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Bernardo Greens to Bernardo Browns:

A New Normal Case Study

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The New Normal for California Landscapes

Movement in California to transform urban landscapes to:

- Use less water
- Reduce Chemicals
- Utilize compost and mulch
- And more climate appropriate plants

Less This

More This

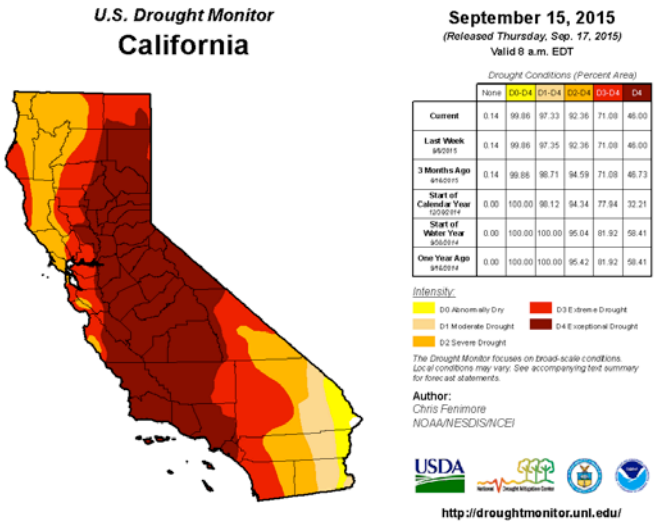
This approach will yield results like:

- Decrease in water consumption
- Increase in landscape and overall environmental health
- Achieve Biodiversity
- Change end-user behavior and expectations of an urban landscape

Many things have brought this to the forefront, like:

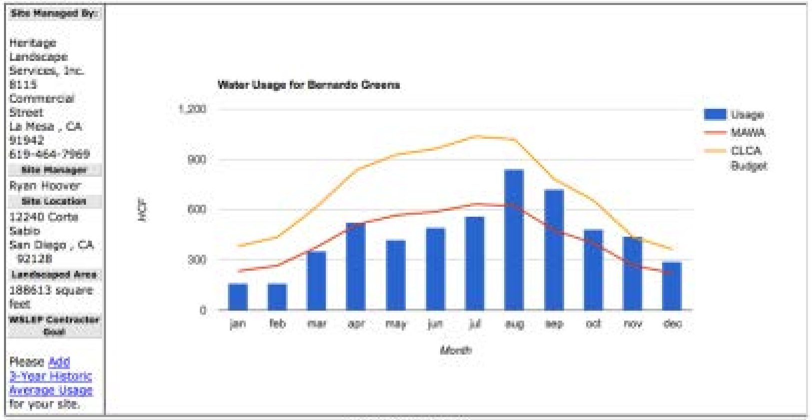
- Healthier lifestyles
- Awareness of possible dangers to kids and pets
- Living more “green”

And….the Great and All Powerful California Drought of 2013-Present



Background: Bernardo Greens HOA Common Area

- Upscale HOA, near golf course in Ranch Bernardo, CA (San Diego Area)
- Common area surrounded by approximately 40,000 square feet of turf
- Uses about 2,706 hcf in the summer (June-Sept. 2009-2014 average)
- Has been monitored and maintained by **Heritage Landscape Services of La Mesa, CA**
- Enrolled in CLCA Water Management Budgeting Software for 6 years



