



# The Certified Environmental Professional

The Newsletter of the  
Academy of Board Certified Environmental Professionals

November 2015

## President's Message

Many great things are happening with ABCEP! As we move from Summer to Fall, I have to give a shout out to all the ABCEP members who have put so much effort into making the organization work this summer. I'm encouraged by the members who have offered to step up and give service where needed. We're a busy group of people, especially in the summertime when field seasons are in full swing and everyone is milking the great weather for everything they can get. As is the case with many of us, life often dictates the time we can dedicate to volunteer efforts.

This summer we've had a two members of the Board of Trustees step down for that very reason. We're grateful to have had the opportunity to know and work with them. Andrew Pulcheon and Lisa Douglas, we thank you for your willingness to be part of the work of moving ABCEP forward and wish you the best. Lisa has worked quietly behind the scenes without fanfare, assisting with membership services.

The Board of Trustees recently appointed two individuals to fill the vacant positions left by Andrew and Lisa. We welcome Bill Eggers and the return of Richard Burke to the Board. Richard has been a Board Member in the past and has contributed significantly to efforts to move the organization forward.

On a final note, as the weather changes, fall temperatures set in, and fall activities commence, especially field work (I've already had snow at my house twice), please consider safety as your top priority. We don't want to see ABCEP members meet with accidents and misfortune due to the lack of safe practices at work or at home.

As you have probably noticed, our newsletter has undergone a bit of a face lift. As you read through this addition, think of the items you could contribute in this new forum to share with the CEP community. We're always looking for new and exciting ways to better serve you.



*Mark F. Gerber*  
*ABCEP President*

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**KEEP  
STRONG  
AND  
MAINTAIN  
ON**

**It's time to account for those hard earned Maintenance Hours - the conferences, workshops, and professional development opportunities you participated in during 2015 to maintain your certification.**

**Log on to CEP-EXPRESS today and take the credit for all your hard work!**

It is that time of the year when we all focus on the need to assure that we have the requisite activities to satisfy our requirements in maintaining our CEP.

The Board hopes that each ABCEP member looks at his/her activities on a continuous basis throughout the year, and if there is any concern that you will have problems obtaining the required maintenance points, please reach out to a Board Member for assistance.

The Board is here to help each member by offering ideas and potential assignments to task groups, committees, and sub-committees.

Watch the ABCEP website for all that is going on!

**REMEMBER TO RENEW  
YOUR MEMBERSHIP!**

# First 'CEP by Eminence' Awarded

During late 2014, the ABCEP Board of Trustees announced the **CEP by Eminence** level of certification. The Board is pleased to announced the first recipient of the CEP by Eminence certification to **Mr. William J. (Jim) Melton**.

Jim presently serves as Senior Environmental Consultant and Project Manager for his firm, Melton Environmental Consulting, based in Billings, Montana. Jim's primary focus is leading land use planning, environmental compliance, and project management for major oil and gas infrastructure projects within the Western United States. He has more than 36 years of management and project experience leading land use planning, permitting, and impact assessment for projects spanning industries including: mining, oil and gas field development, pipelines, coal exploration, and electric power generation and transmission. He has led the development of major Land Use Plans and Resource Management Plans associated with major improvements as well as EISs and EAs prepared in accordance with the National Environmental Policy Act (NEPA). From his experience as both a federal land manager and environmental consultant, Jim continues to lead national and statewide EISs throughout the West. Jim is known for science-based decision-making and has mediated multi-party agreements addressing project development, resource management, and environmental and public policy issues at the national, state, and local level.

Jim worked on the TransCanada Keystone Oil Pipeline Project and EIS, spanning from Montana to Texas. Jim is active professionally having served as a Past President of the National Association of Environmental Professionals (NAEP) and Board of Director for NAEP.

## Do you or someone you know qualify for certification as a 'CEP by Eminence'?

- ▶ Must possess a Bachelor's Degree from a fully accredited college or university. A Master's Degree may be substituted for 1 year of the 20 years of professional experience and a Doctorate may be substituted for 2 years of the 20 years of professional experience.
- ▶ A minimum of 20 years of experience as an environmental professional.
- ▶ A minimum of 15 years in responsible charge and/or responsible supervision. **Responsible charge** is defined as: the direction of environmental work by an environmental professional to the extent that successful completion of the work is dependent on your decisions made without advice or approval of others. **Responsible supervision** is defined as the supervision of another professional person's work by an environmental professional to the extent that you assume the professional responsibility for the work.
- ▶ Achieved a leadership position within their organization. An evaluation must be made of both the position acquired and the organization in which the position is held.
- ▶ Ability to demonstrate a record of service to the profession.

