ASCE SUSTAINABLE DEVELOPMENT ACTION PLAN

MAY 2, 2008

Civil Engineers...Entrusted by society to create a sustainable world and enhance the quality of life

(ASCE - The Vision for Civil Engineering in 2025)

On May 2, 2008, The ASCE Board of Direction

"Received the ASCE Sustainable Development Action Plan as a broad-based Society-wide document for dissemination to the designated lead units and the Strategic Planning Committee, to consider and implement the action items as they relate to their specific areas of expertise and responsibility."

The ASCE Sustainable Development Action Plan was prepared by the ASCE/TAC Committee on Sustainability in cooperation with all of the designated lead units. It can be viewed and downloaded at: www.asce-susdev.org

ACTION ITEM DESIGNATIONS

LEAD UNIT(S)	RECOMMENDED ACTIONS
INSTITUTES	2, 8, 10
Architectural Engineering Institute (AEI)	
Coasts, Oceans, Ports, and Rivers Institute (COPRI)	
Construction Institute (CI)	
Engineering Mechanics Institute (EMI)	
Environmental and Water Resources Institute (EWRI)	
Geo-Institute (GEO-I)	
Structural Engineering Institute (SEI)	
Transportation and Development Institute (T&DI)	
TECHNICAL ACTIVITES COMMITTEE (TAC)	2, 7, 8, 10
Technical Council on Cold Regions Engineering	
Technical Council on Computing and Information Technology	
Council on Disaster Risk Management	
Technical Council on Forensic Engineering	
Technical Council on Lifeline Earthquake Engineering	
Technical Council on Wing Engineering	
Aerospace Division	
Energy Division	
Geomatics Division	
Pipeline Division	
Committee on Metrication	
Committee on Sustainability (CS)	+ 1, 4, 5, 6, 9
COMMITTEE ON ACADEMIC PREREQUISITES FOR PROFESSIONAL PRACTICE (CAP^3)	5
COMMUNICATIONS COMMITTEE (CCOM)	6
COMMITTEE ON CRITICAL INFRASTRUCTURE (CCI)	6
CIVIL ENGINEERING FORUM FOR INNOVATION (CEFI)	8
EDUCATIONAL ACTIVITIES COMMITTEE (EdAC)	5, 7
ASCE FOUNDATION	3
SOCIETY AWARDS COMMITTEE (SAC)	10
INTERNATIONAL ACTIVITIES COMMITTEE (IAC)	7, 11
POLICY REVIEW COMMITTEE (PRC)	1
STRATEGIC PLANNING COMMITTEE	Continuing Coordination

ASCE SUSTAINABLE DEVELOPMENT ACTION PLAN

BACKGROUND

On July 4, 2006, ASCE joined with the Canadian Society of Civil Engineers (CSCE) and the Institute of Civil Engineers (ICE) in signing a document entitled "A Sustainable Future for the Planet." It calls for each organization to "...develop, monitor and implement an action plan to help articulate and deliver their contribution to sustainable development, both nationally and internationally..." It adds that "This will build on work already carried out by the three organizations. (http://www.asce-susdev.org/programs/documents/SustainabilityGuidelines_final.pdf)

VISION

The ASCE Vision for Civil Engineering in 2025 states that civil engineers will be "Entrusted by society to create a sustainable world and enhance the global quality of life..."

PURPOSE

The ASCE Sustainable Development Action Plan is designed to fulfill the Society's commitment, as called for in "A Sustainable Future for the Planet", and to provide a strong, integrated, Society-wide program to help achieve ASCE's vision of creating a sustainable world.

ORGANIZATION

The ASCE Sustainable Development Action Plan includes both past actions and proposed new actions, so that the reader can follow the logical progression and expansion of steps taken by the Society. The past and proposed actions are grouped under six Plan Elements; Policy, Practice, Education, Research, Outreach and Information Sharing. Each past action includes a website reference that provides more detailed information on the action. Each proposed new action includes the lead units and time frame for implementation, and information on program integration and funding.

