

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





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Water Conservation Advisor, Western U.S.

Ewing Irrigation Products

As Water Management and Conservation Advisor for the Western United States, **Chris Wright** focuses on cultivating partnerships with water districts, landscape architects and municipalities to promote water-efficient practices.

Chris is actively involved in developing Ewing's water management and conservation marketing initiatives, and is instrumental in guiding Ewing's brand management as the leading Source for Conservation Solutions™.



The Real Costs of Value Engineering Water Conserving Devices

Out of the Landscape

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The Reality

Report: More than One Out of Three U.S. Counties Face Water Shortages Due to Climate Change

Greatest Risks Seen in 14 States: AZ, AR, CA, CO, FL, ID, KS, MS, MT, NE, NV, NM, OK and TX;

WASHINGTON (July 20, 2010) -- More than 1,100 U.S. counties -- a full one-third of all counties in the lower 48 states -- now face higher risks of water shortages by mid-century as the result of global warming, and more than 400 of these counties will be at extremely high risk for water shortages, based on estimates from a new report by Tetra Tech for the Natural Resources Defense Council (NRDC).

Natural Resource Defense Council Report:

<http://www.nrdc.org/media/2010/100720.asp>





RECLAMATION

Lower Colorado Region

Managing Water in the West

Current Lake Powell storage is 15,576 thousand acre-feet (KAF) (64 percent of capacity). Lake Mead storage is 10,402 KAF (40 percent of capacity).

Total system storage is 34,119 KAF (57 percent of capacity). Lake Powell elevation is 3,636.35 feet.

The observed April-July runoff for the Colorado River is 5.8 million acre-feet or 73 percent of average.

<http://www.usbr.gov/lc/region/g4000/hourly/rivops.html>

**Taken from Bureau of Reclamation website 8/13/10



The Need









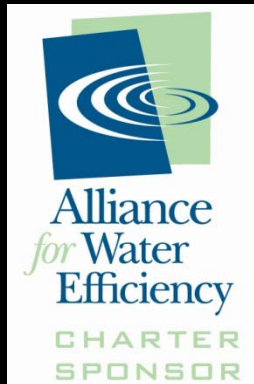


**WRONG
WAY**



The Solution?

Industry Involvement



The core of water conservation in the landscape

- Pressure
- Uniformity
- Scheduling

Available Technology

- High efficiency nozzles
- SMART controllers
- Pressure regulation devices
- Flow sensors

Site Profile

Draper City Amphitheater Draper, UT

- Municipal event venue
- Culinary supply
- \$ 3.73 / 1,000 gallons



Site Profile

Draper City Amphitheater Draper, UT

- Installation:
 - 42 zones
 - Conventional sprays & nozzles
 - Rotors
 - Hydrometer
 - Baseline controls





Site Analysis

Turf area = 32,240 square feet (.74 acres)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
ET	3.9	5.27	6.3	7.13	6.2	5.4	3.41	37.61
MAWA	54,388	73,571	88,150	99,764	88,150	75,557	47,713	527,293

Site Analysis –

Zone 30

- Area = 1,877 sq/ft
- MAWA = 30,638 Gallons
- Sprays @ 60 psi = 49.1 gpm
- Multi-stream @ 40 psi = 17.5 gpm

DU Iq

Sprays	46%
Multi	57%

Du Ih

Sprays	67%
Multi	81%

PR NET

Sprays	2.07
Multi	0.58

PR Gross

Sprays	2.52
Multi	0.90

Site Analysis –

Zone 31

- Area = 1,297 sq/ft
- MAWA = 21,171 Gallons
- Sprays @ 80 psi = 42.6 gpm
- Multi-stream @ 40 psi = 15.9 gpm
- Sprays @ 30 psi = 34 gpm

Dulq

Sprays (80)	55%
Multi	67%
Sprays (30)	57%

Dulh

Sprays (80)	73%
Multi	76%
Sprays (30)	74%

PR NET

Sprays (80)	2.25
Multi	0.58
Sprays (30)	1.62

PR Gross

Sprays (80)	3.16
Multi	1.18
Sprays (30)	2.52



Site Analysis – Zone 30

Run Time Gross (Min/Month)

	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>July</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	Total Min	Hours
Sprays	111	150	179	203	176	154	97	1070	18
Multi	257	348	416	471	409	356	225	2482	41

Gallons / Month (PR Gross)

								Total	Savings
Sprays	5446	7359	8797	9956	8658	7540	4762	52518	
Multi	4505	6087	7277	8235	7161	6237	3939	43441	9077

Gallons / Month Actual

								Total
Sprays	0	0	35,056	28477	17970	12372	0	93875

Site Analysis – Zone 31

Run Time Gross (Min/Month)								Total Min	Hours
	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>		
Sprays (80)	81	110	131	148	129	112	71	783	13
Multi	209	282	337	382	332	289	183	2013	34
Sprays (30)	100	136	162	184	160	139	88	968	16

Gallons / Month (PR Gross)								Total	Savings
Sprays (80)	3457	4671	5584	6320	5496	4787	3023	33338	
Multi	3319	4485	5361	6068	5276	4596	2902	32007	1331
Sprays (30)	3413	4612	5514	6240	5426	4726	2984	32915	424

Gallons / Month Actual								Total
Sprays	0	0	30415	29563	19424	10734	0	90136

Water Savings / Cost Analysis

Zone 30

- MAWA = 30,638 gallons
- Conserved = 9,077 gallons
- Actual use = 93,875 gallons
- \$ Savings = \$33.85

Zone 31

- MAWA = 21,171 gallons
- Conserved = 1,331 gallons
- Actual use = 90,136 gallons
- \$ Savings = \$4.96

ROI =

NEVER!