The complete description of the eligibility requirements and application process is provided on the website - [www.ABCEP.org](http://www.ABCEP.org).

Contact Andrea Bower or Jessica Orner at the ABCEP Office ([office@abcep.org](mailto:office@abcep.org)) for more Information.

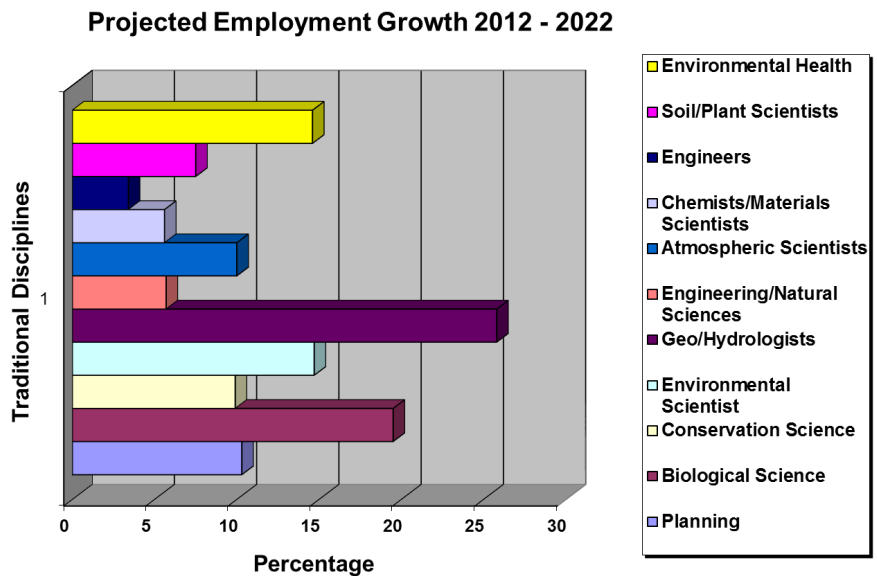
# Professional Employment Forecast

Connie Chitwood, CEP

Have you “taken stock” of your career path lately? Some basic employment statistics point to the importance of taking time to regularly evaluate your professional life. The average American today can expect to change jobs between five to seven times in their lifetime (Hall 1982). In addition, employment studies suggest that if you are just starting your career; expect to change jobs four to five times before landing the job lasting five-years or more (Hall 1982, Farber 2008). Depending on geographic location and job type, employment in the environmental profession is tied to the national, regional and local economy and labor market conditions.

Despite the economic down-turn in the last decade, the number of employment opportunities for environmental professionals is expected to increase in the coming years. The Bureau of Labor Statistics (BLS) reports an expected 26 percent increase in employment of environmental scientists in 2016. Employment trends indicate increasing interest in environmental management, monitoring and regulatory compliance professionals. Other areas of growth include contamination and pollution controls.

In addition the future outlook 2012 to 2022, a projected growth rate much higher than the average. A recent BLS update predicted around 11 percent growth overall for all jobs and 15 percent for environmental scientists between 2012 and 2022. Employment trends suggest that traditional environmental jobs are starting to plateau while new emerging disciplines are gaining ground.



## What does this mean for the Environmental Professional?

This translates to an overall projected increase in professional/business and jobs for technical, scientific, water-wastewater and waste management/treatment and environmental remediation services through 2022.

