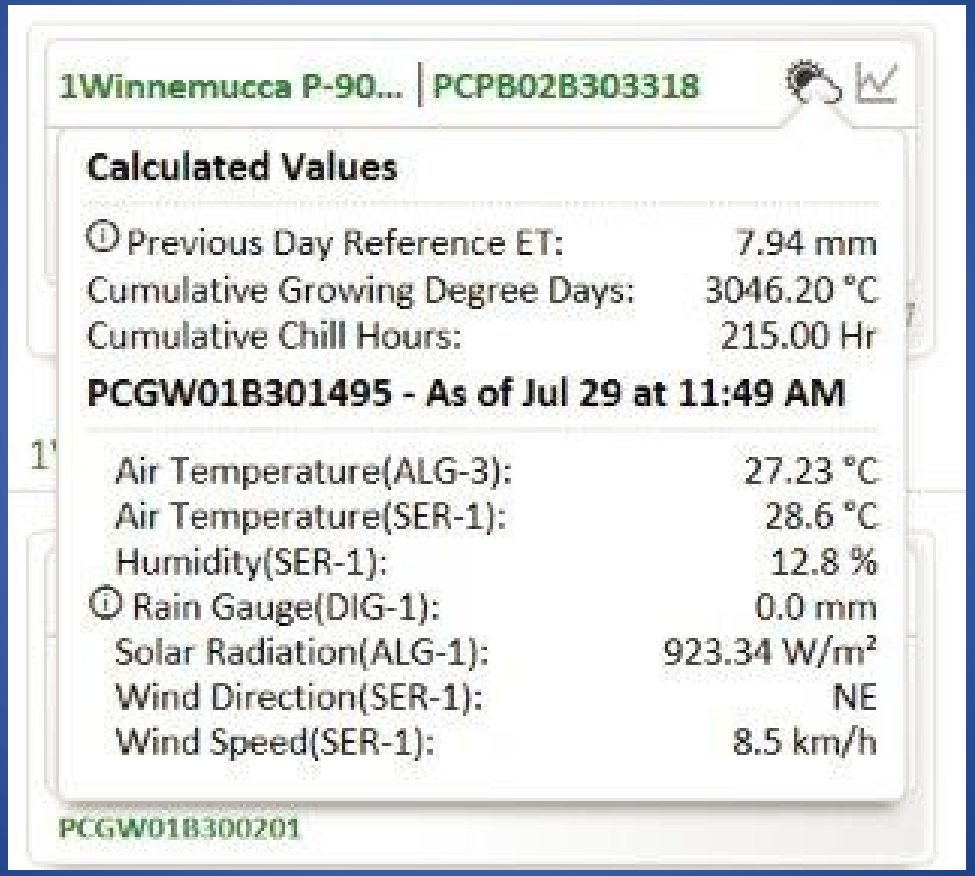
Water Applied with Other

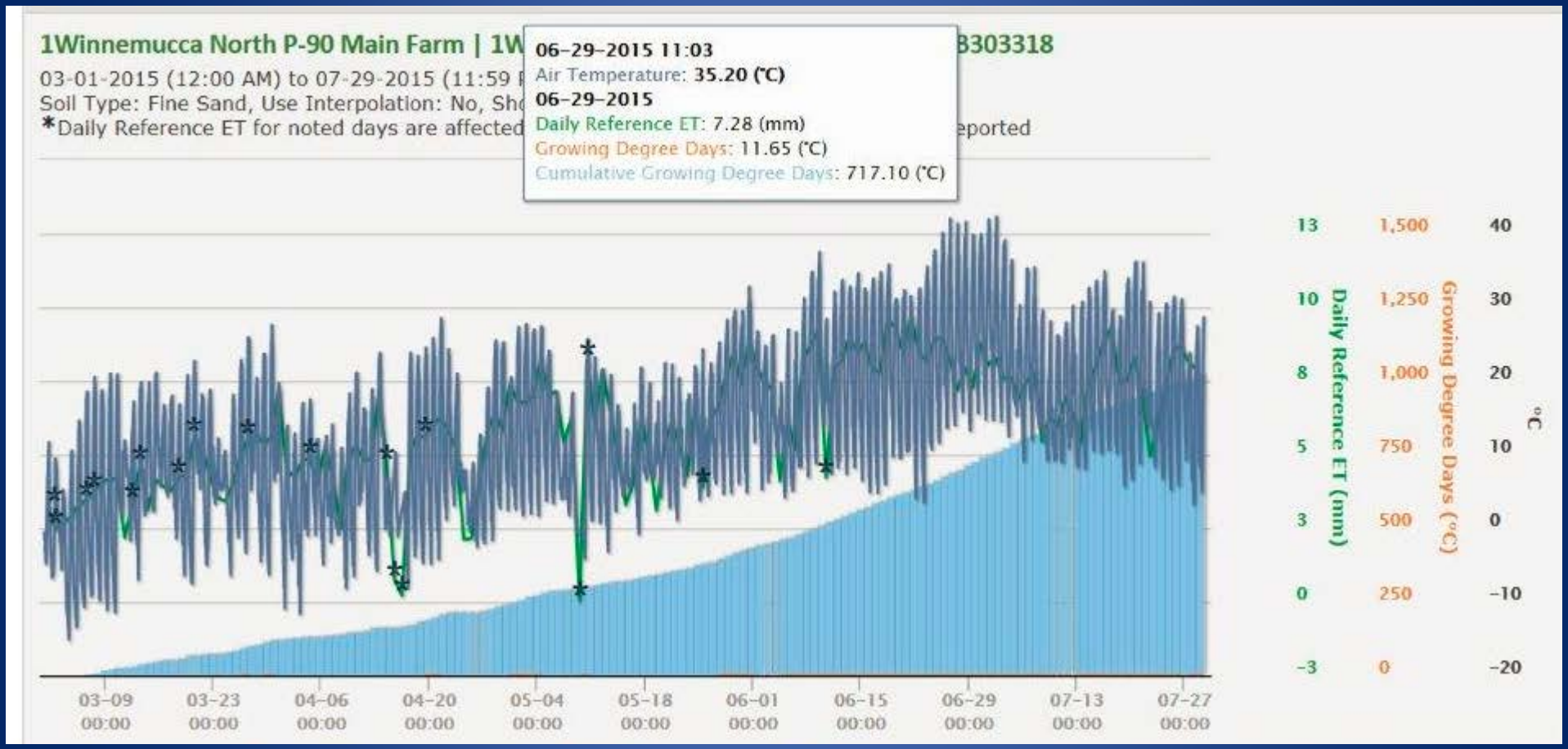
Total Water Applied: [002] 2

Start Date	End date	Start Angle	End Angle	Water (in)
06-01-2015	06-30-2015	142	185	0.6
06-01-2015	06-30-2015	185	186	0.3
06-01-2015	06-30-2015	186	312	0.6
06-01-2015	06-30-2015	312	142	0.3
				1.80

Water Applied with Chemicals: [002] 2

Start Date	End date	Start Angle	End Angle	Chemical (in)


1Winnemucca P-90... | PCPB02B303318
Calculated Values
Previous Day Reference ET: 7.94 mm
Cumulative Growing Degree Days: 3046.20 °C
Cumulative Chill Hours: 215.00 Hr
PCGW01B301495 - As of Jul 29 at 11:49 AM
Air Temperature(ALG-3): 27.23 °C
Air Temperature(SER-1): 28.6 °C
Humidity(SER-1): 12.8 %
Rain Gauge(DIG-1): 0.0 mm
Solar Radiation(ALG-1): 923.34 W/m²
Wind Direction(SER-1): NE
Wind Speed(SER-1): 8.5 km/h
PCGW01B300201


1Winnemucca North P-90 Main Farm | 1W
8303318
03-01-2015 (12:00 AM) to 07-29-2015 (11:59
Soil Type: Fine Sand, Use Interpolation: No, Sh
*Daily Reference ET for noted days are affected
eported
06-29-2015 11:03
Air Temperature: 35.20 (°C)
06-29-2015
Daily Reference ET: 7.28 (mm)
Growing Degree Days: 11.65 (°C)
Cumulative Growing Degree Days: 717.10 (°C)
13
10
8
5
3
0
-3
Daily Reference ET (mm)
1,500
1,250
1,000
750
500
250
0
Growing Degree Days (°C)
40
30
20
10
0
-10
-20
°C
03-09 00:00
03-23 00:00
04-06 00:00
04-20 00:00
05-04 00:00
05-18 00:00
06-01 00:00
06-15 00:00
06-29 00:00
07-13 00:00
07-27 00:00

SOLUTIONS ?

- Agriculture cannot “conserve” its way out of a prolonged drought
- Water Importation Projects – “When Donald Trump admits to being shy”
- Frequent and repeated requests to the state engineer for rain and snowpack have brought no relief — deeply disappointing non-response.
- Only the grace and mercy of heaven can bring the needed moisture

IN THE INTERIM FOR AGRICULTURE

- Require "Best Practices" in physical transport and use of water
- Encourage conservation by doing away with "water forfeiture" for justifiable non-use of permitted water
- Don't allow "supplemental" pumping if surface water is available
