

WHITE RIVER WILDLIFE AREA
Master Plan Concept Element

Property Task Force

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WHITE RIVER WILDLIFE AREA

SECTION I - ACTIONS

GOAL, OBJECTIVES, AND ADDITIONAL BENEFITS

Goal

To manage a state wildlife area for duck and pheasant production, public hunting, trapping, fishing and compatible recreational and educational opportunities.

Annual Objectives

1. Produce 2 ducks per acre on 600 acres of permanent water (1200 ducks).
2. Produce an average fall population of 300 wild rooster pheasants.
3. Provide for 200,000 fall goose use-days during the fall migration with a peak population of 7,000 geese by 1995.
4. Provide 20,500 participant days of hunting and trapping opportunities as follows:

<u>Activity</u>	<u>Participant Days</u>
A. Ducks	3,000
B. Geese	3,000
C. Pheasant	3,500
D. Deer (gun & bow)	6,000
E. Furbearers	2,000
F. Other game	3,000

5. Provide 800 angler days of fishing.

Annual Additional Benefits

1. Contribute to the habitat of migratory endangered and threatened species as well as migratory and resident nongame species.
2. Provide opportunities for 6,000 participant days of other extensive-type recreation including hiking, boating, cross country skiing, snowshoeing, and nature observation.
3. Harvest forest products when consistent with property objectives.

RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

Property Development

To complete the proposed goals and objectives of the property additional improvements are needed. In addition to the management goal is the continued acquisition efforts to meet the property acreage goal. Under the management goal, a waterfowl refuge of about 2,000 acres could be established within the present natural marsh, river, and agricultural fields. This refuge could hold a fall peak of 7,000 geese and 3,000 ducks by 1995.

Three small flowages with 15 associated dugout ponds will be developed as well as 4 parking lots, and a scenic overlook. Dense nesting cover for waterfowl and pheasants will be established by share-croppers and work unit crews. All present annual work maintenance projects on existing facilities will be continued with increased use of controlled burning, mowing, sharecropping and spraying to improve and maintain 100 acres of grassy areas. Under this management goal 2,000 acres could be annually closed to hunting during waterfowl season. The closed area and the public hunting boundaries will have to be marked with posts and signs. Because of the large acreage this will take considerable time and expense. There will be very little loss, by flooding, of upland game, sandhill crane and deer habitat, as well as the natural marsh areas.

Land Acquisition

The current ownership is 10,771.83 acres with an original approved acreage goal of 16,557 acres. It is recommended to make boundary changes. The large area on the west end of the property is to be deleted because it is now an artificial lake-housing development and developed muck farm. The several small additions were part of complete units bought within the boundary. These parcels are now included in property operation and development. Because of possible trades, the fact that certain parcels are not needed to meet the goals and objectives of the property and some parcels may not be purchased, the acquisition goal within the boundary is to be reduced to 14,000 acres.

Thirty-two ownership tracts will remain within the boundary. Acquisition will continue until remaining acreage goal is completed. The recommended acquisition boundary lines are shown on Fig. 2.

Timetable and Costs

Acquisition of parcels is completed by negotiation as they become available for purchase from willing sellers. Development projects can be initiated as key parcels are purchased. To complete the entire acreage goal, the total estimated acquisition cost is 2.5 million dollars. The estimated costs of development is \$200,000. Annual operations will be an estimated \$20,000 with the eventual hiring of additional manpower (1 permanent NRA II).

Other

Because of the recreational potential adjacent to and within the area and close proximity to large cities, private developments are likely to occur. An artificial lake has already been developed within the NW corner of the area. The work management unit also has wildlife responsibilities in Marquette and Green Lake counties in addition to four other wildlife areas including the intensively managed Grand River Waterfowl Area. Any increased management of this property will require more money and manpower.

Firewood permits will be issued to remove undesirable trees that cause a hazard to facilities, roads and parking areas or are species with little or no wildlife or commercial value.

One of the primary species of trees on the property is oak. Because oak is an important mast producer for wildlife food, harvest is not immediately planned and any cutting of timber will be limited to maintain species usable to wildlife. Regeneration of oak may require a selective cutting and planting program. Pulpwood sales may be initiated to remove such species as maple, aspen and ash.

Fifteen old building sites need further landscaping and some permanent well capping to eliminate health and safety hazards. These sites also act as dens for predators that may have a detrimental effect on nesting birds. Purchase of more buildings within the boundary will be avoided if possible.

New acquisitions involving buildings may require subsequent sales with acreage or salvage of surplus buildings and cleanup of debris, capping wells and landscaping the sites. Two old building sites are currently being used for management of the property. About $\frac{1}{4}$ mile of boundary line fencing is required annually and accomplished either by agreements or DNR crews.

SECTION II - SUPPORT AREA

BACKGROUND INFORMATION

History of Property

The preliminary Project Statement and first Land Acquisition on the White River Marsh was approved by the Wisconsin Conservation Commission on March 30, 1962. Various sportsmen's clubs and individual conservationists supported the establishment of a state refuge and wildlife area in the 1940's and 1950's. Aldo Leopold investigated the marsh in the 1940's and wrote a biological report that contained field observations on a wide variety of wildlife species. Wildlife species such as Prairie Chicken and Bobwhite Quail were once very abundant on the marsh area. At that time, Mr. Leopold recommended Federal or State purchase of the marsh for conservation purposes. Much of the uplands were once farmed and the marshlands cut and burned for the production of marsh hay and grass. The marsh grass was used for cattle feed, bedding, and for the production of carpet fiber at nearby factories in Oshkosh.

Current Use and Management

Hunting is the main use made of the property at the present time. Gun and bow hunting for deer are the leading activities presently. The greatest hunter-use on the property occurs on the opening day of the

deer gun season. The property contains excellent deer habitat. The large central marsh-woodland area, because of its limited access, offers quality deer hunting for those willing to expend the effort.

Pheasant hunting pressure has been moderate with other hunting pressures for such species as squirrel, woodcock, rabbit and ruffed grouse are moderate to light.

Waterfowl hunting pressure is appreciable in the natural marsh, flowages and water courses on the area. Accessibility somewhat controls excessive numbers of waterfowl hunters, but success in bagging teal, mallard, wood duck and geese is good, especially during wet years when the entire marsh floods. About 1,000 ducks plus 100 geese are harvested on the property during these years.

