

ANNUAL WATER PROGRAM 1965

PUNGO REFUGE

In reviewing the contents of this plan, it must be understood that in view of existing facilities at this station there is only the possibility of limited water management under normal conditions and no control during periods of excess precipitation. The major problem confronting the program is disposition of excess water as a prerequisite to all phases of development and management. Therefore, regardless of plans outlined on paper, success in water management for calendar year 1965 is pretty well at the mercy of nature's elements.

Pungo Lake consisting of 2800 surface acres is the only facility available with reasonable possibilities of fluctuation control. In addition to surface collections from lands bordering the lake, three laterals have been permitted to discharge into this body for an unknown period. There is no record of efforts to effect a drawdown sufficient for facility study or improvement to any degree prior to the summer of 1964. No beach markers or other monuments are available for determining the exact lake elevation at full stage level.

On June 20, of 1964 effort was initiated to effect a drawdown of Pungo Lake for multiple purpose of exposing shoreline areas for observation and planning of debris removal and promoting a vegetative cover on exposed mud flats. This was ~~was~~ attempted by removal of stop logs from the only existing control structure as indicated on attached map.

A 24 inch drawdown was effected during the first 15 days. At that point an extensive debris collection at the entrance to the discharge channel prevented additional fluctuation. The debris collecting and embedding in the deep muck was subject to removal only by a high floatation dragline or demolition. With no dragline available, preparation was made to apply demolition to effect an additional 18 inch drawdown. Hurricane rains prevented this operation and for the remainder of the year the elevation ranged from normal full stage to 12 inches below. Various species of grasses of limited or no value to waterfowl produced noticeable growth over most of the mud flats. Only limited quantities of smartweed and wild millet could be located following the drawdown. Plant success was rendered near nil by uncontrolled fluctuation which followed.

As previously emphasized food production within the lake was near nil. However, the facility did provide resting and roosting accommodations for practically all ducks and geese using the refuge and vicinity. Peak populations of 50,000 Canada geese and 15,500 ducks of mixed species

resulted in an annual day-use figure of 9,256,205 for ducks and 13,935,600 for geese.

No disease or unusual biological factors were evident.

Proposals for 1965 include backing the three laterals at the point of discharge into the lake. This will assist to some degree the drawdown effort also eliminate a portion of the black, acid laden water presently adding to the extreme adverse conditions. A drawdown should begin at the earliest possible date following spring rains that major canals and drainage facilities will permit. Demolition work should be accomplished as soon as the elevation is lowered to the point that existing debris reduces lake discharge, resulting in an approximate $3\frac{1}{2}$ foot fluctuation from full stage. The elevation should be permitted to remain as low as weather conditions will permit until the observation of early migrants. At that time stop-logs should be replaced at such intervals as to gradually cover mud flats and any vegetation which may have been successful in producing waterfowl foods. A full stage elevation should be reached by the beginning of the waterfowl hunting season and maintained comparable throughout.

Mud flat seedings of millet, ryegrass, etc. is not recommended as yet, due to uncertainty of water elevations throughout the hurricane season.

Other water facilities, including major canals, catcher ditches and V drains are scheduled for maintenance to the extent of available funds, in promoting better water disposal from agricultural lands and the area of Pungo Lake.

