

BAY AREA BACK YARD

June 2009

SAMPLE PLANT LEGEND

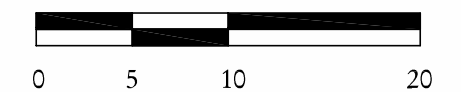
SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	xChitalpa T. 'Morning Cloud'	NCN
	Quercus agrifolia	Live Oak
	Quercus suber	Cork Oak
SMALL TREES		
	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree
	Cotinus coggygia	Smoke Tree
	Lagerstroemia 'Natchez'	Crape Myrtle
	Leptospermum l. 'Compacta'	Dwarf Tea Tree
	Luma apiculata	NCN
LARGE SHRUBS		
	Myrtus communis	Myrtle
	Artemisia pycnocephala	Sandhill Sage
	Sarcococca confusa**	Sweet Box**
	Ribes sanguineum**	Currant**
	Arctostaphylos purissima	Lompoc Manzanita
SMALL SHRUBS & PERENNIALS		
	Polystichum californicum**	Sword fern**
	Helictotrichon sempervirens	Blue Oat Grass
	Aristida purpurea	Purple Three-Awn
	Eschscholzia californica	California Poppy
	Juncus patens	California Gray Rush
	Epimedium alpinum	NCN
GROUNDCOVER RECREATIONAL/ACTIVE		
	Carex pansa*	Sedge*
	Turf *	NCN*
GROUNDCOVER SOCIAL/PASSIVE		
	Arctostaphylos 'Emerald Carpet'	Emerald Carpet
	Thymus serpyllum*	Creeping Thyme*
	Rubus pentalobus*	Bramble*
HARDSCAPE		
	Pavers	Mulch or DG
	Stepping Stones	Pea Gravel
	Bench	Sand-set Brick

* Can tolerate light traffic
** Can tolerate shade

SUNSET ZONES - 15, 16, 17



NORTH



1" = 10'-0"

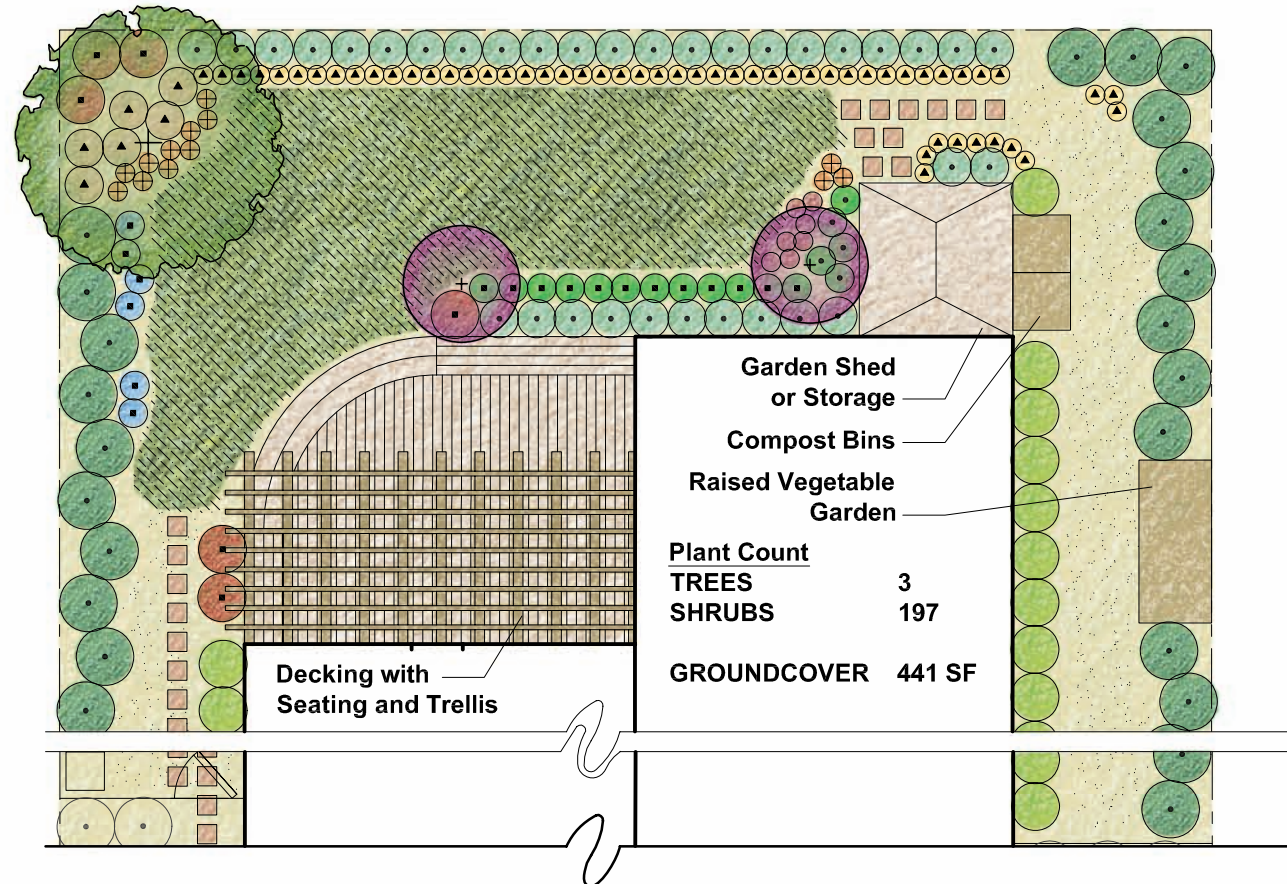
Note: For additional information regarding design and installation, please see back yard template and CUWCC's Water Smart Landscape Checklist at www.cuwcc.org.
Funded by the U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Office.

