

This presentation premiered at WaterSmart Innovations

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F-1305: Raingardens to Water Sensitive Cities

Water Smart Innovations 2013

Friday, October 4; 9:35 – 11 am

F-1305: Raingardens to Water Sensitive Cities

The session is a panel discussion on the future of our cities and preparing for the effects of climate change and the challenges of population growth on water management. How do our built urban environments, including landscapes, move us towards resiliency and sustainability? How do the traditional roles of public works and planning intersect (or not) through urban water management? The panelists will each give a short overview of concepts and projects and then will engage the audience in a discussion.

Moderator: Nancy L.C. Steele, D.Env., Executive Director, Council for Watershed Health

Abstract

Report cards are a valuable communication tool that are increasingly being applied to effect environmental and public health management goals. The objective of environmental report cards is to ensure the implementation of sound policies that will result in improvement, rather than degradation, of ecosystems and related human or community health goals. Report cards can be a powerful tool for engaging and inspiring public involvement and motivating decision makers to make positive changes in management and policies. Tracking change over time of specific indicators is especially useful, especially when analysis shows a decline, for example, in environmental quality. The challenge in developing these assessments is to be efficient in data collection, effective in communication, and responsive to social needs, in order to ensure broad ongoing support among the many stakeholders that are recipients of the assessment's information.

Bio

Dr. Nancy L. C. Steele is the Executive Director of the Council for Watershed Health, a southern California hub for watershed research and education. Nancy serves on the board of the Marine Conservation Research Institute, as vice-chair of the Upper Los Angeles Integrated Regional Water Management steering committee and as a member of the Leadership Committee of the Greater Los Angeles County IRWM. She is a current Stanton Fellow of the Durfee Foundation and Robert & Patricia Switzer Foundation Fellow. She co-owns the Chaparral Mountain Honey Company, a family business. Prior to joining the Council in 2005, Nancy worked for the State of California in various environmental and public health positions, enforcing California's hazardous waste control laws, preventing childhood lead poisoning, and reducing emissions from heavy-duty diesel trucks and buses. Nancy earned her doctorate in Environmental Science & Engineering from UCLA, her Master of Science in Zoology from Arizona State University, and her Bachelor of Arts in Biology from Occidental College.

Panelists:

Eileen Alduenda, Researcher/Project Manager, Council for Watershed Health

Abstract

21st Century Water Infrastructure: A Partnership in Art and Stewardship

Throughout the United States, cities are rethinking and reimagining the management of urban stormwater to address our aging water infrastructure and as a step toward sustainability. Communities are asking for more sustainable and cost-effective solutions that address livability, resiliency to climate change, and other community priorities. Several notable green infrastructure projects have addressed these issues by using creative and engaging project designs that benefited from early and strong community engagement. Green infrastructure projects lend themselves to partnership: city and community working together to address multiple issues. Once constructed, green infrastructure projects mimic the historic natural hydrology or reintroduce natural processes to urban landscapes, resulting in valuable community benefits. These projects require a new appreciation and understanding of living systems in the urban landscape, thus a need to rethink how these systems are managed. Ensuring reliable performance and continued benefits requires consistent stewardship practices, including performance monitoring and landscape maintenance practices, which differ from conventional landscapes. Therein lies the opportunity and challenge: how can cities and communities continue their partnership and work together to share the stewardship of a 21st century green infrastructure that is resilient and sustainable.

Bio

Eileen Alduenda is a Project Manager and Researcher for the Council for Watershed Health. She is project manager for the Elmer Paseo Stormwater Improvements project, a green alley retrofit. Her current research focuses on the performance and stewardship of green infrastructure projects. She also develops seminars on topics of importance to watershed health for the organization's Sustainable Landscape Program. Eileen has a Master of Landscape Architecture from the University of Washington with a focus on urban ecological systems. Previous academic and work experience focused on energy and water utility demand side management programs, watershed coordination, and sustainable community initiatives and projects.

Pamela Berstler, Managing Member, G3, The Green Gardens Group

Abstract

Infrastructure change requires People Change. The buy-in of average people is necessary for every aspect of Infrastructure change from supporting public policy to approving funding at the ballot box and participating with programs implementing changes on private property and in communities. In the case of water infrastructure, where 50% of residential potable water is used in landscapes and outdoors and the vast majority of rainwater is inhibited from groundwater recharge or landscape hydration because of impermeable surfaces, an entire landscape industry transformation is necessary. Shifting attitudes and policies from water efficiency to watershed efficiency and building an economic engine to sustain that shift requires growing a labor force with the necessary skills to create completely new watershed wise businesses. To begin the dialogue, and bring the discussion to ordinary people, perhaps we start talking about

sustainable urban infrastructure as "A NEW NORM OF LANDSCAPING," rather than LID, GreenStreets, or Water Use Efficiency.

