Sustainable Water Resources Roundtable

Sandy Wiggins

March 31, 2015

RSF Social Finance

Consilience LLC

BALLE

RSF Social Finance

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Wanted: Social Enterprise Stars
We're looking to fund at least 25 new borrowers over the next year—established for-profit or non-profit enterprises doing groundbreaking work in our focus areas. Know one? Are you one?

Get details.

WHAT WE OFFER ►

- FOR INVESTORS
- FOR DONORS
- FOR ENTREPRENEURS

Seed Fund Grantee Highlight: Tanka Fund

REDCO
Rosebud Economic Development Corporation
Sicangu Lakota Oyate

Seed Fund Grantee Highlight: Rosebud Economic Development Corporation

#SocentStars

The Next 25 Social Enterprise Stars: Education & the Arts

Reimagine Money BLOG

An online conversation about the nature of money.

Soil, Soul, and Society

October 25, 2012

Print E-mail

By Martin Ping

"What we are founding here is a seed—the seed of a living organism. The organism is essentially threefold—pedagogical, artistic, and agricultural—as reflections of thought, feeling and will. Each needs the others if the whole is to flourish. All are interrelated... for young and old alike, this work together will create a place in which to *become*, in the true sense, a full human being."

~Karl Ege, Hawthorne Valley Founder

On July 30, 2012, Hawthorne Valley Association marked the 40th anniversary of working the soil of agri-culture on its land in the Hudson Valley of New York. In all that time it has been Hawthorne Valley's mission to inspire by example social and cultural renewal through the integration of education, agriculture, and the arts. The significance of place and the ability to connect intimately to and through place provide compelling evidence as to why our localized agriculture can be understood as a foundational activity upon which *all* humanity depends—not just for producing food.

Watch Video

Learn about AQUARIUS!

Webinar

AQUARIUS WebPortal – How to Make Data Sharing Easy

FREE eBook

Communicating Hydrometric Data Quality: What, How, & Why

Modern software for insight into your water data.

AQUARIUS Time-Series
Efficient, Accurate & Defensible Water Data.

AQUARIUS EnviroSCADA
Real-Time Water Data Acquisition

MEIDLINGER PARTNERS

A private equity firm with operational expertise in the water & wastewater sectors

Portfolio...

TRITON-FORMAT

Triton Water is a leading provider of water treatment technologies for the industrial and maritime sectors. Triton's systems cover industrial process water, industrial waste water and potable water for commercial customers. **(learn more)**

Environmental Operating Solutions

Environmental Operating Solutions, Inc. (EOSi) provides solutions for the removal of nitrate-nitrogen in the wastewater treatment process. **(learn more)**

liberty hydro

Liberty Hydro is a services company that develops, markets and maintains treatment systems, which remove water pollutants from extraction industry sources. **(learn more)**

RedZone® ROBOTICS

RedZone Robotics simplifies wastewater management by providing municipal clients with the information and tools necessary to address their most valuable wastewater assets – their sewer pipes. RedZone delivers high performance pipeline inspection products and services for municipalities, contractors and engineering firms across North America. **(learn more)**

ANDalyze

ANDalyze is positioned to be one of the leading remote (field) testing companies for metals and organics as the world's water quantity, quality and scarcity issues increase in severity. **(learn more)**

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1 2 3

BUILDING LOCAL ECONOMIES

By connecting leaders, spreading solutions, and attracting investment toward local economies, BALLE advances the Localist Movement to create real prosperity for all.

Real prosperity begins at the local level with entrepreneurs who are re-imagining their industries, funders who are investing in local economies, and leaders who can mobilize on a broad scale. Together, we can — and will — create a stronger, more resilient, and fair economy. Join us.

Get updates on BALLE and the Localist Movement by signing up for our monthly newsletter, the BALLE Buzz.

BALLE BLOG

Watch It Again: Creating Economic Inclusion through Entrepreneurship [Read] Posted Mar 25 2015

Conference Host City a Rising Star of Localism [Read] Posted Mar 11 2015

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Localist Leader Daily is out!
paper.li/bealocalist/13… Stories via @RSFSocFinance @VickiPozzebon
Show Summary

PLACE MATTERS

Supply chain decisions based on choosing local resources — vegetables, energy, timber, finance, and other locally made goods and services — engender a natural respect for the environmental and human resources in a place. Also, preserving the diversity of our food and different cultures, is not only smart, but so much more fulfilling!

