



# The South Dakota Engineer

March 2016

## This Issue

- President's Message
- 2016 SDES Annual Conference
- SDES Members In the News
- 2016 Legislature Bills
- Welcome New Members
- NSPE News

## SDES

2015-2016

### EXECUTIVE COMMITTEE

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Stacy Froelich, P.E.

#### PRESIDENT-ELECT

Brian Jenner, P.E.

#### VICE PRESIDENT

Philip Gundvaldson, P.E.

#### SECRETARY-TREASURER

Steven Myer, P.E.

#### PAST PRESIDENT

Todd (T.J.) Yerdon, P.E.

## President's Message

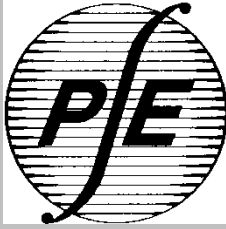
Stacy A. Froelich, MS, P.E., 2015-2016 President

Hello everyone. February 27, 2016, marked the end of Engineers Week for 2016. Each of our State's Chapters participated in Engineers Week in some fashion. Engineers Week is part of a much broader educational and outreach program dubbed DiscoverE that is spearheaded nationally by the National Society of Professional Engineers.

Spring is quickly approaching which means the 2016 Annual Conference is right around the corner. The Eastern Chapter will be hosting this year's Annual Conference in Sioux Falls, SD on April 6-8th, 2016. The Eastern Chapter is working very hard at providing another quality conference with superior speakers and guests. The conference provides a great opportunity to network with other colleagues from across the state, and there are 12 PDH's available if you attend the entire conference (11 if attending the tour). Again like last year, the annual awards presentations will be held during the Thursday lunch, and Brian Armstrong, P.E., the North Central Region Director of NSPE, will join us to provide the state of NSPE address and to install the new officers. The reduced conference fee for early registration ends on March 25, 2016, so visit the SDES website soon to register. Please come out for the conference and show your support for our speakers who volunteer their time and talents for our Society.

During our last board meeting, the State Board approved the 2016-2017 SDES executive board nominations. Brian Jenner will be our president, Phil Gundvaldson will be president-elect, Ryan Johnson will be vice president and Steven Myer will be secretary/treasurer. Along with the SDES executive board, various state chair positions, chapter board positions, and chapter chair positions will be changing hands. I personally want to thank everyone for volunteering your time and energy to be responsible for these positions. Our state and chapters have been very successful due to the commitment made from our volunteers.

With that I will call for volunteers to be more involved with our society. These volunteers better our organization and set it up for future sustainability. The current board has many ideas brought forward during my term and beyond, however I know there are more out there too. I realize some people may be hesitant to volunteer because you aren't that familiar with how the organization is



NSPE  
Leadership Toolbox

Have you remembered to pay your membership dues? If you need an invoice, please go to [www.sdes.org](http://www.sdes.org), where you can pay your dues online or contact Gail Boddicker at 394-6674 or [gail.boddicker@sdsmt.edu](mailto:gail.boddicker@sdsmt.edu) for a copy of your invoice.

It is a good idea to periodically check your records to be sure your contact information is correct. You can update your information online or contact Gail with the information.

ran or the duties involved or even to due to time limitations, but please trust me that it can be a very rewarding experience and the perfect opportunity to meet some great people from across the state and nationally.

Thank you for allowing me to serve as your President this last year, Stacy A. Froelich, MS, P.E.

## REGISTRATION IS OPEN FOR THE 2016 ANNUAL CONFERENCE!

### SOUTH DAKOTA ENGINEERING SOCIETY 2016 ANNUAL CONFERENCE APRIL 6-8, 2016 HOLIDAY INN CITY CENTRE, SIOUX FALLS, SD

The program includes the Midco® Aquatic Center Construction Site Tour.

Log on to [www.sdes.org](http://www.sdes.org) to register online or to print registration form.

*Printed programs should be arriving in your mail boxes in a few days.*

### SOUTH DAKOTA ENGINEERING SOCIETY Members In the News

Commissioner's Office  
Washington, DC

Media Contact: Peter Soeth, [pssoeth@usbr.gov](mailto:pssoeth@usbr.gov), 303-445-3615

For Immediate Release: February 26, 2016

### Stacy Ann Froelich Selected as Bureau of Reclamation's 2016 Engineer of the Year

*Froelich is recognized for her work for assisting Tribes and non-tribal rural water projects in South Dakota*

WASHINGTON - Stacy Ann Froelich, P.E., is the Bureau of Reclamation's Engineer of the Year for 2016. Froelich, a civil engineer, is being recognized for her contribution toward overseeing and supporting several rural water contracts including tribal construction and



## ENGINEERING A STRONGER PROFESSION

NSPE is on a mission of organizational innovation and development to effectively serve the licensed professional engineer and those on the licensure path.

