Sustainable Water Management Systems

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Sustainable Water Management Systems

Building Healthy Soils

Sustainable Model – River Friendly

Irrigation Water Delivery

Case Study – Drakes Landing

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Water

70% of Earth's surface is Water

97.5% of all Water on Earth is Salt Water

70% of the Fresh Water is frozen or not accessible

<u>Less than 1% is accessible for human use</u>

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Building Healthy Soils

Soil Biology – Analysis & Recommendations

Sheet Mulching, Compost & Mulch

Compost Tea & Bio-stimulants

Organic & Pesticide Free (Heal & Hurt)

Fertigation Systems

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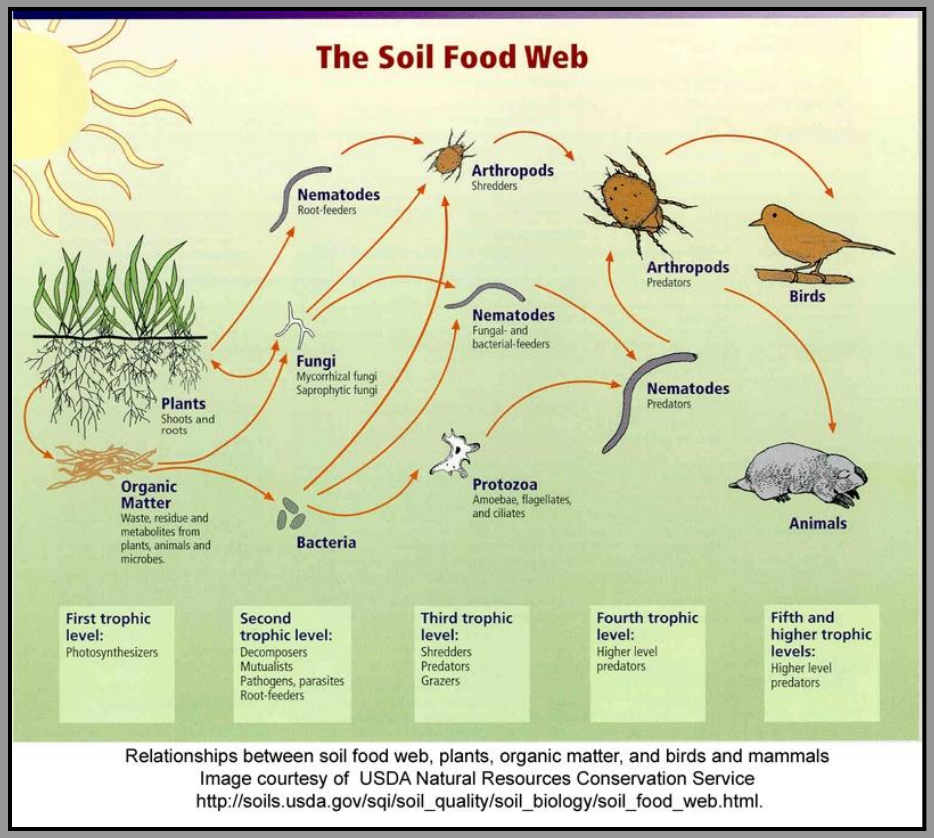
Building Healthy Soils



Relationships between soil food web, plants, organic matter, and birds and mammals
Image courtesy of USDA Natural Resources Conservation Service
http://soils.usda.gov/sqi/soil_quality/soil_biology/soil_food_web.html.

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Building Healthy Soils

Feeding plants	**to**	**Feeding soil**
Linear	**to**	**Dynamic**
Controlled	**to**	**Diverse –Alive**
Knowers	**to**	**Learners**
Polluting	**to**	**Regenerating**
Cost	**to**	**Value - Service**

