

People & Places

Water resources engineer helped pioneer ET mapping

By CAROL RYAN DUMAS
Capital Press

Farmers and ranchers are hearing a lot about NASA's OpenET and its ability to make critical water data free and available for water managers in 17 western states. But they might not know the new online platform that uses satellites to estimate the water consumption of crops and other plants builds on the pioneering work of Rick Allen, a University of Idaho water resources engineer, and the Idaho Department of Water Resources.

Evapotranspiration
Allen and his research team at the Kimberly Research and Extension Center, working closely with IDWR, developed a physics-based model using satellite data to compute and map evapotranspiration, or ET. The model is named METRIC — Mapping Evapotranspiration at High Resolution with Internalized Calibration. Evapotranspiration includes water evaporation from the land and water transpiration from plants. The work was funded by a NASA grant, and Allen's team began working on the project in 2000. IDWR was an "eager user" because it knew there would be challenges among groundwater and surface water users, Allen said. "Idaho was really the first state to use satellite-based ET data," he said. For its work, the team received the Innovations in American Government Award from Harvard University's Kennedy School of Government in 2009. That early work led to NASA's OpenET. That platform offers six different ET mapping models, including METRIC, and it is free to anyone who



Rick Allen views evapotranspiration maps of southern Idaho.

Courtesy of Rick Allen

Western Innovator

RICK ALLEN

Age: 69
Position: Professor of water resources engineering, University of Idaho
Location: Kimberly Research and Extension Center
Education: Ph.D., civil engineering, University of Idaho, 1984; master's degree, agricultural engineering, University of Idaho, 1977; bachelor's degree, agricultural engineering, Iowa State University, 1974
Research interest: Evapotranspiration, irrigation water



requirements, satellite image processing in water resources, hydrologic water balances, impacts of water conservation, center pivot design and operation, weather data quality and processing, evapotranspiration measurement
Affiliations: OpenET Consortium, member; NASA ECOSTRESS Science Team, member;

NASA/USGS Landsat Science Team, past member
Publications: 212, primary author on 78
Awards: Numerous, including Innovations in American Governance Award, Harvard University's Kennedy School of Government; Arid Lands Hydraulic Engineering and Royce Tipton awards, American Society of Civil Engineers; 2016 Irrigation Association Person of the Year (international)
Family: Wife; three grown children; two grandchildren

needs that information, he said. "It allows people to easily compare or average all six models together to get a consistent estimate of ET," he said. Allen is a member of the OpenET Consortium and was a member of the NASA Landsat Science Team from 2007 to 2017. That team helped guide the development of future satellites

and applications of satellite data, he said. "I've really enjoyed being able to work with NASA, benefiting from all the satellite technology they've designed and launched over the years," he said. "I've also enjoyed working with the state of Idaho and seeing our developments put into action for effective water resources management."

Farming roots
Allen grew up on a predominantly corn and soybean farm in northwest Iowa. The family also fed cattle and hogs, and he was in charge of the hogs. "I wanted to stay tied to agriculture but also wanted to do something technical," he said. After getting a master's degree in agricultural engineering at the University of

Oh, deer: Three injured in E. Oregon attack

By BILL BRADSHAW
EO Media Group



Carolyn Lochert/Contributed Photo

A large mule deer buck damages items outside the Lostine home of Carolyn Lochert on Nov. 9. Sheriff Joel Fish shot the buck after it attacked Lochert and two others.

Oliver arrived to take her to a gathering in the nearby town of Wallowa. They saw the buck and tried to help

Lochert chase it off. "It attacked her," Lochert said. "It's just kind of a blur. I've tried to recreate (it) many times." She said all three of them were injured, mostly with puncture wounds, scrapes and bruises. Skovlin and Oliver were taken to the hospital after the attack. "We all got punctured," Lochert said. "Brian got the worst of it. He had to get stitches for one of the wounds which was inches away from his femoral artery," the main blood vessel supplying the lower body. The sheriff and an Oregon State Police trooper were first on the scene. Fish said he was given authorization by Bree Furfey of the Oregon Department of Fish and Wildlife to dispatch the deer. "It had them pinned up on the porch when I got there," Fish said. "Bree said there was a deer attacking

people and said if I got there before her, go ahead and shoot it." He brought the deer down with his revolver at about 15 yards. He and Lochert both said there didn't appear to be other deer in the vicinity. Lochert said the OSP trooper also shot the buck. Fish said he had to give first aid to Oliver. He said Furfey took custody of the carcass for testing. She was unavailable for comment. Lochert said that in retrospect, "He seemed a little sickly. ... He might've been tired from fighting other bucks as his hindquarters seemed shaky." Even though wild animals are common in Wallowa County, Lochert agreed people need to remember they are, in fact, wild. "It's about how dangerous these animals are, especially when they're in rut," she said.

