

SIERRA FOOTHILLS BACK YARD

June 2009

SAMPLE PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	Acer nigrum Quercus agrifolia Quercus kelloggii	Black Maple Live Oak Black Oak
SMALL TREES		
	Cercis occidentalis Cotinus coggygria	Redbud Smoke Tree
LARGE SHRUBS		
	Cercocarpus betuloides Arctostaphylos d. 'Howard McMinn' Raphiolepis i. 'Clara' Cistus ladanifer	Mountain Ironwood Manzanita Indian Hawthorn Crimson-spot Rockrose
SMALL SHRUBS & PERRENIALS		
	Nandina 'Fire Power**' Festuca 'Siskiyou Blue' Mimulus aurantiacus Iris douglasiana Penstemon heterophyllus	Heavenly Bamboo** Blue Fescue Monkey Flower Pacific Coast Iris Beard Tongue
GROUNDCOVER RECREATIONAL/ACTIVE		
	Festuca Idahoensis* Turf *	Idaho Fescue* NCN*
GROUNDCOVER SOCIAL/PASSIVE		
	Achillea millefolium Arctostaphylos 'Emerald Carpet' Eriogonum fasciculatum*	Common Yarrow Emerald Carpet Buckwheat*
HARDSCAPE		
	Pavers	Mulch or DG
	Stepping Stones	Pea Gravel
	Bench	Sand-set Brick

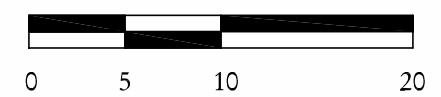
Note: Trees to be limbed up 10' above ground with no roof overhang.

* Can tolerate light traffic
**Can tolerate shade

SUNSET ZONE - 7



NORTH



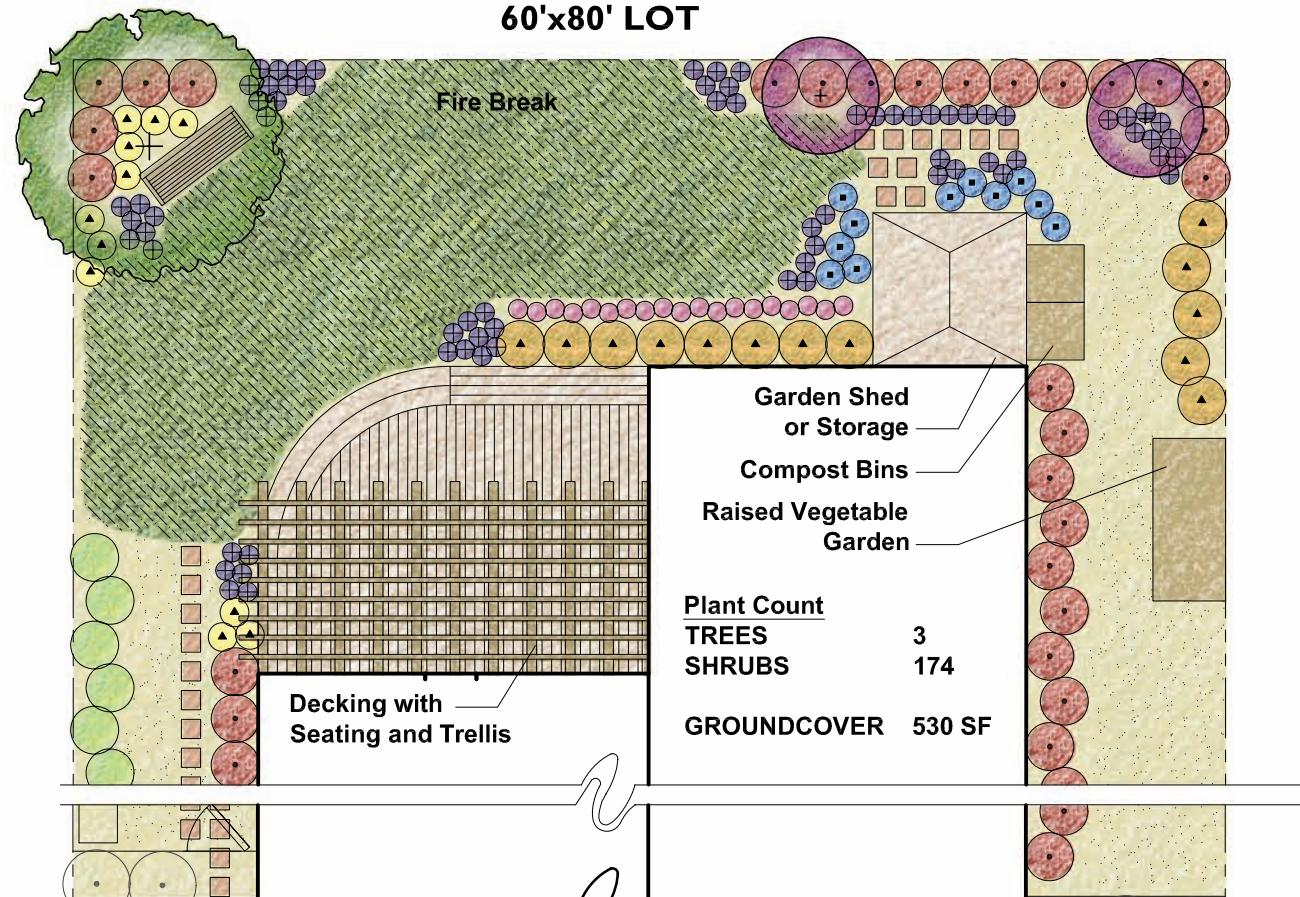
1" = 10'-0"

