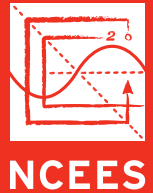


Licensure EXCHANGE

DECEMBER 2015
Volume 19, Issue 6



MICHAEL CONZETT, P.E.
NCEES PRESIDENT



FROM THE PRESIDENT

THE FUNDAMENTALS EXAM: REACHING A NEW NORMAL

WE ARE NEARING THE END OF OUR SECOND YEAR of delivering the FE and FS exams in a computer-based format. We have learned a great deal so far and will continue to learn much as the years go by.

One major change that has come with the advent of computer-based exams is the ability of a test taker to schedule and sit for an exam at any time throughout the calendar year. In the past, FE and FS exams were offered twice each year: in April and October. Students, usually in their senior year of college, registered to take the exam. They formed study groups, they took prep courses, they talked with others who had previously taken it, and they were focused on April or October. Then, on the day of the exam, thousands of people across the country sat for 8 hours or so, sweating over fundamental engineering or surveying concepts they either breezed through or guessed at. After it was over, there was probably a pizza and beer at a local joint where a group of test takers gathered to celebrate the fact that it was over.

The whole experience of preparing for and taking the fundamentals exam in a pencil-and-paper format was, for many, a group activity. And our numbers showed it. But in the past year, the number of FE and FS examinees has significantly dropped during the transition to computer-based testing (CBT). Other professions that have made the switch to CBT told us to expect this to happen, but it's still unsettling to think we may not get back to the numbers (and accompanying revenue) that we once had. Is this a bad thing? I say, not necessarily.

Looking for the impact on licensure

I think what should be important to all of us is the number of individuals sitting for the PE and PS exams. Ultimately, our goal is licensure, and licensure means passing the PE or PS exam. Admittedly, the fundamentals exam is a necessary point along the licensure pathway. But it is not licensure by itself. And while it is disconcerting to have watched the numbers decline, we need to be a bit patient and wait a couple of years to see if the number of candidates who sit for the professional exams also declines.

Let's look at an example to illustrate the point. In fiscal year 2012–13, approximately 56,000 candidates sat for the FE exam, a bit higher than a normal year—probably because people wanted to take it in the familiar pencil-and-paper format before it became a CBT exam. In 2014, the first year of CBT, the number of candidates taking the exam dropped to about 38,000. This decline of around 30 percent was greater than the 20 percent other professions told us to expect; nevertheless, we saw no need to panic. For 2015, the FE exam number is trending upward. We are predicting by year end to deliver just over 40,000 exams. We don't know where all this will settle, and a number of factors are in play.

Volunteers needed to judge Future City regionals

IN ITS CONTINUING SUPPORT OF THE DiscoverE Future City program, NCEES is seeking professional surveyors to serve as volunteer judges for this year's competition.

Future City is a cross-cultural program that encourages students in the 6th, 7th, and 8th grades to do the things engineers do: identify problems, brainstorm ideas, design solutions, test and retest, build, and share results. Student teams present their ideas at the regional competitions in January, and the regional winners go on to compete at the national level in Washington, D.C., as part of the DiscoverE Engineers Week celebration in February.

This year's challenge—Waste Not, Want Not—asks students to design an innovative, citywide solid waste management system for a future city that is safe, environmentally sound, and energy efficient.

For 2016, Future City has introduced the engineering design process as a framework to guide students through the creation of their cities. Students apply specific project management methods to plan and complete each part of their entry. Educators from across the country piloted the new framework and declared it an effective way to teach about engineering and project management.

NCEES continues surveying award

NCEES will sponsor the competition's Best Land Surveying Practices award for this year's competition. This award recognizes the design that employs the best land surveying practices, while taking into consideration the high standards used by surveyors to safeguard the public's health,



Students from Berkeley Preparatory School show off their future city Springsburg, which won the 2015 national Best Land Surveying Practices award at the Future City finals in Washington, D.C. The team represented the Tampa Bay region of Florida after winning the area's regional competition.

safety, and welfare. The winning team must demonstrate skills and resources surveyors provide through the design, development, and maintenance of their future city.

NCEES has sponsored this award at the national finals since 2004, and this will be its fourth year offering the award at regional competitions. The expansion into the regional level introduced 40,000 middle-school students to the surveying profession last year. In addition, more than 1,300 teachers and more than 30 NCEES volunteer judges were involved in the competition.

“Participating in regional competitions has helped us inform students and educators about what surveying is and

its role in building cities now and in the future,” NCEES Director of Public Affairs Nina Norris said. “We need professional surveyors to serve as judges at the regional competitions to ensure repeated success in the coming year.”

Judges will participate in the all-day event to judge individual teams and present the special award to the winning team. Sample questions and a scoring rubric will be provided, and travel expenses are reimbursable.

To volunteer, email Christian Cernauskas, NCEES marketing and outreach associate, at ccernauskas@ncees.org. For a list of regional competition locations and dates, visit futurecity.org.



JOHN GREENHALGE

OHIO STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS AND SURVEYORS
EXECUTIVE DIRECTOR

Land surveying vs. engineering measurements: When do measurements become a survey?

WHEN DO MEASUREMENTS NECESSARY for the design, construction, and post-construction records of an engineering project become surveying? This is one of the many questions NCEES member boards must address. A recent case of the New Jersey Board of Professional Engineers and Land Surveyors may provide some guidance for member boards.

