

SAN DIEGO  
GREEN  
BUILDING

# CONFERENCE + EXPO19

## PROGRAM



SAN DIEGO  
GREEN  
BUILDING  
COUNCIL

FRIDAY, OCTOBER 18<sup>TH</sup>

COURTYARD BY  
MARRIOTT | LIBERTY STATION

#SDGBCE19



# WELCOME

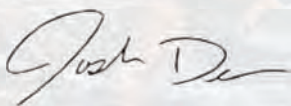
## WELCOME TO THE 2019 SAN DIEGO GREEN BUILDING CONFERENCE AND EXPO!

The effects of climate change are reaching us here and now, and we recognize that our built environment has a large footprint impacting not only the surrounding communities and infrastructure but the occupants within. We're excited to bring together local, regional and national partners to highlight and inspire action to create a built environment that will regenerate and sustain the health and vitality of all life within a generation.

This year's program is arranged into three tracks, **Net Zero**, **Resiliency for the Future**, and **Health & Wellness** with a focus towards taking action now for our collective future. Buildings and neighborhoods are platforms to protect and enhance our environment, achieve economic prosperity, and ensure equity, health and well-being for all. The focus of the San Diego Green Building Conference and Expo is to showcase how the built environment can contribute to a more sustainable region.

By highlighting cutting-edge building strategies and progressive policies, we strive to be the platform that amplifies this regenerative movement by our community. I hope you will find fresh inspiration, valuable insights, and actionable information that can help us all move forward as a region toward true sustainability.

Thank you for joining this year's event and for your leadership towards a more sustainable future!



Josh Dean  
Executive Director  
San Diego Green Building Council



## ABOUT US

The San Diego Green Building Council is a community of building industry professionals and sustainability advocates with expertise in areas such as architecture, construction, design, urban planning, policy and more. We work together to promote sustainable building and community practices to bring the San Diego region closer to achieving its climate, water, waste and energy goals.

501c3 Community Benefit Non-Profit • Local aligned community of the USGBC • ILFI Partners and host of San Diego Living Future Collaborative • **Initiatives:** Green Assistance Program, Green Schools, Green Homes Tour, Zero Net Energy & Water, San Diego Green Business Corner • **Education:** Lunch & Learn, GreenMEET, Annual Conference & Expo, Training in LEED, GPRO, Living Building Challenge and WELL

**Become a member and gain access to exclusive benefits!**



# WELCOME KEYNOTES

## OPENING KEYNOTE



### Climate Disruption: Actions We Can Still Take

In about 10 years, the warming will most likely exceed the threshold for dangerous warming. Since weather extremes are linked with warming, the current climate disruption we are experiencing will get worse, by as much as 50%. Fortunately, there is still time to avoid catastrophic outcomes and I will list actions we can all take for the common good.

#### **Dr. Veerabhadran Ramanathan**

Edward A. Friedman Endowed  
Presidential Chair in Climate Sustainability  
Scripps Institute of Oceanography  
University of California at San Diego

## CLOSING KEYNOTE + AWARDS HOST



### 2nd Annual Sustainability Awards

Celebrate winning people, organizations and projects that promote sustainability in its most innovative forms. From LEED to Net Zero to Green Business Practices, these leaders embody the idea that **The Future is Now** and their actions are proving it. Please join us in applauding our community and their efforts to continue San Diego's environmental stewardship.

#### **Kyle Pickett**

Co-founder & COO, Urban Fabrick  
Co-Founder & Executive Director, The William J. Worthen  
Foundation



