

# Montana Society of Engineers

*A state society of the National Society of Professional Engineers*



*Founded 1887*

## **President's Message:**

*Michael J. Cech, PE, President*

We had a very successful Joint Engineers Conference this past November 7, 8, & 9 despite the snow storm that didn't seem to dampen the spirits of anyone in attendance. This year we had 451 in attendance including 337 delegates, 66 speakers, and 48 vendors. Also we noted that of the 337 delegates, 108 of those didn't claim any society affiliation. Many thanks to the JEC Committee and Connie Dempster for all of their hard work and dedication. Everyone in attendance can see the quality of topics as well as the knowledge impressed by the speakers and presenters. It just gets better every year.

Our annual meeting and dinner on Thursday evening was very well attended with almost standing room only for dinner. We were pleased to have Jennifer James our esteemed lobbyist present and she gave an update on the upcoming legislative session and her expectations on any changes that we may see with the election. Our Keynote speaker was Harve Hnatiuk who is our NSPE Vice President. Harve provided valuable insight on what NSPE is undertaking as well as answering several questions posed by some of the members in attendance at the dinner. I had the opportunity to visit with Harve during lunch on Friday and was very impressed with his knowledge and drive to advance NSPE.

Since Jennifer represents MSE, we have extended invitations to other societies to see if they would be interested in expanding her services to include them for the 2013 Legislative Session. By pooling our resources, we feel that our common

interests and common goals could be represented which will greatly benefit all. MSE would be the liaison between Jennifer and the other societies during the session. This would also give us a greater opportunity to communicate with the other societies building valuable relationships.

Your MSE Board and the Montana Society of Engineers does amazing things on a very limited budget. Our MathCounts program, Hall of Fame, Legislative representation, Quarterly Newsletters plus tremendous involvement in the JEC provide excellent exposure, resources, networking, representation, and valuable information for our Professional Engineers in Montana. Please pass on our mission and values to other engineers and invite them to join and reap the benefits of this wonderful organization.

For this coming year our goals are to continue the great work that our Past President Steve Smith has started with mentoring our College and University students as well as graduating seniors on the benefits of registration. Visibility in our institutions of higher learning is extremely important to our succession. I am very proud to be an engineer and even more proud to be a Registered Professional Engineer.

Have a happy and safe holiday season and welcome the possibilities of a new year.

**December, 2012**

***"Your MSE Board and the Montana Society of Engineers does amazing things on a very limited budget."***

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# Montana MATHCOUNTS Update!

Dan Munson, PE, MathCounts State & Billings Chapter Coordinator

Planning for the 2013 Montana MATHCOUNTS season is underway. We already have over 400 students registered, and are hoping to finish registration with 500 students. If a school near you hasn't registered yet, they can still register up until December 31<sup>st</sup>, but will have to pay a small late registration fee.

Each year, Montana MATHCOUNTS conducts a contest for students to design a logo for the Chapter t-shirt. Students of participating schools have been sending in potential logos for this year's Chapter t-shirts. The t-shirt logo competition has proven to be fun for the students — it is always hard to choose the winning design.

Fund raising is in full swing with our many fine sponsors. Without corporate sponsors and volunteers from the engineering and math committees, the Montana MATHCOUNTS program could not exist. If you haven't gotten on the MATHCOUNTS Sponsor list yet, please contact Connie at the MSE office. If you would like to help out with any of the local competitions or like more information about MATHCOUNTS, please contact any of the Coordinators listed below:

## North Central Chapter

Competition: February 13, 2013  
Coordinator: Bill Burkland  
bill@rpa-hln.com

## Eastern Montana Chapter

Competition: February 5, 2013  
Competition: Mike Hunter  
hunter@dawson.edu

## Kalispell Chapter

Competition: February 8, 2013  
Coordinator: Jason Williams  
j.williams@flathead.coop

## Billings Chapter

Competition: February 8, 2013  
Coordinator: Dan Munson  
Dan.munson@northwestern.com