CALENDAR

Submit upcoming ag-related events on www.capitalpress.com or by email to newsroom@capitalpress.com.

SUNDAY-WEDNESDAY DEC. 5-8
2021 California Farm Bureau Annual Meeting: Hyatt Regency Orange County, 11999 Harbor Blvd., Garden Grove, Calif. Join us for an in-person, enhanced annual meeting experience including workshops on policy and advocacy, CE sessions on pesticide licensing, networking, annual awards, a trade show and the House of Delegates. The Young Farmers and Ranchers State Conference will be combined with the annual meeting and will be Dec. 4-5 in the same venue. Website: <https://www.cfbf.com/annualmeeting/>

MONDAY DEC. 6
Washington Dairy Conference: Great Wolf Lodge, Centralia, Wash. The conference will include panels on the CAFO permit being developed by the Department of Ecology, state carbon legislation and technologies and the dairy

industry's Net Zero Initiative. Website: <http://www.wadairy.com>

TUESDAY-THURSDAY DEC. 6-9
8th Annual National Conference on Grazing Lands: Embassy Suites Kingston Plantation, Myrtle Beach, S.C. The conference will focus on how sound, scientific technology can help improve management systems. Website: <http://www.grazinglands.org>

TUESDAY DEC. 7
Virtual classes for pesticide applicators (online): 8 a.m.-noon. There will be virtual classes for pesticide applicators' recertification, offered by Oregon OSHA and the Oregon Farm Bureau Health & Safety Committee. The virtual training will provide continuing education credits for any pesticide applicator licensed in Oregon. Participants will receive pesticide recertification CORE credits to maintain an applicator's license. The four CORE credit hours provided are approved by the Oregon Dept. of Agriculture's "Worker Protection Standard: What You Should Know." Website: <http://www.OregonFB.org/pesticideclass>

NRCS Idaho State Technical Advisory Committee (virtual): Representatives of agricultural, natural resources and other groups advise NRCS and other USDA agencies on carrying out conservation provisions of federal Farm Bill. NRCS state conservationist chairs committee. Website: <https://bit.ly/30d0njn>

Mexico business outlook webinar (online): Idaho's Commerce and Agriculture departments will host an update on Mexico's economic outlook, United States-Mexico-Canada Agreement on trade, and supply chain, logistics and transportation matters. Contact: Tanner.Wagner@isda.idaho.gov Website: <https://bit.ly/3FEZQGu>

TUESDAY-THURSDAY DEC. 7-9
2021 Oregon Farm Bureau Convention: Eagle Crest Resort, 1522 Cline Falls Road, Redmond, Ore. The Oregon Farm Bureau Federation's annual convention, plus on Dec. 7 will be the Western Christmas Night Out, hosted by the Deschutes County Farm Bureau and Oregon's Young Farmers and Ranchers Committee. Buses will shuttle Farm Bureau members to Smith Rock Ranch for the family-friendly food, drinks and fun. Website: <https://oregonfb.org/events-2/>

WEDNESDAY DEC. 8
2021 University of Idaho Snake River Sugar Beet Conference (online): Topics will include pests and disease, irrigation, soil health, strip tillage, direct seed and cover crops. Website: <http://uidaho.edu/sugarbeetconference>

THURSDAY-FRIDAY DEC. 9-10
Western Governors' Association 2021 Winter Meeting: Loews Coronado Bay Resort, Coronado, Calif. The conference will feature roundtable discussions on the most significant issues facing the West. Website: <http://www.westgov.org>

FRIDAY-SATURDAY DEC. 10-11
U.S. Cattlemen's Association Annual Meeting: Spearfish Convention Center, Spearfish, S.D. The meeting will focus on policy with updates on USCA's efforts. Website: <http://uscattlemen.org>

MONDAY-WEDNESDAY DEC. 13-15
Far West Agribusiness Association Winter Conference: Three Rivers Convention Center, 7016 W Gran-

dridge Blvd., Kennewick, Wash. This year's speakers are Jonathan Eaton, practice leader for Grant Thornton's national supply chain practice; Shay Myers, CEO of Owyhee Produce and social media sensation; and U.S. Rep. Dan Newhouse. Website: <https://www.fvaa.org/events/2021-fvaa-winter-conference>

WEDNESDAY DEC. 15
H-2A Forum: 9 a.m.-4 p.m. Yakima, Wash., Convention Center. Join the Washington Growers League and MásLabor for a forum with in-depth presentations on H-2A application and management. The forum will cover the basics of H-2A but also include higher-level presentations, as many growers are experienced with the program. This event is in-person. Website: <http://growersleague.org/event/h-2a-forum/>

SUNDAY-WEDNESDAY DEC. 19-22
American Sheep Industry Association Annual Convention: Sheraton San Diego Hotel and Marina. The event will include discussions on animal health, genetics, research, policy and legislation. Website: <http://www.sheepusa.org>



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