2013 Water Use History

month	ETo (inches)	Water Usage (HCF)	% ETo	CLCA Water Budget (HCF): Water Budget (HCF)	CLCA Water Budget (HCF): Over/Under (HCF)	CLCA Water Budget (HCF): % Budget	Maximum Applied Water Allowance (HCF): Maximum Applied Water Allowance (HCF)	Maximum Applied Water Allowance (HCF): Over/Under Maximum Applied Water Allowance (HCF)	Maximum Applied Water Allowance (HCF): % Maximum Applied Water Allowance
jan	3.10	160.00	48.47%	381.89	-221.89	41.90%	233.10	-73.10	68.64%
feb	2.40	162.00	42.95%	436.44	-274.44	37.12%	266.40	-104.40	60.81%
mar	3.40	351.00	65.68%	618.29	-267.29	56.77%	377.40	-26.40	93.00%
apr	4.60	525.00	72.61%	836.51	-311.51	62.76%	510.60	+14.40	102.82%
may	5.10	420.00	52.39%	927.44	-507.44	45.29%	566.10	-146.10	74.19%
jun	5.30	495.00	59.42%	963.81	-468.81	51.36%	588.30	-93.30	84.14%
jul	5.70	562.00	62.73%	1,036.55	-474.55	54.22%	632.70	-70.70	88.83%
aug	5.60	844.00	95.89%	1,018.36	-174.36	82.88%	621.60	+222.40	135.78%
sep	4.30	722.00	106.83%	781.98	-59.98	92.33%	477.30	+244.70	151.27%
oct	3.60	481.00	85.01%	654.66	-173.66	73.47%	399.60	+81.40	120.37%
nov	2.40	440.00	116.64%	436.44	+3.56	100.82%	266.40	+173.60	165.17%
dec	2.00	293.00	93.21%	363.70	-70.70	80.56%	222.00	+71.00	131.98%
total	12.50	5,455.00	117.65%	9,567.35	-4,112.35	57.02%	5161.5	395.50	105.60%

What did Bernardo Greens HOA want?

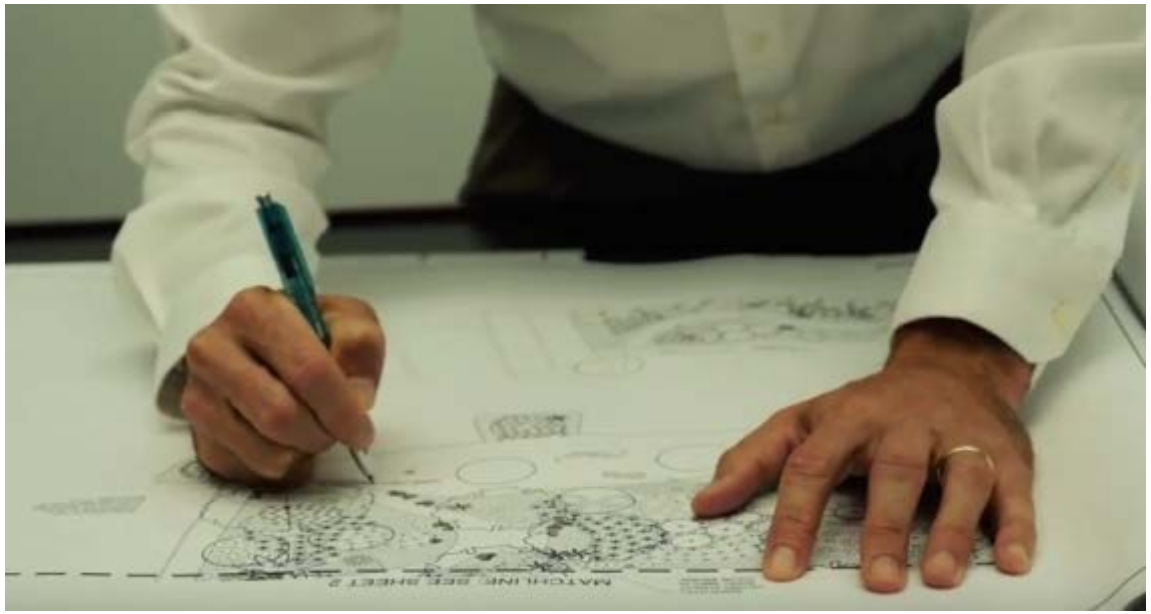
- Water Savings
- To better utilize the approx. 1 Acre around their common area
- Create more curb appeal
- Create more paths for walking and interaction with residents
- Incorporate surrounding wildlife

Why did Bernardo Greens HOA want to make a change?

- Being more sustainable was key
- Healthier more interactive area for people, children and pets
- San Diego is a “hotbed” for a more “watersmart lifestyle”
- Future rising water costs
- Good rebates available
- Dollar savings was a bonus!

