

UTAH PLANNER



American Planning Association
Utah Chapter

Making Great Communities Happen

A Publication of the Utah Chapter of the American Planning Association

April 2016

GREEN ISSUE

VOLUME 43 NUMBER 3



IN THIS ISSUE

- 1 Editors Corner**
Michael Maloy, AICP, on Earth Day, Arbor Day, and Jane Jacobs
- 2 Trends and Choices**
Jay Aguilar on personal choices and environmental sustainability
- 3 GREENbike Rolls On**
Will Becker and Ben Bolte on Salt Lake City's successful bike share
- 7 Hive of Clean Energy**
Meghan Stettler on Utah's solar energy boom
- 10 Building Resilience Through Mitigation**
Bradley Bartholomew on hazard mitigation planning
- 11 Caribbean Sustainability**
John Janson, AICP, on sustainability as necessity
- 15 Events Calendar**

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Utah Planner is the official newsletter of the Utah Chapter of the American Planning Association (APA Utah), which is a non-profit organization. *Utah Planner* is circulated to approximately 570 subscribers and is available online.

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ARTICLES

The *Utah Planner* welcomes APA Utah members and associates to submit articles for publication within the newsletter. Articles from one to three pages (approximately 600 to 1,800 words) will be considered. Special features may be longer or printed in a serial format. Subject matter appropriate for publication should be relevant to city planning or related profession, such as architecture, civil engineering, building, economic development, landscape architecture, etc. Articles should include images in PNG, JPEG or TIFF formats.

LETTER POLICY

The *Utah Planner* welcomes letters of up to 200 words on a single topic of general interest. If published, they become the sole property of the newsletter and may be edited for length, grammar, accuracy or clarity. Letters must include the author's full name, street address, daytime and evening telephone numbers, however only the name and city of residence are published. Only one letter per individual may be published each issue.

SUBMITTAL INSTRUCTIONS

Please submit all articles or letters in Microsoft Word format. Please include your name, title, and e-mail contact information. Submittal deadline is the 15th of each month for publication the following month. *Utah Planner* reserves the right to delay publication of any submitted material. *Utah Planner* also reserves the right to reject any submitted material that is offensive, inappropriate, or doesn't meet the standards of the Utah Chapter of the American Planning Association.

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COVER

Photograph courtesy of graphic artist, Anton Balazh, who lives in St Petersburg, Russia. The image was formed from combining real satellite data published by NASA. Each image takes a month to collect, prepare, and render the 20 to 30 million polygons that form the realistic three-dimensional terrain. The cover image (identification number 139012565) is available for purchase in high resolution and multiple sizes at www.shutterstock.com.

EDITORS CORNER

Welcome to another special edition of the *Utah Planner*—our annual Green Issue—which honors two international celebrations: Earth Day and Arbor Day.

According to Wikipedia "Earth Day is an annual event, celebrated on April 22, on which day events worldwide are held to demonstrate support for environmental protection. It was first celebrated in 1970, and is now coordinated globally by the Earth Day Network, and celebrated in more than 193 countries each year.

"In 1969 at an United Nations Educational, Scientific and Cultural Organization (UNESCO) Conference in San Francisco, peace activist John McConnell proposed a day to honor the Earth and the concept of peace, to first be celebrated on March 21, 1970, the first day of spring in the northern hemisphere. This day of nature's equipoise was later sanctioned in a Proclamation written by McConnell and signed by Secretary General U Thant at the United Nations. A month later, a separate Earth Day was founded by United States Senator Gaylord Nelson as an environmental teach-in, first held on April 22, 1970. Nelson was later awarded the Presidential Medal of Freedom Award in recognition of his work. While this April 22 Earth Day was focused on the United States, an organization launched by Denis Hayes, who was the original national coordinator in 1970, took it international in 1990 and organized events in 141 nations."

Returning to Wikipedia we also learn that "Arbor Day—or Arbour; from the Latin arbor, meaning tree—is a holiday in which individuals and groups are encouraged to plant and care for trees. Today, many countries observe such a holiday. Though usually observed in the spring, the date varies, depending on climate and suitable planting season."

Within the United States of America "Arbor Day was founded in 1872 by J. Sterling Morton in Nebraska City, Nebraska. By the 1920s, each state in the United States had passed public laws that stipulated a certain day to be Arbor Day or Arbor and Bird Day observance." Utah celebrates Arbor Day on the last Friday in April, which in 2016 is April 29.

According to the national Arbor Day Foundation, 89 of 243 cities and towns in Utah, or nearly 37 percent, are "Tree City USA Communities." Any guess which Utah city is the oldest member? Hint—it is not one of the usual suspects. Murray has been a member of Tree City USA for approximately 40 years, and Springville is second at 38 years. Salt Lake City, my own employer, is tied for seventh with Wellsville (29) behind Ogden (33), Provo (33), Logan (32), and Brigham City (31), respectively.

Coincidentally, April 25, 2016, is the 10th anniversary of the death of famed writer, activist, and urbanist Jane Jacobs—and May 4, 2016, will be the 100th anniversary of her birth. To turn a phrase, the *Utah Planner* intends to celebrate 'the death and life of Jane Jacobs' by publishing quotes, articles, and events throughout 2016.

We hope you will join us in celebrating these worthy and momentous events.

Michael Maloy, AICP

THE CITY

Quotable Thoughts on Cities and Urban Life

"Parks are volatile places. They tend to run to extremes of popularity and unpopularity. Their behavior is far from simple. They can be delightful features of city districts, and economic assets to their surroundings as well, but pitifully few are. They can grow more beloved and valuable with the years, but pitifully few show this staying power. For every Rittenhouse Square in Philadelphia, or Rockefeller Plaza or Washington Square in New York, or Boston Common, or their loved equivalents in other cities, there are dozens of dispirited city vacuums called parks, eaten around with decay, little used, unloved." Jane Jacobs, *The Death and Life of Great American Cities* (1961)

Trends and Choices

A Message from APA Utah Sustainability Chair

by Jay Aguilar

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Call me old fashioned, but I really don't have any desire to live on another planet. I kinda like the one we have now. I've been looking at the work of various futurists and trying to glean ways that their thoughts and trend analyses might affect planning and planners. (Luck favors the well prepared, right?) Even the main stream media is abuzz with stories on space colonization, robots, autonomous vehicles, virtual reality, and global climatic and technological upheaval. How can we prepare ourselves and our profession to better address these issues and the rapid change that will accompany them?