## Chart a Pathway

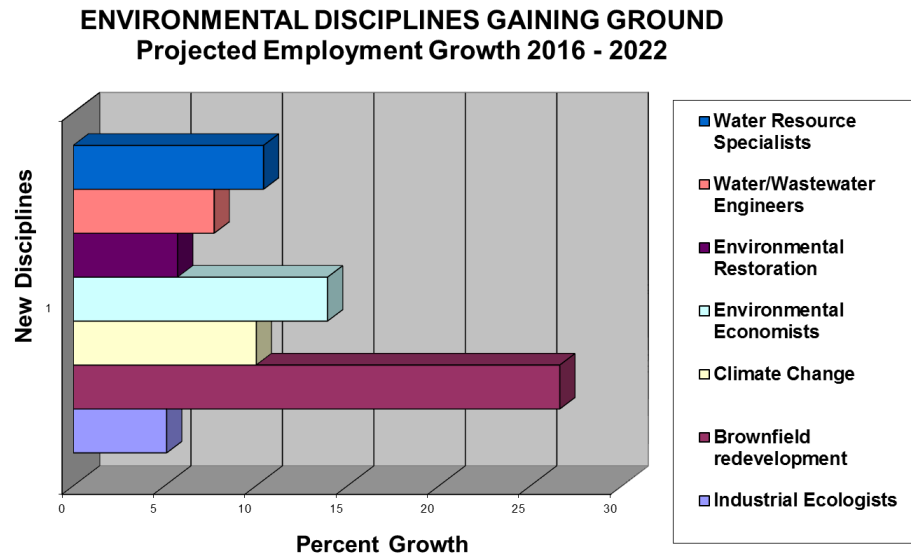
To evaluate a potential professional pathway and learn more check out the ***career evaluative tool***:

[http://www.careerinfonet.org/select\\_educ\\_rd.asp?](http://www.careerinfonet.org/select_educ_rd.asp?)

[next=oview1&optstatus=&id=&nodeid=3&soccode=&stfips=&jobfam=&ShowAll=](http://www.careerinfonet.org/select_educ_rd.asp?next=oview1&optstatus=&id=&nodeid=3&soccode=&stfips=&jobfam=&ShowAll=)

## How will this affect your professional choices?

Regional employment forecasts project between 1 to 2 percent growth in professional and business services jobs for the Southwest and Midwestern states and over 2 percent growth in the Pacific Northwest and Mid Atlantic states. Job sectors expected to grow most include environmental scientists, industrial ecologists, climate change sciences, biological/environmental health, and environmental restoration and water/wastewater engineers.



## Professional Bottomline?

It's important to prepare for anticipated changes affecting the environmental profession.

- 1) Take stock of where you are in your career;
- 2) Do your research and project ahead;
- 3) Develop a plan; and
- 4) Build your network to help you direct your course and professional growth.

### **Professional Employment Forecast Sources:**

Bureau of Labor Statistics. Overview of Statistics by Occupation. Accessed through [www.bls.gov/bls/occupation.htm](http://www.bls.gov/bls/occupation.htm) , September 2015.

Farber, Henry S., 2008. *A Decline in Worker Firm Attachment in the United States*. Working Paper No. 530, Princeton University, July 2008.

Hall, Robert F., 1982. The Importance of Lifetime Jobs in the U.S. Economy. September 1982.

USA Today, Jobs/Money; Jobs May Rebound in 2010. Updated 9/19/2012. Accessed through <http://usatoday30.usatoday.com/money/economy/story/Jobs-Forecast-2011/34083932/1>,

