



*The college idealists who fill the ranks of the environmental movement seem willing to do absolutely anything to save the biosphere, except take science courses and learn something about it.* — P.J. O'Rourke



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## President's Letter to Members My Scientific Roots

The two contributions above frame a professionalism challenge that I am working through. In previous Presidential letters I have stated that I am having fun doing this. I still am. This newsletter in particular has me very excited. The contributions are more aimed to making you think and consider your daily life than we usually present. Two of our authors were deliberately requested to write articles with ideas rather than simple information usually contained in a practitioner-based article about a project or study. As a result, I find myself reassessing my approach to the environmental professions and my role as a scientist. I am usually convinced that I am a scientist, but now I wonder whether I am much better than the young scientist in the cartoon, or for that matter, the clueless environmentalist that P.J. O'Rourke references.

My mother sent me the cartoon several years ago to remind me that my scientific roots really started in the field of chemistry and I just rediscovered it as I was sorting through my files. My family tells tales of finding me in one of the family bathrooms

with a sink full of different unidentified liquid or dissolvable solid cleaners, shampoos, and such. Oh, yes, I got in trouble, but my parents never really stifled the creativity that I showed in those sink experiments. Mom made sure that she never had bleach and ammonia in the same room and I got a chemistry set that Christmas. I swear I did discover cold fusion in the early 60's.

I remember Mr. O'Rourke from when he was an editor and contributor to *National Lampoon* magazine. He was funny and had a good sense of irony. He shifted politically in a direction that appeared to be polar opposite to my world view somewhere in the 80s. Yet, here he is making me recognize something that was easier to ignore. I think there is an element of truth to what he has written. However, I believe he is a bit simplistic in his overall analysis. That is the element of, and the drawback to, Mr. O'Rourke's pithy comment.

When I first received the quote I thought it was funny because I knew I did not fit into his defined category of an idealist. Since receiving it I have passed it on to others for professional amusement. For many years, I found it important to distinguish myself as a professional working in the environmental professions as opposed to being an "environmentalist." I am, after all, a trained scientist. I pride myself in my basic and continuing education about environmental issues. For the most part I educate myself before making my opinion known. As I was putting this newsletter together I started to realize something a bit troubling

Continued on page 6



*Editor's Note: This article resulted from recent discussions I had with Tom. When I took over the editorship of the ENews, I was looking to create a practitioner-based publication that would complement the Environmental Practice Journal.*

*What I was looking for was a means whereby the membership could be stimulated to think, possibly get shaken from the comfort of daily routine, and provide a vehicle for exchanges of ideas in the form of Letters to the Editor. Warning: This article will not allow you to remain unmoved. Tom presents some great ideas. He provides much food for thought and self-reflection. I thank him for writing this piece.*

*With this paper I also want to put the membership on notice that Tom has written a lengthier version of this idea and submitted to the Journal for consideration.*



*Dr. Tom Cuba is principle and owner of Delta Seven Inc., a small environmental consulting firm in St. Petersburg, FL. He is also a research adjunct at the University of South Florida and a Principle Scientist for the nonprofit Stillwater Research Group, Inc. Educated at Texas A&M and the University of South Florida, Tom's focus is in successional ecology. A Naval Intelligence Officer in his early years, he was also a Division Administrator for Pinellas County Florida before joining the private sector. He has taught specialty courses at USF, Saint Leo University, Florida Atlantic University, and for the Mote Marine Tropical Research Lab in the Florida Keys. He is a founding director of the Florida Association of Environmental Professionals and of the Tampa Bay Chapter, and has served as President of both. He has also served on the board of the NAEP and the Florida and St. Petersburg Audubon Societies. He is a Certified Environmental Professional and a Certified Lake Manager. His contributions to the NAEP journal have been focused on the application of the Code of Ethics. His belief in, and support of, the latter is so strong that a reference to the code is contained in the standard language of his corporate contracts.*

## Post Partum Environmentalism

**By Thomas R. Cuba, Ph.D., CEP, CLM**

**F**orty-one years ago, in 1969 the air in St. Louis was fouled by emissions from a variety of smokestacks. Meat packing plants, power plants, chemical plants, and other manufacturers discharged without restriction. Sanitary sewer plants pumped sewage treated to basic levels directly to the Mississippi and Missouri Rivers as well as local feeder streams where it mixed with liquid discharges from manufacturing interests. Landfills accepted whatever people no longer wanted and people who didn't want to wait for trash pickup just tossed garbage and waste out the window of the car.

That was the year I decided to study Zoology instead of Mechanical Engineering. At the time, environmental jobs were scarce. The employment boom resulting from the passage of the

National Environmental Policy Act was still years in the future. Environmental Consulting didn't exist because environmental regulations didn't exist. I was, however, happy and planning on becoming a park ranger or a college professor. When the environmental revolution came, it spawned the Environmental Protection Agency along with hundreds of state and county agencies. Today, many states, if not most states, actually have more than one environmental agency.

After graduation, I served in the military. This is relevant, as one of the most important of my thought patterns is derived from the synergy of having been trained as a Naval Intelligence Officer and having studied Ecological Succession for my doctor-

*Continued on page 3*



## Post Partum

*Continued from page 2*

ate degree. As it turns out, both these specialties utilize the same basic logical patterns. In each, one gathers data, assesses the existing set of relationships and dynamics, and then attempts to predict outcomes from actions taken, answering the question, “If I do this, what happens?” In its applied sense, this is the fundamental logic train of mitigation and NEPA Impact Statements.

Now, nearing the end of a career in a field in which I never expected to practice, I realized that there has been a huge paradigm shift and only people in my age group would recognize it. This report is an attempt to share my view on the evolution of the profession from hippies to suits and ties.

The best way to do that is to simply tell stories about my career, but that would take more time than we have. The preceding paragraphs were provided because it is important that my vantage point have some degree of credibility: It is why my observations are more than just the ramblings of an elder statesman of the environmental profession.

### Shift 1: Magnitude.

In the decade of 1960, the air in St. Louis was thick enough to taste. Driving into the city left soot on the car. There were days when it was overcast, yet there were no clouds. The spring near my parent’s home outside of St. Louis bubbled up gray and foul because the adjacent city disposed of sanitary effluent into a cave system. Industry discharged purple or yellow foam directly into the creeks and rivers. I was to learn a few years later that one creek I frequented was not a creek at all but when traced a few miles upstream, it was the discharge of a sanitary waste water treatment plant.

By contrast, during the decade of 2000, regulators were arguing about whether contaminants were hazardous at concentrations in the parts per billion or parts per trillion. This shift reflects success at the grand scale, and is clearly positive, but may also raise the question of whether 30 years of momentum has carried regulation past the point of sustainability.<sup>1</sup>

### Shift 2: Context.

As the magnitude of environmental threats lessened, the context in which practitioners operated also changed. Graduates in the class of 1980 would have little to no direct knowledge of the events of 1960. By 1990, severe pollution was being taught as history.

The echo of context is the mind-set established in the early decades. During the days of the hippies, a mind-set arose which elevated natural systems to near religious levels. The term “tree hugger” arose to describe those who valued trees above all other considerations. The Crying Indian commercials designed to control litter by changing individual behaviour were effective, but also served to establish a good vs. evil mind-set. The mind-set is no longer limited to trees. PETA is naught but a zoological echo. It is, however, most often limited to the less well educated amongst us.

The echo is carried through the halls of Academia through Professors. Faculty earning doctorates in the mid eighties did have direct knowledge from the 1960 decade and taught the mind-set of protectionism to students. As large problems were eliminated and as the change in magnitude lessened, new students needed to identify new threats. The mind-set only grew stronger.

### Shift 3: Conversion of Disgust to Fear.

In the decades of 1960 and 1970, the public opinion was one of disgust. It was asked how industry or political leaders could allow or encourage the piggish activities which were dominant and common at the time. In the decades to follow, as pollution became less and less visible, activists lost the ability to motivate the public with photographic evidence of destruction. The threat became invisible. Fear became the new motivation: Fear of the known; fear of the unknown; fear of the uncertain.<sup>2</sup> New threats are identified at molecular levels and as genetic contaminants. Old threats remain, such as habitat loss, but these old threats do not contain the element of fear as a dominant motivator. The element of fear has grown to the point that there are people who seek therapy.

### Shift 4: Connectivity.

At the onset of Environmental Management as a profession and as a government responsibility, regulations addressed individual species and their habitats. Management of any one

*Continued on page 4*

1 Considering the body of regulation as a “development” and recalling that sustainable development ought to be qualified within categories of environment, economics, society, and politics, the question of the sustainability of regulations is worth pursuing.

2 Fear of the uncertain is a cornerstone of the Precautionary Principle.



## Post Partum

*Continued from page 3*

particular habitat was correctly identified as being closely dependent upon actions and activities in adjacent habitats. From this arose the practices of “Ecosystem Management” and “Watershed Management.”

The countercurrent to the connectivity movement was the subsequent shift, by some, away from the management of systems and back, past the point of protecting of species, to the protection of individuals. Under this shift, retaining a forest is deemed inadequate and supplanted with the desire to protect each and every tree. Maintaining deer populations is supplanted with protecting each and every deer. Arguments presenting the relationship between high populations and disease are met with establishing veterinary services for sick deer.<sup>3</sup> In Florida, the shift is most evident in the current practice of protecting each and every blade of seagrass and each and every mangrove tree.

## Shift 5: Exclusion.

Arising from the elevation of nature to a near religious status is the demonization of mankind with the exception of the priests and priestesses of the new religion. Mankind has been designated the antagonist to nature. The new ecologist has a tendency to neglect man’s status as *Homo sapiens* and to forget that this species is an integral part of nature. Forgotten is the similarity of habitat alteration conducted by other species. An oak tree growing in a meadow alters that habitat within its sphere of influence as dramatically as does a subdivision. The difference is in scale. Coral reefs, migratory herds of grazing mammals, and forests of all kinds (rain, temporal, and boreal), however, alter habitat well beyond the direct influence used in the example of the oak tree. Again, the difference is in scale. Man has a broader niche, even if its breadth stems from his ability to create suitable micro-habitats within otherwise unsuitable ones (i.e. the igloo). While an arguable point, the above comparison is not meant to justify Man’s capacity for alteration, but to demonstrate the popular characterization that man is not part of nature, but is instead nature’s enemy. It is to characterize the prevalent opinion that the only way to protect nature is to exclude Mankind as well as individual men.<sup>4</sup> The exception to the rule of exclusion is that the self-proclaimed protectors (men and women in positions of authority) are the only ones who can safely enter into preserves without causing damage. Others, regardless of education, experience, or capabilities, are excluded. In this manner, each preserve becomes a sort of ecological fiefdom of the local manager. The analogy even extends to the erection of the fiefdom by the

governing body and the appointment of the bio-baron (government employee) placed in charge by edict of the governing body (king). Appointments are often political and reversed with new members from the “king’s” office: Just as in fiefs.

## Shift 6: The Profession itself.

With the advent of the working professional came the environmental street-walker. When consulting became a competitive enterprise, those in the profession began to sort themselves into two classes: The working scientist and the biostitute. The NAEP itself was born in resistance to the latter and the code of ethics was established to be used as a standard by which we may rid ourselves of those who would sell themselves indiscriminately. As the profession evolved, however, there arose the equivalent of the environmental “call girl.” Some in the profession were no longer just a scientist for sale, but had become a scientist who was also capable of advising (consulting) his client on methods to circumvent rules and criteria. All very legal, but nonetheless, a shift.

## Shift 7: Education and Professional Qualifications.

As the profession evolved, it became apparent that not all scientists were good managers. Managing an ecosystem was discovered to be vastly different than managing an agency riddled with policy and regulations created by political or legal forces in juxtaposition with the laws of nature. And so was born the education track known as “Environmental Policy” or a variation thereof. Environmental Science and Policy as a track was intended to provide qualified managers but was sold as a less difficult pathway to a job in consulting or in regulatory agencies. The sacrifice was that the new breed of managers would have better honed process and social skills at the expense of a diminished understanding of the natural system being managed. Because policy and regulation derive from legal and political forces, and the education failed to provide the details of the natural systems, the management standard became more and more reliant on mantra and dogma than science. The new management were, in many cases, unable to grasp conflicts between legislated and natural laws. Nature, being illiterate, often fails to react in accordance with policy.

*Continued on page 5*

3 In the decade of 2000, there was a proposal to develop antibiotics for certain coral diseases and hand inoculate infected individuals.

4 See United Nations Biodiversity program maps for re-wilding programs.



## Post Partum

*Continued from page 4*

### Shift 8: Professional Development Practices.

At approximately the same time that Environmental Policy education tracks became widespread, so did tracks in Environmental Science, or Environmental Studies. These latter two programs gave emerging professionals the skills needed to function in entry level jobs. In fact, they were created to fill the industry need for entry level workers who, while labeled as an environmental scientist in their job description, actually spent more time in field technician or compliance types of jobs. The educational profile varies broadly based on the electives chosen, but seldom is there an in depth body of knowledge imparted to these students. Professional development practices allowed for advancement into management jobs or even scientist level jobs based on nothing more substantive than on-the-job training. The latter, while exceptionally valuable, cannot replace structured classes and guided laboratory experiences in a more classical education.