Consider the following statement: The first person to live to be 150 years old has already been born! I'm working in St. George, Utah, and there are a disproportionate number of chronologically challenged people down here. This is making me think that we better prepare for this future as best we can. If we're going to live longer; can you imagine what future public hearings are going to be like? Mobs of highly experienced people complaining about land uses and how to operate all of these new technologies. Expect highly mobile protesters with lots of time and technology on their hands that regularly descend on the nation's capital and city halls to lobby for lower taxes, protection from age discrimination, banning environmental toxins, and the elimination of non-autonomous vehicles.

Businesses and technologies are already changing faster than our current and long range plans can even relate to. Augmented reality will, one day, eliminate the need for actual signage in cities. Drug abuse will only be a problem for a small population of very nostalgic people born in the mid-nineteenth century.

We live in interesting times and things are changing rapidly. Many things that we could previously only dream about seem to be happening daily. Are we as planners prepared for change? Can we anticipate the impact of rapid change and prepare our communities to be able to adapt? We have opportunities today to make choices that may preserve and improve the environment on this planet.

In this month's special "Green Issue" of the *Utah Planner*, we've tried to highlight some innovative and interesting changes in the State of Utah and beyond. Hopefully we can learn from new ideas and help our communities adapt to our rapidly changing world.

If you have innovative and sustainable planning projects that you'd like to share please contact me and we'll highlight them in a "future" edition.



GREENbike Rolls On

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GREENbike is SLC's non-profit bike share. Bike sharing is an innovative, urban transportation solution that allows the public to access bicycles from a network of automated stations for short trips. The bikes are well maintained and built for city riding. GREENbike connects office workers, visitors and residents with downtown employment centers, transit stops and popular destinations for food, drink and entertainment. The many benefits of bike sharing range from health, air and quality of life improvements to increasing public transit ridership. The program additionally serves as a mechanism for incentivizing infill development, reducing traffic congestion and saving public

"In 2016, GREENbike will undergo its largest expansion yet, adding eight new stations and expanding the number of docks at many existing stations."

dollars by extending the roadway life-cycle.

Over the last five years, there has been a dramatic rise in the number of U.S. bike share programs, with more than 60 currently operating in cities like Denver, New York City, Madison, Minneapolis, Boulder, Austin, Washington D.C., Boston, Charlotte and San Antonio. Over 600 cities worldwide have instituted bike sharing as a comparatively inexpensive and quick-to-implement option for improving the mobility of city residents and visitors.

Salt Lake City launched its non-profit bike share, GREENbike, in April, 2013 with 10 stations and 55 bikes. Several months later, the program added two stations and expanded the capacity of five existing stations. By December, 2013, over 6,100 people had taken 25,361 trips, the equivalent of 390 trips per bike. Those figures made GREENbike the most successful small bike share system (less than 50 stations) in the U.S.

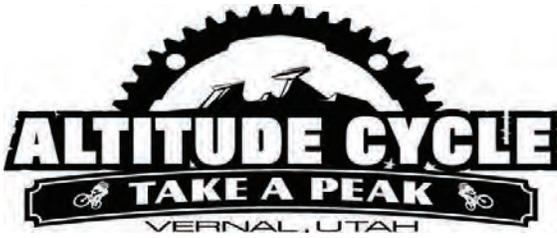
By June 1st of 2015, GREENbike completed its third system expansion. This expansion increased GREENbike's inventory to 220 bikes located at 25 stations. 2015's May/June expansion created a season average of 198 bikes at 24 stations that were available for public use. This 34% expansion resulted in an immediate ridership increase of 292% over 2014. In 2015, each GREENbike averaged 536 trips during the 266 day operating season.

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GREENBIKE (continued from previous page)



A Public-Private Model

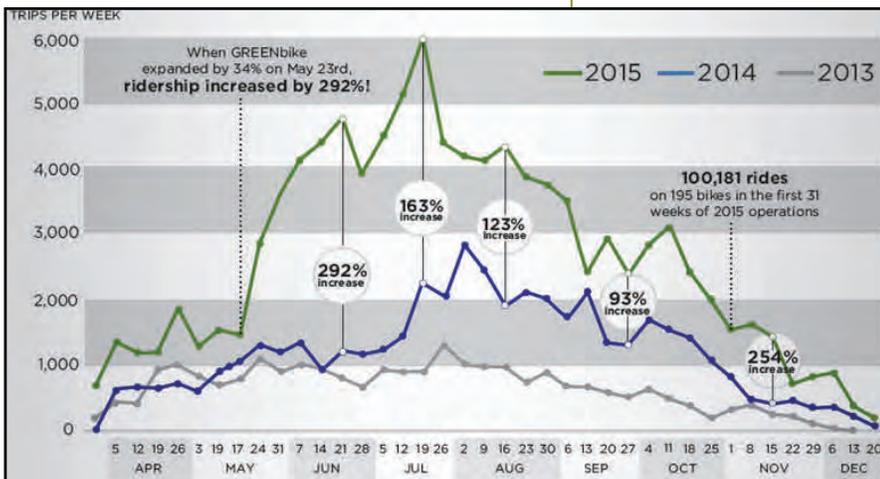
GREENbike is a local organization that grew out of a desire to create an active transportation alternative to single-occupant automobile trips, increase transit choices and to provide residents with a safe, affordable, and efficient option to get around. GREENbike has become a key component of that system. GREENbike is a public/ private partnership between Salt Lake City, the Salt Lake Chamber of Commerce, the Salt Lake Downtown Alliance, Visit Salt Lake (Convention & Visitor's Bureau), the Wasatch Front Regional Council, the Utah Transit Authority, Utah Department of Transportation, SelectHealth and a myriad of private sponsors.

