NATURAL AREA INVENTORY

Wisconsin's Great Lakes Coast Revised 1980

COASTAL ZONE
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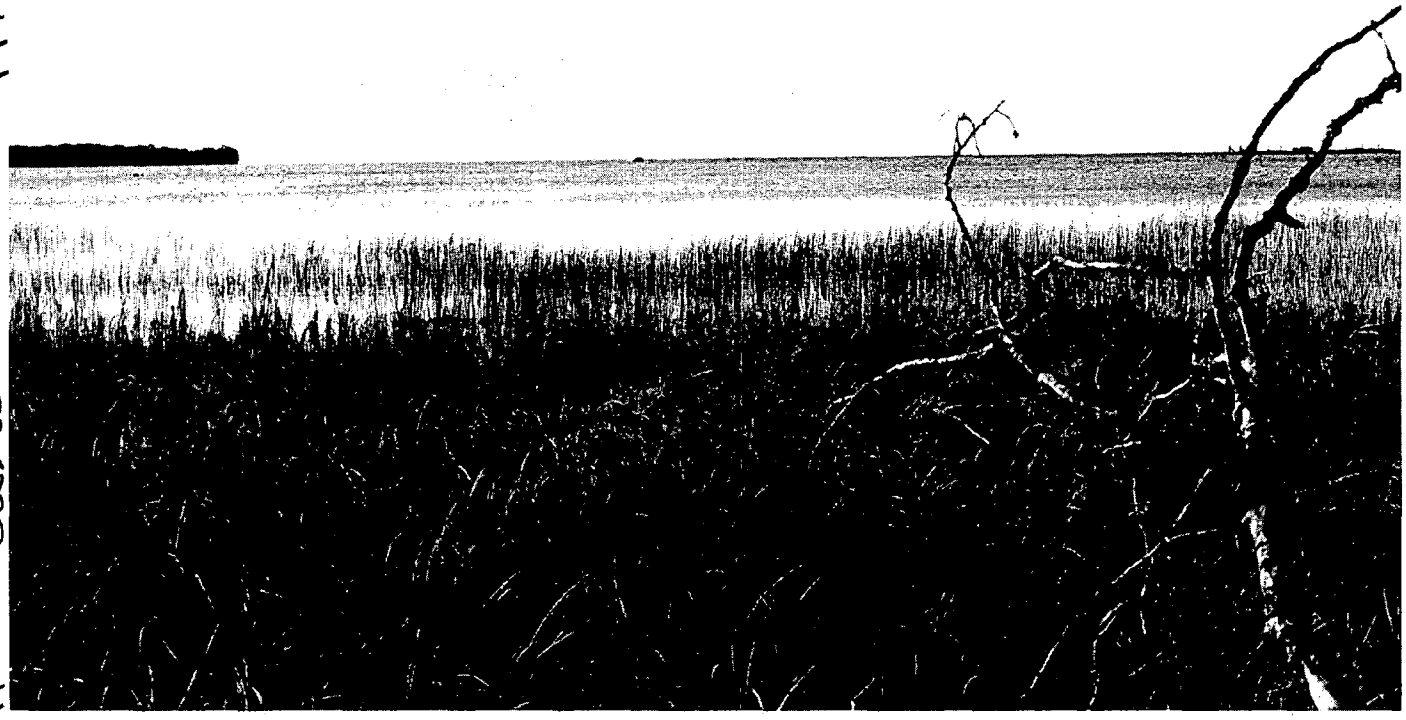

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Office of Coastal Management, Wisconsin Department of Administration

Scientific Areas Section, Wisconsin Department of Natural Resources

Wisconsin. Coastal Zone Management Program

Natural Area Inventory

Wisconsin Great Lakes Coast

Revised 1980

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NATURAL AREA INVENTORY - WISCONSIN GREAT LAKES COAST

INTRODUCTION AND PURPOSE OF INVENTORY

This natural area inventory of the Wisconsin coasts along Lakes Michigan and Superior is one of a continuing series of inventories conducted and directed by the Scientific Areas Preservation Council and the Scientific Areas Section, Department of Natural Resources. The long term goal of the Scientific Areas Section is to inventory all 71 counties to locate remnant natural areas and features. Approximately three-fourths of the state has been inventoried, and within two years, initial natural area inventories for the entire state will be available.

Financial assistance for this study has been provided by the Wisconsin Coastal Management Program through a grant from the Federal Office of Coastal Zone Management. Their support is gratefully acknowledged.

A natural area as defined by the Scientific Areas Preservation Council is: a tract of land or water so little modified by man's activity or sufficiently recovered that it contains intact native plant and animal communities believed to be representative of the presettlement landscape.

The purpose of a natural area inventory is to identify, delineate and evaluate biotic communities and other features possessing a significant degree of naturalness. These include terrestrial and aquatic plant communities (cf. Curtis, J. T. 1959. The Vegetation of Wisconsin) which reflect vegetation types present in presettlement times and which have somehow escaped destruction; recovery sites, which were at one time altered or modified by man's direct or indirect activities, but with the passing of considerable time and without further disturbance, have recovered so that most of the evidence of disturbance has vanished; sites which contain significant geological or archaeological features or which harbor threatened or endangered species of plants or animals.