Note: For additional information regarding design and installation, please see back yard template and CUWCC's Water Smart Landscape Checklist at www.cuwcc.org.
Funded by the U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Office.

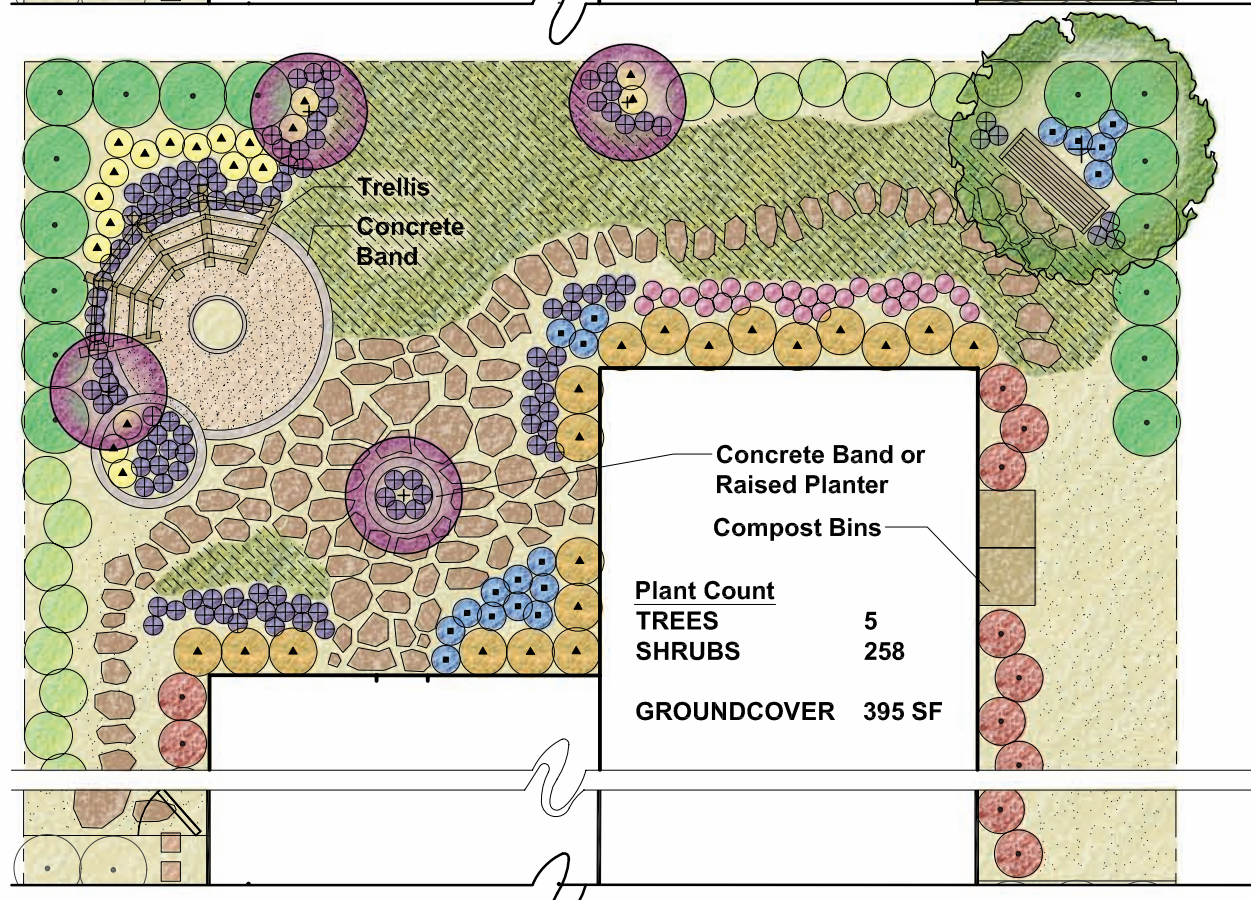
"TYPICAL" SIZED LOT HOUSE NORTH FACING REAR GARDEN, TYPICAL

60'x80' LOT

RECREATION/ACTIVE

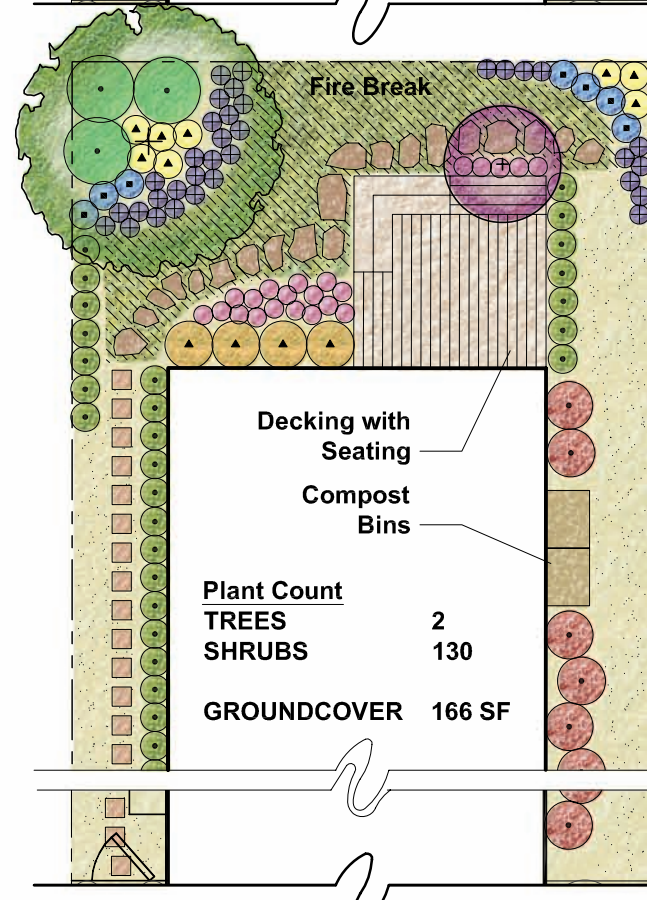
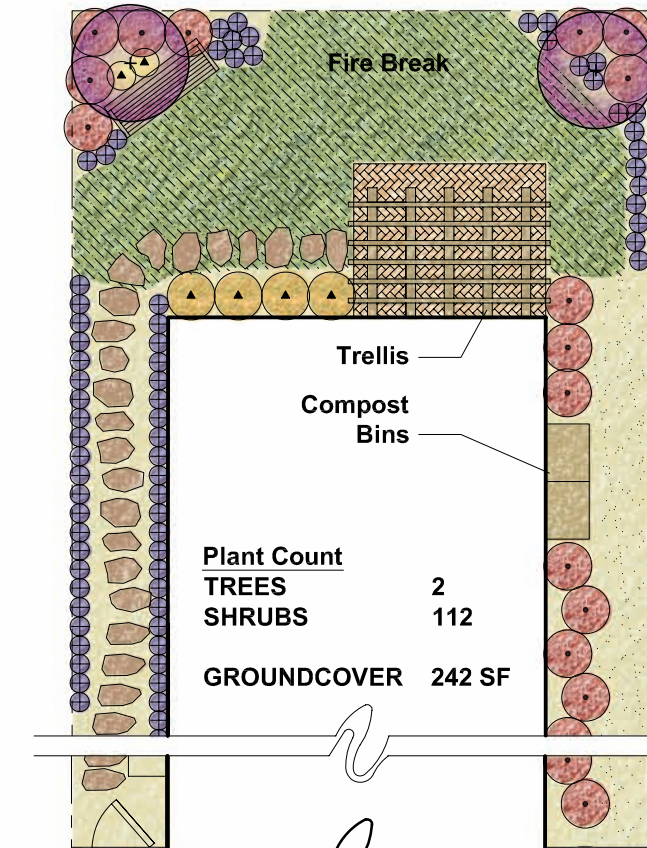