# SCHEDULE

**REGISTRATION + BREAKFAST** 8:00 - 8:30<sub>AM</sub>

**WELCOME + OPENING KEYNOTE** 8:30 - 9:15<sub>AM</sub>

**Climate Disruption: Actions We Can Still Take**  
with Dr. Ramanathan, Scripps Institution of Oceanography

**NETWORKING BREAK + EXPO** 9:15 - 9:45<sub>AM</sub>

**BREAKOUT SESSIONS** choose one 9:45 - 10:45<sub>AM</sub>

**Resiliency and Adaptation Planning at the Port of San Diego**  
SALON A

**Zero Energy + Zero Water:  
Pushing The Envelope in California's Residential Space**  
SALON B

**Healthy People, Healthy Planet:  
WELL Buildings Ignite a Second Wave of Sustainability**  
SALON C

**NETWORKING BREAK + EXPO** 10:45 - 11:15<sub>AM</sub>

**BREAKOUT SESSIONS** choose one 11:15 - 12:15<sub>PM</sub>

**Passive Design as an Answer to Social and Climate Challenges  
of Today and Tomorrow**  
SALON A

**ZNE Project Planning & Community Engagement for Existing Municipal  
Buildings: The City of San Diego ZN3 Project**  
SALON B

**Not your Garden Variety Design: Optimizing Building Integrated Vegetation**  
SALON C

**LUNCH + EXPO** at Courtyard's Waterside Terrace 12:15 - 1:15<sub>PM</sub>



# SCHEDULE

**BREAKOUT SESSIONS choose one 1:15 - 2:15PM**

**A Climate Change Survival Plan:  
Future Proofing Neighborhood Development**  
SALON A

**Operational & Embodied: Achieving True Zero Carbon**  
SALON B

**Healthy Buildings: Impacts on Building Users and Public Health**  
SALON C

**NETWORKING BREAK + EXPO 2:15 - 2:45PM****BREAKOUT SESSIONS choose one 2:45 - 3:45PM**

**Resilient Design & Operations in an Era of Climate Change**  
SALON A

**A "Three P" Approach to Net Zero Water: Policy, Plumbing and Processes**  
SALON B

**Closing the Transparency Loop - A Call for Drastic Materials Action**  
SALON C

**NETWORKING HAPPY HOUR at Courtyard's Waterside Terrace 3:45 - 5:30PM****SUSTAINABILITY AWARDS 5:30 - 7:00PM**

**Hosted by Kyle Pickett**  
Urban Fabrick, The William J Worthen Foundation

**October 19th & 20th - San Diego Green Homes Tour**  
Visit [sdgreenhometour.org](http://sdgreenhometour.org) for more info!



# RESILIENCY FOR THE FUTURE

## **Resiliency and Adaptation Planning at the Port of San Diego**

Renée Yarmy, Port of San Diego | Phil Gibbons, Port of San Diego  
Tim Barrett, Port of San Diego

The Port of San Diego is addressing climate adaptation and resiliency planning across various disciplines and collaborations. Port staff will provide an understanding of the planning and policy development process, vulnerabilities within San Diego Bay, strategies for adaptation and resiliency planning, and will outline the collaboration needed to address complex topics, such as sea level rise, infrastructure modernization, long range planning considerations, and current projects.

## **Passive Design as an Answer to Social and Climate Challenges of Today and Tomorrow**

Staci Atwater, Glumac | Andrew Michajlenko, Gensler  
Angela Hansen, DPR Construction

Everything you know about thermal comfort is wrong... but also right. By expanding our knowledge of the factors that impact thermal comfort, including age, gender, attributes of the human body, and other physical conditions, we can design spaces to better cater to the occupants inside. Using this knowledge, we can create happy and healthier built environments as well as improve our energy efficiency in our path to net zero.

**CONT'D**

# RESILIENCY FOR THE FUTURE

## **A Climate Change Survival Plan: Future Proofing Neighborhood Development**

Alexandra Sokol (EnviroDynamix)

This presentation will focus on neighborhoods as leaders on the forefront of resilience and the positive inroads being made by ingenious cross-industry designs and technologies being applied to the problem. We'll look at a variety of cutting-edge innovations and solutions in neighborhood development through the lens of climate impact, social equity, resilience and disaster mitigation. I'll share best practice strategies for putting knowledge into action on new projects and existing neighborhoods, as well as how we can integrate all components of true sustainability, incorporating LEED principles, U.N. SDG's and what I call "Human-i-City" (Human Integrated Cities) into our neighborhood projects.