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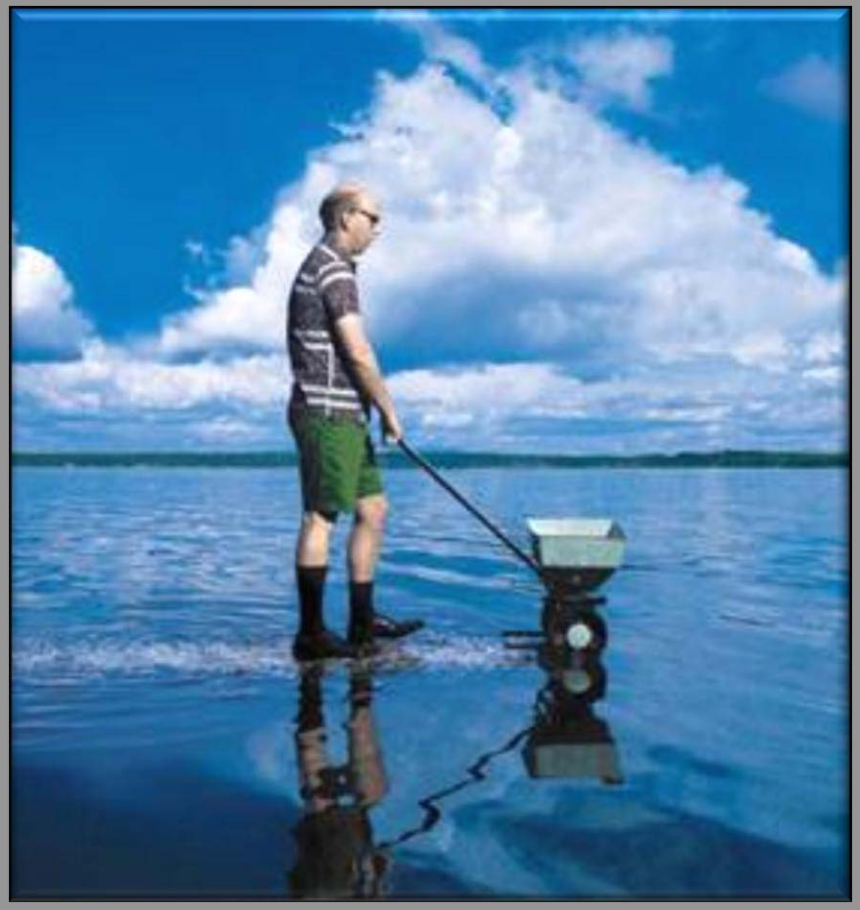
Building Healthy Soils



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Sustainable Models

Declaration of Support

Guide Books

Conference

Promoting Programs, Training & Qualification

3rd Party Rating System

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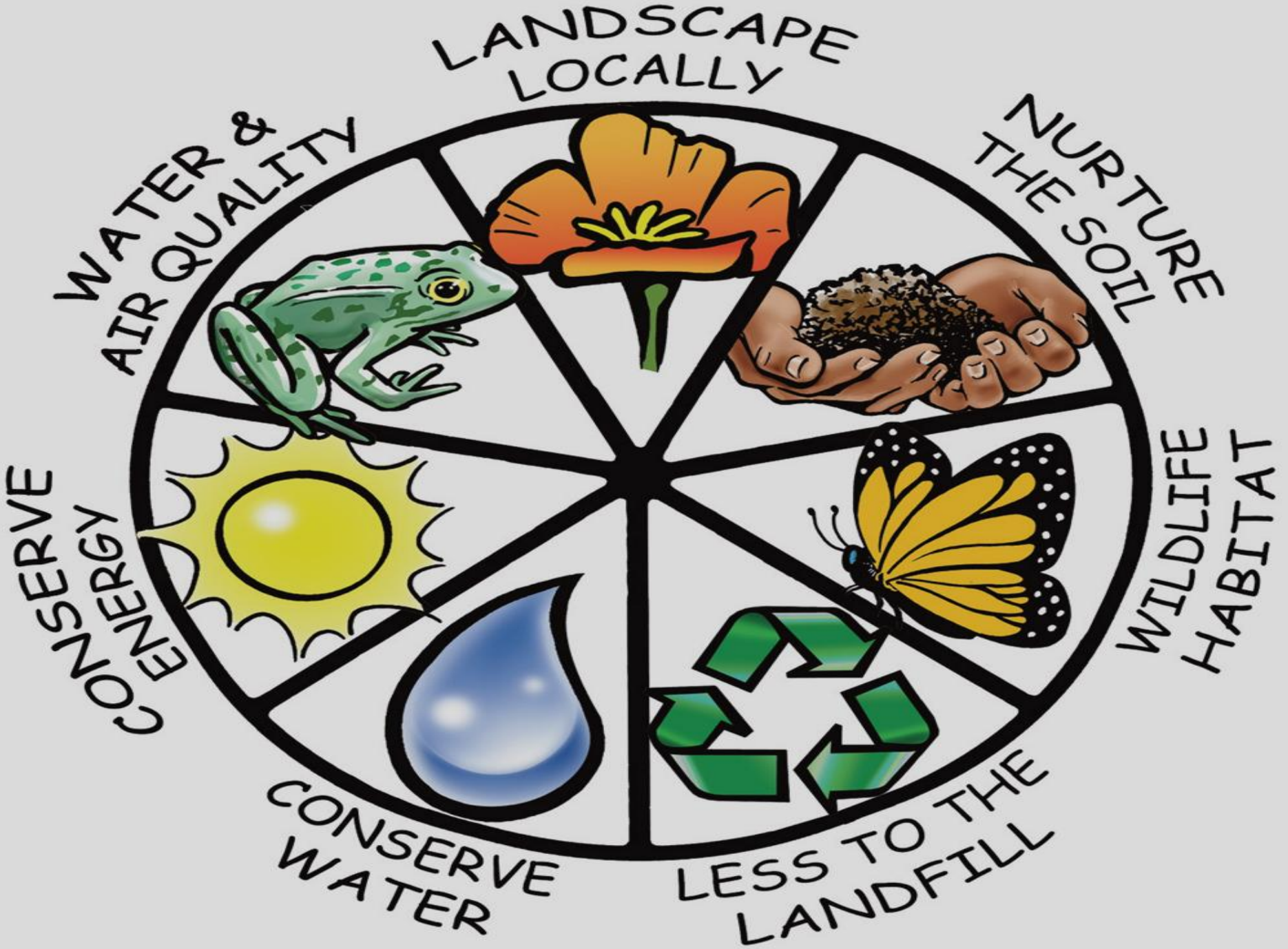
LANDSCAPE LOCALLY
NURTURE THE SOIL
WILDLIFE HABITAT
LESS TO THE LANDFILL
CONSERVE WATER
CONSERVE ENERGY
WATER & AIR QUALITY