# Trends in Environmental Accountability

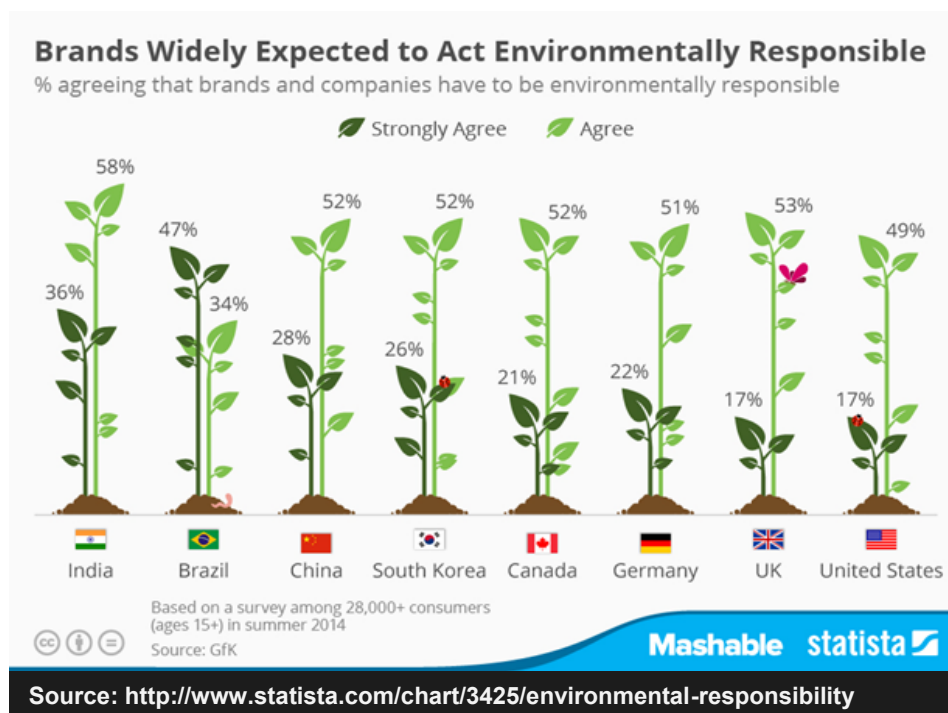
Connie Chitwood, CEP

The global environmental monitoring market is poised to grow at a compound annual growth rate (CAGR) of 7.5% during 2015-2020 (FMR 2015). Environmental monitoring is a process that involves collecting and recording data about indicators of the environment established in space and time and using comparative methods to analyze the data and document the environmental trends. Increasingly information and communication technologies are being used to establish and use global, regional and other communication systems to collect, share and provide the means to quickly communicate global environmental data.

## New Emphasis on Global Auditing

As a result of the growth in global population, new governmental initiatives targeted towards pollution prevention and increased government funding for monitoring programs, and the establishment of environmental monitoring stations. It is believed that although environmental monitoring helps to inform environmental decisions amongst nations and international conventions; decisions typically take up to 9 years to implement (Danielsen et al 2010). Auditing is a tool used for tracking government programs to ensure accountability. Disclosure of environmental assets and liabilities, evaluate compliance with legislation, and tracking audits on international environmental agreements (IEAs).

Evidence of the growth in global environmental monitoring systems is the expectation of the public for governments and industry to be environmentally responsible not only at a regional scale but at a global scale. More than half of the general public from six out of eight nations in the world believe that companies need to be environmentally responsible.





## Community-Based Research

Community Based Research (CBR) is conducted by or with the participation of members of the community and is now established in many areas as a way to implement environmental monitoring programs. Community groups, non-government organizations and universities collaborate on establishing and managing environmental monitoring programs.

In the United States is the EPA's National Directory of Volunteer Monitoring Programs available on-line at <http://yosemite.epa.gov/water/volmon.nsf/Home?openform>. This directory lists all the volunteer organizations around the United States with active water quality monitoring programs.

The Global Environment Outlook (GEO) of UNEP and the recently launched United Nations Millennium Ecosystem Assessment (MA) are good examples of formalized non-governmental assessment processes and inter-organizational networking systems that share monitoring data across the globe.

The MA's objective is to monitor change in ecosystem and utilizes the collaborative expertise of over 1,350 worldwide scientists who developed a state-of-the-art assessment of the trends in global ecosystems.

Read more about the role of community based research associated with eighteen sub-global assessments that are underway at <http://www.unep.org/maweb/en/Multiscale.aspx>. Sub-global assessments are important because it has been determined that ecosystems are so variable in time and space and environmental management needs to include community level involvement.

## Industry Increasing Products

Industry is developing new environmental monitoring products such as monitoring stations, sensors and software. Monitoring systems are being established worldwide. Some examples of these monitoring systems include; global mean surface temperature is monitoring anomalies on the surface of the earth via the US National Aeronautics and Space Administration (NASA) and National Oceanic and Atmospheric (NOAA) GIS databases in combination with the data on climate change Intergovernmental Panel on Climate Change (IPCC) under the United Nations Framework Convention.

## Growth in Global Financing

A special European evaluations group was established in 2006, with the intention to evaluate natural and man-made disasters. The group's first task was to audit foreign funds earmarked for recovery from the disasters such as the nuclear reactor explosions, tsunamis, floods and earthquakes. As a result of increased governance on the global environment, auditors have completed more audits driven by international sources, foreign funds, or co-funded projects

## Rise in International Environmental Agreements

The number and range of international agreements on environmental practices and policies have grown tremendously in recent years. International agreements on environmental issues are second only to global trade agreements and rule making (INTOSAI 2007). Such agreements encourage countries to implement new or change existing environmental policies.