## Missoula Chapter

Competition: February 12, 2013  
Coordinator: Troy Monroe  
tmonroe@m-m.net

## Bozeman Chapter

Competition: February 7, 2013  
Coordinator: Jerry Stephens  
jerrys@coe.montana.edu

## Butte Chapter

Competition: February 7, 2013  
Coordinator: Sandra Anderson  
Sandra\_andersondavid@hotmail.com

## 2011-2012 Montana MathCounts Corporate Sponsors

Ash Grove Cement Company  
Blackfoot Telephone Cooperative  
CHS, Inc.  
ConocoPhillips  
Dennis & Phyllis Washington Foundation  
ECI Environmental Services  
ExxonMobil  
Falls Construction  
Great West Engineering, Inc.  
HDR Engineering, Inc.  
Luzenac Rion Tinto  
Montana Refining Company  
Montana-Dakota Utilities  
NorthWestern Energy  
PPL Montana, LLC  
REC Silicon  
Robert Peccia and Associates  
Stillwater Mining Company  
Western Energy Company  
Yellowstone Electric Company  
Alco—American Linen Division

*Thank you!!*

Thanks for your continued support. We wish you a very joyful Christmas season!

## **MATHCOUNTS Sample**

**Problem: See how you do!**

### **Finding the Perfect Gift Box:**

Vanessa bought some round holiday dessert plates to give as a gift to her friend. However, the store only had 5 of the 8 plates she wanted. (All of the plates are the same.) The stack of five plates measured 1.5 inches tall, and when two plates were removed from the stack the remaining stack of three plates had a height of 1 inch. When Vanessa finally has all 8 of the plates she wants, how tall will the stack of 8 plates be, in inches? Express your answer as a decimal to the nearest hundredth.

Solution: Remember that most plates are not flat, so when they are stacked, the bottom plate takes up more height-space than the plate that is stacked on top of it. That's why we can't add the height of a 5-plate stack to a 3-plate stack to get an 8-plate stack of 2.5 inches. Notice that when the two plates were removed, the stack's height decreased by 0.5 inches. This means that adding a plate to the stack will add 0.25 inches to the stack. If we then add three plates to the 5-plate stack of 1.5 inches, we will have an 8-plate stack measuring  $1.5 + 3(0.25) = 2.25$  inches.

# ***2012 Montana Professional Engineers Hall of Fame Inductee***

Alex G. Drapes, P.E. was inducted into the Montana Professional Engineers Hall of Fame on November 7 at the Montana Engineering Honors Banquet.

Drapes was an electrical and mechanical engineer for several hundred new and renovated buildings in Montana. He was born in Poplar and grew up in Great Falls. He operated Drapes Engineering from 1954 to 1992. Drapes sold the business to a group of engineers that formed Gordon Prill Drapes (GPD).

Drapes and his company provided engineering services for numerous landmark buildings and clients in Montana. His projects include the Metcalf Building in Helena, MSU Breeden Fieldhouse, MSU Creative Arts Complex, Life of Montana Building in Bozeman, C. M. Russell High School in Great Falls, KRTV and KFBB Television Studios in Great Falls, Hagener Science Building at MSU-Northern in Havre, and First National Bank in Great Falls.

Drapes had numerous recurring customers, including Great Falls Public Schools, MSU-Northern, MSU-Bozeman, UM-Missoula, Mountain States Telephone (now Century Link), Malmstrom Air Force Base, and the State of Montana.

For his 43-year career as the principle mechanical and electrical engineer in central Montana; Alex Drapes is inducted into the Montana Professional Engineers Hall of Fame.

Plaques honoring the inductees are displayed in Roberts Hall at the Montana State University College of Engineering in Bozeman.

*Nominations for the PE Hall of Fame will open in March . The form to make a nomination will be posted to [www.mtengineers.org](http://www.mtengineers.org). Nominations close at end of May. New inductees are honored at the Engineering Honors Banquet each year at the JEC.*



## ***2013 JEC!***

Even as the JEC Committee is putting the final numbers together and making distributions from the 2012 JEC, plans are going forward for next year. The 2013 Joint Engineers Conference will be held November 6-8 at the Red Lion Colonial Inn.

