



**California/Nevada Section
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Thirty Seventh Edition**

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* **SB 692 is now SB 1061, California Engineering Statute Needs Fixing**, published by Craig Musselman, P.E., F.NSPE

California has a convoluted engineering statute that needs fixing. For many years, reasonable legislative initiatives proposed by the PE board, legislators, and other interests have failed due, in large part, to testimony and political influence from factions within the engineering profession in California with interests in maintaining the status quo.

California has a unique engineering licensure system. There are three “practice act” disciplines: civil, mechanical, and electrical. These disciplines are authorized to practice engineering, and their practice is regulated by the California Board for Professional Engineers, Land Surveyors, and Geologists. Civil, mechanical, and electrical engineers can be held accountable for their professional misconduct, and their authority to practice can be suspended or revoked. There are also nine “title act” disciplines: agricultural, chemical, control systems, fire protection, industrial, metallurgical, nuclear, petroleum, and traffic engineering. In these disciplines, the state regulates the use of the title, but not the practice. In the case of misconduct, the board can revoke continued use of the title but cannot preclude continued practice. Title act engineers who commit professional misconduct can continue practicing as long as they do not continue using the title. Many state and local agencies refuse to accept documents stamped by engineers in these disciplines even though their reports are within their field of study and experience. Many fire protection and nuclear engineers, for example, are also licensed as mechanical engineers, but many of the title act engineers are not also licensed in either civil, mechanical, or electrical engineering. To make matters even more complicated, there are two “title authority acts,” for structural and geotechnical engineers, indicating proficiency in those specialties at a higher level than is required for civil engineering licensure.

The plot has thickened. A recent ruling has indicated that any “fixed work” constructed in California—essentially anything not on wheels or that doesn’t fly or float—must be designed by a licensed civil engineer. In the past, the regulated work of any of the title act engineers has needed to be under the responsible charge of a licensed civil, mechanical, or electrical engineer. That is now clarified, and required to be under the responsible charge of a civil engineer. Despite the fact that the California statute requires that licensed civil engineers practice only within their areas of competence, some civil engineers in California have testified to the effect that these provisions require them to practice outside of their areas of competence, and to stamp the work of engineers of other disciplines, which would constitute professional misconduct. Convoluted. And very confusing. This system may have made some manner of political sense when it was adopted many years ago, but it doesn’t make practical sense now. No other states have licensure systems like this.

A bill currently before the California legislature ([SB 692](#)) [Note: This bill is now [SB 1061](#)] would convert the title acts to practice acts, requiring all professional engineers to practice within their area of competence and allowing the inherent overlap among disciplines that is common in all other

states, and that is now allowed in California only for civil engineers. Fixing this is in the public interest and will enhance the protection of the public health and safety. And it is consistent with the manner in which engineering is regulated in every other U.S. jurisdiction. The benefits are as follows:

1. California will be able to regulate the professional practice of all the engineering disciplines. It cannot currently. That doesn't make any sense, and it is not in the public interest.
2. Civil engineers will not feel that they are required by law to assume responsible charge and stamp documents for engineering disciplines outside their area of practice and/or competence.
3. Engineers with education and experience in the title act disciplines will be able to practice, and to take responsibility for work within their area of expertise.

As an added benefit, fixing this legislation would result in far less confusion, among engineers and the public. It must be very difficult for all concerned in California to understand who can and cannot do what. In other states, it is far simpler. Professional engineers practice within their areas of competence.

Like civil engineers, California title act engineers generally are educated in engineering programs accredited by the Engineering Accreditation Commission (EAC) of ABET. Like civil engineers, California title act engineers are rigorously examined through the Fundamentals of Engineering Exam and the Principles and Practice of Engineering Exam, issued by the National Council of Examiners for Engineering and Surveying. In all other states, duly qualified engineers of the disciplines that are California title act disciplines are qualified to practice as professional engineers and are regulated as such.

Legislation to fix this dysfunctional licensure system has been opposed for years by the California Professional Engineers in Government (a public employees' union of Cal Trans and other public agency employees) and the American Council of Engineering Companies, California, and in recent testimony by a lobbyist representing California members of the American Society of Civil Engineers. They made an attempt to explain their opposition at a recent state senate hearing, which can be [viewed on YouTube here](#). [Look for SB692 Hearing Jan 9 2012. This bill was a predecessor to the current SB 1061.]