The State of New Jersey Statutes Title 45 defines land surveying as follows:

... [T]he act of measuring and locating distances, directions, elevations, natural and man-made topographical features in the air, on the surface of the earth, within underground workings, and on beds of bodies of water for the purpose of determining areas and volumes, and for the establishing of horizontal and vertical control as it relates to construction stake-out, for the monumentation of property boundaries and for the platting and layout of lands and subdivisions thereof and for the preparation and perpetuation of maps, record plats, field notes, records and property descriptions in manual and computer coded form that represent these surveys. The practice of land surveying shall include the establishment and maintenance of the base mapping and related control for land information systems that are

developed from the above referenced definition of the practice of land surveying.

This language is also included in New Jersey Administrative Code Title 13, Chapter 40 (NJAC 13:40)—the regulations governing the practice of land surveying and engineering.

The law further notes that “nothing in this chapter shall preclude a person licensed by the board as a professional engineer from performing those measurements necessary for the design, construction stake-out, construction, and post-construction records of an engineering project, provided that these measurements are not related to property lines, lot lines, easement lines, or right-of-way lines, the establishment of which are required to be made by a land surveyor.” NJAC 13:40 does not include similar language.

In addition to these definitions, the New Jersey Board of Professional Engineers and Land Surveyors, in concert with other design professional boards, promulgates regulations under what is commonly referred to as the Site Plan Rule. This rule, at NJAC 13:40-7, describes what each design professional may or may not do when preparing site plans. Specifically, the rule states that only a licensed land surveyor may prepare and submit a survey

“showing existing conditions and *exact locations* of physical features,” but that a professional engineer may transfer such information to a site plan and may depict “vegetation, general flood plain determination or *general location* of utilities, buildings, or structures.” (emphasis added)

Over the years, there has been much confusion about where the line is drawn between measurements necessary for the design, construction, and post-construction records of an engineering project and the practice of land surveying. A recent decision from the New Jersey Office of Administrative Law may clarify this issue.

New Jersey board considers the issue

In October 2003, a P.E. licensed in New Jersey appeared before the New Jersey State Board of Professional Engineers and Surveyors for practicing surveying without a license. The P.E., who was not licensed as a land surveyor, had been preparing site grading plans using a “system of surveying” of his own invention to locate, measure, and depict existing and proposed elevations. The board informed the P.E. that only a licensed land surveyor can perform the act of measuring and locating elevations and natural or man-made topographical features. The P.E. appeared before the board again in July 2004 for continuing to practice surveying without a license.

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NCEES committees and task forces begin work on 2015–16 agenda

WITH ITS COMMITTEES AND TASK forces addressing more than 100 charges this year, NCEES has a full range of issues to consider in 2015–16. President Michael Conzett, P.E., has assigned the 12 standing committees charges that focus on education, exams, enforcement, and other issues. He has appointed task forces to study the future of surveying, the use of NCEES financial reserves, and the use of technology such as electronic seals in professional practice for engineering and surveying. He has formed a Special Committee on Bylaws to propose changes to the document that outlines the structure of the organization. He has also assigned charges to the Emerging Engineers and Surveyors Group, a group of students, interns, and licensed professionals working with NCEES leadership to address issues related to the future of the engineering and surveying professions and the licensure process.

The following highlights the issues these groups will address this year. A full list of charges and the membership of each group is available on MyNCEES, the members-only section of the NCEES website. The committees and task forces will present their preliminary findings at the zone interim meetings this spring and get feedback from NCEES delegates. The groups will then submit their final reports

for publication in the annual meeting *Action Items and Conference Reports*. The Council will vote on any resulting motions at the annual meeting in August 2016.

Advisory Committee on Council Activities

Chair: Joe Timms, P.E.

Board of directors liaison:

Michael Conzett, P.E.

Staff liaison: Donna Moss, PHR

ACCA makes recommendations on policy issues that are not assigned to another standing committee or that involve several committees. It also reviews the NCEES *Manual of Policy and Position Statements* and recommends revisions.

This year, the committee will review the designations of Model Law Engineer, Model Law Structural Engineer, and Model Law Surveyor that are defined in the *Model Rules* and will propose amendments to move them to an NCEES professional policy, as approved by delegates at the 2015 annual meeting.

Other charges include developing *Bylaws* language to address the circumstance of a vacant treasurer position between annual meetings and considering whether emeritus members should be required to have an active license.

Committee on Awards

Chair: Ted Sack, P.L.S.

Board of directors liaison:

Michael Conzett, P.E.

Staff liaison: Sherrie Saunders

The Committee on Awards will collect nominations for NCEES service awards to be presented during the 2016 annual meeting and recommend recipients to the board of directors. It will also review Administrative Policy 12 and consider whether the Distinguished Examination Service Award is limited to exam volunteers who are not eligible for other NCEES service awards.

Committee on Education

Chair: Michelle Roddenberry, Ph.D., P.E.

Board of directors liaison:

Daniel Turner, Ph.D., P.E., P.L.S.

Staff liaison: Davy McDowell, P.E.

The Committee on Education serves in an advisory role for education issues related to ABET, requirements prior to initial licensure, continuing professional competency (CPC), and foreign degree or unaccredited program evaluation.

The committee will address several charges related to CPC requirements for licensure renewal. This includes working with the Committee on

Member Board Administrators to further develop the NCEES continuing education standard as an option for member boards to facilitate uniformity in CPC requirements. It will research a practice-oriented pathway to satisfy the newly adopted position statement on future education requirements for initial engineering licensure. It will also review the NCEES Engineering Award criteria and recommend any necessary changes and will assist the Future of Surveying Task Force with development of the Surveying Program of Distinction award, which was approved at the 2015 annual meeting.

Committee on Examination Audit

Chair: Bob Zahl, P.E.

