

ANNUAL WATER PROGRAM - 1966

PUNGO REFUGE

In consideration of the primary objective of an annual water program and in view of near nil manipulation facilities, this preparation is of little significance. The primary problem and prerequisite to all manipulation success is disposition of excess. This problem is multiple, with fifty to seventy-five percent deficiency in quantity and standard of refuge facilities and a deplorable state of maintenance of all canals and rivers from Pungo to the Pamlico Sound. Again, as in 1965, regardless of plans prepared and approved, success in managing water problems deviating to any degree from normal, will be limited and to be endured in accordance with nature's provisions.

In view of previously mentioned facility deficiencies and mindful of elevation consistency ranging from 10 to 17 feet sea level over the 12,229 acres, it is easy to comprehend the problem. This is further aggravated by a situation inherited through procurement of the original and major tract of refuge lands. The situation includes flowage of water from approximately 7,800 acres of private lands north and west of Pungo, into and through refuge facilities.

At present, Pungo Lake, consisting of 2,800 surface acres, is the only facility with fluctuation control possibilities. In addition to surface collections from lands bordering the lake, three laterals (see attached map) have been permitted to discharge into the facility. Lateral number one or Property Line Canal has been most instrumental in creating the deplorable silt condition present in the lake. As scheduled for 1965, lateral number one was blocked to prevent further lake silting. Heavy rains in July knocked out the block and considerable silting was evidenced. Laterals two and three were left open after a study revealed little or no silting was occurring due to retarding action created by negative growth.

According to proposals, the drawdown of Pungo Lake began around June 1, with fair progress for two weeks. Demolition was employed in removing silt and debris from the discharge channel and another eight inch drawdown was effected during the following ten days with a total fluctuation of 30 inches. The operation was progressing nicely when excess precipitation of late June and early July completely refilled the lake and deposited more debris in the discharge channel. Drawdown was again started in August and a low of three feet from full stage elevation was effected by October 15. This was too late for the promotion of vegetation on mud flats. However, since waterfowl populations have not demanded maximum surface acreage, we again deviated from plans and maintained a low elevation with the intent of drying much of the waterlogged debris and floating to the shoreline at the next full stage. Considerable use has been made of small pools and pot holes between the low water line and lake shore by various species.

Within the year, refuge water facilities accomadated resting and roosting population peaks of 21,900 ducks and 42,000 geese with a total of 4,551,532 waterfowl use days.

No disease or unusual biological factors were evident.

