

Montana Society of Engineers

A state society of the National Society of Professional Engineers



Founded 1887

President's Message:

Crystal Kuntz, PE, President

At some point I do hope that we will see the end of the second flood – but at this time, I am seriously contemplating the construction of an Ark (how big is a cubit again?). With all this taken into account we see that our infrastructure, already in poor condition, is really taking a beating. The water treatment systems are flooding, storm sewers are gushing, some areas are without power, bridges have washed out and streets are inundated. Just yesterday, a colleague asked me to explain all the hub-bub that he sees on TV, in the papers and on the radio about evaluating infrastructure projects using life-cycle budgeting.....Good question.... Anyone that has ever tried to feed 2.5 kids, pay the mortgage, keep the car going and the roof from leaking - - all at the same time knows everything there is to know about life cycle budgeting. Those in engineering have spent their career carefully identifying projects for a capital improvement plan and balancing the critical needs of their client against the limited budget that there is to go around.

According to a 2008 study by the Congressional Budget Office, “asset management includes evaluating total life-cycle costs—both the initial capital costs and the subsequent costs for operation maintenance, and disposal to ensure... that projects are prioritized appropriately.” That study went on to say that life-cycle budgeting can aid in extending the life of construction equipment, and reducing the cost of operations by as much as forty percent.

We’ve all heard the radio ads about the guy stuck in traffic – held up by road construction complaining profusely that money is being thrown out the window. Wouldn’t it be better if we just built roads/infrastructure that would last?

Oh – well.... Good deal, problem solved. I can rest easy that this issue has been addressed at long last. There would be no failing infrastructure problems if we would just build it to last in the first place – good to know. I’m hanging up my stamp and retiring today, the world’s problems have been resolved.

Can it really be that simple? I seem to recall I had this same conversation when we built the house. It would have saved me thousands to have finished my basement in 2003 dollars, put in the highest quality energy efficient windows and the automatically adjusting furnace that I wanted. The life cycle budgeting of that expenditure would have greatly benefitted me at this juncture - but a funny thing – the bank was not so keen on delivering boat loads of cash to my front door. Hmm... This is not a new dilemma.

As engineers, I believe that in our heart-of-hearts we would all most certainly like to construct the most cost-effective project from a life cycle perspective. Who wouldn’t want to build a road with a 50-year design life instead of 20-years? The facts remain the same. Our infrastructure managers have limited budgets for their capital expenditures and more infrastructure to construct and maintain than any budget will allow. They are forced, on a daily basis, to choose between fixing 50 miles of streets littered with potholes to buy one more year of relative municipal tranquility or construct one high-end concrete intersection that will see a long life of maintenance free living for a few lucky patrons. When you’re the guy at the other end of the angry public phone calls originating from Pot-Hole Lane.... The decision isn’t so clear.

What is the right answer to this issue? – I don’t know. I think that perhaps there isn’t one. As engineers, we work diligently to make the best decisions possible based on the constraints at hand. What looks good on a balance sheet may not necessarily be the best decision in context. We strive to balance the wants with the needs and fit it all into a nice tidy package that everyone can still afford. Sometimes the best solution is more expensive up-front – but sometimes we can’t afford the best solution – but can we afford not to afford it? I dunno, but I sure am glad I’m not on the other end of those phone calls.....stay dry....

June, 2011

“Just yesterday, a colleague asked me to explain all the hub-bub that he sees on TV, in the papers and on the radio about evaluating infrastructure projects using life-cycle budgeting.....”

Inside This Issue

<i>MATHCOUNTS National Results.....</i>	<i>2</i>
<i>2011 JEC News!</i>	<i>3</i>
<i>MSE Gold Medal Award at MSU—</i>	
<i>Bozeman.....</i>	<i>3</i>
<i>NSPE-Issues and Advocacy/</i>	
<i>Latest Issues</i>	<i>4</i>
<i>From the MSE Office</i>	<i>6</i>
<i>2010-2011 State Officers.....</i>	<i>6</i>
<i>Inspection of Sewerage and Drainage</i>	
<i>Construction.....</i>	<i>6</i>

Montana's State MATHCOUNTS Team Competes at National in May



2011 Montana State MATHCOUNTS Winners: Amy Cho, Isabella Whitworth, Arthur Befumo, and Daniel Smith

Dan Munson, PE, MathCounts State & Billings Chapter Coordinator

MATHCOUNTS National Competition was held in Washington, D.C. on May 6th. The Montana team consisted of Amy Cho from Bozeman Sacajawea Middle School, Daniel Smith from Missoula Washington Middle School, Arthur Befumo from Five Valleys Homeschool in Missoula, and Isabella Whitworth from Billings Lewis & Clark School along with Five Valleys Homeschool math coach Amzi Jeffs. The Montana MATHCOUNTS team placed number 35 nationwide —WELL DONE and GREAT JOB!

