Statement of

David Applegate

Director, U.S. Geological Survey

U.S. Department of the Interior

Before the

House Committee on Natural Resources

Subcommittee on Energy and Mineral Resources

April 26, 2023

Chairman Stauber, Ranking Member Ocasio-Cortez, and members of the Subcommittee, it is my pleasure to be here today to summarize the Biden-Harris Administration's budget for the U.S. Geological Survey (USGS) for Fiscal Year 2024. As the science arm of the Department of the Interior (Department), the USGS delivers objective, policy-neutral, actionable scientific information to protect life and property, inform environmental and natural resource management decisions, and serve as a foundation to advance the next generation of scientific discovery. I am Dave Applegate, and it is my honor to serve as the Director of the USGS. I am committed to building on this remarkable institution's 144 years of scientific excellence focused on the needs of the Nation and ensuring that our science reaches those who need it the most.

Overall, the 2024 budget provides $1.8 billion for the USGS. The budget makes targeted investments in the delivery of science to support sound land and resource management decisions and, in particular, address the effects of environmental changes on our Nation's ecosystems and physical infrastructure. Wildfire and drought are two of the most consequential challenges facing the Department and the U.S. Forest Service in carrying out their missions to manage natural resources. Ensuring they get the best, most useful science from the USGS is a very high priority, and we are requesting an investment of $6.5 million to improve our ability to bring our science to bear on these hazards with a focus on working with our partners to collaboratively develop the science they need for decision-making. To enable science delivery in this and many other key areas, the budget also builds out the science infrastructure we need to set a firm foundation for the future, with investments in advanced scientific computing, the next generation of the Landsat land-imaging constellation, and state-of-the-art facilities to enable innovation. These resources will help the USGS meet the ever-growing demand for our science and best ensure that it is useful and accessible to the public and to decision makers like yourselves.

The budget proposes $150.8 million for the USGS Energy and Mineral Resources programs, an increase of $46.5 million over the 2023 enacted level. This includes funding to advance the

assessments of geothermal resources and areas for potential geologic carbon sequestration. The funding also builds on investments in critical minerals research to expand assessments of mine-waste resources that could be a significant new source of domestic critical minerals and on funding from the Infrastructure Investment and Jobs Act, commonly known as the Bipartisan Infrastructure Law (BIL), that supports foundational data on mineral resources in the energy supply chain.

The budget for the USGS Natural Hazards programs proposes $226.2 million, an increase of $25.9 million over the 2023 enacted level, continuing funding for the operations and build out of *ShakeAlert* earthquake early warning, the National Volcano Early Warning System, and implementation of the Landslide Hazards Preparedness Act. New investments would expand our work characterizing the threat posed by giant earthquakes, volcanoes, tsunamis, and landslides that can be generated in the subduction zones that lie along the edge of Alaska, the Pacific Northwest, and the Caribbean territories. The budget also includes additional funding for addressing community resilience and landscape changes caused by coastal storms. These investments support our ongoing work with partners, including the National Park Service (NPS), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Army Corps of Engineers, to develop and disseminate models of coastal change that will help local decision makers and land managers respond to the storms they face today and better plan for future risks. More than 40 percent of the U.S. population is in coastal counties, so these hazards are a matter of national interest.

Investments in science infrastructure provide benefits for the long term. Our Core Science Systems programs are an example of this science infrastructure, as they provide many of the mapping, surveying, and remote sensing capabilities that other scientists, as well as the public, rely on. Core Science Systems also includes the National Cooperative Geologic Mapping Program and the National Geological and Geophysical Data Preservation Program that are supporting the energy supply chain work from the BIL that I mentioned earlier. The budget proposes $368.6 million for Core Science Systems, an increase of $84.0 million over the 2023 enacted levels. Landsat, which for more than 50 years has provided a continuous observational record of changes on the Earth's surface, is another part of the Core Science System portfolio of science infrastructure investments. Landsat missions 7, 8, and 9 are in orbit and we are preparing for the future with Landsat Next, which will collect more data than its predecessors, with more detail, as well as a commercial satellite data pilot that will help the USGS better understand how commercial data can augment Landsat data. Similarly, the budget supports USGS coordination with other agencies and partners to improve Federal climate services and data delivery, providing accessible climate information to users to respond to climate risks and improve climate resilience. Our budget invests in high-performance and cloud-computing resources to meet our stakeholder needs for finer-scale, better integrated models in real-time or near-real-time. Where we are able to make these investments, we have seen the enormous difference it can make. For example, during the recent eruptions on the Island of Hawai‘i, access to high-performance computing resources enabled us to estimate lava flows in 30 seconds — work that used to take 27 hours.

Advances in USGS Ecosystems programs also support the Nation in the face of future challenges. The budget proposes $395 million, an increase of $87.8 million over the 2023

enacted level, which supports a variety of work, including continued monitoring of harmful algal blooms, assessments of potential biological carbon sinks on Federal lands, and partnering with States and Tribes to map big-game migration corridors. Additionally, the budget supports wildlife disease work, such as ongoing efforts to prevent the extinction of native Hawaiian forest birds, and it supports the Climate Adaptation Science Centers. Our Ecosystems programs, along with our Water Resources Mission Area, play a key role in the proposal to transform the decision-support tools we provide to characterize the impacts of wildfire and drought.

All of this requires a skilled workforce and functional, safe facilities for them to work in. Rebuilding the USGS workforce so that we can meet the high expectations to deliver our science where and when it is needed is one of my most important responsibilities. As we seek to bring on board our next generation of scientific talent, we are working to strengthen our existing university partnerships and build new ones to tap into the full range of diverse talent that is out there. To that end, the USGS now has partnerships with five minority serving institutions, including City College of New York and Alaska Pacific University, and we are working to expand those partnerships. We are also continuing to invest in improving our facilities, including a new energy and mineral research facility on the campus of the Colorado School of Mines, continuing our move from Menlo Park to the National Aeronautics and Space Administration (NASA) Ames Research Park at Moffett Field, updated laboratory capabilities for our National Wildlife Health Center, and the re-location of the Hawaiian Volcano Observatory, which was damaged by the eruptions at Kīlauea in 2018.

On behalf of the 8,000 highly skilled and dedicated public servants of the USGS, thank you for the opportunity to testify today. I am happy to answer any questions you may have.