Some of the opposition testimony is disturbingly misleading and directly contradicted by correct testimony from a group of engineering deans. Much of the opposition, for years, has stemmed from the one time grandfathering of a small number of title act engineers without a PE exam requirement in the 1970s when some of these title act disciplines were initially established. Those small numbers of engineers are now predominantly in their 70s and 80s, and many are not practicing. At this point in time, this issue appears to be a ruse.

It is time for professional engineers in California, and those who retain the services of professional engineers, to speak out and encourage that the licensure system be fixed. Doing so is clearly in the interest of protecting public health and safety in California.

This item has been reviewed and edited by L. Robert Smith, P.E., F.NSPE; Bernard R. Berson, P.E., P.L.S., F.NSPE; and Ken Discenza, P.E., president, California Society of Professional Engineers.

The author is a Fellow of NSPE and ACEC, a Distinguished Member of ASCE, a Board Certified Environmental Engineer, the Chair of the NSPE Licensure and Qualifications for Practice Committee, and a member of the ABET Board of Directors. The opinions expressed herein are his own and do not reflect the views of any of these organizations.

Published Wednesday, January 18, 2012 10:46 AM by [Craig Musselman, P.E., F.NSPE](#)

Points of clarification from Bob Katin, PE, CLCPE President:

1. There was a comment that you cannot discipline Title Act PE's which is Nonsense! A title act engineer who commits professional misconduct loses his "PE" and then like any other "Practice Act PE" is unable to find work.

2. The law has been clarified. It used to be understood that any non-"Practice Act PE" had to perform his work under the supervision of a "Practice Act PE". The lawyer for the State Legislature has clarified that. That understanding was WRONG. According to the lawyer for the State Legislature, only civil engineers can work on geographically fixed sites (such as chemical plants, petroleum refineries, environmental remediation, biopharm, food, wastewater treatment plants, water treatment plants, nuclear and conventional power plants, etc). Therefore, ALL engineering and science conducted on a facility that is geographically fixed site must be conducted by a CIVIL ENGINEER. No non-civil engineer (including ME and EE's with a PE) nor a scientist can conduct work at a geographically fixed site in California. If they do, they are breaking the State Engineers' Act. I hope CE PEs carry a lot of errors and omissions insurance.

3. CEs were grandfathered when the State Engineers' Act became law in 1929. ChEs, Petroleum Engrs, MEs, and EEs were grandfathered when they became Title Act Engineers in 1946. If a ChE had just graduated from college, with no experience, he would be 21 years old in 1946. If he had been grandfathered with NO experience, that would have been 65 years ago, and he would be 86 years old now. Many of these engineers that were grandfathered are no longer living, and few, if any are still practicing engineering.

According to State Law, if you got your BS in any engineering discipline but CE, you spent all that money for nothing. It is illegal to conduct engineering in California unless you are a CE PE. Ten Deans of California Engineering Schools agree: support SB 692, now SB 1061. It is time to fix the broken California State Engineers' Act!

* **ASABE Pres Sonia Maassel-Jacobsen and CAST Exec Dir John Bonner attend CA/NV Meeting**, written in CAST Friday Notes

World Ag Expo Highlights Advancements and Opportunities

* **Presentations and Awards at the Concurrent ASABE Meeting**

* **Corporate Career Opportunities in Focus**

The 2012 World Ag Expo featured exhibits, seminars, and demonstrations as members of the ag community gathered in Tulare, California, from February 14 to 16. This large exposition has been celebrating innovative agriculture for 45 years, and this year, the California-Nevada Section of the American Society of Agricultural and Biological Engineers (ASABE) held their annual meeting in conjunction with the Expo.

Dr. John Bonner of CAST was one of the guest speakers, and he focused on CAST's many publications that have communicated information about agricultural research, the prominence of water issues in food production, and the importance of food safety. He reported that one of the meeting highlights included the honors and awards given to students.

A special point of interest during the three-day event is the way in which companies and societies provide training and enrichment for those seeking careers in agriculture. Many companies feature special opportunities focusing on young people interested in agriculture, and following are a few examples of those programs.

John Deere offers a two-year associates degree program that balances classroom theory, hands-on lab work, and paid internships. The Land O'Lakes internship program has grown to include about 50 interns, both undergraduates and graduates, spread out in positions in more than 14 states. Elanco develops opportunities for employees to assume leadership roles within agriculture and provide community



Speakers and presenters at the ASABE meeting included, left to right, Sonia Maassel-Jacobson (ASABE National President), John Bonner (CAST EVP/CEO), Carolyn Jones (ASABE Nev./Calif. Chair), and Richard Cavaletto (Cal Poly and CAST Board of Representatives member).

service. Monsanto provides youth opportunities for scholarships, awards, and internships in support of organizations such as FFA, 4-H, and AFA. The Pioneer Hi-Bred International Scholarships give financial support to outstanding students working toward graduate-level degrees in plant breeding at non-U.S. institutions. CAST *Friday Notes* will share career and educational opportunities from other corporations and organizations in future editions.

