US EPA ARCHIVE DOCUMENT

EPA Earth Day Event

NSDE
National Sustainable Design Expo

EPA's P3 award

Washington, D.C. • April 16-17, 2011 • www.epa.gov/P3

2011 PROGRAM GUIDE

EPA United States Environmental Protection Agency

AIChE American Institute of Chemical Engineers

ASCE American Society of Civil Engineers

Engineers Without Borders USA

Welcome

WELCOME to the United States Environmental Protection Agency's (EPA) Earth Day Event! Whether you happened by while in the D.C. area or planned to visit us today, we are glad you stepped into our tent to enjoy the exhibits, demonstrations and hands-on activities.

EPA's Earth Day event offers a unique opportunity to learn about how each one of us can make a difference in protecting our environment and even glimpse into the future with technology designs that can lead to a sustainable planet.

This year's Earth Day event includes the National Sustainable Design Expo featuring EPA's P3 competition. The P3 – People, Prosperity and the Planet – competition is an annual event for teams of graduate and undergraduate students to design solutions for environmental and sustainability challenges worldwide. These teams bring their innovative designs to the National Mall and compete for the P3 Award and a grant of $75,000 to turn their idea into a business or implement it in the community. This year, 55 teams from across the United States are competing and showcasing their ideas alongside our exhibitors.

See how the energy and creativity of today's college students can empower solutions for a greener future!

Held every year in the shadow of the U.S. Capitol, the Expo truly is an inspiring exhibition of innovative technology for a sustainable future. This year, more than 40 nonprofit organizations, businesses and other government agencies are showcasing their achievements in sustainability. This year's Expo is cosponsored by EPA, the American Institute of Chemical Engineers, the American Society of Civil Engineers and Engineers Without Borders-USA.

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Schedule

Saturday, April 16, 2011

10:00 A.M. – 5:00 P.M.	Open to the public EPA Exhibits and Demonstrations National Sustainable Design Expo Exhibits P3 Team Projects
10:00 A.M. – 3:30 P.M.	P3 Project Judging
10:00 A.M. – 5:00 P.M.	Eco Art Theater
11:00 A.M. – 4:00 P.M.	Earth Tales

Sunday, April 17, 2011

10:00 A.M. – 3:00 P.M.	Open to the public EPA Exhibits and Demonstrations National Sustainable Design Expo Exhibits P3 Team Projects
10:00 A.M. – 3:00 P.M.	Bash the Trash Eco Art Theater

Green Fun for All Ages

Earth Tales, cosponsored with The Library of Congress, features environmentally-themed story time, read by VIPs hourly on Saturday. Visit the tent for stories and times.

Eco Art, co-hosted by the Capital Hill Arts Workshop, invites children to paint an earth-friendly image on a post card, and mail it from the event courtesy of the Post Office and their new "Go Green" stamp launch. Open Saturday and Sunday.

"Bash the Trash" is an exciting opportunity for children to build musical instruments from recycled materials and create an "earth symphony" on Saturday. Visit the tent for times.

Theater – step into the theater and enjoy environmental movies from EPA's film vault.

EPA Earth Day Exhibits

Clean Air Kiosk Exhibits
- Smartway
- Stratospheric Protection
- Climate Change/videos
- Radtown
- Acid Rain and Power Plants
- Asthma
- Radon
- Clean Air Act

Safe Water Kiosk Exhibits
- Enviroscape
- Ground Water Model
- Low Impact Development
- Water Sense Products
- Envirofacts Online
- Septic System Model
- CCR / ECHO Databases

Green Science Kiosk Exhibits
- Permeable Pavement Demo
- Fun with Chemical Reactions
- Lung Capacity Game
- Matching Particles

Green Science Kiosk Exhibits (cont.)
- Community Gardens
- Wheel of Science
- Superfund Clean-up
- CARE Program "Do you Live in a CARE Community"

