



CENTER FOR LAW, ENERGY & THE ENVIRONMENT



2015 ANNUAL REPORT

YEAR IN REVIEW A LOOK AHEAD

BerkeleyLaw
UNIVERSITY OF CALIFORNIA

Center for Law, Energy &
the Environment

ABOUT THE CENTER

Our central goal at the Center for Law, Energy & the Environment (CLEE) is to channel the expertise and creativity of the Berkeley Law community into pragmatic policy solutions to critical environmental and energy challenges.

We work with public, private, and community partners on interdisciplinary research to identify equitable and effective approaches and to provide trustworthy analysis of complex issues. We focus on producing work that is timely, relevant, and actionable in the following areas:

- **CLIMATE & ENERGY** – creating pathways for achieving greenhouse gas emissions reductions and supporting transitions to renewable energy sources
- **SUSTAINABLE LAND USE** – furthering sustainable planning, community development, and transportation
- **WATER** – enabling innovation to address pressing water challenges in California and beyond
- **OCEANS** – ensuring effective and efficient ocean and coastal governance systems

CLEE is also designed to function as a hub for Berkeley's environmental and energy law faculty, staff, and students. The Center supports the education of Berkeley Law students by providing research opportunities, supporting student-led initiatives, and coordinating environmental and energy certificate programs. We could not be any prouder of the students that come through our halls each year.



Jordan Diamond
EXECUTIVE DIRECTOR



Daniel Farber
CO-FACULTY DIRECTOR



Holly Doremus
CO-FACULTY DIRECTOR

CLIMATE & ENERGY

CLEE works with policymakers, businesses, nonprofits, and others to advance clean energy and reduce greenhouse gas emissions.

CLIMATE CHANGE AND BUSINESS RESEARCH INITIATIVE

CLEE’s Climate Change and Business Research Initiative began in 2009 to facilitate communication, cooperation, and analysis with business executives, policymakers, non-profit leaders, and attorneys about the opportunities created by climate change. This successful collaboration between CLEE at Berkeley Law and the Emmett Institute at UCLA Law is also sponsored by Bank of America. In the past year, the initiative produced three reports:

Knowledge Is Power: How Improved Energy Data Access Can Bolster Clean Energy Technologies & Save Money (*January 2015*) which featured a well-attended legislative briefing at the State Capitol, with commissioners from the California Energy Commission and Public Utilities Commission;

Moving Dollars: Aligning Transportation Spending With California’s Environmental Goals (*February 2015*), which was launched at the Planning and Conservation League Annual Symposium at a panel with State Assemblymember Richard Bloom was highlighted in a Sacramento Bee op-ed entitled “State must spend smarter on roads and ‘fix it first.’”; and

Planting Fuels: How California Can Boost Local, Low-Carbon Biofuel Production (*December 2015*), which was the subject of a webinar and a Sacramento legislative briefing, as well as a Sacramento Bee op-ed entitled “State should set goals on use of low-carbon biofuel”.

CLIMATE ACTIONS FOR CALIFORNIA: RECOMMENDATIONS FOR GOVERNOR JERRY BROWN’S FINAL TERM

California has made landmark progress reducing carbon emissions while growing the economy, but the state’s work to reduce greenhouse gas emissions is just beginning. To reduce long-term emissions 80 percent over 1990 levels by 2050, the state will need both to build on existing programs and to address new areas that are key to decarbonizing the state’s economy, such as natural resources, water, and land use.

With just over three years remaining in Governor Brown’s final term, the new report **Climate Actions for California: Recommendations for Governor Jerry Brown’s Final Term** details immediate steps that administration leaders, environmental and energy advocates, and other stakeholders can take to achieve additional short-term successes and create a foundation for long-term progress that endures beyond the administration.

The report findings are based on interviews and a convening with Brown Administration officials, agency leaders, philanthropic representatives, and environmental experts.