Locating natural areas is the first step in seeking their wise use and protection. Next, it is necessary to incorporate the body of natural area inventory data into the land use planning process of local, state and federal agencies so that inadvertent destruction of natural features is avoided and a positive approach to critical natural area protection can be avoided.

Most of the sites delineated in this inventory are important as preserves of our natural heritage and are now, or will be in future years, valuable to educators, their students and other outdoors-oriented people for passive, nonconsumptive use of the resource, whether it be for class use or teaching purposes, nature interpretation, hiking, bird watching or other activity. Natural areas also have a constantly increasing value as research and reference sites where comparisons with disturbed areas are useful in evaluating and quantifying land management practices. It is thus important that county and regional planners integrate these data into land use plans and the land and water regulatory processes; and that townships, county and state highway planners, for example, have access to these data so that new road construction avoids sensitive natural features. Maintaining lands in a natural or near natural condition holds open the land management alternatives available to future generations. If these resources are degraded, alternatives for the future are narrowed, for the recovery of converted natural features, if at all possible, is extremely slow.

SCOPE OF THE INVENTORY

This natural area inventory encompasses the entire shoreline of Lakes Michigan (407 miles) and Superior (156 miles), and includes the various islands in Lake Michigan off the Door peninsula and the Apostle Islands of the Bayfield peninsula. For the purpose of this coastal inventory, the area to be inventoried was limited to a strip of land six miles inland from the shoreline. In isolated instances, particularly where either large tracts or what appeared to be high quality natural areas were observed at the edge or beyond the six-mile limits, those natural areas were evaluated for potential inclusion in the inventory.

It should be noted that this inventory contains relatively few sites of geological or archaeological significance and is biased toward terrestrial plant communities. Additional information on geology or archaeology should be sought from the Wisconsin Geological and Natural History Survey or the State Archaeologist, respectively, in Madison. Surface water, primarily streams, were not evaluated as intensively as terrestrial sites. Additional information on lakes and streams can be found in the Surface Water Resources publications of the Wisconsin Department of Natural Resources.

In Milwaukee County, a considerable number of city and county parks and parkways are found within the coastal area. Most of these parks and greenways are not listed in this inventory except for those of outstanding natural area significance. It is also noteworthy that in the heart of metropolitan Milwaukee (see Milwaukee 7-1/2 Min. Quadrangle) cemeteries provide a substantial acreage of undeveloped or "green space" in addition to the outstanding county park system. Although they are not natural areas in the traditional sense, their dominant cover is that of a savanna when viewed from an aerial photograph, and they do impart a refreshing element to the urban landscape as well as contain some of the elements which make up natural areas. It is anticipated that in the future, the role of certain cemeteries as limited recreation sites will continually be evaluated.

The shores of Wisconsin's Great Lakes contain many populations or rare, restricted, or otherwise noteworthy plant and animal species. For the most part, a systematic inventory of these species has not been completed, although one is in progress. The significant colonial bird concentrations in Brown County are included as are significant plant populations where known to occur within natural or scientific areas. These populations are indicated in the description and comments column by "critical species" present.

Some of these plant species have been designated by the Department of Natural Resources as "Endangered" or "Threatened" as per Administrative Code NR-27, while other species are currently being evaluated for inclusion on that list. Further information on the nature of critical species present at any particular site will be supplied by the Scientific Areas Section upon request.

METHODS

Sites included in this inventory were located by examining the files of the Scientific Areas Section, through a literature search, or by recommendation from selected teachers, DNR field personnel and other naturalists and resource managers in the counties inventoried. Through systematic examination of aerial photographs and by using the United States Geological Survey topographic maps, staff of the Scientific Areas Section located the bulk of these natural areas and features. Except in a few rare instances, all of the sites contained in the inventory were field inspected. Most of the field analysis for this inventory was conducted in the period of June, 1975 through May, 1976, while revisions added in 1980 resulted from subsequent field work in the Coastal Zone.

LIMITATIONS AND PROBLEMS OF A NATURAL AREAS INVENTORY

The scope of this natural area inventory is restricted because it does not take into consideration factors involved in outdoor recreation, human resources, historical or cultural features, prime agricultural lands, forestry resources, etc. Emphasis is on biotic communities from a biologist's point of view, for these features are most threatened.

As with any inventory, there are always some sites inadvertently missed or some species habitats to be discovered. In the case of certain geological points of interest, as caves or quarries, some may still be located by quarrying or excavation. New natural area locations will probably be found. Those who prepare natural area inventories are faced with the difficult situation of seeing too much publicity and resultant overuse and abuse of natural features. Incompatible land uses may be extremely detrimental to fragile natural systems.

The sites included within the inventory were evaluated according to the criteria set forth pertinent to natural areas. Others evaluating these same areas may view their characteristics in a different light, emphasizing different features. In addition, inspecting natural areas thoroughly in several different growing seasons is necessary for the most accurate evaluations, thus it is anticipated that some evaluations will change in the future. Additional sites now ranked as county level significance may well be worthy of acquisition and preservation by public or private agencies particularly in a region as large as Wisconsin's Great Lakes shoreline.