Nearly two thirds of 2015 GREENbike monies came from the private sector. Broken out into three main categories, 39% of program revenue came from private sponsors, 36% from public investment, and 25% came from ridership (pass sales). Public dollars were used for hard costs—stations, bikes, and other infrastructure related expenses—and was funded by a Transportation Alternatives Program grant via the Wasatch Front Regional Council, the Utah Transit Authority, the Salt Lake City Council and the Salt Lake City Redevelopment Agency. GREENbike's private sector funding sources came from a combination of sponsors, donations and foundations, and help pay to operate the program.

Like all other public transportation agencies and bike share systems, GREENbike reduces the price of its passes below what is needed to recoup its operating expenses. This is designed to lower the barrier to entry and encourage maximum public use.

Ridership and Users

In 2015, 29,982 users purchased 34,302 GREENbike passes. That is a 106% increase in users and a 96% increase in passes purchased from 2014. Those nearly 30,000 users took over 106,000 rides on 200 bikes—more than the total ridership in 2013 and 2014 combined.



SLC GREENbike Trips per Week 2013 - 2015

that were taken on GREENbikes in 2015, 24-hour and 4-day users took 65% and annual users took 35%. This represents a 6% increase in ride share for annual members over 2014.

GREENbike users are multi-generational with representation from millennials, gen x, and baby boomers. While millennials represented the largest user segment with nearly 43% of GREENbike's 2015 user base, there were more GREENbike users over the age of 55 than under the age of 24. And there were nearly three times as many 45-54 year old users than 18-24 year old users.

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GREENBIKE (continued from previous page)

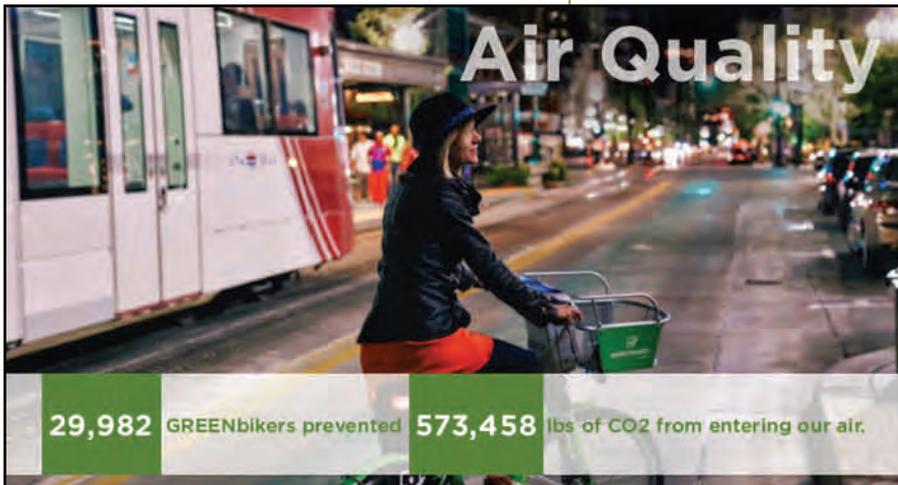
42% of all GREENbike users in 2015 were women, representing a 10% year to year increase. GREENbike's 42% female user base is roughly 20% higher than the national average for bicycle commuting. GREENbike and other bike share systems serve as a tool for creating new female cyclists in urban environments across the country.

The program is used by people from all over the country and the world, but the majority live along the Wasatch Front. In 2015, 31% of all GREENbike users were visitors from out of state while 69% of all users were from Utah. 19% of all GREENbike users live in regional areas like Ogden and Provo while 50% live in Salt Lake County. Of the 50% of GREENbike users that live in Salt Lake County, 36% live in Salt Lake City.

The Benefits

The many benefits of bike sharing range from health, air and quality of life improvements to increasing public transit ridership. One of GREENbike's most salient benefits is making it easier for people to use our existing public transportation infrastructure. This goal is achieved by providing first and last mile connections to UTA facilities. In fact, 61% of survey respondents said that "connections to other forms of public transportation like Front-runner, TRAX or buses" played an important factor in their decision to use GREENbike.

GREENbike users burned more than 11,500,000 calories in 2015. According to the Center for Disease Control and Prevention, only 20% of adults meet the recommended physical activity guidelines. Purpose-driven activities are the most likely to stick and cause lasting behavioral changes. GREENbike also helps raise awareness for the need to improve air quality; roughly 80% of those surveyed reported the program increased their attention to the issue. 70% of GREENbike users reported that they made fewer trips in their personal vehicle in addition to their GREENbike trips. And some GREENbike users reported reducing the amount of vehicles in their household since they joined the program.



"In 2015, the GREENbike system helped remove 632,217 vehicle miles from the road and prevented 573,458 lbs of carbon dioxide from entering the atmosphere."