Bio

Pamela Berstler is the Managing Member of G3, The Green Gardens Group, an organization devoted to changing the American landscape paradigm from the water and resource-depleting gardens of today to climate and place-appropriate mini watersheds through education, design, consulting and community activism. G3 works with cities, water agencies, non-profit organizations, workforce development groups, and property owner constituencies throughout the U.S., developing and teaching classes for homeowners, providing demonstration garden design, and hosting hands-on workshops (HOWs) that help people get the "feel" of sustainable landscaping. For landscape professionals and policy-makers, G3 offers training seminars in water and resource conservation and low-impact design.

Pamela received her MBA from The Anderson School at UCLA and her BA in Psychology from The University of Pennsylvania. Pamela currently serves as the President of the California Chapter of the Association of Professional Landscape Designers (APLD), and is a member of CLCA (California Landscape Contractors Association), ASLA (American Society of Landscape Architects), and is an Accredited Professional with ARCSA (American Rainwater Catchment Systems Association).

Paul R. Brown, AICP, Visiting Professor and Director of Applied Research, University of South Florida, Patel College of Global Sustainability

Abstract

Uncertainty and Infrastructure: Planning for the Unknown

The large-scale capital investments associated with urban water infrastructure have always required planners and engineers to anticipate future demands, both in terms of their physical and temporal dimensions. While that task was never easy, the uncertainties presented by rapid urbanization, population growth and mobility, and the unpredictable and extreme impacts of climate change, make the challenges much more challenging. The response to these new realities requires rethinking the fundamental goals and strategies needed to address hyper-uncertainty and create sustainable outcomes.

Bio

Mr. Brown has over nearly 40 years experience in project development, project finance, and the planning and management of public utilities and environmental facilities for clients that include the states of California and Colorado; the Metropolitan Water District of Southern California (MWD); the Santa Clara Valley Water District; the Orange County (CA) Sanitation District, the Orange County (CA) Water District; and the cities of Los Angeles, San Diego, San Francisco, San José, and Seattle. From 1975 to 2013, he held various positions at CDM Smith, a global engineering and construction company; most recently, as Executive Vice President and 12-year member of the firm's Board of Directors. In addition, he was the Founding Technical Director of CDM Smith's Neysadurai Centre for Integrated Urban Solutions in Singapore.

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Brown is co-editor (with Vladimir Novotny) of the book *Cities of the Future: Towards Integrated Sustainable Water and Landscape Management*, published by IWA; co-author (with Vladimir Novotny and Jack Ahern) of the book *Water Centric Sustainable Communities*, published by John Wiley & Sons; and a contributor to *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, published by the University of Pennsylvania Press. He was a guest lecturer at the 8th Annual Distinguished Lecture Series in Sustainable Development, Cambridge University, United Kingdom.

A member of the American Institute of Certified Planners (AICP), Brown's educational background includes an MBA from The Wharton School, University of Pennsylvania (1982); an MA from the University of Rochester (1973); and a BA from Tufts University (1971). He co-chairs the International Water Association (IWA) Cities of the Future program steering committee. He has been a member of the Stockholm Industry Water Award Committee and served on the International Advisory Panel for the Institute of Water Policy of the Lee Kuan Yew School of Public Policy at NUS.