OTHER MATHCOUNTS NEWS!

MATHCOUNTS Alum from Pennsylvania wins Scripps National Spelling Bee: Sukanya Roy, an 8th grader from Abington Heights Middle School in Pennsylvania, won this year's Scripps National Spelling Bee. To win the spelling bee, she had to correctly spell 'cymotrichous'. Apparently Sukanya is equally talented in math -- she won first place in the individual portion of the

Northeast Pennsylvania Chapter Mathcounts Competition. Last summer, she was selected to participate in *Jeopardy!* Kids Week at the regional level. Sukanya speaks Bengali, and every summer travels to India to visit family. She hopes to pursue a career in international relations. Sukanya participated in the 2009 and 2010 Scripps National Spelling Bees, tying for 12th place in 2009 and 20th place in 2010.

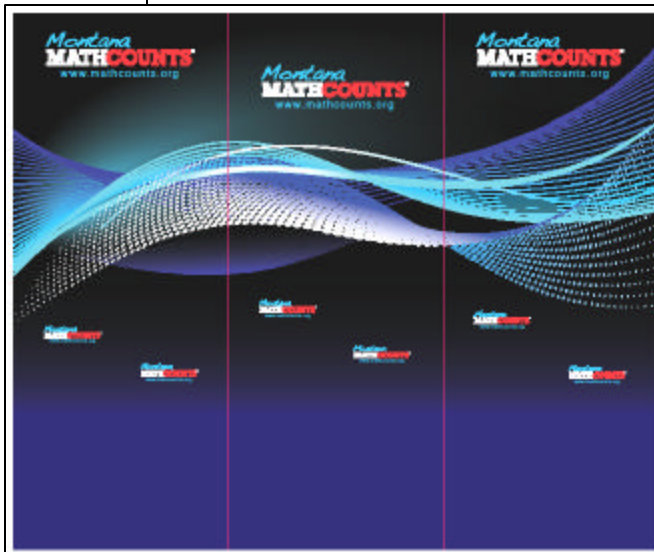
Dakota Jones, an 8th grader from Hyde Park Middle School in Nevada, and a recently competitor at the MATHCOUNTS National Competition in Washington, D.C., placed 5th overall.

For this and other math news—visit www.mathcounts.org and remember to thank all our wonderful sponsors:

2010-2011 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
- Also—American Linen Division

“Plans for the 2011-2012 Season are already underway!”
—Dan Munson, State Coordinator



Northeast Pennsylvania Chapter MATHCOUNTS Competition.

Sukanya enjoys hiking, rock climbing and ice-skating. She was selected to go to Panama this summer with her school's ecology club to learn more about the rain forest. A pianist, Sukanya also plays violin in her school's orchestra. She won first place in the individual portion of the



2011 Joint Engineers Conference News!

Crystal Kuntz, PE, President & Chair of JEC

A record number of speaker proposals were received for the 2011 Joint Engineers Conference. Committee members are busy processing through the proposals and making their selections. All courses and the tour should be in place by July 1. The agenda will be posted on the website and speakers will be notified regarding the schedule. Early Registration will open on September 1, 2011. Mark your calendar and make your plans to attend: November 2-4 in Helena, Montana.

Again this year some successful elements of the past will remain. Thursday the focus will be on VENDORS—only 5 booths are still available. Friday the focus will be on Societies. Societies will be invited to meet during the lunch break on Friday during the conference if they so choose and this year society representatives to the JEC have the ability to schedule their own meeting time on line at the

JEC web site. An offsite technical tour is planned as a part of the conference—more details to come.

Another item to note includes the Engineering Honors Banquet. This banquet is held each year during the JEC to honor those who have contributed greatly to the engineering society. This year's banquet will be held on Wednesday evening, November 2, 2011 during the JEC. If your group or society would like to present any awards or recognize their members during this event we encourage you to participate. Please contact Doug Brekke (dlb@5400.tv) or myself (crystal.kuntz@eciblgs.com) and we will ensure that you are added to the banquet program. This evening is a great opportunity for your small group or company to honor those that have contributed greatly without all the planning and expense of a separate event – so take advantage!