NATURAL AREA EVALUATION AND CLASSIFICATION

All of the biotic sites investigated were evaluated on the basis of quality, which includes: 1) the diversity of plant and animal species, 2) expected natural area community structure and integrity, and 3) the extent of significant human disturbance (logging, water level manipulation, grazing); commonness, a measure of the amount of the cover type as compared with the total amount of that plant community or feature in the present landscape and in the presettlement vegetation, and the degree to which the type has been converted by the direct and indirect activities of man; and diversity, the number of plant community types (aquatic or terrestrial) and other natural features within the tract. Two additional criteria are size, which should be such as to afford adequate protection, and educational value. A more detailed discussion on "priority ranking of biotic natural areas" can be found in Michigan Botanist 13:31-39. On the basis of these criteria, natural areas and features were evaluated and classified as follows:

SA State Scientific Areas - those natural areas, geological sites, or archaeological sites (or combinations) of at least state significance which have been designated by the Scientific Areas Preservation Council.

NA-1 Natural Areas - tracts of land and/or water so little modified by man's activity, or sufficiently recovered, that they contain nearly intact native plant and animal communities believed to be representative of the presettlement landscape. They are of statewide or greater natural area significance. Some tracts containing critical species habitats are also within this designation.

NA-2 Natural Areas - tracts of land and/or water slightly modified by man's activities or insufficiently recovered from past disturbances such that they are of county or multi-county natural area significance because of one or more of the following reasons: the degree of quality is less than the ecologically defined ideal, and there is evidence of past or present disturbance from logging, grazing, water level manipulation, or pollution, etc.; the type may be the most abundant or a very common type in the region, only the very best of which might qualify for state scientific area recognition, or the area may be too small.

NA-2 areas are valuable assets to the local communities as education sites, for passive, non-destructional recreation and as "ecological zones" which maintain a relatively high degree of naturalness. Some of these sites, depending on their fragility, may be suitable for county or local park development, but caution should be exercised to avoid degradation of their primary features. Protective zoning could be an alternative method of protection.

If maintained for a sufficient period of time in an undisturbed condition, NA-2 areas should increase in their degree of naturalness. Scars of disturbance will gradually disappear, although some types will never fully recover. Some areas in this category may be viewed in the future as being worthy of state significance.

NA-3 Natural History Areas - tracts of land and/or water modified by man's activities, but which retain a moderate degree of natural cover and often would be suitable for educational use, such that exclusion from a natural area inventory would be an oversight. Two or more of the identifying natural area criteria may be substandard in natural history areas, but in time and with protection most natural history areas will increase in "naturalness". Natural history areas may reflect patterns of former vegetation or show the influence of settlement on vegetation. Some natural history areas are quite scenic. An important value of some of the larger NA-3 sites is their role in watershed protection and as environmental corridors.

NA-1 (RSH) Rare Species Habitats - sites where the primary natural value is the presence of one or more rare, threatened, or endangered species of plants or animals.

GEO-1 -2 Geological Sites - these are quarries, mines, smelters, caves, outcrops, and structural and glacial features of geological interest. The number following the designation indicates state significance (1) or county significance (2).

ARCH Archaeological sites.

INVENTORY SUMMARY OF THE COASTAL ZONE

Classification	Number of Sites
SA	23
NA-1	34
NA-2	60
NA-3	32
NA-1 (RSH)	9
GEO (all)	6
ARCH (all)	1
Not ranked	4
Total	169

RECOMMENDATIONS

The evaluation of 43 sites as state natural area significance (NA-1) simultaneously conveys the highest preservation priority to these sites. Therefore, it is recommended that public and private agencies involved in natural area preservation or acquisition give top priority for preservation to those NA-1 sites which are either privately owned or outside of existing acquisition boundaries.

Because many of the NA-1 sites in this inventory are privately owned, it is anticipated that land acquisition will be one useful method of arranging for long term protection of these sites. Whenever feasible, alternative methods of land preservation should be explored.

The following natural areas, all of which are described more fully in the body of this inventory, are highlighted here because of their exceptional natural area qualities. Not all of the NA-1 sites are contained in this summary listing, just those privately owned community types most critically in need of preservation action and those under public or protective ownership which merit recognition as significant natural areas.

Privately Owned Sites

Bloch Dry-mesic Forest, Marinette Co.
Chiwaukee Prairie Addition, Kenosha Co.
Furrer Beach and Dunes, Door Co.
Long Island, Ashland Co.
Lower Montreal River, Iron Co.
Manger Boreal Forest, Door Co.
Middle Lake, Brown Co.
Mink River, Door Co.
Port Wing Boreal Forest Addition, Bayfield Co.
Schmoke Lake, Door Co.

Protected Sites Which Merit Recognition

Devil's Island Forest and Cliffs, Apostle Islands
Dwights Point-Kimballs Bay Boreal Forest, Douglas Co.
Gull Island, Apostle Islands
Hotz Tract, Door Co.
Kurtz Woods, Ozaukee Co.
Munsing Boreal Forest, Madeline Island
North Twin Island, Apostle Islands
Outer Island Hemlocks & Sand Spit, Apostle Islands
Stockton Island Beach & Bog, Apostle Islands
Wisconsin Point, Douglas Co.

USE OF THE INVENTORY

The listing of natural areas and features immediately following this section is organized by name of the site with the county name in parentheses; legal description, size and name of the U.S. Geological Survey topographic map on which the site can be found; code indicating the tract's evaluation; ownership; and pertinent comments relative to the most significant features of the site. The number to the left of each area name corresponds to the number identifying that natural area on the county maps.

