



*Your neighborhood solar-powered gardener.*

## **PURPOSE**

To provide an example of edible and forest gardening, sustainable practices and beauty in an urban setting.

## **GOALS**

1. Expand the use of environmentally healthy practices in the residential setting.
2. Test ecological gardening practices to find the ones with the least impact on the environment.
3. Provide as much food as possible for the residents and neighbors.
4. Eliminate all water run off from property into storm drains.
5. Zero use of city water for exterior landscape.
6. Provide retreat a calming and restorative space for residents.

## **SITE CHALLENGES**

1. **Poor Drainage:** flooding by sidewalk entrance and in rear garden
2. **Perennial Weeds:** Bermuda and Kikuyu grass in rear garden
3. **Burrowing Pests:** gophers and voles
4. **Shading of property:** house and arbor to South, neighboring trees and large Liquidambar trees
5. **Northern view:** trucks, waste, recycling bins and house

## **SUSTAINABLE PRACTICES AND THEIR MULTIPLE FUNCTIONS**

1. **Water catchment:** solved drainage problem and collects water for dry season using both gravity fed system for front garden (440 gallons) and solar powered watering for rear garden vegetable crops (495 gallons). Recycled Maraschino Cherry syrup drums (55 gal each) are used.
2. **Dry creek bed/infiltration swales:** solved flooding of front entryway near garage and in rear garden, provides path to North side of house and central path in rear garden, provided optimum drainage and growing conditions for plants. Develops lens of water for trees and shrubs to reduce water usage during dry months, avoids over taxing our storm drainage system, and reduces pollution of the Monterey Bay. Water is piped from downspouts into dry creek bed and infiltration gallery in back garden.
3. **Greywater:** Golden showers every morning on top of an infiltration gallery adjacent to the hot tub. This waters the Beauty Plum and Frederick Passion Fruit Vine. Since the house is vegan, dishwater from the kitchen is saved in tubs to water trees and shrubs. Water to wash and reuse plastic bags is also used for large plants. The washing machine currently waters approximately 33% of the garden (front and back fruit, nut, and native plants). Plans are to add another zone to water the garden directly in front of the house. This will move greywater use to 50% of the garden.

4. **Use of on-site materials:** the dry creek bed rocks came from the existing landscape that was all rock over plastic in the front garden, the soil from the raised beds came from the trenches dug in the front and rear (some as deep as 3.5 feet), wood chips for garden and rear path came from Liquidambar trees that were removed and from Nature First Tree Company that did tree work in the neighborhood. A large compost pile covered in black plastic to speed decomposition provides fertilizer for our plants. Vegetable kitchen scraps are also put under the wood chips and mushroom compost to encourage vigorous growth. They also supply our 4 worm bins that supply liquid fertilizer and vermicompost to the plants.
5. **Use of beneficial insects:** Chrysoperia rufilabris or Green Lacewings are used to control all soft-bodied insects, aphids, scale crawlers, white flies, thrips, mites, insect eggs and small caterpillars. Also, Trichogramma spp. (wasps) that lay eggs in the eggs of moths, prevent caterpillar damage. Lobularia maritime or Sweet Alyssum, Achillea or Yarrow and other flowering plants provide nectar for these and other beneficial insects.
6. **Sheet mulching:** cardboard and wood chips have been used to conserve water and for weed control.
7. **Roof gardening:** the Kiwi vines are being trained on the roof to maximize production due to limited space and sun.
8. **Solarization:** the Bermuda grass and Kikuyu grass were eliminated by using black plastic over a 4 month period to fry the roots.
9. **Design considerations (efficient use of space):** the hot tub was placed in the shadiest and most private part of the garden, an area where it would be difficult to grow anything. Most of the fruit trees and fruiting vines are espaliered against south and west facing walls and fences (except for passion vines) and the rear garden has the tall trees around the edges forming a “U” with an opening facing south (other functions of this are more privacy and improving the views). In the opening, annual vegetable crops are grown. Under the trees, root crops are being grown, the beginning of the forest garden: roots, herbs, edible ground covers, shrubs, small trees, and large trees. This is also called “stacking functions.” A new mushroom bed has been installed along the south fence in the back garden, one of the shadiest areas.
10. **Using recycled materials and resource conservation:** The spa patio is made from broken concrete that was removed from a job about 2 blocks away. Between the broken concrete is tumbled recycled glass that came from Red Shovel Glass Company in San Francisco. All the cardboard for the sheet mulching came from the Bicycle Trip and boxes that we used for moving here or that packaged products we received via UPS. The patio containers are made from recycled decking and the raised beds from reclaimed bookshelves. The Advanced Drainage System (ADS) piping used to run the roof water from the downspouts to the dry creek bed and drainage trench was scrap from a landscape job. Used heater filter fabric (1” thick) was stuffed in the end of the ADS pipe to keep the pipe from getting full of soil. Tree and plant ties are made using reclaimed bike tires, wire, or vegetable bundle wraps.



11. **Organic gardening:** There are no pesticides used on this property. For slugs and snails we remove them late at night and have started to use snail traps made of wood. Kindly, we move them to Lighthouse Field instead of squashing them. Unkindly, we also use Sluggo in some cases, but have found the populations to be quite diminished, we think, because of the sharp wood chips spread around the garden. Also, we use diatomaceous earth around plants to protect them. We put gopher wire under all the rear garden paths, garden beds and spa patio. The plants in the front garden have gopher baskets. If there is aphid or scale infestation, I blast them off with water. I think too, that the diversity of plants, use of organic composts and beneficials keep the populations under control. Urine is used to fertilize all the trees and non-edible plants (see book "Liquid Gold").
12. **Reseeding:** We allow many annuals to reseed again and again to save time planting and the cost of seeds. Note Arugula, Mitzuna, Lettuces, Annual Sowthistle, Chickweed, Borage, and Miners Lettuce are doing this in the garden.
13. **Nurturing Bioactivity:** Mushroom Compost is used to mulch around trees, shrubs, and vegetables. The mycelium in it increases micro-organism populations and transfer of minerals and other nutrients to the plants. We also have a worm bin that recycles our kitchen scraps in to wonderful vermicompost that I use on indoor plants and outdoor container plants.
14. **Drought tolerant plants:** whenever possible we select plants that require little, if any, watering once established. The exception to this is the fruiting and annual crops that we use water catchment, greywater, and filtered water (to remove chlorine). We eat many of the flowering plants, all of the herbs and vegetables, and plan to make tinctures of the medicinal plants. Growing local saves transportation and manufacture costs (fossil fuels).

*Thank you for your interest in*  
**LOVE'S GARDENS DEMONSTRATION GARDEN**

