State News for NSPE Members

Montana to Get $629M in Federal Broadband Funding

Montana will get $629 million in federal funding for high-speed internet infrastructure, the *Bozeman Daily Chronicle* reports. The money comes from the Broadband Equity, Access and Deployment program, which was created by the bipartisan infrastructure bill passed by Congress in 2021. The program allocates a total of $42.5 billion in grants throughout the country for broadband construction, offsetting internet costs for low-income households and offering training programs.

It's intended to prioritize affordable internet access for "unserved locations," which it defines as those with less than 25 megabit-per-second download services and 3 Mbps uploads.

US Senator Jon Tester (D-Montana) was one of 10 lawmakers who negotiated the compromise legislation, called the "Infrastructure Investment and Jobs Act," in 2021. He was the only member of Montana's congressional delegation to vote for the $1.2 trillion spending bill. The funding will be deployed to an estimated 100,000 unserved locations across the state, according to a press release from Tester's office.

Exactly how and where Montana's $629 million gets spent will be worked out in the coming months. Montana has about six months to submit a proposal to the National Telecommunications and Information Administration for awarding the federal money. Read more.

Frustration Builds as Flathead Lake Continues to Drop

Elected officials in northwest Montana are expressing frustration after the Bureau of Reclamation, which manages the many dams and reservoirs of the Columbia River Basin, rejected a plan to send water from the Hungry Horse Reservoir to raise Flathead Lake, one of the key components of the region's tourism-driven economy. The rejection came as the lake was nearly two feet below full pool, a record low for this time of year, the *Montana Free Press* reports.

Since mid-June, Flathead Lake has dropped nearly 24 inches, from about 2,893 feet datum (the standard measure to gauge water levels in lakes) to 2,891.04 feet as of mid-day Monday. Water managers blamed the less-than-steller snowpack that melted early due to a burst of warm spring weather. Northwest Montana also got little rain in the last few months, and, according to the US Drought Monitor, January to May 2023 was the fifth driest start to the year in Flathead County since it started keeping records 129 years ago.

Earlier this month, dock owners and marina managers began to frantically remove boats from the lake before they got stuck in the mud below. Many docks are unusable now because of how low the water is in Flathead, which typically remains closer to full pool through Labor Day. Read more.

Montana State Researchers Harness AI for Cancer Diagnosis

Montana State University has announced that researchers at the university have been steadily advancing a potentially life-saving application of artificial intelligence: helping to diagnose and treat prostate cancer.

By using new computing methods to detect visual patterns in biopsy scans, the scientists and their medical collaborators are developing technology that could one day help doctors more confidently recommend effective treatment.

"What we've learned is that three different pathologists could look at the same slide and assess the cancer differently," said John Sheppard, professor in the Gianforte School of Computing in MSU's Norm Asbjornson College of Engineering. "Our goal is a computer-assisted process that can make diagnosis more consistent and hopefully more accurate."

By combining expertise in biomedical engineering, computational geometry, computer vision, machine learning and pathology, the interdisciplinary project is in a unique position to improve analysis of the scanned images, said Brittany Fasy, associate professor of computer science at MSU, who is leading the school's portion of the project.

"The open dialogue among the different disciplines is how cutting-edge techniques are developed and successfully applied," she said. Her expertise is in topological data analysis, or TDA, which studies and applies algorithms to identify shapes and other patterns in data. Finding innovative ways to integrate TDA with machine learning is one of the accomplishments that has helped advance the project as a whole, she noted. Read more.

*Stay up to date on legislative issues through the **NSPE Advocacy Center** .*

Meet the 2023 NSPE Emerging Leaders

NSPE is pleased to recognize 15 talented professionals who recently completed the Society's Emerging Leaders Program. This diverse group of young professionals was selected from around the country to take part in an intensive, unique enterprise designed to equip them as leaders in the engineering field.

- **Nicholas J. Bailey, P.E.** (Cincinnati, Ohio)

- **Frank Block III, Ph.D., P.E.** (Silver Spring, Maryland)

- **Timothy Choma, P.E.** (Iselin, New Jersey)

- **Courtney Cunningham, P.E.** (Houston, Texas)

- **Steven T. Fox, P.E.** (Nashville, Tennessee)

- **Blane Gee, P.E.** (Oklahoma City, Oklahoma)

- **Holly Hartley Guillaume, P.E.** (Katy, Texas)

- **Lingbee Chyna Lim, P.E.** (Charleston, South Carolina)

- **Brianne R. Jole, P.E.** (Lubbock, Texas)

- **Corey Kingsland, P.E.** (Kansas City, Missouri)

- **Carter Lytal, P.E.** (Lubbock, Texas)

- **Rebecca Martinez, P.E.** (Cherry Hill, New Jersey)

- **Alissa Neuhausen, P.E.** (Rockville, Maryland)

- **Victor Odili, P.E.** (Conroe, Texas)

- **Skylar Wierzbicki, P.E.** (Grapevine, Texas)

The program is accepting applications for the next class of rising leaders until August 31.

The upcoming Professional Engineers Day (Wednesday, August 2) is an incredible opportunity to showcase the value of NSPE and your PE license. We encourage you to post on your social media accounts a highlight from your community, your work, your impact, your story and include the #IAMNSPE, #WeareNSPE, #ProudPE.

NSPE's apparel shop features the PE Day logo on a variety of items including many styles of t-shirts and other apparel for men, women, and kids, as well as accessories like mugs, notebooks, tote bags, wall prints, and even phone cases. Shop now.

Check Out the Latest Issue of *PE*

The Chatter About AI

OpenAI's ChatGPT came on the scene in November 2022. This type of generative AI has made a noticeable impact in a brief period of time and other versions of chatbots have been released. This emerging technology is sparking discussions about what impact AI could have on the engineering workforce and in engineering practice.

Reaching Tomorrow's Innovators

DiscoverE has released its latest research on the views of high school students and parents on engineering and engineering careers. The Messages Matter results were encouraging as they reveal that targeted messages and profiles of engineers can spur interest in engineering among the very groups that will ensure a more diverse future for the field.

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