Other uses made by the public of the project include: Nature study, bird watching, canoeing, berry and nut gathering, mushroom picking and hiking. Trapping of fur bearing animals often occurs on such species as muskrat, fox, mink, otter, raccoon and beaver. Fishing activity is confined to the White and Fox Rivers where walleye, northern pike, smallmouth bass, panfish and catfish are taken from the shorelines or boat.

Most notable nonconsumptive uses made by the public of the project include observation of migratory birds, notably the Canada geese, Sandhill crane. The marsh normally floods each spring. The leftover corn food patches and flooded

cut grass marshes (from permits and sharecropping) attract considerable numbers of waterfowl. As many as 20,000 geese, 500 to 1,000 sandhill cranes and 5,000 ducks will use the area as a resting and feeding area in the months of March, April and May. A Seneca-St. Marie town road named White River Road runs through the southeast portion of the property. This is a well-maintained 3 mile gravel road that has been designated a state rustic road.

On the property, the annual DNR wildlife management activities now include: sharecrop farming for wildlife food and cover on 975 acres (7 contract agreements); 30 land-use permits issued primarily for the cutting of marsh hay and firewood; mowing of 40-80 acres of field invaded by brush and trees and of 2.25 miles of access trails; 2.5 miles of access roads and 40 parking lots mowing and grading; five wildlife population and habitat surveys; stocking of 1,000 mature cock pheasants; maintenance posting on 27 miles of boundary, 30 parking lots, maintenance of 4 project signs; removal of several miles of old interior fencelines (continuing activity since 1963); and $\frac{1}{4}$ mile of fencing on property lines.

Management of the vegetation is mainly accomplished by use of share-cropping contracts. Marsh hay cutting controls tree and brush invasion of the marshlands and functions as a habitat improvement for wildlife such as openings do in forested lands. Of the cropland under the share-cropping program 700 acres are maintained in grassy nesting cover and 45 acres of corn is left for winter wildlife food in 20 scattered food patches near winter cover.

Wildlife management development since the project started has included: construction of 12 large waterfowl dugout ponds and 4 flowages (containing 58 acres of water) with 3 water control structures and 2,750' of dike; erection of 8 large project signs, 4 road gates and development of 30 parking lots with connecting service trails, planting of 80 acres of switchgrass upland nesting cover.

There are some farm buildings remaining on the project from past land purchases. Three of the buildings will be sold when a tenancy expires. Three of the buildings have been renovated for storage and shop purposes. In the past 15-20 years, approximately 435 buildings have been sold and removed from 43 farm sites. The farm sites were cleaned up, seeded to grass and now serve as habitat for birds and animals and for parking lots for those who use the wildlife area. Approximately 50 miles of old interior fences have been removed and 5 miles of fence built on exterior lines. Much of this fence removal work was completed by Youth Conservation crews from Mecan Youth Camp.

RESOURCE CAPABILITIES AND INVENTORY

Soils and Geology

The marsh type soils are peat and muck ranging in depth from 12" in the lower White River area to 90" in the Upper White River area. The upland soil types vary from sand to silt loams. The western and southern portions of the property have generally sandy soils that can become droughty.

Continued Acquisition and Small Flowage Development

Continue land acquisition as parcels become available for purchase and establish 3 flowages and 15 dugout ponds as sites become acquired.

Acquisition of remaining acreage to complete the goal for an estimated 3 million dollars would be spread over 30-40 years. Hunter use will slightly raise.

Advantages - A) Annual production of ducks be eventually increased to about 1,200. B) No loss of public hunting opportunity, crane, deer, and upland game habitat or proposed natural areas.

Problems - A) Require additional seasonal employe. B) Limited goose use.

Continued Acquisition, Small Flowage and Waterfowl Refuge Development (No large dam Development)

Continue land acquisition as parcels become available with purchase to reach goal of 14,000 acres for an estimated 2.5 million dollars. Establish a 2,000 acre refuge within natural marsh, river, and agricultural fields. Establish 3 flowages and 15 dugout ponds as sites are acquired.

Advantages - A) Could hold a peak of 7,000 geese and 3,000 ducks in the fall season. B) No loss of upland game, crane, deer habitat or affect

The better silt loam and sandy loam soils are located on the northern and eastern portions of the property. These areas are generally better suited for agriculture but somewhat poorly drained.

Several glaciers passed through Green Lake County during the Ice Age and are responsible for White River Marsh's general physical geography. Large marshlands and the surrounding gently rolling uplands are the common features of the upper Fox River watershed.

Wildlife

All the wildlife common to central Wisconsin can be found on White River Marsh. Most notable species include deer, fox and gray squirrels, rabbits, ruffed grouse, pheasant, fox, raccoon, quail, muskrat, mink, otter, beaver, mallard, Canada goose, blue and green-winged teal, pintail, wood duck, woodcock and black duck. A wide variety of migratory waterfowl often use the area in spring and fall. Non-game wildlife common to the area include the sandhill crane, myriads of songbirds and many types of predatory birds.

Fish

Various fish species populate the waters on and bordering the property: Northern pike, crappie, walleye, perch, bluegill, sunfish, large and small-mouth bass, channel catfish, flathead catfish, bullheads, suckers, dogfish, carp, dace and other minnows are found in the White River, Sucker Creek, Fox River, flowages and ponds.

Presently, there are no known endangered or threatened species of fish within the property. The Office of Endangered and Non-Game Species (DNR) will be consulted regarding inventory needs. The Great Egret has been seen on the property but no nesting colonies exist.

Vegetation Cover

The large open expanses of marshland contain such vegetation as blue-joint grass, reed canarygrass sedges. The balance of the wetlands contain cattail, bulrush, sagittaria, three-square, pond lily, pondweeds, coon-tail and water weed. Other portions of the low marsh contain shrub species such as alder, red osier dogwood and willow. The lowland forest areas contain cottonwood, willow, soft maple, ash and elm. In portions of the Upper White River marsh with peat 60"-90", red maple, tamarack, birch and aspen are present.

The upland areas that are not cropped contain various grasses and annual plants associated with abandoned fields or pastures. The upland forested areas contain mostly white and red oak, shagbark hickory, birch, basswood, elm, aspen and white pine. No endangered or threatened plant species are known to be found on the property. Two large natural sedge meadows are shown on Figure 4. The cover type breakdown is 65% marsh and brush, 20% cropland and grasslands, 15% timber.