Environmental agreements have increased in the following categories (J. Vidal, 2015)

- ⇒ 61 Atmosphere
- ⇒ 155 Biodiversity
- ⇒ 170 Chemicals
- ⇒ 47 Land Conventions
- ⇒ 196 Water Conventions

*Continued from page 6*

## Global Monitoring Collaboration Programs

**Water Quality Monitoring** – The World Water Monitoring Challenge TM (WWMC) is an international outreach program designed to increase public involvement in the protection of world-wide water resources. The organizations primary goal is to educate and engage citizens about their local water resources and implement monitoring programs of these waterbodies. Interested in getting involved ? ... contact the WWMC at <http://www.monitorwater.org/GetInvolved.aspx>.

**Air Quality Monitoring** – Launched in 2002, the satellite Envisat; containing a Spectrometer that scans images via absorption monitors and measures trace amounts of atmospheric gas such as Nitrogen Dioxide (NO<sub>2</sub>) and the vertical distribution in the atmosphere. This spectrometric cartography produces global maps of air pollutants and plays an important role in monitoring the distribution of Ozone.

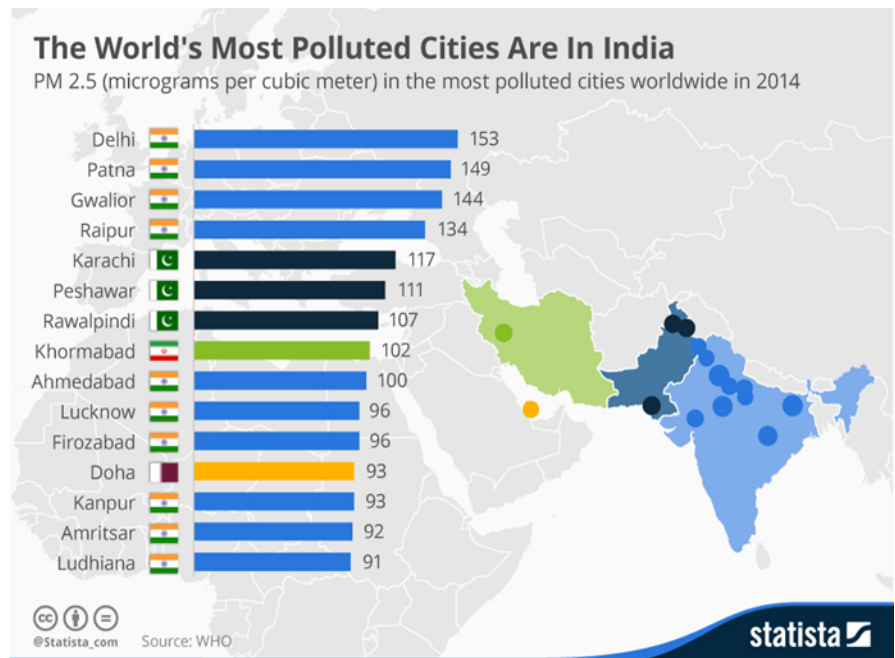
**Global Vegetation Monitoring** – The Global Land Vegetation Monitoring (GVM), a product of 4DScience-II; is a collaborative scientific

research that focuses on data acquisition, aggregation focused on scientific modeling, mapping and reporting of the density of vegetation on the globe using satellite data.

**Global Marine Monitoring** – Aqua maps is a globally scaled predictive map showing marine species distribution. This joint venture between two organizations; Fishbase and Sea Life Base utilize data on species occurrence data from more than 9,000 species and developing maps showing the spatial species distribution based on probability of occurrence. The Aqua Maps organization provides standardized distribution maps for over 17,000 species in a searchable marine biodiversity map.... Read More at <http://www.aquamaps.org>.

**Global Environmental Monitoring Index** – A non-linear vegetation index that is used to monitor the global environment via satellite imagery. The Global Environmental Monitoring Index (GEMI) environmental monitoring methodology utilizes an algorithm to adjust or correct the effects of atmospheric effects. The index uses a broad band green indices with image data acquired from satellite sensors such as AVHRR, Landsat TM and Quick Bird. Emphasis is on global vegetation growth used to detect climatological assessments. The GEMI monitoring is less sensitive to the effects of the atmosphere and more affected by the distribution of open areas and bare soil (1992).

The challenge is not the acquisition and reporting of the state of the environment; it's the effectiveness of the technology, successes of financing environmental mitigation ,and the global environmental improvements that meet global environmental compliance standards.







