

# ROOTED IN ECOLOGICAL PRACTICES

Gardeners' Guild, Inc. has a long history of protecting the environment. We have incorporated this responsibility into our business practices and it's one of our corporate values.

## General Practices and Acknowledgements

We promote and manage recycling of green waste at the point of origin on customer properties via composting and mulching, and waste management strategies such as diversion of clean yard waste, clean rock/dirt/concrete, and commercial garbage from landfills. In 2003 GGI diverted 586 tons of materials from landfills. In addition, GGI has retired old trucks into recycle programs and all manners of office supplies/equipment and vehicle maintenance materials (tires, batteries, fluids) are recycled.



## Recognized Leader

Special Honor by Marin Economic Commission, 2003 "Business of the Year"

In February, 2009, Northbay business Journal phoned Gardeners' Guild to get our input on an article about water conservation. They called us because they were told that we are the leader in sustainable landscape programs

## Water Management

In 1984 we received the first of several recognition awards from the MMWD (Marin Municipal Water District).

Designed and implementation of water conservation programs. Staff is trained in State of California Water Resource Management Program. Over 150 water audits performed.

We are routinely consulted by manufacturers of the latest in irrigation technology. For example, we partnered with a smart controller manufacturer to install 90 controllers for the City of Petaluma's pilot program. The result was a savings of 30% water/dollars.

Gardeners' Guild staff has played a leading role in the development of the "Turf and Landscape Irrigation Best Management Practices". These BMPs have been developed under the auspices of the Irrigation Association.



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# E n v i r o n m e n t a l   A w a r d s   a n d   A c k n o w l e d g m e n t s

## **Marin County Certified Green Business, 2002**

## **California Integrated Waste Management Board**

*Waste Reduction Awards Program. 1995 – 2005-11 consecutive years  
“Top Ten” Award for Recycling and Waste Reduction Efforts, 1998*

## **The Marin Conservation League, 1998**

*John M. McPhail, Jr. Award*

## **City of San Rafael**

*Resolution of Appreciation*

## **Green Entrepreneur Award, 2003**

*Safe-Bid Co*

## **Bay Area Air Quality Management District**

*2003 Spare the Air Campaign*

## **Marin Economic Commission, 2003**

*Golden Spire Award for Outstanding Business of the Year*

## **The Environmental Forum of Marin**

*Golden Acorn Award, 1998*

## **Green Business Award, 1995**

## **Marin Municipal Water District**

*Certificate of Recognition Water Conserving  
Landscape Water Management Award  
Multiple Awards*

## **2006 Joseph J. Garbarino**

*Environmental Leadership Award*

Please visit our website at [www.gardenersguild.com](http://www.gardenersguild.com), and click on the Sustainability section for more information about our practices.



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# LIVING SOLUTIONS - BACKGROUND

## Employee owned Gardeners' Guild Inc. is a certified green business

We were founded on a commitment to ecological practices. This has put us at the forefront of the green industry and made us an invaluable resource for our clients.

## We've evolved these principles into a proven comprehensive program called *LivingSolutions*.

It has been well received by high profile properties and we are eager to continue its success on other sites. The program is a science based approach focused on soil health and irrigation efficiency. The results of introducing beneficial organisms into the soil include: improved plant vigor, disease resistance and enhanced drought tolerance.



## Gardeners' Guild Ecological Practices Background

- Recycling, reuse and reduce waste.
- Active involvement in developing and using state of the art water conservation programs.
- For 36 years Gardeners' Guild has promoted and created landscapes that reduce the need for fertilizers and chemicals.
- The recipient of over twenty-three state and local awards acknowledging these environmentally sound practices.
- Assisting clients in achieving their *green* goals.
- One of the first bay area landscape contractors to use and install smart irrigation controllers
- First Marin landscape contractor to be certified green business
- Bay Friendly Certified

## Why *LivingSolutions*?

- The *LivingSolutions* program restores soil degraded from conventional construction and site development a processes. Healthy soil makes healthy plants.
- Soil where there is a diverse soil food web will perpetuate and sustain landscapes for the benefit and health of all.
- It eliminates the threat of harmful chemicals and residues in the water supply making the landscape safe for your pets and children.
- Improving our environment is the right thing to do.

## What Does *LivingSolutions* do?

- Eliminates the use of pesticides in turf areas
- Eliminates the use of synthetic fertilizers to turf, shrub, and color areas throughout the site
- Creates a diverse population of beneficial organisms in the soil
- Beneficial soil organisms and ecological management practices lead to improved plant vigor, improved disease resistance and enhanced drought tolerance.