*If you haven't already seen the video and other resources related to the Society's new Statement of Strategic Direction, check out [www.nspe.org](http://www.nspe.org) and the link to "Mission: Engineering a Stronger Profession."*

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operation and maintenance contracts with the Oglala, Rosebud and Lower Brule Sioux Tribes, plus construction of the non-tribal rural water system, West River/Lyman-Jones.

Froelich, who works at Reclamation's field office in Pierre, South Dakota, is also a top ten finalist for the National Society of Professional Engineers' Federal Engineer of the Year Award for 2016. She will be honored with her peers at a luncheon ceremony on Friday, February 26, at the National Press Club, in Washington, District of Columbia, as part of National Engineers Week.

"Ensuring that Native American communities have a sustainable water supply is one of the most important things that Reclamation does," Commissioner Estevan López said. "Stacy's work helps Reclamation fulfill its mission to deliver safe and reliable water supplies to a number of communities across Indian Country."

Froelich conducted research as part of her job supporting the rural water projects. She co-authored a study on the service-life of asbestos-cement pipe used in a significant portion of tribal community water systems to determine eventual distribution pipe replacement. She is also administering a research study into nitrosamine that is a suspected cancer-causing disinfection-by-product of water treatment and will be potentially regulated in the future. Phase II starts soon and will explore treatment options to reduce its formation.

She received a Bachelor of Science in Chemical Engineering in 2002, and a Master of Science in Technology Management in 2010, both with the South Dakota School of Mines and Technology. She is a registered professional engineer in South Dakota and is a member of the National Society of Professional Engineers and South Dakota Engineering Society. Froelich was selected as the South Dakota Engineering Society, Central Chapter, Young Engineer of the Year in 2007.

Reclamation would also like to recognize its 2015 Engineer of the Year regional winners:

- Brandon Hilliard, P.E., computer engineer at Hoover Dam, Nevada (Lower Colorado Region)
- Bau Yang Chang, electrical engineer at the Central Valley Operations Office in California (Mid-Pacific Region)
- Gwendolyn Christensen, P.E., technical projects manager at Columbia-Cascades Area Office in Washington (Pacific Northwest Region)
- Jay W. Bytheway, supervisory civil engineer at Upper Colorado Regional Office in Utah (Upper Colorado Region)

Each of the five regions nominate one candidate for consideration as Reclamation's Engineer of the Year. The final selection represents Reclamation's nominee for the National Society of Professional Engineers' Federal Engineer of the Year Award.

###

Reclamation is the largest wholesale water supplier in the United States, and the nation's second largest producer of hydroelectric power. Its facilities also provide substantial flood control, recreation, and fish and wildlife benefits. Visit our website at <http://www.usbr.gov> and follow us on Twitter @USBR.



## SOUTH DAKOTA LEGISLATURE 2016 Session

The following two bills have been signed by the Governor and may be of interest to you. You should be able to access the bills by Ctrl clicking on the title.

**FOR AN ACT ENTITLED, An Act to revise signature and seal requirements for the Board of Technical Professions.**

**FOR AN ACT ENTITLED, An Act to revise certain provisions related to the Board of Technical Professions.**

### Welcome New SDES Members

#### Black Hills Chapter

Richard Bell  
Jason Hinds  
Cong Hong  
Justin Huntley  
Mackenzie Kenney  
Skylar Larson  
Peter Rausch  
Adam Spindler  
Mark Wathen

#### Central Chapter

Nicholas Nelson  
Laura Newman  
Terry Florentz

#### Eastern Chapter

Mikala Fjerstad  
Chelsea Hunt  
Daniel Kvasnicka  
Derek Lee  
Aaron Miller  
Ryan Murtha

### NSPE NEWS

Read on to see what is happening with NSPE!

