DEAN’S MESSAGE

With the first Bren School All-Alumni Reunion scheduled for April 23-25, 2015, it’s a great time for this special all-alumni issue of Bren News. The 30-plus graduates you’ll meet—or reconnect with—in these pages represent in microcosm the incredibly diverse careers our graduates are pursuing in a variety of sectors and close to 30 countries around the world.

When I travel, I often meet people who talk to me about Bren School alumni they have hired, and what I’ve noticed is that no one ever says, “Oh, yes, we hired one of your graduates” and then goes silent. They always follow with a string of superlatives about how talented and creative Bren graduates are. If we say our students are great, it can seem like PR. If an employer says it, it’s true.

Since our first graduates received their diplomas in 1998, more than 1,000 Bren alumni have gone into the world to do great things and impress employers. I hear over and over that our graduates are aware and mature; that their complex skill sets and broad perspectives enable them to work on tough details and understand the big picture; that they know how to write and communicate; and that they are good at forming and leading collaborative teams.

Collaboration is how the world works, and from their first day here until their last, Bren students learn by immersion how to collaborate effectively across disciplines. We push them to work together, support them, watch them support each other, and send them on their way. Then employers tell us how well they lead and how much they contribute. Having learned the hard way in my own career how much more a team can accomplish than individuals working alone, I would like to see this approach become the norm in education.

Perhaps most importantly, when I meet alumni, I see that they’re passionate about what they’re doing. They’re in jobs they want and that interest them. That has a lot to do with them as people, but it’s also the result of their coming out of this program excited and equipped to solve problems.

With so many articles in just 12 pages, it’s not possible to fit the complete stories of the 33 alumni into the print issue. But it is in this electronic version. I hope you’ll enjoy the full-length articles and that you’ll be as impressed as I am by the breadth of our alumni’s careers, the passion they have for their work, and, most importantly perhaps, the degree to which all of them rely on their Bren education to make a difference.

ZURICH VISITORS

The Bren School is pleased to present two Zurich Financial Services Distinguished Visitors on Climate Change during spring quarter 2015.

Charles Godfray is a faculty member in the Department of Zoology at Oxford University. A population biologist, he is interested in how the global food system will need to change and adapt to challenges, including climate change, in the 21st century. He has a particular interest in the concept of sustainable intensification and the relationship among food production, ecosystem services, and biodiversity. Dr. Godfray will be in residence during mid-April and will deliver his talk at Bren Hall on Wednesday, April 15, from 11:30-12:30.

Steve Polasky is a professor of ecological and environmental economics at the University of Minnesota and one of the leaders of the Natural Capital Project, which seeks to integrate the values of nature into all major decisions affecting environmental and human well-being. He will be in residence at the Bren School May 11-15 and will present his public talk at Bren Hall on Tuesday, May 12, from 11:30-12:30.
MORE SUPPORT FOR URBAN WATER

The Bren School has received a generous gift of $200,000 from Henry H. Wheeler, Jr. to continue his support of Bren professor Patricia Holden’s research on urban groundwater quality. The gift fortifies a prior donation that Wheeler made to the Bren School and Professor Holden in 2012.

Wheeler’s contribution parallels his own interest in urban water infrastructures stemming from decades of experience as a water-industry executive. He understands the important role science plays in tackling the problems embedded in urban water management, and he hopes that Holden’s research will “encourage informal, interdisciplinary collaborations with other institutions” as it addresses the issues surrounding pollutants and contaminants in urban water sources.

These gifts have “provided an incredible opportunity for us to pursue research innovation in urban water quality,” says Holden. “His most recent gift allows us to deepen and extend our research, building from results made possible by his original generous gift.”

As part of her recent work, Holden has developed a new program called the Urban Water Environment (UWE), which is intended to improve co-management in cities, as well as the quality of water, waste water, and storm water within these urban areas. “We are excited to extend our research evaluating how waste water infrastructure is affecting the quality of urban shallow groundwater,” Holden says.

This research is particularly important in having the potential to strengthen the science behind future management decisions. The Bren School is extremely grateful to Mr. Wheeler for his ongoing support of this important applied research.

Bren alumni (all MESM 2012) at a recent gathering in Berkeley (from left): Byron Thayer and son, Milo; Dana Jennings and son, Leonardo; Kelsey Jacobsen; Teo Grossman; and Karly Kaufman and son, RJ.

FIRST BREN SCHOOL ALL-ALUMNI REUNION

For the first time since it opened, the Bren School of Environmental Science & Management is bringing together all of its alumni for the inaugural All-Alumni Reunion, to be held **Thursday, April 23 – Saturday, April 25**. The Bren School reached an exciting milestone this past June when our 1,000th graduate received her diploma, making this the perfect time for alumni to celebrate, reconnect, and get inspired to continue their leadership in solving today’s environmental problems.

THE WEEKEND’S EVENTS INCLUDE:

**Kick-off Street Fair-Themed Reception and Art Show** — Bren graduates, their guests, and current master’s and PhD candidates will come together for an evening of mingling, music, games, and artwork, while enjoying food and drinks from alumni-owned companies.

**Professional Development Training Session** — Geared toward generating connections, fostering leadership, and creating synergy among Bren alumni and the environmental community, this event will include a keynote speech by author, climber, filmmaker, and entrepreneur Majka Burhardt, plus working groups and a faculty panel.

**Class of 2015 Master’s Project Public Presentations and Reception** — Alumni will connect with this year’s graduating class and get a feel for the latest at the Bren School as second-year master’s students showcase their Group Projects and Eco-Entrepreneurship Projects April 24 at the Doubletree Hotel. This event is open to the public.

**Evening Mixer** — After the Master’s Project presentations, alumni will continue to connect and network as everyone gathers for a private event at Figueroa Mountain Brewing Co. in downtown Santa Barbara’s Funk Zone. The brew pub is owned and operated by alumni Jaime and Meighan Dietenhofer (both MESM 2002).
The talented, highly trained members of the ever-growing Bren School alumni community hold phenomenally diverse and interesting jobs across 6 continents, nearly 30 nations and 2 U.S. territories.

In the U.S., job opportunities have produced concentrations of Bren alumni in several locations, including the San Francisco Bay area, Southern California, and the U.S. East Coast.

As a leader in environmental innovation, California offers many professional opportunities for highly trained problem-solvers. The East Coast is also fertile ground for Bren graduates to find jobs where they can have a big impact, from our nation’s policy center in Washington, D.C., to New York, Boston, and other population centers. A number of alumni also live and work in rural areas, focusing on environmental challenges that are unique to those resource-rich locations.

In this issue of Bren News, we are able to highlight just a small percentage of our alumni and the various fields in which they work: corporate sustainability, consulting, government, education, research, non-governmental organizations, and entrepreneurship. These alumni share stories about what they do, why they love their jobs, and how they use what they learned at the Bren School in their professional daily lives. As impressive as this group is, there are more than a thousand others we’d still like to tell you about, so stay tuned.

The profiles begin on page 6, and in this electronic version of the issue, they all run at full-length, allowing you to get a sense of the incredible variety of jobs Bren alumni hold.
International Alumni

In addition to making an impact, Bren alumni have international reach, with some 60 (about 6 percent) of PhD and master’s graduates working in a wide variety of fields, positions, and locations around the world. The highest concentrations outside the U.S. are found in four nations: the United Kingdom, Australia, Japan, and Mexico. Several countries have two to four alumni — Norway, Switzerland, Canada, Chile, the Mariana Islands, France, and Germany — and a single graduate represents the Bren School in Argentina, Peru, South Africa, Saudi Arabia, Kenya, Malawi, Austria, Ireland, Italy, Portugal, Greece, Israel, India, Singapore, and Thailand.

Expat alumni work as professors, environmental ministry officers, postdoctoral scholars, consultants, project managers, environmental policy experts, entrepreneurs, research scientists, economists, and in corporate positions.

MESM alumnus Adam Knox (2013) lives on the Pacific Island of Guam, where he is coordinator of the Rapid Response Team formed as part of the island effort to eradicate the invasive brown tree snake. Recent Latin American Fisheries Fellow Matias Caillaux (MESM 2013) is a fisheries specialist for The Nature Conservancy in Lima, Peru. Carissa Klein (MESM 2006) is the lead researcher at the Ecology Centre and Spatial Ecology Lab at the University of Queensland, Australia, where she also earned her PhD. Clarice Wilson (MESM 2002) is Senior Coordinator for Policy & Interagency Affairs at UNEP in Kenya, Toshiyuki Yamasaki (MESM 2011) is Deputy Director at Japan’s Ministry of the Environment, and Amanda Nelson (MESM 2013) is Senior Editor in the Energy Technical division of IHS in Geneva, Switzerland. That’s diversity — in both place and pursuit.
One thing common among Bren alumni who work in corporate sustainability is the variety in their daily “routine.” In nearly eight years at the Walt Disney Company, Erin Fisher (MESM 2007), Environmental Assessments Manager for the Corporate Environment and Conservation Group, has been no exception.

The Corporate Group works with Parks and Resorts, Media, Studio, and Consumer Products, Fisher explains: “It’s different every day. I can be talking about water usage on the log ride at Disneyland in one meeting and electricity usage on ESPN’s ‘College Game Day’ in the next, and then meeting with the makers of the latest Star Wars film to discuss the production’s carbon footprint.”

Mike Casterline (MESM 2004) jokes that for some time he had a case of “career ADD.” He worked at restaurants and ski resorts, and in television production before enrolling at the Bren School, and he saw himself doing something heroic after graduating.

“I thought I was going to find myself between the harpoon and the whale, or out defending rhinoceroses in Africa,” he recalls. He thought about going into biological conservation work but says, “I couldn’t get a job sampling coyote scat in eastern Nevada.”

Ultimately, he says, “I wanted to have a family and be able to pay the rent while doing something I was passionate about. That’s what led me to selling solar.”

As Sustainability Manager for the footwear giant Vans, Kim Matsoukas (MESM 2006) has a lot of impact, largely as a result of her ability to communicate.

“Ninety percent of my job involves getting people on board with things,” she says. “You have to influence without directly controlling anything, so when you get a big win, it’s great.”

One such win came when the company began to incorporate BCI cotton — grown according to social and environmental guidelines — into the canvas used in Vans footwear.

“When we got that commitment addressing the biggest raw material in our supply chain, I couldn’t believe it,” she recalls. “I was thinking, ‘I’m actually making a difference.’”

Elissa Loughman (MESM 2005), Manager of Product Responsibility for Patagonia, came to the Bren School expecting to do marine conservation work for a government agency, but changed focus after an internship at the visionary outdoor company.

Bren School alumni help to steer companies to sustainable practices.

As Sustainability Manager for Performance and Reporting at Levi Strauss & Co., Byron Thayer (MESM 2012) thinks a lot about the cotton used to make Levi’s denim. He describes it as “a water-intensive crop that makes up 95% of our fabrics.”

Thanks to his Bren coursework, says investment manager Josh Levine (MESM 2005), he is “able understand in detail what a company is doing from an environmental or social perspective,” and advise investors accordingly.
CORPORATE

Greening of the Mouse
Erin Fisher (from page 6)

One thing common among Bren alumni who work in corporate sustainability is the variety in their daily “routine.” In nearly eight years at the Walt Disney Company, Erin Fisher (MESM 2007), Environmental Assessments Manager for the Corporate Environment and Conservation Group, has been no exception.

The Corporate Group works with Parks and Resorts, Media, Studio, and Consumer Products, Fisher explains. “We compile information from all groups to make sure we’re hitting corporate targets for sustainability. I’m lucky enough to work closely with units all over the company. It’s different every day. I can be talking about water usage on the log ride at Disneyland in one meeting and electricity usage on ESPN’s “College Game Day” in the next, and then meeting with the makers of the latest Star Wars film to discuss the carbon footprint of their production.”

Her group conducts an array of environmental assessments, doing all the measurement and reporting for the various programs, which has recently expanded to include supply-chain management. She manages the Paper Sourcing and Use Policy, established in 2012 “to ensure that none of our paper products come from unsustainable forestry.” She has managed the company’s greenhouse gas (GHG) inventory, and has overseen inventories for waste, recycling, and water use.

Fisher has been able to put her mark on the sustainability efforts of a global company that has 200,000 employees. “I came into my department when it was brand new; I was in the initial group it was formed with,” she says. “And in that situation, what I learned at Bren was really helpful. When you’re given a project and you aren’t given a lot of guidance, it’s very helpful to know how to start – to at least know how to do research on where to start.

“We completed our first GHG inventory in 2009, starting from scratch to figure out which protocol we wanted to use, what the boundaries were going to be, and how we were going to collect the data and do the analysis. And then to see the information come in and have the numbers make sense and be able to present it out to the company — that is one of my favorite accomplishments here. The work that we laid out in that first year continues and is now done on a quarterly basis. It’s exciting to see generations of people on my team later using the process and the guidelines I set up. It has definitely grown a lot since then, but it’s satisfying to know we weren’t far off base at a time when not every company was doing something like that.”

Fisher has found the quantitative rigor of the Bren School MESM curriculum to be particularly valuable to her as an environmental professional.

“I don’t do nearly the in-depth analysis that we did at Bren in certain areas, but other positions do, and having the ability to work with large data sets and to use data to understand an issue or do an analysis in a number of different ways has been an incredibly useful skill,” she says. “It’s something I see when new people come in who don’t necessarily have that. I can see the difference.”
Mike Casterline (MESM 2004) jokes that for some time he had a case of “career ADD.” He worked at restaurants and ski resorts, and in television production before enrolling at the Bren School and saw himself doing something heroic after graduating.

“I thought I was going to find myself between the harpoon and the whale, or out defending rhinoceroses in Africa,” he recalls. “I had a lot of romantic ideas.”

He thought about going into biological conservation work but says, “I couldn’t get a job sampling coyote scat in eastern Nevada.” He worked for a nonprofit for a time and then focused on water issues for a consulting firm. But ultimately, he says, “I wanted to have a family and be able to pay the rent and do something I was passionate about. That’s what led me to selling solar.”

Today he is Senior Project Developer of National Accounts for SolarCity, the rapidly growing San Francisco—based company started in part with $5 million from Tesla Motors co-founder Elon Musk, who is chairman of the board.

Casterline works with Fortune 500 companies “to help them figure out how where and at what price they can put solar on their facilities to meet sustainability goals, create carbon offsets, and build a hedge against volatile energy prices.” His current clients include Walmart, Procter & Gamble, Hewlett Packard, and Walgreens. He has developed more than 80 megawatts of solar projects worth more than $250 million in revenue.

At a recent national sales meeting, Casterline’s supervisor presented the facts about everyone’s sales performance, but he did it not in dollars or megawatts but in amounts of CO₂ prevented from entering the atmosphere. For Casterline, who has been SolarCity’s No. 1 or No. 2 sales performer from 2010 through 2014, the figure was approximately 2 billion pounds of CO₂ avoided over the lifetime of his projects.