Phase 1- Pre-Planning: Devil is in the Details

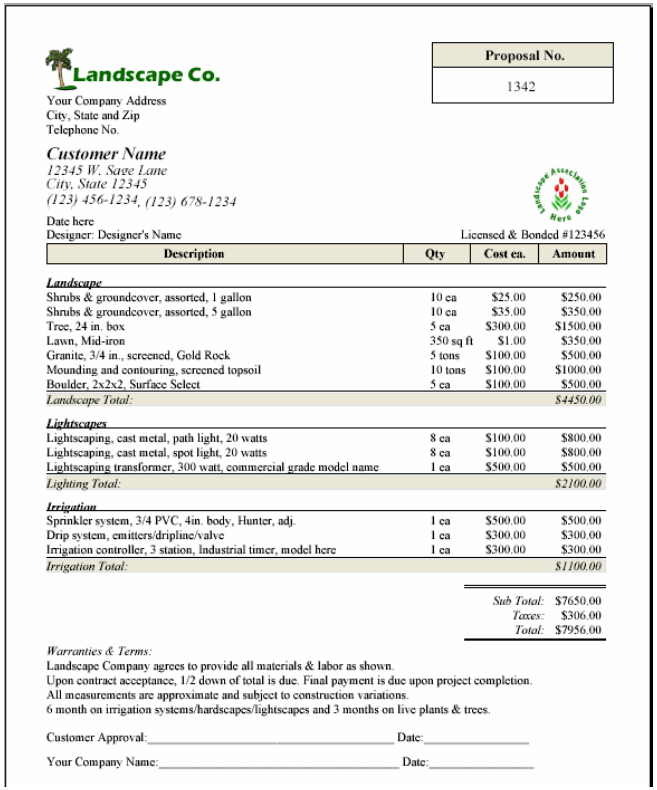
- Lots of meetings with landscape committee and HOA board
- Rebate research and paperwork by the contractor
- Hiring a landscape architect to incorporate ideas in to the plan
- Approval by the HOA board and City of San Diego inspectors



Phase 1- Scope & Proposal

- Lower water use plant pallet (more established trees, shrubs, accent plants, groundcover)
- Incorporate the existing trees
- Installing drip irrigation and MP rotators
- Installing boulders, decomposed granite walkways, river cobble for accent
- Removing old turf and disposal (cost was approx. $35,000)
- Adding a few square feet of turf for contrast
- Installing benches, stone water feature
- Create a certified wildlife habitat

Total cost: Approximately $175,000 for the project to BG HOA



Landscape Co.

Your Company Address
City, State and Zip
Telephone No.

Proposal No.
1342

Customer Name
12345 W. Save Lane
City, State 12345
(123) 456-1234, (123) 678-1234

Date here
Designer: Designer's Name — Licensed & Bonded #123456

Description	Qty	Cost ea.	Amount
Landscape			
Shrubs & groundcover, assorted, 1 gallon	10 ea	$25.00	$250.00
Shrubs & groundcover, assorted, 5 gallon	10 ea	$35.00	$350.00
Tree, 24 in. box	5 ea	$300.00	$1500.00
Lawn, Mid-iron	350 sq ft	$1.00	$350.00
Granite, 3/4 in., screened, Gold Rock	5 tons	$100.00	$500.00
Mounding and contouring, screened topsoil	10 tons	$100.00	$1000.00
Boulder, 2x2x2, Surface Select	5 ea	$100.00	$500.00
Landscape Total:			*$4450.00*
Lightscapes			
Lightscaping, cast metal, path light, 20 watts	8 ea	$100.00	$800.00
Lightscaping, cast metal, spot light, 20 watts	8 ea	$100.00	$800.00
Lightscaping transformer, 300 watt, commercial grade model name	1 ea	$500.00	$500.00
Lighting Total:			*$2100.00*
Irrigation			
Sprinkler system, 3/4 PVC, 4in. body, Hunter, adj.	1 ea	$500.00	$500.00
Drip system, emitters/dripline/valve	1 ea	$300.00	$300.00
Irrigation controller, 3 station, Industrial timer, model here	1 ea	$300.00	$300.00
Irrigation Total:			*$1100.00*

Sub Total: $7650.00
Taxes: $306.00
Total: $7956.00

Warranties & Terms:
Landscape Company agrees to provide all materials & labor as shown.
Upon contract acceptance, 1/2 down of total is due. Final payment is due upon project completion.
All measurements are approximate and subject to construction variations.
6 month on irrigation systems/hardscapes/lightscapes and 3 months on live plants & trees.

Customer Approval:_____ Date:_____

Your Company Name:_____ Date:_____

Phase 2- Scope and Proposal (cont.)