SOCIAL/PASSIVE



ZERO-LOT LINE HOUSE NORTH FACING REAR GARDEN, TYPICAL

30'x80' LOT

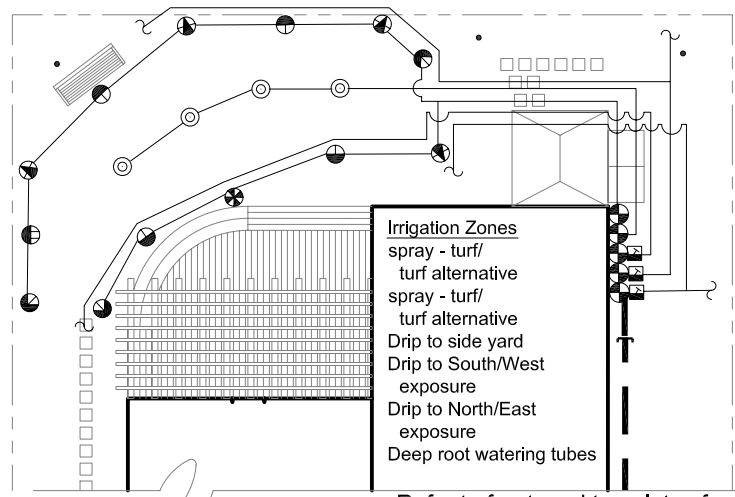


SIERRA FOOTHILLS BACK YARD

June 2009

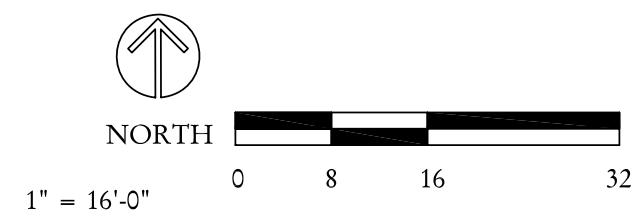
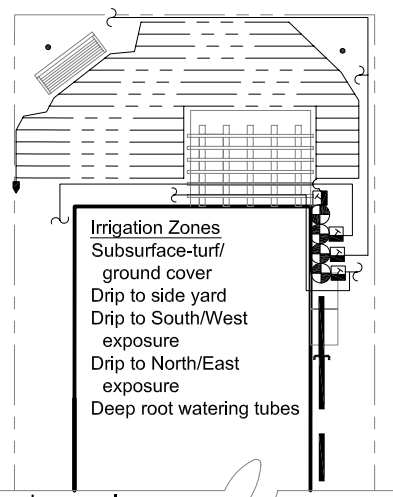
RECREATION/ACTIVE