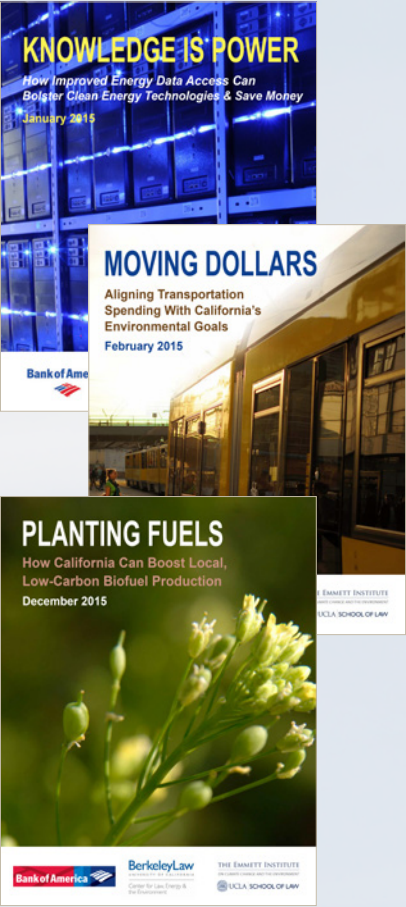


PARIS EVENT FOR GOVERNOR JERRY BROWN’S SUBNATIONAL CLIMATE INITIATIVE

CLEE sponsored a luncheon and signing ceremony in Paris in December during the United Nation’s COP 21 international negotiations. Governor Brown has been leading a global effort to secure commitments from subnational governments, including cities, states and regions, who pledge aggressive reductions in carbon emissions by 2050. In Paris, the governor received pledges from additional subnational entities, bringing the total commitment to one-tenth of the world’s population, representing a total of \$20 trillion in combined gross domestic product, and growing.

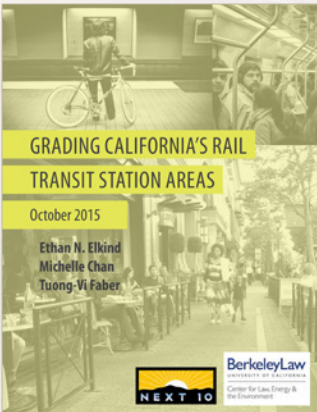


In the coming year, the Center plans to engage in research on ways to finance energy efficiency retrofits in existing commercial buildings and other topics related to achieving California’s 2030 greenhouse gas reduction goals, as well as additional events for decision-makers and the general public.



SUSTAINABLE LAND USE

In 2015, the Center continued its efforts to advance sustainable land use around California’s major urban transit systems.



HOW WELL DO CALIFORNIA’S RAIL TRANSIT STATION NEIGHBORHOODS CREATE WALKABLE, EQUITABLE, AND THRIVING LOCALES?

Grading California’s Rail Transit Station Areas (October 2015) A CLEE report, released by Next 10, graded 489 neighborhoods within 1/2-mile radius of stations in California’s six rail transit systems, covering the San Francisco Bay Area, Sacramento, Los Angeles, and San Diego.

Why grade these neighborhoods? The most effective rail systems with the highest ridership serve significant concentrations of jobs, retail, services, and housing around their stations and along the corridors they travel, particularly those within 1/2 mile of the station.

The grades revealed that high-performing stations are often in the middle of transit systems in downtown-like environments, while the poorest-performing stations are often located at the outer edges of rail systems and urban areas.

“Compared to major Metro stations and cities throughout California, the Westlake/MacArthur Park Station, which is on the Red Line, earned an A for its diversity, destinations, walkability, access and affordability. Researchers graded the 88 stations in the L.A. Metro area, and more than half of them received a grade of B or higher.” - ABC-7 NEWS LOS ANGELES

2015 PRESENTATIONS

The Administrative & Public Environmental Law Conference
California State Bar Public Law Section
June 2015 Hastings Law
Topic: CEQA & Land Use: “SB743 and the Ever-Changing CEQA Landscape”

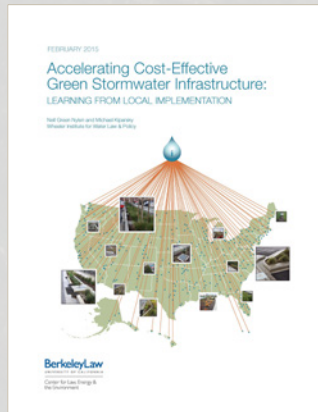
California Association of Councils of Governments
Regional Leadership Forum
April 2015
Topic: “Moving Dollars - Transportation Infrastructure and Environmental Goals”



LOOKING FORWARD

In 2016, CLEE hopes to engage in targeted follow-up analyses based on the findings. We also plan to develop assessments of land use and housing policies in key regions of the state to identify necessary next steps.