Water Resources

Two water courses flow through, and one lies adjacent to the property. The White River enters the property on the northwest corner and flows

through the entire area. The river is of relatively high velocity. The water is normally quite clear originating from a sandy soil watershed. During the summer months carp cause the river to become turbid. The water quality is of medium fertility with a good year-around flow. The White River flows into the Fox River in the SE portion of the property. The White River is 10 miles long, with 5 feet maximum depth, and comprises 55 acres of water.

The Sucker Creek, a small creek, enters the area from the north and flows through the eastern portion of the area. The creek is of medium fertility and flow is constant except during droughty conditions. The length is 3.5 miles with a maximum depth of three feet, comprising 9 acres of water.

The Fox River forms the SE project boundary. It is a large warm water river and maintains a year-round flow. It is of high fertility and becomes turbid in the summer months. The river contains many ox-bows and long meandering hooks and widespreads. The stream velocity is quite low. Dredging and channel changing occurred quite frequently in the late 18th and early 19th century. The river has a system of dams that create a series of shallow sluggish pools of water. A substantial carp population has a negative impact on the water quality of the river. The river length within the property is 3½ miles (one side only) with a maximum depth of 6 feet.

Historical Archaeological Features

The State Historical Society was contacted. An archaeological feature is presently recorded in NW¼, Sec. 33, T17N-R12E (Appendix and shown on Figure 5). The Historical Society will be contacted again prior to implementation of the Master Plan.

Land Use Potential Areas (Figure 4)

Resource Protection - Habitat Preservation (HP). The Fox River flood plain is an important fish spawning area for such species such as walleye and northern pike. Waterfowl and furbearer use is limited to the more wet and natural water areas. Game cover is excellent for deer, pheasant, crane, woodcock and ruffed grouse. No major alterations are planned or feasible for this area other than some vegetation control in the brushy areas and shoreline stabilization.

The Scenic Areas - These are mainly narrow wooded areas adjacent to roads and water courses that have unique aesthetic qualities needing protection from development and timber harvest.

Resource Development - Wildlife Management and Fisheries Areas (RD2) - The management areas make up the more expansive units of the property. The development projects will be mainly for waterfowl but also some upland game management will occur. Several farm buildings are now being used for storage and work shops. These buildings are nearing completion for administration, shop and storage uses.

RESOURCE MANAGEMENT PROBLEMS

Recreational Development

A private development has encroached upon the NW corner of the property within the original project boundary. The marsh was excavated into "lagoons" with fill being deposited on the upland ridges and islands. The excavated areas have filled with water. The area is now being subdivided into small lots where houses and cottages are built. More of this type of development can be expected and several property owners within the boundary have been contacted regarding the sale of the property to developers.

Off-road Vehicle Use

The surrounding area is a large reservoir of all kinds of off road vehicles. Constant closing of trails, gating and patrol is necessary to stop the abuse to the landscape and vegetation.

Public Overuse

Deer gun pressure is greatest early in the season. Development of the area will increase waterfowl hunting. The area is within an hour's drive of the populous Fox River Valley.

Private Ownership

Flowage and refuge development cannot proceed until a number of tracts have been purchased.

Vandalism, Littering, Camping

The area must be maintained for only day-use activities. Even with this restriction, considerable effort must be maintained to restrict abusive uses of the property.

Difficulties in Fire Control

Large marsh expanses pose problems for control of wildfires. Fire control specialists have plans and resources that can control all but the most extreme fire situations.

RECREATION NEEDS AND JUSTIFICATION

Being within a moderately high populated area of private developments (rural housing, subdivisions, recreational facilities and drainage), protection of marsh habitat associated with the White and Fox River flood plain are essential for the long range well being of waterfowl and fish resources. Demands for recreational opportunities are increasing, and waterfowl hunting pressure is heavy on many of the intensively

managed areas. Increasing goose use on this property is also planned, as there is a need to establish more goose management areas in east-central Wisconsin.

Increased demands for more nature study-wildlife observation type programs will undoubtedly occur and this property, being close to metropolitan areas, can contribute to this need.

ANALYSIS OF ALTERNATIVES

Status Quo

No further land acquisition, flowage or refuge development. Wildlife production and use would continue at present level. Hunting intensity would likely remain stable or raise slightly. Geese and ducks would use natural marshes, rivers, flowages at beginning of hunting seasons with an annual duck production of about 800.

Advantages - No increase in budgets or manpower.

Problems - None, other than routine management. Goals and objectives would have to be altered to meet existing habitat capabilities.

Continued Acquisition and Small Flowage Development

Continue land acquisition as parcels become available for purchase and establish 3 flowages and 15 dugout ponds as sites become acquired.

Acquisition of remaining acreage to complete the goal for an estimated 3 million dollars would be spread over 30-40 years. Hunter use will slightly raise.

Advantages - A) Annual production of ducks be eventually increased to about 1,200. B) No loss of public hunting opportunity, crane, deer, and upland game habitat or proposed natural areas.

Problems - A) Require additional seasonal employe. B) Limited goose use.

Continued Acquisition, Small Flowage and Waterfowl Refuge Development (No large dam Development)

Continue land acquisition as parcels become available with purchase to reach goal of 14,000 acres for an estimated 2.5 million dollars. Establish a 2,000 acre refuge within natural marsh, river, and agricultural fields. Establish 3 flowages and 15 dugout ponds as sites are acquired.

Advantages - A) Could hold a peak of 7,000 geese and 3,000 ducks in the fall season. B) No loss of upland game, crane, deer habitat or affect

on proposed natural area. C) Annual production of ducks would be increased to about 1,200.

Problems - A) Loss of hunting opportunity on the 2,000 acre refuge. B) Will concentrate several hundred cranes in fall on refuge. C) Require an annual budget of \$15,000, and an additional resource assistance needed to complete operations. D) With smaller water acreage in refuge (200-1,000 acres depending on rainfall), some concern for waterfowl disease potential.