### Shift 9: Elevation of Certifications over Education.

As both regulations and charlatans became more commonplace, the government decided to protect the public through several processes of certification. The Engineering profession was already regulated and was also the profession to whom scientists turned when there was a need to restore or manage habitats by structural alteration of certain elements of the managed habitat. Somewhere along the line, however, the engineering opinion became dominant over the ecological opinion. In numerous cases throughout the country, ecology is secondary to engineering. In a similar manner, working environmental professionals without advanced degrees sought to bolster their credentials. Certifications may now be found in a wide variety of fields from Gopher Tortoise relocation to something called a HAZWOPER. Having a doctorate in reptilian ecology is insufficient to qualify a person to touch a gopher tortoise but a weekend class in handling and care during transport will put you among the elite.

### Shift 10: Academia and Activism.

Once upon a time, there was an Ivory Tower in which grand observers looked out over the land and documented their observations in journals. When the children of the 60's earned their doctorate degrees in the 90's, some of them flung open the gates of the tower and ventured out into the world to become environmental activists. This activist on intellectual steroids often takes action to the detriment of science. As a result of this sortie, some gains may have been made, but the sacrifice was the violation of the scientific principle of non-interference. The

proper observer is charged with observing in a manner which does not alter the experiment at hand. The activist professor in combination with the product of the environmental policy education track created a situation in which those with grants to award will often award them to those whose results are predestined.

### Shift 11: The onset of the “Data-free Environment.”

The latest advance in environmental management is the broad application of the “Precautionary Principle.” This doctrine teaches that if we have no data, we must adopt a regulatory and protectionist position based in the avoidance of doing unintentional harm. This seems like sound judgment and worked well when we sent lesser primates into space before the more highly evolved. As applied, however, virtually everything is expected to be damaging until proven safe. Since there are no completely safe options in life, everything remains damaging. From a regulatory position, once the precautionary position is codified, there is little incentive to conduct the exculpatory research. The problem has been solved. Move on. There is also little, if anything, which can subsequently escape the regulatory straight jacket.

### Shift 12: The Backlash.

In 1969, when we (myself included) were writing congressmen and mayors to enact restrictions on the wholesale destruction rampant at the time, the public rallied behind us. The NGO was seen as a white knight riding in to save the planet for both man and nature (there I did it too. I separated them). In the summer of 2011, however, there has been a nationwide outcry for the disbanding of the Environmental Protection Agency. The trusty steed of the people is now seen by many as a simple manufacturer of manure.

### Summary:

Through no particular fault of any one person or program, science and the practice of both the environmental professional and the environmental activist has changed in the past 40 years. The contribution by science has been subverted by the contributions from attorneys, case law, regulatory expediency, inadequate education, inappropriate hiring and development practices, and the fear laden expectations of the lay community. Laws are passed and programs developed in opposition to the very heart of the science. I know that this trend will eventually reverse itself. Perhaps this paper will assist. I am certain of my prediction because no matter how hard Tallahassee or Washington may try, we all know, “*You can't legislate natural law.*”

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## President' Letter

*Continued from page 1*

about myself. It is not hard to slip into the comfortable arms of blissful ignorance.

An example of where I have become blissfully ignorant: global climate change. Likely each of us has an opinion, possibly a strong one, concerning the existence and the cause. If you are like me you also listen to the radio pundits and laugh gently when they purposely confuse a single weather event (last year's massive snow on the east coast) with absolute proof that "global warming" does not exist. I do not put credence into any entertainer who is so blatantly distorting facts to make a political argument.

Over the last few years I have tried to become better educated about the issue of climate change and to come to some sort of science-based stand. I lean toward the man-induced side of the ledger, but sometimes waiver. In 2008, I received a book that purported to put the climate change issue into the geological time scale. The book pointed to a 1,500 year return interval for global warming and warned on the cover about the "inevitable" warming to come.

Certainly, 1,500 years is on a scale where we cannot obtain sufficient reliable, scientifically proven, information. The authors worked very hard to convince the reader that the information was irrefutable. The variation of cooling versus warming in different areas was handled deftly and I came to a point where my belief in man-induced global climate change was not strong. Something bothered me, though. I am not convinced that their work used the basic scientific method for the conclusions reached.

Even with massive references, their argument was not convincing. I researched the bona fides of the authors and became less convinced that the book was correct. It is an unfortunate result of the internet age that unsupported negative comments can lead to a person with strong scientific credentials to be cast in a negative light.

When I researched the authors, I was dismayed to find out that they were categorized as "deniers." Something that I am guessing should immediately disqualify them. I found that I could not dismiss the information, however. All I can say is that the book was written very well. Was it scientific? The verdict is still out..

On the other side of the issue there are current climate experts who are working through complex mathematical models

and arriving at much different conclusions. They meet much of the requirements of the scientific method. Their work is science-based, data was gathered, and conclusions were made. But some would say their approach is flawed. The arguments against man-induced climate change are that the supporting science was "discovered" from research that assumed man made change.

Despite the best effort on each side of the climate change issue, there appears to be a lack of real science and scientific method being practiced by both sides of the issue. There is some potential evidence that the original United Nations report started out trying to prove man-induced global warming rather than the proper scientific method of disproving the null hypothesis.

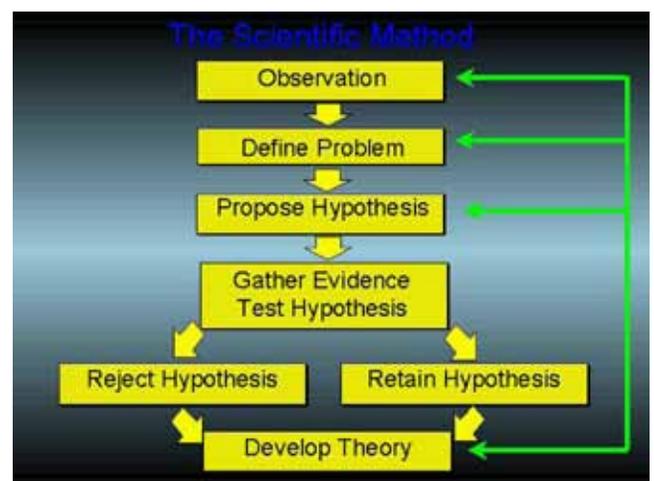
Where am I now on this important environmental issue? Firmly on the fence. I have not seen nor read anything that has convinced me either way. I listen, read, and discuss, but nothing has me fully convinced that we are not in a cyclic weather pattern...and nothing has convinced me that we are not causing it.

FOOMP!

Maybe I need to rely on scientists trained in that branch of science and let the experts in that discipline come to a conclusion. I think I understand that something is happening. I think I understand that the statistical likelihood of two 100-year storm events happening within two years of each other needs to be looked at differently.

I understand that there is a scientific movement to continue to prepare for what appears to be happening. However, is science running the show or is the show running science?

*Continued on page 7*





## President' Letter

Continued from page 6

Have we lost sight of the basic steps of the scientific method? As part of my outreach for students to pursue science as a career, I am reminded annually that science depends on a basic set of instructions.

The list to the left is one of dozens of different representations of the scientific method I found in a quick internet search. It was interesting to see the slight variations in the illustrations, but the general idea is there. What is missing is the null hypothesis. Even in talking to fifth graders I am aware that they need to start getting an understanding of the null hypothesis.

Having admitted to all of this, is there anything redeeming about my approach to science? As a Certified Environmental Professional with a Maser's degree in Biology and Environmental Policy, am I really someone who works within the structures of scientific method daily?...or am I one of those college idealists who want to "save" everything and still lack a basic grasp of science?

I think the requested articles by Dr. Tom Cuba and Mr. Denis Eirikis will cause each serious reader to question some of their daily activities. Are we true believers or are we scientists? Each article is similar in premise, but definitely different in approach. Each will make you think.

The environmental professions are having an identity crisis. I do not mean that we don't know who we are and what we are doing, I know too many of you to make that statement. Members in NAEP are the most driven and most focused professionals I know. The real problem is that our political identity is undergoing a significant redefinition and we aren't really making a lot of comment about it.

I think that most of us have paid some attention to the Occupy movement and the message being crafted about that protest. In simple terms there is a growing discontent with the wealth divide in this country (in the world) and the inherent lack of understanding by the 1% of the population that is gaining ground vs. the 99% that continue to lose ground. Yet, when a television reporter actually talks to an Occupy protester, my experience is that the spokesperson is usually inarticulate, off message, and fringe in their thinking. I have heard snippets of justified property seizure; personal "rights" that were never taught in a good civics class; and statements that the government "owes me." These stands appear to come from outside the known political system of most civilized countries.

*Meanwhile, some of them were shouting one thing, others something else; the assembly was in chaos, and most of the people had no idea why they had come together. Acts 19:33.*

This apparent difference in purpose presented among members of the movement is partly the result of the disparate types of discontented people willing to stand (or camp) in the streets and partly that fact that the reporter tries to interview the most colorful person in the area. The most interesting person at these sites is not necessarily one that has a good handle on the overall message. There are no leaders, so the message from the television or radio is at best garbled, many times incoherent, and unfortunately in the interests of political agenda.

Some news organizations have gone out of their way to portray the Occupiers in a most negative light. Yet, through it all I remain...firmly on the fence. The Movement has great points to be made about the financial imbalance in the US and the world. However, the spokespersons are sometimes off topic and do not represent ideas I can fully espouse.

To fully define what an association of people represent, many develop a definitive mission statement. To help us environmental professionals speak with one voice and to still allow for internal discussions, NAEP has a very good mission statement:

**Our mission is to be the interdisciplinary organization dedicated to developing the highest standards of ethics and proficiency in the environmental professions.**

**Our members are public and private sector professionals who promote excellence in decision-making in light of the environmental, social, and economic impacts of those decisions.**

### Our vision is to:

Be the primary source of unbiased information on environmental practices

Support the advancement of the environmental professions as a whole and our individual members in their careers

Encourage better decision-making that thoughtfully considers the full implications of those decisions.

Continued on page 8



## President' Letter

*Continued from page 7*

NAEP has a membership that is well focused and, to a person, can provide a coherent message of purpose with very little deviation. We are professionals who associate to improve what we are and what we do. For the most part we all believe in this mission and believe that others respect that same mission.

NAEP is part of a greater movement, here and around the world, which is committed to making the environment better. Yet, we are losing this battle for political recognition and respect. There are people who profess to want to help the environment but really do not have a clue. Others still are politically opposed to the basic mission and aim to minimize the importance of what we do.

The two articles in this Newsletter are deliberately written to make us all think. They will not allow us to remain firmly on the fence when politics and policy are discussed. By the end of them I started to challenge myself: Are we all doing what we can to advance the agenda of the environmental professions? Are we actually living the life we claim to demand of the rest of the world? Or are we the idealists that P.J. O'Rourke skewers?

I trust this newsletter will start some serious discussions, so experiment with the ideas presented and provide us all with something ingenious to move us forward.

FOOMP!!!!

## Best Practice Principles Pilot Program

CEQ NEPA Pilot Project Update: Best Practice Principles for Environmental Assessments (BPPs for EAs) We announced in the September-October 2011 NAEP National E-News Letter that the Council on Environmental Quality (CEQ) selected the NAEP Pilot Project BPPs for EAs on October 19, 2011. Since then the steering committee has had monthly teleconferences, fleshed out the structure of the Survey Monkey questionnaire, began drafting questions, and added Rita Holder to the committee. The next steps will be to formulate approximately 25 questions for the survey, have the steering committee review and approve the survey, beta-test the survey, and then send it out to both the federal NEPA points of contact e-mail list (238 addressees) and the entire NAEP membership e-mail list. The survey will then be used to compile experience-based lessons learned and inform the writing of the BPPs for EAs and the report to CEQ. Current thinking is that the final survey will be distributed in mid-February 2012. The final BPPs for EAs and the final report will likely be sent to CEQ mid-to late-summer 2012.

If you have a keen interest in beta-testing the survey, or in reviewing the BPPs for EAs and/or report to CEQ, please contact Larry Canter or David Keys. It should go without saying that this CEQ NEPA Pilot Project is a large feather in our collective NAEP hat and that we want to get an excellent response on the survey.

### Points of contact:

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David Keys, (727)510-6021, [david.keys@noaa.gov](mailto:david.keys@noaa.gov)

## Environmental Practice — Call for Papers

*Environmental Practice* is seeking submissions for the September 2012 issue. EP vol. 14 no. 3 will focus on Environmental Ethics and submissions are due by February 15, 2012.

<https://naep.memberclicks.net/assets/ep14.3callforpapers.pdf>

*Environmental Practice* is seeking submissions for the December 2012 issue. EP vol. 14 no. 4 will focus on Hydrofracturing and submissions are due by May 15, 2012.