Board of directors liaison:

Christy VanBuskirk, P.E.

Staff liaison: Lehmon Dekle, P.E.

The Committee on Examination Audit conducts regular audits of the NCEES exam program. This year, it will review administrations of the FS exam, the SE exam, and the following PE exams: Agricultural and Biological Engineering; Chemical; Civil; and Metallurgical and Materials. It will also audit standard-setting studies for the PE Metallurgical and Materials exam and the PE Naval Architecture and Marine Engineering exam.

Committee on Examination Policy and Procedures

Chair: Paul Tyrell, P.E., P.L.S.

Board of directors liaison:

Christy VanBuskirk, P.E.

Staff liaison: Tim Miller, P.E.

The EPP Committee reviews the effectiveness of the NCEES exam process and recommends revisions to exam policies and procedures when needed.

In 2015–16, the committee will develop a fee schedule for compensating item writers and reviewers of exam materials. It will also work with the EPE Committee to investigate the possibility of assuming all responsibilities for the development of Group II PE exams. NCEES currently partners with professional societies in developing the 11 lower-volume PE exams. Its other charges include investigating whether to keep the five-year window to achieve acceptable results on both parts of the SE exam.

Committee on Examinations for Professional Engineers

Chair: David Whitman, Ph.D., P.E.

Board of directors liaison:

Daniel Turner, Ph.D., P.E., P.L.S.

Staff liaison: Tim Miller, P.E.

The EPE Committee oversees the development and scoring of the FE and PE exams. Its recurring charges include conducting content reviews to update exam specifications, monitoring the training of exam development volunteers, and recommending changes to exam policies and procedures as needed.

The committee will address several charges related to transitioning PE exams

to computer-based testing (CBT). It will work with exam development committees to develop a detailed implementation timeline for transition to CBT and oversee the development of supplied-reference manuals for each PE exam. It will also evaluate how alternative item types can be integrated into CBT exams. Other charges include determining at what point exam questions that have been used multiple times should be retired and defining what constitutes a sufficient item bank size and/or exposure rate for CBT exams. The committee will also survey member boards to gauge interest in a professional practice exam for licensure.

Committee on Examinations for Professional Surveyors

Chair: Lisa Hanni, L.S.

Board of directors liaison:

Roy Shrewsbury, P.L.S.

Staff liaison: Tim Miller, P.E.

The EPS Committee oversees the development and scoring of the FS and PS exams. It reviews item performance, monitors the training of exam development volunteers, and recommends changes to exam policies and procedures.

Like the EPE Committee, the EPS Committee will be considering the necessary item bank size and/or item exposure rate for CBT exams and evaluating how alternative item types can be integrated into CBT exams. Other charges include considering if the *Model Rules* should include a waiver of the FS exam for surveying licensure candidates who hold a surveying doctoral degree. (The *Model Rules* currently includes a waiver to the FE exam for engineering licensure candidates with an engineering doctorate.)

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COMMITTEE FOCUS

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Committee on Finances

Chair: Dale Jans, P.E.

Board of directors liaison:

Gary Thompson, P.L.S.

Staff liaison: Betsy Pearson, CPA

The Committee on Finances studies the financial needs of NCEES and recommends sources of income and ways and means of securing adequate funds for the Council's operation. The committee will review the results of the 2014–15 audit and the current financial condition of NCEES and will work with NCEES leadership to recommend an income and expense budget for 2016–17.

Its other charges for the year include recommending pricing for PE exams when converted to CBT. The committee will continue to monitor revenue and costs throughout the transition of exams to CBT to identify trends. It will also develop guidelines for determining the appropriate level of financial reserves for NCEES zones.

Committee on Law Enforcement

Chair: John Greenhalge

Board of directors liaison:

Patrick Tami, P.L.S.

Staff liaison: Bob Whorton, P.E.

The Committee on Law Enforcement promotes greater uniformity and cooperation between member boards in the enforcement of licensure laws. The committee maintains the NCEES *Investigation and Enforcement Guidelines* and *Investigative Training Manual*, best practice manuals for enforcement activities and training. It also conducts a

law enforcement program at the NCEES annual meeting and writes the column "Enforcement Beat" for *Licensure Exchange*.

This year, the committee's other charges include devising audit procedures for CPC requirements for licensure renewals and developing recommendations for enforcement staff safety when conducting investigations outside the office. The committee will also consider whether an advisory group to assist member boards in enforcement matters should be created.

Committee on Member Board Administrators

Chair: Lance Kinney, Ph.D., P.E.

Board of directors liaison:

Theresa Hodge, P.E.

Staff liaison: Steven Matthews

The MBA Committee is responsible for coordinating meetings for MBAs at the NCEES annual meeting and zone interim meetings. The committee facilitates cooperation between MBAs and assists with any member board efforts to address licensure processes and practices. It also writes a *Licensure Exchange* column, "Member Board Brief."

The committee's charges for 2015–16 include developing a plan to promote the adoption of the NCEES *Model Law* for mobility purposes and working with the Education Committee to promote

A full list of charges and the membership of each group is available on MyNCEES, the members-only section of the NCEES website.

the adoption of a national continuing education standard to satisfy CPC requirements for licensure renewal. The committee will also assist staff with developing processes and guidelines for boards to use the new NCEES database management system, known as E3, for initial application to a board and for using the Enforcement Exchange database with E3.

Committee on Nominations

Chair: David Widmer, P.L.S.

Staff liaison: Jerry Carter

The Committee on Nominations submits the nominations for officers for the next administrative year. This year, it will solicit a nomination from the Western Zone for president-elect for 2016–17 and a Nominations Committee member and alternate member from each of the four zones.