Total cost: Approximately $175,000 for the project

Turf removal rebates available from:
So Cal Watersmart (MWD) $2.00 per square foot
40,000 sq. ft. x 2= $80,000
City of San Diego $2.00 per square foot
30,000 sq. ft. (rebate maximum) x 2= $60,000

$175,000 for the project
-$140,000 in rebates

= Net cost of $35,000 to BG HOA (or equal to the price of the turf disposal)

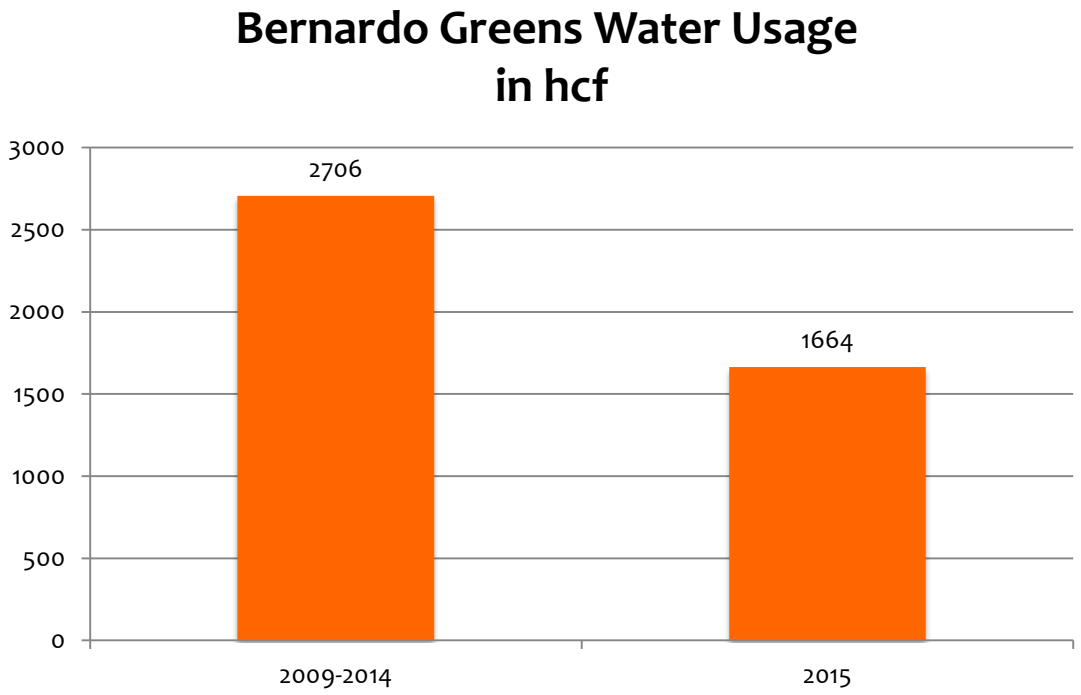
Phase 2- Installation

Phase 3 Post Installation - Analyzing the Data ROI

Summer months (June-Sept 2009-2014) average water usage was : 2,706 hcf

Summer months (June-Sept. 2015) average water usage was: 1,664 hcf

Usage savings of 39% in year one (during establishment period)



Phase 3- Analyzing the Data ROI (cont.)

If average water cost about $5.15 per hcf at Bernardo Greens
Bernardo Greens uses about 2,706 hcf over the Summer months
5.15 x 2,706= $13,936 is what Bernardo Greens pays each summer

If their average is now 1,664 at $5.15 per hcf= $8,570 per summer

$13,963-$8,570= summer savings of $5,123

This means their ROI will be reached in about 5-7 years!*
Given an annual savings of $7,000 per year

With no rebates, at about $7,000 in savings per year, ROI on a $175,000 investment would take almost 25 years to be achieved

Before & After Photos

Before and After Photos

Before and After Photos

More After Photos

Conclusion

- Water restrictions will only get tougher post-California drought
- People will begin to embrace a more sustainable landscape if they are motivated
- A beautiful landscape can be achieved, keeping in mind a client's budget
- ROIs for large commercial projects become reasonable only when turf rebates cover a large portion of the cost

You can find a full video story of this conversion on You Tube:
https://www.youtube.com/watch?v=0jiOSVYK9-s

Questions?

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