<https://naep.memberclicks.net/assets/ep14.4callforpapers.pdf>



*Editor's Note: Denis Eirikis' article was also a commissioned piece. I met him at the FAEP Annual Conference in West Palm Beach and was fascinated with his message to an audience of environmental professionals. One of the telling points of his address was a simple two part question that put into stark reality some of the problem we in the environmental professions must remedy. His first question was, "How many of you believe mass transit is a good thing?" The entire audience stood up. We were all so very proud at our environmental awareness. The second question put us all on edge..."How many of you took mass transit to the meeting this morning?" The shock was not that there was a minority of the crowd standing, there were fewer than 10 standing. Does that put us all firmly in the camp of those P.J. O'Rourke skewers in his quote? I was very uncomfortable with the result of the informal poll.*



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## Confessions of a Spin Doctor Why the Environmental Profession is Getting Killed

**By: Denis Eirikis**

This article endeavors to enlighten the scientific audience on the very real and measurable powers of emotion, branding, and public perception. It also provides the reader with insight on how years of anti-environmental messaging, that includes phraseology like "environmental wacko" and "jobs-busting environmental regulation", has led us to this point in American history where clean air, clean water, endangered species, the EPA, and the environmental profession are all in danger of extinction.

The reader can expect a discussion of:

- The alternate universe of public opinion and politics where branding and messaging are more powerful than facts/data/technical arguments.
- The poor state of the "Environmental" brand. Why public support of the environmental profession has plummeted by half during the existence of the NAEP.
- How rebranding the NAEP and becoming a credible VOICE in this election cycle can potentially make a difference.

### Introduction

I am a scientist who went to the dark side, I am a Spin Doctor. Paul Looney heard me speak and twisted my arm to write this. I love the NAEP and the environment, so I have decided to offer this brutally honest warning shot letting EP's know that you are getting killed in the marketplace of public perception and I don't think you have to continue to take it lying down.

In the 1989, I became active in the Florida Association of Environmental Professionals which was a very helpful networking organization as I made the career transition from bench chemist to marketing and sales for the largest environmental laboratory in the Southeast. Scientists then were still pretending to be immune from marketing, and I ran one of the first successful marketing and PR efforts in the industry.

My transition from science and technical to marketing and sales was not smooth. As a scientist, I had been trained to think in terms of scientific methodology where the observer is always

*Continued on page 10*



## Spin Doctor

*Continued from page 9*

impartial and the facts and figures speak for themselves. I was a lousy sales guy because I tried to make rational arguments to my clients, most of whom were professional engineers or senior scientists. I had empirical data from the EPA that my laboratory's data was significantly higher in quality than all of our local competitors and it was outside my realm of experience when I noticed that I was losing business to a lesser and more expensive laboratory that had hired an attractive blond saleswoman.

To increase my professional development, I joined the Direct Marketing Association where the old timers told me, "All buying decisions are emotional decisions". I politely corrected these poor unscientific souls and pointed out that most of my engineer and Ph.D. scientist clients seemed so dry as to be completely devoid of emotion in their critical decision making. The wise marketers challenged me to design a test.

The beauty of direct marketing is that it employs scientific methodology. Each campaign is designed like an experiment with controls and variables where results are closely measured. We sometimes measure response rates down to the thousandths of a percent and every single element of a major campaign is pretested. For example, at the time, one experimenter tested two exact mailings with the difference that one envelope was splashed with the words, "Please Open Me". The request apparently worked because that mailing drew 17% more response than the plain envelope. A good direct marketer tests messaging, various calls to action, price, etc. before rolling out the big bucks on a large expensive campaign.

I objected to the idea that all buying decisions are emotional and reminded my marketing mentors that engineers are smarter than to be persuaded by such inane cosmetics such as envelope color or clever messaging. My mentor managed the then famous Publishers Clearinghouse magazine sweepstakes mailings featuring a smiling Ed McMahon on the envelope and requiring the target to affix all sorts of labels, stamps, and stickers on the response to ostensibly increase their chances for winning. I was shocked when I was told that the response rate from professional engineers, people with the acronym "PE" attached to their database entries, responded to sweepstakes mailings at a rate greater than housewives. Their hypothesis was that engineers enjoyed the mini-challenge of manipulating all the stickers and decals.

I saw their data but remained skeptical. I decided to go ahead and design my own experiment to test whether emotional arguments played stronger than rational arguments in an audience of professional engineers and scientists.



It was 1995 and all of America was engaged in the broadcast of the OJ Simpson trial. I recall the moment clearly. I was on my way to the Miami International Airport in order to try to capture as much business as possible from a huge cleanup that was about to be undertaken to mitigate decades of sloppy housekeeping. The groundwater in the vicinity of the airport was awash in JP4. On my drive to a pre-bid conference, I listened to trial testimony where the manager of the DNA laboratory was on stand. The defense attorney was grilling the scientist about a lab QA/QC performance evaluation where the lab had come up with faulty data for one of the blind tests. You may recall that DNA evidence was new, the evidence clearly nailed OJ, but the defense successfully used emotion to refute the scientific evidence.

In the world of environmental laboratories, at the time, states worked with the EPA to administer biennial blind testing for water quality laboratories. There was a complicated formula for pass-fail, but the bottom line was that failing some blind tests was routine. The lab manager in the OJ Simpson case was being grilled and humiliated in front of the world for something that happens to virtually every laboratory.

This gave me an idea. Under freedom of information laws, I researched how well my laboratory did amongst my competitors on EPA Performance Evaluations. Fortunately, of the twenty or so labs that I researched, ours was at the top for analyzing blind tests within acceptable limits. I was amazed that the competitor with the attractive blond sales woman was able to get its data wrong about 30% of the time and still keep certification while we were at around 2 %.

I designed a controlled experiment. I crafted a no-nonsense report highlighting the results of the past several years of performance evaluations comparing our results versus other laboratories in the Southeast. Each mailing went to an equal number of engineers and scientists in about twelve states randomly divided from a single list that we had purchased. The difference between the two mailings was as follows:

Mailing 1: Rational Argument: Written formally by scientists, for scientists, the oversized envelope and cover letter highlighted percentages and statistical arguments suggesting that

*Continued on page 11*



## Spin Doctor

*Continued from page 10*

it clearly made sense to buy data from our laboratory since our QA/QC was so demonstrably the best on the market. We made a “numbers” argument and assumed that any critical thinker would choose to buy data from us.

Mailing # 2: Emotional Argument: The envelope was splashed with the headline, “Lessons from the OJ Simpson case... What You Need to Know Before You Order Your Next Lab Report”. The cover letter was designed to evoke fear. It asked the recipient to imagine themselves on the witness stand, squirming under public scrutiny, explaining to the jury why they bought data from any lab that failed so many of their performance evaluations. The mailing then included the same exact same QA/QC Report as Mailing #1.

You can guess the outcome. The fear-based emotional argument pulled in more than ten times the business of the rational statistical argument, in an audience exclusively comprised of professional scientists and marketers.

This experiment changed my working model of the human universe and set me on a new career path where I have put down the GC Mass Spec and now embrace tools like messaging, psychology, emotion, branding, and stories as my tools for advancing environmental and other causes.

## Environmental Politics

Let me share one more anecdote before I get into how I think the NAEP needs to step up in this political climate of unprecedented anti-environmental regulation where the EPA and our very profession have become expendable pawns.

As an officer in a local chapter of the NAEP, it was once my privilege to escort our keynote speaker, Carol Browner. She had just been appointed Secretary of the Florida Department of Environmental Regulation. As an astute observer of human nature and already aware of the power of branding, one of her first recommendations (later instituted) was to change the agency name to the Florida Department of Environmental Protection. She later went on to become the longest-serving administrator of the USEPA.

In our short time together one on one, I think I drove her from an airport, she told gave me more insight into the environmental business than I had learned from years at the laboratory bench or in the field. She said, and I paraphrase from a twenty year old memory, “One cannot simultaneously boast that a state has a great business climate and a strong environmental protec-

tion program. The best one can do is to put great environmental regulations on the books and then to fight the political battle, case by case, in the arena of enforcement”.

## The Alternate Universe

Not of the string theory variety perhaps, but one of my prime reasons to write this is to convey to fellow scientists that the political world does not seem to function according to the comfortable laws of scientific methodology. While numbers rule the world of the scientist, emotions like fear, greed, and anger win more votes than any statistical analysis. The political alternate universe is one where a story can hold more truth than an equation, where perception trumps truth.

I became an environmental professional, probably for the same reasons you did, I wanted to change the world, improve the environment, and advance both environmental science and the environmental profession. I was a typical EP, comfortable in the science-mathematics-logic model of the universe, and sure that if only we made people understand the facts, then we could create a greener, more sustainable world. Like most scientists, I had no tolerance for politics, and disdained public relations as unnecessary BS.

But the real world does not operate on science alone. My first glimpse of political reality was when I was a fresh, eager Coast Guard Ensign. I loved the ocean and was so proud to have a role in protecting it. My boss was the Federal On-Scene Coordinator for federal response to oil spills in the Greater Antilles. I was in charge of cleanup on one of my first major spills, it was a Sunday, and the cleanup seemed to have diminishing returns as the crews wound down trying to get the last of it out of San Juan harbor. I remember calling the Captain of the Port at home to ask him, “How clean is clean?” I will never forget his reply. He asked me if the media was there. I replied, “Yes.” He then told me, “The cleanup is finished when the media says it’s clean enough, or after they go home, whichever comes first.”

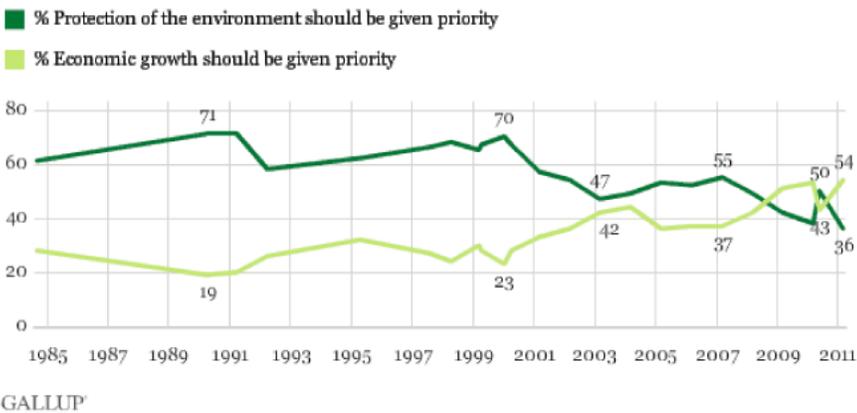
That brutal lesson, from the worst boss I ever had, shook a bit of my idealism especially when he was soon promoted thereafter. But whether I like it or not, I have come to accept that media, politics, public opinion, perception and branding are as much a part of environmental professionalism as biology, chemistry, physics and engineering.

The OJ Simpson case opened my eyes that everyone, even scientists, operates primarily on emotion. This information is

*Continued on page 12*



With which one of these statements about the environment and the economy do you most agree -- protection of the environment should be given priority, even at the risk of curbing economic growth (or) economic growth should be given priority, even if the environment suffers to some extent?



If you don't think messaging is successful, take a look at this Gallup data whose bottom line is that support for the environment has eroded by about half since the early days of the NAEP.

## Branding 101

Messaging works much better if the messenger is perceived, or branded, as credible.

Branding is the choreography of emotional images, marketing and messaging around a company, organization, or cause. I know people that are so emotionally invested in Ford cars that they have a decal of a little imp relieving himself on the Chevy logo. I personally am proud of my hybrid Civic and my wife felt like the best mother in the world as she used to drive around our three kids in our super safe Volvo station wagon.

Branding is a measurably demonstrative way to advance a company or organization's goal, sales, or policies. Successful branding creates feelings of identification, desire, and loyalty.

## Spin Doctor

Continued from page 11

useful in advancing an environmental agenda. Carol Browner taught me the world's oldest lesson: that politics plays a huge role in environmental policy. If we professionals want to effectively protect the environment, we need to acquire and embrace political acumen.

## Messaging 101

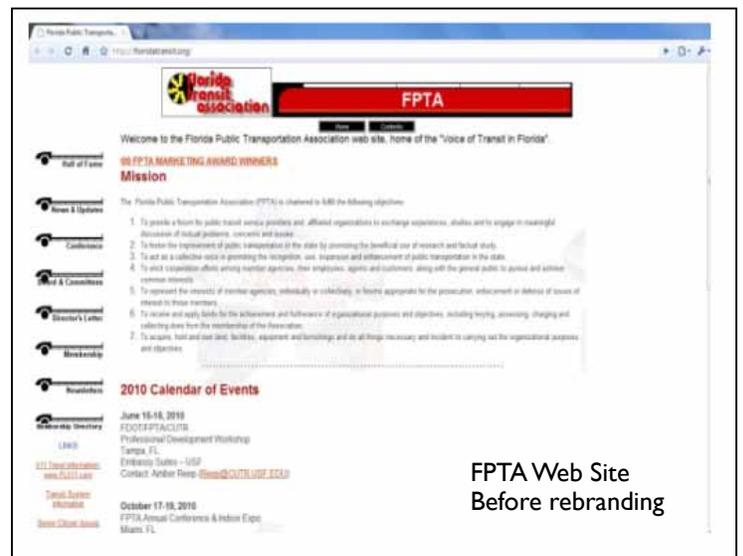
Conservative politicians have brilliantly embraced the power of messaging. For decades, they had tried to eliminate inheritance taxes when one of their best strategists, Robert Luntz, suggested it be called the "death tax." Twenty years of trying, no progress. Change messaging to "death tax" and they won their case instantly. Luntz scientifically tests word and phrase choices using focus groups and interviews. His stated purpose is the goal of causing audiences to react based on emotion. "Eighty (80) percent of our life is emotion, and only 20 percent is intellect. I am much more interested in how you feel than how you think." On a side note, in a speech last week, he advised Republican Presidential Candidates to refrain from using the word, "capitalism" because of its newly negative connotations. My hunch is that they will listen to the guy who helped make "liberal" a dirty word in American politics.