Committee on Uniform Procedures and Legislative Guidelines

Chair: Sallye Perrin, P.E.

Board of directors liaison:

Patrick Tami, P.L.S.

Staff liaison: Keri Anderson

Each year, the UPLG Committee looks for ways to strengthen the licensure process and proposes any necessary changes to the *Model Law* and *Model*

Rules, the documents that provide member licensing boards with a model for their own practice laws to regulate the engineering and surveying professions.

The committee's charges for 2015–16 include reviewing the use of the terms “or the equivalent,” “substantial equivalence,” and other similar terms in all NCEES documents and proposing amendments to eliminate or replace the phrases with language that is clearer and fits with current Council practice. It will also review *Model Law* 130.10, General Requirements for Licensure, to develop language for structural engineers parallel with that of professional engineers.

Emerging Engineers and Surveyors Group

Chair: Scott Bishop, P.S.
Board of directors liaison: Mike Conzett, P.E.
Staff liaison: Jerry Carter

The group will review the current licensure process to identify obstacles faced by applicants and provide recommendations for systemic changes to improve the process. It will recommend marketing communications tactics for promoting the value of licensure for students, interns, and professionals and will conduct a survey to provide baseline data on why individuals enter engineering and surveying programs and why they do or do not pursue licensure. Each member will attend his or her respective zone meeting to participate in a forum to discuss the group's efforts and progress on charges.

Financial Reserves Task Force

Chair: Patty Mamola, P.E.
Board of directors liaison: Gary Thompson, P.L.S.
Staff liaison: Betsy Pearson, CPA

President Conzett formed this task force to develop guidelines regarding the use of existing reserves to support ongoing initiatives of the Council and to further promote the mission and vision of NCEES. The task force will also recommend guidelines for the NCEES board of directors to use in responding to requests for funding non-NCEES activities that promote the engineering or surveying professions.

Future of Surveying Task Force

Chair: Donna Sentell
Board of directors liaison: David Widmer, P.L.S.
Staff liaison: Nina Norris

The task force will continue to evaluate the current state of the surveying profession in terms of what NCEES can do to mitigate the low number of candidates seeking licensure as professional surveyors and to better market the value of a career in the surveying profession. It will consider if revisions are needed to the definition of surveying to encompass new technology and methodology to broaden the potential base for licensed surveyors. It will host a meeting with professional surveying stakeholders to develop recommendations or a general plan of action to help reverse the declining numbers of licensed professional surveyors. The task force will also assist staff with developing a schedule and evaluation criteria for the Surveying Program of Distinction award, which was approved at the 2015 annual meeting.

Special Committee on Bylaws

Chair: Nancy Gavlin, P.E., S.E.
Board of directors liaison: Daniel Turner, Ph.D., P.E., P.L.S.
Staff liaison: Davy McDowell, P.E.

President Conzett convened the Special Committee on Bylaws to amend the *Bylaws* to replace the Committee on Nominations with a Tellers Committee and to incorporate an International Affiliate Organization category of NCEES membership, as approved at the 2015 annual meeting. The Council will vote on formally adopting these changes at the 2016 annual meeting.

