

	ACTION [Outcomes Addressed] (Target Completion Dates)	STATUS	LEAD COMMITTEE /UNIT	LEAD STAFF CONTACT
	<p>Next 5 years:</p> <ul style="list-style-type: none"> Based on summit outcomes, implement a stand alone sustainability certification program/Academy. (2014) Modify the components of the professional PE/FE engineering exam to reflect the candidates' knowledge of sustainability. (2014) 			
3.	<p>Make all ASCE policies consistent with the sustainability principles and actions of the Society, as well as with new developments in sustainable engineering practice, education, and research. [1, 2] (On-going)</p> <p>Immediate:</p> <ul style="list-style-type: none"> Actively participate in and advocate for policy leadership in sustainability and climate change with allied groups in the US and worldwide. (On-going) Seek opportunities to advance sustainability in the infrastructure stimulus package, the Transportation Authorization Bill – Green Tea by providing sustainable solutions associated with the ASCE Report Card that contribute to economic development. (On-going) Leverage government infrastructure investments by building relationships with government agencies (rather than focusing exclusively on Capitol Hill members). (On-going) Communicate sustainability in the format that most effectively resonates with Capitol Hill members with compelling stories and visuals. (On-going) Review ASCE Policies periodically to ensure consistency with the sustainability principles and new developments in engineering practice, education and research. (On-going) Leverage ASCE policy statements as appropriate by inserting specific sustainability policy verbiage. (On-going) Find suitable opportunities insert sustainability specifics into Capitol Hill policies. (On-going to date) 	<p>Modified Code of Ethics – see http://www.asce.org/inside/codeofethics.cfm</p> <p>Adopted a policy on the Role of the Engineer in Sustainable Development – http://www.asce.org/pressroom/news/policy.cfm</p> <p>Adopted a policy on Capacity Building – http://www.asce.org/pressroom/news/policy.cfm</p> <p>Adopted a policy on the Millennium Development Goals – http://www.asce.org/pressroom/news/policy.cfm</p> <p>Described the critical role of engineers in a sustainable world in its report on "The Vision of Civil Engineering in 2025." (http://www.asce.org/files/pdf/professional/summitreport12jan07.pdf)</p> <p>Included as a Society Goal that the Society will, "Facilitate the advancement of technology to enhance quality, knowledge, competitiveness, sustainability, and environmental stewardship." (http://www.asce.org/inside/next_plan.cfm)</p>	Sustainability Committee (new Board Committee) and the Policy Review Committee	John Segna and Brian Pallasch
4.	<p>Participate actively in Practice, Education and Research in Sustainable Infrastructure (PERSI) to promote and incorporate sustainability into national and international standards and practices throughout the life cycle of infrastructure systems. [2, 3, 4, 6]</p> <p>Immediate:</p> <ul style="list-style-type: none"> Actively support PERSI to develop a major proposal to NIST for Assessment of Knowledge and Practice for Sustainable Infrastructure. (On-going) Enlist PERSI liaisons from Institutes/TAC to provide two-way communication and continue active participation, including standards development. (On-going) 	<p>Provided leadership in initiating the PERSI (Practice, Education and Research in Sustainable Infrastructure) Project, to help its member organizations address sustainability consistently in their practices and standards, and to develop metrics for measuring sustainability performance. (http://www.persi.us)</p> <p>Established the Industry Leaders Council to advance the role of</p>	Grants and Contracts, Technical Activities Committee, Institutes Industry Leaders Council, Sustainability Committee, and TAC Committee on Sustainability	Muhammad Amer, John Segna, John Durrant, and Marla Dalton

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	<ul style="list-style-type: none"> Engage with the Industry Leaders Council to address the role of innovation in achieving sustainability, and develop solutions to key challenges facing the profession such as risk management, and infrastructure resilience. (On-going) <p>Next 2 Years:</p> <ul style="list-style-type: none"> Actively seek funding and support implementation of PERSI, with the long-term goal of advancing and incorporating concepts and knowledge of sustainability into the national and international standards and practices used throughout the life cycle of infrastructure systems. (2011) <p>Five Years:</p> <ul style="list-style-type: none"> Produce agendas for implementation of best practices, development of improved practices, research and education. (2013) Implement agendas in ASCE programs of standardization, research and education. (2013) 	innovation in achieving sustainability, and applying innovation and knowledge for resilience.		