For all of the state scientific areas (SA) and most state significant natural areas (NA-1), additional information in the form of plant community descriptions, natural area significance, plant species lists, and other pertinent data are on file with the Scientific Areas Section.

It is requested that those who have an opportunity to utilize this inventory and inspect particular sites will exercise caution toward the listed areas by respecting their fragility and not abusing their natural characteristics. Please exercise caution in duplicating or distributing these inventory findings. Above all, respect the property rights of the owners of these sites by requesting permission prior to visiting them.

For additional information contact:

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Scientific Areas Section
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(608) 266-8916
or 267-7479

or

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Department of Administration
101 South Webster Street
Madison, Wisconsin 53702
(608) 267-7982

KENOSHA COUNTY
RACINE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
1	Chiwaukee Prairie (KENOSHA)	T1N 23E Section 30, 31 150 acres total Kenosha 7½'	SA	U. of Wis. Parkside	Rich prairie and marsh on swell and swale topography created when the level of glacial Lake Michigan was lowered in stages. Over 350 plant species have been documented from the prairie, some of which are very rare in the state (e.g. chestnut sedge, pink milkwort, and roundstemmed false foxglove) Scattered oaks in portions give a savanna aspect to the tract. A National Natural Landmark and one of the most important prairie in Wisconsin. Land acquisition is conducted by the Nature Conservancy. Critical plant species present.
2	Kenosha Sand Dunes (KENOSHA)	T2N R23E SE 1/4 7, 8 120 acres Kenosha 7½'	NA-1	Wisconsin Elect. Power Co.	One half mile of frontage on Lake Michigan containing well developed dunes and dune succession patterns (fore dunes to swale to wet prairie). The diversity of beach plant species is good. Some ditching has been done behind the dune area but it remains in good condition and is an excellent observation area for migrating shore birds. The Lake Michigan shore has been rip-rapped.
3	Petrifying Springs (KENOSHA)	T2N R22E parts of 2, 11 65 acres Racine South 7½'	NA-1	Kenosha County	A mixture of red and white oaks and sugar maples cover the area in a dry-mesic to mesic forest. The undulating topography is covered by very diverse and delicate spring flora. There has been some introduction of species but the area remains one of the better woodland areas left in southeastern Wisconsin.
4	Des Plains River Marsh and Woods (KENOSHA)	T1N R22E Sec. 19, 20, 29, 30 Pleasant Prairie 7½' 650 acres	NA-2	Private	Woodland containing remnant oak-shagbark hickory with old growth of both red and white oak and black cherry timber. The undergrowth is generally shrubs, with hawthorns, black cherry and raspberry dominant. An old meander of the Des Plains River divides the woodland, now containing various wetland species. To to south there is an extensive wetland, ditched in many places but not traversed by a highway for nearly 2 miles. Significant because of its open space and wildlife habitat, it is one of the longest stretches of river without a highway in the county.

RACINE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
5	Sanders Park Hardwood Forest (RACINE)	T3N R22E Part 36 30 acres Racine S. 7½'	SA	Racine Co.	A southern dry-mesic forest on two low ridges separated by a swale of American elm and cottonwood. The largest trees are oak, walnut and white ash. Nearly 100 species of flowers, ferns, shrubs and trees can be found. The forest lies on one of Lake Michigan's ancient terraces and has calcareous well drained, soils with a thin outwash covering. A peripheral road and numerous trails facilitate use of the area.

RACINE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
6	Renak-Polak Woods (RACINE)	T4N R22E E½ 14 70+ acres Racine N. 7½'	SA	U. of Wis. Parkside	An excellent southern mesic hardwood forest ¼ mile east of the Root River. The dominant trees are sugar maple, white ash, beech and basswood. Spring ephermeral flora is very diverse; hepatica, spring beauty, dogtooth violet and trilliums. Although the topography is almost level, an intermittant stream runs diagonally through the tract from NE to SW. A Nature Conservancy Project.
7	Caledonia Wildlife Area (RACINE)	T4N R22E SW ½ 21 25 acres Franksville 7½'	NA-2	Caledonia Township	An open wetland with seasonal ponds that attract a large number of migratory birds such as whistling swans, snow geese, golden plovers and willets. The pond is one of the few secure stopover areas in the southeast counties and thus is a very good observation area. The area is a project of the Hoy Nature Club.
8	Caddy Vista Woods (RACINE)	T4N R22E NE¼ NW¼ 4 5 acres Franksville 7½'	NA-3	Private	This is a small woodlot that has been somewhat disturbed by the nearby school and subdivision development. Dispite this the area contains an interesting assembly of woody plants. There are also a good number of common mesic herbaceous species as well as red oak, beech and sugar maple trees. The area fronts the Root River and has numerous trails with heavy hiking use.
9	Gravel Pit Woods (RACINE)	T4N R22E SE¼ NE¼ 3 10 acres Franksville 7½'.	NA-3	Private	Beech, sugar maple, basswood, red oak woods near active gravel pit. Edges have been disturbed; however, most of the wood lot retains good natural characteristics.
10	Seven Mile Road Woods (RACINE)	T4N R22E NE¼ NE¼8 25 acres Franksville 7½'.	NA-3	Private	Young maple-ash-oak woods- age about 50 years, never grazed but has been managed by timber removal.
11	Stone Woods (RACINE)	T4N R22E NW¼ 3 50 acres Franksville 7½'	NA-3	Private	Green ash, silver maple and American elm are the dominant tree species on this relatively large forested tract. It lies in the Root River floodplain and has seen past grazing which has altered the groundcover. However, there has not been any heavy logging. The area remains significant because of its size and location.
12	Crestview Ravines and Banks (RACINE)	T4N R23E parts of 6, 8 40 acres Racine No. 7½'	NA-3	Racine Co.	Spectacular clay banks along Lake Michigan. Some rare plants in this region occur here.