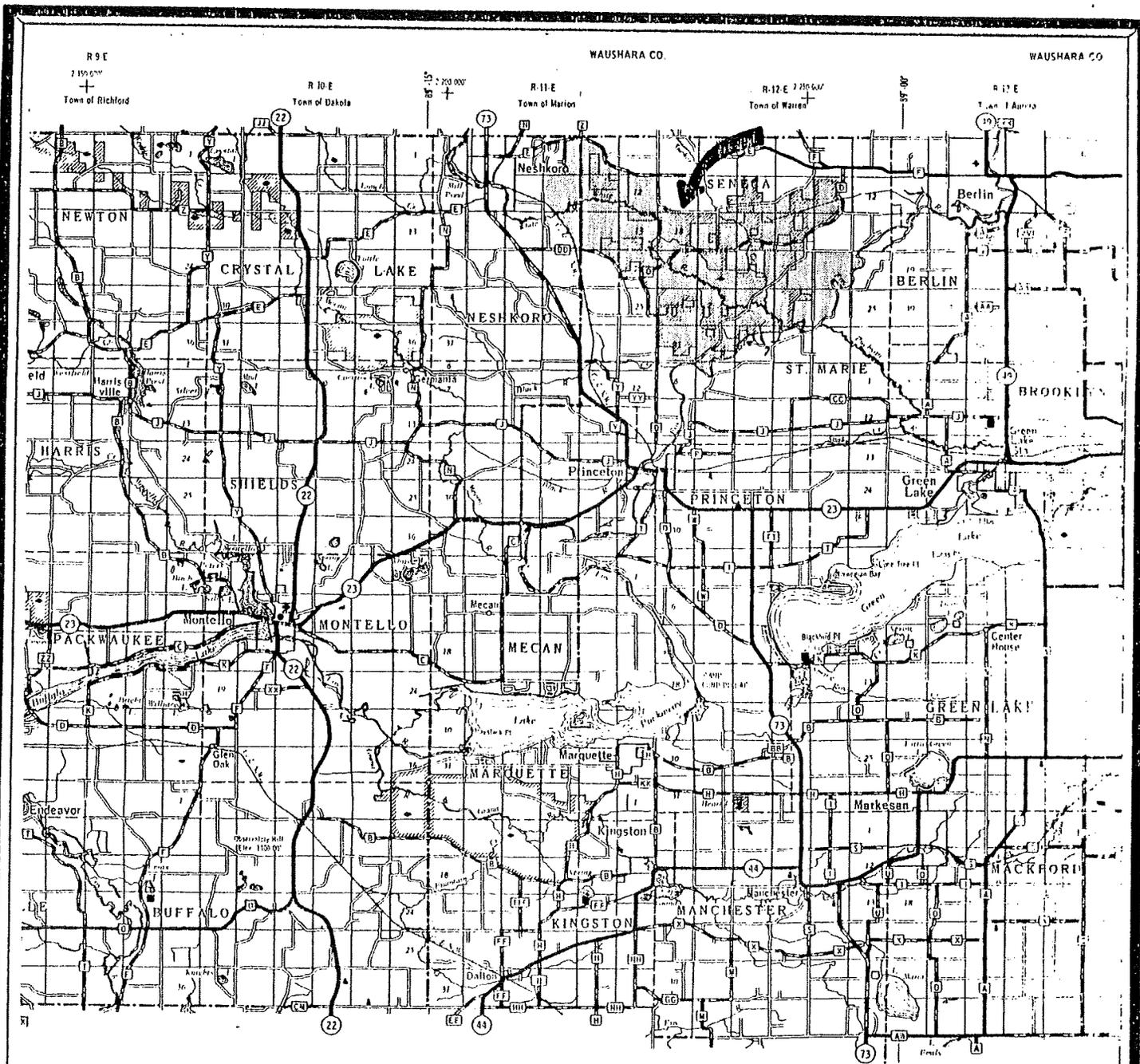
Increased Acquisition and Complete Large Dam and Refuge Developments

Establish a 2,500 acre flowage-refuge complex on the White River and Sucker Creek. Would require a selected purchase of at least 2,145 acres (15 ownerships). Land acquisitions would have to be expanded beyond the recommended goal of 14,000 acres. Costs and operations are estimated at: \$1,500,000 (dam), \$3,000,000 (land), \$38,000 (annual operations), \$80,000 (building), additional technician and assistant required.

Advantages - A) Could hold more than 10,000 geese and 6,000-8,000 ducks in the fall and increase total duck production to about 2,500. Would be a major waterfowl development.

Problems - A) Considerable combined costs involved in acquisition, development and operations. B) Hiring of additional employees. C) Project Manager and technician would have to be relieved of most other

responsibilities to complete this project. D) Loss of upland game, deer, crane habitat and public hunting opportunity. Proposed natural area would be flooded. E) Increased waterfowl hunting pressure and firing lines. F) Flowage development will affect drainage on property agricultural fields. Also, with flat topography to the north, problems and complaints from many farms outside the project boundary would occur because of the dams. G) Construction of large dikes and structures in the Fox River floodplain would cause dam maintenance problems and affect floodplain water storage. H) Daming the White River would hinder fish migrations upstream and the large shallow flowages would produce carp populations requiring control. Loss of natural fish spawning grounds will occur. Most of the large waterfowl developments in southern Wisconsin have excessive problems with carp.



LEGEND

- | | | |
|------------------------|--------------|--------------------------------|
| Portland Canal | U.S. & STATE | Chil. Town Boundary |
| Blum Concrete | COUNTY | Corporate Limits |
| Blumwood | | Nat. & State Forests |
| Gravel | | Airport |
| Earth | | Fish Hatchery |
| Town Road | | Game Farm |
| Fee Lane | | County Seat |
| Multilane Divided | | Unincorp. Village |
| Freeway | | Schools |
| Interchange | | Public Hunt or Fish Grid |
| Highway Separation | | Hospital |
| Interstate Highway No. | | Ranger Station |
| U.S. Highway No. | | Public Camp & Picnic Gids |
| State Highway No. | | State Park, with Campsites |
| County Map Letter | | County Park, with Campsites |
| Railroad | | County Park, without Campsites |
| Dam | | Wapigee, with Facilities |
| State Boundary | | Wapigee, without Facilities |
| County Boundary | | |