NSPE Executive Director's Report to the BoD, February 16, 2016

**TO:** NSPE Board of Directors

**cc:** NSPE House of Delegates  
NSPE Committee, Task Force, Council and Interest Group Chairs  
State Society Leadership  
State Society Executives Council  
NSPE Past Presidents

**FROM:** Mark J. Golden, FASAE, CAE , Executive Director

**DATE:** 16 February 2016

**RE:** Board Update: February 1-15, 2016

A number of active issues that you have only been able to engage with electronically or on paper get very real when the Board of Directors gathers in Washington, DC. At their meeting, the Board will:

- Be reviewing the data and member, state association and stakeholder feedback into membership and dues structure and tackling models and options;
- Get updates on the three pilot, short-term membership campaigns, now underway;
- Go in-depth on the Committee on Policy and Advocacy's proposed position statements, threat assessments and advocacy strategies on autonomous vehicles, protecting the PE from attacks as a barrier to trade, discipline-specific licensure, interstate mobility of licensed engineers; and the use of certification credentials; and
- Get hands on and challenge the new association management system (AMS) software.

Agenda materials are being added to the online [board book](#) as they are finalized and available for your review.

### **1. Advocacy**

On February 1st, NSPE [called on Michigan legislators](#) to support Michigan House Bill 5238, the *Local Government Professional Services Selection Act*. If enacted, the legislation will set procedures for local governments to procure architectural, engineering, and land surveying services using a qualifications-based selection (QBS) process.

President Tim Austin weighed in on a recent report performed by an outside auditing firm erroneously suggesting that the Kansas Department of Transportation could save money by eliminating qualifications-based selection in the department's procurement of architectural and engineering services. In his [February 11th letter](#) Austin provided evidence that QBS protects the public welfare, protects the taxpayer, benefits small firms and promotes technical innovation.

NSPE also corrected errors in the report misstating jurisdictions it incorrectly described as not using qualifications-based selection.

Add Arizona to the list of states considering dismantling occupational licensing (possibly including the PE). NSPE General Counsel Art Schwarz will be in Phoenix later this month, meeting with state association leadership to assist in

coordinating a response.

Embracing its Grand Challenge to foster ethical innovation, NSPE has been working on multiple fronts to promote and protect the public health, safety, and welfare in the development and deployment of autonomous vehicle technologies. The Society is taking action to give professional engineers a leading voice in ensuring that the same attention to safety and reliability that went into the built transportation infrastructure is incorporated into autonomous vehicles and smart transportation systems. NSPE has been collaborating with the California Department of Motor Vehicles, which has been tasked with developing the nation's first deployment regulations (including both functional operations and behavioral competencies for autonomous vehicles). NSPE has been at the forefront, participating in recent stakeholder meetings in Sacramento, Los Angeles, and Washington, DC. The Society has provided formal [written input](#) to the California DMV urging a comprehensive and informed approach. In these submissions, NSPE President Tim Austin, P.E., F.NSPE, called for professional engineers to play a key role in vehicle safety certification that must include safety certifications by the manufacturer and third-party testing by competent and independent third-party authorities (i.e., PEs). These focused efforts will be followed by steps to engage other stakeholder groups (such as public safety, insurance, and consumer access organizations), which will not only ensure a good outcome, but also increase public awareness of the role of licensed professional engineers. (Stacey Ober is now looking into creating a new Storify presentation on this topic.)

NSPE has expressed concern about Oklahoma legislation that would amend the state's engineering licensure law to permit a structural engineering designation for structural engineers. This change, the Society says, would undermine the existing process for licensing professional engineers in Oklahoma and possibly other jurisdictions.

In his February 1st [letter](#) to the chair of the Oklahoma engineering licensure board, President Tim Austin explained that continued recognition of PE licensure as the defining qualification for practice is critical to guaranteeing the trust and protection of the public. He also noted the defeat of a motion in August that would have protected the structural engineer title and restricted SE practice in the model law published by the National Council of Examiners for Engineering and Surveying.

The NSPE officers are taking advantage of being in Washington for the board meeting, with Hill visits planned with two of our congressional champions: Representative David McKinley (R-West Virginia) and Representative Bruce Westerman (R-Arkansas). Both congressmen are PEs.

## **2. Member Value**

NSPE's increasingly activist advocacy posture, at the national level and in coordination with our state partners, is an obvious and direct example of increasing member value. However, a less obvious but equally significant step forward in this area was realized when the new Association Management System went live more than two weeks ago.