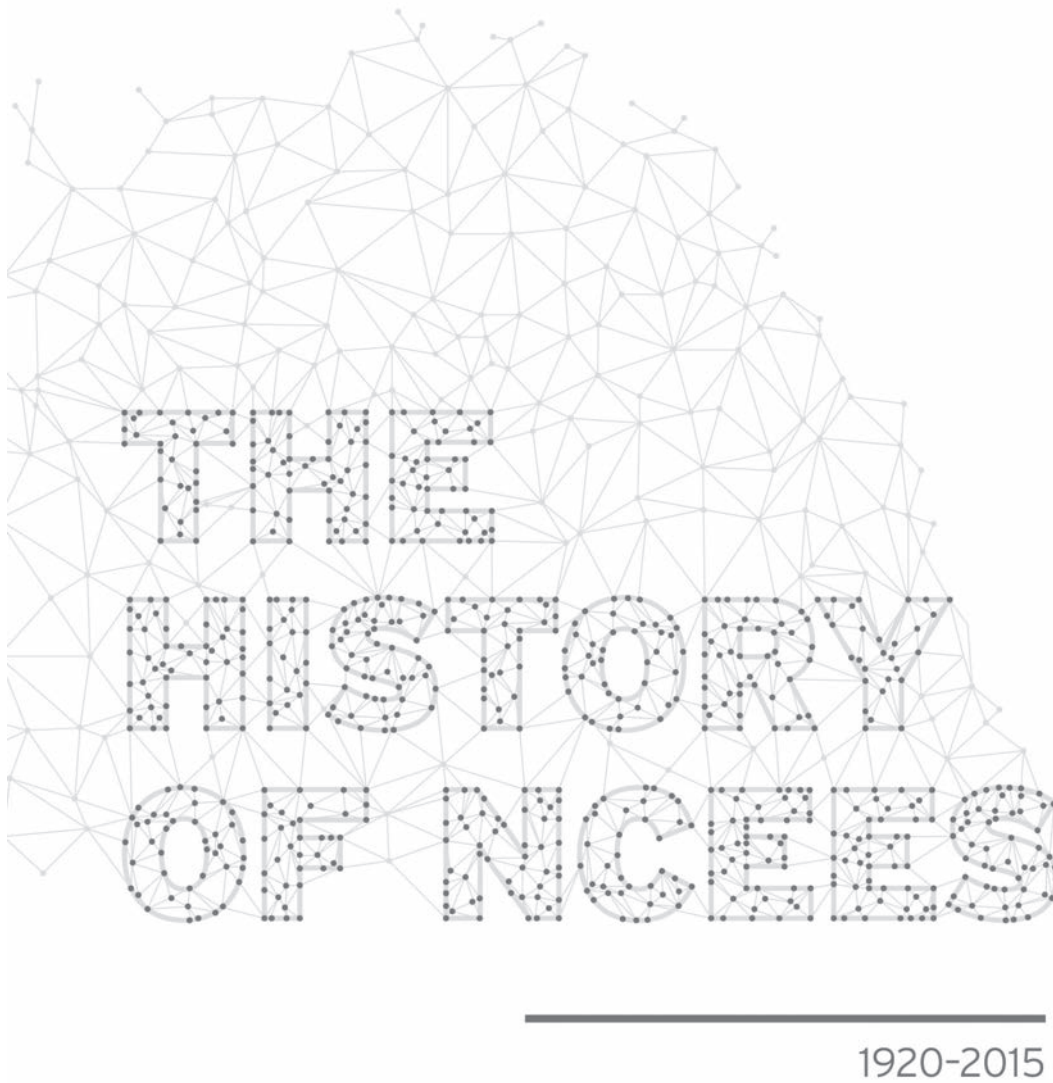
Technology Task Force

Chair: James Foley, P.E., S.E.
Board of directors liaison: Gary Thompson, P.L.S.
Staff liaison: Davy McDowell, P.E.

The task force will study the issue of electronic seals and signatures on design plans and related documents and propose guidelines for their application to ensure that they are authentic and that professionals are assuming responsible charge for their production. It will evaluate the process of building information modeling (BIM) and the ability of multiple professionals to work on design plans simultaneously. The task force will provide guidelines for how each design professional accepts responsibility for his or her work and how the finished product denotes each professional's work. The task force will also evaluate the use of remote sensing technology in surveying applications and provide guidelines for their use by licensed professionals.

NCEES publishes history of the organization

New publication gives overview of Council initiatives since 1920



NCEES is pleased to introduce *The History of NCEES 1920–2015*. This new publication is a condensed and updated version of *The History of the National Council of Examiners for Engineering and Surveying 1920–2004*. It includes information on initiatives that NCEES has undertaken through the decades. Those initiatives focus on finding ways to advance licensure and facilitate mobility among the U.S. licensing jurisdictions. The history highlights key developments in licensure over the past century and shows how NCEES has grown as an organization, while increasing its services to boards, licensees, and educators.

“The History of NCEES 1920–2015 gives readers a glimpse into the organization’s long and productive history,” said NCEES Chief Executive Officer Jerry Carter. “When U.S. licensing boards began to see a need for a national council to help improve uniformity of laws and promote mobility of licensure, NCEES was created. This publication tells our story. In addition, a new chapter is included to cover 2005–15 and the advancement of licensure.”

A PDF version of the publication, along with the in-depth history of NCEES, is available at ncees.org/history.

MEMBER BOARD BRIEF



LANCE KINNEY, PH.D., P.E.

TEXAS BOARD OF PROFESSIONAL ENGINEERS
EXECUTIVE DIRECTOR

MBAs focus on best practices

AS WE ATTEND THE NCEES ANNUAL MEETING EACH year, it is interesting to see all the different players involved in the Council—board and emeritus members, NCEES past presidents, Council staff, state board administrators and staff members, and representatives from engineering organizations and even other countries. There is an enormous amount of participation from all of these different individuals and groups, and each has a different role to play.

The participation of member board administrators (MBAs) in the Council is important because they are the implementers of the various policies and procedures agreed to at the national level and mandated by statutes, rules, and regulations at the state level. MBAs meet regularly at the zone and annual meetings to share information about what is happening in our various states. In addition, we openly share ideas, best practices, and innovations regarding the operations of our agencies with an eye toward doing the best job possible for our constituencies, the public, and the professions.

In the past several years, the focus on best practices has been formalized via the reconstitution of the MBA Committee. This committee is an excellent opportunity for MBAs, in concert with NCEES staff and the board of directors, to help improve the operations of each board involved in engineering and surveying licensure across the nation. The committee charges cover two major areas: 1) how to best implement the polices and directives of the Council at the state level in a thoughtful, effective, and uniform manner across jurisdictions and 2) how to share the internal best practices and fresh ideas of the wide variety of state boards to move licensure and the professions forward as a whole. Toward these ends, the structure of the committee allows for a wide range of perspectives—large and small boards, early adopters and those with limited IT resources, institutional knowledge from long-time MBAs and the fresh eyes of new administrators—and everyone can work together to create some very innovative and effective solutions.

Many charges will involve surveys and information gathering from experienced professionals like you, so keep an eye out for those requests.

This is evident in the work of the MBA Committee and what the MBAs as a whole have achieved in the recent past: development and implementation of the electronic verification system used by most boards to facilitate exchange of licensee information, the population and use of the NCEES Enforcement Exchange to share data on violations and enforcement, feedback from MBA users to NCEES IT staff for the redesign and expansion of the Records program and online applications, and implementation and details regarding the successful rollout of computer-based testing for the FE and FS exams.

In the coming year, the MBA Committee charges offer even more opportunities to share best practices and explore and develop new procedures to implement important Council programs. We will be working with the Education Committee on comity for continuing education procedures, best practices for decoupling the timing of PE exams and experience, rollout and testing of the new Records software and examinee management system, development of a guide for board administrators to use in facilitating mobility (including electronic verifications of examinations and licenses), fast-track procedures for Record holders who have been designated Model Law status, and providing for the onboarding and mentorship of new MBAs—just to name a few.