GREEN LAKE CO.
DEPARTMENT OF TRANSPORTATION

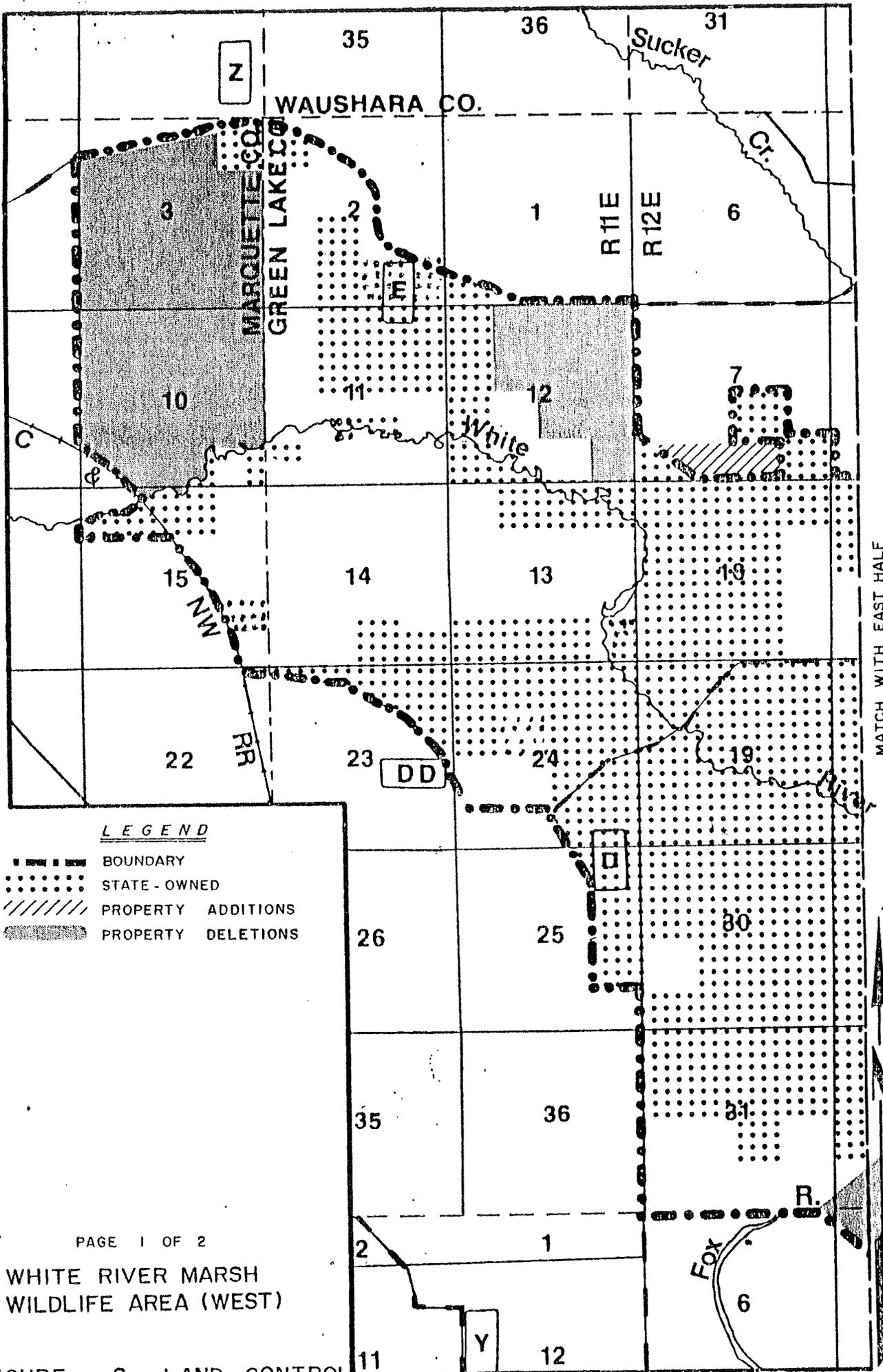
MARQUETTE CO.
DEPARTMENT OF TRANSPORTATION

STATE OFFICE BUILDING
Madison, Wisconsin
SCALE MILES
Corrected for

JAN. 1981
Compiled from U.S.G.S. Quadrangles
Based on Aerial Photographs

*Surface types on town roads not shown

FIGURE 1 LOCATOR



LEGEND

- BOUNDARY
- STATE - OWNED
- ////// PROPERTY ADDITIONS
- PROPERTY DELETIONS

PAGE 1 OF 2

WHITE RIVER MARSH
WILDLIFE AREA (WEST)

