



THE ARCHITECTS ASSOCIATION OF SANTA CRUZ COUNTY

Third Quarter

Volume Three 2012

Call for AASCC Officer Nominations

Get involved with the AASCC, and help to make a contribution to our design community. The nomination period for next year's AASCC Officers is now open through the **1st of October**. Nominees must be of, and by, Architect Members in good standing, with their consent. Call any current AASCC Officer with your nomination, or mail to our Post Office Box. Nominations must be received by 5:00 pm on October 1st.

Call for Systems Integrator Projects

Our fourth presentation this year, "**Air**", will look at projects seamlessly integrating multiple resource conserving systems into the building and site design.

We are looking for good examples of this integration in projects, where systems do not read as an element tacked-on after the fact, but are an integral part of the whole.

Examples of such systems would include photovoltaic and domestic hot water solar systems, windmill or turbine electrical generation and pumping, water harvesting and recycling, greywater and blackwater systems, and others. Integration of multiple systems is preferred.

If you have a project you would like to share with others, give one of the AASCC officers a call for additional details.

AASCC Donation to Habitat for Humanity

This year's seventeenth annual **Open Architecture Tour** drew over four hundred and fifty design aficionados to tour the eight different buildings designed by our AASCC Architect Members.

As a result of the broad community support for this event the AASCC will be donating \$6,000. to our local **Habitat for Humanity Santa Cruz County** at our next meeting.

Informed of the upcoming donation, **David Foster, Executive Director** of Habitat replied "*With three homes currently under construction and another eight in the design phase Habitat for Humanity Santa Cruz County is clearly picking up the pace. The long-term support from the Architects Association of Santa Cruz County, through their annual Open Architecture Tour, is a boost that really helps keep us going. **Being a part of the Tour process is certainly a highlight for us every year.***"

Since Habitat uses volunteers for much of the labor on their projects, as well as obtaining many materials at cost or even for free, this donation will stretch even further.

Many thanks to our seven Tour Sponsors, forty seven Advertisers, five Distribution Sites, the Habitat Staff, our Tour Director, our eight participating Architects, and AASCC members for their efforts and support in making this year's Tour a success.

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Non-Conforming Rules Updates

In our recent article "*Non-Conforming Rules Changed*" we inaccurately referred to a "*rolling five-year window of maximum modifications to a legal Non-Conforming structure*". Actually, according to Planning staff, there are no "*maximum modifications*," due to elimination of the Variance previously required for modifications to Non-Conforming structures.

Instead, all changes over a rolling five-year period to the major structural components of both Conforming and Non-Conforming portions of the building will count towards a Modification Threshold.

If the Modification Threshold is reached, a Site Development permit is required. This is an improvement to previous regulations, which required a Variance once the threshold was exceeded, since a Variance could only be approved under special circumstances.

AASCC Donates, continued.

A special thanks to those eight generous home and building owners who opened their doors to benefit Habitat for Humanity, and to the hundreds of community members who support our Tour each year

We thank you all and extend our invitation to attend a brief presentation of our donation to Habitat at our next meeting, September 20th at 6:00 pm.

See Page four for venue information.



The Architects Association of Santa Cruz County

Officers:

President:	Jim Stroupe	831 688-3300
Vice President:	Hugh David Carter	831 458- 1544
Treasurer:	William Fisher	831 246-0117
Newsletter Editor :	Hugh David Carter	

Send letters, change of address, subscription & advertising inquiries to:
AASCC Newsletter, P.O. Box 7462, Santa Cruz, California 95061

The Architects Association of Santa Cruz County is a professional organization of licensed Architects, interns, and related professionals living or working in Santa Cruz County. It was formed in 1982 with the purposes of increasing public awareness and sensitivity to architecture, giving members a platform for addressing design and planning issues at the regulatory level, fostering communication among local design and building professionals, and sponsoring cooperation among private and public groups, all with the goal of improving the quality of both the built and natural environments.

Website: www.aascc.org

Recorded Information line: 831.460.2999

NEXT IN OUR LECTURE SERIES

Don't miss your opportunity, this **Thursday, September 20th**, to hear **Andrew Brownstone** of **BioSphere Consulting Inc.** present case studies of his innovative work on recycling wastewater as a way to free up space on the site, gain a landscape irrigation source and to reduce less-treated discharge into our waterways.

See the *"Earth" Understanding How Soil is a Critical Resource for On-Site Wastewater Treatment*, article this page, for a more detailed description of the presentation. See back cover for location and event details.

HOLIDAY DINNER AT CASABLANCA

Our annual Holiday Dinner Meeting will be at Casablanca Restaurant once again. With it's hillside perch overlooking the Monterey Bay, and it's fine cuisine, it has been a local favorite for years.