Closer to home, the most listened to radio host in America, Rush Limbaugh, has used the term "environmental wacko" thousands of times to describe people like NAEP members. Politicians now successfully refer to environmental regulation as "jobs-busting or jobs-killing" environmental regulation."

## Lessons from the Public Transportation Industry

Like all sacred things environmental, public transit funding is under severe attack. Here in Florida, in messaging used to kill high speed rail, every news release from the governor's office always referred to the project as "Obama's high speed rail" rather than Florida's high speed rail.

Continued on page 13



FPTA Web Site Before rebranding



## Spin Doctor

Continued from page 12

One of my favorite clients is the Florida Public Transportation Association (FloridaTransit.com). They used to look at themselves as an organization with about 150 members and one full time employee. I have helped them brand themselves as “The Voice of Public Transit” in Florida whose members directly employ more than 20,000 Floridians, provide about a million rides per day to Florida’s commuters and visitors, and whose efforts facilitate billions of dollars in economic activity each year. Furthermore, I helped them launch IM4Transit.org, an advocacy organization of 100,000 pro-transit Floridians. While we had not rebranded and gained sufficient perceived political power in time to save high speed rail, the organization has a new gravitas that it brings to the negotiating table to advance public transportation issues and funding in Florida.

Our messaging stresses the benefits of transit, especially economic and jobs benefits. While transit is green and has wonderful environmental benefits, frankly, I don’t stress them as much. Why? Because when dealing with an overwhelmingly Republican state legislature, as soon as they hear the word “environmental,” they consciously or unconsciously tune us out lumping us with the environmental wackos. We tested which benefits of transit make voters think transit funding make sense, and “environmental” benefits ranked a mediocre 6 out of 10 listed benefits.

On a national scale, this past summer, a devastating 37% cut to the nation’s transportation spending was proposed by a key congressional committee overseeing the Reauthorization of how America spends gas taxes. The American Public Transportation Association, unprecedented in its 130 year history, teamed with unions, riders, stakeholders like the Florida Public Transportation Association, and others to run the “Don’t X Out Transit” street rally media circus campaign. Within a few weeks, the congressional committee had quietly backed away from the 37% cut and the future bill is expected to enjoy near current funding levels. The bottom line is that the squeaky wheel gets the grease,



FPTA Web Site AFTER rebranding (the site now usually depicts a business leader saying why transit is so important)

and in the case of politics and budgeting, whoever screams the loudest suffers less cuts.

## A Suggested Path Forward for the NAEP

While I have not been active in the NAEP in the years since turning my career towards measurable public relations and advocacy, I was very pleased to be asked to speak on behalf of the IM4Transit project at the recent annual meeting of the Florida Association of Environmental Professionals. Coincidentally, on the day I spoke at FAEP, in the tortuous ongoing national partisan budget crisis, that particular day GOP leadership had offered to extend emergency funding for FEMA... by taking the funds away from the EPA.

The NAEP was formed in response to a new environmental awareness represented by the formation of Earth Day and ground breaking NEPA environmental regulation. Today, climate change is a politically and emotionally charged issue. Strong business interests want to close the EPA and do away with jobs- busting environmental regulation, ostensibly in order to patriotically restore America’s prosperity. “The Environment” has fallen off the radar as a national priority with nary a mention in the presidential debates or this year’s polling

As a former EP who loves both the environment and the environmental profession, I urge the NAEP to take up arms and do everything within its power to fulfill its mission of advancing the profession. I posit that the profession cannot be advanced if the EPA, NEPA, and other environmental policies are dismantled. To fulfill its mission, and advance the environmental profession, I respectfully suggest the following:

The NAEP is conspicuously silent. The best and brightest professionals in the environmental industry, members of the NAEP, need to be heard in the national debate about clean air,

Continued on page 14



## Spin Doctor

Continued from page 13

clean water, environmental protection, and why these are important to America's health, prosperity, and quality of life. The time to speak up is now in the 2012 election season. The NAEP could craft a credible voice and message to advance its mission and its members.

The NAEP is needlessly obscure. I made some informal calls today to leadership at the Union for Concerned Scientists, Climate Central, Sierra Club, and no one had heard of the NAEP. Meanwhile, Wikipedia lists about 75 environmental organizations in the

USA, NAEP is not mentioned and has no Wikipedia listing.

The NAEP could be a greater force for national good. I challenge NAEP leadership to rebrand itself as a credible force to be reckoned with, and join the battle to save the environmental profession from those that wish to make it irrelevant. EP's are uniquely qualified to stand up and, in partnership with other organizations, make the public aware of the benefits of protecting the environment with intelligent and jobs-creating environmental policies. Clean air and clean water should be winning issues.

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## Quest for Papers

I have gotten feedback concerning what the *ENews* has become. I am encouraged to hear that the article selection so far has been good. We are still trying to improve the value to members.

We still have not touched on all of the areas of practice in this multidisciplinary profession. I know that there are almost entire Chapters that have a specific emphasis that still have not provided their voice to this shared publication.

We are still experimenting with different features and I believe we have a hit with the member spotlights so far. In that light, I would like the members to know that each of you is likely to get a call from me asking you to tell us about yourself. I want the membership to know the volunteers that make this a great association and I also want those who possibly cannot afford the time to volunteer to be able to tell us who the membership actually is.

Your idea for an article will definitely help make this a full

spectrum publication. I encourage you to write an original article or a well considered response to something published here.

Controversial issues are welcome. I want to start receiving letters to the editor to help round out the information presented and to keep us all involved. As the Editor I am only the facilitator, I depend on the membership to help make this a premier publication of the premier Environmental Professional Association.

Here is what I am looking for: approximately 2,500 to 3,500 words, MS word format. The content is up to you. Pictures are welcome. I would also like a short bio of you and a recent photograph so folks know who is speaking.

Keep the articles and ideas coming; there is ALWAYS room for your voice. If you are not sure whether your idea or article can be included, please contact me and we can flesh it out together. This newsletter is getting better and I want all of us to feel we are a part of this.

— Paul B. Looney, CEP, CSE, PWS,  
NAEP Newsletter Editor, [plooney@volkert.com](mailto:plooney@volkert.com)

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*Editor's Note: The following three papers all deal with the concept of cap-and-trade. The first is written by three members of the Energy and Environmental Policy Committee for NAEP and originally submitted to the NAEP membership as a "white paper" on the subject. The paper is a generalized treatment of the concept. It was updated and released to ENews as a comparative piece to the two California-specific cap-and-trade papers originally published in The Recorder by authors from Marten Law. When I first thought of putting these three pieces together I asked for feedback from the NAEP authors because there seemed to be a difference in my mind about the results of the two efforts. What I received was heartening and told me everything I needed to know about the scientists who wrote the article and their level of comfort with what had been written.*

*The authors appeared to share a feeling that the main difference between the white paper and the California cap-and-trade issues is the difference in scope between state and federal implementation of cap-and-trade legislation. While policy is sometimes considered an answer in itself, there are times that implementation of policy can run into problems. Should California be looking at the impending implementation of policy expecting to be sued, or should there have been more work done on the legislation? California's leadership is not in question here, but the matter of being first, and in such a bold way, can leave the state implementation open for comment and litigation. Is California's cap-and-trade implementation properly framed? Is it actually workable? And the granddaddy of all questions, what can the federal government learn from this state experience? How does (or should) the U.S. implement federal energy policy to address a need to reduce greenhouse gas emissions?*

*I am proud of this Committee and their work. I wanted to expose a larger audience to the brilliance that is NAEP.*

## Introduction to the Energy and Environmental Policy Committee White Paper on Cap and Trade

**By Judith Charles, Committee Chair**

*The Energy and Environmental Policy Committee thanks Dr. John Perkins, Mr. Stephen Gerritson, and Dr. Thomas Cuba for their thoughtful and insightful preparation of the below paper, "Regulating Greenhouse Gases: Background and Review of Cap and Trade." This paper was written in 2010 for the purpose of educating committee members and NAEP membership on the subject of cap and trade, and to help outline activities that could be required by environmental professionals addressing greenhouse gas emissions and global climate change should national cap and trade legislation be passed. The paper is general, in nature, and begins with a description of the major air emissions and activities contributing to greenhouse gas emissions followed by a brief overview of international and national efforts to regulate these emissions. The authors then define cap and trade and discuss the system's effectiveness in theory and in practice. Examples of cap and trade programs are highlighted along with some of the lessons learned from these types of trading programs. As indicated by the paper's introductory paragraph, national discussions in 2010 about a cap and trade program for the United States diminished with the new Congress in January, 2011.*

# Regulating Greenhouse Gases: Background and Review of Cap and Trade

**By Dr. John Perkins, Mr. Steve Gerritson,  
and Dr. Thomas Cuba**

**September 5, 2010**

## 1. Introduction<sup>1</sup>

This article was finished in September, 2010. With the elections of November, 2010, however, the weight of political opinion about climate change has shifted substantially. The Senate took no action on Waxman-Markey American Clean Energy and Security Act after the elections. When a new Congress commenced work in January, 2011, new leadership of the House of

Representatives had no interest in further discussions of the matter. Moreover, substantial numbers of new Representatives and Senators opposed any effort to curtail greenhouse gas (GHG) emissions, especially by policies that would raise the prices of energy. Nonetheless, the authors feel the information in this article, dated as it is in some respects, still is worth sharing with the membership of NAEP.

*Continued on page 16*

<sup>1</sup> Authors note, August 8, 2011.



## Greenhouse Gases

*Continued from page 15*

### 2. Background and Nature of the Problem

A variety of human activities and natural events release carbon dioxide and other materials to the atmosphere. The vast majority of scientists (97 – 98 percent) who contribute the most to climate science in peer-reviewed journals have concluded that the human-caused emissions of carbon dioxide, methane, nitrous oxide, and several other gases (greenhouse gases) are the most important causes of observed changes in the earth's climate.<sup>2</sup> In addition, multiple scientific associations have agreed that human causes of climate change (often called global warming) are serious and must be mitigated to avoid serious consequences.<sup>3</sup>

Burning fossil fuels (coal, oil, and gas) is the source of the largest volume of the contributing gases, while land clearing, some agricultural practices, and industrial activities contribute most of the rest. Legislation to reduce climate change now pending in Congress seeks to eliminate about 80 percent of the carbon dioxide emissions by 2050. This is a massive reduction that will challenge human ingenuity to invent a new energy economy for the world. It is feared by many that failure to develop or adopt these innovations will seriously impair the ability of the human population to maintain the material plenty that came with the Industrial Revolution. It is further speculated that such a failure would have far-reaching impacts on the quality of life for those accustomed to abundant, inexpensive energy supplies. Thus reducing greenhouse gas emissions is a task of re-making the US and global energy economies: a task of achieving per-capita emissions of GHG's equivalent to that of the middle 19<sup>th</sup> century approximately.

The Kyoto Protocol, signed in December, 1997, was intended to implement the UN Framework Convention on Climate Change by requiring countries that ratified it to reduce their emissions of greenhouse gases. It went into effect in 2005. The United States Senate, however, specified in July, 1997, that it opposed signing the protocol unless developing countries also had to participate and the US economy would not suffer serious harm.<sup>4</sup> The failure to include these criteria led to no Senate action to ratify the protocol and thus the US is not a participant in the protocol. Serious Congressional discussions of US participation in international agreements to reduce greenhouse gas emissions did not begin again until 2009.

Thus this international treaty (Kyoto Protocol) provides no legal foundation to force Americans to reduce their emissions. The Supreme Court ruled in 2007, however, that the

Clean Air Act as amended did provide legal authority for USEPA to regulate greenhouse gas emissions. Still, the agency has not yet released such rules. The general sentiment is that Congress is by far the more legitimate body to create such monumentally important regulations.

Congress, however, has not yet passed legislation to regulate greenhouse gas emissions, although the President has given clear signals that he wants to sign a good bill. Many members of Congress, in both the House and Senate want to pass such a bill, but it remains controversial with many members in opposition. The House passed the Waxman-Markey bill (H. 2454, American Clean Energy & Security Act, in 2009). Senator John Kerry and three co-sponsors introduced the Clean Energy Jobs and American Power Act (S. 1733) in late September 2009 in response to Waxman-Markey. It was passed by the Committee on Environment and Public Works in November, 2009, but further progress in the Senate stalled in February, 2010. Currently Senate leadership is working to bring a much reduced bill to the floor.