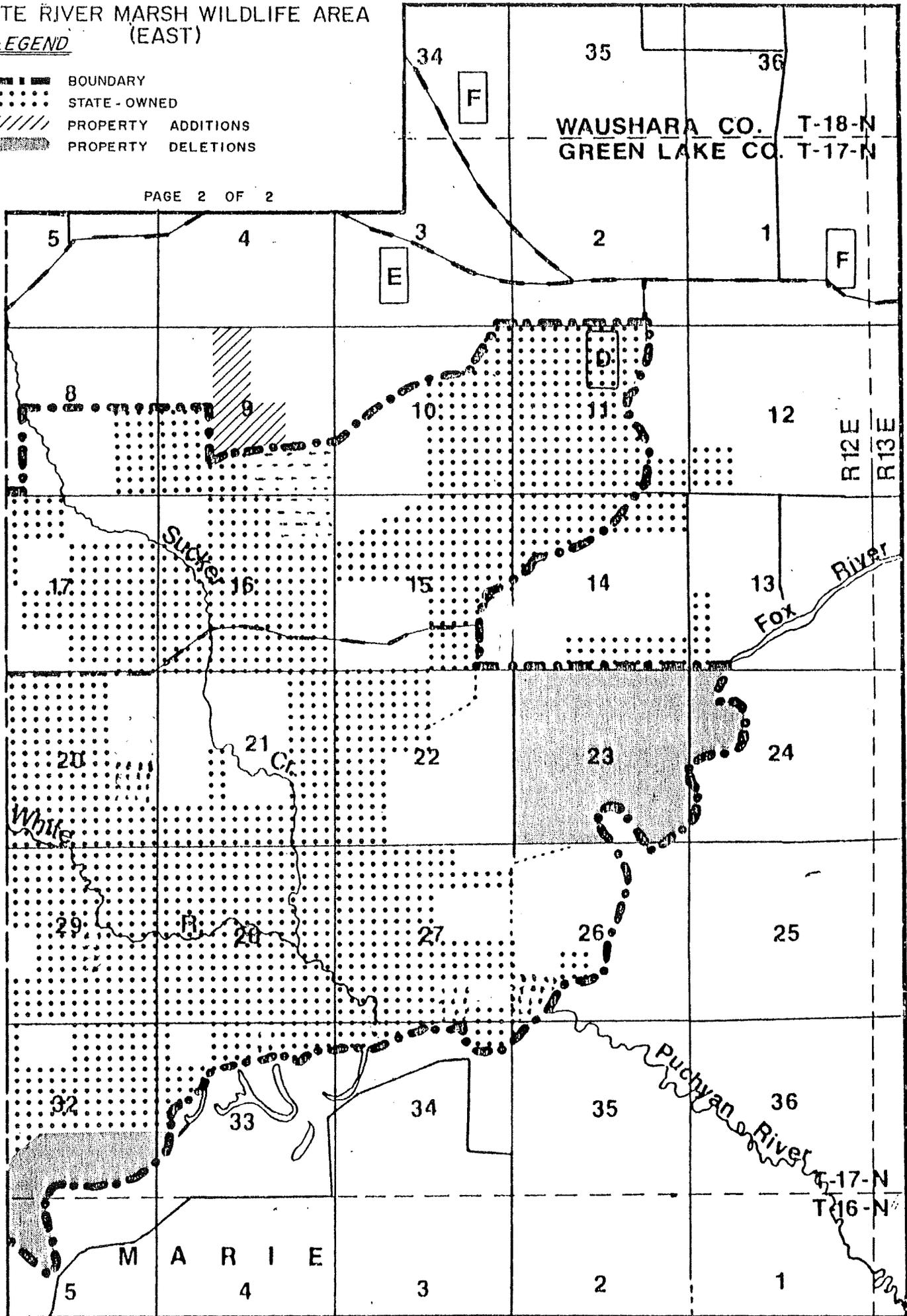
FIGURE 2 LAND CONTROL

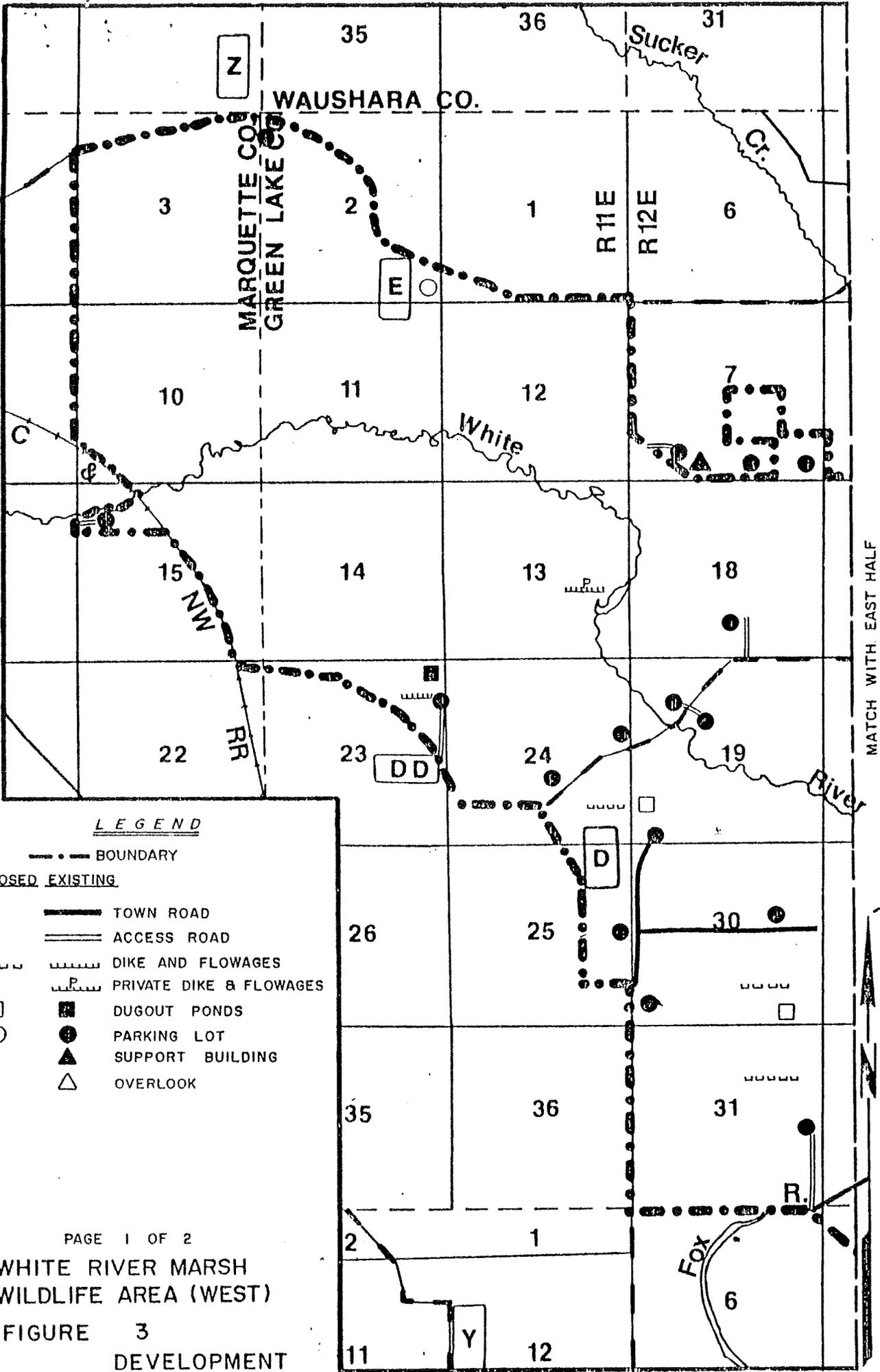
WHITE RIVER MARSH WILDLIFE AREA
(EAST)

