Since the talents and training of scientific personnel are wasted if appropriate facilities and specialized equipment are not available, the far-flung groups of experts require that support functions be provided throughout the country. Natural resources being extremely varied in character, appropriate research facilities are similarly so:

The Department owns and operates 18 high seas oceanographic vessels—fourteen for the Bureau of Commercial Fisheries, three for the Bureau of Mines, and one for the U.S. Geological Survey. Additional ship space is obtained by charter. The Bureau of Sport Fisheries and Wildlife makes effective use of a two-man submersible and other small submarines have been used under charter.

Twenty-six mobile laboratories measure everything from gold dust to fish and the characteristics of the environment for each. A 10-wheel lunar exploration vehicle called "Trespasser" is being readied by Geological Survey to roll on the moon.

Research observatories range from the famous, 55 year old laboratory perched on the rim of Kilauea volcano in Hawaii to portable blinds used for studies of bird—and hunter—behavior on remote duck marshes.

Pilot plants explore advanced waste treatment methods for sewage, liquification of coal, salvage of junk car metal, desalting of sea water and a host of other processes designed to reclaim and reuse water, air, and solid wastes.

Yellowstone and other natural parks, as well as wildlife refuges, national monuments, estuarine oyster beds, Alaskan glaciers, and the high seas and ocean bottoms are but few of the research sites that hold the secrets pertaining to effective utilization of present and future resources.

A four and a half mile direct-current test line (the longest in existence) is tied into test transformers which can step up voltages to as high as 1,100,000 volts in order to further our knowledge on power transmission.

Snowmobiles, instrumented airplanes, trucks, and radar units converge on western mountain slopes to develop means of augmenting the natural snow fall to irrigate more of the next summer's crops.

The land resources, the water resources, and the living resources are all about us, but Atlantic and Pacific fish differ, Utah copper and Pennsylvania coal have little in common, and pollution problems vary from river to river. The network of Department of Interior laboratories has been designed to place groups of specialists in the best places to solve present problems and conduct the basic research that is necessary to meet presently unseen future needs. University campuses are the sites for 36 of the Department's major laboratory installations; and have long provided a natural mechanism for strengthening both the institution and the agency in common efforts to produce trained specialists and research results. In line with the President's directive of September 1965 on "Strengthening Academic Capability for Science Throughout the Country," the Department is moving to increase the effectiveness of the relations that have long existed.

Taken in total—the 7500 people, the far-flung facilities, the innumerable supporting arrangements—the investment represented by Interior's research and development program is significant, but nonetheless modest in relation to the size of the needs. The Department's science and engineering team has played a vital role over the years in making America great. Vast mineral developments can be traced directly to Geological Survey research. Entire industries have been born in processes developed by the Bureau of Mines. Major new U.S. fisheries have been started in recent years because of fisheries research begun 15 years ago. We have Hawaiian geese today because of the efforts of avaian biologists 20 years ago. Nucleus flocks of the Aleutian Canada geese and other endangered bird species with restricted ranges are being held in captivity today as insurance against catastrophic changes in the wild. The adequate handling of water supplies in the Eastern drought was predicated on the research and records of Interior hydrologists working much earlier in times of plenty.

The Interior research and development team that has helped America live off the land, now faces the much greater challenge of leading the nation into an Age of Environmental Quality in which the people must live in harmony with the land. It will not be easy. Despite all of our science of the past, the ecological relations are not well understood. We live in ignorance of the details and sensitivity of the balances of nature that exist all around us. Until such basic knowledge is obtained we will not be able to measure accurately the effects of man's actions on his surroundings. The "clean" river basin is an attainable goal