MILWAUKEE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
13	Cudahy Woods (MILWAUKEE)	T5N R22E E½ NW¼ 4 60 acres Greendale 7½'	NA-1	Milwaukee Co.	An upland hardwood forest containing two major forest types separated by a small stream. To the north, a dry-mesic forest of oak, cherry and hickory, southward, an old growth mesic forest of American beech, sugar maple and red oak. One of the best forests of its kind remaining in the vicinity. The forest is also a habitat for critical plant species (Solidgo caesia), blue-stemmed goldenrod.
14	Meyers Woods (MILWAUKEE)	T7N R22E NW¼ SE¼ 19 30 acres Greendale 7½'	NA-2	Private	A mesic hardwood forest remnant composed of scattered individuals of many species; oak, cherry, hard maple, hickory and basswood. Throughout the woods there are patches of dense saplings from previous canopy disturbances. The area contains a small pond that is surrounded by cattail and associated species. The spring ephemerals are reportedly fairly diverse.
15	Esch Woods (MILWAUKEE)	T5N R22E 18 10 acres Greendale 7½'	NA-3	Private	A very small but good stand of beech and sugar maples. Good size distribution, light logging in distant past, disturbance along edges. Viburnum prunifolium, a rare shrub, occurs there. Housing development has almost obliterated the remaining woods.
16	Fox Point Clay Bluffs and Beach (MILWAUKEE)	T8N R22E 9, 16 Thiensville 7½'	GEO-2	Multiple Private	Eroding clay banks above Lake Michigan harbor numerous regionally rare species like: Sheperdia, Diervilla, Thuja and Symphoricarpos. The abandoned shoreline up to 600 feet back from the current shore is a classic example of a terraced shoreline. See photo in p. 52 of Goldthwait. This area is within the northern 4 miles of Milwaukee County shore which is essentially a natural shore, in which the beach and offshore bars are naturally nourished with sediment. No shoreline modifications are present.
17	St. Francis Woods (MILWAUKEE)	T6N R22E NE¼ SE¼ 15, NW SW¼ 14 140 acres S. Milwaukee 7½'	NA-3	St. Francis Seminary City of St. Francis	Located in a very urban area, but surrounding fence has helped to preserve areas integrity. Old growth sugar maple, birch, basswood and beech trees are the primary feature. The area is divided by a gravel road, trails and a small stream. Some native prairie species persist on the fringe and to the SE, and exotic species have been planted along the road and near the cemetery.
18	Downer Woods (MILWAUKEE)	T7N R22E Center 10 15 acres Milwaukee 7½'	NA-3	U. of Wis. Milwaukee	Numerous ash, basswood and hawthorn trees, along with large oaks dominate this tract. Native shrubs include choke cherry and dogwood, the remainder are mostly exotics. A varied history of uses has reduced the natural value but its location near UW-Milwaukee makes it noteworthy.
19	Root River Forest (MILWAUKEE)	T5N R22E Section 32 E of RR Franksville 7½' 40 acres	NA-1 (RSH)	Milwaukee County	Small woodland and gravel-bottom tributary to Root River. Critical plant species present.

MILWAUKEE COUNTY
OZAUKEE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
20	Schlitz Audubon Center (MILWAUKEE)	T8N R22E 9, 10 Thiensville 7½' 164 acres	Not ranked	National Audubon Society	Features include nature center, prairie restoration tract, ornamentals, wooded ravine, bluff and lake terrace. A resident naturalist is present and the area is active in local conservation education.

OZAUKEE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
21	Fairy Chasm (OZAUKEE and partly northern Milwaukee Co.)	T9N R23E 33 T8N R22E 4, 5 60 acres Thiensville 7½'	SA	Private, Nature Conservancy	A wooded ravine 80-100 ft. deep extending 1¼ miles west from its mouth on Lake Michigan. The chasm's stream and several small tributary gorges cut through glacial and lacustrine deposits. The steep slopes support white pine, white cedar, yellow birch to the north and xeric hardwood forest on the more exposed south. Many species, noteably Dirca palustris and conifers, give the area special significance as they occur only in cold air drainages this far south in Wisconsin. Critical plant species are present.
22	Kurtz Maple Woods (OZAUKEE)	T10N R21E SW¼ NE¼ 1 120 acres with buffer Cedarburg 7½'	NA-1	Nature Conservancy (31 acres)	An outstanding southern mesic forest dominated by sugar maple and American beech with red oak, white ash, black cherry, basswood and red elm present. About 30 acres are mature timber 15-24" DBH. No recent cutting history. A good distribution of tree sizes, and a very rich herbaceous layer are its significant characteristics. It was recently donated for preservation. Critical plant species are present.
23	Donges Bay Gorge (OZAUKEE)	N9N R22E NE¼ NW¼ 33 20 acres Thiensville 7½'	NA-2	Private	A deep ravine on Lake Michigan shore. The ravine contains a white pine, beech forest. Unfortunately housing developments and erosion have taken away many natural characterisitics.
24	Mee-kwan Park Woods (OZAUKEE)	T9N R21E SW¼ NE¼ 10, 20 acres, NE¼ NE¼ 15 10 acres Cedarburg 7½'	NA-2	County Park	A beech-sugar maple-red oak forest with a good age distribution and larger trees scattered in the northern tract. Small tumbling stream is an added attraction in northern tract. Small areas in both tracts of land have been disturbed in past - light logging long ago. Ave. DBH:15-20".
25	Harrington Beach Lacustrine Forest (OZAUKEE)	T12N R23E S½ 19 80 acres Port Washington East 7½'	NA-2	DNR	A lacustrine forest bordering Lake Michigan, dominated by black ash and white cedar with yellow birch, red maple, and white birch on sandy rises. Tree size mostly 5-9" but locally mature sizes. Heavy deer use.
26	Grafton Woods (OZAUKEE)	T10N R21E Ne¼ NE¼ 13 20 acres Cedarburg 7½'	NA-3	Private	Am. beech and sugar maple forest with a history of grazing and cutting. Woods does have a good tree size variety.

