

## Acceptance of the Distinguished Public Service Medal for 2002

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President Ewing, members of the Society, and guests:

It is indeed a special honor for me to accept the Mineralogical Society of America's Distinguished Public Service Medal. I must say, this award came as a complete surprise. When Kase Klein called earlier this summer to tell me I had been selected by the MSA to receive this medal, I was convinced that he had called the wrong David Hill—after all, I'm a seismologist and not a member of the Society. I have since learned of the distinguished list of past medal recipients and that the scope of this medal encompasses contributions in volcanology—a field in which I have become increasingly involved over the past 20 years. The generous tradition of the MSA in considering candidates outside the Society membership adds a special luster to the medal. As far as I am aware, this enlightened attitude of the MSA is unique among earth science professional societies.

I've earned my volcanologist credentials through my role as Scientist-in-Charge of the Long Valley Observatory and the USGS efforts to monitor unrest in the Long Valley Caldera-Mono Craters volcanic field in eastern California. I agreed to take on this responsibility in early 1982 as a means of restoring both my sanity and ability to do science after having spent five years in an administrative role as Chief of the Seismology Branch in Menlo Park. In hindsight, this turns out to have been a most rewarding decision, not only affording opportunities for fascinating science but also the challenges and satisfaction of relating the significance of science to the public.

Many of you are aware of the volcanic unrest in Long Valley caldera (LVC) that began on 25 May 1980 (a week after the catastrophic eruption of Mount St. Helens) with a sequence of three M6 earthquakes followed two days later by a four M6 event. Our problems didn't really begin, however, until May of 1982 when the USGS released a "Notice of Potential Volcanic Hazards" for the area of eastern California that includes LVC and the resort community of Mammoth Lakes. Details of how this release came about is a story in itself; the immediate impact, however, was the reaction of outrage, anger, and disbelief by the residents of Mono County and Mammoth Lakes—a reaction characterized by "...what volcano? I've lived here for five years. You cone-head scientists are nuts." The anxiety underlying this reaction was certainly underscored by the fresh images of Mount St. Helens. This communal antagonism toward geologists (and USGS geologists in particular) was ex-

pressed by, among other things, "geologists not welcome" signs in motels and restaurants and, in one case, an apparent death threat to my colleague Dan Miller. As with many things, however, time is an ally. With time, residents became more aware of the active geologic setting in which they lived and, on our side, scientists became better at explaining the nature and implications of the unrest in terms understandable to the public. In addition, continued unrest in the form of recurring earthquake swarms and the onset of tree-killing CO<sub>2</sub> emissions in 1990 emphasized that natural hazards in this part of eastern California are of a different stripe than those in non-volcanic regions.

The "geologists not welcome" signs have long since disappeared from the restaurant windows in Mammoth Lakes, and when asked, most residents express their appreciation that the USGS is monitoring the situation, perhaps with too much confidence in our ability to invariably provide an accurate warning of any impending eruption. Although the last two years have seen relative quiescence in the caldera, I remain acutely aware that the path to a socially useful warning is indeed a narrow one. On one hand, an overanxious response exacerbates the "false alarm" problem. One or at most two "needless" evacuations destroys our hard earned credibility. On the other hand, an overly complacent response (no need to worry yet) may lead to serious casualties and fatalities if increasing unrest escalates rapidly into an explosive eruption. Meanwhile, Mammoth Lakes continues to pursue its goal of becoming a global, four-season destination resort with Intrawest Corporation investing \$1 billion over the next five years. Earlier this year the resurgent dome began showing signs of renewed inflation after a two-year pause—so stay tuned.

To conclude, I wish to express my sincere gratitude to Bob Tilling for his efforts in forwarding my nomination and to Rob Wesson for his kind words on my behalf during the awards ceremony. I also want to thank my many friends and colleagues within the USGS, the academic community, and the National Laboratories for their sustained support and cooperation in establishing and maintaining the solid scientific foundation on which our credibility with the public and civil authorities so critically depends as we attempt to understand and deal with the hazards posed by this large, restless volcanic system.

Thank you again, members of the MSA, for honoring me with this medal.