"TYPICAL" SIZED LOT HOUSE

NORTH FACING REAR GARDEN, TYPICAL

60'x80' LOT

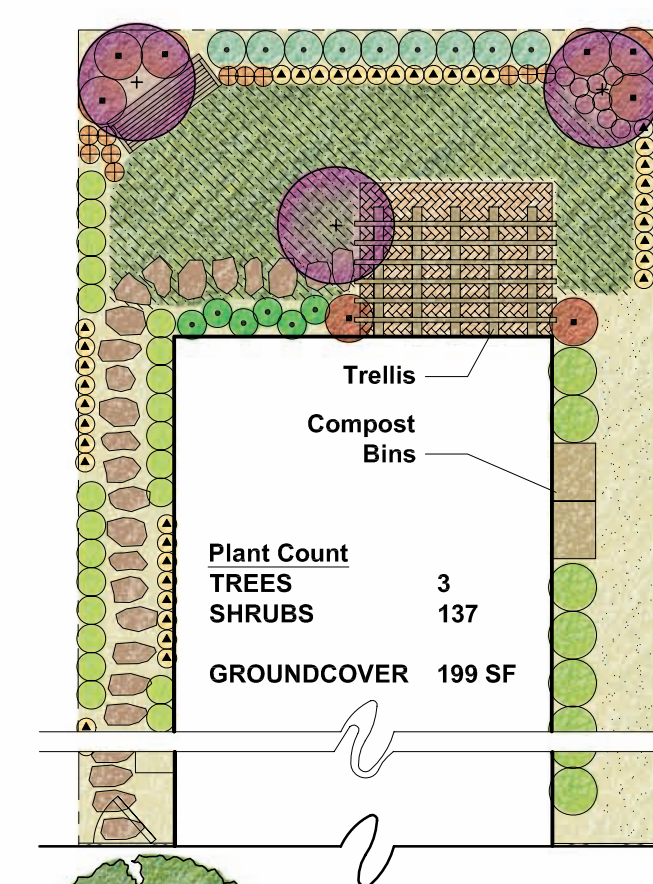
