## Big Bucks for Big Sky Country

Researchers at Montana State University studying the geology and biology of Yellowstone National Park, just across the Wyoming border, are expecting a $2 million geyser of federal funding, thanks to the kindness of a U.S. senator. If it materializes, the money would almost double their current budget. And that's not all. The funding joins three other Montana earmarks—unrequested funding targeted to a specific institution—in the Senate's version of the 1999 spending bill for NASA that total $7.5 million, and another project intended to benefit Montana that's included in a portion of the bill that covers the National Science Foundation (NSF).

These earmarks come courtesy of Senator Conrad Burns (R–MT), a member of the appropriations subcommittee that funds NASA and NSF and chair of the panel that authorizes spending for both agencies. "Our senator made it clear he wanted to do something," recalls Steve Running, a forest ecologist at the University of Montana (UM), Missoula, which is in line for one of the earmarks, a $3.5-million-a-year natural resources center to apply data from NASA's Earth Observing System to everything from fire detection to rangeland productivity. "I could have kept quiet, but my university president encouraged me to come up with ideas." Adds Bob Swenson, the recently retired vice president of research at Montana State who helped with the Yellowstone proposal, "Everyone else is doing it, so we're figuring out how we can do it, too." The university's efforts to secure funding have been assisted by Van Scoyoc Associates, a Washington lobbying firm.

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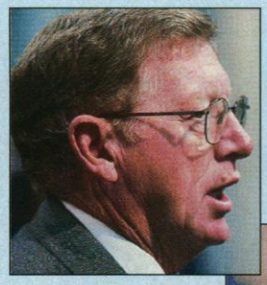

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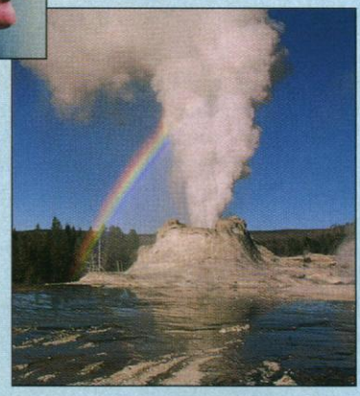

**Funding eruption.** Senator Burns has opened up federal spigots for Montana researchers working in nearby Yellowstone Park and other sites.

Burns's prominence makes space agency managers reluctant to criticize his pet projects, despite the fact that NASA—which has a declining budget—did not request the project funding. NASA Administrator Dan Goldin has, in fact, assiduously courted Burns, visiting Montana in a bid to influence his agency's annual budget and the space station program. And 2 years ago a bevy of top federal science officials, including Neal Lane, then NSF director and now the president's science adviser, visited the university's biological field station in Flat Head Lake for the annual meeting of a federally funded program to boost the state's research capacity.

Burns is not the first politician to bring home the federal research bacon to Montana. But he has become one of the more active participants on the national science scene. MSE-Technologies in Butte, for example, has received pork funding for several years to work on a variety of aerospace engineering efforts. Its latest slice, $2 million for "high-priority aerospace technology," continues that arrangement. "Congress feels this particular organization is the best venue for the government to do this work," says Dennis Bushnell, chief scientist at NASA's Langley Research Center in Hampton, Virginia, which oversees the work.

In addition to the Yellowstone-related research, Montana State is in line for $2 million to further develop a technology that could someday help record the simultaneous actions of thousands of neurons. Swenson says the technique has attracted some commercial interest but that the main goal of both projects is to carry out good research. "The bottom line is that we can't embarrass ourselves or our senator by doing crappy science."

The NSF earmark is less obvious—and less welcome. The committee orders NSF to fund, "through a competitive process, an additional LTER site for the study of a pristine, inland, mountain wilderness area. Preferences should be given to sites with established research facilities." LTER stands for Long-Term Environmental Research, a network of 21 sites from Alaska to Antarctica at which scientists collect and exchange data on biodiversity in a variety of ecological settings. In fact, the language was tailored by Burns's staffers to cover work going on at Flat Head Lake led by UM ecologist Jack Stanford, who already has NSF funding for a range of ecological studies.

But Stanford says his team "doesn't need any special arrangement" to extend its work. Although he says he has discussed his research with Burns and believes that the LTER program "has holes in the northern Rockies," he says any LTER competition should be open to anyone. He says he was not aware of the language in the Senate bill. NSF officials say they welcome the "vote of confidence" in the program but have no plans to hold a competition anytime soon. Indeed, says Doug Collins, who runs the program, "we're gearing up for a 20-year review ... and it wouldn't make sense to add new sites just before we do that." But Collins says NSF will abide by any congressional mandate.

Whatever the ultimate fate of the earmarks, Swenson, Running, and other Montanans argue that they are simply trying to level the playing field. "It's our turn," says Running. "That's probably not a really legitimate justification, but we've not been benefiting like others have." Adds Jon Lindgren, Burns's deputy press secretary: "We have people who can do excellent research. So if it can be done in Montana, we will try to make sure it is." —ANDREW LAWLER

With reporting by Jeffrey Mervis.

an exotic type of surgery that uses high-energy particles for scalpels. Two such centers already exist, one on each coast, so the committee encouraged NCI to "assist in efforts to convert an existing online accelerator into a proton beam therapy center to serve populations which do not have access to this therapy." Translation: NCI should help Indiana University convert its old physics cyclotron in Bloomington to a medical unit. University staffers say they have been searching for a backer for the project ever since the National Science Foundation (NSF) began to trim support for nuclear physics a couple of years ago.

One traditional argument in favor of earmarks is that they channel funds to institutions, states, and regions that have received less than their fair share of federal R&D support (see above). This year, that argument underpinned a Senate panel's attack on an elite group of schools that get the lion's share of peer-reviewed NSF grants. Lawmakers on the panel, which sets spending on NSF and other independent agencies, approved language that would restrict the "top 100" from competing for $18 million in funding for a half-dozen new, university-based research and training centers, three focused on information technology and three on applied molecular biology. Such a competition, according to the committee, will help to overcome "any bias toward more established institutions."

The restricted competition is intended to