## **Resilient Design and Operations in an Era of Climate Change**

Elaine Aye, RWDI | Daniele Horton, Verdani Partners

Resiliency has become an urgent issue for designers, owners and managers responsible for the safekeeping of their buildings and the wellbeing of occupants. This session provides an overview of future climate forecasting models and a climate resilience assessment tool for identifying areas of vulnerability to changing climate conditions. Strategies to incorporate into building design from an operational perspective, with regards to building systems, education, resilient systems, resourcefulness, recovery and adaptability will be discussed.



# NET ZERO

## **Zero Energy + Zero Water: Pushing the envelope in California's residential space**

John Ambert, Studio Verde | Blake Herrschaft, Rising Tide Engineering  
Barbara Bradley, Advanced Onsite Water

This session will explore the opportunities and challenges in creating Zero Energy and Zero Water homes in Southern California. The design team will highlight the design, construction, and operational learned lessons from a recently completed, single family home in La Jolla Shores California. Designed as a high-performance building, the project includes on-site energy generation and water treatment systems to target Zero Energy and Zero Water. Additionally, the project will be the first single-family home in San Diego to permit and operate an NSF-350 listed on-site greywater treatment to toilet flushing system. The Architect will discuss the financial, technical, and code-related hurdles encountered by implementing Zero Energy and Zero Water systems in California's residential space.

## **ZNE Project Planning & Community Engagement for Existing Municipal Buildings: The City of San Diego ZN3 Project**

Kristin Larson, Center for Sustainable Energy | Josh Dean, San Diego Green Building Council | Shannon Sales, City of San Diego

Three existing City of San Diego libraries will receive energy efficiency upgrades that will drastically reduce their energy usage and bring them close to Zero Net Energy (ZNE). These retrofits are part of a multiyear demonstration project known as San Diego ZN3 (SD ZN3) to test, verify and publicize the integration of energy efficiency, on-site renewable power and other demand-side resources to meet the CEC's "ZNE-Code Building" definition. The project is led by The Center for Sustainable Energy, in partnership with the City of San Diego, California Energy Commission, Mazzetti, San Diego Green Building Council, and San Diego Gas and Electric. Project planning and community engagement strategies learned have created a roadmap for similar ZNE Projects.

CONT'D



# NET ZERO

## **Operational & Embodied: Achieving True Zero Carbon**

Charlie Christenson, Brummitt Energy Associates | Boris Gamazaychikov, stok

Operational emissions often drive Zero Carbon discussions, but they're only part of the story. This session will equip participants with tools, tips, and cutting-edge case studies that demonstrate how to achieve holistic (operational and embodied) Zero Carbon on single building projects and across real estate portfolios. Participants will learn how to use existing frameworks like Zero Carbon Certification, LBC, and LEED to strategically guide and evaluate their holistic Zero Carbon efforts. The session will conclude with a deep dive into the difference in impacts between embodied and operational carbon so participants can communicate the benefits of each and use them to drive impactful project decisions.

## **A “Three P” Approach to Net Zero Water: Policy, Plumbing, and Processes**

Eric Hough, Natural Systems Utilities | Ravi Bajaj, Healthy Buildings  
Barbara Bradley, Advanced Onsite Water

Decentralized water recycling systems are becoming more and more common in new construction or redevelopment projects, including residential and commercial buildings, athletic stadiums, universities and office parks. These systems reduce pressure on aging infrastructure and improve the resiliency of centralized treatment systems while providing property owners significant reductions in water and sewer costs. This presentation will focus on the role decentralized water recycling systems will play in the future of water treatment management and Net Zero Water.



# HEALTH + WELLNESS

## **Healthy People, Healthy Planet: WELL Buildings Ignite a Second Wave of Sustainability**

Angela Spangler, International WELL Building Institute

Mark Strauss, International WELL Building Institute

The college campus has always been responsive to the dynamic needs of higher education. From the library to the theatre, lecture hall to lab, a university is at the forefront of shifting paradigms and experimentation. Just as technology has transformed campus spaces to meet the learning needs of a new generation of students, so too must they reflect our evolving understanding of sustainability. The WELL Building Standard is a tool to implement sustainable solutions which integrate design, operations and policies which benefit people, without sacrificing the planet. Join us as we work to elevate the role of sustainability professionals to achieve recognition as agents of public health, and outline how you can deliver a holistic healthy campus experience through implementation of the WELL Building Standard.