New programming to continue to upgrade and improve the website are being made at this time. The website will open on January 1, 2013 for speaker presentation proposals. If you know of someone that would be a great presenter, have them visit the website and input their session. With the addition of a 7th track, there will be more opportunities than ever. Keep in mind that by March 31—there will be more presentations than slots and it will be closed at that point.

Opportunities for exhibitors will open on January 1st as well. Many folks comment that they wish this or that industry would exhibit—INVITE them to logon and come to the 2013 JEC. Opportunities to exhibit, sponsor or advertise are normally gone by early July. So don't delay if you have someone that you would like to see at the conference.

If you are interested in helping at the JEC, contact any of the current MSE Board members. This is a fun project — that is run through the programming on the web. It just needs a bit of prompting and someone that likes to direct folks to the site. In order for MSE to share in the funds raised at the JEC, MSE must have 2 active committee members. Those committee members help find speakers for 6 to 10 sessions. It fun and easier than you think!

***“Plaques honoring the inductees are displayed in Roberts Hall at the Montana State University College of Engineering in Bozeman.”***

***“Registration for speaker presentations for sessions at the 2013 JEC will open on January 1st.”***

# *Policy Perspectives: Four Public Policy Victories for Engineers*

By Sarah Ogden, NSPE

*“This year, however, NSPE has helped secure four major public policy victories for the engineering profession.”*

NSPE’s Government Relations department is constantly working to protect and promote the engineering profession in Washington. Every month, you read about legislation and regulations NSPE is fighting for or against, but because the public policy process is designed to be slow, these battles are usually ongoing. Often, success is determined by building new relationships, making small maneuvers that set the stage for future policy success, or forestalling negative policy outcomes. This year, however, NSPE has helped secure four major public policy victories for the engineering profession. Break out the party hats and read on:

**1. We have a multiyear transportation funding law for the first time since 2005:** After months of partisan battles, Congress finally passed a surface transportation reauthorization law at the end of June. The two-year Moving Ahead for Progress in the 21st Century (MAP-21) Act maintains transportation spending at current levels and contains reforms to streamline environmental reviews for highway projects. NSPE supported passage of multiyear transportation legislation and commented on the convoluted environmental review process at a Department of Transportation meeting last March.

**Why it matters to you:** Enacting multiyear transportation legislation is critical because it provides the funding certainty states need to plan long-range projects. These major projects are vital to bringing our nation’s infrastructure into a state of good repair. Reforming the environmental review process will accelerate project delivery and save federal resources.

**2. The Federal Highway Administration is now fully compliant with the Brooks Act:** The Brooks Act of 1972 requires federal agencies to use qualifications-based selection to procure all architectural and engineering services associated with real property. The FHWA and the Federal Transit Administration, however, have been using QBS to procure only construction-related A/E services. **NSPE commented on the issue during last March’s DOT meeting.** The newly minted transportation reauthorization provides a legislative solution to the FHWA portion of this problem by broadening the scope of A/E services related to construction.

**Why it matters to you:** By including additional A/E services in the definition of “construction,” the law ensures that the most qualified firms are chosen to provide A/E services for federally funded state and local highway contracts.

**3. The small business size standard increased:** The Small Business Administration issued a new rule in February increasing the size standard for engineering services from \$4.5 million to \$14 million in average annual receipts over three years. Size standards determine which private-sector businesses are eligible to participate in federal programs for small businesses, including contracting set-asides.

**Why it matters to you:** Increasing the engineering services size standard enables greater numbers of qualified firms to enter the federal marketplace, which strongly favors large firms. The new size standard may also increase the amount of federal work available to small businesses: With larger numbers of small firms competing, agencies are increasingly likely to find a qualified service provider. The more small firms can meet agencies’ needs, the more agencies will pursue their small business contracting goals.

**4. Congress repealed an onerous tax on federal contractors before it took effect:** Last November, NSPE helped overturn the 3% withholding tax, a mandate that would have required the government to withhold 3% of fees up front when contracting with private-sector businesses. The withholding would have provided an interest-free loan to the government while forcing firms to attempt to recoup their expenses at the end of the year. Had it not been repealed, the tax would have taken effect on January 1, 2013.