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OZAUKEE COUNTY
SHEBOYGAN COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
27	Ulao Marsh (OZAUKEE)	T10N R22E Parts 4, 8, 9 Cedarburg 7½' 25 acres	NA-3	Private	A long narrow lacustrine swamp forest of soft maple, elm, and black ash, grazed in part, and generally of small to medium size. Some migrant bird use.
28	Fredonia Woods (OZAUKEE)	T12N R21E SE½ NE¼ 34 50 acres Port Washington West 7½'	NA-2	Private	A tract lying on the east bank of the Milwaukee River just south of Waubedonia Park. Although with a history of grazing and selective timber removal, the tract is very scenic and is a logical park expansion. Primary features include part of a 1½ mile long glacial deposit of gravel and boulders, with a mesic forest of sugar maple beech-red oak of mostly mature size.
29	Hawthorne Drive Forest (OZAUKEE)	T11N R22 E SW¼ 6 50 acres Port Washington West 7½'	NA-3	Private	Wet-mesic elm-red maple forest with upland forest of red oak, beech, basswood along south. Canopy opened by disease and logging.
30	Milwaukee River Woods (OZAUKEE)	T11N R21E Center Section 3 60 acres Port Washington West 7½'	NA-3	Private	A medium aged stand of sugar maple-red oak-basswood on morainal deposits adjacent to the Milwaukee River. Stand grazed previously.
31	Belgium Lacustrine Forest (OZAUKEE)	T12N R22E W½ 34, Central 27 300 acres Port Washington East 7½'	NA-3	Private	An extensive, young, lacustrine forest 2½ miles from Lake Michigan, with Am. elm, black ash and red maple-silver maple and some swamp white oak. Disease, logging and wind throw have opened the canopy permitting a brushy understory in portions. Crop lands surround forest. North end ditched.

SHEBOYGAN COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
32	Cedar Grove Lacustrine Forests (SHEBOYGAN-OZAUKEE)	T13N R22E Section 34, T12N R22E Section 2, 3 450 acres Sheboygan Falls 15'	NA-3	Private	Extensive second growth forests on ditched lacustrine flats, clayey soils dominated by soft maple-black ash with yellow birch, Am. elm and swamp white oak. Repeatedly logged and encroached by agriculture and ditched.
33	Cedar Grove Ornithological Station (SHEBOYGAN)	T13N R23E N part 30 30 acres Cedar Grove 7½'	SA	DNR	A tract lying close to Lake Michigan on low, abandoned dunes. Located along a major migratory route, the ornithological station is an important trapping and banding station primarily for raptors.
34	Kohler Park Dunes (SHEBOYGAN)	T14N R23E NE¼ NW¼ 23 25 acres Sheboygan S. 7½'	SA	DNR	Three uncommon Great Lakes shore habitats are present in this area: excellent Lake Michigan dunes, consisting of large, active portions surrounded by stabilizing dunes; one quarter mile of beach community; and two, small renmants of white pine forest. The area is rich in coastal plant species, including sand reed, dune thistle, beach pea and dune wheatgrass. Numerous critical plant species are present. Interdunal ponds contain standing water and add vegetational diversity. A 10 acre buffer zone has been established on the west edge of the scientific area.