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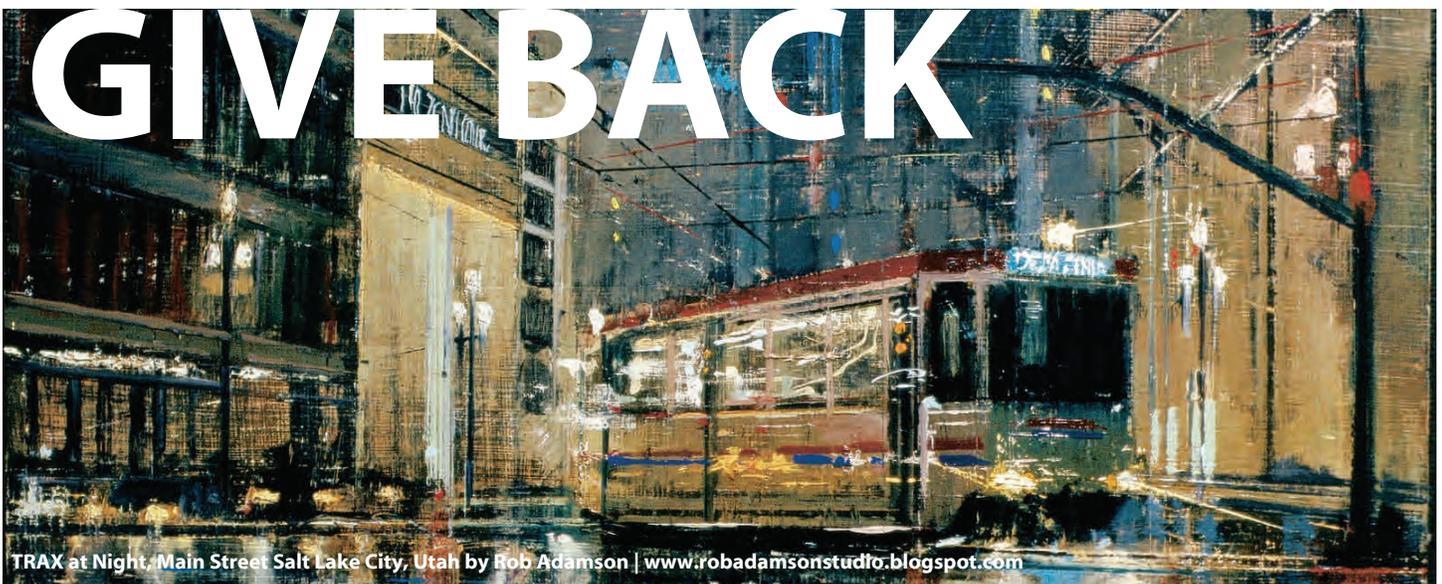
In 2015, the GREENbike system helped remove 632,217 vehicle miles from the road and prevented 573,458 lbs of carbon dioxide from entering the atmosphere.

Pedaling Forward

In 2016, GREENbike will undergo its largest expansion yet, adding eight new stations and expanding the number of docks at many existing stations. The expansion fills in gaps and grows the current service area, making GREENbike more convenient, reliable, and accessible to more people. In large part, the program's success can be attributed to its strategic vision and implementation. GREENbike's station density of roughly 15 stations per square mile makes it one of the most concentrated bike share programs in the nation.

A recent study conducted by the National Association of City Transportation Officials shows that greater station density provides a more equitable bike share network and increases total ridership. While moving forward with the GREENbike Strategic Implementation Plan the program continues to look for innovative ways to expand service to new places and people, utilize bicycle infrastructure, and serve as a first and last mile connection to bus and rail service.

For more information about GREENbike, discount office rates, and to purchase passes, please visit us at greenbikeslc.org and on Twitter and Facebook at [#slcbikeshare](https://twitter.com/slcbikeshare).



TRAX at Night, Main Street Salt Lake City, Utah by Rob Adamson | www.robadamsonstudio.blogspot.com



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For more information, email Bridget Miller, Administrative Officer, City & Metropolitan Planning Department, at bridget.miller@arch.utah.edu

Hive of Clean Energy

Solar Energy's Arrival into the Beehive State

by Meghan Stettler

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Rocky Mountain Power plans to build a 20 megawatt solar farm in Holden, Utah

This is an edited version of a longer article that originally appeared in *Utah Business Magazine* April 15, 2016 (p. 110-117). See <http://business.utah.gov/wp-content/uploads/BusinessInUtah2016.compressed.pdf>

To the casual observer in Utah in 2013, the solar energy industry might have appeared to be a boutique roof-dressing for well-heeled progressives –not a game-changer for the average consumer. In that same year, Peter Kind, utilities expert and executive director of Energy Infrastructure Advocates released a report for the Edison Electric Institute.

Kind highlighted how energy efficiency and distributed energy resources—particularly solar—were combining with other market forces to cause a dramatic shift in power distribution and consumption.

Every few weeks sees another press release from a company unveiling a large solar photovoltaic system on the rooftop of their warehouse or retail center: Real Salt Lake launches a 2.02 megawatt system in Sandy, Burton Lumber announces a 642 kilowatt system in Salt Lake City, and luxury linen company Malouf 'flips the switch' on a 314 kilowatt system in rural Nibley.

Many cities, counties, and non-profits have lined their rooftops. The Utah Olympic Oval in Kearns installed a 791 kilowatt system in 2014, and the Utah National Guard starting nine new solar projects in 2015. This timing is also consistent with rooftop solar for private consumers hitting its stride, causing state and utility officials to recognize its "exponential" deployment rate. These projects suggest that homeowners, businesses and organizations are viewing solar as an ever more cost-effective way to stabilize their long term power costs and make their environmental mark.

While the rooftop phenomenon built over a number of years, Utah's utility scale solar market blossomed practically overnight growing from zero megawatts at the end of 2014, to over 200 megawatts by the end of 2015. Another 600-plus megawatts are expected to come online this year, representing a practically unheard-of growth rate. Millard, Beaver and Iron Counties are at the center of this development, and those communities are awash in construction activity.

How to create a solar boom

The primary driver behind the solar explosion Kind predicted in the Edison Electric report is declining costs. In 2009, according to the Lawrence Berkeley National Laboratory, the nationwide cost of solar decreased between 13 percent to 18 percent each year through 2014, so that today prices are approximately \$3.50 per watt for residential solar and \$2.00 or less per watt for utility scale solar.

These dramatic price trends have combined with a series of federal and state incentives available to homes, businesses and large scale developers. In addition, Utahans have benefited from a longstanding federal obligation mandated through the Public Utilities Regulatory Policy Act (PURPA), according to Jeffrey Barrett, deputy director of the Governor's Office of Energy Development.

"PURPA essentially compels utilities to offer a price based on their avoided cost of power, and if solar developers can pull the trigger based on the proffered price, then the utility must enter into a contract for the purchase of that power," Barrett said.

Thanks to attractive price trends and available tax incentives, it's clear that Utah provides a fertile landscape for this level of deployment. In addition to all of this, the geographic landscape also comes with a large number of sunny days, a high altitude and relatively cool temperatures, all of which allow for solar panels to operate more efficiently.