- Note SB 1894 (California Emergency Drought Relief Act of 2015—Introduced) and H.R. 2898 (Western Water and American Food Security Act of 2015—passed in the House). Senator Feinstein's SB 1894 calls for, among other actions, new and expanded water storage projects, emergency pumping and accessing the "delta", and desalination project(s).
- Storage – increase Nevada's capacity. Adopt Aquifer Storage And Recovery Systems (ASR's) for efficiency
- Change state management of the "resource" . Adopt a "market based" system that is –
    - Transparent and open
    - Deals with "feast and famine" circumstances
    - Operational and functioning today outside the U.S.
    - "Test project" in Diamond Valley assisted by Prof. Mike Young

Core concepts of a "Market Based" System –

1. Robustness in the sense that the resultant water right, allocation and governance systems are designed to work well during times of extreme stress.
2. Water right and administrative systems characterized by **hydrological integrity**.
3. **Unbundling** of water rights into their component parts
    a. Rights defined as shares
    b. Separate management of allocations
    c. Conversion of beneficial use requirements into use and works approvals.
4. Electronic access to **water-entitlement registers and water accounts** that define ownership, track water use and allow trading with bank-like certainty.
5. **Efficient risk management of supply risks** so that those who need access to a very reliable water supply have the opportunity, at an appropriate cost, to secure this reliability.
6. **Incentives** that encourage people to search for more efficient ways to use and invest in resources that use water.
7. **Administratively-efficient processes** designed to speed adjustment and keep transaction costs low.
8. A voluntary, **pilot approach** within well-identified geographical boundaries, with exit ramps to protect water rights holders.
9. Legislated plans that address environmental and regional development concerns up-front so that water rights holders and water users can go forward without fear that the courts may once again intervene.

Questions?