## **Not your Garden Variety Design: Optimizing Building Integrated Vegetation**

Calina Ferraro, Integral Group | Jennifer Montgomery, Schmidt Design Group  
Jim Mumford, Good Earth Plants

Plants are more than decorations in buildings. They provide a biophilic connection to nature that is necessary for human well-being, and their benefits go even further than that. Building integrated vegetation can provide a host of ecosystem services. Drawing on case studies and biomimicry concepts, this presentation provides an overview of how plants can improve air quality, reduce energy, improve space comfort, and provide resiliency in building design. Drawing on the expertise of engineering, landscape architecture, and plant expert/eco-warrior, this presentation seeks to inspire new ways of considering plants within our built environment while providing a practical approach for their incorporation.

CONT'D



# HEALTH + WELLNESS

## Healthy Buildings: Impacts of Building Users and Public Health

Kathleen Hetrick, BuroHappold | Amber Richane, City of Santa Monica

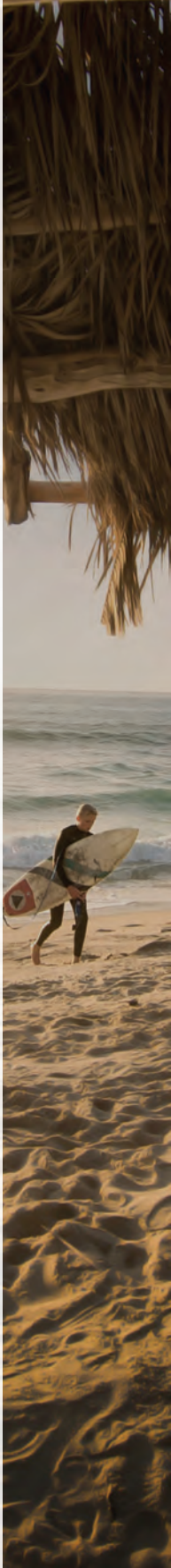
Jessie Buckmaster, Hathaway Dinwiddie | Mariam Mojdehi, Frederick Fisher & Partners

Can buildings be considered sustainable if they only focus on the health of building end-users? Based on their experiences with the Living Building Challenge, the team from the Santa Monica City Services Building will share how toxic materials in the building industry not only impact the health of building end-users, but also the health of manufacturing workers, first-responders, and frontline communities. Approaching the topic from a multidisciplinary perspective, attendees will hear architectural, construction, engineering and operational viewpoints challenge prevailing approaches to sustainable design to examine “Why the supply chains of our most sustainable buildings still cannot match our project aspirations?”

## Closing the Transparency Loop A Call for Drastic Materials Action

Annie Bevan, Superior Essex | Lona Rerick, ZGF Architects

In 2012 the A&D community sent letters to all major building product manufacturers stating if you don't have EPD, HPD or Declare we will not spec your product. 6 years and 1,000's of reports generated by manufacturers later, the Living Product 50 (50 leading building product manufacturers assembled together) and responded to the A&D community with a letter asking them to actually specify healthy materials as well as defining their own commitments in what is a true sustainable building products manufacturer. In 2019, a collective group of over 65 A&D firms signed a letter back confirming their commitment to specifying healthy building products. Here is where the industry lies--many letters and commitment have been made--it is now time for action. This program will help to summarize and educate the room on the history of the healthy materials market as well as the urgent need for action now. It will conclude with an interactive session to allow the audience with actual action item take aways so they can begin to actively participate in this movement.





# HELLO & THANK YOU

## SAY HELLO TO OUR 2019 EXHIBITORS



## THANK YOU TO OUR SPONSORS

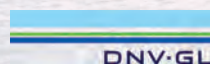
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