NATURE MATTERS

All wealth comes from nature. Without respecting natural boundaries and renewal rates for the animals, plants, soil and water on which we depend, we will not have wealth or health for our own species going forward. Part of the joy of being awake and alive is also to be in awe of the mysterious beauty of the inter-connected natural world.

WHAT WORKS. LOCALLY

We have a unique view here at BALLE. We get to work with deeply rooted Localists - people who are working against long odds to build a new economy from the ground up. This gives us a fairly special perch from which to see trends, challenges, and lessons learned. At this point we are confident that we know something about what works.

There is an emerging checkerboard of solutions – eight stepping-stones – that together represent the path to real prosperity. First, we must decide that yes, we do want to democratize opportunity, and then step in and do the work – there are no short cuts. When combined, these solutions create a recipe for an economy that can work for everyone. Join us. Click on each square for more information, tools and resources.

Promote a culture of local, cooperative and community owned businesses and organizations

Cultivate democratic economic models: worker ownership, land trusts, protection of public assets and the commons

Determinedly invest for opportunity in communities that have been historically oppressed; Align labor, anchors and indie biz around shared prosperity

Build entrepreneurial capacity to meet local needs & to innovate for the greater good; Build 'backbone' organizations, and shared infrastructure, for local 'economies of scale'

Invest in soil and nature-based industries, energy and infrastructure; Divest from fossil fuels

Divest from Wall Street and invest in Community; Use philanthropy to mitigate risk for the pioneers

Advocate for localist policies that level the playing field for local businesses, people and nature

Use magic, soul and inspiration to convene entrepreneurs and to catalyze the courage of their hearts

Consilience LLC

Building environmentally, socially and economically sustainable communities.

Potomac Watershed Study Center

“The aquifers are being pumped faster than they can be replenished. If we stopped today, it could take 100 years or more to regain all the water lost in Southern Maryland since 1960.”

David Bolton, Maryland Geological Survey
Program Chief of Hydrogeology and Hydrology