“That was cool. Climate change is one of the most urgent situations we face, and I’m selling something that’s helping to address it,” he says. “Solar is growing exponentially, and I’m a part of the doubling and quadrupling of solar.”

Once endangered by DDT, pelicans are now a common sight along the UCSB coastline.
CORPORATE

Shrinking the Vans Footprint

Kim Matsoukas (from page 6)

As Sustainability Manager for the footwear giant Vans, Kim Matsoukas (MESM 2006) has a lot of impact, but not because she can create or implement programs on her own. She can’t; her position does not carry that authority. As a result, she says, “Ninety percent of my job involves communication and getting people on board with things. You have to influence without directly controlling anything. A lot of the time, you’re grinding away, but once in a while you get a big win and it’s a great feeling.”

One such win came when the company began to incorporate BCI cotton — grown according to Better Cotton Initiative guidelines — into the canvas that Vans uses for the vast majority of its footwear.

“Cotton is the biggest raw material purchase across the entire company,” Matsoukas explains. “We spend millions of dollars a year on it and use it in eighty percent of our footwear. It’s also the biggest item in terms of environmental impact.”

BCI guidelines address both environmental and social issues associated with growing cotton. “The Beauty of BCI cotton is that it uses fewer fertilizers and pesticides, so it costs less to produce,” Matsoukas says. “Farmers learn a more sustainable way of growing cotton, and studies suggest that yields increase as well, so they make more money, too.”

She spent a full year working to convince her colleagues in the Vans supply chain team, sourcing team, footwear team, and development team to start incorporating BCI cotton into Vans footwear. Finally, it happened.

“When we got that commitment after working with all these different players, I couldn’t believe it.”

Beginning halfway through the year, Vans managed to incorporate BCI cotton into only about 2 percent of its canvas for 2014.

“But I did the calculations, and even that portion is going to affect more than a thousand farmers in China,” Matsoukas says.

The goal is to have BCI cotton represent 30 percent of the cotton for Vans canvas in 2015 and then to “ramp up significantly,” notes Matsoukas.

“When we got that commitment after working with all these different players and addressing the biggest raw material in our supply chain, I couldn’t believe it. I was so happy that I almost started crying,” she says. “I was thinking, ‘I’m actually making a difference.’”

“Eventually we’d like to see BCI be the majority of the cotton in the world and specifically in China. BCI is scalable.”

“By sending that signal to the marketplace that we want BCI cotton, we’re actually able to grow the incomes of rural farmers in China, who make a couple of thousand dollars per year,” she adds. “With every Vans purchase of BCI cotton, we’re helping those farmers.”
CORPORATE

Patience and Patagonia
Elissa Loughman (from page 6)

Finding a good job is sometimes a journey. Elissa Loughman (MESM 2005), Manager of Product Responsibility for Patagonia, came to the Bren School expecting to do marine conservation work for a government agency like NOAA. Working in corporate sustainability was not on her radar at the time, but things changed when the Ventura-based outdoor apparel company called at the Bren School.

That was after Loughman’s first year at Bren, when a summer internship became available at Patagonia. She applied but didn’t get it. Then, as she began her second year at Bren, Patagonia offered her a part-time internship. She accepted and became a full-time intern the summer after she graduated. But come fall 2005, she was out of school and need a full-time job – not an internship – with benefits. But Patagonia had a hiring freeze at the time, so she applied for and was hired to a position in the Environmental Services Department for the City of Ventura, where Bren alumnus Joe Yahner (MESM 2000; see the “Government” section) became her supervisor. She worked four days a week there and one day a week at Patagonia. Then, early in 2007, Patagonia was preparing to develop “The Footprint Chronicles,” a public-facing website that tracked the company’s supply-chain impacts.

“They needed more resources and offered me a full-time position,” Loughman says.

Even as an intern, she had realized “how much of a positive impact a corporation can have if it chooses to focus on driving environmental change.” And while she doubted initially whether her skills would be useful to an apparel company, she says, “It was great to come in and find a department that focused on environmental work.”

Now she is one of several sustainability-unit managers on Patagonia’s 14-person Social and Environmental Responsibility team, which also includes managers of environmental supply-chain responsibility, brand responsibility, and social responsibility. They all work together in a large, open, shared office.

Loughman’s focus is to “continually implement programs that reduce the environmental impacts of Patagonia’s products.” she says.

She finds the work meaningful, challenging, and enjoyable and says that, critically, it is fully supported by the company.

“I feel fortunate to be part of a company where leadership sets many of the environmental expectations. Environmental and social initiatives are not always supported at some companies,” she says. “You hear about environmentalists who are in corporate sustainability positions and can’t get anything done because there’s no support or buy-in for it at their company.”

Having taken some time to land her full-time position at Patagonia — keeping a foot in the door while working for the City of Ventura — Loughman says it’s important for students “to know that it is a journey and that you’re learning every step of the way. Whatever job you get right out of school, you’re building your resume, and after two years, you’re far more employable.”

...And ready when Patagonia comes calling.
Around the time that Jennifer DuBuisson (MESM 2008) accepted the position as Senior Manager for Environmental Sustainability at LEGO, the company set out to produce more-eco-friendly versions of the in-store point-of-purchase displays for their famous kids’ building bricks. But when they finished, they weren’t sure if the new design was better. Putting her Bren School life-cycle assessment (LCA) training to use, DuBuisson ran an LCA for them.

“It turned out that the materials chosen were not the most environmentally preferable, so the new display actually had a greater negative impact than the plastic boxes they had been using originally,” she says.

That successful collaboration with new colleagues from various areas of the company allowed DuBuisson to use her education and expertise to educate the team and suggest alternative materials that led to a more-sustainable point-of-purchase display. The bonus, she says is, “It’s a great piece that I can use in talking with my sustainability counterparts and our customers so that they are aware of the actions we take are taking to meet their expectations.”

At LEGO, after spending five years as Associate Manager for Global Sustainability at Mattel, DuBuisson had to make the transition from a large publicly traded corporation to the family-owned Danish company. Her work is focused primarily around stakeholder engagement, communication, and strategy development relating not only to environmental sustainability, but also to the human aspects of sustainability.

“Manufacturing and labor issues, forced labor, child labor, and wages are all huge issues for companies,” she says. “For them, ‘CSR’ refers to corporate social responsibility, not just corporate sustainability responsibility. My position really focuses around how we build a broader community and a deeper practice for all
kinds of sustainability."

DuBuisson pursued the Corporate Environmental Management (CEM) specialization at the Bren School, and she has seen first-hand that environmental managers in business can make a big difference.

“If you can make changes in business operations, global supply chains, and material sourcing, you can have a tremendous positive impact,” she says. “I fully believe that businesses, industry forums, business-NGO alliances, and cross-industry collaborations are the critical actors in moving us forward on the sustainability journey. Implementing change can take time, but business response times are much faster than those of federal and state governments.”

As for DuBuisson’s preparation, she says, “The CEM program, and particularly the 210 course ['Business and the Environment'] provided great exposure to the types of challenges, opportunities, and focus areas the LEGO Group is working on. CEM students develop the necessary skills to think about problems holistically and understand the tradeoffs, which is a very real part of working in a business.”

She sees the interdisciplinary aspect of the larger Bren School curriculum as responsible for distinguishing a Bren CEM student from a traditional MBA student who may have an environmental focus.

“You come out of Bren well rounded,” she says. “That’s important in these kinds of jobs, which are rare in the corporate setting and require you to cover a variety of topics. Having expertise in a few areas or competency over multiple disciplines is what separates the Bren graduate, and that’s what you’re not getting in an MBA, where you might have only a peripheral overview of the environmental aspects of business.”

Still, DuBuisson encourages Bren students to build the best foundation of business knowledge they can. “It’s important to understand how businesses, and not just clean businesses, work and to be able to contribute in more than one way,” she advise students. “Pick a few areas, whether it’s LEED, LCA, GHG accounting, report writing, or something else, and develop strong competencies in them, because you need to wear a lot of hats.”

But beyond the business and technical knowledge, perhaps nothing is more important than relationships. DuBuisson has some great advice for Bren students on that front, too:

“When you move to a new company, take the time to understand how it operates. Building positive relationships internally is key, because as a sustainability professional in a corporate setting, you don’t own anything. You don’t own manufacturing or product and packaging design; all you can do is influence those areas and try to provide the tools and business cases to make sure that you’re lessening your impact, so relationships are really important.”

“Listening and learning to be empathetic are important, because not everybody agrees with sustainability, and at most companies it’s still an uphill battle, so the more you can listen and understand the current process and what the challenges are, the more you’ll be able to realize opportunities and levers that you can pull.”

“Develop close relationships with your current cohort at Bren, who will be your colleagues in the work world. I reach out to my cohort and my friends so much — for insight, best-practice sharing, introductions, anything — so build those connections. Max [her husband, Max DuBuisson, MESM 2008] is part of a small group who are all ‘carbon kids.’ It’s a small world, and we overlap a lot. It pays to develop those relationships with your cohort and continue them in the professional world.”

Finally, she says, be patient. “Avoid thinking that when you leave school, right away you’re going to be this important decision maker in sustainability in a corporate setting, because that’s not necessarily true. You have to pay your dues, and it’s important to know that and set your expectations accordingly, and to learn about the business first.”
Helping Levi’s Lead
Byron Thayer (from page 6)

As the Sustainability Manager for Performance and Reporting at Levi Strauss & Co., Byron Thayer (MESM 2012) works to reduce the company’s overall environmental impact, which includes assessing and reducing impacts associated with a supply chain that centers largely on the production of cotton denim.

“Cotton is a water-intensive crop that makes up 95% of our fabrics, and since we don’t own cotton fields, we have a limited amount of direct corporate control,” says Thayer, “but we try to influence where we can, especially in manufacturing, where we have a variety of programs to monitor water quality and quality, chemical use, and labor.”

Thayer knew before he came to the Bren School that we wanted to go into corporate sustainability, and he considered getting an MBA but decided on Bren “partly because having a scientific understanding of sustainability issues would set me apart in the job market, and that has turned out to be the case,” he says. “An MBA is valuable, but my MBA colleagues don’t have a background in the technical knowledge I gained at Bren.”

He became interested in water issues during his Group Project, a water footprint study for Deckers Outdoor Corporation, also gaining project-management skills and learning about corporate management and supply chains. “The fact that we had to interact with an actual client prepared me for the realities of dealing with sustainability in a corporate setting,” he explains. “For example, you never have perfect data, so you have to work with what you have and not make the perfect be the enemy of the good.”

He says that life-cycle assessment, biogeochemistry, and Sangwon Suh’s carbon-accounting class were particularly useful: “I immediately used things I had learned in those classes. The strong foundation I developed in climate and water-quality issues at Bren have been very helpful.”

Privately owned by the Haas family since its inception, Levi Strauss has been a progressive company for decades and, says Thayer, “is comfortable taking advocacy positions that a lot of companies wouldn’t.”

Levi Strauss desegregated its American factories long before the Civil Rights era and worked on behalf of AIDS victims before the disease had a name. Further, he says, “About twenty years ago, when a lot of environmental sustainability work began, the company became the first in the apparel industry to set water-quality standards that the rest of industry has since emulated.”

Thayer knew the company’s record when he applied and is happy to be a part of a sustainability team that “strives for industry leadership, which makes my job challenging and exciting at the same time.”

Thayer now manages a water recycling program that cleans and recycles water over and over again, significantly reducing the overall amount of water needed to create the products. He also has crafted a larger company water strategy to “bring attention to the importance of water scarcity in our supply chain.” His water work has led him to interact regularly with Lindsay Bass (MESM 2010), who manages corporate water stewardship at the World Wildlife Fund. (See the “Education, Research, NGOs” section.)
Conscientious Investor
Josh Levine (from page 6)

These days, more people are investing with a conscience. But while ten percent of all the money invested in financial markets is now tied to social responsibility, which includes environmental concerns, the vast majority of banks employ no financial advisors with expertise in socially responsible investing. That’s according to Seattle-based Josh Levine (MESM 2005), who specializes in socially responsible investing as Senior Vice President of Wealth Management for the Royal Bank of Canada.

He says that investors may apply filters to their investment strategy to support their interest in clean, air, carbon intensity, human rights, animal welfare, religion, and many other causes! 

“People do it with varying levels of intensity,” says Levine. “Some may want a highly scrutinized portfolio, and others may just want no big oil or tobacco, for example.”

And, in fact, peer-reviewed research supports the notion that such screening can lower the risk of a portfolio and increase long-term returns.

“If I have a company and I have my pulse on environmental legislation in Washington, D.C., I can make adjustments to mitigate problems and prevent EPA fines, Levine explains. “If I treat my employees well, they will probably be more productive. If I don’t run into human rights violations overseas, and if I have a diverse board of directors that includes women, according to the research, I will probably outperform a lot of companies.”

Levine “had the entrepreneurial bug” but graduated from Bren before the Eco-Entrepreneurship focus began. During an internship with the National Park Service between his first and second years at Bren, he created a business plan for Great Smokey Mountain National Park and considered going to work for the Park Service. But the bureaucracy was an issue for him, so he trained to be a financial advisor specializing in socially responsible investing.

“Much of what I do is financially focused by helping clients achieve financial goals and is not directly related to my Bren education,” he says, “but the particular issues and the social component of the investing do. The knowledge I gained at Bren helped me understand those issues in a much more detailed way, so if I’m learning about what a company’s doing from an environmental perspective, I’m able to understand what that means. Or for example, if a partnership is being formed between companies and nonprofits, I understand that process from my Bren coursework and case studies. I also work with a lot of nonprofits, and they’re the organizations that many Bren students may work for after graduating, so I end up working with people who have a similar mindset.”

Ironically, he says, “Countless nonprofit organizations don’t analyze their investment strategy in terms of their mission,” though it would seem obvious to do so. “If you’re a strong environmental advocate, it doesn’t make sense to invest in companies that are acting in an environmentally insensitive way.”

Levine sometimes gets to help these organizations review and adjust their investments to align with their mission.

“It’s rewarding if I’m working with a nonprofit organization or an individual, and they’re already working with an advisor, and I’m able to educate them and let them be activist in their own right and help them follow their own mission across all elements of their entity,” he says. “To finally go from point A to point Z, working with the board, creating a social policy statement, and then getting them to invest in a way that aligns with their work is probably the most rewarding thing.”
CONSULTING

Bren alumni thrive in the complex interdisciplinary terrain defined largely by environmental regulations.

Solar Power and the Superfund

“The project manager role is very interdisciplinary; you’re always working with engineers, subcontractors, legal teams, regulatory teams, finance, and utilities,” says Mark Weeks (MESM 2007). “You need to be able to speak a lot of different languages. That interdisciplinary focus was a big benefit of Bren.”

As Construction Phase Project Manager for the 10.82-megawatt, 46-acre Maywood Solar Project in Indianapolis, Weeks led a 100-person team that installed the first utility-scale solar “farm” ever built on a US EPA Superfund site.

