

Montana Society of Engineers

A state society of the National Society of Professional Engineers



Founded 1887

MSE State Board Election Results

Dan Munson, PE, President

The results of the 2005 MSE State Board election have been tallied and ratified. For the next 12 months, your MSE board members are:

Dan Munson, P.E., President
Sandra Anderson, P.E., President-Elect
Jeff Ruffner, P.E., Vice-President
Tom Abel, P.E., Secretary/Treasurer
Doug Brekke, P.E., Immediate Past President
Connie Dempster, Executive Secretary

Feel free to contact any of your board members with suggestions on how to make MSE more valuable to you!

(P.S. – you may want to place each officer’s e-mail address with the name.)

Engineers are Responsible for Modern Society

Engineers don’t attract too much notoriety, which doesn’t help our cause in becoming visible to the general public, or becoming an indispensable service in the minds of the masses. However, in the May 1st edition of the *Parade* magazine, one of the smartest women in the world, Marilyn vos Savant paid our profession a great compliment. A reader wrote the following question to her:

“Do you think we would be as advanced today if the famous philosophers, mathematicians, etc. had never lived?”
Nick Hanson, Woodbury, MN

Marilyn answered back with:

“Probably. The ones who became famous aren’t the ones who are doing the day-to-day work that makes a civilization advance. Besides, if those particular people hadn’t lived, others would have made the same discoveries anyway. Creative people such as artists are a major exception: They are irreplaceable.

Everybody knows we need schoolteachers and nurses, and we all love to recognize the individual genius – philosopher or mathematician. But the occupational group most responsible for modern society is engineers, who should win a “most underappreciated” award. They have designed and built our entire infrastructure: roads, bridges, waterworks, power lines, communication systems, schools, hospitals, and just about every house in the country.”

Thanks Marilyn, for noticing the creative work that all of us do as engineers. So, we received our moment in the spotlight. Now we can all go back to our cubicles and crunch out the next solution to the next generation’s problems! Or better yet, take a young person under your mentorship, and show them the real fun and value in becoming an engineer. Some day, we will all become a little bolder to advertise the good thing engineers have been so quiet in doing!

June, 2005

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The two newest members of our board are Jeff Ruffner, Vice President, of Butte, and Tom Abel, Secretary/Treasurer, of Kalispell.

The Montana Society of Engineers is one of the oldest established engineering societies in the nation. That is something special that we need to keep going and growing.

All 'A-Board'

Sandra S. Anderson, PE, President-Elect

Another year has come and gone, bringing with it changes to the MSE Board. Two of our 2004-2005 board members have stepped down. Dan Hogan, President-Elect, and Brad Wright, Vice President, are both small business owners, and are going through that exciting and terrifying time of growth that we all hope for. Their commitment to MSE's values and goals remains strong, and we hope that they will be able to serve again in the future. For now, we thank them for all their hard work, and wish them prosperous expansion.

Dan Munson, President, and Doug Brekke, Past President, have graciously agreed to serve an additional term, to provide continuity of vision and an extra year of support for me before I move into the president's position. Thanks, Dan and Doug!

The two newest members of our board are Jeff Ruffner, Vice President, of Butte, and Tom Abel, Secretary/Treasurer, of Kalispell. Jeff and Tom attended the June board meeting to get a running start, and have already brought new ideas

to the table. We're looking forward to a productive year.

Each board member supports one or more areas of interest.:

- Dan Munson – MathCounts State and Billings Coordinator
- Sandra Anderson – liaison to the Montana Board of Professional Engineers and Land Surveyors (MBPELS)
- Jeff Ruffner – Legislative Issues
- Tom Abel – liaison to the American Institute of Architects (AIA)
- Doug Brekke – Joint Engineers Conference and Montana PE Hall of Fame coordinator
- In addition, Tom and Doug are continuing Brad Wright's work with the MSE website.

What are your interests? What issues would you like the board to address in the next year? Let us hear from you! Please drop us an e-mail (addresses on back of newsletter) or call the MSE office at 406-259-7300.

HELP US HELP YOU!

Meet Your New Board Members:

Jeffrey W. Ruffner, P.E. Bio and Introduction

Since I was just recently given the opportunity to serve on the State Board of the Montana Society of Engineers I just wanted to take this opportunity to introduce myself to the State membership. My name is Jeff Ruffner and I live in Butte. I am originally from San Diego but came to Montana in 1976. I have been married to my wife Cindy (a Butte native) for nearly 27 years. We have two daughters, Kelly and Laura.