RECREATION/ACTIVE



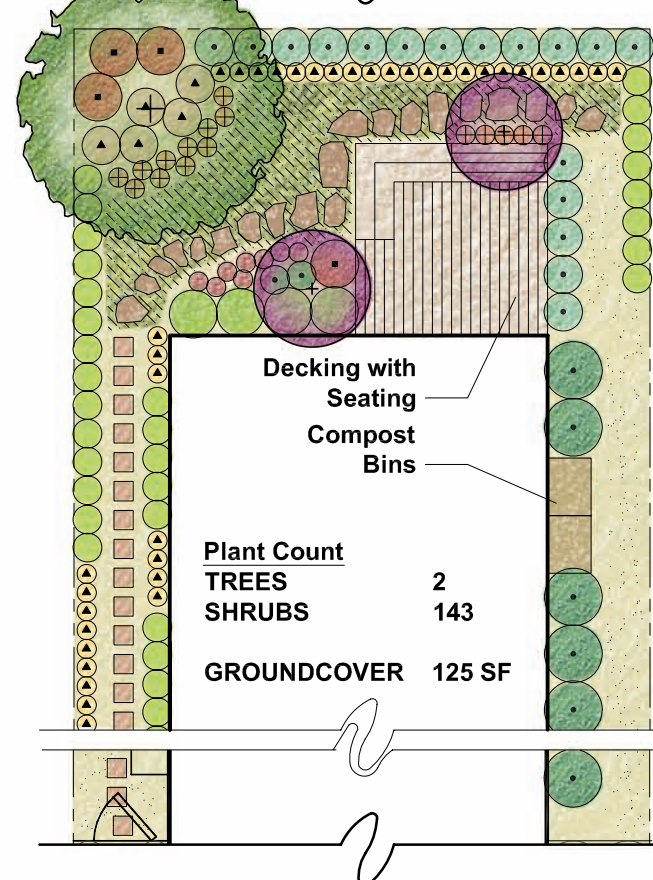
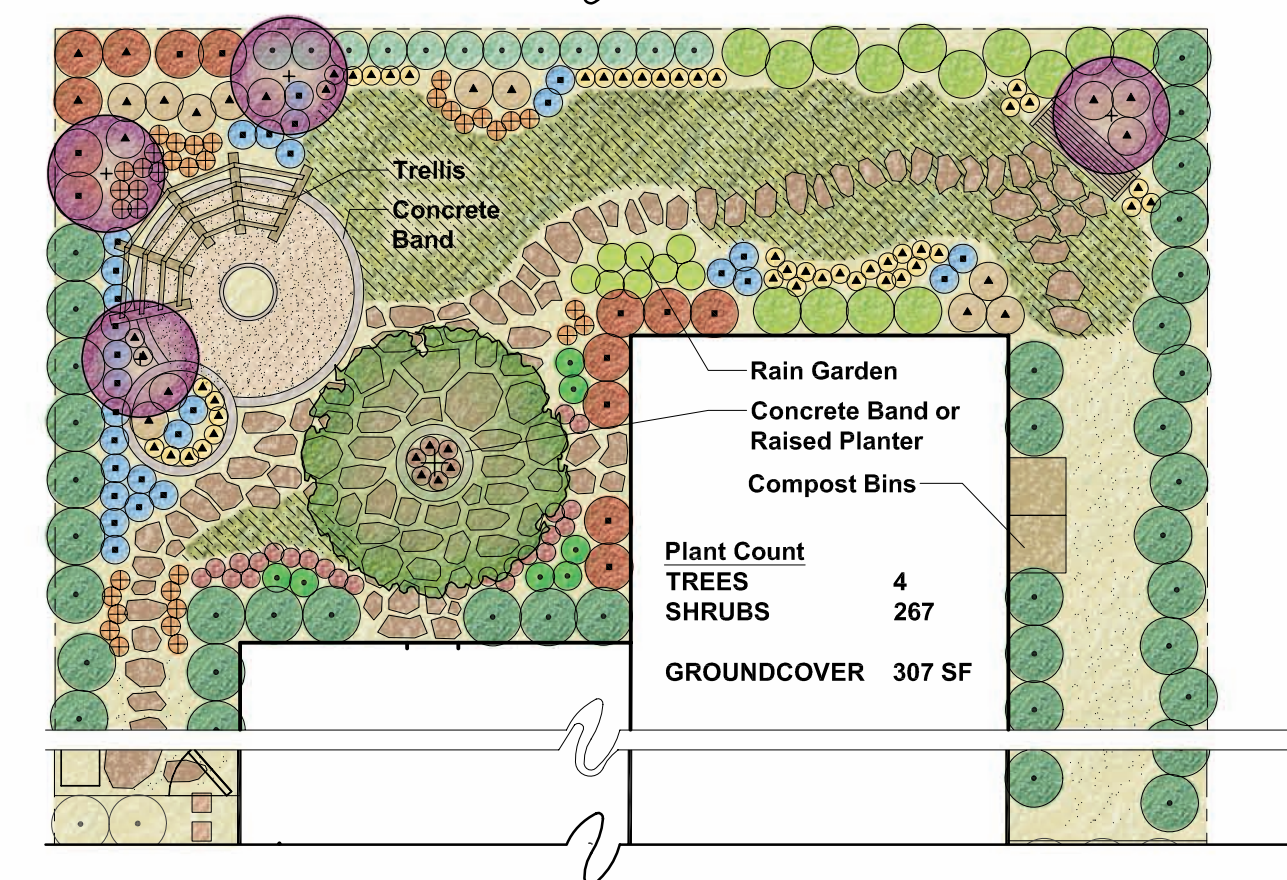
ZERO-LOT LINE HOUSE