SHEBOYGAN COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
35	Kohler Park Pines (SHEBOYGAN)	T14N R23E Part 14 95 acres Sheboygan S. 7½'	SA	Private	A section of Lake Michigan shoreline and adjacent forest located on stabilized dunes between Lake Michigan on the east and the Black River on the west. The sand beach and narrow zone of dunes progresses inward to a mixed conifer-hardwood forest composed of white and red pine, sugar maple, beech, paper birch and red oak. Shrub and wooded wetlands occur near the river. Several critical plant species occur in the dune and beach sections. This area was formerly leased by the State.
36	Ruth Balzer Schmitt Memorial Forest (SHEBOYGAN)	T14N R23E SW¼ SW¼ 11 Sheboygan 7½' 15 acres	NA-2	Izaak Walton League	Although small in area, a well preserved mesic forest. Tall white pine 15" DBH over red oak, red maple, sugar maple, yellow birch and beech. Land all to the north developed; to the south with various land use histories. Nearby scientific area contains the same features.
37	Sheboygan Co. Memorial Arboretum (SHEBOYGAN)	T14N R23E E½ SE¼ 19 22 acres Sheboygan Falls 7½'	NA-2	Sheboygan Co.	A wet lacustrine swamp, primarily of black ash and American elm with alder in the understory. The tree canopy is somewhat open, and there are a great many plant species throughout the swamp. There is little local relief. Trails run along the east and west fringes of the swamp. One of the best remaining examples of a once more widespread forest type.
38	Sheboygan Campus Oak Woods (SHEBOYGAN)	T15N R23E S½ SW¼ 28 30 acres Sheboygan Falls 7½'	NA-2	University of Wisconsin	A medium aged woods near the UW Sheboygan campus composed primarily of red oak, with white ash, white oak, and beech with some taller white pine. Woods in part situated on old Sheboygan River banks.
39	Lake Michigan Pine Hardwoods Dune Forest (SHEBOYGAN)	T14N R23E 33, 34, S½27 1.5 miles shore Sheboygan South 7½' 400 acres	NA-2	Multiple Private	A linear forest zone along Lake Michigan and continuous with J. M. Kohler St. Park under many small ownerships, many with lake front homes. White pine 12-20" is a dominant with red oak, white birch, beech, sugar maple and others. Toward the Black River on the west are ash-white cedar swamps and alder thickets. Area duplicates Kohler pines scientific area to the north. Some hemlocks in the area.
40	Onion River Forest (SHEBOYGAN)	T14N R22E NE¼ 1 80 acres Sheboygan Falls 7½'	NA-2	Private	A large upland forest on the west side of the Onion River. A mixture of hardwoods predominate: sugar maple, red oak and beech with white oak and basswood and areas of white birch and aspen. Some huge red oaks occur on the steep east-facing morainal slopes. Oxbow lakes are adjacent to river meanders. Scattered white pine (and white pine stumps) can be seen. Grazing and logging history; current development for archery range. Located just south of High School.

SHEBOYGAN COUNTY
MANITOWOC COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
41	Gibbsville Mesic Forest (SHEBOYGAN)	T14N R22E NW¼ SW¼ 26 20 acres Sheboygan Falls 7½'	NA-3	Private	An old growth mesic forest remnant of sugar maple, red oak, beech. Small size and past disturbances such as grazing and selective timber removal reduce its natural area value; however, few such remnants occur.
42	Sheboygan River Woods (SHEBOYGAN)	T15N R23E Section 31 SW¼ NW¼ 70 acres Sheboygan Falls 7½'	NA-3	Private	River edge and slope woods containing basswood, beech with white pine on ridges. Woods contain some large trees but has been logged in the past. Area was heavily grazed in the past.
43	Kohler-Pigeon River Tract (SHEBOYGAN)	T15N R23E SW¼ 17 44 acres Howards Grove 7½'	NA-3	Private	Pigeon River floodplain with ridges of second growth pine and hardwoods.

MANITOWOC COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
44	Wilderness Ridge (MANITOWOC)	T20N R24E Section 16 8 acres Two Rivers 7½'	SA	DNR	This area consists of two perpendicular transects, each 66 feet wide, located on and across ridges and swales of the abandoned beach lines of glacial Lake Nipissing. The east-west transect is sedge dominated with ridge and swale topography. Northern conifer-hardwood forest on the north-south ridge is composed of red and white pine, hemlock and yellow birch.
45	Point Beach Ridges (MANITOWOC)	T20N R24E 31, 32 175 acres Two Rivers 7½'	SA	DNR	Wooded ridge-swale topography, dunes and beach within Point Beach State Forest. A total of about 5 miles of similar forested ridges is preserved in the forest. A substantial expanse of swamp timber and brush marsh within the State Forest, sections 5, 8, 17 and 20, lies landward from the ridge-swale complex. Numerous critical plant species are present.
46	Two Creeks Buried Forest (MANITOWOC)	T21N R24E NE¼2 30 acres Two Creeks 7½'	SA	DNR	A soil and glacial till profile exposed by Lake Michigan which illustrates a sequence of events from prior to the last glacial advance. The remains of a spruce forest are blanketed with lacustrine deposits from a glacial lake, which are in turn covered by layers of glacial till. The area is of great geological significance. According to Manitowoc County Outdoors (1967), similar forest remains are found when digging wells throughout much of the Fox River Valley. For an excellent account of the Lake Michigan shore in Manitowoc County and the region's glacial history, see Manitowoc County Outdoors, 1967, published by Conservation Education, Inc. of Manitowoc County.

Two Creeks is a unit of the Ice Age Scientific Reserve. See Black, Robert F. 1974. Geology of Ice Age National Scientific Reserve of Wisconsin. National Park Service Scientific Monograph Series Number Two.

