tures that is neither maintenance nor replacement cost and does not necessarily lead to the irrigation of additional acres. Such an investment might have been made to increase a canal's peak flow capacity, or to supplement a pump engine with an additional engine that would increase the capacity of an existing pumping system. Also, supplemental water might have been provided for existing irrigated acreage by the investment of new capital.

## 2. OPERATION AND MAINTENANCE COSTS

Operation and maintenance costs of supplying water to growers were estimated to average \$4.81 per acre for 1949 in the 17 Western States. No later data are available. There are no comparable statistics available for the Eastern United States.

An approximation of the typical annual range of operation and maintenance cost of irrigation water per acre of irrigated land in the year 1964 was made, using selected data from pages 109–111 of the Bureau of Reclamation's "Report of the Commissioner, 1965; Statistical Appendix." According to this estimate, the current range of typical operation and maintenance costs per irrigated acre in projects constructed by the Bureau of Reclamation is from about \$3.90 in the Kansas, Nebraska, Dakota, Wyoming, Utah, Montana, Idaho area to about \$19.40 in the Arizona-southern California area. Chart 1 shows the numbers of projects having given annual operation and maintenance costs per irrigated acre.

CHART 1.—FREQUENCY DISTRIBUTION OF SELECTED BUREAU OF RECLAMATION PROJECTS' ANNUAL OPERATION AND MAINTENANCE COSTS PER IRRIGATED ACRE

Cost per acre	Number of projects per 0&M cost category
\$ 0-\$ .99 \$ 1.00-\$ 1.99 \$ 2.00-\$ 2.99 \$ 3.00-\$ 3.99 \$ 4.00-\$ 4.99 \$ 5.00-\$ 5.99 \$ 6.00-\$ 7.00 \$ 7.00-\$ 8.00 \$ 8.00-\$ 9.00 \$ 9.00-\$10.00 \$ 11.00-\$12.00 \$ 12.00-\$13.00 \$ 13.00-\$14.00 \$ 14.00-\$15.00 \$ 15.00-\$16.00 \$ 16.00-\$17.00	0 5 10 15 20 25 30  4 13 16 26 16 12 13 7 8 4 4 5 5 2 1 1 2 1 1 2 5

Source: U.S. Bureau of Reclamation; Report of the Commissioner, 1965.

<sup>6 &</sup>quot;Census of Agriculture, 1950," vol. III, p. 88.