Key JEC Dates:
• July 1, 2011 = 2011 JEC Agenda Published
• September 1, 2011 = Early Registration for JEC 2011 Opens
• October 10, 2011 = Last day to add items to program.

MSE Gold Medal Award at MSU-Bozeman

Stephen Smith, PE, President Elect

Each year for nearly 100 years, the MSE has worked with the Montana State University (MSU) College of Engineering to determine the outstanding graduating engineering senior to receive the Gold Medal Award. Each spring the College of Engineering requests that departments submit one nomination from each engineering discipline. The criteria used to select outstanding seniors are:

- Distinguished academic record,
- Involvement in extracurricular activities,
- Leadership in extracurricular activities,
- Commitment to the practical use of the sciences in the execution of engineering work,
- Promise of service to their profession with integrity, devotion to high standards, and a sense of obligation to humanity.

A college selection committee, comprised of faculty, staff, and students, reviews all of the nominations submitted and selects three finalists. Members of the Montana Society of Engineers then interview the finalists to select the winner. The winner was announced by Dean Robert Marley at the College of Engineering's Celebration/Order of the Ring Ceremony on May 6, one day prior to the Main Commencement Ceremony.

This April 20th, Cammy Dooley and Stephen Smith had the privilege of interviewing three outstanding candidates: Samantha Severin

for Industrial Engineering, Tom Brown for Mechanical Engineering, and Chandra Macauley for Chemical and Biological Engineering. We truly enjoyed meeting each individual and believe each will contribute importantly to our profession and to society throughout their careers. However, we had to select only one for the award.

We agreed that Chandra Macauley most exemplified the selection criteria. Chandra is clearly an outstanding student with a 3.98 GPA. She is passionate about applying science and technology to solve the problems of humanity, particularly related to energy. While a native of Montana, her view is global. She spent a year studying in Sweden and is looking toward advanced research and study at the University of California, Santa Barbara. With an advanced degree, she plans to work at a world class research and development firm applying her knowledge to bring new technologies to market. She is also passionate about sharing her enthusiasm for engineering through youth outreach activities, particularly as a MSU Engineering Ambassador and with the Shadow an Engineering Major Program. She exemplifies “professionalism” through involvement in organizations such as Society of Women Engineers, Tau Beta Pi, and American Institute of Chemical Engineers and plans to obtain her P.E. when qualified.

We predict a very bright future for Chandra, as well as for the other candidates.

“Each year for nearly 100 years, the MSE has worked with the Montana State University (MSU) College of Engineering to determine the outstanding graduating engineering senior to receive the Gold Medal Award.”

NSPE—

Issues and Advocacy/Latest Issues

National Society of Professional Engineers is featuring Issues and Advocacy: Latest Issues at <http://www.nspe.org/IssuesandAdvocacy/LatestNews/index.html>

Here are a few of the latest postings—you may want to bookmark this link for current national issues!

National Society of Professional Engineers is featuring Issues and Advocacy: Latest Issues at <http://www.nspe.org/IssuesandAdvocacy/LatestNews/index.html>

June 8, 2011

NSPE and ACEC Seek Nominations for QBS Awards:

NSPE and ACEC are seeking nominations for the 2011 [QBS Awards](#), which honor public and private entities that make exemplary use of the qualifications-based selection process at the state and local levels. One award is given in each of two categories: the nongovernmental sector and the governmental sector. QBS Award recipients will receive an engraved trophy and will be honored during the ACEC Fall Conference in Las Vegas, Nevada in October 2011. The deadline for nominations is Friday, July 15, 2011. For more information, please contact NSPE Senior Manager of Government Relations [Sarah Ogden](#).

June 2, 2011

NSPE Coalition Sponsors Federal A&E Forum:

The [Coalition for the Federal Procurement of Architectural and Engineering Services](#) held its semi-annual Federal Architecture and Engineering Forum, where speakers engaged an audience of federal contracting specialists and private-sector design professionals in a lively discussion of

procurement issues. Speakers included Bret Manley, legislative director for House Transportation and Infrastructure Economic Development, Public Buildings and Emergency Management Subcommittee Chairman [Jeff Denham](#) (R-CA-19); and Small Business Administration Chief Counsel for Advocacy [Winslow Sargeant](#), who holds a Ph.D. in electrical engineering.