Although a truly momentous event, I would wager not a single member actually noticed it. However, that is a benchmark of success for such back-office changes. (Generally, the customer only notices when something goes wrong.) But that shouldn't diminish what a leap forward this is for the "member value" strategy from NSPE's strategic plan: *"NSPE will bring business discipline to ensuring that the individual member's value expectations are being met."* With the new, state-of-the-art database and automated systems, when members come to the website they will now experience:

- Faster, more reliable access to content, products, and member information;
- The ability to directly review and update all contact information in their own member record. (Only unable to change their name, for security reasons);
- Ability to easily see recent transactions, purchases, and downloads;
- A better and more individualized member web experience;
- Greater ease making online contributions when paying dues on the website;
- Single sign on for both website and membership record data; and
- Improved integration with NSPE electronic marketing and subscription platform, allowing for opt ins and opt outs.

State societies have been similarly empowered and supported in improving the member experience with:

- Faster, more reliable access to data;
- Improved reports;
- Immediate application program interface (API) code calling of data. (Basically, the instant a member's data, including state membership data, is changed, state society execs will have access to it, instead of waiting for nightly uploads.);
- Implementation of agreements on standardization requested by the State Society Executives Council (SSEC) including:

- o Retired member rate universally calculated at 50% of the prevailing rate at all levels.

- o Licensed and non-licensed member prices normalized.

- o Students free, not billed by national.

- o Interest Groups treated as communities, not dues package (There has not been an actual financial/dues component to affiliating with an Interest Group for more than 15 years. This change takes them out of the financial/dues system and allows us to use the full power of our IT and database systems to support

communications and engagement, not track non-existent revenue flows.)

And that's only the beginning. With the basic, customer database and transactional infrastructure now in place, our attention can turn to ramping up:

☑ Targeted communications;

☑ Personalized content and marketing message delivery, based on individual customer preferences and past behaviors (e.g.; populating the homepage each member sees with content and suggested product and services, based on the interests that member has demonstrated from prior visits);

☑ Automated member engagement and follow up, particularly with new and high-risk members (e.g.; improved retention messages through automation, improved graphics capabilities, and ability to segment messages.);

☑ Increased business intelligence to track trends and conduct business modelling;

☑ Community Platform integration allowing interaction, listservs and document library for committees and interest groups.

In general, NSPE is now able to assure faster, more reliable access; cleaner data; fewer records to manually maintain and corrections to system flaws; improved integration with NSPE electronic marketing and subscription platform ("big data" capabilities); a stable system not at risk of catastrophic failure; improved integration with finance systems, and better reconciliation and cash flow control. Within the next 12 months, members will be able to directly print membership certificates at renewal, pay dues, or make contributions automatically, in a recurring fashion; and have access to an online membership directory. State societies will gain the ability to manipulate/analyze their data directly and, if they choose to, create and integrate customized nodes (under state society control) on the community platform, allowing listservs and document libraries for state society communities of state members.

Clearing this major hurdle, national is now realigning current membership and marketing staff, reallocating the major resources that have heretofore been consumed with routine administrative tasks and implementing the database conversion, and re-investing them on further improving the membership experience and increasing membership recruitment and retention activities. The NSPE Virtual Career Fair, held on Thursday, February 11 from 12:00 noon to 3:00 p.m. Eastern time, was an event success with 323 Job Seeker signups! Of these 323 signups (those who started the registration process), 226 registered for the full event, 79 actually participated (35%), and there were 108 total conversations.

On the Employer side, there were 8 employer booths with 15 representatives from the following companies: Alliantgroup; CCA, LLC; Commonwealth Associates, Inc.; Due Diligence Associates, Inc.; Epic; Materials Testing Consultants; RS&H;



Sunrun Inc.

Participants said what they liked most about the event was that it was well organized, started on time, was effective as far as getting in contact with recruiters, was easy to connect and chat with a company, and the software was easy to navigate.

Additional feedback from this first time event will be very helpful. Overall, Job Seekers would have liked to see more companies and jobs available in the event space and Employers would have liked to have more previewing of the Job Seeker profiles and resumes. This is something we will strive to satisfy with marketing strategies for future events.

### **3. Content**

President Tim Austin was interviewed by [IHS Engineering 360](#) for a recent article on the “rising call for responsible Artificial Intelligence,” emphasizing the importance of the kind of sensibilities only a licensed engineer can bring to the discussion.

While the transition to the new AMS has been largely (dare I say spectacularly?) successful and transparent to the end user, there are literally thousands of legacy pages of content hosted on the NSPE website. Work is ongoing to streamline, improve and make this valuable resource more accessible and utilitarian, but please be aware and keep your eyes open for links within the site that may not have converted cleanly. If you become aware of links that don't work or take you to old and out-of-date information, make us aware, so we can correct them. We are catching these situations regularly, and kudos to NSPE webmaster Barbara Parker, who is staying on top of cleaning them up promptly and efficiently.