"TYPICAL" SIZED LOT HOUSE NORTH FACING REAR GARDEN, TYPICAL

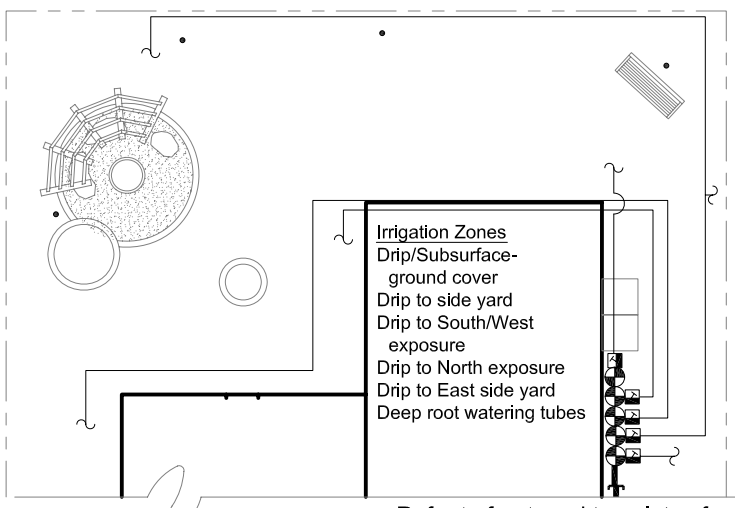


Refer to front yard templates for front yard examples

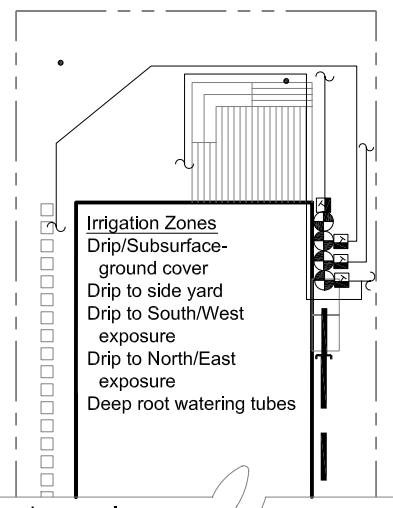
ZERO-LOT LINE HOUSE NORTH FACING REAR GARDEN, TYPICAL



SOCIAL/PASSIVE



Refer to front yard templates for front yard examples



	Existing irrigation main stub-out-1"	-Connect to stubout, station wires and common in valve box
	Remote Control Valves	-Below grade in valve box with 2 cu feet of gravel below
	Drip control assembly	-120 mesh filter and 40 psi regulator where psi is excessive
	Flush valve/air relief valve	-Manual ball valve and air relief valve as required
	6" Spray heads (12" from fence)	-Matched precip with check valves-12H,T,Q,ADJ -12' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-10H,T,Q -10' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-8F,H,T,Q -8' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-15SST,EST -3' X 10'
	Deep root watering tube	-Use 1 GPM bubbler as alternate to hand watering
	Irrigation main-1"	-1120/Schedule 40 PVC pipe -18" cover
	Irrigation lateral	-1120/Class 200 PVC pipe -12" cover
	Electrical conduit-1"	-1120/SCHEDULE 40 PVC PIPE -24" cover
	Sleeving-3"	-1120/Schedule 40 PVC pipe -24" cover
	To drip irrigation	-Point source or multi-outlet emitters -6" cover
	Inline subsurface drip-1/2"	-LDPE with inline emitters 12" on center -4" cover

Typical Lot - Recreation	Estimated Water Use-Auburn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Spray Turf	520	0	32	97	875	1,749	2,333	2,689	2,365	1,701	745	32	0	12,618
Spray Turf alternative	520	0	19	56	500	1,000	1,333	1,536	1,351	972	426	19	0	7,210
Drip GC	1080	0	22	67	606	1,211	1,615	1,862	1,637	1,177	516	22	0	8,736
TOTAL with Turf	1600	0	55	164	1,480	2,960	3,947	4,550	4,002	2,878	1,261	55	0	21,354
TOTAL with Turf alternative	1600	0	41	123	1,105	2,211	2,948	3,398	2,989	2,149	942	41	0	15,946

Estimated water use with turf 21,354 gal/yr; MAWA = 35,307 gal/yr; projected water use = 60% of MAWA with turf
 Estimated water use with turf alternative 15,946 gal/yr; MAWA = 35,307 gal/yr; projected water use = 45% of MAWA with turf alternative