NORTH FACING REAR GARDEN, TYPICAL

30'x80' LOT

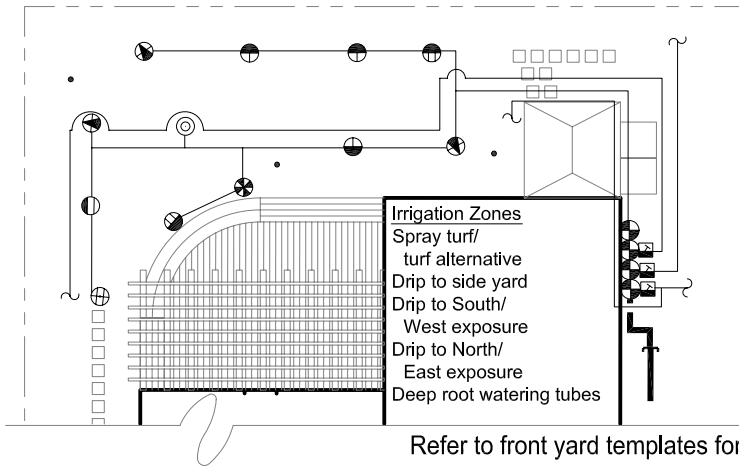


SOCIAL/PASSIVE



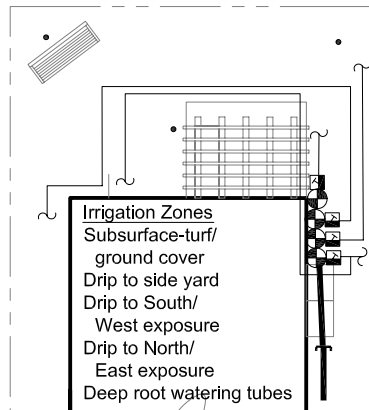
RECREATION/ACTIVE

"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



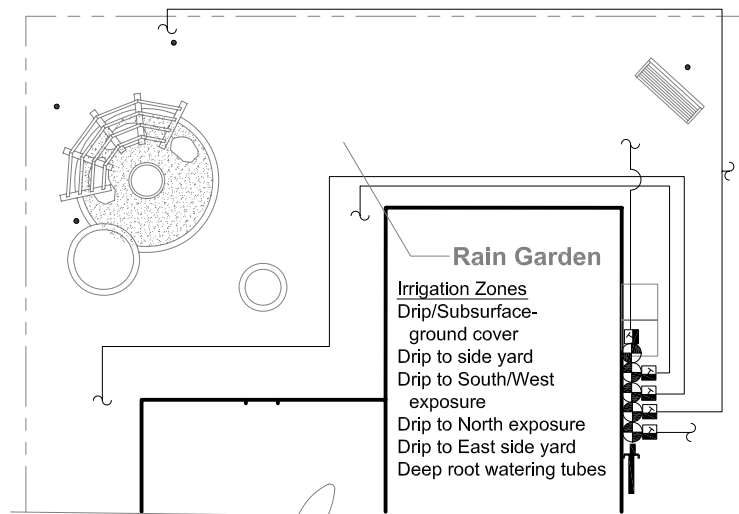
1" = 16'-0"



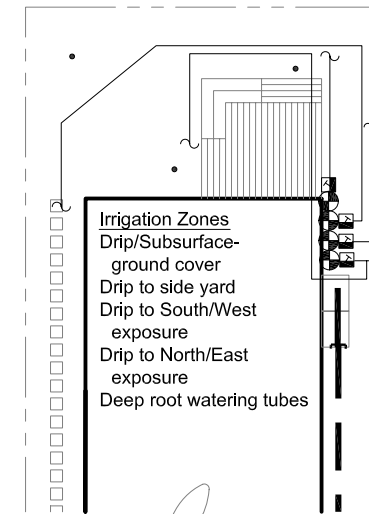
**BAY AREA
BACK YARD**

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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

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_o=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.

Typical Lot - Recreation	Estimated Water Use-San Francisco	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Spray Turf	432	0	27	304	592	942	1,238	1,319	1,292	1,103	624	40	0	7,482
Spray Turf alternative	432	0	15	174	338	538	707	754	738	631	357	23	0	4,275
Drip GC	1,168	0	24	274	534	849	1,116	1,189	1,164	994	563	36	0	6,743
TOTAL with Turf	1,600	0	51	578	1,126	1,791	2,354	2,507	2,456	2,098	1,187	77	0	14,225
TOTAL with Turf alternative	1,600	0	40	448	872	1,387	1,823	1,942	1,902	1,625	920	59	0	11,018
Estimated water use with turf 14,225 gal/yr; MAWA = 24,491 gal/yr; projected water use = 58% of MAWA with turf														