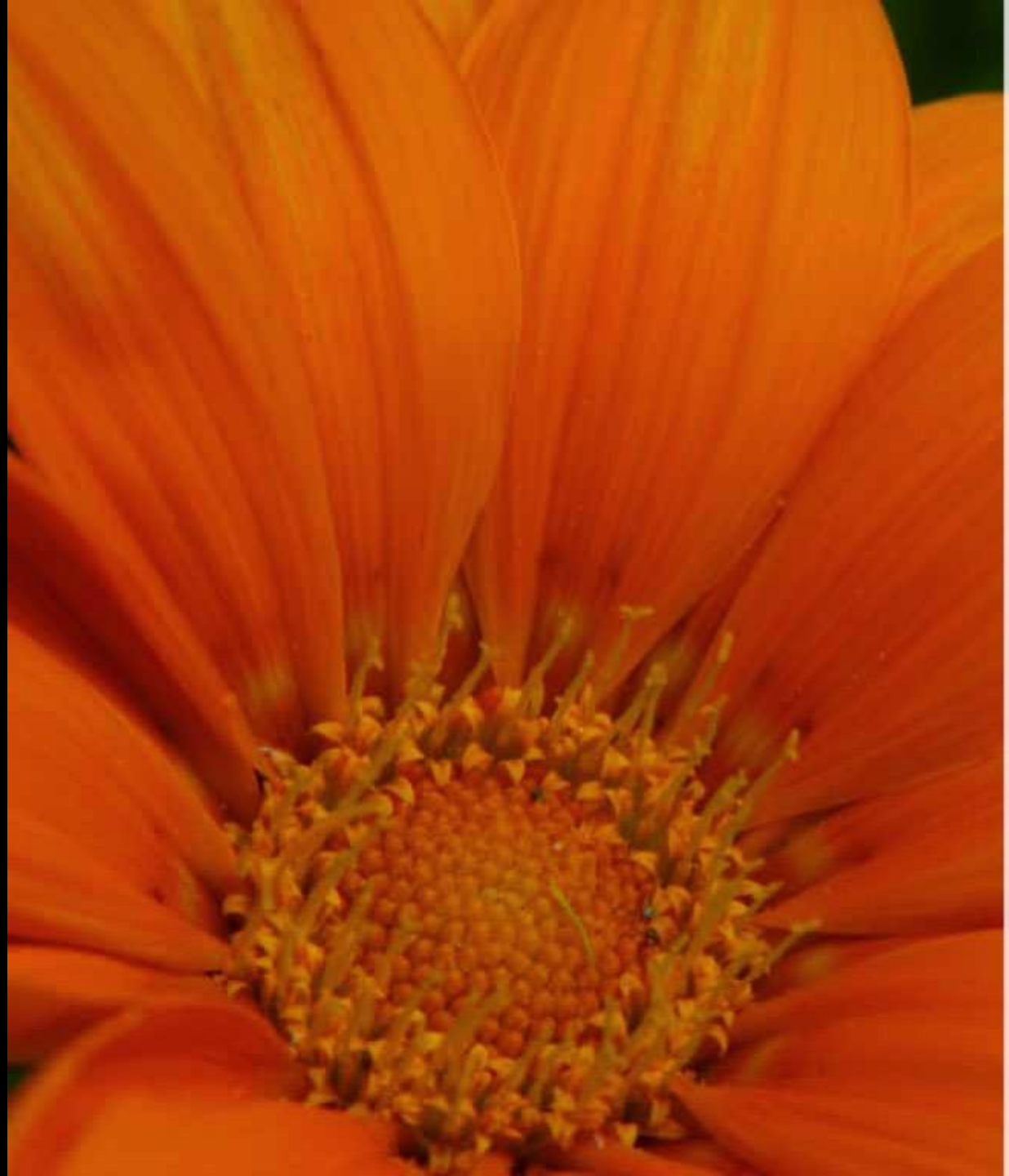
The Washington Post

Growth in Area Draining Supply Of Drinking Water

Survey Projects Depletion by 2030

By Philip Rucker
Washington Post Staff Writer
Sunday, September 23, 2007; C11

Charles County could run out of drinking water by 2030 because its fast-growing population is depleting the county's underground supply, new findings by the state show.



LIVING BUILDING CHALLENGE℠ 2.1

A Visionary Path to a Restorative Future

INTERNATIONAL
LIVING FUTURE
INSTITUTE℠

May 2012

WATER

CREATING WATER INDEPENDENT SITES, BUILDINGS AND COMMUNITIES

PETAL INTENT

The intent of the Water Petal is to realign how people use water and redefine 'waste' in the built environment, so that water is respected as a precious resource. Scarcity of potable water is quickly becoming a serious issue as many countries around the world face severe shortages and compromised water quality. Even regions that have avoided the majority of these problems to date due to a historical presence of abundant fresh water are at risk: the impacts of climate change, highly unsustainable water use patterns, and the continued drawdown of major aquifers portent significant problems ahead.

IDEAL CONDITIONS AND CURRENT LIMITATIONS

The Living Building Challenge envisions a future whereby all buildings, infrastructure, and communities are configured based on the carrying capacity of the site: harvesting sufficient water to meet the needs of a given population while respecting the natural hydrology of the land, the water needs of the ecosystem it inhabits, and those of its neighbors. Indeed, water can be used and purified and then used again - and the cycle repeats.

Currently, such practices are often illegal due to health, land use and building code regulations, or by the undemocratic ownership of water rights, which arose precisely because people were not properly safeguarding the quality of their water. Therefore, reaching the ideal for water use means challenging outdated attitudes and technology with decentralized site- or district-level solutions that are appropriately scaled and efficient.

05

NET ZERO WATER[28]

One hundred percent of the project's water needs[29] must be supplied by captured precipitation or other natural closed loop water systems[30] that account for downstream ecosystem impacts, or by re-cycling used project water. Water must be appropriately purified without the use of chemicals.

28 This Imperative may be attempted using the Scale Jumping design overlay, which endorses the implementation of solutions beyond the individual project scale that maximize ecological benefit while maintaining self sufficiency at the city block, neighborhood, or community scale. For more information on Scale Jumping, refer to page 9.

29 There is a temporary exception for water that must be from potable sources due to local health regulations, including sinks, faucets and showers but excluding irrigation, toilet flushing, janitorial uses and equipment uses. However, due diligence to comply with this Imperative must be demonstrated by filing an appeal(s) with the appropriate agency (or agencies).

30 There is an allowance for an initial water purchase to get cisterns topped off. A Living Building Challenge project only buys water once.

06

ECOLOGICAL WATER FLOW

One hundred percent of storm water and used, project water discharge must be managed onsite to feed the project's internal water demands or released onto adjacent sites for management through acceptable natural time-scale surface flow, groundwater recharge, agricultural use or adjacent property needs.[31]

31 Acceptable onsite storm water management practices are discussed in the Dialogue. Municipal storm sewer solutions do not qualify.