It is not clear when, or if, the Senate will act, nor is it clear what the final bill agreed to jointly by the House and the Senate will require. Nevertheless, if a bill emerges to be signed by the President, it is almost certain to provide mechanisms that over time will be intended to reduce greenhouse gas emissions in the US. The two most common mechanisms discussed, each with numerous variations, are “cap-and-trade” and a “carbon tax.” Although the two policies have significant differences, both seek to reduce carbon emissions by forcing up the price of these emissions.

*Continued on page 17*

2 William R. L. Anderagg, James W. Prall, Jacob Harold, and Stephen H. Schneider, Expert credibility in climate change, *Proceedings of the National Academy of Sciences*, June 21, 2010, doi: 10.1073/pnas.1003187107. The authors discuss the difficulties involved in measuring “scientific expertise” and “scientific credibility,” but their numbers are consistent with other reports about the wide-spread agreement in the scientific community about the importance of human-caused climate change. They also argue that their methods have captured essentially all of the most productive workers in climate change, both those convinced about human-caused climate change and those unconvinced. Anderagg, et al., along with all other scientists, however, would acknowledge that all scientific knowledge is tentative and open to revision upon the production of new data and new interpretations of old data.

3 For example, the latest studies from the US National Academy of Sciences are *Advancing the Science of Climate Change*; *Limiting the Magnitude of Future Climate Change*; and *Adapting to the Impacts of Climate Change*. (Washington, D.C.: National Academies Press, 2010), 3 volumes.

4 U. S. Congress. Senate. S. Res. 98, passed July 25, 1997, 105th Congress, 1st Session.



## Greenhouse Gases

*Continued from page 16*

When the legislation to regulate emissions becomes law, regardless of the mechanisms adopted, NAEP and the community of environmental professionals will face new challenges and responsibilities. In advance of knowing what the legislation will require, it's difficult to specify exactly what the law will require, but at the very least we can anticipate that environmental professionals will be called upon to do a number of things not currently required by Federal law. These may include:

- assisting organizations in planning for reductions;
- measuring emissions for organizations (private and public);
- verifying reductions achieved;
- including greenhouse gas emissions in environmental impact statements and environmental permits;
- estimating the most cost efficient and palatable pathways an organization can follow to reduce emissions;
- working in federal, tribal, state, and local government agencies as regulators of or advisors to emitters;
- working to bring organizations into compliance; and
- teaching relevant subjects in community and four-year/graduate colleges.

This legislation may eventually pass and, if so, would have a profound effect on NAEP, its members, and the public. In this briefing paper we provide an explanation of the most likely mechanism to regulate emissions, the cap-and-trade mechanism.

### 3. Definition

A cap and trade system (or cap and allowance system) is a regulatory regime in which a permit setting an upper limit on a facility's emissions of a particular pollutant is accompanied by an exchange system. The permit is expressed in units of pollutant (usually tons). If the facility emits less than the permit allows, the difference (permitted amount minus actual amount) is certified by a third party and becomes a tradable commodity (a credit), which can be sold to other facilities that may have exceeded their permitted emissions allowance. The price is usually set by the market and is geared to the cost of control as well as the relative availability (or supply) of credits. There is also an overall limit on the total amount of pollutant that can be emitted in a given year, and this amount declines with each succeeding year. An example of such a system is the acid rain trading program, instituted by the USEPA per the Clean Air Act Amendments of 1990.

### 4. Theory

In theory, a cap and trade system minimizes the costs of controlling the emissions of a given pollutant, by creating incentives (sales opportunities) for those facilities with the lowest control costs, and by creating lower-cost alternatives (purchasing credits) for those with control costs higher than average, while guaranteeing that, overall, the total amount of emitted pollutant remains under the targets set each year. This is classical price and resource allocation theory that explains the operation of all markets.

Economic theory, however, does not include some very difficult yet important issues centered on how the limits of pollutant emissions are set and how permits to emit are obtained. Setting limits to emissions depends upon the models of climate science. The questions are, "How much aggregate greenhouse gas can be tolerated in the atmosphere without inducing unacceptable climate change?" and "Can we have sufficient certainty that limiting greenhouse gas emissions will achieve the desired protection of climate?" Either auctions or distribution of permits for free to historic emitters can be used to distribute permits, but the choice is driven more by notions of social justice and the proper role of government than economic theory. In addition, simple economic theory does not specify how limitations on emissions of various greenhouse gases should be set on different sources of greenhouse gases nor what the relative effect of successful reductions would be with respect to other warming processes such as volcanic and solar activity.

### 5. Practice

In practice, experience with emissions trading markets has been mixed. There are significant disincentives, such as transaction costs (costs of registering and certifying the credits, for example), as well as uncertainties, which tend to discourage trading in favor of the certainty of control. Prices are often artificially affected by deadlines. Finally, lack of consistency in IRS treatment of credits as an asset has led to a reluctance to create and hold them.

As noted above, the acid rain trading program, instituted in the 1990s as an adjunct to the Clean Air Act Amendments Title IV sulfur dioxide control program, is often cited as a successful example of cap and trade. The goals of the program (a 50% reduction in SO<sub>2</sub> emissions by 2010) were met by 2007, at

*Continued on page 18*



## Greenhouse Gases

*Continued from page 17*

a cost per ton of about 25% what had been estimated at the beginning of the program. USEPA and some environmental groups credit the trading program for these achievements. Others note that many sources merely switched to low-sulfur coal, and that control-cost estimates were driven up by industry lobbyists arguing against the program.

### 6. CO<sub>2</sub> Trading Programs

A number of countries adopted cap and trade programs after signing the Kyoto Treaty. The earliest and largest (and remains) the European Union Emissions Trading Scheme. Covering 27 countries at its inception in 2005, the program set an overall cap on CO<sub>2</sub> emissions, and provided allowances (or permits) to the major sources. Initial prices of 20-30 Euros per ton of CO<sub>2</sub> quickly fell, as it became apparent that the allowances provided exceeded the actual emissions. (This is a problem

common to almost all established trading schemes, and may be the political price for industry acceptance.) In spite of this initial blip, the trading scheme has been credited with both contributing to a real reduction in CO<sub>2</sub> emissions and in driving down the costs of compliance. Adverse economic impacts were “imperceptible.” (Source: Ellerman et al; *Pricing Carbon: The European Union Emissions Trading Scheme*; Cambridge University Press, 2010; cited in *Nature*; June 10, 2010.)

### 7. Lessons Learned

Trading programs can contribute to faster and cheaper emissions reductions, although there are some potential problems. These include: price distortions due to initial allowances; transaction costs; credit for reductions that would have occurred without regulation; and a reduction in technological advances “forced” by regulatory requirements. In addition, trading programs have suffered from poor public relations in the past, having been characterized as “the right to pollute” by environmental groups.



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*The following article was originally published on November 21, 2011 in The Recorder. Copyright 2011, ALM Media Properties, LLC. All rights reserved. For more information, call 415.490.9990.*

## Cap-and-Trade, Legally Challenged

California's greenhouse gas cap-and-trade program is due to be finalized within a few weeks, over widespread opposition and concern about its effects on California's economy. Looking forward, California business and citizens groups are considering how and when to challenge the regulations in court. Below are some of the likely challenges and their strengths and limitations.

Final regulations in California are subject to judicial review, and may be challenged as being unconstitutional or inconsistent with the statute that authorized their development, or for conflicting with other federal or state statutes. In the case of the Air Resource Board's cap-and-trade program, all of these objections are likely. A successful appeal can invalidate all or part of a new program, and sometimes requires an agency to start a new rulemaking process entirely.

### Constitutionality

The most obvious challenge, and one that ARB prepared for, is that the cap-and-trade regulations violate the commerce clause of the federal Constitution. There are at least two ways to frame this argument. The first is that the program discriminates

against out-of-state goods or services. The second is that the regulation impermissibly burdens or inhibits interstate commerce.

The cap-and-trade program regulates out-of-state emissions differently than in-state emissions. In the area of electric power, for example, the program is designed to raise the price of generating electricity in-state using fossil fuel, which in turn should reduce electricity consumption. Because ARB cannot directly regulate out-of-state generators, electricity importers are subjected to allowance requirements in an indirect path to the same objective.

The program's regulation of natural gas and motor fuel "suppliers," commencing in 2015, is similar. Certain in-state persons (suppliers of petroleum products and natural gas) are covered by the surrender obligation based on volumes of GHG emissions attributable to such fuels. But these obligations vary depending on where in the distribution chain such suppliers or producers are located, with exclusions designed to prevent double counting. Importers, on the other hand, are uniformly



## Cap-and-Trade

*Continued from page 19*

regulated by imposing upon them requirements that may not apply to similarly situated in-state suppliers.

On both the electricity and fuels sectors, the express intent of the program's regulation of imports is to prevent "leakage," which is the transfer of emissions (along with economic activity) from in-state to out-of-state sources. But in preventing leakage, it also may prevent out-of-state sources from competing with in-state regulated sources on the basis of price, which may discriminate against the out-of-state sources and inhibit interstate commercial competition.

Burdens on interstate commerce are not necessarily unconstitutional. They can be justified by compelling state interests that fall within the realm of state regulation, such as protection of health and safety, especially if the burden on interstate commerce is minor. But here, California is acting alone in a manner that will not materially influence climate change or the health and well-being of Californians. In its rulemaking process, ARB made no finding that the program would effectively combat climate change or any of the health effects associated with it. The compelling state interest is therefore not identified, and the argument for the constitutionality of the regulations appears relatively weak.

There is also a question of the validity of ARB's program under other constitutional concepts. Federal and state constitutions assign to legislatures the responsibility for enacting substantive legislation and making fundamental policy decisions about health and safety, among other issues. In the case of AB32, the delegation of legislative authority to ARB was very broad and lacked specificity on key issues. Although AB32 authorized market-based regulatory programs, it did not provide any detail about how such a program would be constituted. It is not clear whether ARB's adoption of sweeping regulations governing California and all who do business in the state is an action that can constitutionally be delegated to an administrative agency.

## Consistency with AB32

There also are likely to be a large number of objections to ARB's program arising from AB32 itself, based on provisions limiting ARB's authority. Among these requirements, the programs adopted by ARB must be "feasible," "cost-effective" and "equitable." These terms provide ample room for argument as to whether the costs imposed by the program are justified by the benefits, and whether the program could have been designed differently.

A few simple examples illustrate the point. Some entities

will receive allowances from ARB for free, and other entities must buy allowances at auction. There is essentially no justification given for the disparities in treatment of those who receive allowances for free and those who do not. Likewise, some parties will be required to purchase allowances, but operate under contracts that may not allow them to recover that cost. There are provisions that provide rebates to utility customers using payments from other sectors of the California economy. ARB has agreed to review these and other open issues at some later point in time. These unresolved issues open the door to arguments that the program is not feasible, or cost-effective, or equitable, and is therefore not consistent with its authorizing legislation.

## Consistency with Other Federal and State Laws

There is a question of whether California's regulations conflict with (or complement) federal actions to combat climate change. New and modified power plants and large industrial sources are subject to recently implemented EPA regulations under the Clean Air Act. EPA has identified additional regulations that would address GHG emissions under the Clean Air Act. These federal regulations apply or would apply in California to some of the same entities that are subject to the cap-and-trade program, raising the potential for inconsistencies.

State air quality regulations must generally conform to federal standards. States may implement requirements more stringent (but not less stringent) than those implemented by EPA. It is unclear whether ARB's rules are "more restrictive" than EPA's regulations. Other cap-and-trade programs implemented under the Clean Air Act have been struck down by courts on the basis that they did not adequately implement the act's health-based requirements. It is possible that California's program could be deemed less restrictive than the Clean Air Act, and therefore be inconsistent with or pre-empted by federal law.

There are also reasonable arguments that the cap-and-trade program conflicts with California state laws other than AB32. The California Environmental Quality Act requires agencies to comprehensively review the environmental impacts of new regulations. ARB's rules have been reviewed multiple times under CEQA to assess their environmental effects, but the analyses have not necessarily included all issues that could be relevant for a program that will affect California's entire economy. For example, the State Water Project pumps water in part to maintain habitat. If it cuts back on such pumping in response to increased electricity costs resulting from the program, there could be

*Continued on page 21*



## Cap-and-Trade

*Continued from page 20*

adverse environmental effects. These and other indirect effects were not considered in the CEQA review of the cap-and-trade program.

The cap-and-trade program is also arguably a new tax imposed in violation of Proposition 26, which was enacted by the voters on Nov. 2, 2010, to amend the state Constitution. Prop 26 requires a two-thirds legislative vote to effect a “change in a state statute” that results in any taxpayer paying a higher tax. Under the cap-and-trade program, ARB imposes a minimum fee of \$10 per allowance (equivalent to a metric ton of carbon dioxide equivalents), that is escalated over time. This minimum fee equates to approximately 0.7 cents/kWh for gas-fired generation and over one cent/kWh for coal-fired generation (which supplies much imported electricity to California). This is the kind of hidden fee that Prop 26 was intended to address — regulatory costs that raise revenue for governmental programs. It looks and sounds a lot like a tax.