**KEEP US  
STRONG  
AND  
MENTOR  
ON**

## CEP Exam Changes in Effect

For those of you mentoring applicants, remember new essay questions went into effect on September 1, 2015. Questions have also been added in a new functional area on “Sustainability”. Applicants no longer need to specify certification within a functional area.

The ABCEP Board of Trustees is very excited and pleased to be able to help our CEPs through the application process by keeping the process relevant.

Applicants under the new essay process will be looking for guidance and support. Helping another person fulfill their goals can be just as rewarding as achieving a personal milestone. Volunteer to be a mentor to an up and coming CEP - you just might benefit from the process too!

**VOLUNTEER TO BE A  
MENTOR TODAY!**

go to [www.abcep.org](http://www.abcep.org)

### ***Trends in Environmental Accountability Sources:***

2007 INTOSAI Evolution and Trends in Environmental Auditing, Working Group on Environmental Auditing. Nov 2007. Center for International Earth Science Information Network Available on the internet at <http://www.ciesin.org/>

2012 J. Vidal. *Many Treaties to Save the Earth But where's the Will to Implement Them ?* Sustainable Development Blog, June 2, 2012.

2015 Fast Market Research. Environmental Monitoring Market – Global Trends and Forecasts to 2020. Available on the internet at <http://reports.pr-inside.com/now-available-environmental-monitoring-market-glob-r4288622.htm>

2010 Finn Danielsen, N. Burgess, M Jensen and K. Pirhofer-Walzl. Journal of Applied Ecology Environmental monitoring: the scale and speed of implementation varies according to the degree of peoples involvement. Volume 47, Issue 6 pages 1166- 1168, December 2010. Available on the internet at <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2664.2010.01874.x/abstract>.

Finn Danielsen, K.Pirhofer-Walzl, T.Adrian, D.Kapijimpanga, N.Burgess, P.Jensen, R.Bonney, M.Funder, A.Landa, N.Levermann, J.Madsen, Linking Public Participation in Scientific Research to the Indicators and Needs of International Environmental Agreements. *2013 Conservation Letters*, 2014, 7, 1. March 5, 2013. Available on the internet at <http://onlinelibrary.wiley.com/doi/10.1111/conl.12024/epdf>

D4Science-II a European e-structure Data Infrastructure Ecosystem for Science. Available on the internet at <http://www.d4science.eu/about>

Pinty, B., and M. Verstraete. GEMI: a Non-Linear Index to Monitor Global Vegetation From Satellites. *Vegetation* 101 (1992): 15-20.

# Call for Award Nominations

## Dr. Richard J. Kramer CEP Memorial Award for Environmental Excellence

The Dr. Richard J. Kramer, CEP, Memorial Award for Environmental Excellence was established by the Academy of Board Certified Environmental Professionals (ABCEP) to recognize extraordinary achievements of individuals in the environmental profession.

Dr. Kramer's involvement in ABCEP spanned more than two decades. In 1982, he was the 31st person to earn the CEP designation. He served on the Academy's Certification Review Board from 1985 to 1999, when he resigned to become the first President of the Academy. Dick began his career in the environmental profession in 1972. For many years he was head of the environmental planning and NEPA office for the Camp Pendleton Marine Corps Base in California.

The ABCEP Board of Trustees are responsible for selecting the winner of the award. More than one award may be given each year. The award was presented for the first time in 2004, to commemorate the 25th Anniversary of the creation of the Certified Environmental Professional designation by the National Association of Environmental Professionals (NAEP) and the 5th Anniversary of the creation of the ABCEP, which was created in 1999 to oversee the CEP program.

## Importance of Mentoring

These awards demonstrate the importance of mentoring in the environmental profession.

Whether as the mentor or the mentee, our skills are tested, our knowledge challenged, and our visions honed through the collaborative mentoring process. Many of us wouldn't be where we are today without the support and guidance of a mentor. Now is the time to return the favor - whether officially as a mentor in the CEP-IT program or through your peers, staff, or students, mentoring helps both sides of the relationship.