The site had housed a factory where railroad ties were treated with creosote, a carcinogen, and the solar installation, built by the global energy conglomerate Hanwha Q. CELLS, had to be constructed without disturbing the soil to avoid releasing creosote into groundwater or inadvertently hauling it away. Miles of essential wires and cables, which normally would be buried in trenches, had to be suspended on metal trays, and workers had to avoid kicking up contaminated dust.

Then, with the completion date approaching, the 2014 Polar Vortex brought sub-zero temperatures. “It was uncomfortably cold,” says Weeks.

Assessing Risk Worldwide

As a Principal Consultant for the firm Environmental Resources Management (ERM), London-based Linda Zwick (MESM 2000) relies on her Bren education in her work with mergers and acquisitions, primarily in the oil and gas industry, advising on transactions that can be valued at tens of billions of dollars. Over the past 15 years, Zwick has found collaboration, communication, and the broad perspective gained through Bren’s interdisciplinary MESM curriculum to be critically important in her role as a consulting professional.

“Reiterative writing and editing, and learning how to work with other people have been fundamental to my career and to my company,” says Zwick, who is responsible for assigning financial value to the risks and liabilities associated with the mergers and acquisitions on which she advises. “We’re successful and get great results when we bring the best people together to collaborate on a project.”

“There Has to Be a Solution”

“Consultants can get stuck looking at things through the same lens over and over — the lens of the norm,” says Chris Minton (MESM 2002), Vice President at the environmental engineering and consulting firm Larry Walker Associates (LWA). “They can get used to things working a certain way and may not see a solution to a problem. Part of what I picked up from the Bren School was the expectation that we would go out in the world and solve problems and not get stuck. So when I get in those situations, I have this feeling that there has to be a solution. It requires taking a step back and doing the research to understand the rationale behind the law or the regulation and the science that gets utilized and thinking critically about solutions that address our clients’ needs and are also acceptable to the regulators.”
Solar Power, Superfund, and the Polar Vortex
Mark Weeks (from page 7)

"It was unpleasantly cold," Weeks recalls. Weeks was hired by URS (now part of AECOM) a few weeks before graduating from Bren, starting as an environmental scientist in renewable-energy construction and development, with an emphasis on solar energy. He had entered the Bren School intending to specialize in conservation planning but shifted directions as the topics of greenhouse gas emissions and climate change began to became more central.

"I was driven by solving environmental challenges, but I saw professional opportunities, too," he recalls. He says uses his Bren education daily. “The role of a project manager is a very interdisciplinary one; you’re always working with engineers, subcontractors, legal teams, regulatory teams, finance, and utilities,” he explains. “You need to be able to speak a lot of different languages.

To me, that interdisciplinary focus was a big benefit of Bren.”

So, too, was the Group Project. “With any team you’re working with, you need to be very adaptable and flexible, and if something needs to be taken care of, you have to be willing to jump on it, own it, and take care of it,” Weeks says. “You experience that with the Group Project. There’s a task that needs to be done, you form a team with a common goal, and you work together to achieve it.”

In dozens of projects at AECOM/URS, he adds, “I’ve encountered projects that are often very dynamic. It changes unexpectedly and you have to be ready to say OK, take stock, and determine how to move forward, adjusting as needed.”

As a result of his latest “group project,” Weeks and his team were able to transform a site with a long history of contamination into a source of renewable energy.

As Construction Phase Project Manager for the 10.82-megawatt, 46-acre Maywood Solar Project in Indianapolis, Bren alumnus Mark Weeks led a 100-person team that installed the first utility-scale solar “farm” ever built on a US EPA Superfund site.

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Then, with the March completion date looming and work proceeding on the electrical connections that link the array to the grid, the 2014 Polar Vortex arrived, bringing temperatures of -14°F, with wind chill reaching -40°F.

Weeks at work in Indiana during the 2014 Polar Vortex. The weather complicated the project to create the first solar-generating farm on a Superfund site.
Two years ago, Lacrissa Davis (MESM 2004) was promoted to become one of five principals at Rincon Consultants in Ventura, California, and the first woman to hold that title at the firm. But Davis sees nothing notable in the gender side of that, preferring to focus on the effort made and the opportunities seized that catapulted her advancement, making her also the youngest principal in the firm.

Starting as an unpaid intern during her final quarter at Bren, she was named principal in just ten years. That’s fast.

“I have less experience, by way of being younger and fresher out of school, so I’ve come farther and faster,” she says in a soft voice that carries a hint of her Georgia roots.

Davis’s success has resulted partially from finding an employer that was the right fit for her, and for that, she says, she is forever grateful to Bren School Career Development Director David Parker.

“There are a million answers to what I took away from Bren, but Dave is still one of the greatest resources I have,” she says. “He was so instrumental in my coming to Rincon.”

When Davis was a Bren MESM student and looking for more experience in large-scale land use to round out her skills, Parker suggested applying for the internship at Rincon. And when it came time to discuss her salary when she was hired to a full-time position following graduation, she says, “He walked me through
every step of the negotiation. There are very few programs that take the time to do that, and I learned so much through that process.”

“One of my bigger takeaways from Bren was how to value myself and the services I provide, she adds. “We took economic courses at Bren, but Dave showing me how to apply it to myself has been huge in my career. He took the time for me, and I know he does the same for so many other people as well.”

Parker is a member of the Bren staff, not faculty, but just as she Davis the information she learned in her Bren coursework, she has also employed some of what Parker taught her about negotiations while dealing with clients and contracts at Rincon.

Another element that fed into Davis’s success was the Bren School curriculum, which was a perfect fit for her.

Having earned an undergraduate degree in biology and then working as a U.S. Forest Service biologist, Davis knew she wanted a graduate school that had “a diverse, multifaceted program. I heard about Bren and fell in love with what it offered.”

So much so that she moved to California and worked for a marine consulting firm for two years to save money so she could attend.

“What I loved about the Bren School was the integration of the different fields,” she recalls. “As an undergrad, I had one class in bioeconomics that covered some of the concepts we learned at Bren: How to do you value open space? How do you put a value on your resources? How do you integrate the resources with the very real-world need for monetary cost, planning, and development?”

The holistic approach — expanding the inquiry beyond the biological resources to include competing economic needs — made sense to Davis.

“It’s one thing to put a value on something, but then how do you get others to buy into it?” she says. “Those were questions that were integrated into the Bren program.”

Davis also appreciated learning about the regulatory context that drives much of a consultant’s work.

“Maybe the biggest thing the Bren curriculum gave me was that link with the regulatory world,” she explains. “I came out with such a better understanding of the connection between scientific information and the political and regulatory worlds. You walk into Bren saying, ‘How do I protect a resource?’ and when you get out you have a better understanding of the laws that let you to do that. I was looking for that connection.”

As one of five principals at Rincon (there are also four owners), Davis is a leader in the firm. She has an ownership share and is “tasked with being available as a resource to staff at every level.” Her responsibilities vary widely and include managing the Natural Resources Group, reviewing technical products, and being a resource to staff when it comes to serving a client’s needs. She plays a key role in program and project management, marketing and business development, and, more recently, financial management in her recently acquired additional role as assistant CFO.

“Every day is different,” she says. “That’s one thing I love. One day I can be on top of a mountain at a site. The next day I can be in an agency meeting. The next day I might be doing an interview in Sacramento, and the next day I might be at my computer all day.”

Moving through this multifaceted career she has built so quickly, she notes that anyone’s ability to succeed lies at least partially in an ability to network, which brings her back to the Bren School Career Development team.

“They do an incredible job of maintaining that network contact,” she says. “Even the e-mail blasts of job announcements help us stay connected. I run into plenty of Bren alumni working on different jobs, and I’ve stayed in really close touch with classmates from my class and the classes above and behind me. The network is an incredible resource.”
Assessing Risk Worldwide
Linda Zwick (from page 7)

As a Principal Consultant for the firm Environmental Resources Management (ERM), London-based Linda Zwick (MESM 2000) relies on her Bren School education in her work with mergers and acquisitions, primarily in the oil and gas industry, advising on transactions that can be valued at tens of billions of dollars. Over the past 15 years, Zwick has found collaboration, communication, and the broad perspective gained through Bren’s interdisciplinary MESM curriculum to be critically important in her role as a consulting professional.

“Reiterative writing and editing, and learning how to work with other people have been fundamental to my career and to my company,” says Zwick, who is responsible for assigning financial value to the risks and liabilities associated with the mergers and acquisitions on which she advises. “We’re successful and get great results when we bring the best people together to collaborate on a project, either across geography or skill sets.”

If an oil company is purchasing an offshore platform or drilling a well, they might hire ERM to assess the site from a range of perspectives, including those of the environment, occupational health, personal safety, process risk, social and community issues, human rights issues, labor issues, and more. “There are a whole raft of diverse issues that come into it,” Zwick says.

Often, she is part of a one- or two-person team that is sent to look at a site – perhaps in South Africa, Kenya, Russia, Azerbaijan or the Arctic, she explains. “You need to be able to spot things on the ground and then go back and recount it to somebody who has more expertise in a certain area and say, ‘This is what we saw, this is what they told us this was all about and how they described it. I was a little suspect when they started talking about X because it didn’t seem to make sense from a given perspective.’ And in that way, you try to tease out what the solutions are.

“For a commercial master’s degree designed to get people out into the workplace, the Bren experience has been immensely valuable,” she says. “Bren’s multidisciplinary approach teaches you a way of looking at things that is broader than you get with a classic master’s degree leading to a PhD, where your focus gets narrower and narrower. Bren offers something that, certainly as a consultant, is fantastic, because it allows you so see all the different sides of what you’re looking at.”
CONSULTING

The Communicator

Allison Turner (from page 7)

When last we spoke with Allison Turner (MESM 2003), she was Northwest Regional Director for Katz & Associates. That was in 2007, and since then, she has risen to become Senior Director of the nationally recognized communication consulting firm, which specializes in issues-based communication programs for public and private sector clients.

“Issues-based” communication can often mean “problem-related” communication, since it becomes necessary in anticipation of or in response to a problem. The U.S. Navy, the primary client for Turner, who leads the firm’s environmental practice, often faces such problems. It is big. It occupies a lot of land. It requires huge tracts of space for training, both in the ocean and in the sky. Its ocean training may temporarily close fishing grounds, homeowners near bases complain about jet flyovers at night, and environmentalists believe that the Navy’s use of sonar in the ocean harms whales.

The Navy has a large footprint, and whenever it acts or prepares to act in its Pacific Ocean area of responsibility, especially in some way that may have environmental implications and particularly when a legally required environmental review is under way, Turner is in action — speaking, planning, strategizing, and managing. She has managed and implemented all aspects of the public participation process for more than 25 NEPA (National Environmental Policy Act) projects for the Navy and Marine Corps across the continental United States and in Alaska, Hawaii, and Guam.

Turner graduated from the Bren School long before the popular Strategic Environmental Communication and Media Focus was created, but the particular skill set she has developed to perform such high-level work could be instructional for any Bren students seeking to incorporate communication skills effectively into their careers.

In a fiercely partisan arena where opinions are strong, memories are long, and emotions can run high, Turner has to keep her cool and remember her purpose, which is to inform anyone and everyone who is a stakeholder. That includes elected officials, regulators, NGOs, tribal groups, fishing communities, tourism interests, chambers of commerce, and the general public.

“We’re not an outcome-oriented firm. We’re process-oriented,” she says. “If we work on a project that gets vetoed or does not move forward, that’s neither a success nor a failure. Our success or failure is judged by how well we inform and engage the public about the proposal, the potential environmental impacts, and issues involved.”

In 2007, Lewis Michaelson, then Katz’s vice president in charge of the firm’s Environmental Communication Group and now the company’s president said, “With Allison, I get the best of both worlds — someone whose speaking, writing, and interpersonal skills are excellent and who understands the issues, the scientific and technical language of the issues, and society’s tensions around environmental policy. She is able to understand and empathize with different points of view. That’s valuable, and I
think going to the Bren School helped to develop that.”

Turner agrees that the breadth of the Bren curriculum serves her well. “I have to read a lot of technical documents and translate them into a format that is understandable to the lay person,” she says. “In hiring me, they broke the mold a bit, looking for someone with an environmental background rather than a communications background.”

Recently, Turner has worked with the Navy on a series of approaches to develop more sensitivity to stakeholders’ inputs while also publicizing some of its more positive environmental actions — “taking more of a proactive approach instead of being reactive,” Turner says. That includes promoting Navy actions to protect habitat and endangered species on bases and leading efforts to reduce energy consumption and develop more renewable and sustainable sources of energy, such as biofuel for Navy jets. Test flights of the F/A-18 Super Hornet fighter powered by the fuel have been successful, earning it the moniker “the Green Hornet.”

Turner sees her job not as adopting the Navy’s position, but rather, helping it to communicate honestly and clearly what the issues are — why the Navy wants or needs to take a given action. “The Navy has a set of requirements they need to complete their mission,” Turner explains. “But there are areas for negotiation or compromise.”

For example, when the Navy needs to train in the ocean from its bases in the island territory of Guam, Turner explains, “They can sometimes create a conflict by impacting fisherman in the local area.” To address that in some places, the Navy may agree to train in one spot and leave the rest open for fishing. “Safety is a top priority, but in some places the Navy has recognized there are areas that would be safe for fisherman to fish during training exercises and has let the fishermen know where those areas are,” Turner says. “There are opportunities for win for both parties.”

The Navy has come a long way over the eleven years I’ve worked with them,” Turner says. “What we have tried to do is increase the Navy’s understanding of stakeholders’ issues and concerns; raise stakeholder awareness of why the Navy needs to train and its environmental protection and stewardship programs; and increase communication and build more collaborative relationships.”

Breaking the mold at Katz & Associates has yielded a Senior Director who is working to shape a slightly different navy.

Allison is able to understand and empathize with different points of view. That’s valuable, and I think going to the Bren School helped to develop that.”

**Dean Steve Gaines (left) joins a full house of faculty and students at the 2015 Bren School PhD Student Symposium.**
CONSULTING

There Has to Be a Solution

Chris Minton (from page 7)

As vice president at Larry Walker Associates (LWA), an environmental engineering and consulting firm that specializes in waste water and storm water, Chris Minton (MESM 2002) works primarily for public agencies affected by environmental laws and the policies and regulations developed to implement them. That includes numerous cities in California, as well as Caltrans, counties, and wastewater agencies, and other special districts.

“All of those entities are affected by state and national laws and have to figure out their approach to meeting the requirements of the corresponding and interrelated policies,” says Minton, who runs a one-person office for LWA in Seattle. “That requires them to make significant decisions with respect to investing public resources to address a regulation that may not take into account their local situation. By understanding the law, the regulation, and the science behind it, which are rolled into the decisions our clients face, we’re able to find a way to implement the regulation in a smart, often more cost-effective way that considers the local environment and situation.”

That often requires critical thinking, listening, and a willingness to pursue creative solutions.