LEGEND

- ▬▬▬▬ BOUNDARY
- STATE - OWNED
- ////// PROPERTY ADDITIONS
- ▨▨▨▨ PROPERTY DELETIONS

PAGE 2 OF 2





LEGEND

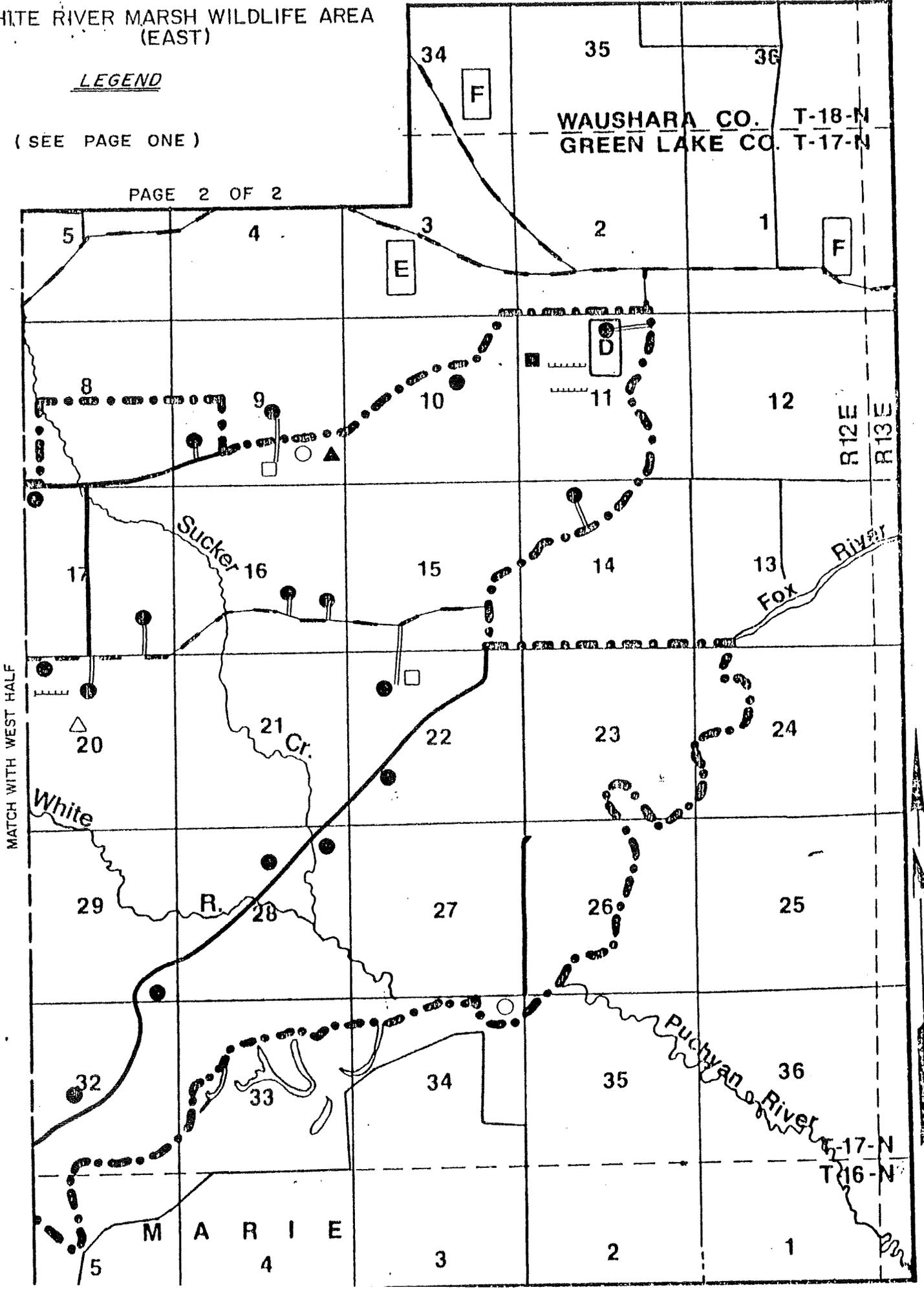
- BOUNDARY
- PROPOSED
- EXISTING
- TOWN ROAD
- ==== ACCESS ROAD
- ~~~~ DIKE AND FLOWAGES
- ~~~~ P PRIVATE DIKE & FLOWAGES
- DUGOUT PONDS
- PARKING LOT
- ▲ SUPPORT BUILDING
- ▽ OVERLOOK

WHITE RIVER MARSH WILDLIFE AREA
(EAST)