CLEE's Wheeler Water Institute focuses on developing integrative, interdisciplinary solutions to ensure clean water for California.



2015 SAW PROGRESS IN ALL THREE OF OUR FOCAL INITIATIVES:

Addressing Emerging Threats to Water Quality

Our report, **Accelerating Green Stormwater Infrastructure**, argues that while developing technologies for managing the impacts of stormwater is an essential element for reducing water quality impacts, establishing their cost-effectiveness will take increased monitoring and sharing of information. The work has caught the attention of federal and state decision-makers, and we have been invited to present our findings and co-organize a dialogue to push forward the thinking on this crucial stormwater issue.

Developing Resilient Urban Water Systems

We published two articles on technology innovation in the urban water sector, with an interdisciplinary group of collaborators. The research analyzes and recommends strategies for progress on potable water reuse. Our framework provides a way for technology proponents to ensure that new water technologies are properly vetted for safety and risks, and appropriately anticipate and respond to public concerns.

In the fall we launched a collaboration with The Nature Conservancy aimed at a key bottleneck (financing) in an emerging area of resource management (natural infrastructure). We have published an initial whitepaper that reviews some developing innovations in governance and financing of multi-benefit projects in the field, and points the way for additional research.

Reconciling Conflict Between Human and Environmental Water Use

To address the growing need for conservation areas, we joined a multi-institutional group in publishing an article proposing that protecting our nation's river network may hold the key to protecting biological diversity in the face of climate change. We suggest that a riparian conservation network could make our nation's protected areas more resilient, without requiring significant new legislation.

LAUNCH OF UC WATER SECURITY AND SUSTAINABILITY INITIATIVE

We launched the **UC Water Security and Sustainability Research Initiative**, a new \$3.5 million collaboration between four core UC campuses and other partners around the state. UC Water seeks to integrate Information, Institutions and Infrastructure to further California's progress towards a secure and sustainable water future.



LOOKING FORWARD

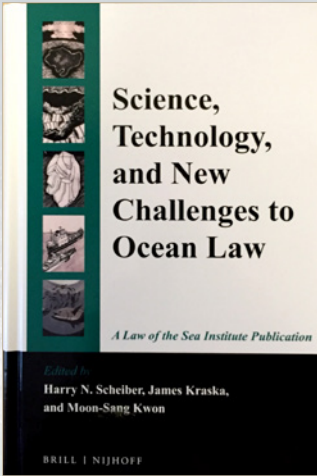
We are excited for what is to come in 2016. Early in the year, we will release the first report in a series on California's groundbreaking **Sustainable Groundwater Management Act**.

We will also release a major report on citizen enforcement under the **Clean Water Act** in the wastewater sector that combines empirical data and legal analysis.

Other ongoing research in 2016 includes:

- Examining the potential and pitfalls of market mechanisms as tools to achieve groundwater sustainability
- Evaluating policies to encourage innovation in the urban water sector
- Developing governance and financing options for natural infrastructure solutions
- Examining water decision-making during times of stress

CLEE engages in research that integrates ocean and coastal law, policy, and science. We are also proud to work with the Law of the Sea Institute, directed by Professor Harry N. Scheiber, to foster discussion and scholarship on key global issues.



LAW OF THE SEA INSTITUTE (LOSI)
CELEBRATES 50 YEARS

CLEE is proud to partner with the Law of the Sea Institute (LOSI), which is directed by Professor Harry N. Scheiber, Chancellor’s Emeritus Professor and Stefan A. Reisenfeld Professor of Law and History (Emeritus). LOSI has been a resource and research center for studies of ocean law since 1965 and has been headquartered at Berkeley since 2002.

Distinguished Senior Visiting Scholar

In fall 2015, the Institute was delighted to welcome Ronán Long, Professor and Jean Monnet Chair of European Law at the National University of Ireland, Galway. A leading expert in ocean law, fisheries governance, and European marine policy, Professor Long spent the semester as a Distinguished Senior Visiting Scholar.

Science, Technology, and New Challenges to Ocean Law

Last year the Institute published its tenth book since arriving at Berkeley. **Science, Technology, and New Challenges to Ocean Law** (eds. Harry N. Scheiber, James Kraska & Moon-Sang Kwon) explores advances in international ocean governance in the twenty years since the UN Convention on the Law of the Sea entered into force, and features current experts in ocean law, jurisprudence, policy, and science.