“Consultants can get stuck looking at things through the same lens over and over, the lens of the norm,” he explains. “They can be used to things working a certain way and may not see a solution to the problem. Part of what I picked up from the Bren School was the expectation that we would go out in the world and solve problems and not get stuck. So when I get in those situations, I have this feeling that there has to be a solution; this can’t be the only way to look at it. It requires taking a step back and doing the research to understand the rationale behind the law or the regulation and the science that gets utilized, really looking at all those things and thinking critically about solutions that address our clients’ needs and are also acceptable to the regulators.”

A class outdoors for students in the Strategic Environmental Communication and Media Focus

Part of what I picked up from the Bren School was the expectation that we would go out in the world and solve problems and not get stuck.
GOVERNMENT

Government plays a big role in supporting sustainability. How does environmentally oriented government service look? It looks like these alumni.

FEDERAL

The Enforcer

Benjamin Carr (MESM 2010) recalls that when he worked in environmental consulting, he had no problem “putting myself in the shoes of the regulated entity and seeing where their concerns were.” He understood the search for balance between the business motive and the regulatory imperative. But in the end, he says, “I felt better about following the rules to a ‘T.’ I related to the heart of the regulation and knew I belonged on the enforcement side.”

He found his niche as a San Francisco–based Special Agent in the U.S. Environmental Protection Agency’s Criminal Investigation Division.

STATE

Capitol Ideas

In January, Ashley Conrad-Saydah (MESM 2008), Deputy Secretary for Climate Policy at the California EPA, was able to contribute to Governor Jerry Brown’s inaugural address. The environment figured prominently in the speech, which the governor delivered to the state legislature on January 5.

LOCAL

Local Connection

“Ten to twelve years ago, people were concerned about the environment; recycling and composting were on the radar,” says Joe Yahnner (MESM 2005), acting Environmental Services Manager for the City of Ventura. “But that awareness has grown quite a bit. Now there’s a culture of valuing the environment, whether it’s open space or simple day-to-day things like recycling or watering the lawn less. We’ve seen a gradual transition to where these issues are becoming the norm; it’s just something people do. It’s awesome to see.”

FEDERAL

These days, NASA isn’t only a space agency; it’s also a landlord. At the Ames Research Center in Moffett Field, California, Hugo Hoffman (MESM 2012) works with businesses that have a relevant research focus to set up their operations at Moffett Field.

STATE

Among the top issues for California Democratic Assemblymember Das Williams (MESM 2005) are education, drought and water conservation, natural resources, and preventing possible contamination of ground water from oil extraction.

For the People and the State of California

John Everett (MESM 2005) vividly remembers the thrill of his first filing as a Deputy Attorney General in the Environment Section of the Attorney General’s Office in San Diego. “I filed the brief and got to write ‘the people of the State of California,’” he says. “And I thought, is this really me? Am I really writing this on behalf of the people? It was such a good feeling.”

Everett continues to find great satisfaction enforcing California’s environmental laws.

STATE

A year ago, California Governor Jerry Brown appointed Bren alumnus Tyson Eckerle (MESM 2009) as California’s first Zero Emissions Vehicle (ZEV) Infrastructure Project Manager. He leads the rollout of a hundred fueling stations for fuel-cell vehicles in California.

LOCAL

As city manager of a small coastal city, Jamie Goldstein (MESM 2000) says, “Everything is always put in this Bren context, focusing on the true cost of an action and strategizing on how best to get there given the political, legal, and fiscal constraints.”
The Enforcer

Benjamin Carr (from page 8)

Benjamin Carr (MESM 2010) recalls that when he worked in environmental consulting, he had no problem “putting myself in the shoes of the regulated entity and seeing where their concerns were.” He understood the search for balance between the business motive and the regulatory imperative. But in the end, he says, “I felt better about following the rules to a ‘T.’ I related to the heart of the regulation, and knew I belonged on the enforcement side.”

Having found his niche as a San Francisco–based Special Agent in the U.S. Environmental Protection Agency’s Criminal Investigation Division, Carr now spends his days “conducting detailed criminal investigations of individuals and companies violating the criminal provision of any environmental statute.”

He underwent six months of rigorous training and works with “full criminal and law enforcement authority, much like an FBI agent,” he says. “We’re armed, and we can make arrests, serve search warrants, conduct surveillance, and do undercover work. We use law enforcement tools, but honed specifically to go after environmental criminals.”

On call day and night, like the other 200 EPA special agents across the country, Carr might be sent out when someone calls the tip line or his office receives an email from headquarters saying that someone is dumping hazardous waste into San Francisco Bay. He also testifies for the Department of Justice in cases that may last as long as five years. The early stages of those cases may involve a search of the premises.

“You never know what you’re going to step into when you serve a warrant,” Carr says. “Sometimes people have a record of violent crime, so you need to have all your wits about you. You have to manage the scene and make sure everyone is accounted for and everything is safe. You may find anything from knives to sawed-off shotguns. When we walk in, all they see are federal agents. We can send people to jail, and some don’t want to go.”

He has found that being an EPA special agent with a multidisciplinary background has its advantages.

“Bren greatly prepared me for this work,” he says. “We need to use evidence to build a case beyond a reasonable doubt. I use the legal background I first learned as a Bren student. I use my environmental science, policy, and research background. I find myself being a translator for a lot of other agents who come from law enforcement. When I work with EPA scientists, I know what they’re saying and can translate it into layman’s terms for attorneys who don’t necessarily have that knowledge.”

While the law-enforcement side of his job is now second-nature, Carr says that “deep down, I’m also still a Bren environmental graduate student and a scientist,” and what speaks to him most is EPA’s mission of protecting human health and the environment.

“I see the reality of the mission every day,” he says. “We have a direct tip line to our office for the public. When people report something, we immediately respond to the scene and begin our investigation. The burden of proof is on us.”
In January, Deputy Secretary for Climate Policy at the California EPA (CalEPA), Ashley Conrad-Saydah (MESM 2008) was able to contribute to Governor Jerry Brown’s inaugural address. The environment figured prominently in the speech, which the governor delivered to the state legislature on January 5, following his re-election last November.

“I think the most exciting news is that his address focused almost exclusively on climate; I was able to brief the governor’s advisors to make sure the text included references to natural resources and some of the other work I champion,” she says.

Conrad-Saydah says that the governor “likes to know that his statements are grounded in science.”

To that end, in the lead-up to Brown’s address, Conrad-Saydah reached out to several of her former Bren professors and other colleagues for the latest science on specific topics. “It was incredibly helpful to have a ready network to send me citations and critical facts for the Governor’s advisors,” she said.

Serving a governor who is focused on climate change, she adds, “is fun and gratifying and makes our work even more relevant in California and the international realm.”

Conrad-Saydah says that topics she’ll be paying most attention to in 2015 include “bioenergy, climate goals beyond 2020, delivering on our climate and environmental agreement with Mexico, ensuring that California’s GHG emission reductions inspire other jurisdictions to commit to reductions, and generally working toward a cultural shift in California that includes a more pro-environment vision.”

Looking back on her three years at CalEPA, she sees a promising trend. “Natural resources are part of our dialog now; they’re not just an afterthought,” she says. “We’re talking about strategies and policies to change the vehicles on the road and the fuels for those vehicles. And in the next breath people are talking about the importance of the natural environment.”

Her specific contributions to California’s environmental progress have a lot to do with being able to initiate and support solution-focused collaborations among diverse groups.

“We’re always trying to find that balance between climate needs and livelihoods of the people who live in California,” she says. That might mean “talking with cattle grazers about the impact of cattle grazing and forest succession and how we can allow the forest to come back while also allowing cattle grazers to pursue their livelihoods, or talking to firefighters in the wake of the devastating Rim Fire [2013] about how many fuel breaks they need to avoid such massive and catastrophic fires, while also preventing invasive species from being introduced into the area.”

“My skillset involves getting people to work together and say ‘Oh, yeah, we do have this in common, and it’s not that my issue will supplant yours, but we can accomplish a lot of things by addressing our issues,’” she continues. Her daily work is strongly cross-disciplinary, either in terms of the stakeholders with whom she’s engaging or the subject matter she is addressing, and that’s where her Bren experience pays big dividends.
“The fact that I can pull out ecology and economic terms and discuss political or policy-based strategy all in one conversation makes a big difference,” she explains. “It gives me credibility when I’m talking to scientists but also when I’m talking to policy colleagues. I had science knowledge before coming to Bren, but being able to take that and figure out the most effective way to insert science and peer-reviewed science references into the policy-making process I think was unique to Bren. Bren moved me in the direction of understanding the importance of bringing science into the dialog in a compelling way.”

Finally, Conrad-Saydah is one Bren graduate who knows first-hand the value of the alumni network, not only in terms of professional networking, but also as it relates to the saving taxpayer dollars.

When a position opened for the executive director of the Western Climate Initiative, a nonprofit corporation formed to support the implementation of state and provincial greenhouse gas emissions trading programs, Conrad-Saydah recalls, “I pushed it to the Bren jobs list. Greg Tamblyn [MESM 2003] saw the position, contacted the director, and ended up getting the job.”

At the time, the government was about to initiate an expensive search for prospects, which means that the Bren alumni network saved taxpayers $30,000 to $50,000. You don’t need an MBA to recognize that kind of ROI!
Joe Yahner (MESM 2000) enrolled at the Bren School after seeing that his bachelor’s degree in biology was not enough to get him the kind of job he wanted.

“I knew I needed a graduate degree, but most programs I looked at were very science-focused,” he says. “I was interested in corporate environmental management and wanted to stay on the West Coast. Bren was a young program then, but it was already building a reputation.”

Entering the school the first year the Corporate Environmental Management specialization was offered, Yahner worked on a Group Project about waste and recycling, and then landed a job at Kinko’s, “essentially as the recycling manager for the corporate and branch offices.” Then, when Kinko’s relocated out of the area in 2002, Yahner went to work for the City of Ventura, where he is now acting Environmental Services Manager. He continues to spend much of his time on solid waste and recycling, and is responsible for ensuring that the city’s contracted haulers reach their waste diversion goals and “do a good job serving the community.”

Like others in government during an era of tight budgets, Yahner has many roles to fill. His office educates schools, businesses, and the general public about all aspects of sustainability and reducing the city’s environmental footprint, including water conservation, pollution prevention in storm water, composting, and ocean-friendly gardens. He also spends a good deal of time meeting state regulations for waste and water.

“We’re getting a lot of downward pressure from the state to improve water quality and reduce the amount of waste going to landfill, and local jurisdictions are putting a lot of effort into following those directives and securing funding to do so,” he explains. “Like most cities, we deal with the regulations without having the fiscal means.”

His varied duties require Yahner to work effectively with diverse groups both within and beyond government, and he credits his Bren School experience for his success in that area.

“The Group Project experience of working closely with a group of people toward a common goal and producing a study was really valuable,” he recalls. “I hadn’t done that before. It was almost a sociological study. I learned to know people and what they bring to the table — who they are, how they tick, and what they need. Do you need to walk someone through something, or can you just say that it needs to be done? I learned how to communicate in a productive way even when things may not be going that well.”

He also appreciated the necessity of thinking critically to succeed in the Bren curriculum. “In most Bren classes, you’re not memorizing things like you do in biology,” he says. “It was refreshing to be in a program that was about critical thinking, analysis, and problem solving, all things I’ve found valuable in the workplace.”

Like other alumni in this issue, in a dozen years, Yahner has seen positive changes in how Ventura residents behave environmentally.
“Ten to twelve years ago, people were concerned about the environment; recycling and composting were on the radar,” he says. “But that awareness has grown quite a bit. Now there’s a culture of valuing the environment, whether it’s open space or simple day-to-day things like recycling or watering the lawn less. We’ve seen a gradual transition to where these issues are becoming the norm; it’s just something people do. On recycling day in any neighborhood, every blue cart is out there. People are doing it. It’s awesome to see.”

Looking back on the path that brought him to his current position, he says, “I didn’t plan to work in government, but I kind of fell into it and really enjoy it, because I’m in direct contact with the community, working face to face with them, and all the programs we develop are for the people in our community. It’s inspiring and motivating to be able to do things for the place where you live.”
MESM in the State House
Das Williams (from page 8)

An elected official’s work is inherently interdisciplinary, and as a member of the California Assembly, Das Williams (MESM 2005) needs to be all things to the many people who are his constituents. The website of the recently re-elected Democratic Assemblymember from Carpinteria indicates the broad swath of issues that require his attention. An advocate for education, immigration reform, and consumer protection, as Chair of the Assembly Natural Resources Committee, Williams has his finger on the pulse of state environmental issues ranging from natural resources, the California drought, and water conservation to protecting underground water from possible contamination resulting from enhanced oil-extraction techniques, such as fracking.

Leasing Aero-Space
Hugo Hoffman (from page 8)

These days, NASA isn’t only a space agency; it’s also a landlord. At the Ames Research Center in Moffett Field, California, start-up businesses that have a relevant research focus can lease land to set up shop. Any company that wants to build there will at some point encounter Hugo Hoffman (MESM 2012), who manages the center’s natural resources and NEPA (National Environmental Protection Act) compliance.

“One of our center missions is to develop a collaborative research space,” Hoffman says. “We accomplish that by leasing property to companies doing research related to space technology, earth science, or other areas relevant to NASA research. It’s good for us, because they’re paying us and they’re developing things that will be important for our missions.”

The Kennedy Space Center in Florida has also begun a leasing program but with a different focus. “We’re engaged with people who are doing more basic research,” Hoffman explains. “They’re a launch center, so they’re focusing on companies that are doing actual launches.”

Hoffman says that because NEPA, his prime area of responsibility, is an umbrella federal regulation, “The breadth of the Bren coursework was really valuable. It gave me the ability to determine whether the things contractors and others involved
with projects say make sense. And I’m able to get into the weeds on more technical subjects.”

Thanks to the broad knowledge he developed in the environmental law course, he is able think clearly about such things as the relationship between the Clean Water Act and Section 404 of the act, which deals with wetlands, or the Coastal Zone Management Act and “how it tiers down to state and local implementation,” all important to the site, located on the edge of San Francisco Bay.

Hoffman did not take a course in negotiation at the Bren School but has found that his other Bren experiences prepared him to succeed in what has become a regular part of his professional life. Recently, two years out of school, he says, “I was identified as the lead negotiator in a big lease we were working on.

“I was in there negotiating with a potential tenant, discussing environmental issues and what kind of responsibility they would have versus what we would have. My Bren background gave me the confidence to speak with them as peers on an equal footing.”
For the People and the State of California
John Everett (from page 8)

John Everett (MESM 2005) vividly remembers the thrill of his first filing as a Deputy Attorney General in the Environment Section of the Attorney General’s Office in San Diego. “I filed the brief and got to write ‘the people of the State of California,’” he says. “And I thought, Is this really me? Am I really writing this on behalf of the people? It was such a good feeling.”