21st Century Stormwater Infrastructure: A Partnership in Design and Stewardship

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4 October 2013



**Council for
Watershed Health**

Eileen Alduenda
Project Manager :: Researcher

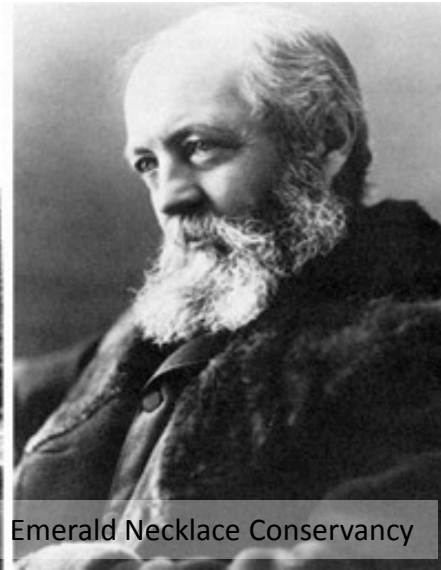


Image: Emerald Necklace Conservancy



Image: Emerald Necklace Conservancy





HarvestingRainwater.com ©2008 Brad Lancaster



HarvestingRainwater.com ©2008 Brad Lancaster

Growing Vine Street
Cistern Steps at Vine and Elliott

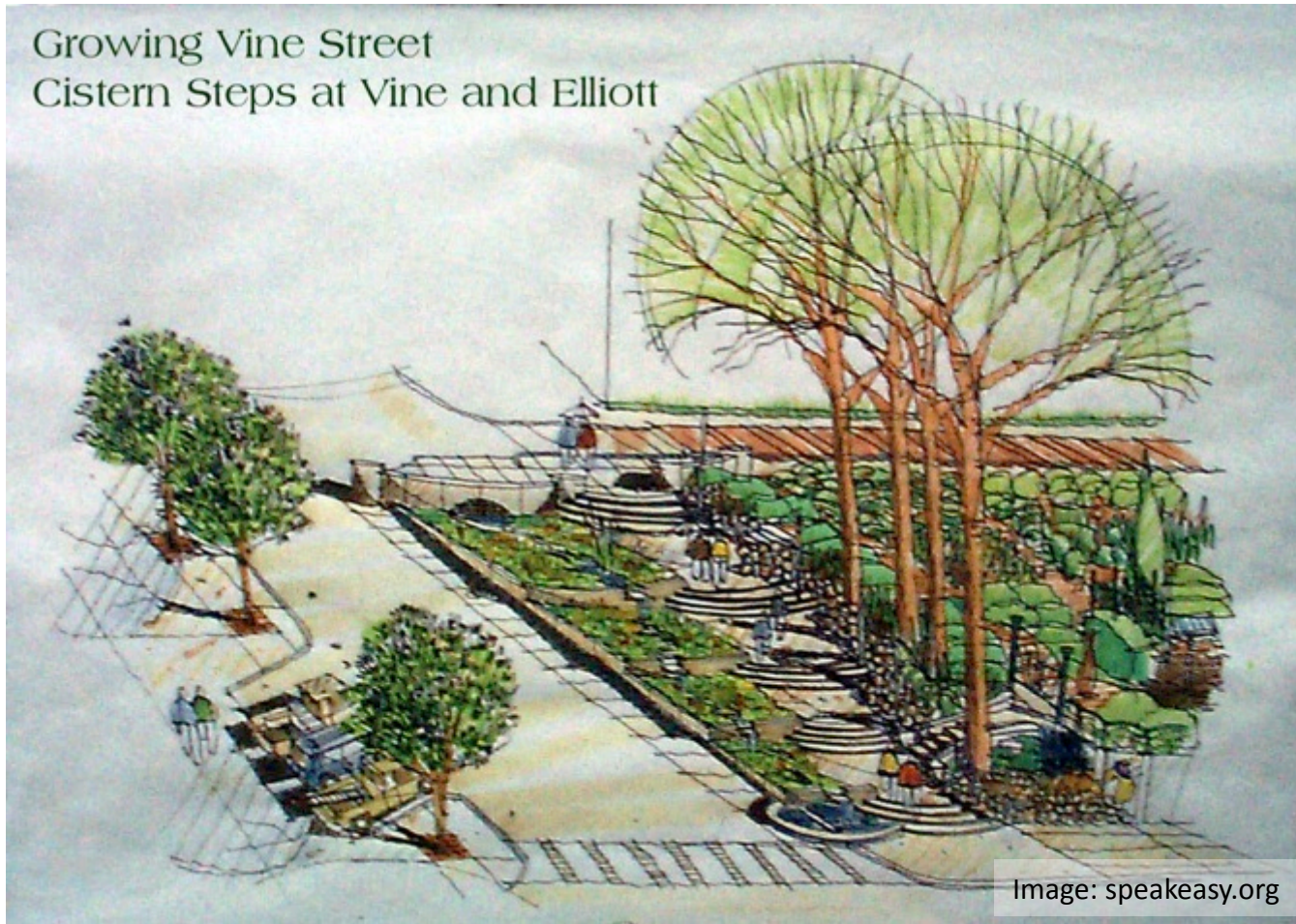


Image: speakeasy.org



Design: Buster Simpson Image: Seattle Times



Images: Council for Watershed Health



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Questions



www.watershedhealth.org

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education consulting design community



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October 4, 2013

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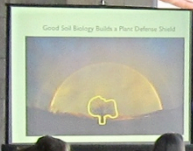
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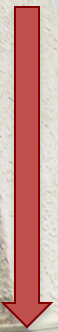


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SLOW IT



SPREAD IT



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JULY





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NOVEMBER

Create Contours And Low Spots to SPREAD and SINK IT





Add Compost For Soil Biology
Create A Healthy Soil Sponge

Another Watershed Friendly Garden Has Been Built



NOVEMBER



But The Proof of the Sponge Is In The Rain It Holds
DECEMBER – 4” or 1,600 gallons



The Proof of the Sponge Is In The Rain It Holds
FEBRUARY – 3.5” or 1,450 gallons



Native Plants Love The Sponge Garden **APRIL – Needs 0 gallons irrigation**





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California Coastal Commission







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Un-mulched Planter Bed
632
4/28R

Tom Peck
[illegible]

LIGHT SAND































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YES-0

YES-90

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