NSPE Senior Manager of Government Relations Sarah Ogden and NSPE Delegate to COFPAES Kent Buehrer, P.E., F.NSPE, attended the forum. NSPE is a founding member of COFPAES, an organization dedicated to protecting and promoting the Brooks Act (PL 92-582) and the use of qualifications-based selection.

May 26, 2011

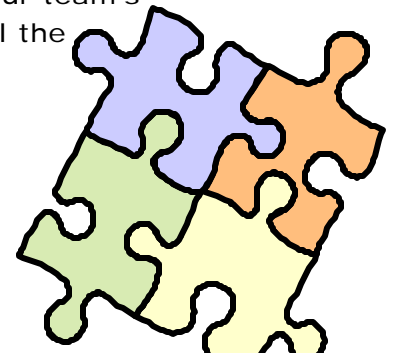
NSPE Observes High-Performance Building Week:

NSPE Senior Manager of Government Relations Sarah Ogden represented NSPE at events in conjunction with [High-Performance Building Week](#), sponsored by the [High-Performance Building Congressional Caucus Coalition](#). NSPE is a member of the HPBCCC, a coalition of more than 100 associations and corporations that seeks to heighten awareness and inform policymakers about high-performance building issues, including new building technologies, enhanced U.S. economic competitiveness, and increased energy efficiency. The coalition provides guidance and support to the congressional High-Performance Buildings Caucus.

Is Something Missing From Your Ethics Training?

NSPE now offers *customized* training presentations, seminars, keynotes and Web seminars for engineering firms, government agencies, and other institutions of all sizes and areas of practice. NSPE General Counsel and engineering ethics expert Arthur Schwartz will work with you to create the optimal program needed to increase your team's engineering ethics awareness — and put all the pieces together.

Visit www.nspe.org/ethics, or contact Arthur Schwart at aschwartz@nspe.org.



From the MSE Office

REMINDER: Ballots are due postmarked by June 15 for the 2011-2012 MSE Board. If you have lost your ballot, please contact the office — I would be happy to send you one.

The MSE Board is currently defining and exploring goals for the Society. What is a goal you would like the Society to pursue for now and into the future? Where do you want to see the professional engineer next year, five years and ten years from now? Please share your thoughts with any of the Board members or this office. This is your opportunity to provide input as to the focus for MSE.

Crystal Kuntz is looking for a Co-Chair for the JEC with the idea that you would move into the Chair role for the 2012 JEC. This is a rewarding experience with a great foundation that mostly needs a LEADER to direct and orchestrate the steps that are in place and have been proven to work. Contact Crystal or this office if you would like more information.

“Ballots are due postmarked by June 15 for the 2011-2012 MSE Board.”

2010-2011 MSE Board

Crystal Kuntz, President
crystal.kuntz@eciblgs.com

Steven T. Smith, President-Elect
stephentsmith@earthlink.net

Michael J. Cech, Vice President
mike.cech@northwestern.com

Georgia Brensdal, Secretary-Treasurer
mtmoosemom@aol.com

Kenneth Phillips, Immediate Past President
kennethphillips@bresnan.net

Connie Dempster, Executive Secretary
MSE Office
PO Box 20996
Billings, MT 59014-0996
406-259-7300
mse@assoc-mgt.com

Deadline for the Next
Issue of this Newsletter is
September 10, 2011

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

2011 Joint Engineer Conference November 2-4, 2011 Helena, Montana



A Field Guide For Inspection of Sewerage and Drainage Construction

An inspector plays a crucial role in any construction project. The job demands knowledge, awareness, keen observation skills, and the ability to deal with contractors and project owners. “A Field Guide For Inspection of Sewerage and Drainage Construction,” published by the Professional Engineers in Construction, provides the inspector the necessary knowledge to inspect sewerage and drainage construction projects.

The guide, specifically written to advance the mission of high-quality construction standards, provides a series of proven policies, established procedures and techniques, and helpful resources, including “Inspection Checklists,” that are applicable to construction projects on any size scale.

Product Code: 4200
Year Published: 2011
Format: PDF

\$19.95/ \$9.95 Member Price

Visit www.nspe.org
NSPE Merchandise