Having worked in the office since 2012, after graduating from UCLA Law School and spending three and a half years at the law firm Latham & Watkins, Everett still derives great satisfaction from enforcing California’s environmental laws.

“Industry needs good and capable attorneys, but for me I’ve found a lot more satisfaction representing the people by enforcing the law and ensuring that environmental laws are being complied with. That’s the part that’s really satisfying.

“I don’t want to disparage business, because there are a lot of great companies that act responsibly,” he continues, “but there are also many entities that take shortcuts and look at the bottom line above and beyond anything else. When you get something environmentally related as an attorney in the private sector, the company is usually already in trouble and you’re trying to minimize it. I find more satisfaction being on the side that is pursuing companies that violate the law.”

The Environment Section of the Attorney General’s Office acts as the environmental enforcement attorneys for the state. They take referrals from other state entities, such as the Department of Toxic Substances Control, the State Water Board, and the Air Resources Board, when those agencies require litigation counsel.

The office also pursues enforcement actions in what is called the AG’s “independent capacity”, that is, without a referral from another client agency. Everett explains that those are generally, “interesting, complex, cutting-edge cases that involve some pressing environmental issue and either do not fall clearly into the jurisdiction of any specific agency or are not being pursued by any agency.”

In all of them, Everett finds that he uses a great deal of what he learned at Bren, including the short, focused, intensive law courses, which he found much more interesting than his law school courses, as well as Calculus for the Biological Sciences, Statistics, Earth System Science, Ecology, and even GIS.

“We often come across science in our jobs,” he explains. “One area I work in is Proposition 65, which relates to toxic chemicals that can be in products that people can come in contact with and can, as a result, receive some exposure to those chemicals. So understanding the science behind them and how people are exposed is critical.

“We also work a lot with the Department of Toxic Substances Control, which always involve a site that has been contaminated with chemicals and requires the AG’s office to help evaluate what needs to be done to clean it up.

“So you look at all sorts of sampling data, and being able to understand those sorts of things is really helpful,” Everett says.

He adds that some environmental attorneys tend to avoid engaging with statistics or environmental sampling numbers, preferring to hire consultants to review that data.

“But with my Bren background and experience, I know that if I sit down and read carefully and focus, I can understand the data and the science and analyze it,” Everett says, adding with a laugh, “That ability has also helped me add value in some team settings, especially when I was a younger attorney and my legal skills probably didn’t add that much.”
Powering up California’s Zero-Emissions Vehicles
Tyson Eckerle (from page 8)

Greening California’s transportation sector has proven to be a challenge, and the average driver still gets around in a traditional fossil-fuel-burning car, often alone. But Governor Brown and others in state government are determined to reduce transportation-related greenhouse gas emissions, and a key goal is to put 1.5 million zero emission vehicles (ZEVs), including plug-in electric (PEV) and hydrogen fuel cell electric vehicles (FCEVs), onto California roads by 2025.

While some public charging stations exist for PEVs, which can also be recharged at home, only ten public fueling stations currently exist for FCEVs in California. Since car makers won’t build and consumers won’t buy the cars if they can’t be refueled, creating the fueling infrastructure is the first priority. To that end, last January Governor Brown appointed Bren alumnus Tyson Eckerle (MESM 2009) as California’s first Zero Emissions Vehicle (ZEV) Infrastructure Project Manager.

"It’s a dream job for me at this point in my career," says Eckerle, who was previously executive director at Energy Independence Now. "It’s a position that has a lot of potential influence."

For Eckerle, managing the project, which is currently focused on the hydrogen FCEV side, means working in the Governor’s Office of Business and Economic Development (GO-Biz) and collaborating with local governments to facilitate the permitting process for stations while ensuring that they are comfortable with the process. He also coordinates a multi-stakeholder group of state and local agencies, industry, and other experts to address the many details associated with such an undertaking.

The goal is to launch an additional forty-five hydrogen fueling stations by the end of 2015, with funding through Assembly Bill 8, which provides up to $20 million per year for the stations through 2024.

"By the end of 2015, you will be able to drive an FCEV from San Diego to Lake Tahoe and fuel up in Santa Barbara," Eckerle reports. "Once we have about a hundred stations, California’s market will be pretty well covered. At that point, we expect private businesses to be able to make the case for un-subsidized stations in key markets."

Because no one reports to Eckerle directly, he says, "It’s all about convincing people to work with me. It all comes down to relationships."

That’s where the skills and knowledge he acquired as a Bren MESM student come in handy.

"Bren prepared me for so many aspects of my job, but learning to communicate complex information concisely was probably the most important thing," he says.

He also leans heavily on his Bren economics training and his Group Project. "I work with a big team, and you have to play to everybody’s strength," he says. "The GP was an important experience for working toward a common goal when the result isn’t clear until you get there."

Eckerle is aware of what’s at stake. "If we get it right, it will change the world," he says. "That’s really exciting, and I wouldn’t be here without the Bren School background."

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Man with a Plan

Jamie Goldstein (from page 8)

As the city manager of the coastal town of Capitola, just south of Santa Cruz, Jamie Goldstein (MESM 2000) has what may be the ultimate interdisciplinary job. From fixing potholes to pension reform and wetland restoration, he oversees the day-to-day operations of a city he describes as “definitely more environmentally focused than most,” adding, “Capitola has a long history of being at the forefront of environmental policy. It was one of the first jurisdictions to implement a ban on polystyrene, and it deeply weighs the pros and cons of any development project.”

But Goldstein has to bridge disciplines in areas far beyond the environment.

“In this position you’re faced with advocacy groups on all sides of every issue,” he says. “It’s always put in this Bren context of, OK, having no polystyrene in the ocean is clearly the best for the environment, but that being said, what are the legal, fiscal, and practical matters associated with implementing a ban? That’s what the Bren School is all about, focusing on the true cost of regulation and strategizing on how best to get there given the political, legal, and fiscal frameworks in which we have to operate.”

The range of issues he addresses includes anything and everything related to implementing policy, which is set by the city council and presents Goldstein with a highly varied diet of challenges.

“Every day looks incredibly different,” he says. “I need to understand a legal brief so well that I can argue it on an equal footing with attorneys. But at the same time, I have to meet with sustainability activists and understand where they’re trying to go, and then turn around and meet with my financial team when they tell me that the sales tax figures aren’t coming in as projected.”

Goldstein has to adjust the budget. It never feels like Ground Hug Day.”

The challenging and, occasionally, frustrating job has him tapping into his Bren training every day of every week.

“All the skills I use rely on what I learned while getting my degree at Bren,” he says, “the legal training I got from seminars and classes, the discussions that forced me to argue a point articulately, the business classes where I learned to jockey a spread sheet, the economics, understanding the environmental implications of decisions, and the broader understanding of all subjects those in a social context — that broad-based training has helped me a lot.”

A self-described “failed engineer,” Goldstein ended up majoring in atmospheric science at UC Davis, then worked for the Tahoe Conservancy before enrolling at Bren. After graduating, he joined several other Bren alumni at Solimar Research Group. He focused on land-use issues in the Lake Tahoe basin and salmon recovery in the Pacific Northwest, providing a research context for studies intended to inform state and local policy decisions. After about a year, he accepted a position in the Santa Barbara County...
Redevelopment Agency and, after an agency reorganization, ended up running it. But with most of his family in Northern California, he and his wife, Amy, eventually decided to look for opportunities up the coast. They focused their search around Santa Cruz, and in 2008 Jamie accepted a job as the community development director in Capitola. When the city manager retired a year later, the city council asked if he’d be interested in that appointed position. “After a lot of thought,” he says, “I decided to put my hat into the ring, and I’ve been the city manager ever since.”

Battered by opinions from every side of an issue, as city manager, Goldstein has to find the middle ground, particularly if he wants to keep a job he likes despite its challenges. “One of the things I’ve noticed is that, as the country becomes more politically polarized, in this job I’m actively forced into the middle,” he says. “Because I work for a board of politically elected officials who come from the left and the right, I need to be conversant in arguments from both sides. I have to think about how my most conservative member and my most liberal member will interpret an issue. What are their arguments, and what’s going to sway their decision-making? If you understand only one side of an issue, you’re going to be an eighteen-month manager. [He’s lasted more than 72 months.] There will be a change politically, and you’ll be too affiliated with one side.

“I entered public service because I wanted to make a positive difference, and I believe passionately that this is a field where you can effect change,” he adds. “It is not a city manager’s role to adopt a particular policy; that is left to city councils. A manager’s role is to recommend an action, and the best, most effective recommendations are those made using the best science, with a clear understanding of the fiscal and legal framework surrounding that policy. That’s what keeps me interested and excited.”
**Toward Increased Ocean Protection**

When Sarah Abramson Sikich (MESM 2005) began working at Heal the Bay in Santa Monica nearly a decade ago, less than one percent of Southern California’s coast had some level of environmental protection. Now, about fifteen percent is protected.

“That’s something I’m incredibly proud of, because I know that having these marine protected areas in place is going to benefit generations to come,” she says. “Without the experience I had at Bren, I would have been less well prepared to be part of the long and difficult negotiations and advocacy required to establish these underwater parks.”

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**Water and the World Wildlife Fund**

“My job requires a lot of collaboration, and Bren totally set me up for success in that,” says Lindsay Bass (MESM 2010), Manager for Corporate Water Stewardship at World Wildlife Fund. “In my Group Project, I was working not only with my team, but also with a client — Patagonia — that had worldwide operations. We had to figure out how to talk with and incentivize its suppliers to give us the information we needed to do our project. That really helped open my eyes to the level of coordination necessary to develop solutions for these problems.”

**Greening Stanford**

Covering 8,180 acres and home to 35,000 faculty, students, and staff; 700 buildings; 49 miles of roads; 88 miles of water mains; and its own power plant and high-voltage distribution system, Stanford University and its ambitious sustainability agenda might not seem “very localized” to anyone but the school’s Sustainability Manager, Fahmida Ahmed (MESM 2006).

That’s because she has something to compare it with in her role as current Chairman of the Board for the Association for Sustainability in Higher Education, a national consortium for sharing best practices among universities.

**People Power at Lawrence Berkeley**

“Technology will get you only so far on your sustainability path,” says Erin Claybaugh (MESM 2007), Sustainability Project Manager at Lawrence Berkeley National Laboratory. “At a certain point, you need people to do their part.” For that, Claybaugh uses her Bren experience.

**Sustainable Seafood in Maine**

“Increasingly, and especially with our generation, people are looking for the added value, and that value is sustainability,” says James Benson (MESM 2013), Sustainable Seafood Project Manager for the Gulf of Maine Research Institute.

**Combatting Forest Loss**

“In places like Brazil, ranching is inefficient, and by improving certain practices, ranchers can increase their production on the same footprint, for greater profits with no new forest loss,” says Erin Madeira (MESM 2008), Senior Advisor for Climate Change at The Nature Conservancy.

**REDD Planet**

As “one of the few people who thinks much about nature at a development-economics think tank,” Jonah Busch (PhD 2008), a Research Fellow at the Center for Global Development in Washington, D.C., finds himself introducing his economist colleagues to concepts familiar to every Bren student and important to international development. “I’ve found myself being the first bearer of the news that, say, preserving forests can reduce malaria; they had no idea.” But once they know, says Busch, they’re receptive to the concept.

**Research Computing and Brain Science**

Rajendra (Raj) Bose (PhD 2004) came to the Bren School with bachelor’s and master’s degrees in engineering, experience working in geographical information systems (GIS) and environmental consulting, and the sense that “exposure to science and policy at Bren would be meaningful, and I could combine these areas with a deeper understanding of data management and computation.”

At the time, he says, “Not many PhD geography programs would accommodate that. They didn’t offer the mix of fields possible at the Bren School.”
Coastal Protection in Southern California
Sarah Abramson Sikich (from page 9)

When Sarah Abramson Sikich (MESM 2005) began working at Heal the Bay in Santa Monica nearly a decade ago, less than one percent of Southern California coastal watershed enjoyed some level of environmental protection. Now, more than fifteen percent is covered by a network of marine protected areas (MPAs) established in accordance with the Marine Life Protection Act, a 1999 addition to California’s Fish and Game code. Sikich has played a key role in that process.

“It’s a huge boon to the ocean environment and something I’m incredibly proud of, because I know that having those marine protected areas in place is going to benefit generations to come,” says Sikich, who was promoted from her position as the organization’s Science and Policy Director for Coastal Resources to Vice President at the end of 2014. Her duties include identifying threats to marine resources, determining where political pressure can be applied to help improve the region’s ocean health, tracking programs that government agencies are considering and weighing in with the Heal the Bay perspective, and shaping the organization’s environmental campaigns.

Sikich is one Bren graduate who followed a fairly direct route to where she is today. She did her undergraduate work in marine and freshwater biology and then spent a year “growing fish in a lab,” which made her realize that she preferred “the people part of marine work.” She eventually landed a job at the Catalina Island Marine Institute (CIMI) and moved from Minnesota to California “sight unseen.” Working with the nonprofit organization Seafood Watch stimulated her interest in the policy aspects of marine conservation. Her next job was at Heal the Bay.

While at Bren, she had a fellowship at NCEAS (the UCSB National Center for Ecological Analysis and Synthesis) leading science experiments in fifth-grade classrooms. The students then displayed their findings at poster sessions at the NCEAS offices in Santa Barbara.

“Being in the NCEAS environment exposed me to so many great researchers doing applied ecology,” she says. “I was also able to participate in a couple of working groups and further build my contacts with researchers and practitioners.”

That, she says, and her Group Project, which focused on marine protected areas, set her up nicely to be appointed to the South Coast Regional Stakeholder Group while at Heal the Bay. The group of 64 stakeholders whose perspectives include conservation, education, recreational and commercial fishing, research, and many others, created the proposal for where the MPAs in Southern California should be located.

“We spent a lot of time relationship-building and going through incredibly difficult negotiations with our members,” she says. “But to be able to propose options for MPAs and have them approved by the California Fish and Game Commission, and to see that come to fruition in such a short time frame is hugely rewarding. Without the experience I had at Bren, I would have been less well prepared to be part of the negotiations leading to the proposal and the advocacy required afterward to ensure that they were approved and implemented.”
Once the MPAs were established, though, more work needed to be done to prevent non-compliance and poaching, a big problem with marine protected areas.

“You cannot see the biological benefit of an MPA if there’s an area that’s being poached, and it’s important to understand if there are hotspots of non-compliance,” says Sikich.

The state came through with funding for monitoring focused on biological changes and socio-economic changes resulting from the MPAs, but another goal of the Marine Life Protection Act was to enhance recreational use of the ocean, such as wildlife viewing and scuba diving, and “No one was looking at the human uses within and beyond the marine protected areas,” says Sikich.

Heal the Bay responded, and under the leadership of Sikich’s colleague and Bren alumna Dana Murray (MESM 2010), worked in partnership with another group called The Otter Project to craft a citizen science monitoring program. The three-year-old trial program, which began in Los Angeles County, is scheduled to go statewide in 2015.