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Vernal Area Chamber of Commerce



134 W Main Street * Vernal * Utah * 84078

Up on the rooftop

Last year, Smith's grocery store chain announced one of the largest rooftop solar photovoltaic arrays in the state at its distribution center in Layton. The 4,000 panel, 993 kilowatt system serves about one quarter of the facility's electrical load.

"Saving energy as a responsible corporate citizen and saving money for our customers has been a priority for us," said Smith's President Jay Cummins. "We've been working for years to make our stores as energy efficient as possible."

Smith's was joined a few months later by Real Salt Lake, when the franchise launched a 2,020 kilowatt system at Rio Tinto Stadium. The enormous array, which covers both the stadium and a series of carpools, produces the equivalent of 73 percent of the electricity required to power the facility, and is the fourth largest solar system at a professional sports venue in the nation.

Auric's success in recent years has exemplified the broader success of the solar industry. In 2010, the company's first year, it installed solar on five homes. Three years later, in 2013, the number was 99 homes, totaling about 570 kilowatts of total capacity. Remarkably, in the fourth quarter of 2015, the company was installing nearly 570 kilowatts in *a month*.

Lehi-based rooftop solar giant Vivint Solar, which is the second largest rooftop solar firm in the nation, also became active in Utah in 2015, leading out in residential installs. Previously the company was pursuing the solar lease model, not its customary business model. But following the passage of new legislation during the 2016 general session of the Utah Legislature, the company will soon be able to pursue its "Third Party Power Purchase Agreement," or "PPA" model that has led to its success in other regions. Through PPAs, Vivint Solar installs and continues to own the solar facilities, and homeowners sign contracts for the purchase of the power, allowing homeowners to adopt solar with no up-front costs.

Out in the sagebrush

As companies compete to market rooftop solar systems to households and businesses around the state, Rocky Mountain Power, the investor-owned utility that serves the vast majority of Utahans, has announced a program aimed at serving those same households through a subscription service fueled by a large, remote solar farm in Millard County. The subscription solar project will allow customers to buy various sizes of blocks of power for their electrical needs without installing their own solar panels.

While Rocky Mountain Power is developing a large-scale project in central Utah to serve a specific subset of customers seeking solar, the vast majority of the new development in that region is being built by private solar companies to serve the Rocky Mountain Power's broader customer base in Utah and the other states it serves. These approximately two dozen projects, which are known as "Qualifying Facilities" under the PURPA law, range in size from two to 80 megawatts, and are currently under construction in Millard, Beaver and Iron Counties. Once complete, by the end of 2016, these projects will account for well over 800 megawatts of new solar capacity in Utah.

Leading the charge in this explosive growth is the world's largest renewable energy developer, SunEdison, followed by Scatec Solar and Juwi Solar. These companies have partnered with the counties and local municipalities who have embraced this new land use which provides significant construction jobs in the near term, and leads to significant increases in property tax assessments to fund local schools and other improvements. Southern Utah has a rich future in large-scale solar energy development.

Solar boom benefits

The rise in solar development across the country has ushered in significant job growth, and the Beehive State has been no exception. Nationally, the solar industry has more than doubled since 2010, with last year alone seeing the addition of 35,000 jobs (a 20.2 percent increase since 2014). With total solar employment at roughly 210,000, the United States is on track to add another 31,000 positions by year's end. Utah has been consistent with that national trend,

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SOLAR (continued from previous page)

and a recent study referred to the state as “a hive of clean energy activity.”

According to a report released by The Solar Foundation earlier this year, Utah ranks 19th in the nation for overall solar jobs, with nearly 2,700 workers at 930 solar establishments. Another 664 jobs are expected to be added in 2016 – an incredible 24.8 percent gain that’s notably larger than near-15 percent expected growth in the U.S. solar industry.

In fact, Vivint Solar, which is headquartered in Utah, reports that more than 1,200 of the company’s 3,000 employees nationwide are based in Utah. “There’s just a lot of really good talent here,” Allred said. “That’s why we’ve grown so fast.”

Just as Vivint Solar gears up for success in Utah, one of their competitors, SolarCity, has also announced that it is creating a new regional headquarters in Salt Lake City. Another one of the nation’s solar giants, SolarCity installs about one out of every three solar systems in the United States, and it already has more than 200,000 residential customers. With more than 12,000 employees nationwide already, SolarCity has plans to add up to 4,000 jobs in the coming years.

Shining future

Utah’s solar sector is a bright spot in Utah’s already strong economy, enhancing the efficiency of homes and businesses, building companies and growing jobs, providing economic stimulus in rural communities, and drawing billions of dollars of capital investment to the state, which has only recently been recognized for its vast solar market potential. Not only is Utah the subject of a great deal of solar investment and deployment, it has also positioned itself as the sector’s next national and international hub, with expected near-term job growth not in the hundreds, but in the thousands.

“Utah’s current solar boom is one of the great energy success stories unfolding in America today,” Barrett said.



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Building Resilience Through Mitigation

by **Bradley Bartholomew**

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Resilience. Sounds like another one of those fancy buzzwords, and maybe it is. Everyone seems to be talking about resiliency, almost like it is a brand new concept. For those of us who have been engaged in mitigation, we have been building resilient communities without actually calling it that for over two decades. And though it sounds like a buzzword, it is so much more.

Resilience is the capacity of systems whether they be individuals, communities, institutions, or businesses to survive, adapt, and thrive through any kind of chronic stress or shocks. These stresses and shocks could be anything from an earthquake or flood to a housing shortage, or economic downturn—or something we have never experienced before. Building resilience to one of the stresses or shocks creates resilience to others.

Worldwide natural disasters caused nearly \$100 billion of economic damages in 2014. While this is below the ten year average of \$162.5 billion, the overall trend of natural disaster costs are increasing (according to the Annual Disaster Statistical Review for 2014). As an example, the Colorado flooding disaster in 2013 caused an estimated \$2 billion in damages, and this does not include economic losses due to closed business, lost crops and inventory. Though not located in the U.S. the Christchurch earthquake in 2011 has cost an estimated \$40 billion and has left an empty downtown area with decades of rebuilding and recovery ahead. The earthquake is similar to one we could experience along the Wasatch Front.