5.	<p>Foster the integration of sustainable engineering principles and practices into engineering education at all levels, including the creation, promotion, and support of "hands-on" projects such as Engineers Without Borders, that provide students and practitioners with practical experience in the cultural, ethical, political, social and environmental dimensions of sustainability including in developing countries. [1, 2, 5]</p> <p>Immediate:</p> <ul style="list-style-type: none"> Jointly sponsor the Annual EPA Sustainability Exposition and the P3 Student Competition and Awards Program. Advocate with NSF, DOE and other US agencies for funding for joint student/faculty research. (2009) Broaden ASCE Continuing Education with courses on Sustainability, both general, and specific to fields (e.g., construction, environmental, geotechnical, hydraulics, structural, transportation, community planning, and management). (2009) Continue to promote and support university-based "hands-on" projects that provide students and practitioners with practical experience in capacity building for sustainability in developing countries, such as Engineers Without Borders. (2010) Actively support the EPA P3 Conference and Exhibit to engage young faculty and students. (2010) <p>Next 2 Years:</p> <ul style="list-style-type: none"> Establish an annual ASCE Sustainability Scholarship for varying education level (BS, MS, PhD). (2011) Explore sponsorship for an annual ASCE Fellowship, providing opportunities for practicing engineers travel to Europe, Asia and elsewhere to observe practices. (2011) Update pre-college outreach programs with products to reflect 	<p>Published a report, "Sustainable Engineering Practice: An Introduction," which is designed to interest and educate engineering students and young engineers in practice. (http://www.asce-susdev.org/news.html)</p> <p>Included substantive coverage of sustainability in the 2nd Edition of the Body of Knowledge (BOK2). The BOK2 lists the knowledge, skills, and attitudes necessary for entry into the professional practice of civil engineering – to be fulfilled through formal education and pre-licensure experience. As such, one of the 24 outcomes (Outcome 10) listed in the 2BOK is exclusively focused on sustainability. In addition, the 2BOK also includes a two-page description of this outcome – and an entire six-page appendix (Appendix L) devoted to this topic. (http://www.asce.org/raisethebar)</p>	<p>Communications</p> <p>Continuing Education, Conferences, Institutes</p> <p>TC on Engineers Without Borders</p> <p>Educational Activities Committee, Committee on Academic Prerequisites for Professional Practice, Sustainability Committee</p> <p>Pre College Outreach IAC/CPP/Communications</p> <p>EdAC</p> <p>ASCE Foundation/EdAC</p> <p>Pre College Outreach</p>	<p>Jane Howel</p> <p>John Casazza John Durrant</p> <p>Jim O'Brien</p> <p>Jim O'Brien</p> <p>Ping Wei, Tom Lennox, Jim O'Brien, John Segna, Mike Sanio</p>

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	<p>the need to address sustainability for younger students. (2012)</p> <ul style="list-style-type: none"> Encourage sustainability to be an area of emphasis in engineering programs across the US and elsewhere (2011) <p>Next 5 years:</p> <ul style="list-style-type: none"> Continue to promote and encourage the integration of sustainable engineering principles and practices into engineering education at all levels, including holistic consideration of the cultural, ethical, political, social and environmental dimensions of sustainability. (2013) Secure modifications and get approval for sustainability principles in the civil engineering criteria under ABET. (2014) 			
6.	<p>Proactively target communications on engineers' role in sustainable development (climate change, energy, transportation, water, urban infrastructure) to ASCE membership, public and private decision makers and other key stakeholders. [2, 6]</p> <p>Immediate:</p> <ul style="list-style-type: none"> Provide a speakers bureau, so ASCE is present and visible at key local, national and international events with sustainability leaders in the US and worldwide. (2009) Establish a sustainable civil engineering website – aggregate content from CE magazine, ASCE News, provide a clearinghouse for evolving issues, with timely information, become the forum for practicing engineers. (2010) Prepare a Sustainability Report for the Society; progress report on the Sustainable Development Action Plan each year. (2010) Initiate a column in Civil