Green Technology Kiosk Exhibits
- Environmental-Information or E-Info
- Google Earth
- Green Buildings and Infrastructure
- Spanish and English Tweets

Green Works Kiosk Exhibits
- Earth Day Stamps – True Green
- What I Want Video Screen Test
- Video Soapbox
- Press and EPA in the News
- Carbon Wheel
- EPA's Enforcement Efforts

A4-5 Energy Star

E4-5 Design for the Environment Games

D4-5 EPA Healthy Home

D12-13 EPA Lead Wall

C29-32 Enforcement Mock Crime Scene

D29-30 Environmental Justice

2011 P3 Phase I Teams

A31: Clean Water - Clean Fuel - Using Algae to Solve Problems
Appalachian State University students use algae to purify wastewater in a system that releases water free of algae and allows for easy algae harvest for biofuel production.

D16: Sun, Bottles and Beeswax
Appalachian State University students have designed a reusable plastic bottle to disinfect drinking water using solar energy and a beeswax indicator to confirm sufficient temperatures have been attained for disinfection.

A19: From Forest Litter to Electrical Energy
Clemson University students are developing a microbial fuel cell system that converts forest litter into usable electric energy and reduces pollution from biomass burning.

B9: Poo Power: Sustaining Communities on Human Waste
Columbia University students address rural villages' sanitation and water access needs while converting waste to energy and fertilizer via source-separated latrines.

B21: Leaner Greener Roof
Drexel University students are designing a low cost, do-it-yourself, soilless, lightweight green roof system with a high water retention capacity that is engineered for existing structures.

D20: Water, Water, Everywhere - Should We Handle It Here or There?
Duke University students achieve economies of scale and improve in water quality by "pooling" how storm flows are managed.

C1: Bike-sharing In a Box
Georgia Institute of Technology students are designing an "on-bike" automated bike sharing system that does not require kiosks to increase flexibility for riders and reduce operating costs.

B16: Biomass Fuel for Power Generation
Gonzaga University students generate power from corn stalks and leaves and human and animal waste to replace costly, high-pollution alternatives for Kenyan farmers.

B27: Fire, Grazing, and Prairie Carbon Sequestration
Iowa State University and Oklahoma State University students research how fire and grazing can reduce invasive species and increase carbon sequestration in prairie pastures.

B17: Sustainable College Communities: Incorporating a Sustainable Food Loop
Lafayette College students create a sustainable food loop: food waste is used to make compost used in a garden that provides food for campus dining halls.

A22: Good Things Come in Small Packages!
Lehigh University students are designing a filter to treat drinking water that is smaller and more affordable for people in developing countries.

C20: How do you Give a Community their Lake and Protect its Tributaries? Arsenic Removal in South East Asia
Lehigh University teamed up with The Institute of Technology of Cambodia to design a treatment system for removing arsenic from drinking water that is more affordable for people in developing countries.

A26: A Fruity Solution for Contaminated Water
Manhattan College students use citricidal as a natural antibacterial agent for in-situ use with coconut shell derived activated carbon for sustainable water purification.

C12: Bison versus Cattle
Marshall University students try to determine if buffalo affect the plants and streams in their pasture differently than cows.

A29: Not Granny's Rooftop Anymore: Green Roofs for Residential Design
Michigan State University students show that conventional roofing materials and installation are out and green roof technology is in. Learn about smart green roofs for your home.

C15: Chameleon Home Automation System
Missouri University of Science and Technology students optimize home energy use through their design of a residential energy management home automation system, named Chameleon.

B1: Sucking Water From the Wind
Montana Tech of the University of Montana students have developed a mechanical water treatment system driven by renewable energy to supply drinking water to developing rural communities.

A12: Toilet of the Future-Cycle of Human Waste
New Jersey Institute of Technology students have developed a sanitation system for a hospital in Milot, Haiti that produces methane and fertilizer and improves water quality.