According to Koshi Okamoto, "50% of business which sustain interruptions of a week or more due to problems at the primary site never recover" and "25% of companies stricken by California earthquakes closed" (published in "Making the Most of the Worst" for *Disaster Recovery Journal*).

Returning your community back to the "new normal" after a disaster is a long process, taking years and sometimes decades depending on the size of the disaster. Building resiliency now, speeds this process up. The longer it takes to open roads, restore water, power and gas services, and get schools operational, the fewer business and residents will return.

Disasters are devastating to a community, yet they can also be a catalyst for rebuilding stronger. Asking citizens and elected officials to invest

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RESILIENCE (continued from previous page)

100 Year Floodplain vs. Erosion Hazard Zones



The FEMA 100-year floodplain maps do not include Erosion Hazard Zones especially prevalent in the West and throughout Utah



above and beyond, and to prepare for an event before it occurs, is difficult. People are much more likely to make changes after a disaster. How do we reduce the cost of disasters while at the same time build systems that not only recover quicker but recover stronger, without having to wait for the next disaster?

The easiest ways to accomplish resiliency can also be the most challenging. Only 2/3 of the United States is covered by building codes and regulations. While establishing codes and regulations has little effect on budgets, it can take political capital from politicians and communities not easily convinced that codes and regulations are needed.

In 1999, the City of St George, in Washington County, Utah, established an Erosion Hazard Zone (EHZ). Understanding they had erosion issues, the EHZ extended beyond the floodplain and prohibited building within the zone. In 2005, 28 homes fell into the Santa Clara River; they did not flood, the soil eroded from underneath the foundations. Only two of the homes lost were within the identified flood area. Because of St. George's foresight and willingness to enact difficult ordinances, the only homes lost were built prior to the EHZ ordinance. A Federal Emergency Management Agency (FEMA) study conducted after the flood estimated the EHZ ordinance saved \$5 million in response and recovery expenses.

Several communities in Washington County have implemented projects to recover from flood incidents and to mitigate future damages. They have reinforced many miles of banks of the Santa Clara and Virgin Rivers. Many projects have been supported with federal funds, like FEMA's Public Assistance and Hazard Mitigation Assistance (HMA) programs, or the NRCS Emergency Watershed Protection Program, yet those communities acknowledged that federal funding might not always be available and started the Washington County Flood Control Authority (WCFCFA). Residents in St. George, Santa Clara, and Washington City pay an additional \$1.50 fee on their monthly water bill. This money is used by the WCFCFA to address key regional flood concerns, maintain previous projects, and provide the non-federal match for federal disaster and mitigation grants. Residents who are part of the WCFCFA are contributing to build a resilient community. This is a great example of municipalities working cooperatively on a regional level to solve flood control issues and prevent future damages.

The HMA program provides assistance to help fund mitigation projects, but building resilience is much more than mitigation and projects. Building resilience involves adapting to our environments and fully understanding our risks. Like in Washington County, where they have committed to maintaining the river ways through fees, those who live in the Wildfire Urban Interface (WUI), and those who live in high earthquake

(continued on next page)

RESILIENCE (continued from previous page)

Erosion Protection—Know Your Risk!



Several years ago, the City of St George mapped their soil Erosion Hazard Zone. This ordinance avoided more than \$5 million in additional losses and suffering

zones and other vulnerable areas need to change their approach and mind sets.

Having a hazard mitigation plan is another tool to build resilience. Mitigation plans identify a community's hazards, risks, and vulnerabilities. Knowing the vulnerabilities allows the development of mitigation strategies to prioritize projects that reduce risks and build resilience. The most effective mitigation plans are those tied to comprehensive plans and capital improvement lists. Planners and emergency managers should be key stakeholders at the table when updating comprehensive and mitigation plans.

The Community Rating System (CRS) reduces flood insurance premiums, reduces risks from floods, and encourages more National Flood Insurance Program (NFIP) policies which buys down risks when there is a flood. Participating in the CRS can help a community attract businesses and residents who are looking for a safe community to work and live in. *Currently there are only 11 communities in Utah participating in CRS.* Chances are, you have already implemented many (if not all) of the requirements and joining would take minimal effort.

Acknowledging the future will not be like the past is the first step in creating and building resilient communities. As we change our approach to natural hazards and learn to live with them, we build strong communities that are able to survive, adapt, and thrive through any kind of chronic stress or shocks.



Photograph of Monument Valley, Utah, by Bettina Woolbright



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Caribbean Sustainability

by John Janson, AICP

Elected and Appointed Officials Chair | Planning Solutions

j_janson@comcast.net



A dramatic coastline...



A sustainable community...



And John Janson, AICP, in the Caribbean Islands!

I've visited the Caribbean many times, especially Antigua where we have a timeshare. It is always interesting to learn about new cultures, and Caribbean life is really different. For one, there's this ring of ocean within a few miles of just about every home. That in itself provides an incredibly different environment than we are used to, and the beach and water are always there to offer you a respite from your daily grind. Of course, when I'm there, there ain't no daily grind. To me the islands are defined by their beaches and they are all a little different when you go exploring, underwater or on the sand.

I have to admit that if you asked a local about their "green philosophies" they would generally think you were referring to something you would find at a Colorado "dispensary." Oddly enough, they tend to engage in some very sustainable building practices. It is just not something they talk about much. This does not mean the buildings are built well, but that they logically choose to get the most they can from their limited environment.

It is hot and humid, but not always as rainy as they need it to be. Self-sufficiency in terms of water is very difficult to achieve. If it does not rain enough, the rest of the water supply is pretty salty! Desalinization is a pretty common public backup system.

