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ON THE COVER
April 2014 red phase of the total lunar eclipse over the Hawthorne Bridge in Portland, OR.

Photo by Pat Gaylord.

This lunar eclipse is the first in a series of four. The remaining eclipses will occur on October 8, 2014, April 4, 2015 and September 28, 2015.

Note: Pat Gaylord submitted two amazing photos of the lunar eclipse for the cover. The editorial committee had a difficult time choosing which photo to feature. Here is the other photo.
Stories:
Every surveyor who reads this magazine will relate to Lee Spurgeon’s “short stories!” I have to thank Lee for a great chuckle, and for giving me the fertilizer to think up my own stories along the furrow his “short stories” germinated. Come on folks, Lee dropped the handkerchief here, I’ll bet, if you think about it, you could all come up with a few of these! Get creative and I’ll compile an article for the magazine with a selection of them credited to their creators!

Quoting Aimee McAuliffe in her article regarding change, “In any good story, the time comes when a supporting character will share insight that…” See, Aimee’s on board and she doesn’t even know it yet! So, keeping with this theme of storytelling, many of our readers can relate to Lee’s and Aimee’s comments. What I’m asking is for you to put pen to paper and send me stories. The editorial committee might just let me print one or two!

Speaking of stories, you may notice that the “Lost Surveyor” photo in the back of the magazine is attributable to ME! To protect the identity of the property owner, I won’t divulge his name or other personally identifiable information, but I will say that my wife and I were walking by one sunny Saturday afternoon and spied the sculpture at just about the same instant that the owner of the home behind it pulled into his driveway. Of course curiosity got the better of me and I introduced ourselves. One thing lead to another, and we met his wife, his daughter, and what followed was a long story on how the boundary sculpture came to be. Naturally, I saw the “possibilities” of a photograph in our magazine and asked the owner if I could have permission to use a photo of it in our “Lost Surveyor” article. They were more than happy to oblige, but with one condition! They wanted a couple of copies of our magazine for their records! How’s that for surveyor outreach? The sculptor is Jerry Maher. If you Google “Jerry Maher, sculptor,” you’ll see another picture of this sculpture!

Speaking of more stories, Bob Taylor has provided the second of many stories (after Dick Bryant’s in the last issue) to come that will fit into our regular column entitled “Cadastral Tales.” Tim Kent gets the credit for the title, but I thought I’d make “stories” a recurrent theme in our magazine, first because they’re a great way to stimulate reader involvement in our organization, but second, and perhaps more importantly, stories represent one of the best ways to teach about this difficult profession called surveying! I have to confess to a bit of selfish interest in this because I know that if this magazine gets into the hands of non-surveyors, they may want to read more too! Now that’s OUTREACH!

One last thing. I recently joined the IRWA (that’s International Right of Way Association for the uninitiated). I was talking with another member about an upcoming presentation I’ll be doing at their annual symposium (May 14 in Portland) entitled “Clearing Title” alongside Alan Brickley (legal counsel for First American Title). I was startled by a comment this member made relating to surveyors. It had something to do with how we tend to “keep to ourselves” and that “few people really understand what we do!” Whether or not that’s true is a matter of some discussion, but one of our strategic directions relates to outreach. I challenge you to work in whatever way you think may be appropriate to change these perceptions! ◆

LOST SURVEYOR, from the inside back cover
Lat 45° 53’ 6” N  Long 123° 57’ 45.6” W
Question: This boundary sculpture is located near a very large rock that sits just offshore in the Pacific Ocean that is named after the way farmers used to stack their hay.
Answer: Cannon Beach, Oregon.
One of my favorite things to do in my spare time is to write extremely short stories. Since a major part of most every surveyor’s job is to write clearly and concisely, I feel that writing extremely short stories is a useful exercise. The point of an extremely short story is to create a complete story with as few words as possible. Generally, I write a slightly longer story and start weeding out words until I can’t cut anything else. These stories generally ask a lot of the reader, in that the reader, through imagination or experience, actually provides the context and the framework within which the story resides.

Here are some extremely short stories I have written:

- Be careful, you don’t want that thing sneaking up behind....
- The terrorist pulled the rental truck loaded with fertilizer onto the busy road, thinking of the glory he would earn. Across the street I found a $20 bill. I rule!
- Beth sat back in the chair of the airplane that was being buffeted by a tremendous storm. As the final engine flamed out she began thinking of all the time she spent folding towels this morning.

So, do the tales of surveyors fit into extremely short stories? Yes they do.

**Book ’em, Danno!**

“Danny, I know you only had four or five shots, but you are back from Scappoose so soon. Did it really go that fast?”

“The data collector batteries died, so we couldn’t collect the shots.”

“You didn’t take the shots with the instrument and record the shots in the field book?”

“You can do that?”

**The Stone**

“Hey boss, you know that stone you sent us out to find?”

“You mean the stone called for in the deed that I sent you out three times to find—twice with calculations?”

“If you put it like that, then this story isn’t going to have the happy ending I pictured in my head. Anyway, I started pounding in the iron rod and ....”

**The Dream Job**

“Hey Bob, how did the job go?”

“It’s finished! We set up on one point at the top of the hill and we could see every single monument from one setup. Everything fit so well we went ahead and set the corners. The client was there and he was so pleased he gave us a check on the spot.”

“Wow, I bid this job for three days. Finally we are going to make some good money....”

“Lee.” “Lee.” “Lee!” “Wake up and get yourself out of bed, you got some construction calcs to get done before the crew gets in.”

**A Lot of Driving, Not Much Surveying**

“I thought you put the tripods in the truck!”