The strongest argument that Prop 26 does not apply to the cap-and-trade minimum allowance price is that AB32 predated Prop 26, so the minimum fee was not imposed pursuant to change in a statute. This argument raises the question, however, of whether an agency can by regulation impose a new fee or tax at

all. While AB32 broadly delegates to ARB the authority to implement a “market-based” program, there is no authorization for the imposition of a minimum auction price for allowances. The argument that the fee/tax can be imposed by an agency without a change in a statute raises the question of whether agencies can impose new taxes at all, and whether Prop 26 should be interpreted to prohibit such actions even without a change in a statute.

## Conclusion

Suits challenging the cap-and-trade rules will likely be filed soon. The state’s Office of Administrative Law is expected to finally adopt the rules by mid-December. Some claims, like those arising under CEQA, must be filed as soon as 30 days after the Office of Administrative Law posts the CEQA notice of determination.

A complaining party must have participated in the rulemaking process to assert certain claims. Hundreds (and perhaps thousands) of persons did so, representing diverse interests, groups and business sectors. It is entirely possible that dozens of suits could be filed by those persons most motivated to oppose the rules and the groups with which they affiliate. Depending upon the claims and the sympathies of the courts in which such suits are filed, enforcement of the cap-and-trade regulations could be delayed beyond the current implementation date of Jan. 1, 2013.

## Cap-and-Trade War Coming Our Way

GHG regulations take effect in just over a year,  
but lots of work remains to be done if they are to succeed

**Robert F. Lawrence and Dustin T. Till**  
**Marten Law**

### Environmental Law

**O**n Oct. 20, the California Air Resources Board (CARB) approved controversial new cap-and-trade regulations on greenhouse gas emissions from electric utilities and large industrial sources after more than five years of debate. The new regulations — the most comprehensive climate change limits in the country — are likely to generate a political, legislative and judicial firestorm. They are being enacted at a time when many other states and Congress have turned away from GHG regulations, citing the burden they place on a struggling

economy. CARB, however, had little choice but to act, in light of impending deadlines established by AB32 — California’s 2006 climate change legislation. AB32 requires California to reduce its GHG emissions to 1990 levels by 2020. The new CARB rules take effect Jan. 1, 2013, although CARB has already

*Continued on page 22*

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## Cap-and-Trade War

*Continued from page 21*

determined that major issues need to be revisited before the rules are implemented.

Cap-and-trade is a market-based framework under which aggregate emissions are capped and regulated businesses must obtain (through government allocations, auctions, or secondary trades) an allowance for each ton of GHGs they emit. In theory, the cost of allowances incentivizes businesses to adopt more efficient methods of production or find alternative technologies for resource use.

Cap-and-trade regulations have been successfully implemented before, but only in limited programs that regulate either one pollutant or one economic sector. EPA has implemented a cap-and-trade program for sulfur dioxide. Several Northeastern states have adopted cap-and-trade regulations limiting carbon dioxide emissions from power plants (that system is known as the Regional Greenhouse Gas Initiative or RGGI). Each famously achieved its objectives before statutory deadlines.

California's program reaches much further than any market-based emissions program ever tried before. It attempts to regulate all economic sectors in California, and applies not just to carbon dioxide emissions, but to emissions of methane and other heat-trapping gases from most economic sectors. California's approach creates enormous complexity, as CARB must attempt to equalize economic impacts upon diverse economic sectors. The program pits investor-owned utilities (IOUs) against industrial sources, as they both must bid for the same limited emission allowances. While IOUs can pass the costs through to ratepayers, industries compete in international markets where cost pass-through is by no means assured. IOUs are therefore almost destined by the new rules to win the bidding for these allowances at the expense of California industry.

Perhaps the most difficult problem California faces in enacting emissions limitations alone, without a federal program, is that at least some industrial users may leave the state to avoid the cost of compliance. The migration of GHG emissions sources from one state to another is known as "leakage," and CARB's rules are not well-designed to prevent this. The fee on out-of-state generation is inequitably assigned. Publicly owned utilities will receive free allocations of allowances for their imported electricity, while other importers will have to bid for the allowances assigned to imported electricity. Furthermore, many utilities import electricity under contracts or agreements under which they will not be able to pass through allowance costs to consumers.

The anti-leakage approach for industries under the program is even more difficult to administer and understand. CARB will initially allocate emission allowances for free to industries subject to the program. But the number of allowances distributed will be based on CARB's view of what the level of those industries' emissions should be, not what they actually are. So, sometime between now and Jan. 1, 2013, in order to keep operating at historical levels, the affected industries may need to modify their operations to match governmentally mandated "benchmarks" for GHG emissions per unit of output. Some industries, most notably petroleum refining, will receive fewer allowances than they need to operate — even at recent recessionary levels.

There are likely to be many other provisions of the CARB rules that will come under attack. Here are some examples:

- **Cap:** CARB established the cap at emissions levels that are consistent with recessionary emissions rates, and are a few percent below emissions in California in 2008. CARB's cap will enforce limits that do not permit California's economy to recover to Pre-recession levels.
- **Phase-in:** Other successful cap-and-trade programs established their caps up to five years in advance of enforcing them, so regulated entities had sufficient time to make investments in alternative compliance strategies. But CARB's program begins in a year, so business must either close, move or reduce operations rather than achieve compliance through investment.
- **Resource shuffling:** The regulations include a requirement that a responsible individual certify, subject to criminal penalties, that the regulated entity has not engaged in "resource shuffling." The CARB staff have explained that resource shuffling occurs when a regulated person switches from a high-GHG-emitting source to a low-emitting source (like from coal fired power to wind energy), but is not effective in shutting down the source from which it is switching. To make the resource shuffling certification, an electricity purchaser that switches from a high- to a low-emitting electricity source must ensure that the former source does not find new customers or continue emitting at prior rates.
- **Allowances auctions:** The theory of auctioning allowances is that an auction "recovers the value of emissions rights"

*Continued on page 23*



## Cap-and-Trade War

*Continued from page 22*

for the benefit of the public. This concept overlooks the fact that if the price signal works, then an auction requires regulated entities to pay twice — once when they buy allowances to keep operating, and again by investing in operational alternatives for reducing their GHG emissions.

- **Rebate of auction proceeds:** The auction of allowances to IOUs and certain other types of facilities will raise revenues that CARB has determined should be rebated exclusively to investor-owned utility ratepayers. The plan raises two fundamental questions. First, why does it serve the interests of the program to impose a fee on electricity users to pay for GHG allowances, and then rebate the fee back to the same people who paid the allowances' costs in the first place? Second, how are the goals of the program advanced by rebating to utility customers GHG allowance proceeds paid by nonutility customers? The rebate program does not appear to serve a purpose related to reducing GHG emissions, and calls into question the need for the auction.
- **Coordination with other programs:** CARB's cap-and-trade program shares the same goals as other programs established in California, notably the Renewable Portfolio Standard, under which certain utilities are required to obtain 30 percent of their electricity from renewable sources by 2020. Under the final version of the regulations, the renewable energy credits, or RECs, associated with renewable energy would be surrendered as part of the cap-and-trade program. RECs so surrendered would effectively be used to reduce the compliance obligation of the regulated party, acting as a sort of offset. This treatment of RECs undermines the cap of the cap-and-trade program, while simultaneously roiling the REC markets on which the Renewable Portfolio Standard depends.

After five years of rule making, at its final hearing on the regulations, CARB members expressed confusion about two fundamental concepts. One is the disruption of existing energy con-

tracts. CARB stated that it had not taken any action to address sales of electricity by independent electricity generators under pre-AB32 contracts. Some of those contracts do not allow generators to pass through to the utilities the costs of GHG allowances. The result is that independent generators must purchase allowances from their electricity utility customers, and then cannot recover the cost of such purchases in the electricity sold to the utilities. CARB has indicated that it hopes this issue can be worked out voluntarily between the parties to those agreements.

A similar result affects large public power agencies that import electricity for their public entity members. Through a last minute definitional change, CARB shifted the responsibility for compliance from the individual members of some public power agencies to the agencies themselves. The result may require restructuring the agreements and regulatory programs under which public power agencies recover their costs. CARB decided in its final resolution approving the program to review this apparently unintended result. CARB identified a host of other major issues that it agreed (in its approving resolution) required revisions to the just approved regulations. One example is the possibility of offsetting the compliance obligations of the University of California by its investment in research or alternative energy facilities. Another example was an agreement to study whether there is an inequitable transfer of funds from certain state water authorities, who will pay significant GHG costs, to utility ratepayers under the rebate program. CARB also agreed that its resolution of issues relating to waste-derived fuels may need additional work.

All of this adds up to a cap-and-trade program that is very much a "work in progress" subject to ongoing modifications and considerable additional thought and discussion. Cap-and-trade does not work well under such circumstances. Regulated entities need to know what the future holds in order to react rationally. Rapid changes in direction simply mean that any investment in California is at risk. Because the rules are still unsettled — and some would say, flawed — there are likely to be political, legislative and judicial attacks in the coming months. Given the stakes, it will be important for affected industrial and power generating entities to keep a close eye on these developments.



## Northwest Florida Goes Green

### Escambia County Central Office Complex LEED Gold Certified

By *Keith Wilkins and Matt Kelly*

For the January 2012 Board meeting, the Board of directors met in Pensacola, Florida. While the accommodations were on Pensacola, Beach, Escambia County extended an invitation to the Board to hold the meeting in the newly built LEED Gold Certified Central Office Complex.

The board was treated to a tour of the facilities, which is a one-stop permitting office for the county that has been built to offset several environmental concerns, energy use and stormwater collection and discharge.

The building has an open two-story construction. The open air concept has proven to increase coordination and cooperation between departments. The location of several permitting agencies in the same building has decreased the permit time to an amazing three days for normal building permit needs. The well light interior atrium allows permit seekers to wait in comfort as their permit quest is completed. The staff offices line the perimeter on the second floor and provide easy access between departments for those seeking several permissions. To reduce energy use from lighting the interior space, the office building has window openings onto the roof which allows ambient light to be the main source of lighting except for the darkest days and evenings.



Extensive green roof planting consists of native, drought tolerant plants recommended by Florida Friendly Landscaping practices.

An additional energy reduction consideration was the installation of a “green roof.” This roof top wild land is planted with several species of primarily herbaceous plant material with one planted shrub, rosemary. While there has not been a large batch of spaghetti cooked for the whole building yet, the herb could point toward a future species list and a secondary herbal garden.



The use of pervious pavement and curbless parking islands allows for increased capture and infiltration of stormwater, reducing discharge to the Pensacola Bay estuary system.

The pervious concrete parking lot did cost approximately twice as much as a conventional blacktop parking lot. However, by reducing the amount of runoff inherent in conventional construction, the amount of stormwater ponds required also increased the amount of developable area.



Green roof vegetation includes: Stokes' Aster (*Stokesia laevis*), Sand Cordgrass (*Spartina Bakeri*), Beach Sunflower (*Helianthus debilis*), Powderpuff Mimosa (*Mimosa strigillosa*), Perennial

Peanut (*Arachis glabrata*), Rosemary (*Rosemarinus officinalis*), and Blanket Flower (*Gaillardia pulchella*).

Normally required stormwater ponds were not built and the pavement contributes to groundwater recharge, unlike normal parking lots. Maintenance is aided by the installation of monitoring peizometers that provide information on the amount of stormwater infiltration and notify the county to vacuum the pavement when the infiltration pores are clogged.

Some of the benefits of a green building come in the form of resources saved, some in the increased people-friendly atmosphere.

*Continued on page 25*



## Northwest Florida

*Continued from page 24*

The Board meeting room is state of the art for wireless connections and video conferencing.

The NAEP Board wants to thank the Escambia County Board of County Commissioners for providing the facilities and the adventure of the Board riding the trolley from the beach to the Office Complex.

Keith Wilkins, the Director of the Community & Environment Department provided excellent assistance in getting the board and our remote attendees up and running on Saturday morning. With the help of Matt Kelly, the Board meeting went off without a hitch and provided the national association with a good understanding of the environmental advances that have occurred in Escambia county and the commitment for continued green planning.

Here are some facts concerning the “green roof” and the environmental benefits to this county building that were presented to the Board during our tour.

- The County complex has the largest green roof in FL and possibly the largest in southeast US;
- The additional cost for construction a green roof was about \$800,000 on an \$18M building (increased cost of building by about 4%);
- Savings for heat and air are about 30%, with this level of savings; the roof should pay for itself in less than 10 years;
- Roof will last 50 years versus 25 years for conventional roof (membrane protected from UV light by growth media);
- 4 inches of growth media is used to grow the rooftop garden;
- The soil was developed by USF and is lighter weight than soil; and
- The Green roof retains the first 1/2 inch of rain with no runoff, and then it overflows to bioretention areas.