Most buildings have some sort of cistern system. They use metal or tile roofs and run the water into an underground storage area. It is filtered—*I hope!*—and then mixed with the public water system, which often is very questionable in terms of quality. Most tourists buy bottled water because they aren't sure that there aren't any frogs or other critters of concern down in those cisterns. I doubt anybody actually inspects those on a regular basis. We have been using a three stage filter on the tap for the last five years but our friendly housekeeper still says she won't drink it!

Most buildings take advantage of the breezes by providing good size windows, which are not always screened. (So what about that Zika virus, dengue fever, and other itchy infectious stuff?) They also have large eaves to shade the windows as much as possible.

Vegetation grows well when there is sufficient rainfall, and there are many, uncommon varieties of palm trees that are good shade trees. These are often planted around the building to help shade its' periphery. Coconut bombs are a concern though!

People in the Caribbean are okay with sweating! Air conditioning (AC) units cost a lot and are an excessive demand on local power systems.

(continued on next page)



CALDWELL
RICHARDS
SORENSEN

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Fast, Reliable Internet

SUSTAINABILITY (continued from previous page)

They use energy pricing systems to help manage that power demand. If you use the AC all day (even when you are not there), then you get charged more. Night time use generally costs less at most places.

Up on the roof, you will often see a solar hot water heater. It may be supplementing a regular water heater, which usually relies on propane, but it will often take care of the outside shower as well as the inside. Yes, a lot of people shower outside WITH their swim suits on!

Some people still live within their means, but most do not. At one time the islands were pretty self-sufficient, but these days so much of their basic needs are shipped in. Tourists demand modern accommodations and modern conveniences. Huge container ships regularly visit their harbors, providing everything from fuel to bananas. It is an amazing system that makes island living pretty expensive and pretty unsustainable. Yet they somehow manage to do a few things well. And then there is that beach, with the constant sound of gentle waves, that beckons you to lay down and dream—planning dreams of course!—and somehow lets you forget what time it is and that you have to go home someday...



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OR

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AGES 15-18

FOR REGISTRATION AND DETAILS, PLEASE VISIT CAP.UTAH.EDU

Upcoming Events for Utah Planners



Placemaking with Form Based Codes—Form Based Code Institute

April 21-22, 2016

Provo City Hall, 351 W Center Street, Provo, Utah

Registration information at www.formbasedcodes.org/courses/fbc201. Register by April 1, 2016, and receive a \$150 discount.



Applications in Transit Planning—APA Webcast Series

April 22, 2016, from 11:00 AM to 12:30 PM MDT

Registration information: www.ohioplanning.org/aws/APAOH/pt/sp/development_webcast

No charge for registration. 1.0 AICP CM credit pending



The Future of Architecture—The Leonardo Museum

British writer Roger Burrows, working in the fields of geometry, design, and architecture, will highlight new technologies and advances in design

April 22, 2016, from 7:30 PM to 8:30 PM MDT

The Leonardo, 209 E 500 South, Salt Lake City, Utah

For more information: www.theleonardo.org/event/the-future-of-architecture/



2016 Annual Meeting | Oasis or Mirage? Landscape Architecture in the Arid West—Utah Chapter of American Society of Landscape Architects

April 28-30, 2016

Hilton Garden Inn, 1731 S Convention Center Drive, St George, Utah

For more information: www.utahasla.org/annual-meeting-2016.html



Planning Ethics | Dealing With Problem Boards and Board Members—APA Webcast Series

April 29, 2016, from 11:00 AM to 12:30 PM MDT

Registration information: www.ohioplanning.org/aws/APAOH/pt/sp/development_webcast

No charge for registration. 1.0 AICP CM Ethics credit approved



45th Annual Historic Homes Tour—Utah Heritage Foundation

April 30, 2015 from 10:00 AM to 5:00 PM MDT

University Neighborhood, Salt Lake City, Utah

For more information: www.utahheritagefoundation.com



What I Wish I Knew—APA Webcast Series

May 6, 2016, from 11:00 AM to 12:30 PM MDT

Registration information: www.ohioplanning.org/aws/APAOH/pt/sp/development_webcast

No charge for registration. 1.0 AICP CM credit approved



2016 Spring Conference | Planning Resources—Utah Chapter of the American Planning Association

May 19-20, 2016

Uintah Basin Conference Center, 313 E 200 South, Vernal, Utah

For more information: e-mail Judi Pickell, Chapter Administrator, at admin@apautah.org

AICP CM credits pending



Forging Neighborhoods for all Generations—APA Webcast Series

May 20, 2016, from 11:00 AM to 12:30 PM MDT

Registration information: www.ohioplanning.org/aws/APAOH/pt/sp/development_webcast

No charge for registration. 1.0 AICP CM credit approved

Mark your calendars now...



Be Project Ready: Go from Opportunistic to Strategic Green Infrastructure—APA Webcast Series

June 3, 2016, from 11:00 AM to 12:30 PM MDT

Registration information: www.ohioplanning.org/aws/APAOH/pt/sp/development_webcast

No charge for registration. 1.0 AICP CM credit approved



CNU 24 | The Transforming City—24th Annual Congress for the New Urbanism

June 8-11, 2016

Detroit, Michigan

For more information: www.cnu.org/cnu24



Wasatch Choice Consortium—Envision Utah, Wasatch Choice, and Active Transportation & Health Summit

June 29, 2016

Little America Hotel, 500 S Main Street, Salt Lake City, Utah

For more information: www.wasatchchoice2040.com/

AICP CM credits pending



2016 Western Planner & Montana Association of Planners Joint Conference—Western Planner

August 10-12, 2016

Civic Center, 2 Park Drive South, Great Falls, Montana

For more information: www.westernplanner.org/conferences/2016-conference

AICP CM credits pending



PLANNING RESOURCES

APA-UT SPRING 2016 CONFERENCE | MAY 19-20, 2016 | Uintah Basin Conference Center - Vernal, Utah