“Science-based policymaking is our niche,” Sikich notes, “and it’s really fun to be able to see environmental change while we’re working right in the middle of it.”

Further, she adds, “I get to participate at different scales. I can be in Sacramento working on big policy changes like legislation, but I can also meet kids for a beach clean-up and see them become inspired as they learn about these issues first-hand. Working at the grassroots scale, the regional scale, and the statewide policy-making scale is really rewarding.”
Water and the World Wildlife Fund

Lindsay Bass (from page 9)

Convincing corporations to improve their practices around water is not the first activity people probably associate with World Wildlife Fund (WWF). The big nonprofit with the panda logo got its start in species conservation, and that remains a central focus. But as Lindsay Bass (MESM 2010), WWF Manager for Corporate Water Stewardship, explains, “Our conservation perspective and approach have evolved over the decades in response to a changing planet.”

The goal of conserving species led WWF to habitat protection and restoration, which led to engaging with communities and governments to try to address the causes of habitat loss. By the late 1990s and early 2000s, the organization had identified markets, consumption, and businesses as a big pull on natural resources.

“Businesses make products and put them on the market,” Bass says, “so we wanted to understand how we could influence the companies that have the greatest impacts to change their practices and draw down the size of their footprint? That’s the focus of what I do; I work with big multinational companies to help add value and impact to their water stewardship journey.”

Lindsay Bass (right) and a co-worker in the field

WWF’s focus on water proved predictive of the World Economic Forum’s 2015 “Global Risk Report,” which places water crises at the top of the list of issues likely to impact the global economy. In her work, Bass engages with members of corporate sustainability teams to help them build a strong business case within their company, both to enhance their focus on water and create a more comprehensive and impactful portfolio of work (i.e. going beyond operational efficiency to engage supply chains, participate in multi-stakeholder water-basin initiatives, etc.) that they can sell up the ladder of their company.

“We try to position the sustainability people as strongly as we can, because they’re our champions; they’re the ones who help us make the case inside the business,” Bass says. “That is probably the trickiest and most challenging part of our work, because water often is not priced for its scarcity.”

But if the low non-market price of water doesn’t catch a business’s attention, a shortage of it will. “We’re beginning to get a lot of traction around helping companies to understand the brand value that’s tied to water-related risks,” Bass explains. “We ask companies to look at their growth projections through 2020 and ask themselves, Will they will have the water they need to be able to hit those growth targets? That’s becoming a very relevant question for a lot of businesses. The brass ring for us is to make the case within companies and get them get involved in helping to shift the trajectories of water basins that are being managed unsustainably onto a more sustainable path.

“This work is absolutely fascinating,” Bass continues. “I’ve never had a day at WWF where I watch the clock. I work full-steam. I have to bring my ‘A’ game every day, and we work long hours because these issues are so complex and so important.”
And businesses, she says, are increasingly engaged: “I find people in these big multinationals who are just as passionate about this as I am. Big businesses are like an aircraft carrier. There are a lot of moving parts, and it can take a while to turn them, but when you get them going in the right direction, that’s a major, major shift. It’s really cool to be a small cog in making those big shifts.”

She has no doubt about the role the Bren School played in preparing her for her work at WWF. “My job requires a lot of collaboration, and Bren totally set me up for success in that,” she says. “I see my role as looking across all the different components of an issue that need to come together for it to be successful. It makes me think back to my Group Project. Not only did I have to work with my team, but we were also working with a client — Patagonia — that had operations around the world. We had to figure out how to talk with and incentivize its suppliers to give us the information we needed to do our project. That experience really helped open my eyes to the level of coordination that’s necessary to develop solutions for these problems.”
“I’ve been putting economics and environmental science to work,” says Jonah Busch (PhD 2008), who spent five years at Conservation International (CI) and is now a Research Fellow at the Center for Global Development, a Washington, D.C., think tank focused on development economics.

“The Bren PhD has been just terrific,” he adds. “There are a lot of disciplinary thinkers, but being able to think and work across economics and science has been really valuable in a variety of settings in D.C. At CI, I was one of the few economists in a conservation NGO that had a lot of natural scientists. So being embedded there was really useful. Now, I’m one of the few people who thinks much about nature at a development-economics think tank. It’s the other side of the coin.”

Busch finds that his economist colleagues may be unfamiliar with concepts that are familiar to every Bren student and important to achieving integrated, comprehensive development strategies.

REDD (reducing emissions from deforestation and forest degradation), which involves supporting forested nations to preserve their forests, is one. An expert on the subject who is currently writing a book about it, Busch says, “I’ve often found myself being sort of the first bearer of the news that, say, preserving forests can reduce malaria; they had no idea.

“The good news is that people are receptive once they hear about it,” he adds. “This encourages me, because any time there’s a gap like that, there’s a need for people to bridge the gap, and that’s what people from Bren do really well.”
Greening Stanford

Fahmida Ahmed (from page 9)

Covering 8,180 acres and home to 35,000 faculty, students, and staff; 700 buildings; 49 miles of roads; 88 miles of water mains; its own power plant and high-voltage distribution system; and even a 70-acre shopping center, Stanford University and its ambitious sustainability agenda might not seem “very localized” to anyone but the school’s Sustainability Manager, Fahmida Ahmed (MESM 2006).

That’s because Ahmed, a class chair while at Bren, has something to compare it with, for she also currently serves as Chairman of the Board for the Association for Advancement for Sustainability in Higher Education (AASHE), a position that, she says, “takes a lot of my time but is great privilege.”

“At Stanford, I’m working with one specific campus, and I dive down into details, but there is applicability for campuses nationwide,” she explains. “The board work is more strategic, and I get to see how other universities are looking at sustainability on their campuses, what works and what doesn’t, and what are the tools and resources as a nation we should have in common to implement best practices and really move them forward.”

Ahmed had a satisfying and lucrative career in high tech before coming to Bren, but “made a conscious decision to align my personal passion for the environment with my future career,” she recalls. “It was a controversial decision at the time, and I came to Bren older than most students, wanting to make a difference and knowing there would be no compromise on that.”

She proposed a “campus climate neutral” Group Project in 2004 to see how an institution could reduce its carbon impact. The project was accepted, and her group chose UCSB, she says, “not really knowing that academic institutions have their own sets of goals and resources that might make them very different from companies.”

“Taking an emissions inventory and looking at projects that could reduce carbon, identifying the challenges to implementation and the institutional barriers — those were strong, classic themes that have resonated in my career ever since,” she says. “I credit the Group Project a great deal for where I am today.”

In fact, after her group spoke at the 2006 Group Project Public Presentation, some faculty members and students from UC Berkeley told Ahmed that they were looking for someone just like her to hire for the Berkeley campus — and would she be interested? She said no.

At the time, she thought working on a university campus would have limited appeal, but after a closer look, she understood that a university “is like a small city” and saw becoming a campus practitioner as “a unique opportunity.”

She was hired at Berkeley after graduating from the Bren School, and she spent two years as Sustainability Specialist there before moving to Stanford in 2008.

Ahmed says that a major part of her work at Stanford involves trying to understand behavior change, “the things that those on campus can work on as individuals. The administration can take action to increase the energy efficiency of buildings and become more water-efficient, but those are a few hundred people making decisions for 35,000 people on campus.”

A bigger question, she continues, is “What can 35,000 people do for their campus? Every small action counts. In my office we are trying to understand how to influence behavior change and what motivates people. The infrastructural and the behavioral changes together promote sustainability. One without the other isn’t complete.”
In the 18 years since the Bren School accepted its first students, the idea of an *applied* PhD has evolved, and a large percentage of Bren doctoral students now pursue research that can be used in solving environmental problems.

During his six years as one of the Bren School’s first doctoral students, Rajendra (Raj) Bose (PhD 2004) took advantage of the school’s interdisciplinary focus — largely unprecedented at the time — to make himself a more-well-rounded professional.

With bachelor’s and master’s degrees in engineering, and experience working in geographical information systems (GIS) and environmental consulting, Bose thought he would benefit from learning some natural science to complement his knowledge of information science and computing.

“I thought the exposure to science and policy at Bren would be meaningful, and I could combine these areas with a deeper understanding of data management and computation,” he says. “Not many PhD geography programs would accommodate that at the time; they didn’t offer the mix of fields possible at the Bren School. Bren was new and interdisciplinary in nature, and the ability to combine environmental and Earth science with my interest in computer and information science appealed to me. I was able to achieve my goals.”

Today, Bose is Director of Research Computing for the new Mortimer B. Zuckerman Mind Brain Behavior Institute at Columbia University, a particularly lively area of research related to the national BRAIN initiative announced by President Obama in 2013.

“It’s exciting because it’s a rare opportunity to be involved with the creation of a new institute at the university,” he says. “It has a start-up feel. A core administrative staff of ten to twenty is being assembled to create it from scratch. We will support up to sixty principal investigators and their labs, roughly a thousand people, in a new building on a new campus in New York City.”

Bose’s overarching duty involves supporting specialized research computing and all information technology for the new building. This will include managing central storage and computing resources, providing IT support, overseeing the audio-visual needs of a lecture hall and 18 conference rooms, and working with network engineering and information security groups at the university.

“My role is providing infrastructure as well as advanced computing,” he says. “I’m an example of someone who did not ultimately pursue a faculty position, but who closely supports the academic research mission.”

As is true in any sector today, Columbia is looking for ways to be wise with energy. To that end, Bose will be participating in the Energy Efficient High Performance Computing Working Group and similar initiatives. The professional organization comprises people in positions similar to Bose’s and works to reduce expenditures and the environmental impacts of computational work.

“Designing so-called ‘green data centers’ represents a connection with the environmental problem-solving focus of the Bren School,” he says. “It’s a connection I will continue to keep.”
People Power at Lawrence Berkeley National Laboratory

Erin Claybaugh (from page 9)

In her role as Sustainability Project Manager at Lawrence Berkeley National Laboratory, says Erin Claybaugh (MESM 2007), “One of the most important aspects of my job is to build relationships.”

She leads the laboratory’s material sustainability initiative, which focuses on waste diversion and green procurement, and also the employee engagement initiative. Through the latter, she speaks with employees and tries to engage them to “reduce and divert” — that is, use less water and energy and divert more waste away from the landfill and into compost and recycling.

Technology can help people to shut off computers and lights, Claybaugh says, “But technology will get you only so far. At a certain point, you need human buy-in. You need people to do their part.”

Obtaining it requires a good deal of human interaction and coordination among different entities; that’s where the relationship-building comes in.

“It could be with decision-makers at the lab — slowly but surely convincing them that we need to change something,” Claybaugh explains. “It could be building trust with custodians so that they know I am taking their considerations seriously and I will try to help them with their work. I’m constantly trying to build relationships with people so we trust each other.”

Perhaps surprisingly, it was her limitations in that area that brought Claybaugh to the Bren School.

In her first job after receiving her undergraduate degree, she realized something important about herself: “I wasn’t very good at working with people,” she says. “I didn’t know how to stand up for what I thought was right in the workplace, and I took any criticism personally.”

But, she recalls, “I wanted to learn that skill, and Bren was perfect for that, because you’re always working with other people. You’re thrown into so many interpersonal situations, in classes and especially in the Group Project. And it’s not a workshop where you’re talking about a hypothetical situation in which you might be working with a certain type of person; you’re actually working with that type of person, so eventually you figure it out. With more experience and a better skill set, I grew a thicker skin and learned to communicate more effectively.”

So it was for Claybaugh that “one of hardest parts about Bren was also one of most valuable parts.”

“You have to work with people,” she adds. “You have to get along. Group work is sometimes uncomfortable, and it’s so much easier to do things alone and not have to compromise, but many studies have shown that group work, and especially diverse groups, lead to better science and outcomes. It’s a better way for all of us to get things done. I didn’t think that way nine years ago before Bren, but now, I know that’s the case.”

Having lived the value of relationship-based collaborative projects, she says, “I’m really surprised most sustainability programs don’t focus on that.”
**Combatting Forest Loss**

*Erin Madeira (from page 9)*

Among her duties as Senior Advisor for Climate Change at The Nature Conservancy (TNC), Erin Madeira (MESM 2008) and her colleagues in Brazil work with ranchers to prevent deforestation.

“In places like Brazil, ranching is inefficient, and by improving certain practices, ranchers can increase their production on the same footprint, which translates to greater profits with no new forest loss,” she says.

That doesn’t make it an easy sell, and TNC representatives have encountered angry protests in Brazil from ranchers who thought that any conservation organization would be prioritizing trees over their livelihoods. Among those early opponents was a young rancher who had cleared land and was raising one cow per hectare at the time.

A TNC team worked with him first to establish trust and then to put in place new practices, and now, Madeira says, “He’s raising three cows per hectare with no intention of cutting more trees. He’s become a big champion of our work and is leading the charge for other ranchers in the area. To see that conservation efforts are benefitting nature and people is really inspiring.”

**Sustainable Seafood in Maine**

*James Benson (from page 9)*

As Sustainable Seafood Project Manager for the Gulf of Maine Research Institute, James Benson (MESM 2013) works with the seafood supply chain to promote local consumption of sustainable seafood species. He was attracted to New England “because fisheries are such a rich part of the culture.” His office overlooks the busy Portland waterfront, with its many boats and processors.

Benson is part of a three-person team on the institute’s Sustainable Seafood Culinary Partners Program, which conducts outreach to a variety of stakeholders, chefs among them, on such topics as fishing efficiency, traceability, and the most abundant local species.

Chefs literally buy in to the program. They agree to have at least one fish on the menu that is Gulf of Maine certified as sustainably harvested, and 20 percent of their fish has to be from the region. In exchange, they receive a brand that is kind of stamp of approval, plus media exposure and ongoing support from the program. Increasingly, Benson says, people are looking for added value, and that value may be sustainability.”

Last year, he coordinated numerous culinary events, including two “Trawl to Table” days. Those brought together fishermen, chefs, seafood processors, and wholesalers to discuss seafood sustainability, quality handling of fish, and fishing-gear research and innovation.

“All parties learned a lot about what it’s like for the other groups, and tangible results came out of it, such as small changes fishermen can make in how they handle fish that will add value for chefs, and small changes seafood distributors can make so that it’s a lot easier for fishermen to deliver their catch,” Benson explains. “You could see the lights go on for people who normally would never be in the same place together. It was really quite amazing.”
ENTREPRENEURS

They dream so they can do. They innovate every day. They take risks and start businesses. And when eco-entrepreneurs profit, the planet does, too.

MAKING BEER GREEN

“Growing up, you say, ‘I like this or that,’ but when you actually find what you really love, you can’t explain it. You want to wake up and bust my a--, I can make it.”

The speaker is Jaime Dietenhofer (MESM 2002), the man behind Figueroa Mountain Brewery, a growing family of wildly successful craft breweries, including one in Buellton and another in Santa Barbara’s burgeoning Funk Zone.