The environmental improvements to the roof and the parking area were funded through a grant from the Florida Department of Environmental Protection, Bureau of Watershed Restoration. The Low Impact Development Grant for \$1.5 million allowed Escambia County to build an environmentally sustainable building in return for monitoring of several important environmental parameters that allow for economic analysis of the benefits of a green roof and stormwater pervious pavement improvements. The idea behind the data gathering effort was to

quantify the positive economic and environmental benefits from this technology. For Escambia County, one of the goals for the grant for the Green roof was to determine which species of vegetation would do well in NWF in a green roof setting. The first species list has seen some issues with cold weather and drought, but the Escambia county extension service is working with the County do help determine replacements that will help make the roof a low maintenance, sustainable system.

So far, the experimental system has found that, several of the originally planted species did not survive last year’s cold weather. In wetter conditions, the irrigation system was turned off. Some less drought tolerant species did not survive. The Rosemary and Spartina have done well. The perennial peanut, blanket flower, and beach sunflower have not done as well.

As the County environmental department works through the initial issues, the County enjoys a significant energy savings.

Even though the first presentation by Keith to the Board of County Commissioners had the typo in his PowerPoint show that called it a “Green Goof,” the resulting cost savings from a green building and the environmental benefits that the County reaps has been anything but a goof.

## Advertising Opportunities in the NAEP Newsletter

The NAEP Newsletter is offering a limited amount of advertising space in the publication. Advertisements will be limited to two pages per issue for 2012 and once that space is filled per issue there will be no other advertisements accepted. Advertisers will have the opportunity to purchase space in all remaining issues of 2012 so that they can be assured of space in each issue. This is a great opportunity to both support NAEP and gain access to a potential readership of over 6,500.

Ads can be purchased in either quarter or half page sizes and is priced at a very affordable price that starts at \$375 per ad for a quarter page ad when 6 ads are purchased. The purchasing of ads in advance allows the advertiser to reduce their costs and allow you to make sure your ad space is reserved.

For more information on advertng opportunities or to reserve your space please contact Tim Bower at 856-283-7816 or by email at [naep@naep.org](mailto:naep@naep.org).



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*National Association of Environmental Professionals*

## *Science, Politics and Policy: Environmental Nexus*

### NAEP 37th Annual Conference

It's time to make your plans to attend the NAEP annual conference. This year we'll be convening in the fabulous city of Portland, Oregon. The schedule is set, speakers confirmed, and [registration](https://naep.memberclicks.net/assets/Conference/2012registrationformrev.doc) is now open. (<https://naep.memberclicks.net/assets/Conference/2012registrationformrev.doc>) For APA members, we are in the process of applying for AICP credits for the entire conference.

In addition to the normal tracks of NEPA, Transportation, and others, we are highlighting environmental issues on and adjacent to military installations and visual resource analysis. Similar to last year, we have developed one day symposiums to provide access to experts for a more in depth look at specific topics. This year the symposiums focus on NEPA and visual resources.

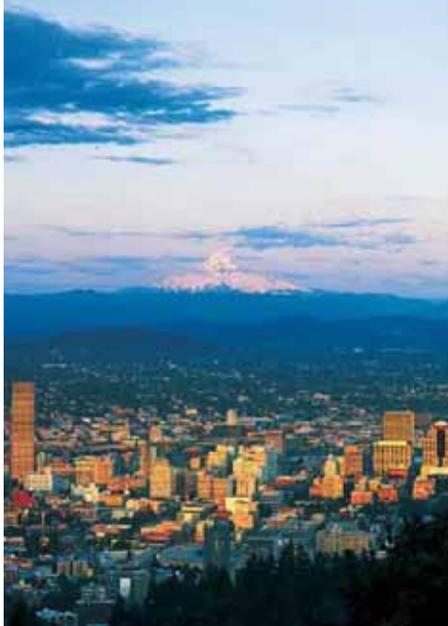
The very popular Hot Topic Lunches are back and include the following topics:

- The Top 10 Reasons Citizens and Scientists Should Care About What Is and Is Not Happening in the Gulf of Mexico Following the BP Oil Spill of April 2010
- Certified Environmental Professionals In Action
- CEQ Update with Horst Greczmiel

We are expanding the job fair this year. The job fair will be held Monday evening beginning at 5pm in the Exhibitor Hall and is open to the public. Job seekers do not need to register for the conference or be a NAEP member to attend the job fair. Please bring your resume to interact with local, national, and international employers. We are also opening the job fair to employers whether they are exhibiting at the conference or not. This free event is brought to you by NAEP as a member benefit. If you're interested in the job fair, please contact Jennifer Lundberg at [naep2012@parametrix.com](mailto:naep2012@parametrix.com) or 360-265-1582.

You may now make your hotel reservation using a link from [www.naep.org](http://www.naep.org) to obtain the NAEP group rate.

We look forward to seeing you in the City of Roses!





## Chapter's Committee Report

The Chapter's Committee met in October and November and spent its time initiating the planning for the 2012 Chapters Retreat and the development of joint NAEP-Chapter activities to promote membership, friendship, and revenue sharing. Discussion also continued on the development of the joint marketing materials for both NAEP and Chapters to use and the development guidelines for requesting and reviewing annual budget requests from chapters to NAEP.

The Chapters Committee has initiated planning for the 2012 Chapters Retreat. Since the first Chapter Retreat in 2007, NAEP has been setting aside budget and making plans for a second **Chapter Retreat to occur sometime in 2012**. The intent of the 2012 Retreat is for Chapter Representatives and Presidents to spend 1 to 2 days planning and envisioning how to cooperatively strengthen NAEP and the individual chapters. To help collect input for the initial planning and develop the framework for the retreat, the Chapters Committee developed a short survey and sent it to Chapter Representatives and Presidents. The survey

included a short introduction for context and questions about location, timing, and suggested agenda items. The results of the survey will be discussed at the Chapter Committee meeting in December.

With Affiliation Agreements in place, the Chapters Committee started discussing possible joint NAEP-Chapter activities to promote membership, friendship, and revenue sharing. Potential joint activities discussed so far are webinars, live meetings, and regional workshops. Joint NAEP-Chapter activities will be discussed at the Chapter Committee meeting in December and in 2012.

A reminder that all Chapter Representatives and Presidents are members of the Chapter Committee and all are welcome to participate, even if you haven't participated previously.

If you have an idea or activity for the Chapter's Committee to tackle, interested in starting a chapter in a state or area presently without one, or have questions about the committee, contact Bill Plumpton, committee chair at (717) 763-7212 ext 2142 or [wplumpton@gfnet.com](mailto:wplumpton@gfnet.com).

## EIA Campus

EIA Campus is now online! EIA Campus provides online courses for Environmental Impact Assessment professionals in the US and worldwide. These courses are taught by Dr. Larry Canter, a leading expert and seasoned educator with over 40 years in the EIA field. Each course offers video instruction by Dr. Canter, bullet points, reference documents and review that Dr. Canter uses in the onsite courses he teaches to US agencies, consulting companies, and international governments each year.

- ✓ Each 1 1/2 hour course includes video instruction and a downloadable student manual.
- ✓ Each course costs \$75 and students can access it as many times as needed for 60 days after purchase.
- ✓ Each course can qualify for 1.5 hours of PDH/CE.



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- Identification and Evaluation of Alternatives
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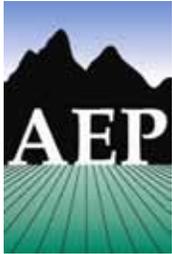
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## California Association of Environmental Professionals Chapter Report

The California Association of Environmental Professionals ([www.AEP.org](http://www.AEP.org)) has an Executive Board and nine local chapters. Since its formation in 1974, AEP has grown to over 1,700 members: planners, environmental scientists, biologists, lawyers, noise specialists, transportation planners, paralegals, archeologists, geologists, engineers, visual analysts, and other professionals in numerous disciplines. There are nine regional AEP chapters covering the following regions: Channel Islands, Los Angeles County, Inland Empire, San Diego, Superior California, Central, Orange County, Monterey Bay Area, and San Francisco Bay.

The AEP provides state-wide programs with CEQA train-

ing two times per year and an annual conference. A one-day CEQA Advance Workshop is being scheduled for the spring of 2012 at nine locations in California. This is a full day workshop for experienced professionals looking to understand the latest changes in CEQA litigation, legislation and practice. Go to [www.califaep.org](http://www.califaep.org) to learn more about the course and venue schedule.

The California local chapters operate independently providing members with active monthly programs at the local level on issues that are of state, regional and local interests. The Chapters provide monthly networking and educational sessions throughout the state. AEP continues working on its website where state-wide activities are posted. Go to [califaep.org](http://califaep.org) for the latest information.

AEP's 2012 Conference will be held in Sacramento, California from May 6 – 9, 2012. The theme for the conference is *Environmental Synergy, A Convergence of California's Environmental Professionals*. Go to [califaep.org](http://califaep.org) click on *Annual Conference* for more up-to-date information. Plan early to attend this great conference!

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## Florida Association of Environmental Professionals Chapter Report

The Florida Association of Environmental Professionals ([www.FAEP-FL.org](http://www.FAEP-FL.org)) is comprised of the FAEP and eight local chapters. The local chapters enable the FAEP to remain active throughout the state of Florida, addressing issues that are of State, regional and local interests. The FAEP provides numerous monthly networking and educational sessions throughout the state via the Central ([www.CFAEP.org](http://www.CFAEP.org)), Northeast ([www.NEFAEP.org](http://www.NEFAEP.org)), Northwest ([www.FAEPNWFL.org](http://www.FAEPNWFL.org)), South ([www.SFAEP.org](http://www.SFAEP.org)), Southwest ([www.SWFAEP.org](http://www.SWFAEP.org)), Tallahassee ([www.sites.google.com/site/faeptallahassee](http://www.sites.google.com/site/faeptallahassee)), Tampa Bay ([www.TBAEP.org](http://www.TBAEP.org)), and Treasure Coast (<https://sites.google.com/site/tccfaep/>) Chapters. To see a list of upcoming events, please visit the local chapter website or visit the Happenings” section on the FAEP website for a full list of events throughout the state.

Highlights from the FAEP local chapters include:

### Central Chapter:

**January 19** – General membership meeting with guest speaker Diane Picket of the Florida Department of Environmental Protection. Ms. Picket will discuss the Low Site Score Initiative (LSSI). John Lesman is the CFAEP President. For information about these events and other Central Chapter news, please visit [www.cfaep.org](http://www.cfaep.org).

### Northeast Chapter:

For information about the Northeast Chapter, please visit [www.NEFAEP.org](http://www.NEFAEP.org).

### Northwest Chapter:

For information about the Northwest Chapter and our upcoming speakers for 2012, please visit [www.FAEPNWFL.org](http://www.FAEPNWFL.org).

### South Florida Chapter:

**January 18** – The SFAEP is hosting a general membership meeting from 11:45 a.m. – 1:15 p.m. at The River Seafood and

Oyster Bar located at 650 South Miami Avenue, Miami, Florida 33130. The guest speaker is Guillermo Söhnlein, Co-Founder, OceanGate. The topic will be Antipodes in South Florida: Opportunities for Symbiosis between Government, Industry and Citizen Scientists Using Manned Submersibles. Cost: Members \$15, Non-Members \$25 and Student Membrs \$10.00. Please RSVP by January 13th to [erik.neugaard@rsandh.com](mailto:erik.neugaard@rsandh.com). For information about these events and other South Florida Chapter news, please visit, please visit [www.sfaep.org](http://www.sfaep.org).

### Southwest Chapter:

**January 17** – SWFAEP is hosting two Membership Meetings — one lunch meeting and one evening meeting. The lunch meeting will be held from 11:30 – 1:00 at the FT MYERS @SFWMD (Lower West Coast Service Office, 2301 McGregor Blvd, Ft Myers, 33901 Map). Lunch will be provided. Please RSVP to: Whitney Gray ([wetlandwhitney@gmail.com](mailto:wetlandwhitney@gmail.com)). The evening meeting will be held in Naples at Davidson Engineering, 3530 Kraft Road, Naples, FL from 6:00 pm - 8:00 pm. Tom Harmon of USF will be presenting his work “Anthropogenic Changes over the Last 100 Years in Dove Sound, Upper Florida Keys, USA”. Dinner will be provided. Please RSVP to: Jeremy Sterk ([jeremy@ecotoneenv.com](mailto:jeremy@ecotoneenv.com)).

**February 16** – SWFAEP Membership Meeting - Sarasota @ VHB, Inc. (8043 Cooper Creek Boulevard Suite 201) - 6-8 p.m. - Amy Wicks, P.E. (HSA) “Treatment Wetland Design: Pitfalls and Solutions” RSVP to Matt Miller ([mpmille3@mail.usf.edu](mailto:mpmille3@mail.usf.edu)). For information about these events and other Southwest Chapter news, please visit [www.SWFAEP.org](http://www.SWFAEP.org)

### Tallahassee Chapter:

**January 11** – The Tallahassee Chapter of the FAEP is hosting a networking social from 5:30 to 7:00 p.m. at Ray’s Steel City Saloon located at 515 John Knox Road, Tallahassee, FL 32303-4117.