2011 P3 Phase I Teams (continued)

D3: A Green Lifestyle Made Easy!
New Jersey Institute of Technology students educate the public about adopting sustainable practices through a program that will be available in "app" form for smart forms, which improve shopping techniques for individuals.

C10: A Novel Raceway for Microalgal Cultivation
New Mexico State University students have developed a new airlift driven raceway reactor for microalgal cultivation.

C13: Wood Products for Clean Air
North Carolina State University students show how forest management for products and carbon storage can lead to cleaner air.

D11: Improved Eco-Friendly Golf Tees
Northern Illinois University students have developed a more biodegradable and less costly golf tee by blending DDGS and glycerine with PLA or corn-starch resin.

C8: Wind, Water and Carbon Dioxide - A Recipe For Fuel...
Oklahoma State University students generate fuel from sequestered CO2 from industrial applications and hydrogen generated from wind power, using BioWinol.

D28: Dark & Light: Pros & Cons in My Backyard
Oklahoma State University, University of Oklahoma, and Clemson University students measure the impacts of existing and artificial optical radiation at 3 housing communities: a military, student and an older adult housing community.

C21: Trash to Treasure with our Microbial Friends: Converting Waste Streams to Nutrient Feeds
Pennsylvania State University students convert waste streams into energy and biofertilizer, which minimizes waste generation, energy usage, and costs associated with bioremediation, nitrogen fixation, and biofuel production.

C25: Miracle Solution for Clean Water in the Developing World
Pennsylvania State University students have reinvented the slow sand filter with the help of the Miracle Tree to purify water.

D6: A Site Intervention for Sustainability Education
Philadelphia University students aim to illustrate how the run-off affects the local ecosystem and what can be done to reduce an impacts at a local public high school through their design of a zero-impact stormwater run-off laboratory.

B24: Barrelling Towards a More Sustainable Community: Using Rain Barrels in CSO Neighborhoods
Purdue University residents eagerly adopted rain barrels to improve the quality of nearby surface water and reduce their dependence on tap water!

B30: Energy for Cameroon
Purdue University students have worked to create community power from sustainable small hydro power systems in Bangang, Cameroon.

A28: Stop Deforestation, for Peanuts!
Rowan University students are developing a simple system for producing peanut shell briquettes to replace wood as a cooking fuel in rural Gambia.

B20: Cloudy with a chance of GRAIN!
Stanford University students make ammonia and reduce carbon dioxide emissions with nitrogen-selective membranes.

D14: Tape & Scissors: EmPowering our Teachers
Stanford University students have erected a wind turbine, offsetting a large fraction of the school's energy load, and have designed hands-on renewable energy education activities for their community.

A3: What's Your Stormwater Footprint?
Ever wondered how your household decisions affect local water bodies? Texas A&M University students have designed an "app" to calculate your stormwater footprint.

B25: Using Alternative Energy for Sustainable Electric Transportation in Rural Communities
University of Alaska at Fairbanks students use alternative energy sources to power Electric All Terrain Vehicles (EATVs) to combat the high cost of transportation fuels in rural communities.

D17: Algae to Butanol: Cleaning Water, Fueling Society, Sustaining Life
University of Arkansas at Fayetteville students produce a direct gasoline alternative: biofuel from algae, which doesn't compete with the food supply.

C17: Bioenergy From Sugar Beets
University of California, Davis students produce biofuels from sugar beets through the integration of ethanol and biogas production systems.

B6: Tired of Paying For Your Car's Fuel? Just Fuel It Up Instead With All Your Trash!
University of California, Riverside students investigate the conversion of University campus waste into Fischer Tropsch Diesel through steam hydrogasification.

2011 P3 Phase I Teams (continued)

A1: Clean, Renewable, Grid-independent Electricity by Fuel Cell System
University of California, Riverside students have developed clean, renewable, grid-independent energy for 1.5 billion people currently without the convenience of electricity.

C27: Soybean, chicken feather and fashion?
University of Delaware students have designed apparel and footwear using materials from bio-based sources such as soybean, linseed and chicken feather.