I received my B.S. and M.S. degrees in Engineering Science From Montana Tech and am a registered Mechanical Engineer in the States of Idaho, Montana, and Washington. I am Currently a Sr. Vice President with MSE Technology Applications in Butte.

After graduation and prior to joining MSE-TA in 1989 I worked for Westinghouse Electric Company in Salt Lake City, Exxon Nuclear Idaho Company and Westinghouse Idaho Nuclear Company in Idaho Falls, Shin-Itsu Hondotai America in Vancouver Washington and then Special Resources Management (a division of Montana Power Company) in Butte.

For the majority of my early career I was a project engineer or project manager responsible for design, construction and start-up

of heavy industrial process systems.

I have been involved with the Montana Society of Engineers since 1989. I previously served for a couple years in the early 90's as the State representative to the Professional Engineers in Construction (PEC) a practice division at NSPE. However, most of my involvement has been at the Butte Chapter level. I jokingly say that I appear to be the President of the Butte Chapter for life.

I have been particularly dedicated to the Butte chapter because of the unique history of the Butte Chapter and the Montana Society of Engineers. The Montana Society of Engineers is one of the oldest established engineering societies in the nation. That is something special that we need to keep going and growing.

I, like everyone else these days, am very busy but will do all I can to help promote the Montana Society of Engineers. I feel very strongly in professional registration and protecting our profession from infringements such as non-licensed practice. Both the profession and the society are facing many difficult issues and we must address these issues head on for the benefit of our chosen profession.

If you have any issues you would like to discuss please feel free to contact me at any time at 406 494 7412 or e-mail me at jeff.ruffner@mse-ta.com.

Tom Abel, P.E. Bio and Introduction

Tom Heinecke called me one day and proposed to me the idea of being nominated for the MSE board. He went on to explain that it would be a 4-year commitment, as I would move through the chairs and eventually become past president. He also said the meetings are held in Billings, Bozeman, Helena, or Butte four times a year. Being from Kalispell, that is a lot of driving and I would be responsible for my own travel expenses. Why would anyone say yes to this? I told him he didn't want someone like me, a relative new comer to the engineering profession. After all, I was a 41-year-old sophomore at MSU in 1989 and I have only been licensed since 1996. Tom said he knew I would be good. (Read: they were really hard up and couldn't find anyone else.) I said yes. There reason I accepted is that Kalispell is isolated in the northeastern part of Montana, a place with a cloud cover from November to February each year, with an over abundance of hard core Grizzly fans, with a football mentality. My thinking was that being on the board would give me the opportunity to interface with other engineers in the state and maybe some on the national level. Interaction and exchange of ideas is always beneficial. Maybe I could even contribute something to MSE.

Abel Engineering Inc. is a continuation of a business my grandfather started in Milwaukee, Wisconsin in the 30's. Unfortunately he died in 1938 and I never met him. My father wanted to be an engineer, but his engineering education was de-railed by World War II. He was a combat engineer in the Philippines. After the war, he eventually became an international marketing manager for 3M Company. I was exposed to engineers, physicists, chemists, lab technicians, and 3M, IBM, and Honeywell executives while growing up near White Bear Lake, Minnesota. I graduated from the University of Minnesota with a BA in mathematics, and minor in economics and almost an art minor. The Viet Nam war de-railed my plan to follow in Dad's foot steps at 3M Company. In 1975 Dad took early retirement from 3M and the family moved to Montana. I soon find out what you do with a math degree in Kalispell, Montana. Breaking into secondary teaching was impossible because I was not a coach., but I did several years of substitute teaching and I still am an adjunct faculty member of Flathead Valley Community College (FVCC) where I teach an engineering graphics course winter semester.

I tried many jobs that I did not like. Eventually, I bought a pickup truck with "Big Sky" mud flaps on it, had a dog in back and a box of carpenter tools, and my dad and I went to work building custom houses and swimming pools. In 1988 I became bored with pouring concrete and

cleaning dead worms out of swimming pools and crawling under spas in subzero temperatures, so I started taking engineering classes at FVCC.

Engineering felt right for me and it felt good. It wasn't until after I graduated from Montana State University with a BS degree in mechanical engineering and on the job for a while it when it occurred to me my grandfather had been an architect and engineer in the 30's. Engineering must have been in my genes. I still have his set of 1899 drafting pens in my desk drawer.