Zero Lot - Recreation	Estimated Water Use-Auburn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Subsurface Turf	255	0	12	37	334	667	890	1026	902	649	284	12	0	4,813
Subsurface Turf alternative	255	0	7	21	191	381	508	586	515	371	162	7	0	2,750
Drip shrubs	465	0	10	29	261	521	695	801	705	507	222	10	0	3,761
TOTAL with Turf	720	0	22	66	594	1,189	1,585	1,827	1,607	1,156	506	22	0	8,574
TOTAL with Turf alternative	720	0	17	50	451	903	1,204	1,388	1,220	878	384	17	0	6,511

Estimated water use with turf 8,574 gal/yr; MAWA = 15,888 gal/yr; projected water use = 54% of MAWA with turf
 Estimated water use with turf alternative 6,511 gal/yr; MAWA = 15,888 gal/yr; projected water use = 41% of MAWA with turf alternative

Typical Lot - Social	Estimated Water Use-Auburn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip Ground Cover	330	0	7	21	185	370	493	569	500	360	158	7	0	2,669
Drip shrubs	1270	0	26	79	712	1,424	1,899	2,189	1,925	1,385	607	26	0	10,273
TOTAL with Turf	1600	0	33	100	897	1,794	2,392	2,758	2,426	1,744	764	33	0	12,942

Estimated water use 12,942 gal/yr; MAWA = 35,307 gal/yr; projected water use = 37% of MAWA

Zero Lot - Social	Estimated Water Use-Auburn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip GC	130	0	3	8	73	146	194	224	197	142	62	3	0	1,052
Drip shrubs	590	0	12	37	331	662	882	1017	894	643	282	12	0	4,772
TOTAL	720	0	15	45	404	807	1,077	1,241	1,091	785	344	15	0	5,824

Estimated water use 5,824 gal/yr; MAWA = 15,888 gal/yr; projected water use = 37% of MAWA

PRECIP = Precipitation Rate is the application rate of irrigation in inches per hour
 Assumed precip: Spray heads - 1.8, Drip - .4, subsurface drip - 1.1, Deep root watering -8
 MAWA = Maximum Annual Water Allotment (in gallons and based upon 70% of area historical annual ET)
 ET=Reference evapotranspiration is the quantity of water evaporated from the soil and transpired by the planting and is measured in inches per month.
 ANN GAL = Annual gallons
 RUNTIME = Total amount of minutes required for planting root depth in native soil
 CYC = Total number of repeat cycles required for native soil
 CYC TIME = Rounded minutes of each cycle to be repeated by "CYC allowing infiltration monthly number = number of times/month to apply runtime (refer to example below)
 BASE SCHEDULE for established plant material with historical weather data (10 year average) and assumed precip. Note, if low precipitation heads or mini rotors are used in lieu of conventional spray heads, then the base run times will need to be extended to provide water down to the planting root zones.
 SPRAY HEAD: Spray head with one of the following: standard matched precipitation spray nozzles-1.8"/hr, low precipitation nozzles - 1"/hr, or mini rotor nozzles-0.4"/hr
 During establishment period, root depth is shallower, thus requiring more frequent irrigation with shorter run times, stretching out the frequency and extending the total runtimes as the planting matures and roots penetrate into native soil conditions over a 3-5 year span. Establishment irrigation frequency depends upon the time of year initial planting takes place.

Monthly example:
 The number under the month indicates the number of times that zone needs to be irrigated during that month. For fractions of runtimes per month, multiply the # of CYC by the decimal (example: drip/ground cover requires .6 runtimes per month of March = .6 X 7(# of CYC)= 4 cycles of 23 minutes each (CYC). This would equate to 92 minutes total runtime one time during the month of March.
 Backyards: Refer to backyard design templates for both social and recreation layout ideas.
 Note: Some plants respond better to overhead spray while many others do better with drip. The irrigation design will need not only to take into consideration plant preferences, but also runoff and potential blockage where the planting grows in front of the spray heads. Drip and spray are both shown on the templates to show differences in system costs and projected water use.
 Also see front yard templates.