Proposals for 1966

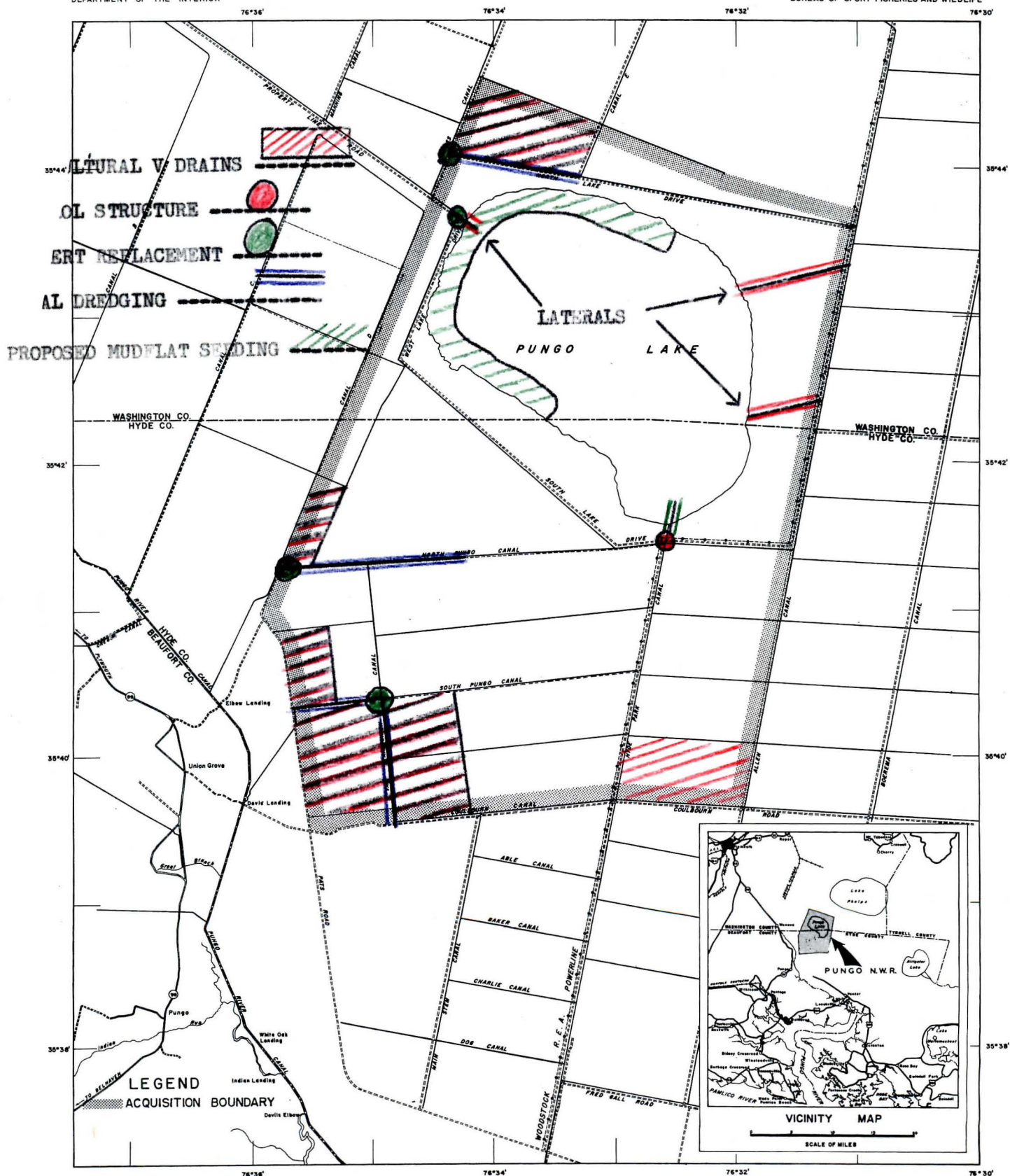
1. Refilling lateral number one sufficiently to prevent additional silt and debris from entering Pungo Lake.
2. Install larger culver~~ss~~ at intersections of Respass and North Lake Canals and Property Line and West Lake Canals to accelerate discharge of water presently creating greatest burden on lake elevations.
3. Cut new discharge channel from Pungo Lake to stop-log control structure at head of Hyde Park Canal.
4. Re-dredge VanStaalduinen Canal and necessary portions of North Lake, North Pungo, South Pungo and West Lake Canals for promotion of drainage necessary for agricultural production. Add 50 to 75 percent more "V" drains to 1,250 acres of agricultural lands presently under cooperative farming agreements.
5. Under normal weather and water conditions, start lake drawdown on or about June 1, as a multiple purpose operation of rehabilitation and waterfowl enhancement. On success of effecting and maintaining early drawdown, propose mud flat seeding of 30 acres of recommended varieties of millet and or 100 acres of rye grass along south, west, and north shores of lake.
6. If desired elevation is maintained until arrival of early migrants, the upward fluctuation will be gradual, slowly inundating millet and native vegetation in the lower areas as populations increase, leaving rye grass on the outer fringes exposed until late season. A full stage elevation will be scheduled on or about December 31.

These proposals are submitted with the reminder that prevailing weather and water conditions will be controlling factors. Based on observations and experience of 1964 and 1965, this would be the extent of local recommendations pertaining to water management for Pungo 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

Scale

0 2000 4000 6000 8000 10,000 FEET

0 1/4 1/2 1 1-1/2 2 MILES

MEAN
DECLINATION
1954

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