At Abel Engineering Inc., we mostly do construction engineering and practice architecture without a license (according to the Montana Board of Architects). We do some on-site septic systems and a few subdivisions. Stemming from my pool building experience, I am also a pool engineer. My most notable project was while employed by Counsilman/Hunsaker & Associates, St. Louis, Missouri. I had the honor of being the lead engineer in charge of designing a 100 meter indoor pool for the Nike Campus in Beaverton, Oregon. I have done pool engineering mostly for large commercial and competition pools in New York, West Virginia, Virginia, New Jersey, Georgia, Missouri, Illinois, Michigan, Texas, Oklahoma, Massachusetts, Ohio, and Oregon. I have yet to do any pool engineering locally in the Flathead Valley. The planners always hire out-of-state experts. We introduced the first hot tub in the Flathead (mid 70's), the first ozone pool water purification system, and the first UV pool water disinfection system.

I have been employed as an engineer by The Engineering Research Center, MSU Bozeman, TAMSCO Manufacturing, Polson, Counsilman/Hunsaker & Associates, St. Louis, Missouri, Paul J. Stokes and Associates, Kalispell prior to re-starting Abel Engineering Inc. So far it has been a good run.

My interests are restoring old Fords and yacht racing on Flathead Lake and in Seattle. I am a member of MSE, ASME, MECA, North Flathead Yacht Club (commodore this year), and Glacier Street Rods.

My idea for any organization such as MSE is to not get too wrapped up in the structure of the organization itself, but rather focus on the reason for it's existence and what the organization can do for it's membership. It seems odd to me with the large membership of MSE only a handful of people attend the MSE meetings in Helena at the Joint Engineer's Conference. I would like to know why you are a member of MSE and what you would like to see us doing on the state and local level. I have some ideas of my own, but I would also like to hear yours. Please contact me at tom@ablenengineering.com. Let's talk!

It wasn't until after I graduated from Montana State University with a BS degree in mechanical engineering and on the job for a while it when it occurred to me my grandfather had been an architect and engineer in the 30's. Engineering must have been in my genes.

MATHCOUNTS News

Dan Munson, PE, President
& State MathCounts Coordinator

The 2005 MATHCOUNTS season officially wrapped up on May 6th when 228 "Mathletes" from around the nation gave it their best at the National Competition in Detroit. A 7th grader from Louisiana took the National title, and the Texas team placed first in the nation. The winning questions that Neal Wu of Baton Rouge, La., answered correctly to win was:

A volleyball coach has three setters and eight other players on her team.

Without assigning any of the positions, in how many ways can she choose six starters if exactly one of the three setters is selected as a starter?

Answer: 168 ways

Closer to home, the Montana MATHCOUNTS team placed 46th out of 57 nationally competing teams. Alec Patterson from Missoula's Washington Middle School, Cole Jensen and Aidan Shackleton from Missoula's Sussex School, Mauro Whiteman from Great Falls North Middle School, along with the Missoula's Washington Middle School Math teacher Teresa Toller, represented Montana as our official state team. Our MSE State President Dan Munson attended the national competition as a volunteer who helped run the event.

General Motors hosted the 2005 National MATHCOUNTS competition in the GM Headquarters and Detroit Marriott at the Renaissance Center along the river in downtown Detroit. The mathletes got to see the GM world headquarters, tour an actual GM wind tunnel, go to an automotive science museum, and get treated like royalty. All of the Montana kids were really impressed with the high caliber of brain trust that they got to rub elbows with.

Although the students are breaking from MATHCOUNTS for the summer, the coordinators are still busy doing a lot of volunteer work behind the scenes. The seven Montana MATHCOUNTS chapters are looking at ways to get additional schools, coaches, and volunteers to participate in their areas. Corporate and individual fund raising continues all year round. We are also putting our heads together to come up with ideas to make the 2006 MATHCOUNTS season the best yet. That's where we would like your help.

We can always use volunteers to help with the February and March competitions. Schools are always looking for community help to assist in coaching their MATHCOUNTS teams before and after school. Fund raising efforts are always ongoing. We are also looking for an interested engineer that would like to help coordinate the Bozeman chapter program. Once you get involved, you quickly find out how meaningful and rewarding this program is to both the kids, and the professional volunteers as well.

If you would like to get involved with this great program, contact Dan Munson at dan.munson@northwestern.com for more information.