B3: The Milk Man vs. Time
University of Georgia students have constructed a 100-liter milk cooler where biogas regenerates zeolite for repeat cooling, eliminating the need for electricity.

A15: Wetlands, Water, People and Nature
University of Georgia and Makerere University students used GIS and remote sensing to assess land feasibility for water harvesting while minimizing wetland encroachment.

D22: Waterboy Solar…The sun can do it!
University of Illinois at Urbana-Champaign students designed a self-watering systeming that can be built into flower planters for on-site water collection and solar powered distribution.

D21: Squeezing Water from Dry Land
University of Illinois at Urbana-Champaign students have worked to improve the quality of water in Ntisaw, Cameroon from the spring catchment, which is contaminated with fecal waste from cattle.

A13: We've Got A Bone To Pick With You, Heavy Metals
University of Illinois at Urbana-Champaign and Oglala Lakota College students have developed a simple, affordable and sustainable bone char filtration systems to remove arsenic and uranium from the Pine Ridge Reservation's drinking water.

D24: Renewable Energy and Electric Vehicles Brought Together
University of Kansas students modified the design of a solar energy filling station for electric powered cars to maximize energy flow and minimize energy loss within the system.

A17: Glycerol, It's Not Just for Soap Anymore!
University of Kentucky worked to increase the profitability and carbon efficiency of biodiesel refineries via utilization of crude glycerol to produce specialty chemicals.

D19: Safer plastic additives made using plant catalysts
University of Massachusetts students researched the the synthesis of polyphenol based non-halogenated flame retardants using an environmentally friendly process.

A24: Waste Not Wood!
University of Michigan students seek to bring sustainable anaerobic digesters to developing communities to improve health and environment.

B32: Drinking Water from Thin Air!
University of Missouri students capture moisture from air and convert it into pure water, using only the sun, thanks to their design of N.E.W.S.

A8: I-SAVE
University of Nebraska students developed I-SAVE, an interactive real-time monitor and controller (RTMC) system, designed to influence user behavior to reduce energy waste.

D9: Shrinking the Environmental Footprint of Getting to Work
University of Tennessee students compare the sustainability of small electric and fuel cell vehicles to current cars for commuting to work.

A6: Contaminant Removal in Sustainable Water Filtration System for the Village of La Barranca, Honduras.
University of Toledo students developed a sustainable riverbank filtration system in La Barranca, Honduras to remove multiple contaminants (pathogens, metals, NOM).

D27: On the Road to reCOVER
University of Virginia students developed "reCOVER", a transitional housing system that uses passive design and prefabrication to improve the health and safety of people worldwide.

A10: From Cloud to Cup: Tapping the Well in the Sky
University of Virginia students have designed a urban rainwater collection and treatment system prototype for developing communities.

C24: Underfloor Air Systems Application in Residential Buildings
University of Wyoming students have focused on Under Floor Air Distribution Systems (UFADs) to provide enhanced indoor air quality, energy efficiency and thermal comfort.

Past P3 Winners Exhibits

A25 Mixed Feedstocks to Biodiesel in a Bubble Column Reactor
Drexel University students, 2010 winners, are developing a method for the production of biodiesel using an acid catalyst to esterify natural oil and grease that contains FFA/TAG.

D1 SolSource
Harvard University students, 2010 winners, have designed SolSource, a portable, affordable and innovative generator of clean energy that is being used in rural communities in the Himalayas.

C7 Enhancing Urban Sustainability through the Application of Natuculture
North Carolina A&T University students, 2010 winners, are researching "natuculture" technology, a way to 'make the unnatural natural' and defined as any human made system that mimics nature in human disturbed landscapes.

B23 Green Energy System for Fish Farms
Roger Williams University students, 2010 winners, have designed sustainable aquaculture construction with habitat, weather and electrical parameters continuously monitored by an automatic system .