Estimated water use with turf alternative 11,018 gal/yr; MAWA = 24,491 gal/yr; projected water use = 45% of MAWA with turf alternative														
Zero Lot - Recreation	Estimated Water Use-San Francisco	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip GC	130	0	3	31	59	94	124	132	130	111	63	4	0	751
Drip shrubs	590	0	12	138	270	429	564	600	588	502	284	18	0	3,406
TOTAL	720	0	15	169	329	523	688	733	718	613	347	22	0	4,157
Estimated water use 4,157 gal/yr; MAWA = 11,021 gal/yr; projected water use = 38% of MAWA														
Typical Lot - Social	Estimated Water Use-San Francisco	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip Ground Cover	806	0	17	189	368	586	770	820	803	686	388	25	0	4,653
Drip shrubs	794	0	16	186	363	577	758	808	791	676	383	25	0	4,584
TOTAL	1,600	0	33	375	731	1,163	1,528	1,628	1,595	1,362	771	50	0	9,237
Estimated water use 9,237 gal/yr; MAWA = 24,491 gal/yr; projected water use = 19% of MAWA														
Zero Lot - Social	Estimated Water Use-San Francisco	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip GC	130	0	3	31	59	94	124	132	130	111	63	4	0	751
Drip shrubs	590	0	12	138	270	429	564	600	588	502	284	18	0	3,406
TOTAL	720	0	15	169	329	523	688	733	718	613	347	22	0	4,157
Estimated water use 4,157 gal/yr; MAWA = 11,021 gal/yr; projected water use = 38% of MAWA														