POLICY ELEMENT

ASCE HAS:

- Modified its Code of Ethics to include"...improving the environment by adhering to the principles of sustainable development..." (http://www.asce.org/inside/codeofethics.cfm)

- Adopted a policy on the Role of the Engineer in Sustainable Development, which defines sustainable development and provides working principles for implementation.
  (Policy Statement 418 - http://www.asce.org/pressroom/news/policy.cfm)

- Adopted a policy on Capacity Building, which promotes the building of indigenous capability in the developing world.
  (Policy Statement 506 - http://www.asce.org/pressroom/news/policy.cfm)

- Adopted a policy on the Millennium Development Goals, which supports the Goals as related to improving the quality of life through science and engineering.
  (Policy Statement 517 - http://www.asce.org/pressroom/news/policy.cfm)

- 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)

- Included as a goal in its Strategic Plan 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)

ASCE RECOMMENDATION:

(1) Review all ASCE Policies periodically to ensure consistency with the sustainability principles and actions of the Society, and new developments in sustainable engineering practice, education and research.

Lead Unit(s) – Committee on Sustainability, Policy Review Committee. Time Frame - Every three years.

PRACTICE ELEMENT

ASCE HAS:

- 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)

- Established the Civil Engineering Forum for Innovation (CEFI), which addresses such issues as the role of innovation in achieving sustainability, and applying innovation and knowledge for resilience.
  (http://www.asce.org/cefi)

ASCE RECOMMENDATION:

(2) Continue to participate actively in the funding and 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.

Lead Unit(s) – Technical Activities Committee, Institutes. Time Frame – Continuing.

(3) 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.

Lead Unit(s) - ASCE Foundation. Time Frame - As opportunities arise.

(4) Prepare a Society-wide progress report on the Sustainable Development Action Plan each year.

Lead Unit(s) - Committee on Sustainability, in cooperation with all lead units. Time Frame – Annually.

EDUCATION ELEMENT

ASCE HAS:

- 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)

- Included substantive coverage of sustainability in the 2nd Edition of the Body of Knowledge (2BOK). The 2BOK 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)

ASCE RECOMMENDATION:

(5) 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.

Lead Unit(s) – Educational Activities Committee, Committee on Academic Prerequisites for Professional Practice, Committee on Sustainability. Time Frame - Continuing Activity.

(6) Work with others to develop and integrate messages that promote understanding and educate the public on sustainable development and sustainable infrastructure systems into existing materials.

Lead Unit(s) – Communications Committee, Committee on Critical Infrastructure, Committee on Sustainability. Time Frame - Continuing Activity.

(7) 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.

Lead Unit(s) - Educational Activities Committee, International Activities Committee, Technical Activities Committee. Time Frame - Continuing Activity.

RESEARCH ELEMENT

ASCE RECOMMENDATION:

(8) Continue to promote and 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.

Lead Unit(s) – Civil Engineering Forum for Innovation, Technical Activities Committee, Institutes. Time Frame – Continuing activity.

OUTREACH AND INFORMATION SHARING ELEMENT

ASCE HAS:

- 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. (http://www.asce.org/instfound/techcomm_cs.cfm)

ASCE RECOMMENDATION:

(9) Develop sustainability guidelines for its sections, branches and student chapters, to promote interest, activities and programs at the local level.

Lead Unit(s) – Committee on Sustainability. Time Frame – Completed.
(http://www.asce-susdev.org/programs/programs_sust.html)

(10) Develop an appropriate award program to recognize outstanding achievements in sustainable civil engineering.

Lead Unit(s) – Society Awards Committee, Technical Activities Committee, Institutes. Time Frame – 2008.

INTERNATIONAL ELEMENT

ASCE HAS:

- Through the U.S. National Member, the American Association of Engineering Societies, (AAES), been an active participant in the World Federation of Engineering Societies (WFEO), and has provided leadership in developing policies and actions on capacity building and combating corruption.
(http://www.aaes.org/international/ and http://www.wfeo.org/)

ASCE RECOMMENDATION:

(11) Continue to 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.

Lead Unit(s) – International Activities Committee. Time Frame - Continuing Activity.