Continues on page 20
CAPTURE EVERYTHING NOW. MEASURE LATER.

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Change can be hard. Whether it's good, bad or just plain different, it's the same for everyone. Your association started 2014 with some big changes—namely me. As your new Executive Secretary, I have been working hard these past months learning your infrastructure, processes, strategic goals and more. It’s been interesting fusing together ideas from PLSO and my association experience. Now that I know how the PLSO body works, my next step is getting to know its soul—the members.

Members give an association its character and culture. One side of its personality is usually more extroverted and include the leadership board and committees. This group is outspoken and its opinion is always heard. After all, they show up when it counts. However, that doesn’t lessen the importance of their introverted counterparts.

Another side of an association personality is the members that pay their annual dues but don’t tend to volunteer. While it’s true that you get more out of an association when you put more into it, we also can’t all be chiefs—nothing would ever get done. Supporting roles are just as important. If you cannot donate a lot of your time, encourage and support those that do.

This doesn’t mean there isn’t conflict or disagreement. In any good story, the time comes when a supporting character will share insight that a protagonist might not want to hear, but needs to hear for growth to occur.

The question is which type of member are you? Don’t worry, the answer may change from year to year. While I consider myself a positive influence, there will be some people that think I’m just different or dislike how something has changed. That’s okay. Whether you’re an extrovert or introvert, I want to hear from you. I’d like to talk to you about PLSO. That will always stay the same.

PLSO is your association and it will always be as strong as its membership. “A sharing community is a vital community” is a phrase I use often. (I do feel like Mr. Rogers when I say it, but the man in the cardigan knew his stuff.) A professional community grows when people collaborate—business practices improve, reputations increase and trust is formed. It also ensures longevity. Many careers have been made or resurrected through trade association friendships. If college graduates don’t feel welcome or see the benefits of joining your industry what will happen to its future? Furthermore—

if we aren’t there to continue outreach how will anyone know what we do? Somebody has to stand up and be a spokesperson. We need a future workforce and a public that knows what to ask for when they need us. The good news is that it’s not all on one person’s shoulders. It’s up to everyone in this great State that PLSO represents. That’s what belonging to an association is all about—no matter who serves as your Executive Secretary. A successful professional community works together to achieve common goals.

I can’t wait to get started. ◆
PLSO is the only organization that exclusively represents the interests and serves the needs of land surveyors, especially in Oregon.

Go to our website at www.PLSO.org.
On April 10, John Palatiello, Executive Director of MAPPS, the association for private sector geospatial firms, and government affairs consultant to the NSPS, testified before the Committee on Appropriations, Subcommittee on Interior, Environment and Related Agencies, U.S. House of Representatives advocating for funding for the USGS 3D elevation program, 3DEP, and reform of federal land inventory activities.

“We respectfully urge the subcommittee to fully fund the important 3DEP program as requested in the President’s budget, or, if possible, increase the appropriations level to meet the extraordinary demand for current, accurate elevation data for the nation,” said Palatiello. “USGS has identified more than 600 applications that would benefit from such enhanced elevation data including flood risk management, agriculture, water supply, homeland security and renewable energy while promoting economic growth, facilitate responsible environmental protection and assist with infrastructure improvements.”

The 3DEP data have the potential to generate $13 billion in annual benefits, at a benefit cost ratio of 4.7 to 1. MAPPS conducted a study in 2012 that determined there is significant capacity and capability in the private sector to support the program and USGS currently has contract vehicles in place to efficiently implement the program.

While 3DEP is a success story, Palatiello pointed out there is an area where improvement is needed.

“The Federal government and Department of Interior lack a current accurate inventory of the land it owns. This has been recognized by GAO and the National Academy of Sciences. This is potentially costing tens of billions of dollars.


Mr. Chairman, members of the subcommittee, I am John Palatiello and I am honored to appear before you today on behalf of MAPPS, the national trade association of private sector geospatial firms, and the National Society of Professional Surveyors (NSPS), the national professional society of individual licensed surveyors regarding the U.S. Geological Survey (USGS) 3DEP program, and the land inventory activities of the Department of the Interior in general and the Bureau of Land Management (BLM) in particular.

MAPPS and NSPS enthusiastically support the USGS 3DEP, or 3-dimensional elevation program. We respectfully urge the subcommittee to fully fund this important program as requested in the President’s budget, or, if possible, increase the appropriations level to meet the extraordinary demand for current, accurate elevation data for the nation.

USGS Public-Private Partnership—Mr. Chairman, this subcommittee has a great success story that is not well known. Beginning in the mid-1990s, this subcommittee included language in its annual report accompanying its fiscal year appropriations for Interior and related agencies instructing the USGS to begin utilizing the qualified and capable private sector in surveying and mapping that the United States is blessed to have. Prior to the enactment of that language, USGS was seen by private firms as a source of competition, not a source of potential business. The subcommittee, beginning under the leadership of full committee Chairman Livingston and subcommittee Chairman Regula, helped transform USGS into the modern, responsive, cooperative geospatial agency it is today.

The USGS now manages a series of Geospatial Products and Services Contracts (GPSC) that includes seven prime contractors and more than 90 subcontractors to perform a variety of surveying, mapping and geospatial services, such imagery and LiDAR data acquisition; photogrammetric mapping; aerotriangulation; orthophotography; thematic mapping; geographic information systems development; surveying and control acquisition; image manipulation,
analysis, and interpretation; map digitizing; data manipulations; primary and ancillary data acquisition; metadata production and revision; and the production or revision of geospatial products.