**February 8** – There is a general membership meeting from 11:30 to 1:00 also at Ray’s Steel City Saloon. There will be a presentation by local government representatives discussing “Sustainable Living in the Tallahassee Area.” For information about these events and other Tallahassee Chapter news, please visit [www.faeptally.com](http://www.faeptally.com) or check out the Facebook page.



## FAEP

Continued from page 29

**March 14** – The Tallahassee Chapter of the FAEP is hosting a networking social from 5:30 to 7:00 p.m. at Ray's Steel City Saloon located at 515 John Knox Road, Tallahassee, FL 32303-4117.

### Tampa Bay Chapter:

**January 18** – The January lunch meeting will be held from 11:30 AM – 1:00 PM at Brio Tuscan Grille at International Plaza in Tampa and will feature a presentation on Numeric Nutrient Criteria by Chris Hill from Brown and Caldwell.

**January 26, 2012** – Our next networking event will be held at the Tampa Bay Brewing Company in Ybor City from 6:00 PM – ?

**February 15** – The February lunch meeting will be held from 11:30 AM – 1:00 PM at Brio Tuscan Grille at International Plaza in Tampa. Linda Hoffman, Senior Engineer with HSW Engineering will present on the Use of ADaPT in the Workplace.

**March 21** – The speaker for our March lunch meeting will be Neil Beckingham, Sustainability Manager for The Mosaic Company. Mr. Beckingham's presentation is entitled "Sustainability and The World Food Story — The importance of Phosphate and Potash ore reserves". Location to be determined. For information about this event and other Tampa Bay Chapter news, please visit [www.tbaep.org](http://www.tbaep.org).

### Treasure Coast Chapter:

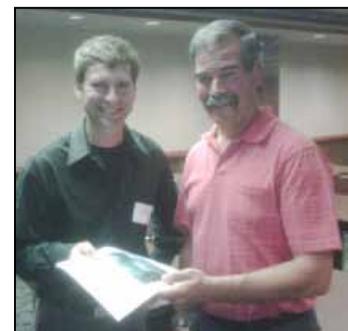
**January 20** – Brandon Howard from the National Marine Fisheries Service will be giving a presentation on "NOAA Fisheries Service Habitat and ESA Update for Southeast Florida." Time and exact location to be announced.

**February 24** – The FAEP-TCC will be hosting its first ever Wetland Plant Identification Workshop – This 8 hour workshop will be held in Jonathan Dickinson State Park on February 24th. The instructor for this event will be Dr. George Rogers, professor at the Horticulture Department at the Palm Beach State College. This workshop will focus on wetland plant morphology and the use of proper tools and techniques to successfully identify plant species and genus. RSVP to Arnaud Roux at [aroux@ewconsultants.com](mailto:aroux@ewconsultants.com). For information about these events and other Treasure Coast Chapter news, please visit our link on the FAEP webpage at [www.faep-fl.org](http://www.faep-fl.org) or on the TCC home page at <https://sites.google.com/site/tccfaep/>.



## Illinois Association of Environmental Professionals Chapter Report

President: Robert Sliwinski,  
Vice President/NAEP Representative: Greg Merritt,  
Treasurer: Christopher B. Burke, Past President: Nathan Quaglia, Board Members at Large: Richard Hayes, Ron Deverman (NAEP Past-President), Suzanne Wootton D'Souza, Dr. James Montgomery, Patrick VerHalén,  
Newsletter Editor: Eric Sikora,  
Executive Administrator: Debra Hatchett, Website: [www.iaepnetwork.org](http://www.iaepnetwork.org)



IAEP President Robert Sliwinski and Keith McMullen USACE – St. Louis District

### Membership Update

IAEP currently has 157 members of which are 139 general, 5 national, 6 student and 7 are corporate.

### Recap of the October Seminar

On October 12 at Café Zalute in Rosemont, Illinois, Mr. Keith McMullen from the St. Louis District of the Army Corps of Engineers presented the Illinois Stream Mitigation Guidance that was released in 2010. He provided a synopsis of the agency's point of view on its interpretation and went over the forms that are required for permit applications for stream projects that require mitigation. This was an excellent opportunity to learn about the guidance and the perspective of the USACE.

IAEP members learn about the new stream mitigation guidance





## Texas A&M Student Chapter Update

By Brock Hoegh, Student Chapter Committee Chair

This chapter has 53 paying members and a total of 94 different people attended at least one of their meetings over the past semester. Most of the chapter's members are bioenvironmental science majors since organization is sponsored by the bioenvironmental science department at Texas A&M University. However, we have a few engineering and environmental studies/geoscience majors.

For the Fall 2011 semester, they had 5 speaker meetings:

- Sept. 20 - Dr. Roberto Gasparini - Managing Consultant/Meteorologist at Source Environmental Services Inc. in Houston, TX
- Oct. 4 - Mr. Doug Anderson - President at Gruene Environmental Construction LLC in New Braunfels, TX



From left: Front Row: VP Adriana Diaz; Public Relations Marin Saenz; Secretary Ashlee Terry; Back Row left Treasure Patricia Larsen and President Samantha Du.

- Oct. 18 - Mr. Charles D. Harlan, P.G. - Operations Manager, Environmental Services Group, at Enercon Services Inc. in Dallas, TX
- Nov. 1 - Mr. Craig Pritzlaff - Attorney (Environmental Law) at Curran Tomko Tarski LLP in Dallas, TX and Ms. Karen Severn - Pre-Law School Advisor at Texas A&M University
- Nov. 15 - Mr. Steve Vavrik - Managing Director of Utilities and Power Plants at SunPower Corp in Austin, TX

They also had a volunteer activity with Texas A&M Replant Day on October 23, 2011 in which 15 TAMU NAEP members helped plant trees in the Bryan/College Station community. Pictures from the event can be found here:

<http://naep.tamu.edu/node/90>

The Chapter is looking forward to the spring semester. Starting in February, they will continue to have bimonthly meetings on the first and third Tuesday of each month. Chapter will also be participating in Big Event (which is a university-wide volunteering event) on March 24. Also, they are considering field trips to the Texas Commission on Environmental Quality Annual Trade Fair & Conference and NAEP Conference in Portland. Also, there will be an open house for the Texas A&M organizations to advertise themselves next Sunday that we will be participating in.

## SC&A, inc.

SC&A, Inc ([www.scainc.com](http://www.scainc.com)) is an environmental and energy consulting firm located in Vienna, VA. The company provides expertise in radiation sciences, environmental remediation, NEPA and regulatory compliance, advanced technology assessment, permitting and licensing, and environmental management. SC&A's staff of planners, scientists, engineers, and economists provide a range of services from permitting and licensing support to feasibility studies to project implementation. For federal contracts, SC&A qualifies as a small business under most NAICS codes.

For more information please contact Greg Beronja at (703) 893-6600 or [gberonja@scainc.com](mailto:gberonja@scainc.com)



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*Yet you were certainly influenced by him.*

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NAEP has developed the James Roberts Scholarship Fund to assist promising individuals while they are still in school. This is your opportunity to preserve and extend the legacy of Jim Roberts.

All donations are tax-deductible. Go to [NAEP.org](http://NAEP.org) and click Scholarship Foundations to make your contribution. You can also donate when you renew your NAEP membership.

Thank you,  
Gary F. Kelman, Chair

James Roberts Scholarship Committee  
Mel Willis  
John Perkins  
Bruce Hasbrouck  
Teri Hasbrouck



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- Enforcement officials - Activists

Initially offered as a certification through the National Association of Environmental Professionals (NAEP), the Academy of Board Certified Environmental Professionals (ABCEP) established organizational independence in 1993. In 1999 ABCEP became a nonprofit organization. In 2005, the ABCEP achieved accreditation by the Council of Engineering and Scientific Specialty Boards (CESB – [www.cesb.org](http://www.cesb.org))

The ABCEP CEP brings heightened confidence in the professional quality of documents, evaluations, and decisions. Certified individuals satisfy the professional requirements outlined by the USEPA, ASTM, and other regulatory agencies, providing assurance to employers and customers. For the individual, certification increases opportunities for promotions, marketability, and career advancement. Certified individuals maintain their knowledge, experience, and credentials through continuing education, teaching, mentoring, publishing papers, and complying with the Code of Ethics.

**Become a CEP-IT:** The ABCEP offers mentoring and a CEP-In Training (CEP-IT) designation to junior and mid-level professionals developing towards CEP eligibility. The CEP-IT increases individual and firm marketability, enhanced career opportunities, and enhanced networking opportunities.

**More Information:** Contact ABCEP at [office@abcep.org](mailto:office@abcep.org); [www.abcep.org](http://www.abcep.org); or 1.866.767.8073 Do you have an upcoming meeting and need a speaker? Speaker opportunities by CEPs about ABCEP are available in certain geographic locations.



Call for papers for publication in the scholarly journal:

## Environmental Practice

The journal of the National Association of Environmental Professionals

### PROFESSIONAL ETHICS FOR ENVIRONMENTAL PROFESSIONALS vol. 14 no. 3 (September 2012)

This issue of *Environmental Practice* is dedicated to Dr. James (Jim) Roberts PhD, CEP (deceased 2007) who was a prominent long-time member of the NAEP and Academy of Board Certified Environmental Professionals (ABCEP) Boards of Directors, the ABCEP Certification Review Board, and the Editorial Advisory Board of our journal in its previous incarnation as *The Environmental Professional*. Jim was a consummate environmental professional who, as a cleric and otherwise thoughtful person, was especially interested in ethics and specific ethics issues potentially or actually facing environmental professionals. Jim wisely counseled his colleagues on ethics and ethical resolution of issues, and consistently succeeded at bringing opposite sides together with a shared commitment to ethics as a necessary, even if sometimes insufficient, condition for resolution.

This issue of *Environmental Practice* is devoted to professional ethics for environmental practitioners. Manuscripts highlighting case studies and best practices in all areas of the development and application of professional ethics for environmental practitioners are encouraged. Discussions of little recognized, unresolved, or difficult issues are welcomed. Topics and themes could include, but are not limited to: (i) the importance of developing ethical reflection by practitioners; (ii) analysis of perspectives on environmental and professional ethics; (iii) ways to think about ethical problems; (iv) legal and ethical issues in relationships with employers and clients; (v) loyalty to the employer – what duties are owed an employer?; (vi) conflict of interest – what constitutes a *conflict*, and how can practitioners recognize and resolve them?; (vii) confidentiality and proprietary information; (viii) professional ethics and safety; (ix) plagiarism and credit; (x) duty of competence and diligence – what kinds of work is the practitioner qualified to do? Broad perspectives are welcome from scholars, practitioners, and students.

**Deadline for submittals is  
February 15, 2012 to  
dcarro17@depaul.edu**

**Sample issues of the journal  
can be found at:**

[http://journals.cambridge.org/action/  
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The editorial office of  
*Environmental Practice* is located  
at DePaul University.

For questions, please contact  
Dan Carroll, Managing Editor, at  
773-325-2298, or by email at  
dcarro17@depaul.edu



Call for papers for publication in the scholarly journal:

## **Environmental Practice**

The journal of the National Association of Environmental Professionals

### **HYDROFRACTURING (“Hydrofracking”) vol. 14 no. 4 (December 2012)**

Hydrofracturing (“hydrofracking”) involves injecting water under high pressure into a bedrock formation via a wellbore. This process removes sediment and rock fragments from existing fissures and fractures and also increases their size and extent. While hydrofracking technology has been in use since the 1940’s, the refinement of the technology for horizontal drilling has recently gotten to the point where aiming a drill string toward a particular formation and depth has become more reliable. The combination of old and new technology has provided the environmental community with a real-time dilemma of how to provide for energy independence while protecting natural resources.

Manuscripts are sought with an emphasis on the legal, environmental, ecological, social, political and human health aspects of hydrofracking. Manuscripts highlighting case studies and best practices in all areas of hydrofracking are particularly encouraged. Specific topics and themes that could be addressed include, but are not limited to: (i) public policy efforts being pursued to minimize environmental damage resulting from hydrofracking; (ii) impacts of hydrofracking on groundwater and surface water resources; (iii) aspects related to the permitting of hydrofracking well site locations; (iv) impacts of hydrofracking and alternative/green energy development on terrestrial ecosystems; (v) critique or defense of USEPA’s new study plan to evaluate the effects of hydrofracking on groundwater; (vi) hydrofracking and NEPA – what is the role of environmental review? (vii) Hydrofracking is an extraction technique that was invented decades ago but which has suddenly exploded into the national consciousness. Why? Who or what is driving this narrative? (viii) If, as some suggest, natural gas is the ‘bridge’ to a green energy future and energy independence, is hydrofracking worth the cost?

**Deadline for submittals is  
May 15, 2012 to  
dcarro17@depaul.edu**

**Sample issues of the journal  
can be found at:**

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