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## What are the results?

- The soil will have increased water holding capacity, nutrient cycling; improved drainage; disease and insect infestation will be suppressed.
- Improved plant vigor and appearance; increased drought tolerance and disease resistance
- Results can be measured in the soil and should become visible on plants over time. Inputs are ongoing and relatively heavy the first few years then maintained over time with a more limited management program.
- Irrigation efficiency and smart controllers will result in water savings.
- Ultimately – it is an aesthetically pleasing landscape that is beneficial to the site user(s) and for the environment.

## What are the key components of the *LivingSolutions* program?

- Base line soil assessment—complete Soil Food Web assay AND comprehensive chemical/physical properties
- Irrigation system diagnostic and ongoing water management— ideally using smart weather based controllers and metering at each point of connection (P.O.C.).
- Develop plan for inputs—biology, organic matter, bulk material for large scale inputs as indicated in base line soil assessment—and ongoing maintenance strategies.
- Applications of microbial diverse soil amendment--Pure Black Castings™. Number and frequency of applications vary for plant and soil types.
- Foliar or soil applications of microbial inoculants.
- Mulching-- to mitigate fluctuations in soil temperature; retain moisture; suppress weeds; protect soil applied Pure Black Castings™, compost, and other materials; provide food for soil dwelling organisms

## What type of ongoing maintenance is needed with the *LivingSolutions* program?

- Ongoing monitoring to read cues for soil health by plant appearance and presence of other organisms.
- Testing for mycorrhizal colonization in areas that become or remain stressed. Inoculation as indicated by testing.
- Foliar applications of microbial inoculants.
- Soil applications of microbial inoculants based on visual determination or results of soil testing
- Soil and plant tissue testing as needed to make adjustments to program
- Water management: irrigation system efficiency upgrades, maintenance and weather based programming; preferable to work with smart controllers.



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## LIVING SOLUTIONS - MULCHING

Mulching is one of the most important ways to maintain healthy landscape plants. Mulch is any material applied to the soil surface for protection or improvement of the area covered. Mulching is really nature's idea. Nature produces large quantities of mulch all the time with fallen leaves, needles, twigs, pieces of bark, spent flower blossoms, fallen fruit and other organic material.

### Benefits of Mulching

When applied correctly, mulch has the following beneficial effects on plants and soil:

- Mulches prevent loss of water from the soil by evaporation.
- Mulches reduce the growth of weeds, when the mulch material itself is weed-free and applied deeply enough to prevent weed germination or to smother existing weeds.
- Mulches keep the soil cooler in the summer and warmer in the winter, thus maintaining a more even soil temperature.
- Mulches prevent soil splashing, which not only stops erosion but keeps soil-borne diseases from splashing up onto the plants.
- Organic mulches can improve the soil structure. As the mulch decays, the material becomes topsoil. Decaying mulch also adds nutrients to the soil.
- Mulches prevent crusting of the soil surface, thus improving the absorption and movement of water into the soil.
- Mulches protect the trunks of trees and shrubs from damage by lawn equipment.
- Mulches help prevent soil compaction.
- Mulches add to the beauty of the landscape by providing a cover of uniform color and interesting texture to the surface.
- Mulched plants have greater root mass than plants that are not mulched, because mulched plants will produce additional roots in the mulch that surrounds them.



\*Source: Clemson University



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## L I V I N G S O L U T I O N S – S M A R T I R R I G A T I O N

The new generation of “smart” irrigation systems can be viewed as sophisticated communications systems that happen to dispense water, rather than a network of underground valves, pipes and pop-ups controlled by a wall-mounted timer.

These systems can monitor data, such as climate, site conditions, or soil moisture, and automatically adjust your irrigation schedule. Smart systems keep your grass green while saving your “green.”

The secret to smart systems is the controller. Smart controllers use weather and/or site data to determine when and how long to water. Then your sprinklers apply just enough water at exactly the right time in each zone of your yard.



### **Saves Water**

Environmentally friendly smart systems conserve water by watering only as much as needed. Smart sprinklers work with Mother Nature to automatically suspend watering during rain, freezing or high wind conditions or compensate for rainfall. Plus a smart system can keep your lawn and landscape healthier by avoiding the pitfalls of inadequate watering, too frequent watering, or the more common problem of overwatering, which often results in disease or poor root systems.

### **Saves Money**

Because smart systems water only when needed, time the applications to allow water to soak-in, and avoid application when water might evaporate or blow away, you may reduce your annual water bill as much as 30 percent. On top of that, you may qualify for rebates from your local water board or utility for the purchase of specific smart controllers.