So, mark your calendars for **December 6th, 2012, at 6:00 pm** for drinks, and 7:00 pm for dinner.

As usual it's a casual affair, order off of the full menu and pay your server directly. Hope to see you there.

If you want to save a spot call Hugh at 831 458 1544.



"Color is the subject matter of painting."

Karl Benjamin, pioneer of the Abstract Classicism Movement.

WHAT DOES SUSTAINABLE MEAN ?

This is the first in a series of articles exploring the impacts of the sustainable movement on the design and construction industries.

There is a lot of discussion about, and marketing around, "green" and "sustainable" products, design and building, as well as some confusion in the public about their meanings. Like the phrase "natural", when applied to food, they imply a higher quality, and a striving to higher levels of social and environmental responsibility. Also, like "natural" there is no regulated definition.

In the public's mind it seems the term "green" is winning out over "sustainability" both because it is shorter, but also because, to some, the term sustainability implies some element of privation, that you will have to forego something specific that you want now for some future good that is ill-defined, an idea difficult to sell. In this article I will use the term sustainable because I believe it is a more accurate description of the movements thinking and goals.

Like other movements that have become trends as they gain a wider audience, a number of competing organizations have sprung up, codifying their own approach to sustainability, and that for a variety of fees will educate you about their approach, train you in the use of their proprietary code criteria and then rate your projects accordingly. California even has a Green Building Code that sets a baseline, a minimum level of effort towards sustainability each project must achieve. *Continued on Page three.*

DON'T MISS THIS MONTH'S LECTURE

"EARTH": UNDERSTANDING HOW SOIL IS A CRITICAL RESOURCE FOR ON-SITE WASTEWATER TREATMENT

"A proven decentralized approach with benefits far beyond greywater".

Affordable technology is currently available to install miniature wastewater treatment plants on standard-sized urban parcels which can reliably treat all of the wastewater from a single family residence, including toilet "blackwater", thus providing a means to re-use this treated wastewater for landscape irrigation. This decentralized approach has far-reaching benefits beyond conserving water.

Most important, and also the most variable and frequently overlooked component to these on-site wastewater systems, is the character of the existing near-surface soil on the site.

It is critical to fully understand how effluent, or filtrate, will move through the subsurface soil on a proposed discharge site. To assure successful design of an on-site wastewater system requires a comprehensive evaluation, testing and understanding of the infiltrative capacity of the existing soil conditions.

Conventional soil percolation testing alone should not be relied upon to provide a dependable design basis. Combining careful soil sampling and analysis, along with the results from more diversified soil percolation testing, and special soil infiltration testing provides a more sound basis for dispersal system design and sizing.

This testing may include a unique device, using a programmable pump and pressure lateral, that provides an actual Long Term Acceptance Rate (LTAR) for that specific soil column. This empirically demonstrated LTAR provides the best design basis for sizing a dispersal system, or drain field, which will discharge treated wastewater filtrate into the earth.

Use of these design tools and methodology avoids over-saturation of the soil, which could lead to surface ponding, a condition considered both a design failure and a potential public health hazard.

On several of our Central Coast projects we have used these unique shallow pressurized infiltration test devices, along with a verifiable scientific approach, to convince regulatory agencies that, due to the soil and site characteristics, far less drain field area is actually needed than would be otherwise required.

We have been very successful, with supporting testing data, in gaining regulatory approval for significantly reduced drain field areas based on this superior soil testing approach.

This results in far more real estate on a property available for other purposes such as a patio, deck, swimming pool, tennis court, garage, etc. We have also succeeded in helping modify regulatory policy in several counties, which reduced drain field size requirements.

Because effluent from these “alternative” enhanced wastewater treatment systems does not have the high organic loading (BOD) as does conventional septic effluent, sizing a drain field to compensate for the continuous progressive failure that all typical leach fields experience is unnecessary.

In addition to reducing the area required for an on-site septic, or wastewater system, these enhanced on-site wastewater treatment systems can mitigate challenging site constraints such as clay soil, high groundwater, limited space and slope instability. Advanced systems offer an alternative to conventional septic systems

on sites where the standard septic system simply won't work.

There is yet another advantage these systems offer, one gaining attention and interest, and which is a significant environmental benefit, namely their many ways to save water.

With our current water scarcity, and increasing threats to our future supply, it makes sense to recycle all of one's wastewater, keeping our landscape lush and green, without using potable water from wells or relying on the centralized municipal water utility, and all of the energy required to provide that potable water.