The MATHCOUNTS program is organized by the National Society of Professional Engineers on a national level. Locally, MATHCOUNTS is organized by the Montana Society of Engineers, with local volunteer effort being provided by area engineers, students, and professionals. Montana has always had a great contingent of fellow engineers volunteering their time to make the program run smoothly. A special thanks to all of you who have helped make this program so successful.

Montana MathCounts is possible by the generous contributions of our corporate sponsors — THANK YOU!

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Billings, MT

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Montana MATHCOUNTS
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Joint Engineers Conference

This year's Joint Engineers Conference will be held in Helena at the Colonial Red Lion Hotel on November 1-4, 2005. MSE will be hosting the NSPE Western Regional Conference in conjunction with the JEC this year. NSPE Western Region members will be invited to take part in the JEC with the meeting specific to the Region being held on Saturday—November 5, 2005.

We are just about ready to unveil the new MSE sponsored website that will host registration information for the JEC. Within a month of this newsletter, try looking up www.mtengineers.org for more details about the conference. Registration instructions and vendor information will be given, as well as a list of the engineering presentations that have been secured to date. If the site isn't available when you look it up, try back later. We are just working out the last few bugs now!

The Montana JEC has been gaining in popularity over the years. Last year, over 350 professional attended the conference. Many of the Chapters of NSPE and the Western Region have saluted Montana on the success of our JEC and are looking forward to the opportunity to see the

conference in person. This would be an excellent year to make plans to attend and earn those continuing education units, as well as meet fellow NSPE members from our Region.

The JEC Program Committee has been busy contacting presenters for the 2005 JEC. The committee has contracted a 2-1/2 day presentation about the National Electrical Safety Code that will begin on November 1, 2005. The Montana Environmental Consultants Association (MECA) has put forward a potential sponsorship with the JEC, and Tom Abel will represent ASME as a new sponsor this year. The Committee is looking for more presenters, possible program ideas, and additional sponsorship of the conference.

The JEC would like to see more Montana Tech, MSU, and other students participate in the JEC. The earlier we can get students involved in professional development, the more we are securing the future of engineering. A special rate will be included on the registration for students. If you or your firm would like to scholarship a student, contact one of the JEC Committee members — we would be happy to arrange this.

Billings Engineers' Club Announcement

D. J. Clark, E.I. & BEC Public Relations officer

The Billings Engineers Club (BEC) recently held its annual banquet and awards ceremony. Following tradition, several members of the professional and student community were recognized for their varied accomplishments from the past year. Six area high school students who intend on majoring in engineering or engineering-related curriculums for their post-secondary educations were awarded monetary scholarships. The scholarship winners were Allyn Harris, Eric Fisher, Joey Staszczuk, and Zach Dill of Billings West High School, Stacy Hogemark of Park City High School, and Vanessa Gneiting of Columbus High School.

Several area engineers were recognized for receiving their Professional Engineer licenses, including Bart Tschacher, Chris Veis, Jeff Haidle, Joel Harbuck, Jon Reagor, E.I., of Engineering Inc., was awarded the Outstanding Young Engineer of the Year award, while Robert R. (Bob) Marvin, PE, P.T.O.E., the principal for Marvin & Associates, was the recipient of the Professional Service award. This year's winner of the prestigious Innovative Project of the Year Award was HDR. They were selected for their work on the Steven's Pass Circuit Switcher Project. Key contributors Wayne Bauer and Matt Mettler accepted the award on behalf the company.

The Committee is looking for more presenters, possible program ideas, and additional sponsorship of the conference.

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MSE would like to be able to post your societies upcoming events and/or share the results of those events.

Wanted:
***News from Your
Local Chapters***

The MSE State Chapter would welcome news from local Chapters and other engineering groups. For example, in this issue, the Billings Engineers' Club shared the results of their annual banquet by listing recipients of scholarships and other recognitions. BEC is made up of several Billings area engineering groups — by joining together, they share the work load and enjoy greater rewards for their efforts.

MSE would like to be able to post your societies upcoming events and/or share the results of those events. Please provide the who, what, where, contacts, how much and how many CEUs for seminars and conferences. To report on events, please use the standard press release format. MSE will use this in the newsletter and on the website.

Deadlines for the next issue of this newsletter is September 10th, 2005. If you have questions or need additional information, please contact the MSE Office. We would be happy to have the opportunity to work with you and your society.

Connie Dempster
MSE Executive Secretary

05-06 MSE Board

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