### **Saves Time**

Once your irrigation installer has programmed the site data into the smart system, the controller adjusts the watering schedule based upon local conditions and/or soil moisture and by zone.

### **Adds Convenience**

Smart controllers require little direct access, so they provide an excellent solution for sites where it is difficult to access the controller. There's no need to reprogram the controller due to seasonal weather changes.

Upgrading your current controller may be an option. Some new components are designed as easy add-ons to an existing controller, eliminating the need to replace your system's “brains.”

### **Gardeners' Guild expertise using and installing smart controllers**

One of the first in the bay area to use them

Pilot program with the City of Petaluma: installed 90 smart controllers. Petaluma enjoyed a 30% savings in usage and cost.

\*Source: Irrigation Association



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# LIVING SOLUTIONS – ORGANIC PRODUCTS

The following are organic products we use in soil fertilization. Unlike chemicals these products add vital nutrients to the soil that plants need to thrive. Our philosophy is simple - healthy soils grow healthy plants.

## Concentrated liquid microbial inoculants

It provides the essential nutrients for the soil; is not derived from petroleum products, but from an organic solution extracted from worm castings. It is rich in beneficial microorganisms including humic acid\*, plant extracts and sea kelp. It also reduces plant susceptibility for disease. Children and pets can play on the lawn as soon as application of this product has been completed.

Benefits include:

- Reduces transplant shock
- Reduce germination time
- Promote vigorous plant growth.
- Produce larger flowers.
- Increases drought resistance
- Disease suppression



## Mycorrhizae

Mycorrhizal is a beneficial fungus which brings great amounts of soil nutrients and moisture to plants. A mycorrhizal plant can uptake 100 times or more nutrients than one without it. The word "mycorrhizae" literally means "fungus-roots" and defines the close mutually beneficial relationship between specialized soil fungi (mycorrhizal fungi) and plant roots.

About 95% of the world's land plants form the mycorrhizal relationship in their native habitats.

## Earthworm castings used as organic fertilizer

Earthworm castings are 100% Natural, odorless and have the appearance of coffee grounds. The castings slowly release nutrients needed for healthy plant growth and increased production rates. Earthworm Castings can be used in aeration by incorporating it into the soil or it can be used as a top dressing which can then be covered with mulch.

Benefits of Worm Castings

- Reduces runoff by increasing water-holding capacity in soil.
- Helps to keep our environment cleaner.
- Provides plants with valuable, balanced, nutrition.
- Provides plant growth hormones.
- Help soil to fight diseases "biologically."
- Provides a slow-release of nutrients, which conditions the soil for a long time, not just a season.

\*humic acid is one of the major components of humic substances<sup>1</sup> which are dark brown and major constituents of soil organic matter humus that contributes to soil chemical and physical quality and are also precursors of some fossil fuels. They can also be found in peat, coal, many upland streams, dystrophic lakes and ocean water.



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# L I V I N G S O L U T I O N S – M A N A G E D G R A Z I N G

## Background

Drought conditions and hotter and drier summers intensify the chance of property damage from fire. Lack of firebreak protection multiplies the risk for a catastrophic wildfire.

- Most types of vegetation, including grass, trees, shrubs and common weeds will enable a fire to spread rapidly.
- A crown fire, that is a fire which has spread to the top of the tree, is extremely difficult to suppress, and allows for other trees to crown from the top down. These types of fires pose a risk to fire fighters.



## The Solution

Firebreak management \*(Vegetation Management): Increases the space between plants inhibits the speed at which a fire can spread, the heat and intensity of it and limit the amount of time a fire will burn.

## Options

- Gas powered equipment; brush cutters, string trimmers, tractor and disk. (Soil disturbing contributes to erosion)
- Managed grazing which has the benefit of having no environmental impact

## Benefits of Managed Grazing

- Managed grazing can provide natural firebreaks\*
- The cost of a human worker along with fossil fuel will increase over time whereas the cost of sheep or goats will decrease
- Machines that do this job kick up dust, pollen and will trigger allergies. Sheep are actually consuming the pollen
- No noise
- No dust
- Minimize worker safety issues (no equipment)  
They work 24/7
- Over time mitigate the population of weeds
- Preserves soil by maintaining root systems and structural vegetation which holds soil
- Managed grazing does not disturb soil thus doesn't contribute to soil erosion

## Testimonials

*"I sit on my porch to watch them graze; it's great to see"* HOA resident

*"I brought my wife and kids to see the animals. It was great!"* Employee at large corporate campus

\*firebreak: a strip of open land that stops the advance of a fire



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