C23 Healthy Solar Lighting For Building Cores
Texas A&M University students, 2010 winners, are developing an efficient passive horizontal solar light pipe that integrates daylight, electric light and lighting controls to reduce energy consumption.

A32 Virus Removal in Biosand Filters for Rural Communities
University of Illinois at Urbana-Champaign students, 2010 winners, are improving biosand filters for virus removal, potentially affecting millions.

C18 Sustainable Farming Using Fish Effleunt to Grow Vegetables
University of Arizona students, 2009 winners, show indigenous farmers in Southern Mexico how to recycle fish wastes to grow vegetables. The effort focuses on sustainable farming and the transfer of technology from China and the U.S. to Mexico.

D8 Are you AWARE of water? A Water Awareness Research and Education Project
University of South Florida students, 2009 winners, have designed and implemented a water awareness research and education project (WARE) that is a model for university, K-12, community partnerships that promotes STEM interests while creating sustainable healthy communities.

D10 A New Norris House: A Sustainable Home for the 21st Century
University of Tennessee – Knoxville students, 2009 winners, are putting the finishing touches on their redesign of a classic TVA home that incorporates green building principles and maintains the historic features of the house.

C2 Cement From Trash: Fair, Low-Cost and Low-CO2
Drexel University students, 2008 winners, have developed a process for making alkali-activated cement that is made from trash, costs 50 percent less and makes 95 percent less CO2 than traditional processes. More: http://bit.ly/hWXm8b

A23 Biofuels for School
Loyola University of Chicago students, 2008 winners, are bringing biodiesel to high schools. They built mobile biodiesel processors, developed curricula and provided support.

B18 Education with Implementation: A model for sustainable energy
Northwestern University students, 2007 winners, have improved wastewater treatment, provided solar electrification and begun work on rice huller designs in Panama.

Intel High School Science Fair Winner

A18 Intel International Science and Engineering Fair (ISEF)
EPA Sustainability Award Winner

John Boykin won the EPA award for his research to answer the question, "Can recycled plastics be used to reduce landfill waste, help improve the infrastructure of buildings, hospitals, roads, highways and bridges and reduce green house gas? Intel ISEF is the world's largest international pre-college science competition, provides an annual forum for more than 1,600 high school students from nearly 60 countries, regions and territories to showcase their independent research.

National Sustainable Design Expo Exhibitors

B4-5 American Association for the Advancement of Science (AAAS)
AAAS Spark Club is an after school program in which DC middle school students learn physics and engineering, with an emphasis on green energy.

B2 AIA|DC Committee on the Environment
Greening your Home! COTEdc is a committee of green building professionals that educates and promotes sustainable strategies for commercial and residential design.

B26 American Academy of Environmental Engineers Established in 1955, the American Academy of Environmental Engineers is a specialty certification board and professional society for environmental engineers that is dedicated to improving the quality of environmental engineering practice. For more information, visit http://www.aaee.net.

C28 American Institute of Chemical Engineers (AIChE)
A cosponsor of the National Sustainable Design Expo, AIChE serves chemical engineers with conferences, webinars, publications and networking opportunities. Please visit us at www.aiche.org.

C19 American Meteorological Society (AMS)
Wonder about #weather? Make your own cloud at the AMS booth! AMS also provides professional development opportunities for for K-12 teachers and undergraduate college courses.

B13-15 American Society of Civil Engineers (ASCE)
A cosponsor of the National Sustainable Design Expo, ASCE is an engineering professional society and a global leader in sustainability through its programs and partnerships.

D2 American Society of Landscape Architects (ASLA)
A national professional association for landscape architects, ASLA seeks to lead, to educate and to participate in the careful stewardship, wise planning and artful design of our cultural and natural environments.

B7 American University
Green your career in business, policy and science. All in one degree right here in DC.

D18 Association of Environmental Engineering and Science Professors (AEESP)
Founded in 1963, AEESP assists its more than 700 members with improving education and research programs, encourages graduate education and serves the profession by providing information to government agencies and the public. Member professors in academic programs throughout the world provide education in the sciences and technologies of environmental protection.