Engineering Magazine on Sustainability Innovation. (2010) Initiate a column in ASCE News –what are our members doing; sustainability tips; updates on LEED – EB etc. (2010) Provide basic sustainability news and information to the other designated lead units, for incorporation in their various publications. (2010) Establish an article series in ASCE Journals, such as CE Magazine, Structures Magazine. (2010) <p>2 years</p> <ul style="list-style-type: none"> Disseminate case studies for use by practitioners distilling member experience implementing sustainability in projects. (2011) Encourage Committees/Units to publish reports on sustainability. (2011) Work with others to develop and integrate messages that promote understanding and educate the public on sustainable development and sustainable infrastructure systems into 	<p>The Task Committee on Sustainable Design is planning to design and implement a comprehensive program to identify and contact key stake holders.</p>	<p>Sustainability Committee, Communications, Strategic and Public Affairs, Publications, Institutes, Committee on Critical Infrastructure</p>	<p>Jane Howell, Anne Powell, Marla Dalton, John Segna, Mike Sanio</p>

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	existing materials. (2011) <ul style="list-style-type: none"> Establish an effective, two-way communications strategy addressing sustainability. (2012) 			
7.	Encourage basic and applied research and development for sustainability (climate change, energy, transportation, water, urban infrastructure). [2, 3] (On-going) <u>Immediate:</u> <ul style="list-style-type: none"> Identify research programs on sustainability (national and international universities, private sector, government agencies and labs), assess those research programs, work to support and promote those research projects. (2009) Partner with PERSI to develop research agenda to present to potential funders. (2009) <u>Next 2 years:</u> <ul style="list-style-type: none"> Develop a Journal on Sustainability (see the Journal on Computing in Civil Engineering. (2011) Establish a Technology forum (could be virtual or in-person) for technology transfer (could develop into a social network). (2011) <u>Next 5 years:</u> <ul style="list-style-type: none"> Encourage basic and applied research and development (R&D) for sustainability, along with demonstration and commercialization programs, to meet national needs, including promotion of sustainable technologies, to help reduce energy consumption and global climate impacts. (2014) Work with NSF and USAID to target research that can be readily cited and affiliated with the ASCE sustainability initiatives. (2014) Encourage sustainability research at colleges and universities. (2014) 	The Institutes, TAC, and other technical units of ASCE and Government Affairs are addressing research dimensions of sustainability.	Government Affairs, Technical Activities Committee, Industry Leaders Council, TAC, Institutes	Casey Dinges, John Segna, Marla Dalton, John Durrant, Muhammad Amer
8.	Encourage and assist ASCE geographic entities – Sections, Branches and Student Chapters in becoming involved in sustainability. Share sustainability guidelines; promote interest, education and programs at the local level. [5, 6] <u>Immediate:</u> <ul style="list-style-type: none"> Support Section and Branches to initiate Sustainability committees at a local level. (2010) Provide training to incoming officers at the regional meetings. (2010) Develop sustainability guidelines for sections, branches and student chapters, to promote interest, activities and programs at the local level. (2010) 	Developed sustainability guidelines for geographic entities. Provided leadership in organizing the Engineers Forum on Sustainability, co-sponsored with AIChE, ASEE, IEEE, and ASME, which offers a multi-disciplinary venue for education and information sharing on sustainability developments and issues.	Geographic Services, International Activities Committee, Sustainability Committee	Nancy Berson, Meggan Maughan-Brown
9.	Seek new opportunities to form multi-disciplinary partnerships with diverse professional organizations worldwide to address global			

