

yzing new ideas in undersea warfare and ocean technology, by translating these into effective operating systems and by assisting in the introduction of resultant undersea warfare systems and technologies into production and service use.

The work of this Center covers a wide range of research and development in such fields as underwater optics, underwater acoustics, military oceanography, sonar technology, oceanometrics, fluid dynamics, lasars; and advanced computer techniques, and systems developments in submarine launched weapons, deep submersibles, homing torpedoes, deep sea salvage systems, deep-operating research vehicles, fire control systems, underwater sensors, and search and recovery systems.

I have provided your committee with brochures and reports of our work. Some of the material describes the work of the new Center organization; some from the former Navy Electronics Laboratory and the Naval Ordnance Test Station describe our ocean research and sensor development, ASW weapon developments and ocean engineering programs prior to the reorganization of last July which transferred these programs to the new Center.

NUWC is currently operating on the original sites of the two primary laboratories from which the Center was formed. The Center has major laboratories both in Pasadena and on the Point Loma waterfront at San Diego, Calif. with additional research facilities at Mission Beach, Calif.; Kaneohe Bay, Oahu, Hawaii; Cape Prince of Wales, Alaska; and Lake Pend Oreille, Idaho. The Center operates test ranges at Morris Dam, Long Beach, and San Clemente Island in California.

The Center is currently operating with a civilian ceiling of 1,400, including 567 scientists and engineers. We have 350 assigned military personnel. The budget for this fiscal year is \$51.1 million. Resources in technical facilities and equipment assigned or used by NUWC, are valued at approximately \$100 million.

The functions of this laboratory are moving in the direction of designing equipments and techniques needed for the inspection, exploration, and control of the undersea environment. A broad mission in this area is required for the support of the Navy's undersea warfare effort. The programs on the detection and tracking of submarines are primarily classified and designed for control of the seas. They involve sonar systems, advanced data processing, weapons, and fire control, as well as investigations of the structure of the oceans of the world on a regional basis. The report of the Panel on Oceanography of the President's Science Advisory Committee (issued by the White House in June 1966) provides us with excellent guidelines for exploration and use of the sea during the next 10 years. National goals as expressed in this report are: Prediction and control of the sea's phenomena for safety and economy of seagoing activities, the full development of marine resources for man's use, and more strategic use of the undersea environment to enhance national security.

The Naval Undersea Warfare Center work at this time includes effort in all of these areas. The Center is currently a strong element in implementing the recommendations of the President's Science Advisory Committee. For example, NUWC was designated by the Chief of Naval Material as the lead laboratory for the deep ocean technology program. The interlaboratory task team working on this program is