PQD210 ADSL099939 EWING IRRIGATION PRODUCTS 10/06/10
 Quote #: 1281870 FORMAL QUOTE ENTRY/UPDATE 22:32:20
 CASH SALE CONTR'R SAN DIEGO
 06988 RANK: AAA Grid: H Total Quote: \$180.93

Qty	Item	Description	List Price	Net Price	C P	Extended Price
ZONE 30						
PRESSURE REGULATION						
1	44009295	ACCU-SET PRES REG FOR ICV VAL	75.00	41.250		41.25
HIGH EFFICIENCY NOZZLES						
20	44005120	MP1000 90-210 10-12FT ROTATOR	9.25	4.949	X	98.98
8	44005120	MP1000 90-210 10-12FT ROTATOR	9.25	5.088		40.70
						180.93

Selection options: X = Change the line H = History of Item Prices

D = Delete the line

I = Insert after the line F13=Comments F20=ITEM INQ

F3=EXIT F6=ADD ITEMS F10=CLASS SUBSET F12=RETURN



PQD210 ADSL099939 EWING IRRIGATION PRODUCTS 10/06/10
 Quote #: 1281870 FORMAL QUOTE ENTRY/UPDATE 22:39:12
 CASH SALE CONTR'R SAN DIEGO
 06988 RANK: AAA Grid: H Total Quote: \$331.86

Qty	Item	Description	List Price	Net Price	C P	Extended Price
		ZONE 31				
		PRESSURE REGULATION				
1	44009295	ACCU-SET PRES REG FOR ICV VAL	75.00	41.250		41.25
		HIGH EFFICIENCY NOZZLES				
20	44005220	MP2000 90-210 16-20FT ROTATOR	9.75	5.216 X		104.32
1	44005220	MP2000 90-210 16-20FT ROTATOR	9.75	5.363		5.36
						150.93

----- ADD A LINE ----- Last Qty: 21 Item: 44005220
 Qty: _____ Item: _____ UP: _____ MP2000 90-210 16-20FT ROTATOR
 or
 Line Code: _ (C=Comment B=Begin subtotal E=End Subtotal) F20-ITEM INQ
 F3-EXIT F5-REFRESH F6-CHANGE ITEM F8-DATA ENTRY MODE F12-PREV F22-ITEM SEL

Water Management Controls

Featured Products:

- Baseline Systems BaseStation 3200R
- Baseline BiSensor Soil Moisture Sensors



Case Study – San Diego, CA

- The Baseline controller replaced a conventional controller.
- Utilized existing valve wires without any additional wiring requirement.
- Soil Moisture Sensors were installed in a turf zone and a shrub zone. The sensors were wired to the lead wires in parallel with the zone solenoid wires.
- Turf sensor buried in the top 1/3 of the root zone, per manufacturer's recommendation.
- Shrub sensor was buried in the root zone of the base ground cover plant.

Case Study – San Diego, CA

Estimated Water Savings

April 22 – September 31, 2009 Totals

	<u>Turf Sensor</u>	<u>Shrub Sensor</u>
Scheduled water days:	107	95
Actual water days:	43	15
Estimated water savings:	60%	85%

Water Savings / Cost Analysis

Zone 30

- MAWA = 30,638 gallons
- Actual use = 93,875 gallons
- Potential conserved = 56,325 gallons

\$ 210

Zone 31

- MAWA = 21,171 gallons
- Actual use = 90,136 gallons
- Potential conserved = 54,081 gallons

\$201

\$ 8,400



PQD210 ADSL099939 EWING IRRIGATION PRODUCTS 10/06/10
 Quote #: 1281870 FORMAL QUOTE ENTRY/UPDATE 22:39:12
 CASH SALE CONTR'R SAN DIEGO
 06988 RANK: AAA Grid: H **L** Total Quote: **\$3,341.79**

Qty	Item	Description	List Price	Net Price	C P	Extended Price
WATER MANAGEMENT CONTROLS						
1	55000428	BL-3200X-R48 48STA LRG CAB CN	2860.00	2574.000		2574.00
2	55000850	BL-5315B 1.5FT SOIL MOIST SEN	249.00	224.100		448.20
						3022.20

----- ADD A LINE ----- Last Qty: 2 Item: 55000850
 Qty: _____ Item: _____ UP: _____ BL-5315B 1.5FT SOIL MOIST SENS
 or
 Line Code: _ (C=Comment B=Begin subtotal E=End Subtotal) F20-ITEM INQ
 F3-EXIT F5-REFRESH F6-CHANGE ITEM F8-DATA ENTRY MODE F12-PREV F22-ITEM SEL

THANK YOU.

For more information,
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EWING