*** Sacramento Regional Science & Engineering Fair (SRSEF) needs volunteers & judges**

If you would like to volunteer to help or judge the entries of the Sacramento Regional Science & Engineering Fair (SRSEF) held March 23-24 at Rosemont High School in Sacramento, please visit <http://www.srsefair.org/> where you can find a form to submit, due Thursday, March 8th.

*** New Face of Engineering, Daniel Holtz, USDA NRCS, and CA/NV Engineer of the Year, Carolyn M. Jones, PE, USDA NRCS, written by Kristin Jean, USDA NRCS CNMP Engineer**

In celebration of National Engineering Week, The American Society of Agricultural and Biological Engineers (ASABE) recently gave accolades to two members of NRCS California's engineering staff: Daniel Holtz and Carolyn Jones.

Daniel Holtz, Agricultural Engineer in Escondido, graduated from California Polytechnic University, San Luis Obispo, and has worked for NRCS since 2007. He was nominated by ASABE board members as one of the 15 New Faces of Engineering, a recognition program that highlights the unique and challenging work of young engineers and their impact on the world around us. Daniel was also chosen to be one of five ASABE members honored nationally in a similar program, New Faces of ASABE. Find out more about Daniel and his recognition online at: <http://www.asabe.org/news-public-affairs/k-12-outreach/new-faces-of-asabe-2012.aspx>.

Carolyn Jones, recently promoted to Bay-Delta Cluster Engineer in Dixon, was awarded the distinction of ASABE California/Nevada Section "Engineer of the Year" for her outstanding work in the agricultural engineering community. Carolyn has worked tirelessly to re-establish validation and acceptance of Agricultural Professional Engineering licensure and has been recognized for her efforts by the national committee. She is known throughout the engineering community for actively promoting the agricultural engineering discipline, and for leadership and mentoring to many new engineers. In an interview committee member Richard Cavaletto said that between Jones' efforts and involvement with ASABE, professional accomplishments, leadership and mentoring efforts, and dedication to the promotion of agricultural engineering, it was clear who was their top choice.

*** ASABE CA/NV Meeting - February 15, 2012 in Tulare, CA**

On the evening of February 15th, 2012, over 100 members, students, and guests met after the World Ag Expo/Tulare Farm Show at the Edison Energy Education (formerly AgTAC) Center in Tulare, CA. Betsy Gerwig, our Membership Chair, provided a licensure update, details above. Robert Coates, Public Relations Chair, gave us an update on our website at www.asabecanv.org. Please visit it and let us know if there is any further information you would like added to it! First and second place Graduate Student Poster awards went to Brandon Miller and Brad Arnold, respectively. The first place Undergraduate Student Poster award went to Cal Poly's Quarter Scale Tractor Team. We heard school reports from Butte College, Cal Poly SLO, and UC Davis. Your newly elected officer team is now Carolyn Jones, Chair; Balaji Sethuramasamyraja, Vice Chair; Secretary/Treasurer, Andrew Holtz; Membership, Betsy Gerwig; Program, Traeger Cotten; Public Relations, Robert Coates; Awards, Richard Cavaletto; Industry/Student Liaison, Brandon Miller; and Past/Nominating, Victor Duraj. We currently have a vacancy in Career Development. Additionally, ASABE President Sonia Maassel-Jacobsen and CAST Executive Director John Bonner addressed us briefly (see note above). The Cal Poly Quarter Scale Tractor team was sponsored by the Section to the tune of \$650 - good luck, team! Daniel Holtz of USDA NRCS Escondido told us about his projects in San Diego County. Ben Holtz of California Avocados Direct dot com told us about his work in construction in Escondido and the marketing and

improvement of the family's avocado farm! Once again, ASABE CA/NV has received contributions from Rain for Rent and Ag Industrial Manufacturing, among others. Thank you to our sponsors!!! Thanks to all officers and attendees! We hope to see you again very soon!

- Bimonthly Update contributors: Carolyn M. Jones, USDA NRCS; Kristin Jean, USDA NRCS; Andy Holtz, Cal Poly; Craig Musselman, P.E., F.NSPE; CAST Friday Notes.
- For previous editions of the Update, please visit www.asabecanv.org.
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