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Take the pledge and join Global Day

What will you do to grow the next generation of innovators?



**GLOBAL DAY
OF THE ENGINEER**

JOIN US
Celebrate Engineering
Engage Students
Share a Local Innovation

Take the pledge at:
www.DiscoverE.org/globalday
#GlobalEngineer

DISCOVER

GLOBAL DAY
OF THE ENGINEER
February 24, 2016

DISCOVERE WANTS ENGINEERS TO TAKE THE PLEDGE TO celebrate and share how engineers make a work of difference. The pledge is part of its Global Day of the Engineer celebration, which will be held February 24.

DiscoverE created Global Day of the Engineer to bring together the international community to

- Celebrate the accomplishments of engineers
- Give students around the world a chance to experience engineering
- Share the innovations engineers create every day

There are several ways to fulfill the pledge:

- **Celebrate engineering**—Honor how engineers in your community make the world a better place
- **Engage students**—Introduce K–12 students to the profession through a hands-on activity
- **Share a local innovation**—Celebrate the engineering feats all around us by sharing a photo on social media (#GlobalEngineer)

Visit DiscoverE.org/GlobalDay to learn more about Global Day, take the pledge, and download activity ideas.

MEMBER BOARD BRIEF

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For most of these charges, we can't succeed without the input, guidance, and support from our boards and emeritus members. Many charges will involve surveys and information gathering from experienced professionals like you, so keep an eye out for those requests. On behalf of the MBA Committee and all

MBAs, I thank the Council for the opportunity to work on these important issues and to help develop and implement best practices for engineering and surveying licensure.

ENFORCEMENT BEAT

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In July 2004, the board published a notice in the *New Jersey Register* stating that only licensed land surveyors may prepare a topographic survey and that, in preparing a site plan, a licensed professional engineer must transfer the existing conditions shown on the site plan from a survey prepared by a licensed land surveyor. The notice went on to state that the limited exception granted to licensed professional engineers in “performing those measurements necessary” does not permit a licensed professional engineer to prepare a topographic survey or locate and show existing conditions on a site plan without a survey having been first prepared by a licensed land surveyor.

Subsequently, at least four additional complaints were filed against the P.E. for the same reason.

Having exhausted its options in the complaint process to reach a consent agreement, the board transferred the case to the Professional Boards Prosecution Section of the Division of Law. The Prosecution Section retained an expert to review the case, and the investigation culminated in the matter being transferred to the Office of Administrative Law for a hearing before an administrative law judge.

The board presented its case at two hearings. It sought the revocation of the P.E.’s engineering license, enjoinder from his unlicensed practice of land surveying, imposition

Over the years, there has been much confusion about where the line is drawn between measurements necessary for the design, construction, and post-construction records of an engineering project and the practice of land surveying.

of civil penalties, reimbursement for expenses in pursuing this action, restitution for the affected consumers, and other relief as appropriate. The P.E. maintained throughout the proceedings that professional engineers are permitted to perform topographic surveying under the exception granted.

While there were multiple facets of the complaint related to competency and the harm done to the consumers involved, the underlying decision is instructional. The judge concluded that the P.E. “was not authorized to conduct a topographic survey independently without relying upon a survey performed by a licensed professional land surveyor.” The New Jersey board has contended this all along, and it has now been validated. In New Jersey at least, there is a clear distinction between land surveying and measurements necessary for the design, construction, and post-construction records of an engineering project.

FROM THE PRESIDENT

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What I am most interested in seeing is the number of PE exams in 2018 and 2019. I don’t believe we will see a significant decline. In essence, I believe there will simply be a higher percentage of those taking the FE exam continuing on to become licensed. Fewer people will be taking the FE exam just because everyone else is doing it. To use our earlier numbers, if 25,000 of the 56,000 FE test-takers in 2012–13 sit for the PE exam in four or so years, it represents a 45 percent follow through. But if 25,000 of the 38,000 FE test-takers in 2014 sit for the PE exam, then the follow through is around 65 percent. What is important

in this scenario is that there is no drop in the number of PE candidates. If that happens, it will show that, when all is said and done, most of the people taking the FE exam will be those who are serious about becoming licensed.

I acknowledge that my thinking may be simplistic and perhaps wishful, as the future is complex with many moving parts. Year-round availability of CBT exams has created a new normal. But we must watch closely to determine how it affects professional licensure so that we can determine the appropriate response.

HEADQUARTERS UPDATE



JERRY CARTER
NCEES CHIEF EXECUTIVE OFFICER

Service to member boards is at the center of staff activities

NCEES IS OFTEN VIEWED AS TWO DISTINCT PARTS—the 70 member licensing boards and the administrative support based in Clemson, South Carolina. I would argue that this is not the case since the headquarters and staff based in Clemson only exist to support the activities of the member boards. As such, the NCEES staff members are constantly trying to use our skills and resources to enhance the services provided to the member boards, their candidates, and licensees.

For several years, NCEES staff has been working to develop and implement programs that provide a better user experience for exam candidates while also providing member boards with greater access to electronic information. Exam candidates are now required to create an account with NCEES and provide basic biographical information that can be used to qualify candidates for seating. With the advent of computer-based testing (CBT), the vast majority of member boards now allow candidates to be seated for the FE exam prior to filing an application with the board. Some boards use the option of manually approving all candidates or manually approving candidates who do not have an EAC/ABET-accredited degree. These are options that NCEES staff developed in response to suggestions from member board administrators (MBAs). As we move to transition the professional exams to a CBT delivery system, a number of MBAs have asked staff to provide additional options, including automatic approval for both the Fundamentals and Principles and Practice exams. This would mean that a licensure candidate would apply to the member board only after he or she has passed both exams.