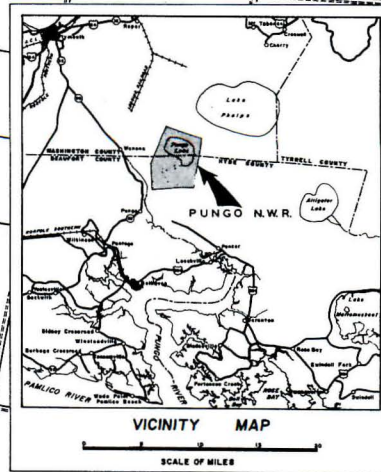
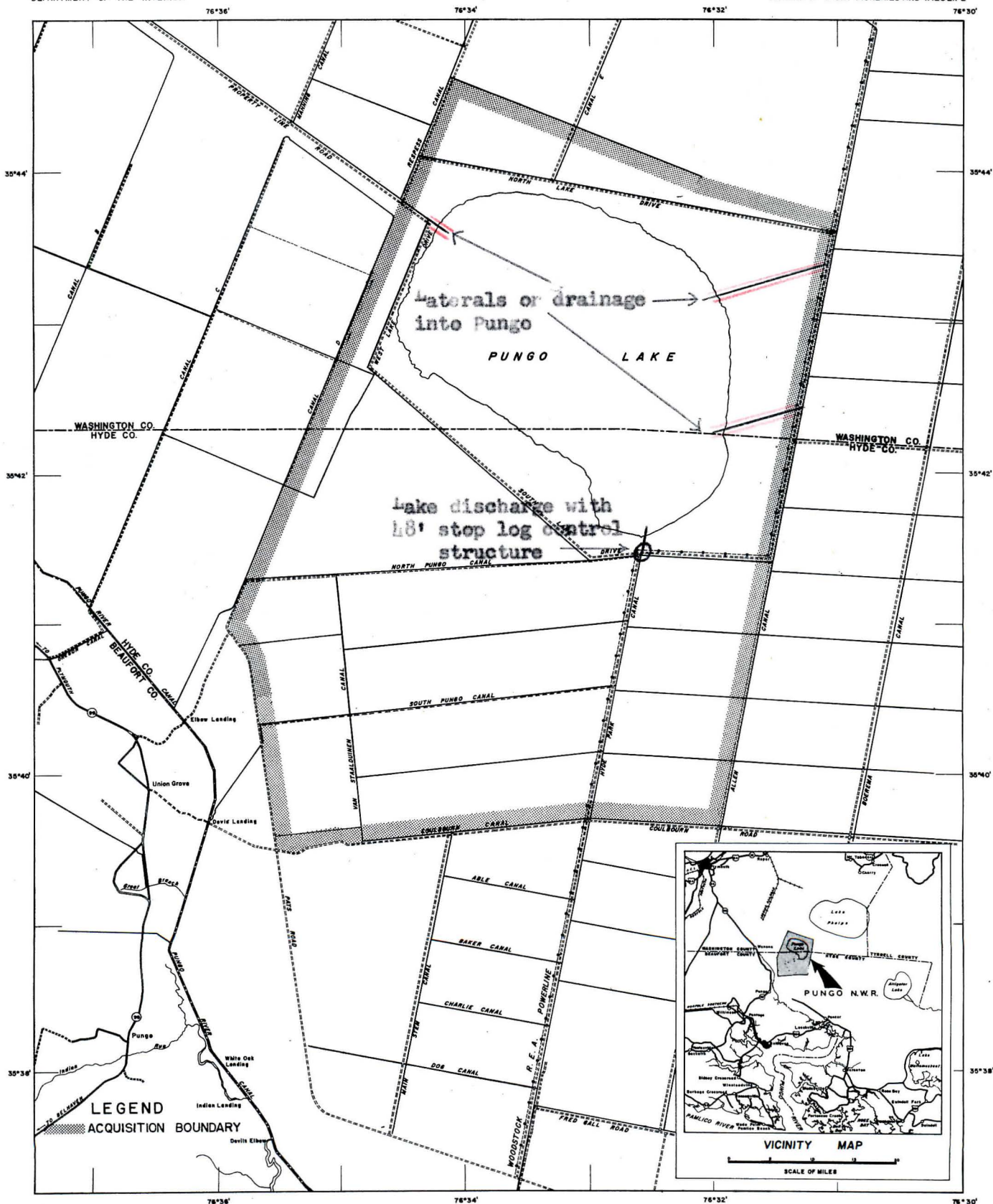
Based on observations and experience throughout 1964, this would be the extent of local recommendations with reference to water management, realizing that without proper weather conditions most of the afore mentioned recommendations will be impossible.

PUNGO NATIONAL WILDLIFE REFUGE

UNITED STATES
DEPARTMENT OF THE INTERIOR

HYDE AND WASHINGTON COUNTIES, NORTH CAROLINA

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE



COMPILED IN THE BRANCH OF ENGINEERING
FROM SURVEYS BY GEOLOGICAL SURVEY
AND AERIAL PHOTOGRAPHS.

ATLANTA, GEORGIA

MARCH, 1963



MEAN
DECLINATION
1954

4 R N.C.

404