Not only can these systems drastically reduce use of potable or municipal water, but they also save water by protecting our water resources. Specifically, these alternative on-site wastewater systems can help prevent contamination and degradation of our groundwater, streams, lakes and the ocean. Treating wastewater on-site, in lieu of discharge off-site into the environment, can be a far more responsible and sustainable approach than conventional sewer or septic systems.

Taking this decentralized approach uses discharge to the subsurface soil, a fantastic treatment medium in itself, which completes the treatment process, returning pure water to the earth and completing the water cycle.

In an urban environment these on-site systems can prevent the significantly less-treated wastewater of a municipal treatment plant from being discharged to a single point source in the ocean, which in Santa Cruz is in the middle of our marine sanctuary.

This point returns us to the important role that the EARTH'S soil plays in these systems. There is mounting evidence that fine-grained soils have the ability to capture, hold and remediate many harmful and concerning constituents of wastewater, such as residual pharmaceuticals, that the municipal plants are unable to remove prior to discharge into our waterways. There is mounting concern about these by-products entering our oceans and waterways and

their impacts on wildlife and micro-organisms.

Come to the presentation on the 20th of September, and learn more about these alternative on-site wastewater systems, how they work and the process involved in assuring that they are properly designed, installed and managed. Specific examples of completed projects by BioSphere Consulting will be shared, including lessons-learned and useful case-studies for systems designed to meet various development objectives, while mitigating challenging constraints and providing water conservation.

BioSphere Consulting, Inc., a design and consulting firm started in Santa Cruz in 2005, specializes in site and soil evaluation, and design of on-site wastewater dispersal and irrigation systems, capitalizing on the experience, approach and standard of care from years of consulting as a professional engineering geologist.

Andrew Brownstone, Geologist can be reached at 831 430 9116, or at www.biosphere-consulting.com

What Does Sustainable Mean, continued.

But what does it really mean? Lets start with the most basic question. Is this the right site for the building, and is this the right building for the site?

Of course we are not just talking about buildings, but also the social and physical infrastructures needed to support a building, such as government services, roads and utilities.

For instance, putting single family housing on scarce, prime arable land beyond the reach of current infrastructure, when buildable sites closer to utilities and transportation are available, would not seem to qualify as sustainable because, while we can build housing in a variety of places large scale agriculture still requires large areas of relatively flat and fertile soil.

This was an easy one, unless you are the owner of that property. In our next article we will address some much trickier question. Stay tuned.

2012 AASCC LECTURE SERIES

Our Lecture Series is *The Four Elements: Water, Fire, Earth and Air*. Integrating resource conserving systems into site and building design.

September 20th, 2012. "Earth".

Andrew Brownstone of BioSphere Consulting shows how capture and reuse of greywater reduces reliance on scarce freshwater for irrigation.

November 15th, 2012. "Air".

Examples of integrating multiple resource conserving systems into the site and architectural design.

SPECIAL EVENTS

October 18th, 2012, 4:00 - 5:00 pm.

Building Tour of the new **Monterey Bay National Marine Sanctuary Center**. You are invited on a private one-hour tour of the brand new Monterey Bay Exploration Center located at **35 Pacific Street** across from the Santa Cruz municipal wharf.

Designed by **Thomas Hacker Architects, Inc.**, an award-winning firm from Portland, Oregon, and built by **Bogard Construction**, a local general contracting firm, this \$16 million, 12,600 sf building opened last month, and will achieve LEED Silver certification with green features such as low water consumption, high energy efficiency, careful material selection and improved indoor environmental quality.

The center reduced its energy consumption more than 30% by using roof-top photovoltaic panels, setback thermostats, occupancy sensors for lighting and exterior sunshade devices, and use of a light-colored roof, with overhangs and baffles to reduce solar heat gain and glare. Fan-assisted towers supplement natural ventilation.

More than 20% of all materials were manufactured in this region and 95% of construction waste was recycled. Materials include recycled content glass, carpet and insulation, and Forest Stewardship Council certified

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sustainable wood. Natural daylighting and high-efficiency plumbing fixtures complete the list.

Meet at the main entrance by 3:50 pm.

December 6th, 2012.

AASCC Holiday Dinner Meeting.

Details on page two.

LECTURE SERIES VENUE

Lectures and Exhibits are free and open to the public, and are held at *The Museum of Art & History* at the *McPherson Center*, located at **705 Front Street** in downtown Santa Cruz.

Doors open 5:30 pm, with light refreshments and **Exhibits in the Atrium**.

Lectures start at 6:00, running until about 7:15 pm, with questions, discussion and Exhibits open until about 7:30 pm.

We hope to see you there.

AASCC

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