Dietenhofer entered the Bren School thinking of pursuing economics and land-use planning and worked in the latter for a time after graduating. But then, as sometimes happens to people on the way to their career, he found himself moving into a whole different sphere. First he became a partner in a successful start-up business providing green solutions to garage storage. He sold that company and now applies the same skills in statistics and regression analysis that he picked up at the Bren School to run his breweries.

Dietenhofer has remained close to the Bren School and has supported many events held there, so it may not be surprising that he is trying to make his breweries the greenest in the industry.

A $75K BOOST FOR BIOCHAR

Every new business can use a financial boost. Char-born recently received one to the tune of $75,000, their award for winning the 2014 Barrett Foundation Business Concept Challenge. Some 27 teams entered, and 8 were selected for the final round of the national competition, which is sponsored by former Intel CEO Craig R. Barrett and the National Forest Foundation.

RIDING THE WIND

In 2008 Matt Riley (MESM 2003) and a colleague at Clipper Wind Power, Derrick Harding, opened Infinity Wind just before the economic crisis swept the nation.

Their portfolio includes two projects in Kansas — one generates 167 Mw and the other 104 Mw — together representing $450 million of investment by the parties that purchased the project. A third, 74-Mw, site was recently completed in Nebraska, and a 250-Mw project under way in New Mexico will bring the company’s total generating capacity to 3.2 million Mw hours annually, more than the City of Santa Barbara used in 2011.

The key question for any solar project, says Riley, is always, If you build it, will utilities come to buy the electricity?

SELLING FISH THE SUSTAINABLE WAY

Things have moved quickly for Norah Eddy and Laura Johnson since developing a model for their business, Salty Girl Seafood, as the capstone of their participation in the Bren School Eco-Entrepreneurship (Eco-E) Focus.

They brought on Bren School classmate Gina Auriemma as chief information officer and earned three prizes worth a total of $12,500 at the 2014 TMP New Venture Competition. Since graduation, they have incorporated and been featured in Forbes magazine and other electronic, print, and radio outlets.

CHASING VAPORS

As one of the first doctoral students to graduate from the Bren School, Mark Kram (PhD 2002) was thinking like an entrepreneur long before entrepreneurship became part of the Bren curriculum.

After graduating, he created a company, Groundswell Technologies, Inc., which sells web-based software that provides real-time visualization of environmental data, particularly data gathered by sensors and related to underground contaminants, water supplies, air quality, and oceanographic applications.

Recently, Kram has been offering his expertise in an area that seems poised for regulatory change: the dynamics of toxic subsurface vapors associated with contaminant release sites. His testing has shown that the concentration of such vapors fluctuates, and he believes that those changes result from shifts in barometric pressure.
Entrepeneurs

Making Beer Green: you need a Leatherman
Jaime Dietenhofer (from page 10)

“Growing up, you say, ‘I like this or that,’ but when you actually find what you really love, you can’t explain it. You want to wake up and go to work. You’re excited. It’s like being a kid again. I can sit in the car and drive and dream back-of-the-napkin stuff. I love the risk and the reward and always being on the cutting edge and in control of my own destiny. I love knowing that if I get up and bust my a--., I can make it.”

The speaker is Jaime Dietenhofer (MESM 2002), the man behind Figueroa Mountain Brewery, a growing family of wildly successful craft-brewing outlets, one in Buellton and the other in Santa Barbara’s burgeoning Funk Zone, with more in the works. Dietenhofer entered the Bren School thinking of pursuing economics and land-use planning and worked in the latter for a time after graduating. But then, as sometimes happens to people on the way to their career, he found himself moving into a whole different sphere. First he became a partner in a successful start-up business providing green solutions to garage storage. He sold that company and now applies the same skills in statistics and regression analysis that he picked up at the Bren School to operate breweries.

Dietenhofer has remained close to the Bren School and has supported many school events, so it may not be surprising that he is working to make his breweries the greenest in the industry.

“Being sustainable can give you a better bottom line and a clear direction, whether you do it for personal or ethical reasons, or simply as a way to make your business more effective,” he says. “There is probably some of each there for me.”

But brewing green, like running any business more sustainably, requires knowledge, insight, analysis, and the wisdom to chart a workable path.

“You need to make sure that being sustainable is sustainable,” Dietenhofer says. “You want to be sustainable when it makes sense and as early in your trajectory as possible. But there are trade-offs, areas where you might have to concede for the moment and prioritize. There may be a great machine you want, but you have to ask, ‘Will it put us back financially and not pay us back fast enough? If so, let’s pick a system that costs a little less and may be less efficient but still allows us to save energy and continue to be profitable.’ That kind of decision is faced by a lot of businesses that want to be eco-friendly. I know my path, but it’s a competitive world out there and you have to survive. Being green in a capitalistic society isn’t easy, so how do you stay on top and continue the message? It’s tough to carry the torch for sustainability while seeing market share being taken by less-conscious businesses.

“As an entrepreneur, you need to be able to analyze and see the big picture,” he adds. “Bren is about the big picture. You can focus more if you want to, but in the world, you need to be wider. You need a Leatherman, not a fillet knife.”
A $75,000 Boost for Biochar
Niles Brinton and Debbie Pierce (from page 10)

Every new business can use a financial boost. Charborn recently received one to the tune of $75,000, their award for winning the 2014 Barrett Foundation Business Concept Challenge. Some 27 teams entered, and 8 were selected for the final round of the national competition, which is sponsored by former Intel CEO Craig R. Barrett and the National Forest Foundation.

Charborn began as a Bren School Eco-Entrepreneurship (Eco-E) Project comprising five students from the Class of 2014. Two of them, Niles Brinton and Debbie Pierce, have continued to push the business forward after graduating. Their objective is to become a successful marketing and distribution company connecting producers of biochar soil amendment, which is made from forest litter and timber waste, with farmers who can use the product to boost production and save water.

Biochar is a powerful soil builder that also addresses some of the challenges facing modern agriculture, which is extremely resource-intensive and can negatively impact the long-term health of water and soils.

Further, agriculture is responsible for 80 percent of all water consumption in drought-ravaged California, a world center of production for high-value specialty crops.

“This isn’t acres and acres of corn and wheat,” Brinton says. “It’s fruits, nuts, citrus, leafy greens, and berries. These are such an agricultural powerhouse, and why more value in in other places in the time, that value is price for the rivers, ground water and salts from belching CO₂. Any soil that’s under intense agricultural production slowly loses organic matter, which is where the carbon is held; it keeps the soils healthy and happy. Poor soil releases more carbon into the atmosphere.”

That’s another place where biochar comes in. “It’s almost entirely carbon and incredibly stable; it’s durable and long-lasting,” Brinton says. “When we bury it in agricultural soils, it stays there, sequestering carbon and providing serious economic and environmental benefits.”

One challenge is to make biochar at a scale large enough so that farmers can afford it and can reap the environmental benefits while also seeing higher yields and reducing their water use.

Biochar is made through an industrial process called pyrolysis, but Pierce says that engineers “are still getting it dialed in at large scale,” adding, “Those who have most expertise in industrial-scale production

They’re like industry translators. They can explain the science in terms that farmers understand and appreciate.

— Emily Chan, Eco-E Program Coordinator
don’t tend to know about soil science or have the skills or the network to reach farmers and sell their product. They’re focused on an important piece of puzzle, to produce efficiently at a large scale, but they’re having trouble creating a lot of demand.”

That’s where the two Bren alumni, with their broad-based understanding of such relevant topics as water pollution, pollution mitigation, the carbon cycle, climate change, soil science, and communication, can make a real difference.

“They’re like industry translators,” says Eco-E program manager, Emily Cotter. “They can explain the science in terms that farmers understand and appreciate.”

Brinton and Pierce each received a six-month research fellowship from the Bren School after graduation. During that time, they completed their application for the competition and began real-world field testing of biochar with commercial growers. After six months, they incorporated. The partners plan to divide their winnings among small salaries, conducting ongoing field testing, and providing “discounted biochar for farmers interested in field trials,” says Pierce. “The biochar industry is relatively new, but we believe that it’s on the verge of expanding rapidly, and we’re excited to be a part of it.”

*Between classes, master’s students gather in the Michael J. Connell Courtyard at Bren Hall.*
It’s hard to overstate the potential value of an internship to a Bren School master’s student. Just ask Matt Riley (MESM 2003). In February of his second year at Bren, Riley became the first internship for the Clipper Windpower Development Company. Now he is CEO of Infinity Wind, the Santa Barbara-based company he co-founded in 2008.

Clipper has since closed but was doing well when Riley arrived, with several hundred employees, including a dozen Bren graduates. But renewable energy is an unstable industry, and Riley recalls that when a round of layoffs occurred a week after he started his internship, “Right away I was asked to pick up the slack.”

His job involved mapping and GIS work to support the process of “prospecting” — essentially, assessing the viability of — proposed wind farm projects. He was hired full-time after graduating from Bren, and then “systematically moved up,” eventually becoming a manager and originating more than 10,000 Megawatts (MW) of wind projects in North America.

He enjoyed working at Clipper but also saw an opportunity to develop projects his way. He wanted to advocate for land owners — who can often feel marginalized in the long, complex process of bringing a wind farm into operation on their land — by enhancing communication with them and enhancing the transparency of the development process.

In 2008 Riley and Clipper colleague Derek Harding (CEE) opened the doors at Infinity, just before the Great Recession swept the nation. They survived and expanded. Their portfolio now includes two projects in Kansas — together generating 271 MW and representing $450 million of investment by the parties that purchased the project. A third, 74-MW, site was recently completed in Nebraska, and a 250-MW project is under construction in New Mexico. All told, the company’s total generating capacity is now more than 4 million MW hours annually, more than the County of Santa Barbara used in 2011.

Infinity projects incorporate a comprehensive plan to prevent the main negative environmental impact of their turbines: bird strikes. They conduct extensive environmental impact studies, with particular focus on how birds and bats use the landscape.

“We don’t develop without doing those studies, even if we’ve already built a project a few miles away,” Riley says. “We analyze the risk, and if it’s high, we will walk away from a project unless we can mitigate it in some way.”

In Kansas, where endangered whooping cranes are present, mitigation can include shutting down the turbines within a reasonable radius of a whooping crane sighting, in addition to the usual practice of making power lines visible to birds by stringing brightly colored plastic spheres along them at intervals.

State-of-the-art turbines now spin slower and have three larger propellers and hubs 80 to 100 meters off the ground, rather than 65 meters, the norm when Riley started at Clipper. “The manufacturers are constantly improving through blade, gear box, and generator design,” Riley says. “The turbines are now incredibly efficient.”

Having risen from an intern to become the CEO of his own renewable energy company, Riley says, “I owe my career to the Bren School. I put the interdisciplinary skills I learned there to work every day.”

The list of valuable skills and knowledge he acquired as a Bren MESM student include, of course, learning the basics of renewable energy, which planted the seed for his career. But there was much more.

“It was probably the Group Project that most prepared me for this situation,” he says. “I learned to work in teams to address a problem, come up with solutions, and implement them, and now, almost
every meeting I have is with three to six people, and we’re usually addressing a set of issues. In the Group Project, I learned to understand group dynamics and navigate to a successful conclusion by making sure everyone is contributing in the way they feel comfortable. I do that several times every day with different sets of individuals.”

While taking a finance class that, he says now, “I wasn’t sure how I would ever use,” he gained an understanding of the financial analysis of a company and now uses it daily.

“I also encounter a lot of unknowns,” he continues. “It was invaluable at Bren to be constantly learning something I had not previously experienced. Being able to encounter unfamiliar material and ask the right questions to understand it is a skill I use all the time.”

Riley originally came to UCSB as a PhD student in chemistry, but after sitting in on an environmental chemistry class at Bren, he decided to apply here.

“I remember it like it was yesterday,” he says. “I fell in love with that class, because it showed me that the abstract concepts I was studying could be applied in the real world. And as someone who constantly needs to get my hands dirty and do something relevant to my daily life, I was hooked.”

*Turbines spin at Infinity’s recently completed wind farm in Nebraska.*
Entrepreneurs

Selling Fish the Sustainable Way
Salty Girl Seafood (from page 10)

Salty Girl Seafood entrepreneurs, (from left): Laura Johnson, Gina Auriemma, and Norah Eddy

Things have moved quickly for Norah Eddy and Laura Johnson since developing a model for their business, Salty Girl Seafood, as the capstone of their participation in the Bren School Eco-Entrepreneurship (Eco-E) Focus.

They brought on Bren School classmate Gina Auriemma as chief information officer and earned three prizes worth a total of $12,500 at the 2014 TMP New Venture Competition, put on at UCSB by the College of Engineering’s entrepreneurially focused Technology Management Program, a partner in the Bren School’s Eco-E Focus. Since graduation, they have incorporated and have been featured in the digital edition of Seafood International, the leading global publication for seafood marketing professionals, as well as Forbes magazine, Bloomberg Radio, and the Pacific Coast Business Times.

Salty Girl Seafood provides a transparent marketing and delivery system for fresh seafood purchased directly from fishermen and sent directly to customers (such as high-end restaurants) in a way that addresses traceability and sustainability, both problems in the seafood industry. It is the ideal example of an Eco-E business that solves a customer’s problem and an environmental problem.

One key step the partners have taken was to bring on UCSB alumnus Craig Cummings, who has served as the founding CEO of several successful technology-driven start-ups. With the benefit of his experience on the investor side of new ventures, Salty Girl was oversubscribed on its first round of seed funding.

Cummings met the Salty Girl team when Eco-E program manager Emily Cotter asked him to judge a business-plan competition.

“I was impressed,” he says. “As an investor, you invest in people more than in an idea. “You can have a great idea and a mediocre team and it will fail. They understand the business. [Both Eddy and Johnson have worked on fishing boats.] They have the domain expertise and the passion. The only thing they didn’t have was business expertise, and I have that.”

Recalling their presentation at the TMP event, he says, “It could not have been better.” So he approached them, asked what they were doing after graduation and said, “Need a CEO?” They’ve been working together ever since.

“The fact that that Craig has been part of so many start-ups is valuable,” says Auriemma. “He helps us out daily,” adds Johnson, “He keeps us on the right track with our reports and communications and helps us to understand that not everything happens at once.”

The team is currently focused on growing the business and has plans to scale up quickly. Exploring new channels of distribution and developing strategic partnerships has helped them achieve a number of early successes. They recently joined 1% for the Planet, an organization founded by Patagonia’s Yvon Chouinard requiring companies to donate 1% of their annual revenue to a nonprofit of their choice. Salty Girl’s ties to the Bren School have enabled them to connect with leaders in the fisheries world who are looking for innovative solutions like what the company provides.

“The goal is to drive positive change in fisheries sustainability,” says Eddy, “and we have to grow as a company to have the impact we want to see.”
As one of the first doctoral students to graduate from the Bren School, Mark Kram (PhD 2002) was thinking like an entrepreneur long before entrepreneurship became part of the Bren curriculum. After graduating, he created a company, Groundswell Technologies, Inc., which sells web-based software that provides real-time visualization of environmental data, particularly data gathered by sensors and related to underground contaminants, water supplies, air quality, and oceanographic applications.