Celebrating 50 Years of Scholarship

In October 2015, LOSI hosted a commemorative conference to celebrate its 50th Anniversary. The two-day event featured distinguished speakers from across the world discussing the evolution of international ocean law and the current challenges associated with sustaining marine biodiversity and protecting living marine resources.



David VanderZwaag, Dalhousie University,
LOSI 50th Anniversary



LOOKING
FORWARD

The world’s fisheries are under enormous pressure to feed an ever growing human population. In order to gain a meaningful understanding of the state of US stocks, we need to clearly understand both the current state of a species and the commercial and recreational pressures it faces. The challenge, however, is that the public has limited access to part or all of this information. CLEE is exploring how fisheries data is handled once collected, and how public access compares with that in other resource extraction regimes.

Local governments in California and beyond face significant challenges associated with climate change and sea level rise. CLEE is helping Berkeley Law students identify options for local government adaptation to sea level rise and tailor approaches to specific local conditions.

STUDENT ORGANIZATIONS

BERC@Boalt
BERC@Boalt, the Law School chapter of the Berkeley Energy & Resources Collaborative, continues to connect current law students with campus energy resources and professionals in the energy law space. Last year, BERC@Boalt cultivated a new leadership team and brought a number of practicing attorneys to the law school to speak with students.

This spring, BERC@Boalt is excited to welcome two of the California Public Utilities Commissioners to a “Fireside Chat” moderated by Professor Steven Weissman. This year will feature the first ever “Energy Law Mixer,” inviting alumni and practicing attorneys to a networking reception with Berkeley Law students, in collaboration with the Berkeley Center for Law & Technology. The BERC@Boalt Energy Career Guide is also slated for an update in 2016.

Boalt Sustainability Team
Boalt Sustainability Team (BST) is a collaborative project of student organizations at Berkeley Law determined to bring attention to the Law School’s environmental impact. Since its inception, BST has partnered with law school and main campus staff to focus on waste management at Berkeley Law, specifically food waste. In 2015, BST helped implement Berkeley Law’s first composting program.

BST is also active in awareness and advocacy efforts to make environmental sustainability a greater priority at Berkeley Law. In Spring 2015, BST organized Berkeley Law’s first annual Green Week, which featured a wide range of speakers on environmental issues. BST is currently working to synchronize waste management efforts between the law school staff community, main campus

recycling, and refuse managers, and is also putting together the second annual Green Week.

Ecology Law Quarterly
Since 1971, **Ecology Law Quarterly (ELQ)** has served as the hub of environmental scholarship at Berkeley Law. Publishing four issues a year, ELQ provides a forum for preeminent scholarship on groundbreaking environmental law topics, including renewable energy, environmental justice, and international environmental law.

In 2008, ELQ launched **Ecology Law Currents**, an online companion journal designed to publish shorter pieces on a more frequent basis than the print journal. In 2015, in addition to publishing its four issues and Currents web content, ELQ members participated in the annual tradition of journal trips to both Yosemite

Valley and South Lake Tahoe. ELQ also continued to host our popular GuacFest parties on the rooftop courtyard of the law school, providing the student body with good guac, good music, and good times.

Environmental Law Society
The **Environmental Law Society (ELS)** promotes public interest environmental law, engaging students in projects and dialogue about emerging environmental issues and advocating for environmental protection.

ELS took on several projects in 2015, including an Environmental Conservation Outreach SLP, which partnered with Earthjustice on projects relating to hydraulic fracturing in Western States; co-sponsoring Green Week with the Boalt Sustainability Team; and chairing a panel at the 2016 California Water Law Symposium. Events and activities highlights from 2015 include a presentation co-hosted with the Berkeley Journal of International Law on Advocacy of Rivers and Human Rights by Peter Bosshard of International Rivers, a hike in Sibley Volcanic Regional Preserve, a summer jobs panel for 1Ls interested in environmental and energy law, and

a hike in Strawberry Canyon during Admitted Students Weekend.

Students for Economic and Environmental Justice
Students for Economic and Environmental Justice (SEEJ) is an affinity group for law students interested in economic and environmental justice issues and advocacy. Committed to the equitable distribution of environmental and economic benefits and burdens, SEEJ investigates the strategic use of legal tools to strengthen grassroots organizing and build community power.

