MONTHLY REPORT OF ACTIVITIES Fish Springs Refuge July 24, 1964

I. INTRODUCTION

Weather for the month has been hot and dry. Only 0.02 inches of precipitation have been received. The high daytime temperatures (max. 102°F) have greatly reduced the water table within the marsh. By the close of the month, evaporation was approximately 0.7 inch a day. A and H pools are beginning to show the effects of the high rate of evaporation and transpiration.

II. ACTIVITIES AND ACCOMPLISHMENTS

Force Account Construction: The general drying condition has been of great benefit to our gravel job. The reduction in soil moisture has resulted in firmer haul roads which require little back filling. Progress is excellent; to date the following work has been accomplished.

Item	Length	Cu. Yds.	Cost
J pool approach road D pool approach road F pool approach road F dike road surface East arm J dike gravel facing East arm D dike gravel facing C dike gravel facing Totals	2,000° 2,600° 2,200° 7,000° 1,200° 2,000° 7,300°	3,599 2,802 9,961 2,317 1,217 1,260 5,584 26,740	\$ 1,949.00 \$ 1,094.00 \$ 4,235.32 \$ 1,913.76 \$ 751.88 \$ 953.88 \$ 5,955.68 16,853.52

Headquarters development was brought closer to completion with the seeding, fertilizing, and mulching of 18,000 sq. ft. of lawns.

Biological: During the forepart of the month, 87 mourning doves were banded. The farm crops in units I and II were irrigated. 1 1/4 miles of A pool shoreline and 1 mile of H pool dike were planted to rootstocks of hardstem bulrush. H pool exhibits an excellent stand of alkali bulrush. This stand was established by seeding in June of 63. The pool is now well stocked with a seed crop.

Maintenance: Routine, except the hanger area was given an extensive cleanup. An open storage area was established north of the Thomas House and unsightly items such as barrels, scrap metal, old tires, etc., were relocated there to improve the appearance of the headquarters area.

Problems: Our tree and shrub plantings are having difficulty surviving the summer heat despite weekly waterings. A heavy infestation of grasshoppers is not helping this situation. Generally, the chinese elms, locust, and green ash are doing well; while the spruce, honeysuckle, lombardy poplar, and burning bush are showing poor survival. Green ash seems to be especially well adapted to this area.

Mr. Nelson of the regional office and Mr. & Mrs. William Ackerknecht of the Wash-ington office visited the refuge on July 23 and 24.