## Kramer Award Nominating Information

**Objective:** Nationally recognize extraordinary achievements, leadership, and spirit of CEPs.

**Eligibility:** All ABCEP members

**Who May Nominate:** Any ABCEP member

**Deadline:** February of each year

## Previous Kramer Award Winners:

2010 - Irving D. Cohen, CEP, FACFEI  
2011 - Richard P. McGucken, CEP  
2012 - Lori Cunniff, CEP  
2013 - Connie Chitwood, CEP  
2014 - Heidi Pruess, CEP  
2015 - Gary F. Kelman, MS, CEP

# Call for Award Nominations

## Emerging Environmental Professional Achievement Award

The ABCEP Emerging Environmental Professional Achievement Award recognizes environmental professionals for their leadership, professional involvement, commitment to foster environmental improvement, and actions to help make the world a better place for future generations. ABCEP welcomes participation by other environmental organizations in co-sponsoring these awards.

The Board of Trustees is looking for nominees for this year's award from individuals, companies, and/or agencies describing outstanding contributions of young environmental professionals. Nominations may include young professionals whose leadership, projects, or programs have advanced the environmental profession as recognized by others, as evidenced through:

- ◆ References containing personal testimonies or corroboration of professional experiences;
- ◆ Achievements, commendations from employers, Boards of Directors, and/or other professional associations or societies; and/or
- ◆ Commendations from governmental and/or private sector groups.

Eligible nominees:

- ◆ Must be no older than 35 years of age in the calendar year in which they are nominated.
- ◆ Must possess a bachelor's degree from an accredited university in an applicable field.
- ◆ Must be a full-time environmental professional.
- ◆ Must have a minimum of 5 years of professional experience in a position of reasonable charge.
- ◆ Must have made a valuable contribution to the profession by serving in a leadership position.

If you know or work with someone that meets the nominating criteria, the Board encourages you to submit a nomination via the ABCEP website ([www.abcep.org](http://www.abcep.org)). You do not need to be a CEP to submit a nomination. Please contact Andrea Bower, the Academy's Executive Administrator, at [office@abcep.org](mailto:office@abcep.org) if you have any questions about the nomination process.

## Emerging Young Professionals Award Selection Criteria - the degree to which the nominee:

- ◆ Demonstrates leadership in the environmental field.
- ◆ Demonstrates expertise and competence in the environmental profession.
- ◆ Encourages, mentors, and supports other professionals in their work and community.
- ◆ Acts as a role model for other young professionals.
- ◆ Has achieved accomplishments and innovations in the environmental profession.
- ◆ Has a minimum of three references who can verify the above characteristics.

**Who May Nominate:** Any ABCEP member

**Deadline:** To be announced; awards made at end of the year.

# Call for Articles!

Interesting projects, exciting research, new study applications – our community wants to hear about what our CEPs and CEP-ITs are doing. The Communications Committee is seeking articles about your interesting projects for upcoming issues. This newsletter is a fabulous forum to share your insights and opinions.

In the next addition of the newsletter we will be seeking your input on themes for upcoming newsletters.

*Our newsletter is only as strong as our members can make it.*

*So don't be afraid and GET INVOLVED!*

*We hope you like our new look!*

## Newsletter Policy

In the interest of presenting material on which our members can formulate their own views regarding environmental matters, we present articles representing a variety of viewpoints. Whereas there may be limitations which trammel inquiry elsewhere, we take the position that it is through continual and fearless sifting and winnowing of information from various sources can the truth be found.

Should you take issue with an article appearing in this Newsletter, you are encouraged to submit an article with your viewpoint which will be published in a future issue.

## The Certified Environmental Professional

The ABCEP Newsletter is published monthly and is intended to be a:

- ♦ Communication vehicle for the Board of Trustees and ABCEP Committees to inform and engage with CEPs and CEP-ITs on current activities within ABCEP and its future direction.
- ♦ Forum to report on current and emerging environmental issues, regulation and policy changes, and professional trends.
- ♦ Forum to provide professional guidance and advice to expand the professional growth and knowledge of members.
- ♦ Means for members to communicate with one another on current accomplishments, interesting projects, or lessons learned on the job with new approaches and successful problem solving solutions.
- ♦ Platform to acknowledge, highlight, and welcome active CEPs and CEP-ITs.

All members are encouraged to be active in their profession and affiliated professional organization.

If you have a topic of interest that you would like presented in *The Certified Environmental Professional* newsletter please submit your topic request or completed article to Andrea Bower at [office@abcep.org](mailto:office@abcep.org) or Shari Cannon-Mackey, CEP ENV SP, at [scannonmackey@burnsmcd.com](mailto:scannonmackey@burnsmcd.com).

Thank you,

*Shari Cannon-Mackey, CEP, ENV SP  
Editor*