In Spring 2015, SEEJ organized a symposium on Lawyering for Social Movements. Purvi Shah, Berkeley Law alum and Director of the Bertha Justice Institute, led two days of discussion and training for lawyers who support social movements.

This past fall, SEEJ co-hosted a series of talks, including a lunchtime presentation about the impacts of mountaintop removal coal mining in Appalachia, featuring Junior Walk. SEEJ also worked with community members to organize a tour of environmental justice sites in Richmond, CA.

ENVIRONMENTAL & ENERGY LAW CERTIFICATES

Berkeley Law offers two certificates of specialization in the fields of environmental and energy law. The certificate programs ensure that students develop a broad background in fundamental areas of law while receiving advanced training in environmental and/or energy law. In 2015, we were delighted and inspired by the 25 students that earned certificates in Environmental Law and in Energy & Clean Technology Law.



RAYMOND AZIZ, NICHOLAS J. DUBROFF, NINA KUMARI GUPTA, ALEX J. HARDEE, ALLISON AMBER JOHNSON, YASUYUKI KATO (NOT PICTURED), MARIA KOLIASTA, STEVEN S. MCCARTY-SNEAD, MAXIME MICHON-ROLLENS, PURBA MUKERJEE (NOT PICTURED), EVELINA NAVA, ELISE MARIE O'DEA, ELEFTHERIOS MIKROS, MARIA DEL PILAR OROZCO FERNANDEZ, ELENA M. PACHECO, INGRID PFISTER, JOHN E. REIDY, LOUIS ANDERS RUSSELL, DAVID M. SHULL, SHEENA M. STOCKER, YINGYING SUN, RODRIGO URZUA, SUBIN GEORGE VARGHESE, VIDYA VENUGOPAL, KIMBERLY A. WELLS

FACULTY/STAFF



Daniel Farber
CO-FACULTY DIRECTOR; FACULTY DIRECTOR OF RESEARCH AND PUBLIC POLICY WORK AND SHO SATO PROFESSOR OF LAW

Dan is a leading scholar in environmental law, constitutional law, and legislation. He is a pioneer in disaster law, an emerging field that examines legal issues and risk surrounding catastrophes and their aftermath. Much of his recent research centers on climate change.



Holly Doremus
CO-FACULTY DIRECTOR; JAMES H. HOUSE AND HIRAM H. HURD PROFESSOR OF ENVIRONMENTAL REGULATION

Holly is a leading scholar in environmental law, natural resources law, and law and science. Holly’s strong background in life sciences inform her work and her commitment to interdisciplinary teaching.



Jordan Diamond
EXECUTIVE DIRECTOR

Jordan’s work focuses on ensuring environmental and energy governance systems are based on robust information and inclusive, adaptive processes. She specializes in ocean and coastal law and policy.



Ethan Elkind
DIRECTOR, CLIMATE PROGRAM

Ethan’s work and interests cover the crossroads of climate change, business, and land use. His research produces practical solutions to combat climate change.



Michael Kiparsky
DIRECTOR, WHEELER WATER INSTITUTE

Mike brings interdisciplinary perspective to bear on his work at CLEE. He has worked on technical and policy aspects of water resources management, and much of his work at CLEE lies at the intersection between the two.



Nell Green Nylen
RESEARCH FELLOW, WHEELER WATER INSTITUTE

Nell’s research engages law, science, and policy to identify interdisciplinary solutions to pressing California water issues.



Christopher Williams
RESEARCH FELLOW, WHEELER WATER INSTITUTE

Christopher’s research focuses on policy and financing strategies to overcome some of California’s most pressing hydrological challenges, including climate change-related adaptation and water treatment technology adoption.



Lisa Tucker
PRO BONO ATTORNEY

Lisa joined CLEE on a volunteer basis in fall 2015 and is now fully engaged in issues concerning the health of our oceans and fisheries. She hopes to apply her experience in the business and private sectors to make a difference in the world of environmental policy.



Clara Alivisatos ’16 (Vassar)
UNDERGRADUATE STUDENT INTERN, SUM 2015

Clara engaged in research on offshore energy law and policy, California water policy, and energy efficiency financing.



Kelly Archer ’17,
UNDERGRADUATE STUDENT RESEARCHER, FA 2015 - SPR 2016

Kelly works with Mike Kiparsky and Nell Green Nylen to research the availability of data necessary for sustainable groundwater management and the potential role for market mechanisms.