These are Qualifications Based Selection (QBS) contracts competitively awarded under the “Brooks Act” (40 USC 1101 and part 36.6 of the Federal Acquisition Regulation (FAR 48 CFR 36.6)) and task orders are negotiated directly with selected firms to provide contract services. The GPSC can accommodate the mapping requirements of all USGS offices and is also available to any Federal, State, or local agency.

The primary data currently procured via the GPSC contracts is for the 3DEP program. This features light detection and ranging (LIDAR) data in the conterminous United States and interferometric synthetic aperture radar (IFSAR) in Alaska.

3DEP—3DEP will satisfy the growing demand for consistent, high-quality topographic data and a wide range of other three-dimensional representations of the Nation’s natural and constructed features. Among the applications that will benefit from 3DEP data are flood risk management, agriculture, water supply, homeland security, renewable energy, aviation safety, and other areas. Indeed, USGS has identified more than 600 applications that would benefit from such enhanced elevation data. 3DEP will promote economic growth, facilitate responsible environmental protection and resource development and management, assist with infrastructure improvement, and generally enhance the quality of life of all Americans.

The USGS, with involvement from the private sector and other stakeholders, conducted a National Enhanced Elevation Assessment (NEEA), to determine and document the need for national elevation data within government and private markets. The results indicated that enhanced elevation data have the potential to generate $13 billion in annual benefits, at a benefit:cost ratio of 4.7 to 1.

The equipment infrastructure and service capacity and capability of the private sector, as well as the contract vehicles in USGS, are in place to efficiently implement the 3DEP program. Moreover, Congress provided an innovative mechanism for cooperative activities in elevation data when it enacted the Biggert-Waters Flood Insurance Reform Act, in the MAP-21 Act, Public Law 112-141, in July of 2012.

It included section 100220, which can be utilized to pool funding from Federal, state and local government entities for elevation data. USGS was specifically named in that provision. Section 100121 required a National Academy of Public Administration (NAPA) study on how FEMA can improve interagency and intergovernmental coordination on flood mapping, including a funding strategy to leverage and coordinate budgets and expenditures and establish joint funding mechanisms with other Federal agencies and units of State and local government to share the collection and utilization of data among all governmental users.

NAPA recently published “FEMA Flood Mapping: Enhancing Coordination to Maximize Performance” it which it proposed: “Recommendation 15: The Office of Management and Budget should use the 3DEP implementation plan for nationwide elevation data collection to guide the development of the President’s annual budget request.” In light of the controversy over FEMA flood insurance rates, particularly as that influenced the recent enactment of the Homeowner Flood Insurance Affordability Act of 2014 Public Law, 113-89, on March 21, 2014, there is an even more urgent and compelling need for the high-quality elevation data that 3DEP provides.

Given the attention the Government Accountability Office (GAO) has given to agency duplication in geospatial activities (including “OMB and Agencies Can Reduce Duplication by Making Coordination a Priority,” GAO-14-226T, Dec. 5, 2013), we believe 3DEP stands out as a best practices model for coordination, inter-agency and inter-governmental cooperation, and a strong definition of government and private sector roles and responsibilities in a public-private partnership.

While 3DEP and GPSC are success stories, there is an area where improvement is needed.

Land Inventories—National Public Radio recently reported on Government Accountability Office (GAO) findings that $2 billion is expended on unneeded buildings owned by the Federal government. The Washington Post then noted, “the NPR article is excellent but it vastly underestimates the size of the problem. In addition to empty buildings, the Federal government owns/controls millions of acres of land that are worth hundreds of billions and perhaps even trillions of dollars. The land is not being used to its full value or potential even though maintenance costs runs in the tens of billions annually.”

Since 2003, the Government Accountability Office (GAO) has repeatedly designated “Managing Federal Real Property” one of the high-risk areas within the Federal government most prone to waste, fraud and abuse. This activity is again on the list released by GAO on February 14, 2013 (GAO-13-283). One of the reasons cited by GAO is the fact that the government does not have a current, accurate inventory of the land it owns. The General Services Administration (GSA) collects data from at least 30 Federal agencies, but its system has been criticized by GAO for being “unreliable and of limited usefulness” and “not current or reliable.” The last official report on unneeded
federal land (1997) indicated that the Bureau of Land Management alone is holding more than 3.4 million acres that had been identified for disposal through the agency’s land use planning process.

On the other hand, the government inefficiently maintains a plethora of land inventories that are inaccurate, out-of-date, single purpose, and non-interoperable. In testimony before this Subcommittee on March 2, 2005, then-Secretary Gail Norton said, “The Department currently uses 26 different financial management systems and over 100 different property systems. Employees must enter procurement transactions multiple times in different systems so that the data are captured in real property inventories, financial systems, and acquisition systems. This fractured approach is both costly and burdensome to manage.”

Unfortunately, little has been done to reduce and consolidate this proliferation of land inventories. We strongly urge the subcommittee to include language requiring the Secretary of the Interior, in consultation with the Director of the Office of Management and Budget, the Administrator of the General Services Administration, and the Comptroller General of the United States, conduct an assessment of all land inventories authorized, operated or maintained by all Executive agencies of the Federal government. This “inventory of inventories” will identify duplicate and wasteful activities that can be eliminated. All agencies owning Federal real property should have an improved accounting of their land assets. Such an inventory will assist in improved Federal land management, resource conservation, environmental protection and utilization of real property, and identify property the Federal government no longer needs to own. With today’s geographic information systems (GIS) technology, this is a perfect example where the Federal government can “map it once, use it many times.”

