

30th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Space Assets and Disaster Management (4)

Author: Mr. Lindley Johnson
NASA Headquarters, United States, lindley.johnson@nasa.gov

Ms. Doris Daou
National Aeronautics and Space Administration (NASA), United States, Doris.Daou@nasa.gov

Dr. Kelly Fast
National Aeronautics and Space Administration (NASA), United States, kelly.e.fast@nasa.gov

Ms. Victoria Friedensen
National Aeronautics and Space Administration (NASA), United States, victoria.p.friedensen@nasa.gov

Mr. Rob Landis
NASA Headquarters, United States, rob.r.landis@nasa.gov

A SUMMARY OF THE UNITED STATES'S NATIONAL NEAR-EARTH OBJECT PREPAREDNESS
STRATEGY AND ACTION PLAN.

Abstract

NASA and its partners maintain a watch for near-Earth objects (NEOs), asteroids and comets that pass within Earth's vicinity, as part of an ongoing effort to discover, catalog, and characterize these bodies and to determine if any pose an impact threat. NASA's Planetary Defense Coordination Office (PDCO) is responsible for: • Ensuring the early detection of potentially hazardous objects (PHOs) – asteroids and comets whose orbits are predicted to bring them within 0.05 astronomical units of Earth's orbit; and of a size large enough to reach Earth's surface – that is, greater than perhaps 30 to 50 meters; • Tracking and characterizing PHOs and issuing warnings about potential impacts; • Providing timely and accurate communications about PHOs; and • Performing as a lead coordination node in U.S. Government planning for response to an actual impact threat.

This paper will review the United States's National Near-Earth Object Preparedness Strategy and Action Plan (the Action Plan) published by the White House in 2018. The Action Plan was authored by the Interagency Working Group on Detecting and Mitigating the Impacts of Earth-bound Near-Earth Objects (DAMIEN). The purpose of the Action Plan is to improve the Nation's preparedness over the next 10 years to address the hazard of NEO impacts. The Action Plan establishes five overarching strategic goals to mitigate the risk of NEO impacts through improved understanding, forecasting, prevention, and emergency preparedness • Enhance NEO detection, tracking, and characterization capabilities • Improve NEO modeling prediction, and information integration • Develop technologies for NEO deflection and disruption missions • Increase international cooperation on NEO preparation • Establish NEO impact emergency procedures and action protocols

Achieving these five goals will dramatically increase the United States's preparedness for countering the threat and mitigating the hazard. The Action Plan will leverage existing efforts and policies while promoting enhanced coordination and cooperation across the public and private sectors in the United States and abroad. The Action Plan will help organize and coordinate NEO-related efforts within the U.S. Federal Government to ensure that the Nation can effectively respond in the event this low probability but high consequence natural disaster should occur.