### **4. Collaboration**

This weekend, the 24th annual Future City national finals were held in Washington, DC. On Sunday, February 14th, I judged the 37 Future City finalists for NSPE's special award, recognizing the entry that best demonstrates “protecting the public's safety and welfare through competent and ethical engineering practices.” On Monday, February 15th, I participated in preliminary judging for the national finals. Finalists will be announced and final round judging will be conducted February 16th. And I will have the honor of presenting the NSPE special award and the 2nd place award (a \$5,000 prize, funded by NSPE, to the winning school's STEM programs) at the closing ceremony. Follow [#futurecity2016](#) on Twitter for breaking news on developments.

### **5. Professional and Leadership Development for the Licensed Professional Engineer**

Plans proceed on schedule for the [2016 Professional Engineers Conference](#) (PECon), the joint NSPE-TxSPE annual meeting, June 22-26, 2016 in Dallas, Texas. The call for presentations has generated a rich assortment of proposals, which are now being finalized into multiple tracks of educational content. General sessions, networking opportunities, sponsorships and social events are being finalized. This isn't the same-old event members may be used to, of interest only to national and

state leadership volunteers. We will continue to fully service this key constituency, but the 2016 conference will be a major advancement in our multi-year effort to transform this meeting into a “must attend,” national event for the entire professional engineering community.

With leadership having selected Atlanta as the site for the 2017 PEcon, staff has narrowed candidate venues to host the meeting, and will be able to announce dates and hotel prior to the conference in Dallas.

## **6. Member Engagement**

A note to congratulate Dave Engels, and Dave Whitman in Wyoming and Tom Roberts and Erin Gates on their success hosting an Order of the Engineer Ceremony earlier this month at the Wyoming Engineering Society Conference in Sheridan, Wyoming. Twenty-four were inducted into the Order, at what I believe is a first for the 96 year old conference. Most of the conference’s 350+ attendees learned about the Order and/or recommitted to their obligation to the profession.

## **7. Finance, Administration, Operations and Staff Alignment**

Budget templates have been completed by individual staff budget managers and are now being compiled and reviewed by the staff management council, so they can be presented to the NSPE board for review and revision, incorporating strategic direction and priority guidance from the elected leadership. Importantly, this includes not only budget planning for FY2017, but three-year projections, allowing a longer-range planning perspective and creation of the long-range business plan the board has mandated.

As an important and integral part of NSPE and the major source of non-dues revenue, NICET’s FY2017 budget will be presented to the NICET Board in Little Rock on March 11th.

The final draft budget (integrating NSPE core (membership) and NICET operations) will be presented to the Finance Committee in April, followed by the full NSPE Board later that month.

Senior Director of Finance Laura Meyer has successfully negotiated relaxation of covenants with NSPE’s bank (Bank of America) that create flexibility for NSPE to invest financial reserves more productively, a major step towards better use of these resources to support the association’s mission. (Bank of America covenants had previously restricted us to only certificates of deposit issued by the bank, which have generated virtually no investment income).

We have also started, in consultation with the NSPE Educational Foundation board, reconciliation of their current fund balances ... an arduous resource-intensive, but long-overdue restructuring, which will enable more effective deployment of the Foundation’s assets in support of its scholarship mission. Finally, please remember that access to NSPE leadership resources is always available to you in the Leadership Toolbox at [www.nspe.org/toolbox](http://www.nspe.org/toolbox). You will need to log in with your user name and password.

This includes [links](#) to current talking point scripts and presentations for use by NSPE officers, board members, and other leaders during state visits, chapter

meetings, or other venues to promote NSPE and its activities. There are three versions of the presentation to suit your presentation style and skill – an animated PowerPoint with moving graphics and text, a static PowerPoint with no animation, and a Word document with an outline overview of the presentation.

You will also find other [sample presentations](#) for volunteer leaders, [sample](#) promotional and other materials for membership, advocacy, association management, meetings, governance and other areas, and the [latest advocacy news](#).

There is also great material on NSPE's purpose, mission, vision and a history of the *Race for Relevance* and the resulting Strategic Plan in a section called "[Who We Are and What We Do](#)."

You can also review a detailed calendar of NSPE and state society events on the website at: [www.nspe.org/AboutNSPE/Events/index.html](http://www.nspe.org/AboutNSPE/Events/index.html).

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