Noosha Bronte Razavian ’17
UNDERGRADUATE STUDENT RESEARCHER, FA 2015 - SPR 2016

Noosha is working with Mike Kiparsky on risk regulation and how institutions can be developed to better manage potable water reuse.



Melina Dunham ’17 (Barnard)
UNDERGRADUATE STUDENT INTERN, SUM 2015

Melina engaged in research related to high seas biodiversity, cook stove deployment, managing the environmental impacts of marijuana cultivation, and effective social media strategies. potable water reuse.



Jennifer Han ’16,
UNDERGRADUATE STUDENT ASSISTANT, FA 2015 - SPR 2016

Jennifer works with Jordan Diamond on a variety of Center efforts including database development, web editing, and more.



Katherine Jayne ’17
GRADUATE STUDENT RESEARCHER, FA 2015

Kit worked with Ethan Elkind on research into various models and policy frameworks for energy efficiency retrofit financing.



Rebecca Morse ’16
GRADUATE STUDENT RESEARCHER, FA 2014 – SPR 2015

Rebecca worked with Mike Kiparsky and Nell Green Nylen to examine legal and regulatory aspects of citizen suits regarding sanitary sewer overflows under the Clean Water Act.



Shampa Panda ’16
GRADUATE STUDENT RESEARCHER, FA 2015 – SPR 2016

Shampa writes a weekly newsletter for Berkeley Law students, staff, and faculty summarizing current environmental and energy law activities and events on campus.



Luke Sherman ’15
UNDERGRADUATE STUDENT RESEARCHER, SPR – SUM 2015

Luke worked with Mike Kiparsky and Nell Green Nylen to gather and analyze data related to sanitary sewer overflows and citizen suits under the Clean Water Act.

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A TRIBUTE TO
HENRY H. “SAM”
WHEELER
(1927-2015)

The Center for Law, Energy and the Environment celebrates the life of Henry H. “Sam” Wheeler, who made extraordinary contributions as a leader in the water sector and as a philanthropist.

Sam served as President of Park Water Company from 1973 until 2011. As steward of this well-respected utility, Sam built an enduring institution. In addition to his leadership and tenacity leading Park Water to success as a water service provider, Sam cared deeply about his employees – his loyalty to his staff was a primary concern. Sam focused heavily on philanthropy during the past few years of his life. His support was as wide-ranging as his intellectual interests, with crucial and game-changing investments in areas from medical research to water pollution.

On a personal note, we at Berkeley Law found Sam’s intellectual curiosity and engagement as impressive as they were legendary among his peers. His appetite for science was voracious and wide-ranging. Sam’s critical and astute reading of the scientific literature resulted in an ability to challenge a spectrum of experts on the details of research in their specialties. Belying his prodigious abilities, Sam had a modest demeanor and love for in-depth conversation. We had a deep respect and affection for Sam, and will dearly miss him.

Sam had the vision to help us launch our work on water at U.C. Berkeley School of Law three years ago. We are forever grateful for the opportunity to continue the work he saw fit to help us begin.

THANK YOU FOR YOUR SUPPORT

As a self-supported research unit within the school, CLEE could not complete its work without the generous financial and in-kind support we receive from the extended environmental and energy law community. Our gratitude to all of you who give of your time and resources to help make our projects and programs a reality. In a time of fiscal austerity throughout the state, and especially in the UCs, it is no exaggeration to say that none of this would be possible without you.

To find out more about how to support environmental and energy law, research, and students at Berkeley Law, please visit www.law.berkeley.edu/clee-support.

FOR MORE INFORMATION



clee.berkeley.edu

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UC Berkeley School of Law's CLEE Annual Report saved the following resources by using 250 pounds of Ingenuity, made with 100% recycled fiber and 100% post-consumer waste, processed chlorine free, designated Ancient Forest Friendly™ and manufactured with electricity that is offset with Green-e® certified renewable energy certificates.

TREES	3 FULLY GROWN
WATER	1,403 GALLONS
ENERGY	1 MILLION BTUs
SOLID WASTE	94 LBS
GREENHOUSE GASES	258 LBS

Calculations based on research by Environmental Defense Fund and other members of the Paper Task Force.



NEW LEAF PAPER
manufactured with wind power