For a Building project that has a FAR equal to or greater than 1.5 in Transects L5 or L6, a conditional exception may apply, which allows some water to leave the site at a reduced rate and depends on site and soil conditions and the surrounding development context. Greater flexibility is given to a project with higher densities. Refer to the Dialogue for more detailed information.

For a Building project in specific identified Bioregions where weather patterns historically demonstrate a much greater than 'normal' proportion of rainfall equivalent duration and/or frequency, there is a Climate Overlay that offers an alternative compliance path to address extreme conditions. Refer to the Dialogue for more detailed information.

This Imperative may be attempted using the Scale Jumping design overlay, which endorses the implementation of solutions beyond the individual project scale that maximize ecological benefit while maintaining self sufficiency at the city block, neighborhood, or community scale. For more information on Scale Jumping, refer to page 9.

STROUD
WATER RESEARCH
CENTER

LIVING COMMUNITY CHALLENGE℠ 1.0

A Visionary Path to a Regenerative Future

INTERNATIONAL LIVING FUTURE INSTITUTE℠

WATER

CREATING WATER INDEPENDENT SITES, BUILDINGS AND COMMUNITIES

SCALE JUMPING PERMITTED

PETAL INTENT

The intent of the Water Petal is to realign how people use water and to redefine 'waste' in the built environment, so that water is respected as a precious resource. Scarcity of potable water is quickly becoming a serious issue as many countries around the world face severe shortages and compromised water quality. Even regions that have avoided the majority of these problems to date due to a historical presence of abundant fresh water are at risk: the impacts of climate change, highly unsustainable water use patterns, and the continued drawdown of major aquifers portend significant problems ahead. A water-independent community is a stronger, more resilient community, and the Challenge calls for Communities that honor the realities of each project's bioregion.

IDEAL CONDITIONS AND CURRENT LIMITATIONS

The Living Community Challenge envisions a future whereby all buildings, infrastructure, and communities are configured based on the carrying capacity of the development's site: harvesting sufficient water to meet the needs of an entire population while respecting the natural hydrology of the land, the water needs of the ecosystem the site inhabits, and those of its neighbors. Indeed, water can be used and purified and then used again—and the cycle repeats.

Currently, such practices are often illegal due to health, land use and building code regulations (or because of the undemocratic ownership of water rights) that arose precisely because people were not properly safeguarding the quality of their water. Therefore, reaching the ideal for community-wide water use means challenging outdated attitudes and technology with decentralized site- or district-level solutions that are appropriately scaled and efficient.

Photo: Pakhnyushcha / Shutterstock.com

WATER

NET POSITIVE WATER

IMPERATIVE 05

Community water use and release must work in harmony with the natural water flows of the Community[11] and its surroundings.

One hundred percent[12] of the Community's water needs must be supplied by captured precipitation or other natural closed loop water systems, and/or by re-cycling used Community water, and must be purified as needed without the use of chemicals.

All stormwater and water discharge, including grey and black water, must be treated and managed at the Community scale either through re-use, a closed loop system, or infiltration.

11 Scale Jumping is limited to the watershed of the Community only.
12 There is an exception for water that must be from potable sources due to local health regulations, including sinks, faucets and showers but excluding irrigation, toilet flushing, janitorial uses and equipment uses. However, due diligence to comply with this Imperative must be demonstrated by filing an appeal(s) with the appropriate agency (or agencies).

Antioch College Village

NASA: California Has One Year of Water Left

BY **ZOË SCHLANGER** 3/13/15 AT 1:18 PM

Uvas Reservoir, Santa Clara County, California. DON DEBOLD/FLICKR

A NATIONAL PROBLEM

Barriers to using rainwater capture as a potable source:

- Regulatory environment

Barriers to natural onsite treatment and recycling of waste water:

- Regulatory environment

Barriers to green infrastructure:

- Regulatory environment

In the Global Risk Assessment report released this week by the World Economic Forum in collaboration with Swiss Reinsurance and the Wharton Center for Risk Management, Water Supply Crisis ranked highest in both likelihood and impact of all societal risks over the next ten years.

The relationship of sustainable water technologies to this mounting problem is much the same as renewable energy technologies are to climate change. They are critical components to a systemic solution, and they work best when distributed rather than centralized. Rainwater capture is the simplest of all such solutions and is used all over the world for that reason. The U.S. should be leading the world in the development of technologies, policies and regulations that support the safe use of captured rainwater for potable supplies.