**Why it matters to you:** Because small businesses (including 90% of engineering firms) often have less than a 3% profit margin on government contracts, the resulting cash flow problems could have cost firms the vital funds they needed to conduct day-to-day business, including paying subcontractors. Some firms may even have been forced to seek outside financing to complete their contracts.

*Read more about what NSPE is doing for you in Washington by visiting [www.nspe.org/IssuesandAdvocacy/LatestNews/index.html](http://www.nspe.org/IssuesandAdvocacy/LatestNews/index.html).*

*The MSE Office wishes everyone a Merry Christmas and a Happy New Year!*

*“I will enjoy lobbying for MSE and if you would like to visit the Capital during the legislative session, I would love to have you join me. While legislators get to know and trust the respective industry lobbyists, they always enjoy a new face and hearing from individuals within a given industry.”*

## ***From the MSE Office***

Recently, NSPE shared the results of Benchmarking—a survey marketing group — on association membership. The purpose of this 2012 survey was to determine membership trends for 631 large national organizations. Since NSPE participated, Benchmarking shared the results.

The report is over 56 pages long and was just shared with the MSE office. Several positives were reported. Trends over that past 4-years show there has been a slight up-tick in memberships as reported by most organizations. Another finding that jumps out is the reasons someone joins an organization: NETWORKING (22%) followed by ACCESS TO SPECIALIZED/CURRENT INFORMATION (12%) and ADVOCACY (12%). Reason beyond that fall to single percentages.

MSE—though small — works very hard to provide you with these items through the Joint Engineers Conference, MATHCOUNTS, quarterly newsletters, and hiring Lobbyist Jennifer to monitor bills during the 2013 Legislative Session. Thank you for your continued support!

## ***2013 Upcoming Legislative Session***

*Jennifer James, MSE Lobbyist*

It is easy to get frustrated with politics, especially during the campaign season. We are all flooded with commercials, poll results, mailers, and requests for contributions. If you're like me, you are left wondering who to believe, and you end up thinking much more about how much money has been spent on the elections and questioning our election process. Even so, we should value our ability to vote and I would argue that it is also important to get involved with the legislative process.

The 2013 Legislature will begin in early January and run for 90 days. It will be a very important session for many reasons. We are very fortunate in Montana not to have the budget deficits many other states have, but we're also working with a relatively small budget. A traditional governmental response to a weak economy has been to inject money through infrastructure spending. This has historically resulted in the immediate creation/preservation of jobs and tangible benefits for the taxpayer. In the past few years, Congress has failed to pass a budget and infrastructure spending has been lurching along under continuing resolutions. In Montana, our 2011 Legislature failed to pass a bonding bill that would have funded numerous infrastructure and building projects. We have commitment from the incoming administration to sign a bonding bill if it is sent to the Governor's office.

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## ***2012-2013 MSE Board***

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Deadline for the Next  
Issue of this Newsletter is  
March 10, 2013

Submit articles and advertising to  
*mse@assoc-mgt.com*

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The 2011 bonding bill, which totaled nearly \$100 million dollars, included funds for renovating several university buildings, replacing state agriculture labs, expanding the state historical museum, and constructing a veteran's nursing home. As we think about what might be included in such a bill in 2013, you do not have to look very far in each of our communities to find potential projects. Here in Helena, we are debating some major school improvements and struggling to identify funding. As an industry, we should be engaged in the discussion to help identify priorities and make sure the Legislature leverages historically low interest rates to spur economic growth, not to mention addressing long-overdue improvements to some of our aging infrastructure.

During the legislative session, Connie and I will circulate a weekly update that will include a summary of bills we are monitoring as well as those bills we are actively supporting or opposing. While I will provide an assessment of each bill and inform MSE of the relative positions of House and Senate leadership and the Governor's office on these bills, the Board will decide what position will be taken on specific legislation. My job then, is to work either with the bill sponsor, leadership, and other interested groups to pass, kill or amend legislation based on the direction of the Board. Please let Connie know if you would like to receive these weekly updates.