D31 Center for the Advancement of the Steady State Economy (CASSE)
CASSE offers a positive solution to our economic and ecological predicament – transition to a steady state is the answer to climate change, financial fiascoes, and ecosystem eradication. For more information, visit steadystate.org.

B22 Centers for Disease Control and Prevention (CDC)
CDC's Healthy Community Design Initiative promotes health impact assessment in community planning, transportation and land-use decisions.

C16 DC Net Impact Professional Chapter
DCNI is a premiere socially responsible professional association in the national capital region.

B29 Department of Energy (DOE)
DOE - Energy Efficiency and Renewable Energy invests in clean energy and energy efficient technologies that strengthen the economy and protect our nation and the environment.

A16 Electric Vehicle Association of Greater Washington, D.C.
Home-built and commercially available electric vehicles are on display including cars, motorcycles, electric bicycles and others.

D23 Energy Independence Corps
The Energy Independence Corps helps citizens and communities become energy independent and fully sustainable. Visit us today at eicorps.org!

A14 Engineering for Change (E4C)
E4C is bridging technology and international development. Explore how communities are being transformed using open-source technology and global collaboration. Visit us at www.engineeringforchange.org.

D7 Engineers for a Sustainable World (ESW)
Students and professionals of ESW see a world in which engineering fosters environmental, social and economic sustainability to improve both the quality of life and the condition of our planet. For more information, visit esustainableworld.org.

C26 Engineers Forum on Sustainability (EFS)
EFS provides the engineering community with a place for interdisciplinary information exchange and discussion. Visit us at www.efs.aiche.org.

National Sustainable Design Expo Exhibitors (cont.)

B13-15 Engineers Without Borders-USA
A cosponsor of the 2011 National Sustainable Design Expo, EWB-USA pairs engineers and college students to help communities meet basic needs sustainabley. Visit www.ewb-usa.com.

D26 Erb Institute for Global Sustainable Enterprise-University of Michigan
Founded in 1996, the institute's mission is to produce transformative tools, knowledge and leaders that work to create socially and environmentally sustainable economies.

B31 European Union
Green Energy in the European Union

C6 Fair Trade Federation (FTF)
FTF strengthens and promotes North American organizations fully committed to fair trade. The Federation is part of the global fair trade movement, building equitable and sustainable trading partnerships and creating opportunities to alleviate poverty. Follow us on Twitter @FTFederation.

C11 Green Building Institute
The Green Building Institute—a non-profit organization focused on education, outreach and networking—sees a world where the built environment enhances the natural environment. Visit www.greenbuildinginstitute.org!

A2 Institute of Professional Environmental Practice
Show your standards of knowledge and ethics with the EPI (Environmental Professional Intern) credential from IPEP! Visit www.ipep.org.

B19 Internal Development Enterprises (IDE)
The power of innovation and markets, IDE has been creating income and livelihood opportunities for poor rural households since 1982.
Visit www.ideorg.org.

E2 Newton Marasco Foundation (NMF)
Inspiring tomorrow's stewards through youth designed and driven programs, NMF teaches the value and ethics of environmental stewardship and sustainability.

C3 Planet Forward
Planet Forward is where citizens and scientists weigh in on solutions to our energy, climate and sustainability challenges. Visit planetforward.org!

A9 Potomac Region Solar Energy Association (PRSEA)
PRSEA can help you GO SOLAR with free lectures, events, solar tours and more. Join us today at PRSEA.org!

D15 Student Conservation Association
Established in 1957, this large conservation organization creates the next generation of conservation leaders.

A30 Sustainable Community Initiatives (Community Forklift Program)
Don't dump - donate! For a nonprofit building material reuse centers near you, visit www.CommunityForklift.com.