For the past 18 months, the IT staff has been working to upgrade the user interface that the member boards employ as well as providing software updates to accompanying databases to allow better communication and exchange of data. We anticipate the launch of these revamped programs, along with major revisions to the NCEES website, in mid 2016.

Our member licensing boards, along with their licensure candidates and licensed professional engineers and surveyors, are the heart of our work at NCEES headquarters.

The most significant change will be to the NCEES Records program. This program allows an individual who is already licensed by a member board to create a portfolio that includes information required by other member boards for comity licensure considerations. All member boards accept the Record, but some require additional information from the licensee prior to awarding a license by comity. Currently, 37,951 individuals have an NCEES Record, and several member boards require candidates for comity licensure to hold a Record.

In revamping the Records program, NCEES will begin allowing candidates who have taken the FE or FS exam to have their transcripts submitted to NCEES and then commence logging their work history, which NCEES will verify during their employment and obtain the required verifications. NCEES also plans to have the experience reviewed by licensed professionals to provide feedback to candidates and ensure that the experience is specific to the fields of engineering or surveying and progressive in nature. This will eliminate the problem of candidates having to locate a former supervisor to verify experience or having descriptions of work experience that are vague and fail to confirm progressive professional experience.

Once a candidate has successfully completed the Fundamentals and Principles and Practice exams and is ready to apply to a

member board for licensure, NCEES will request references, including licensed individuals who can attest to the candidate's professional skills and ethical aptitude. Due to interest expressed by several member boards, we are developing the system to allow the information collected by NCEES to be transmitted to the member board and used as the initial application for licensure as well as licensure via comity. We would expect each member board to require an application fee, and we recognize that there may still be state-specific requirements for applicants to meet.

NCEES staff will continue to work with the MBA Committee on the launch of the revised programs and support efforts to fulfill the mission of NCEES. Our member licensing boards, along with

their licensure candidates and licensed professional engineers and surveyors, are the heart of our work at NCEES headquarters. We are honored to serve them and help this organization meet its mission to advance licensure for engineers and surveyors.

Correction

In my October 2015 column, I quoted from a report issued by the Indiana Job Creation Committee that proposed the elimination of the boards of engineering and surveying. After intense lobbying from both the engineering and surveying professions, this recommendation was rescinded from the final report submitted to the Indiana governor.

Remembering past presidents Stivers and Taylor



Past President Stivers (left) follows the debate at the 2011 annual meeting in Providence, Rhode Island. Past President Taylor (right) meets with other NCEES past presidents at a 1997 annual meeting breakfast in New Orleans, Louisiana.

TWO FORMER NCEES PRESIDENTS RECENTLY PASSED away: T.E. (Ted) Stivers, P.E., died September 20 at the age of 95; and Paul Taylor, P.E., died October 31 at the age of 90.

Stivers was a member of the Georgia State Board of Registration for Professional Engineers and Land Surveyors from 1970–80 before being named an emeritus member. In addition to serving as NCEES president in 1976–77, he was Southern Zone vice president, served on numerous NCEES committees, and was involved in the development of the Participating Organizations Liaison Council. Stivers was a key member of NCEES leadership dedicated to regaining financial stability for the Council, which faced insolvency in the mid-1970s. Stivers was appointed financial liaison officer to the board of directors in 1974 and worked with the Council's first treasurer and other leaders to implement extensive fiscal reform. By 1978, the NCEES president reported that the organization enjoyed "an excellent

financial position." NCEES honored Stivers with the Distinguished Service Award in 1980 and the Distinguished Service Award with Special Commendation in 1989 for his dedicated service.

Taylor was a member of the Alabama State Board of Licensure for Professional Engineers and Surveyors for 17 years. In addition to serving as NCEES president in 1992–93, he also served as Southern Zone vice president from 1989–91. He was a member of the Committee on Law Enforcement for three years, including serving as chair, and he served in various capacities on the Committee on Education and Assessment Qualifications for eight years. NCEES awarded him the Distinguished Service Award in 1987 and the Distinguished Service Award with Special Commendation in 1995 to honor his committed service. Taylor was also member of the Alabama Engineering Hall of Fame and a fellow of the American Institute of Chemical Engineers.

NCEES expands testing windows for CBT exams

NCEES is extending the testing windows for its computer-based exams beginning January 2016. The four windows for computer-based testing (CBT) will expand from two months to three months, making testing for these exams available 12 months of the year.

“We included an off month in each testing window when we introduced CBT exams in 2014 in case time for adjustments was needed,” explained NCEES Chief Executive Officer Jerry Carter. “Now that we’ve had time to know that everything is working well, the board of directors approved opening more scheduling opportunities.”

2015 exam item costs

The NCEES board of directors has approved values for each exam item for fiscal year 2015–16, which began October 1. The values are calculated in three groups: multiple-choice items for CBT exams, which currently include the FE and FS exams; multiple-choice items for pencil-and-paper exams, which includes the PS exam, all PE exams, and the breadth portion of the 16-hour SE exam; and constructed response, or essay, questions for pencil-and-paper exams, which include the depth portion of the SE exam.

The following are the exam item costs for 2015–16:

- CBT exam item cost: \$1,654
- Pencil-and-paper exam item cost for multiple-choice items: \$2,408
- Pencil-and-paper exam constructed response: \$16,280

Each year, NCEES assesses the potential financial damages associated with an exam breach and sets a cost to replace an exam item, or question, if it can no longer be used. NCEES considers travel expenses, subject-matter experts’ time, psychometric costs, and office and personnel costs when establishing the dollar value of each exam item.