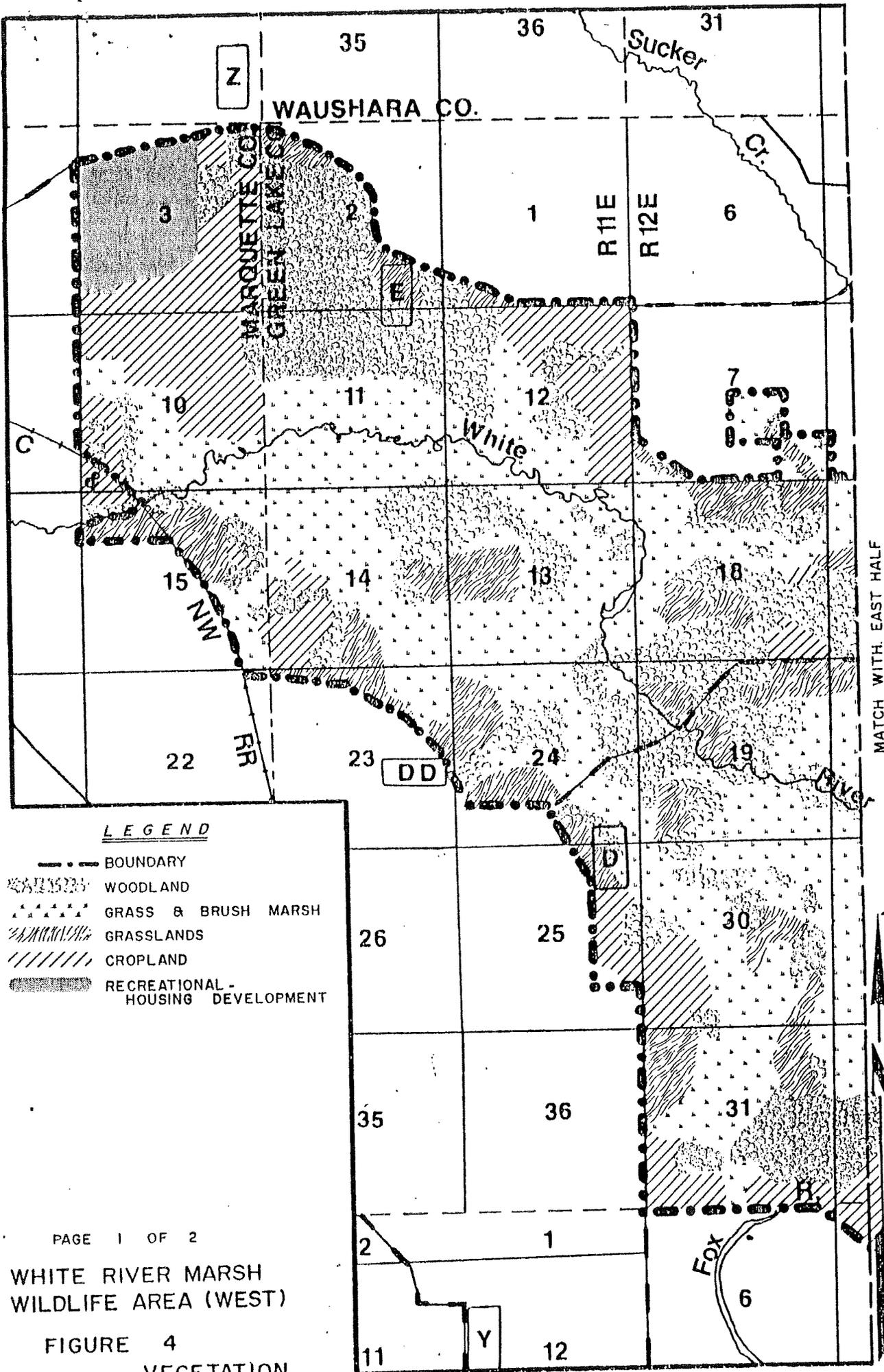
LEGEND

(SEE PAGE ONE)

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MATCH WITH WEST HALF



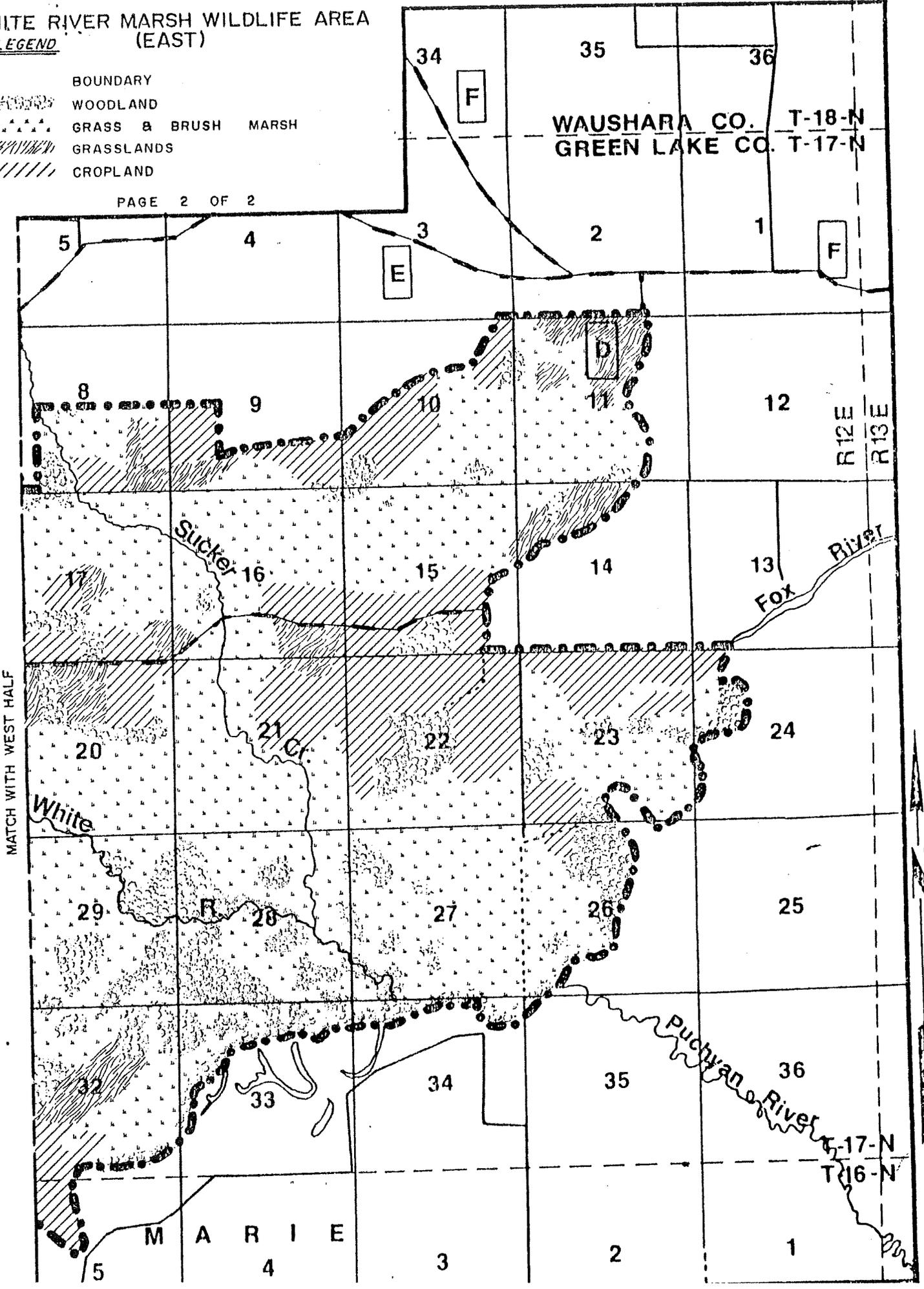
WHITE RIVER MARSH
WILDLIFE AREA (WEST)

FIGURE 4
VEGETATION

WHITE RIVER MARSH WILDLIFE AREA
(EAST)

- LEGEND
- BOUNDARY
 - WOODLAND
 - GRASS & BRUSH MARSH
 - GRASSLANDS
 - CROPLAND

PAGE 2 OF 2



MATCH WITH WEST HALF