Irrigation Water Delivery

Promote Learning & Change

- **Re-specify or Promote thru Design-Build**
- **Educate & Train**
- **Align Maintenance & Installation**
- **Promote Sales thru ROI Studies**

SMART Controllers
Subsurface Drip Irrigation
Efficient Spray & Rotor Zones

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Drakes Landing

Drakes Landing

53% Water Savings

Projected ROI = less than 10 years

Environment

Customer & Community

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Drakes Landing

Sheet Mulching – Step by Step

1. Shut off water & scalp mow
2. Excavate Perimeter at hardscape
3. Irrigation – cap & stub up for drip
4. 2 layers of cardboard
5. 3” Organic Compost
6. Plant & Drip
7. 3” Recycled Arbor Mulch

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ALL OVER MARIN
MINI STORAGE


515
FORD

Drakes Landing

Education

Community

Marketing

Co-branding

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LANDSCAPE DESIGN ELEMENTS & BAY FRIENDLY PRINCIPLES

Drakes Landing's sustainable landscape design will follow Bay Friendly Guidelines that look great and create environmental solutions by nurturing the soil, protecting our water and air, preventing landfill waste, redeveloping natural habitat, and reducing energy use. These Bay Friendly strategies create landscapes that bring beauty to the community, healing to the planet, and value to the property.

Susie Dowd Markarian Design Elements:

- The design incorporates a plant palette that blends naturally within the setting, one that flows and undulates with the elements. The native landscaping builds community through more inviting courtyard spaces, by using water features, labyrinths, and offering places to gather.
- Customers and visitors will be able to connect with the natural ecosystem through the innovative landscape surrounding them.
- The plant selection creates a visually calming landscape enhanced by the winds from the bay, while adding year-round interest and seasonal change.
- Sheet mulching and organic amendments will develop the soil food web that reduces water use and neutralizes toxins, while providing more nutrients and disease resistance for plants and trees.
- Bay Friendly principles and techniques have been used throughout the design to create a sustainable landscape.

Bay Friendly Strategies at Drakes Landing

Nurture the Soil

- Sheet mulching with organic amendments will regenerate the soil without toxic chemicals.
- All of the planting areas will be amended with local organic compost and beneficial soil organisms that ensure the health of the new landscape ecosystem.

Conserve Water

- The irrigation design and technologies will use water most efficiently for the variety of plantings and seasons.
- Replacing turf grass with native meadow plants greatly reduces water needs.
- Native plants, once established, need a fraction of the water of most non-natives.