The subcommittee should request that the Secretary identify the over 100 property systems and indicate how many are still maintained by the Department today and what, if anything, has been done to integrate, merge, consolidate or terminate any of the more than 100 property systems? Additionally, data should be provided on the annual cost of operating and maintaining these 100+ systems and whether there are other land inventories operated and maintained by the Department that are not included in the 100 mentioned by Secretary Norton.

Section 201 of the Federal Land Policy and Management Act (FLPMA) [43 U.S.C. 1711] requires the Secretary to “prepare and maintain on a continuing basis an inventory of all public lands and…This inventory shall be kept current…”. We recommend that the Subcommittee determine the status of that inventory, its currency and accuracy, and the annual cost of operating and maintaining that inventory. Executive Order 13327, “Federal Real Property Asset Management,” calls for “a single, comprehensive, and descriptive database of all real property under the custody and control of all executive branch agencies”. However, it exempts public domain lands. Section 7 states “In order to ensure that Federally owned lands, other than the real property covered by this order, are managed in the most effective and economic manner, the Departments of Agriculture and the Interior shall take such steps as are appropriate to improve their management of public lands and National Forest System lands and shall develop appropriate legislative proposals necessary to facilitate that result.” It is our understanding that no actions have been taken to include the public domain lands in the Real Property Inventory, no steps have been taken by Secretaries of the Interior or Agriculture as required by section 7 of the Executive Order and no legislative proposals have been developed pursuant to section 7. The subcommittee should seek information on these activities as well.

In conclusion, our request and recommendations to the Subcommittee are:

- Congress should appropriate funds for the 3DEP program at its optimal annual level of $146 million among all participating agencies, including, at a minimum, the $5 million for 3DEP, $236,000 for Alaska Mapping, $1.9 million for The National Map Modernization, and $60,428,000 for the National Geospatial Program in the President’s request for USGS.
- Language should be included once again reaffirming that USGS utilize the private sector for more than 50 percent of its appropriated mapping and digital data production funds; and
- The subcommittee should request that the Interior Department provide information on (or formally request of Chairman Rogers that the full Committee’s Surveys and Investigations staff conduct a study of) federal land inventory activities.

Thank you for the opportunity to share our views and we look forward to working with the subcommittee to continue the work to build on past success and further improve the Interior Department’s surveying, mapping and geospatial activities.

John M. Palatiello & Associates, Inc. (JMP&A) is a public affairs consulting firm based in the Washington, D.C. area. JMP&A provides public relations, association management, strategic planning, and management and marketing consulting services to private firms, associations, and government agencies with an emphasis on the architecture and engineering; geospatial, surveying and mapping, and GIS; information technology; construction; transportation and infrastructure sectors. For more information, visit www.jmpa.us.
We write on behalf of millions of Americans who are strongly supportive of robust funding and smart investment in NOAA’s ocean, coastal, and fisheries programs. We strongly support funding for the National Oceanic and Atmospheric Administration at or above the President’s Request of $5.5 billion in FY15. In addition, we support balanced investments across NOAA’s dual atmospheric and oceanic missions—Americans shouldn’t have to choose between weather satellites and ocean and coastal resources that support and protect our coastal economies and communities. We simply need both.

NOAA’s mission to protect, restore and manage our ocean, coasts and Great Lakes is vitally important not only to sustain these resources but also to sustain our coastal economies. The National Ocean Economics Program has estimated that the U.S. ocean and coastal economy contributes more than $282 billion annually to the nation’s GDP through fisheries and seafood production, tourism, recreation, transportation, and construction. Additionally, over 2.8 million jobs in the U.S. depend on the ocean and coasts. Adequate funding for NOAA is critically important to support a healthy and resilient ocean that can continue to strengthen our coastal economies and communities.

Resilience has emerged as the critical goal that unites all of NOAA’s ocean and coastal programs. Man-made and natural ocean and coastal disasters over the last several years, from Department of Commerce declared fisheries disasters to the BP Deepwater Horizon oil disaster, remind us of the connection between the health of our ocean and coasts and the well-being of our coastal communities and economy. Resilience means more than just storm-ready; truly resilient communities are prepared to face changing ocean conditions, from acidification to sea level rise, changing economic conditions, from recession to emerging ocean uses, as well as major catastrophes, from Superstorm Sandy to marine debris clogging waterways. Investing in NOAA’s programs will ensure we can respond to and mitigate the impacts and costs of future disasters by creating healthy and more resilient coastal ecosystems and communities.

MAPPS and NSPS cosign NOAA funding letter to both House and Senate Committees on Appropriations

Letter to House Committee on Appropriations

March 31, 2014
Representative Frank Wolf
Chair, Subcommittee on Commerce, Justice Science, and Related Agencies
U.S. House of Representatives Committee on Appropriations
H-310 United State Capitol Building
Washington, DC 20515
Representative Chaka Fattah
Ranking Member, Subcommittee on Commerce, Justice Science, and Related Agencies
U.S. House of Representatives Committee on Appropriations
1016 Longworth House Office Building
Washington, DC 20515

Re: Support funding for the National Oceanic and Atmospheric Administration at or above the President’s FY15 Request of $5.5 billion.

We write on behalf of millions of Americans who are strongly supportive of robust funding and smart investment in NOAA’s ocean, coastal, and fisheries programs. We strongly support funding for the National Oceanic and Atmospheric Administration at or above the President’s Request of $5.5 billion in FY15. In addition, we support balanced investments across NOAA’s dual atmospheric and oceanic missions—Americans shouldn’t have to choose between weather satellites and ocean and coastal resources that support and protect our coastal economies and communities. We simply need both.