C22 Texas A&M University (TAMU), College of Architecture
The TAMU Exhibit showcases a spectrum of initiatives, programs and projects related to architecture and sustainability of the built environment.

A21 Trees for the Future
Trees for the Future works to improve the livelihoods of communities through sustainable agriculture and the planting of beneficial trees.

B10-12 U.S. Army Corps of Engineers
As the Nation's Environmental Engineer our focus is on engineering solutions for a sustainable future.

A7 U.S. Peace Corps
Peace Corps, a federal agency, is devoted to world peace and friendship.

C9 Virginia Tech, Executive Master of Natural Resources (XMNR)
Virginia Tech, XMNR Program engages a new generation of professionals to develop skills in leadership for sustainability.

D32 Walden University
Since 1970, Walden has supported the academic goals of working professionals with a mission of positive social change.

Business Exhibitors

A11 Covanta Energy
Covanta Energy currently operates more than 40 Energy-for-Waste facilities in North America, Europe and Asia. Converting energy from waste conserves resources and reduces GHG emissions.

B28 Dow
Driven by the power of chemistry, Dow's innovation engine delivers solutions to world challenges, including energy, water food, and health. Dow combines the power of science and technology with the "Human Element" to innovate solutions for a more sustainable world.

D25 Hydrovolts, Inc.
Hydrovolts makes portable hydroelectric turbines to generate renewable energy from water canals used for irrigation and other uses.

A27 Kenergy Solar
A solar system is an extension of the home or business it is built for. Our designs are as unique as you are. We will demonstrate our process for evaluating buildings to create the perfect design.

A20 Science Applications International Corporation (SAIC)
SAIC demonstrates capabilities and leadership in the fields of sustainability, global climate change, greenhouse gas issues and Green IT.

E1 Siemens Foundation and Discovery Education
Visit the Siemens Science Day Hands-On Activities and check out cool, free science experiments that will inspire your kids to go green and protect the planet! For more information, visit siemensscienceday.com.

2011 National Sustainable Design Expo

Established in 1970, EPA's mission is to protect human health and the environment. For more than four decades, EPA has confronted environmental challenges, fostered innovations, and cleaned up pollution in the places where people live, work, play and learn. EPA is strongly committed to protecting and preserving our country's environment through improving air quality; ensuring chemical safety; cleaning up our communities; protecting America's waters; working for environmental justice; and building strong state and tribal partnerships. Sustainability principles and approaches can help to achieve global solutions for these priorities. To learn more, visit www.epa.gov.

The American Institute of Chemical Engineers (AIChE) is the world's leading organization for chemical engineering professionals, with more than 40,000 members from over 90 countries. AIChE's Institute for Sustainability (IfS) was created to serve the needs of professionals, academics, industries and governmental bodies that contribute to the advancement of sustainability and sustainable development. The Institute approaches sustainability from an engineering and scientific perspective with the objective of promoting the societal, economic and environmental benefits of sustainable and green engineering. To learn more, visit www.aiche.org.

Founded in 1852, the American Society of Civil Engineers (ASCE) represents more than 144,000 civil engineers worldwide and is America's oldest national engineering society. ASCE's mission is to advance civil engineering and serve the public good. In carrying out that mission, ASCE advances technology, encourages lifelong learning, promotes professionalism and the profession, develops civil engineer leaders and advocates infrastructure and environmental stewardship. To learn more, visit www.asce.org.

Engineers Without Borders-USA envisions a world in which the communities they serve have the capacity to sustainably meet their basic human needs. EWB-USA members strive to achieve global perspectives through the innovative professional educational opportunities that the program provides. Dubbed the "Blueprint Brigade," by Time Magazine, EWB-USA grew from little more than a handful of members in 2002 to over 12,000 today. EWB-USA has over 350 projects in over 45 developing countries around the world including water, renewable energy, sanitation and more. To learn more, visit www.ewb-usa.org.

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AIChE
American Institute of
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ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

ENGINEERS
WITHOUT
BORDERS
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