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	<p>sustainability issues and challenges (climate change, energy, transportation, water, urban infrastructure) supporting the Millennium Development Goals. [1, 3]</p> <p>Immediate:</p> <ul style="list-style-type: none"> Proactively and aggressively, support sustainability and climate change initiatives currently underway in ASCE's Institutes, Technical Committees, and Educational Activities. (2009) Seek opportunities for multi-disciplinary partnerships and co-sponsorships with diverse professional organizations worldwide, to address global sustainability issues and challenges, such as climate change. (2010) Compile case studies and best practices on sustainability in civil engineering (and sub disciplines). (2010) Jointly sponsor a summit, in partnership with the National Academies/National Research Council and others to define owner's needs for sustainability, and prioritize our response. (2010) Partner on international conferences (technology transfer) such as CECAR with the Asian Civil Engineering Coordinating Council (ACECC) and the Triennial conference with CSCE and ICE. (2010) Encourage the Agreement of Cooperation Societies to proactively partner with ASCE on sustainability issues and challenges. (2010) <p>Next 2 years:</p> <ul style="list-style-type: none"> Partner with engineering (AAES, WFEO, UPADI, ACEC, FIDIC, APWA), owners and operators, public sector agencies, (FCC), international development banks (WB, IDB, ADB), academic, meeting professionals, (PCMA) intergovernmental organizations (UN-CSD, UNESCO). (2011) Survey existing global research and activities in support of sustainability, present results through technical forums. (2011) 	<p>Through the U.S. National Member, the American Association of Engineering Societies (AAES), been an active participant in the World Federation of Engineering Organizations (WFEO), and has provided leadership in developing policies and actions on capacity building and combating corruption.</p>	<p>Institutes, International Activities Committee, Sustainability Committee</p>	<p>Meggan Maughan-Brown, Stefan Jaeger, Mike Sanio, and John Durrant</p>
10.	<p>In the continuing life cycle maintenance and refurbishment of its headquarters and other facilities owned and leased, utilize sustainable (green) building standards and practices, wherever feasible, to demonstrate and promote sustainable technologies. Advance sustainability principles in society operations including conferences and conventions. [1, 5] "ASCE's Green Team" (On-going)</p> <p>Immediate:</p> <ul style="list-style-type: none"> Document the LEED EB certification process as a model for the ASCE membership. (2010) Use the ASCE building as an example of how owners of existing buildings can become LEED certified. (2010) Implement sustainability principles in building management and 	<p>ASCE has instituted an ASCE Green Team to work on this process.</p>	<p>ASCE Green Team and ASCE Foundation</p>	<p>Christine Williams</p>

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	<p>in the Society's Operating Procedures. (2010)</p> <ul style="list-style-type: none"> Publicize ASCE's experiences to demonstrate ASCE's leadership in sustainability. (2010) <p>2-5 years</p> <ul style="list-style-type: none"> Attain LEED EB certification of the ASCE headquarters. (2012) 			
11.	<p>Develop an appropriate awards program to recognize outstanding achievements in sustainable civil engineering. [3, 4]</p> <p>Immediate:</p> <ul style="list-style-type: none"> Recognize the sustainability components of the OCEA winning project in all communications. (2010) Incorporate sustainability into the OCEA award criteria. (2010) Include a special feature in the annual report on sustainability. (2010) Review existing ASCE awards to add or emphasize sustainability in the criteria. (2010) <p>Next 2 years:</p> <ul style="list-style-type: none"> Create a National ASCE award associated with sustainability. (2012) Encourage sustainability awards within the Sections and Branches and allow Section and Branches to be included in evaluations for these awards. (2012) Establish an OPAL Award for Sustainability – individual achievement award. (2012) Encourage Institute and TAC Sustainability Awards. (2012) Consider blending with certification (it occurs along same timeline) certifies members/organizations for awards. (2012) 	<p>The SAC has offered the Honors and Awards staff to work with the Secretary of OCEA panel and Chair of the TAC Committee on Sustainability to draft and seek the approvals necessary to include sustainability criteria in the rules of the Outstanding Civil Engineering Achievement Award.</p>	<p>Society Awards Committee, Communications, Technical Activities Committee, Institutes</p>	<p>Wendy Cowan, Jane Alspach, Anne Powell, John Segna, John Durrant, and Nancy Berson</p>