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Letter to Senate Committee on Appropriations

April 9, 2014
Senator Barbara Mikulski
Chair, Subcommittee on Commerce, Justice Science, and Related Agencies
United States Senate Committee on Appropriations
142 Dirksen Senate Office Building
Washington, DC 20510
Senator Richard Shelby
Ranking Member, Subcommittee on Commerce, Justice Science, and Related Agencies
United States Senate Committee on Appropriations
125 Hart Senate Office Building
Washington, DC 20510
For example:

- Coastal wetland buffer zones in the U.S. are estimated to provide $23.2 billion per year in storm protection and a single acre of wetland can store 1 to 1.5 million gallons of flood water or storm surge.
- Healthy fisheries are needed to support an industry of more than 60,000 jobs and $6.6 billion in GDP. Information provided by core data collection, catch monitoring and stock assessment programs within the NMFS is critical to ending overfishing.
- Ocean and coastal observations and monitoring supports severe storm tracking and weather forecasting systems, which greatly reduce the cost of natural disaster preparation, evacuation, and mitigation.

The President’s Request seeks modest increases in ocean, coastal, and fishery programs, and we support these increases as an important step towards robust funding for NOAA’s ocean mission. In FY14, NOAA has finally been put back on a path towards robust and sustainable funding, the first step in bouncing back from significant cuts to critical programs from FY11 to FY13. **Underfunding NOAA simply is not sustainable, we urge Congress to recognize the importance of our ocean, coasts, and Great Lakes by fully funding NOAA programs at or above $5.5 billion in FY15.**

Signed,

**Organizations & Businesses**

- Advanced Aqua Dynamics, Inc.
- Alliance for the Great Lakes
- American Geophysical Union
- American Rivers
- Center for Biological Diversity
- Center for Coastal Studies
- Chesapeake Communities
- Citizens Campaign for the Environment
- Coastal Conservation League
- Coastal Research & Education Society of Long Island
- Coastal States Organization
- Conservation Law Foundation
- Consortium for Ocean Leadership
- Earthjustice
- Environmental Defense Fund
- Hawaii Institute of Marine Biology
- International Federation of Fly Fishers
- IOOS Association
- Long Live the Kings
- Management Association for Private Photogrammetric Surveyors (MAPPS)
- Marine Conservation Institute
- National Audubon Society
- National Estuarine Research Reserve Association
- National Marine Sanctuary Foundation
- National Society of Professional Surveyors (NSPS)
- Natural Resources Defense Council
- Nature Abounds
- The Nature Conservancy
- Ocean Conservancy
- Ocean Conservation Research
- The Ocean Project
- Oceana
- Operation Splash
- Project AWARE
- Puget Sound Partnership
- Puget Sound Salmon Recovery Council
- Reef Relief
- Restore America’s Estuaries
- Rhode Island Marine Trades Association
- Save Our Shores
- Save Our Wild Salmon Coalition
- Scripps Institution of Oceanography
- Sierra Club
- Southeast Coastal Ocean Observing Regional Association (SECOORA)
- Surfrider Foundation

**Individuals**

- Carleton Ray
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- Dawn J. Wright
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  Esri
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  Professor of Marine Biology
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  Founder, Hawaii Nature Hui Honolulu, HI
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- Mitchell A. Roffer (Ph.D.)
  President
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  West Melbourne, FL
- Sarah Towne
  NOAA Fisheries West Coast Region
  University of Washington Masters Candidate (School of Marine and Environmental Affairs)
- Will McClintock, Ph.D.
  SeaSketch Director
  Marine Science Institute University of California Santa Barbara
- Y. Peter Sheng, Ph.D.
  Professor and Director Coastal and Oceanographic Engineering Program
  University of Florida
The changing environment of higher education in Oregon

Mason Marker, PLSO

At the April 12, 2014 PLSO Board of Directors meeting, one of the main agenda items was our strategic plan. Our discussion focused on Strategic Direction #2, Education and Outreach. Part of this discussion included a presentation to the board on the current state of higher education in Oregon and the direction to which it is trending. This presentation was made by Mason Marker representing the Oregon Institute of Technology (Oregon Tech) along with Tim Kent and Erielle Lamb representing Clark College in Vancouver, Washington. The presentation centered on providing the Board with ideas of the educational challenges and opportunities faced by our profession in the years ahead so that the PLSO’s strategic direction in Education and Outreach can provide the best assistance and guidance. This article summarizes some of the points that were made in this discussion in order to better inform our membership of these challenges and opportunities looming for future (and current) surveyors.

Some of the challenges facing higher education today involve decreasing financial support from the state, greater interest by administration in academic programs that are revenue generators, and a changing administrative structure for Oregon Schools. The first challenge, decreasing state financial support for higher education, has been a growing problem since the early 90’s, but is a challenge that is moving to the front of educational concerns. Oregonian

...academic programs are spending more time seeking outside support through research grants, industry and alumni. This impinges on time devoted directly to students by way of class preparation, direct, one-on-one contact, and faculty assistance with student activities.

reporter David Sarasohn has long been a follower of Oregon higher education and has recently published a book summarizing the last 15 years of his observations (Failing Grade – Oregon’s Higher Education System Goes Begging). In the preface to his book, Sarasohn points out that between 1989 and 1990, Oregon higher-education drew 55 percent of its teaching and educational funds from the state general fund and only 37 percent from tuition. In 2009–2011, higher education drew 26 percent from the state and 64 percent from tuition. Over this same time period, the percent of the State general fund used for higher education dropped from 8.22 percent to 4.78 percent. According to Sarasohn, this places Oregon 44th out of 50 states in the support granted to higher education per full time enrolled student. What does this mean to us? Significant tuition increases for students and a steady reduction of academic programs that are small and expensive to maintain (read “Surveying!”).