Recently, Kram has provided his expertise in an area that seems poised for regulatory change: the dynamics of toxic subsurface vapors associated with contaminant release sites. His testing has shown that the concentration of such vapors fluctuates, and he has used continuous sensor-based monitoring to document that they are related to variations in atmospheric pressure.

Even in areas known to be highly contaminated, he says, field instrumentation and sampling equipment used to monitor contaminated vapors may turn up little or no levels of contamination — a “false negative” result. Only continuous monitoring over multiple barometric cycles can confirm observation of the worst-case risk scenario, which can have serious consequences.

“My theory is that during times of locally high atmospheric pressure, the air gets pushed into the shallow subsurface, constraining the mobility of contaminants,” he says. “But when a storm is approaching and barometric pressure drops, we observe the reverse situation, so that there is a kind of exhalation of the contaminants, allowing them to migrate toward the ground surface.”

Under those conditions, he says, vapors can be released from the soil and enter buildings, resulting in harmful exposure for people. In some of the worst-case scenarios Kram has seen, methane plumes have moved into a confined space near a pilot light or other heat source, and explosions have resulted.

Financial risks are also associated with inaccurate measurement of contaminants. Kram explains that during a due diligence process associated with a transaction, a study is usually performed to identify potential risks at a property located above a plume. But because regulatory monitoring guidelines have not caught up with this research, field personnel who test the soil typically collect samples at the wrong time, using methods that are approved but fail to represent all exposure conditions.

This results in questions about who is liable should a deal be approved and an accident occur. Is it the people who live there now? Is it the people who lived there previously or three to four owners back? Is it the lenders?

“Since my team’s discovery, people have been using the court system to bridge the gap between what is currently required by regulators and superior continuous monitoring methods that are better suited for evaluating risk from vapor intrusion,” Kram says. “Continuous monitoring is essential to accurately assess the risks to building inhabitants exposed to vapors emanating from contaminant release sites.”

Following Kram’s findings, the standards organization ASTM International sponsored a symposium focusing on the topic, with Kram serving as co-chair. He subsequently received the 2014 ASTM International D18 Technical Editors Award for his work on a related book on the subject, titled Continuous Soil Gas Measurement: Worst Case Risk Parameters. And while waiting to see whether his and other similar science will lead to a new policy, he has developed and commercialized a web-based “automated indoor detection/mitigation liability management” platform to resolve such exposure challenges.
On Sunday, March 1, Bren School alumnus Justin Lichter (MESM 2013) and his partner in adventure, Shawn Forry, became the first to through-hike (and ski and snowshoe) the Pacific Crest Trail in winter.

The partners had covered 2,650 miles in 131 days, starting in British Columbia and finishing near the Mexican border. Only two other people are known to have attempted the feat, a husband-and-wife team that perished in the attempt.

An article on the Outside Magazine website after the partners completed their journey quoted Pacific Crest Trail Association representative Jack Haskel as saying, “What Shawn and Justin have done is really remarkable. The outdoor skill and planning involved in such a feat push them into the upper echelon of long-distance hikers.”

2003

Sarah O’Brien (MESM) served as project manager for a two-year study documenting the large increase in trail use — and associated economic benefits — resulting from a new bridge that crosses Interstate 40. The new span links the previously separated northern and southern segments of the popular American Tobacco trail in Durham, North Carolina. The study found that people are now running, walking, and biking farther than they used to, increasing fitness, and are spending a lot more money on their extended trips.

2007

Aubrey (Spilde) Miller and Brent Miller (both MESM) married on October 12, 2013. They welcomed a baby girl, Linnea Ludine Miller, on January 13, 2015.

Karen Setty (MESM) and her husband, Fabio Bolognesi, welcomed their second child, Gemma Elizabeth Bolognesi, on Sept. 14, 2014. Gemma’s big brother, Niccolo, will be three in April. Karen recently left her communications position at the Southern California Coastal Water Research Project to pursue a PhD education in public health. She has been offered a fellowship to pursue her studies at the Gillings School of Global Public Health at the University of North Carolina, Chapel Hill.

2008

Marion Wittmann (PhD; MESM 2004), now works as a research assistant professor in the Biology Department at the University of Nevada, Reno, and continues to work on invasive species issues in Lake Tahoe, Lake Mead, and other aquatic ecosystems in the Sierra Nevada and the state of Nevada. In April 2014 she married Christopher Jerde. She will head east in September again to spend a year as a fellow in the science and policy fellowship program of the American Association for the Advancement of Science in Washington, D.C.

2009

Heather Coleman (PhD) is currently with the National Academy of Sciences in Washington, D.C., as a fellow in the Christine Mirzayan Science & Technology Policy Graduate Fellowship Program. She is working on restoration in the Gulf of Mexico.
Alumni News

2003

Sarah O’Brien (MESM), bicycle‐pedestrian program manager at the Institute for Transportation Research and Education at North Carolina State University, served as project manager for a two‐year study documenting the large increase in trail use — and associated economic benefits — resulting from a new bridge that crosses Interstate 40 to link the northern and southern segments of the American Tobacco trail in Durham, North Carolina. The study found that people are now running, walking, and biking farther than before and are putting more money into the economy as they do.

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Karen Setty (MESM) and her husband, Fabio Bolognesi, welcomed their second child, Gemma Elizabeth Bolognesi on Sept. 14, 2014. Gemma’s big brother, Nicolo, will be three in April. Karen recently left her communications position at the Southern California Coastal Water Research Project to pursue a PhD in public health. She was recently offered to study at the Gillings School of Global Public Health at the University of North Carolina, Chapel Hill.

2008

Marion Wittmann (PhD; MESM 2004), started a new position as a research assistant professor in the Biology Department at the University of Nevada, Reno, and continues to work on invasive species issues in Lake Tahoe, Lake Mead, and other aquatic ecosystems in the Sierra Nevada and the state of Nevada. Recently, she was a postdoctoral researcher in the Biological Sciences Department at the University of Notre Dame. She returned from Indiana in March 2014 and married her husband, Christopher Jerde, in April.

2009

Heather Coleman (PhD) is currently in Washington, D. C., with the National Academies of Science as a fellow in the Christine Mirzayan Science & Technology Policy Graduate Fellowship Program. She is working with the Ocean Studies Board on restoration in the Gulf of Mexico. Before that, she was Senior Science and Policy Advisor for PacMARA, an NGO in Victoria, British Columbia, where she worked on spatial planning internationally. She plans to return after her fellowship.

Milena (Viljoen) Gavala (MESM) married Eric Gavala in 2010 and now calls San Diego home. She worked as a science communicator and a regional liaison for NOAA’s Restoration Center until 2012, and has since combined her passions for science communication and graphic design to start her own business, Curious G Design Studio. Milena uses information, data, and science graphics to help technical teams organize their thinking, translate their work for lay audiences, and enhance decision‐making processes.

Jordan Sager (MESM): See Jessica Golman (MESM 2011)

2010

Zoe Carlson (MESM) continues to work for the County of Ventura Watershed Protection District, where last year she began a new role as Watershed Coordinator for the Santa Clara River Watershed, Southern California’s largest river system that remains in a relatively natural state. She is now also Chief Financial Officer for the Brazilian Cultural Arts Center of Santa Barbara and continues to pursue the
Brazilian marshal arts form capoeira, as well as Afro-Brazilian dance and drumming. She also paints in her spare time; “Bird of Paradise” (above) is a recent work.

Julie (Holst) Brown (MESM) was married to Nick Brown on November 9, 2014 at Elings Park in Santa Barbara. They live in Santa Francisco, where Julie works for the Sustainable Apparel Coalition (SAC). The trade organization, comprising members representing more than a third of the global apparel and footwear market, works to reduce the environmental and social impacts of apparel and footwear products around the world.

Last year, after nearly six years in Santa Barbara, Randy Turner (MESM) and his wife, Summer, moved back to their house in McKinleyville, California. Randy left his job as a water conservation specialist with the Santa Barbara County Water Agency to become coordinator of the Klamath Basin Monitoring Program and work on cooperative water-quality monitoring in the Klamath River. Randy and Summer are enjoying hikes among the tallest trees in the world, dog walks in the neighboring Mad River Bluffs Preserve, and spending time on the wild and scenic Six Rivers.

2011

Having met during their first week as Bren students, Kyle Blickley and Lauren (Campbell) Blickley (both MESM) were married on October 4 on the island of Maui, where they live. Kyle is a Programs Manager with HNu Energy, focusing on zero net energy and energy-efficiency projects, and Lauren is the Marine Conservation Programs Manager with the nonprofit Pacific Whale Foundation.

In April 2013, Jessica Golman (MESM) and Jordan Sager (MESM 2009) were married at Villa Verano in Santa Barbara. Dan Ovando (MESM 2012 and current PhD candidate) was the event’s MC, and more than a dozen Bren alumni attended the celebration.

Formerly the Sustainability Manager for UCLA Housing & Hospitality Services (H&HS), Aliana Lungo-Shapiro (MESM) was promoted to Business Analytics Manager in late 2014 and now assists in managing and reporting financial and budget information. Her new role allows her to continue to oversee and provide strategic planning and direction to the sustainability program within H&HS.

Anderson Shepard (MESM) and Liz Whitely recently moved back across the country to “home soil,” landing in Santa Cruz in late January, finding a home and “settling back into the Cali lifestyle.” The move was prompted by Anderson’s new job with a six-person ecosystem science and design firm, 2ndNature, LLC. “The D.C. adventure was fun and enlightening,” he says, “but we’re stoked to be back on the West Coast!”

Fiona Teng (MESM) accepted a promotion within Zipcar to be their Regional Marketing Manager covering the northeastern region of the United States. The new job has taken her to New York City, where her portfolio will cover seven markets across the Northeast. Zipcar, of course, is trying to get people out of their cars to live a more sustainable urban lifestyle. Fiona’s blog post titled “Guide to Getting Uncomfortable with Race” appeared on the Huffington Post site last Dec. 12.

Liston Witherill (MESM) left his position as Director of Marketing at WRA to start Snap Copy, an online marketing company focused on copywriting. He still loves the environment and is applying his love for words and behavioral psychology to the new business.
2012

Sean Baumgarten (MESM) and his wife, Jess, have a new baby daughter, Gabriella Bray Baumgarten (nickname Ella), born August 5, 2014. The photo shows Ella at four days old, bonneted and bound for her first walk in the redwoods.

Last October, Mike Schwartz (MESM) joined EcoVadis as a Corporate Social Responsibility analyst. EcoVadis provides companies with solutions for understanding the environmental, social, and ethical risks associated with their supply chains. After three months of training at company headquarters in Paris, France, Mike is back in New York City. During the coming year, he will also participate in the Rene Cassin Fellowship in Human Rights.

Harry Vickers (MESM) is engaged to be married to Emma Thornton Jones on June 6, 2015, in the idyllic burg of Penshurst in Kent, England.

In a kind of West Coast channeling of LeBron James, Ed Walsh (MESM) says he is “taking my talents in air quality” to Trinity Consultants in Oakland, California. Those skills include “assisting clients in air permitting and compliance subject to local air district, California Air Resources Board, and federal criteria.” He says he’s excited to return home to the East Bay Area but will miss life in Hermosa Beach.

2013

Gretchen Grebe (MESM 2013) finished her stint as Feed Program Director with Olazul in La Paz, Mexico, and has returned to her native Colorado. In September she began working as a watershed scientist for a small consulting firm, Lotic Hydrological, in Carbondale. She’s coaching cross-country skiing and taking as many hut, desert, and international trips as possible.

On Sunday, March 1, Bren School alumnus Justin Lichter (left; MESM 2013) and his partner in adventure, Shawn Forry, became the first to through-hike (and ski and snowshoe) the Pacific Crest Trail in winter. The partners had covered 2,650 miles in 131 days, starting in British Columbia and finishing near the Mexican border. The only other people known to have attempted the feat, a husband-and-wife team, perished in the mountains near Los Angeles. An article posted on the Outside magazine website shortly after the partners completed their journey quoted Jack Haskel, trail information specialist for the Pacific Crest Trail Association, as saying, “What Shawn and Justin have done is really remarkable. The outdoor skill and planning involved in such a feat push them into the upper echelon of long-distance hikers.”

2014

After graduation, Taylor Debevec (MESM) moved to Huntington Beach, began working as a scientist supporting policy for highly migratory species at the National Marine Fisheries Service, and got married to Bassem Shoucri, whom she refers to as “the best person ever.”

Shelby Petro (MESM 14) and Raoul Comaduran were married in Portland, Oregon, on August 30, 2014.
The Alumni Issue

In this special issue of Bren News, we profile some of the Bren School’s more than 1,000 alumni: who they are, what they do, and how it makes a difference and gives them satisfaction.

Where in the World?  4
Bren alumni are currently working in nearly thirty nations and in two U.S territories. Wherever they are, they are providing leadership in multiple areas of environmental focus.

Corporate Sustainability  6
Business is changing. Consumers are more concerned about the environmental and social impacts of product supply chains. Bren alumni work at major companies on the forefront of this enormously impactful evolution.

Consulting  7
Regulations affect companies, governments, and individuals alike, and Bren alumni who work as consultants call on every element of their multidisciplinary education to help clients navigate the complexities of the regulatory world.

Government  8
Alumni in this sector are a remarkable group, working for government offices and agencies from the local to the federal level. Whether appointed, elected, or selected from hundreds of applicants, they make a difference every day.

Education, Research, NGOs  9
These alumni are not just on the cutting edge of sustainability; they’re sharpening it by bringing broad-based knowledge, interdisciplinary understanding, and fresh perspectives to D.C. think tanks, NGOs, university sustainability offices, and more.

Entrepreneurs  10
Bren School entrepreneurs are discovering new ways of turning the profit motive to environmental benefit. Combining their hunger for independence with a touch of the maverick spirit and a steadfast commitment to the environment, they are creating exciting new ventures in the spirit of doing well by doing good.

The Bren School is looking for inspired environmental problem-solvers.

Do you know a professional who wants to take his or her career to the next level, someone who wants to have a greater impact by qualifying for a higher-level job or a broader range of jobs? If so, let us introduce them to the Bren School. You can start by sharing this issue, which demonstrates the value of a Bren School degree.

Our friendly admissions staff is ready to guide prospective students through the admissions process and support them in preparing a polished application. We are also happy to arrange for applicants to visit the school and speak personally about it with students and faculty.

Learn more at www.bren.ucsb.edu. Contact the Bren School admissions staff at admissions@bren.ucsb.edu or 805-893-7611.

"After visiting the Bren School and speaking with the admissions staff and faculty, there was no question which program I would choose. I knew the Bren School was the place for me."
— Lara (Polansky) Buluç, MESM 2009
Sustainable Operations and Climate Change Coordinator, USDA Forest Service