2016 REGISTRATION FEES

PLEASE CHECK THE APPROPRIATE BOX:	EARLY		STANDARD	
	April 18, 2016		May 18, 2016	
Member, Utah Chapter APA	<input type="checkbox"/>	\$220.00	<input type="checkbox"/>	\$245.00
Non-Member, Utah Chapter APA	<input type="checkbox"/>	\$250.00	<input type="checkbox"/>	\$275.00
Full-Time Student / FAICP / Retired / Elected & Citizen Planner Officials - One Day	<input type="checkbox"/>	\$75.00	<input type="checkbox"/>	\$95.00
Full-Time Student / FAICP / Retired / Elected & Citizen Planner Officials - Two Day	<input type="checkbox"/>	\$95.00	<input type="checkbox"/>	\$115.00
One Day Registration	<input type="checkbox"/>	\$150.00	<input type="checkbox"/>	\$175.00

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Dinosaur National Monument Pass

Please check the box if you are interested in a \$1.00 Dinosaur National Monument Pass:

Register online at www.apautah.org

To pay your registration fee by check, please mail your payment and completed registration form to:
 UT APA Chapter, P.O. Box 1264, American Fork, UT 84003

*Registration will not be accepted without payments. Refund requests must be made in writing at least 2 weeks prior to the conference. A \$10.00 processing fee will be deducted from all refunds. Questions may be sent to utah-apa@utah-apa.org or call 801-450-2659. Receipts are available upon request.

THURSDAY, MAY 19, 2016

PARADISE ROOM

MOUNTAIN ROOM

MOBILE WORKSHOPS

7:00 AM
-8:00 AM

AICP Test Prep

8:15 AM
-9:15 AM

KEYNOTE - NEAL PEACOCK, M.ED.
Above and Beyond

9:15 AM
-9:30 AM

BREAK

9:30 AM
-10:30 AM

**Rural Roads + Public
Lands = Hot Topic**

**The Carrot and The
Stick - The Art of Code
Enforcement**

**Frontier Transit -
Starting a Transit
System in the
Wild West
BTA Mobile Tour**

10:30 AM
-10:45 AM

BREAK

10:45 AM
-11:45 AM

**Does the Heart of Your
Downtown Need a
Bypass?**

**Drinking Water
Protection**

11:45 AM
-1:15 PM

LUNCH

1:15 PM
-2:15 PM

**You Are What You
Breathe - Air Quality in
Your Community**

**Your Utah, Your Future,
The Results Are In.
Envision Utah**

2:15 PM
-2:30 PM

BREAK

2:30 PM
-3:30 PM

**Interagency
Planning - Fruitful or
Futile?**

**The Hows and Whats of
Resource Management
Plans**

**McConkie Ranch
Mobile Tour**

3:30 PM
-3:40 PM

BREAK

3:40 PM
-5:10 PM

**Practical Duty Based
Ethics**

**Endangered Species
and Incentivizing
Conservation**

5:30 PM
-7:30 PM

DINNER & SOCIAL - HOW LIBRARIES ARE DESIGNED FOR THE FUTURE

Babcock Designs/Library (Bring family or guest)

FRIDAY, MAY 20, 2016

	PARADISE ROOM	MOUNTAIN ROOM 1	MOUNTAIN ROOM 2	MOBILE WORKSHOPS
8:00 AM - 9:30 AM	KEYNOTE - BRENT BISHOP <i>It's Nothing Personal</i>			
9:30 AM - 10:00 AM	BREAK			
10:00 AM - 11:00 AM	Resources for Rural Communities	How Affordable is HUD Affordable Housing?	Mock Planning Commission Meeting	Energy Resources Tour - Planning in an Energy Area
11:00 AM - 11:10 AM	BREAK			
11:10 AM - 12:10 PM	Planning for Events - Or Eventful Planning, Which One?	Form Based Code Keys to Success	Citizen Planner Training	CDA Development Mobile Tour
12:15 PM - 1:30 PM	LUNCH / KEYNOTE - REP. ROB BISHOP			
1:40 PM - 2:40 PM	Professional Planning and Design Assistance Programs - CPAT Spanish Fork	Three Key Concepts of the FEMA's NDRF	Ask Brent - All Your Questions Answered	McCoy Flats Bike Trail
2:40 PM - 2:55 PM	BREAK			
2:55 PM - 4:25 PM	Legislative Update <i>Combined Meeting (Paradise Room)</i>			

APA-UT SPRING 2016: PLANNING YOUR VISIT

DIRECTIONS

FROM SALT LAKE CITY

Take I-80 East toward Park City/Cheyenne,
Take Exit 146 for US-40 E toward Heber/Vernal,
Turn Right onto E 200 N/Main St in Roosevelt,
Turn Right onto 300 E St in Vernal,
Turn Left onto 200 S St, following the signs to the
Uintah Basin Conference Center.

FROM PROVO

Take University Ave North toward US-189 N,
Turn Right onto US-40 in Heber,
Turn Right onto E 200 N/Main St in Roosevelt,
Turn Right onto 300 E St in Vernal,
Turn Left onto 200 S St, following the signs to the
Uintah Basin Conference Center.



CONFERENCE HOST HOTELS

(Ask for APA Conference Block)

HOLIDAY INN EXPRESS

1515 West Hwy 40, Vernal, UT
435.789.4654 - \$89/night Conference Rate

LANDMARK INN & SUITES

288 East 100 South, Vernal, UT
435.781.1800 - \$69.99/night Conference Rate

SPRINGHILL SUITES BY MARRIOTT

1205 West Hwy 40, Vernal, UT
435.781.9000 - \$95/night Conference Rate

TOWNEPLACE SUITES BY MARRIOTT

1219 West Hwy 40, Vernal, UT
435.789.8050 - \$95/night Conference Rate

MICROTEL INN AND SUITES

1041 South 1500 East, Vernal, UT
435.781.8141 - \$75/night Conference Rate

QUALITY INN

1684 West Hwy 40, Vernal, UT
435.789.9550 - \$72/night Conference Rate

LEDGESTONE HOTEL

679 West Main Street, Vernal, UT
435.789.1202 - \$79/night Conference Rate

Call and book your rooms early.
Rates are guaranteed until May 1st.