This also means that academic programs are spending more time seeking outside support through research grants, industry, and alumni. This tends to impinge on time devoted directly to students by way of class preparation, one-on-one contact, and faculty assistance with student activities.

The second major challenge in higher education is the greater emphasis by administration on the ability of individual programs to generate revenue. Academic programs can generate revenue through a variety of different methods, with student enrollment being the...
largest, followed by funded research, and finally through direct alumni and industry support. The resultant revenue model for program development means that programs that are inexpensive to deliver and require minimal equipment are very popular with administration and programs that are small and require a large expenditure for lab hardware and software are under careful scrutiny. We have already observed the impact of this model in surveying with the closure of the surveying program at Chemeketa Community College in Salem.

Restructuring of the Oregon University System (OUS) is the third major challenge facing Oregon higher education in the years to come. On July 3, 2013, the Oregon Legislature passed Senate Bill 270, which allowed universities in the OUS system to become separate institutions governed by their own board of directors. This presents a challenge to the institutions in terms of not having the top down control originally held in the OUS system, but it does open up significant flexibility in that each institution has more control over its individual destiny through its own board of trustees. Institutions will now have individual control over items such as tuition and fees, authority to issue revenue bonds, and the ability to manage their real property assets. Over the coming years, the implementation of this new structure will impose great challenges on each of the universities in the OUS system.

While the challenges facing Oregon higher education are many, opportunities also lie ahead. The National Science Foundation (NSF) tracks many aspects of higher education and in their recent publication, *Science and Engineering Indicators – 2012*, the NSF reports that overall enrollment in higher education has risen 6.2 million between 1994 and 2009 and that enrollment will continue to grow through 2019 because of the demographic trend of an increasing population to recruit into the profession of surveying. Our observation of this model in surveying with the closure of the surveying program at Chemeketa Community College in Salem.

Under the heading of challenges, I noted that as programs become more reliant on outside funding, faculty time begins to divert from the primary mission of education. On the surface, this is a bad thing as students are paying more tuition for less time with faculty, however, this could present a positive opportunity for the PLSO. As faculty time becomes stretched many more opportunities will become available for practicing professionals to participate in the educational process. Examples of help practicing professionals can provide include anything from teaching of entire courses as an adjunct faculty member to giving individual presentations on specific topics, or mentoring individual students. What on the surface seems to be a further “watering down” of student education may, in fact, become a fantastic opportunity for students gain more direct experiences with the industry.

With the above items discussed at the April PLSO Board of Director’s Meeting, what can we, as PLSO members, do to help out higher education in Oregon? First, as an organization, the PLSO Board voted to enlarge the membership on the Educational Goals and Actions Committee (EGAC) to try and expand on the role of education and outreach for the PLSO. This is a great start and will most certainly enhance PLSO’s education and outreach footprint.

But what can individual members do? First, if you are an alumnus of an Oregon geomatics/surveying program, become involved with your program. While a monetary donation is probably the quickest and easiest way to participate, it is not necessarily the most valuable. Time and expertise from many years of practice are also incredibly valuable commodities. Contact faculty in a program you are interested in and offer your help in any way you think might be beneficial. This may be through teaching courses, helping students with projects, mentoring students, or recruiting in local k-12 schools. You can also help by contacting your State representative and letting them know that you value higher education. Consistent with our strategic plan, let a member of EGAC know of your interest in ongoing activities so that your energies are not duplicated by others or may be focused by EGAC on targeted needs or opportunities.

Second, you can educate yourself on the Oregon University System. I strongly recommend that everyone read David Sarasohn’s book *Failing Grade – Oregon’s Higher Education System Goes Begging*. It is an eye opener on the state of higher education in Oregon. Colleges and Universities are not only valuable for educating future generations of surveyors, but collectively are valuable as components of the state economic engine. A better educated population equals more industrial potential which equals more growth! ✨
**#1 Life in Izee**

As some of you know, I started surveying with Charles Albert White. We met in Baker, Oregon (now Baker City) at the BLM office. Al had a crew member not show up for work and he wanted a replacement. He wasn’t picky.

For the first week, he had me sharpen axes and machetes. Since I didn’t cut myself and had achieved an edge on blades which he liked, I was hired.

In two weeks we were off to Izee, just south of John Day. Al was called the Party Chief; the Crew Chiefs were John and his brother Jake. Izee was a logging camp which is now closed. During my stays, there were lots of bunkhouses, where you paid $2 per week for one clean sheet. Changing sheets consisted of sending the bottom sheet to the laundry, placing the top sheet on the bottom and the new sheet went on the top. Radio signals faded at dark so we played cards, or listened to jazz and rock n’ roll on my phonograph.

One evening about 8 o’clock, things got quiet as people began to drift off to sleep when all of a sudden there was a loud explosion! Some guy named Mike was going stir-crazy, pulled out his Magnum 357 and shot a big horsefly on the ceiling. He said it kept buzzing him. We backed off of Mike for a while.

About a week later, a three-day weekend came up and one of the guys wanted a haircut. Joe said he could do it and started to cut Frasier’s hair. Well, as young men will do, we grabbed Frasier and held him tight as Joe gave him a beautiful mohawk haircut. Frasier took it fairly well but the next day he got an awful sunburn and had to wear a bandana for the rest of the week.

We had a cook at the camp who said if we could “kill it, he could cook it.” That was my first taste of porcupine. And yes, it did taste like chicken.