Landscape Locally

- Using native plant material reduces waste material from trimming and allows healthy growth in the local micro-climates.
- Extra materials from demolition will be donated to local organizations.
- Community outreach for education will take place before, during, and after in order to empower others to create sustainable solutions in their landscapes.

Conserve Energy

- The construction process will include carbon reduction strategies within the transportation of people and materials.
- Native plants can be left to grow to full height, thus reducing hedging and transport of materials.
- Using organic local materials reduces energy consumption from production and shipping.

Protect Water and Air Quality

- Sustainable soil strategies allow water to infiltrate without running off into the bay.
- Using organic products eliminates toxins from entering the bay and groundwater.
- Reducing the amount of turf grass and using native plants reduces the air pollution from mowing and trimming with power equipment.

Create Wildlife Habitat

- Native plantings provide food and shelter for beneficial insects and birds that keep pests in balance.
- Water features provide water for pollinators and birds that keep the landscape healthy.
- Native plants and habitat in the landscape will allow the site to integrate and grow with the surrounding ecosystem.

Less to the Landfill

- Existing plant material will be chipped and used as mulch.
- Existing pavers will be picked up and reused for pathways, repairs, and donations.
- Most waste materials from construction will be recycled.
- Existing planters will be donated to a local community organization.

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Printed on recycled paper.

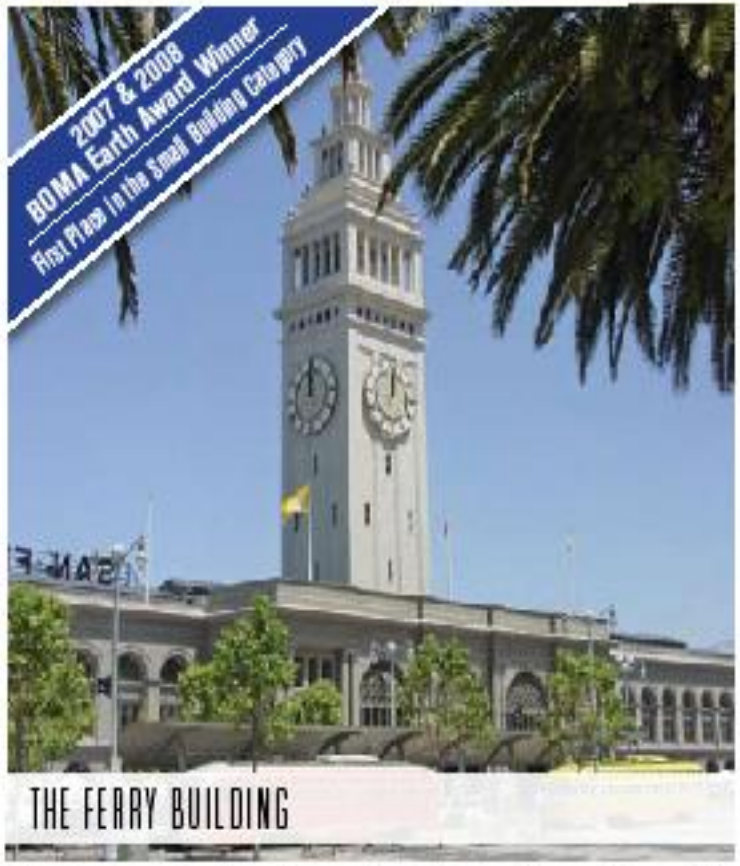
DRAKES LANDING OFFICE PARK

BUILDING SUSTAINABILITY

Equity Office

Building Sustainability

Equity Office is committed to operating its Northern California portfolio of approximately 20 million square feet in an energy efficient manner.



THE FERRY BUILDING

This San Francisco icon has evolved into a daily reminder of the importance of ecological awareness and values. It is known for its organic merchants and sustainable agriculture advocates and farmers' market featuring third-party certified organic farmers.

DRAKES LANDING OFFICE PARK GREENBRAE

When completed in December of this year, the sustainable landscape renovation taking place at Drakes Landing in Greenbrae will make it one of the first commercial properties in Marin County to embark on such an extensive and meaningful program. To learn more, visit www.cagwin.com/drakes.

For more information about locating in an Equity Office building and our green operations, contact:

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energyconnect

Equity Office

Sustainable Water Management Systems

How do you define success?

- ❑ Customer & Community
- ❑ Economic
- ❑ Environment

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Questions

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