Calculator list approved

The NCEES board of directors recently approved the calculator models that can be used on NCEES computer-based and pencil-and-paper exams in 2016. They are as follows:

- Casio: All fx-115 models (Any Casio calculator must have fx-115 in its model name.)
- Hewlett Packard: The HP 33s and HP 35s models, but no others
- Texas Instruments: All TI-30X and TI-36X models (Any Texas Instruments calculator must have TI-30X or TI-36X in its model name.)

Limiting the types of calculators allowed in the exam room is one of the measures NCEES takes to protect the integrity of its exams.

New specs, design standards

The PE Naval Architecture and Marine Engineering exam has new specifications starting in April 2016. The specifications are posted online at ncees.org/exams.

Final pencil-and-paper PS exam

NCEES will offer the PS exam in pencil-and-paper format for the last time in April 2016. Beginning October 2016, the exam will be offered via CBT at Pearson VUE testing centers. Registration for the computer-based PS exam will open in June.

“This is the first of the professional exams to move to CBT,” CEO Carter said. “We will continue to work toward transitioning the PE exams.”

More details on the format and specifications of the computer-based PS exam will be available in April.

MEMBER BOARD NEWS

ARKANSAS Brian Moore is a new appointee. Tommy Bond and Frank Vozel are no longer members. Heather Richardson is now executive director, replacing Steve Haralson. Grant Grigg is the new chief investigator.

COLORADO Kelly Miller and Jered Minster are new appointees. Lawrence Connolly and Jeffrey Olsen are no longer members.

DELAWARE PS Flora Peer is the new board administrator. She replaces Amanda McAtee.

IDAHO Dusty Obermayer and Raymond Watkins are new appointees.

LOUISIANA Emeritus member Norma Jean Mattei was installed as president-elect of the American Society of Civil Engineers at the organization's annual business meeting in October.

NEVADA Kent Anderson and Karen Purcell are new appointees. Kenneth Gardner and Patty Mamola are no longer members.

OHIO Walid Gemayel is a new appointee. James Mawhoor is no longer a member.

RHODE ISLAND PE Carissa Charles and Patricia Walker are new appointees. Kazem Farhoumand and Ferdinand Ihenacho are no longer members.

RHODE ISLAND PS Amy Sonder is a new appointee. Richard Lipsitz and Curtis Johnson are no longer members.

VIRGINIA Corey Clayborne is a new appointee. Clint Good is no longer a member. Doyle Allen, who was an emeritus member, has been reappointed as an active member.

WASHINGTON Aaron Blaisdell is a new appointee. Scott Valentine is no longer a member.

UPCOMING EVENTS

December 3-5
SE Exam Scoring Workshop
Clemson, South Carolina

December 4-7
PE Metallurgical and
Materials Exam Cut Score
Meeting
Houston, Texas

December 6-7
Education Committee
Meeting
Dallas, Texas

December 7-8
MBA Committee Meeting
Tampa, Florida

December 13-14
ACCA Meeting
Austin, Texas

December 14-15
Financial Reserves Task
Force Meeting
Portland, Oregon

January 7-9
PE Electrical and Computer
Exam Meeting
Clemson, South Carolina

January 8-9
Emerging Engineers and
Surveyors Group Meeting
Charleston, South Carolina

EPE Committee Meeting
Clemson, South Carolina

UPLG Committee Meeting
Albuquerque, New Mexico

January 15-16
FE Exam Meeting
Clemson, South Carolina

January 20-21
PE Petroleum Exam Meeting
Houston, Texas

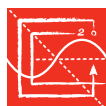
January 22-23
PE Civil Exam Meeting
Clemson, South Carolina

January 28
EPS Committee Meeting
Clemson, South Carolina

January 28-31
PE Control Systems Exam
Meeting
Houston, Texas

January 29-30
FS/PS Exam Meeting
Clemson, South Carolina

January 30
PE Architectural Engineering
Exam PAKS Meeting
Dallas, Texas



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ISSN NO. 1093-541X
VOLUME 19, ISSUE 6

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POSTAL NOTICE

Licensure Exchange is published bimonthly by NCEES, 280 Seneca Creek Road, Seneca, SC 29678-9214.

Periodicals postage paid at Clemson, SC 29633

Postmaster: Send address changes to *Licensure Exchange*, P.O. Box 1686, Clemson, SC 29633-1686

NCEES publishes 2015 Engineering Award Book, opens 2016 competition

The 2015 NCEES Engineering Award book features the six engineering programs recognized this year for excellence in connecting professional practice and education. The award is designed to connect engineering students with professional engineers through collaborative projects.

The new book showcases each winning project, which involved collaborations with students, faculty, and professional engineers. It also includes interviews with the Marquette University Department of Civil, Construction, and Environmental Engineering, which won the \$25,000 grand prize for its project, *Sechum Vehicle Bridge*.

Since 2009, NCEES has sponsored the award to promote understanding of the value of licensure and encourage partnerships between the engineering profession and education.

2016 call for submissions

As it celebrates the 2015 winners, NCEES is also opening the 2016 competition. EAC/ABET-accredited programs from all engineering disciplines are invited to compete for a grand prize of \$25,000 and five awards of \$7,500 each.

The deadline to enter is May 2, 2016. Detailed entry information and promotional materials, including a downloadable PDF of the NCEES Engineering Award Book, are available at ncees.org/award. Printed copies of promotional materials are available by request.

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