**#2 The lost eye**

We were in Brookings, on the Oregon coast during my second survey season. It was 1961 and I had advanced all the way up to “Rear Chainman.” It was mid-summer and getting hotter each day. It was after lunch and the crew leader was Jake (remember him from Izee?).

Our line was along a side-slope (draining to the right of line) and covered with tan oak trees. If you’ve worked in tan oak you know it gets very dusty and sticks to sweaty surveyors (no one else, just us). For someone with dust allergies, working around this stuff can make for a very miserable summer.

As I was last in line on a five person crew, I usually had lots of time. The point man was trying to find a new set-up for Jake and the brush cutters were working with him. The head chainman stayed about two chains behind the instrument. We were working with a five chain tape. Idling away the time, I decided to drop down the slope to a small, clear, and cool creek where I could wash up and get a drink.

As I jumped down the small bank onto a four foot wide gravel bar, I heard a brushcutter yell, “Look out, Bob!” So of course I looked up the hill just in time to see a small rock coming straight at me. It struck my right eye.

Everything was black and as I reached up to feel my eye I could tell my eye had come out of its socket. My instinct was to push it back in my head, but I could feel dirt and sand around the eye so I dropped to my knees by the creek and began to wash the eye. I would wash a little then try to push it back in the socket. Wash, push, wash, push. Then I began to see light and then my eye actually came out in my hand! Turns out my good friend Richard had actually thrown a SLUG and it had hit my eye. I really washed that slug clean. I see Richard once in a while and we have a good laugh. What are friends for?
It was ’61 or ’62 and we were working out of Brookings again. We had a four mile line to run near Bosley Butte. We headed out of town and drove seven or so miles north on Highway 101 and turned east on Bosley Butte Road.

It was summer, and one day we discovered two cute college girls who had taken jobs at the Bosley Butte Lookout Station. It happened this way: Mike and I were chaining up and I saw the “gun” was pointed up the hill to the Lookout Station and not down the brush line. Jake said “take a look.” There on a ledge were two cute girls with binoculars watching the brushing crew and they had not seen Jake. Joe the point setter got tired of waiting for line and started walking back to Jake. Jake started to laugh as the girls watched Joe coming back and then they started laughing and waving as they saw Jake watching them. They of course waved for us to come up. On our way in, we turned up a ½ mile entry road to the station and asked if we could bring them anything from town.

So for several weeks we would stop by with bread, eggs, ice, and six bottles of “stuff.” About this time we were finishing the work by setting new corners. I had a college student out for the summer from the east coast. As I came down the steep dirt road I began to pick up speed and as I put on the brakes, we didn’t slow, we started going faster. As it happened, the edge of my corked boot was catching the gas pedal. I decided that if I ran up the bank on the other side of the road and into the low brush I could stop. Well, the front end went straight up and we rolled over and came down on the passenger side of the cab-over Jeep. The front window flew out in one single piece. I looked down at my helper and he had blood all over him. We had pipes, axes, hammers and a hundred things in the back that went flying around.

I yelled, “Where are you hurt?”

He said, “I’m not hurt but you’re bleeding all over me!”

My head had hit the door edge and gone numb. But it was bleeding like crazy. Jake was not far behind us and soon arrived. He took me to town and Al White had to take me to a hospital in Crescent City, CA. The nurse at the hospital started to shave my head for the stitches. That first slash across the wound sent such a shock through my body that my right foot shot out, and my corked boot turned the drywall into dust! Well, she said some unkind words and pulled me and the gurney into the middle of the room and with a headlock proceeded to shave a BIG patch out of my scalp.

Another crew member named Ken was taking me to Salem that weekend on a blind date with a girl he knew. It didn’t go too well. ♦
In March of 1973, my prospects for full time employment as a surveyor looked grim. I had spent several summers, breaks and weekends working for Bert W. Udell, Engineer and Surveyor, in my hometown of Lebanon, Oregon and had found his profession to be a lot of fun. Where else can you tramp around in the woods or fields using machetes and chainsaws looking for “evidence,” and get paid for it? A friend of mine mentioned a surveying company in Albany that might need some help, so off I went with fingers crossed and a packed lunch. I made this same trip to Albany weekly for two months until David, the founder of Timberland Services, got tired of me bugging him for a job and put me to work. I may not be the sharpest knife in the drawer, but I had tenacity.

One of David’s employee’s was Kenneth M. Wightman. Ken was a great guy to work with that first week; he began the process of teaching me techniques I had not been introduced to before. Oh I had read about them in college, but had yet to put them into practice. Luckily, I had been taught as a teenager to “throw” a chain. Now for some of you younger folks, this was before the EDM came into play, well there were Electro-Optical Meters (we called them electro tapes) but the average business had yet to invest in this fledgling technology. I did my best to throw a six-foot loop as that was Ken’s preferred length, a five foot length fit my wingspan better, but then again, Ken was the boss. Ken was patient and hardworking, his knowledge base was well beyond mine and being his chainman was just fine with me because I could tell, this guy knew his stuff.

Initially, the first week we began with a few mortgage inspections, locating the foundation on various lots. Then we moved onto a subdivision project where we were original surveyors, setting pins for individual parcels.

The real fun was yet to come and I had only been there for four days. Wow! My dream job, working with a smart and professional genuinely nice guy. My future was really looking up.

