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REVIEW OF PROCUREMENT OF EQUIPMENT FOR IMPLEMENTING
AUTOMATION OF WATER DATA RECORDS, GEOLOGICAL SURVEY,
DEPARTMENT OF THE INTERIOR

Before developing a system to automate streamflow records, the Geological Survey collected basic streamflow data with an instrument known as a strip-chart recorder. In June 1962, the Survey completed its evaluation of the automation program and concluded that savings in costs and manpower could be realized by using a digital recorder. Both recorders collect the same type of water data—the strip-chart recorder produces a graphic chart which requires manual methods of interpretation while the digital recorder produces a punched tape which is interpreted by processing on a general-purpose computer.

During fiscal years 1963 through 1965, the Geological Survey purchased and installed digital recorders to automate water data records and, during the same period, continued to purchase new strip-chart recorders of the type being replaced by digital recorders. This situation occurred because the Survey did not develop an overall plan to show the number of digital recorders that would be periodically needed in each district office to effectively implement the automation program and did not provide for coordination in relocating replaced strip-chart recorders so as to avoid the procurement of additional new strip-chart recorders. We believe that the Survey knew or should have known that replaced strip-chart recorders would be available periodically to meet the needs of the various district offices during the equipment substitution phase of the automation program. Nevertheless, the Survey purchased new strip-chart recorders, most of which were of the type being replaced by the digital recorder for about \$155,000, while at the same time it was generating a surplus of strip-chart recorders.

We noted also that the Survey procured a substantial number of the batteries needed to operate the digital recorder from local suppliers even though comparable batteries were available on the Federal Supply Schedule at a lower cost. We estimate that, when the conversion to the digital recorder is completed in fiscal year 1968, the Government could achieve savings of about \$13,000 annually if the batteries needed to operate digital recorders are procured through the Federal Supply Schedule.

We brought the matters discussed in this report to the attention of the Department of the Interior and proposed that an overall plan be developed which would provide for the timely procurement, distribution, coordination, and installation of all water data collection equipment to avoid further procurement of new strip-chart recorders. We proposed also that instructions to field personnel be revised to require procurement of digital recorder batteries through the Federal Supply Schedule, except in justifiable emergency situations.

In December 1965, the Department advised us that it agreed with the intent of our proposals and was therefore asking the Geological Survey to take appropriate actions necessary to carry out our proposals. The Department stated that the Survey would develop a plan for stronger central control and coordination of procurement and distribution of water data collection equipment. The Department