On Friday, after almost a full week, and probably the best week of my life at that point. Ken told me we were heading north of Albany into the wide open farm fields to do a boundary survey for a developer. We would be hoping to recover some original evidence for a DLC Corner along with determining the boundary for this large parcel. Along the entire east side of this ownership was the Southern Pacific Railroad, with a tangent at least three quarters of a mile in length. This was before we asked for permission to trespass on railroad property. We split the tracks and placed a nail in the tie at this midpoint for a place to start and then proceeded north up the tracks to split them again for a sight. Ken asked me to set the Wild T-16 over our first nail while he made notes and then I was to walk back up the track for a sight (holding a plumb bob over the nail of course) to begin our work. Once that was accomplished, we set off to the west approximately 600 feet to look for a DLC corner which appeared to have not been recovered before.
The notes read “a stone with a bottle buried beneath.” Oh boy, buried treasure! We would need to be careful while excavating, and we wanted this bottle for our collection.

Prior to leaving the gun I made a most neophyte statement, “I suppose this will be safe.” Ken commented, “No problem, my observations tell me the train isn’t due for four hours,” so off we went with visions of a shiny new bottle for our reward.

My shovel hit what felt like a stone after only the second or third scoop, sure enough the top of a large stone appeared, the old fence post had been its protector for ages it seemed. Now the painstaking hand digging began. While dug, Ken began the tedious task of note keeping; all the while reminding me to be careful not to break the bottle.

It may have been only seconds later when my attention was directed to a sound far off much like a train whistle. I asked Ken, “Did you hear that, it sounded like a train?” “Nope” Ken said, “didn’t hear a thing, and don’t be kidding me.” So, scolded and reassured, I continued the excavation process. Finally the reward was in sight and it was a pristine blue bottle. Yippee treasure at last! Then I heard a sound again, but this time Ken was looking northerly and he had stopped sketching. Sure enough a train was coming. I didn’t know how fast it was traveling, but a quick glance at the train and then back to the unprotected T-16 told me one of us better be a track star.

Ken’s face flushed and he yelled words that would cause a sailor to blush. “Run for it” he yelled. Run I did, but it was obvious we couldn’t out run a train. We were within 200 feet of our rescue when my first week turned into a nightmare. Suddenly my world went into slow motion, as I watched the locomotive explode the tripod and pieces of instrument into a flash of yellow and green, raining down pieces of equipment and creating a debris field for a hundred yards.

The train was a long one and I detected a slowing until at last a caboose was stopped near the point of impact where a railroad representative pronounced us trespassers. Our day was shot, Ken had some “splainin” to do back at the office and I was done for the week.

As it turned out, I did have a long successful tenure with Timberland Services and later at David Evans, Inc. when they merged several years later. Ken went on to bigger things within the company and I eventually left with some great memories of a fun profession and a note to myself to always check official train schedules prior to trespassing. ◆

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**NSPS Registry of Stolen Surveying Instruments**

List your information on the NSPS website and your equipment may be found!

Email this information to trisha.milburn@nsps.us.com:

- Description of instrument including serial number.
- Location where equipment was stolen; include nearest town and state.
- Date stolen.
- Contact person; include phone and/or email.

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**Description of equipment**
- Leica 1201+ (Serial No. 261564)
- Leica RX1250 controller/data collector (Serial No. 316471)
- GPS Antenna (Serial No. 188998)
- Cords and batteries as well

**Location**
- Portland, Oregon

**Date Stolen**
- Nov. 19, 2013

**Contact**
- Brady McGarry
  Chase, Jones & Associates
  503-228-9844
Scenes from the Exhibit Hall
The Long Hike

“Jacob, I got a couple of questions. First, how is your cell phone reception out here?”
“I got no bars...and I am beginning to fear the next question.”
“Second question. Should we take the big stick out of the radiator or just leave it in there?”◆

The Chief

“How did the ALTA survey go? Did you tie everything?”
“It went great! We tied everything on your list. The only weird thing was that this old guy came out and started talking at us.”
“That’s not so unusual.”
“Not really, but he pointed out a spot near the property line where the last Chief of the Molalla Indian Tribe was buried. It might even be on the property line, it was hard to tell.”
“And you tied the grave site?”
“It wasn’t on your list. Why? Is that important for an ALTA?”◆

The 100 Yard Dash

“Hey Justin! How fast do you think you are in the 100 yard dash?”
“I don’t know, with track shoes on, I suppose I could...”
“Not with track shoes, dressed exactly as you are.”
“Probably 15 seconds.”
“That’s pretty good. And how fast do you think a wasp is in the 100 yard dash?”
“Is the wasp angry?”
“For the sake of discussion, let’s assume it is, but I’m not real sure that I’m ready to lift my foot off this entrance to the hive and ask.”◆

Two Goats

“...and I am sorry to cancel but I found someone for $150 cheaper. I hope you understand.”
I didn’t really understand, since the job was going straight into court unless they hired a surveyor with serious conflict resolution skills. If attorneys got their maws around this one, it will cost a fortune.
“No worries! I can understand trying to save a dollar or two. Personally I am going to a third world country for brain surgery. The doctor will do the job for a couple hundred dollars and a case of tequila. He has already done the job twice before and both goats lived, although one still has a bad case of the twitches.”
Or at least I wished I had said that.
Instead I said, “Thanks anyway and I hope everything works out for you.”
I am such a liar.◆
This boundary sculpture is located near a very large rock that sits just offshore in the Pacific Ocean that is named after the way farmers used to stack their hay.

Lat 45° 53’ 6” N  Long 123° 57’ 45.6” W

Answer on page 2
SAVE THE DATE!
June 4 & 5 2014

To make it convenient for you, we are bringing the entire technology experience to your doorstep, no flights or hotels needed! With direct access to Topcon technology experts and a multi-day open session format, you can tailor an experience that best fits your schedule.

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