MANITOWOC COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
47	Lakeshore Technical Maple Woods (MANITOWOC)	T17N R23E Part SE¼21 30 acres Cleveland West 7½'	NA-2	Public Schools	Although small in total size, the tract has some old growth maples and Am. beech to 30" DBH, and is an impressive remnant. Some cutting has taken place. North end is privately owned.
48	Weyers Lake (MANITOWOC)	T18N R23E SE¼ SW¼ 10 30 acres Manitowoc	NA-2	Manitowoc Fish & Game Assn.	Small seepage lake surrounded by brush-timber swamp of elm, alder, black ash, dogwood, tamarack, white cedar and white birch. Access to south edge. It is a seepage lake with hard water; maximum depth 32 feet. There is no development on the shore.
49	Glomski Lake (MANITOWOC)	T18N R23E Part SE¼4 40 acres Manitowoc 7½'	NA-2	Private	A deep, hard water lake in the terminal moraine, with no immediate development except one pier. Hardwood swamp and brush surround the lake. Maximum depth: 43 feet.
50	Camp Vits (MANITOWOC)	T19N R23E NW¼ 26 100 acres Manitowoc 7½'	NA-2	Private	An extensive second growth forest of mixed hardwoods and some white pine with a white birch-white cedar-hemlock forest on the steep north and east facing slope above the Manitowoc River. Large size and proximity to Manitowoc are strong points.
51	Twin River Marsh (MANITOWOC)	T20N R24E NE¼34 and Section 35 About 80 acres Manitowoc 15'	NA-2	Private	One of the largest river marshes along Lake Michigan. Area is dominated by sedges and cattails with some shrub-carr. Some infringements by the City and local farmers are taking place (dumping, filling drainage). Marsh is an excellent stop over for many species of birds. Timber on north edge has been completely cut producing birch and shrub-carr. Some areas are being grazed.
52	Woodland Dunes (MANITOWOC)	T19N R24E Parts of 2,3,10,11 700 acres Manitowoc 7½'	NA-2	Natural Areas Preservation Inc.	A forested tract containing ridges of former glacial lakes levels, lying 10-20 feet above Lake Michigan's present level. The ridges are wooded with scattered hemlock and pine with aspen. Small elm, cedar, and brush are present in lowlands. An important stopping place for a variety of migratory birds. Several maintained trails and boardwalks provide access to a variety of habitat variations and facilitate local educational use and nature implementation. Acquisition continues.
53	Little Mud Lake (MANITOWOC)	T21N R24E NW¼ 17 120 acres Two Creeks 7½'	NA-2	Private	A 20 acre lake surrounded by northern wet forest. Forest is second growth white cedar, tamarack and balsam fir. Area is reported to be rich in orchid species. The lake is a hard water seepage lake with fluctuating levels and about 2-3 feet deep. The shoreline is undeveloped.

MANITOWOC COUNTY
KEWAUNEE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
54	Sugarbush Woods (MANITOWOC)	T17N R23E NE¼ SE¼ 15 25 acres Cleveland East 7½'	NA-3	Private	Mesic forest remanant of sugar maple, beech, ash with low spots of yellow birch.
55	Cleveland Lacustrine Forest (Centerville Swamp) (MANITOWOC)	T17N R23E Parts 33, 34, 3(16N) 600 acres Cleveland East 7½'	NA-3	Private, Manitowoc Fish & Game Assn.	Extensive second growth lacustrine forest of elm, ash, and soft maple with white cedar. Cutting and drainage history.
56	Wet Mesic Woods (MANITOWOC)	T20N R24E SE¼ 9, NE¼ 16 100 acres Two Rivers 7½'	NA-3	Private	This woods has suffered cutting long ago and recent infringement by housing. It does retain characterisitics of a hemlock-yellow birch forest. The floor of the woods has cradle knolls and contains many small ephemeral ponds.

KEWAUNEE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
57	Duvall Swamp (KEWAUNEE)	T25N R23E Parts of 1, 2, 11, 12, 14, 15 Namur 7½' 1500 acres	NA-1	Private	An extensive second growth swamp, mostly of cedar, aspen, hemlock, red maple and tamarack farming the headwaters of the Red River. The big lake is surrounded by a cedar swamp that grades into a tamarack and shrub-carr zone, which in turn grades into an open boggy zone dominated by waterwillow (Decodon), sedges, and bog shrubs. The shrub-carr area is primarily bog birch with dogwood and alder, while the open area lies on a quaking mat. The area was logged at one time but has never been grazed.
58	Alaska Bog (KEWAUNEE)	T25N R24E Sections 23, 24 100 acres Casco 15'	NA-1	Private	An open bog and wet-mesic forest area, the Sphagnum bog with small areas of alder, tamarack and black spruce. Many typical bog species including pitcher plant, moccasin flower and others are present, while sedges are very common. The bog forest is comprised of tamarack, white cedar, black ash and hemlock.
59	Krok Woods (KEWAUNEE)	T23N R24 E NE¼ SE¼20 25 acres Kewaunee 15'	NA-2	Private	A good representative of a maple-beech forest. Some light cutting in the past, but the canopy is almost complete, no evidence of grazing. Tree species include maple, beech, white ash, yellow birch, hemlock, white pine in that order of importance. There is a diverse ground flora. Average DBH is 18-24". Many small gravel knolls.
60	Kewaunee River Marshes (KEWAUNEE)	T23N R24, 25E 7, 12, 13 200 acres Kewaunee 7½'	NA-2	Private & DNR	One of the largest marshes along Lake Michigan. Good river marshes containing potholes and a fair diversity of marsh plants. Area affords considerable wildlife and waterfowl habitat.

KEWAUNEE COUNTY
DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
61	Casco Tamarack Woods (KEWAUNEE)	T24N R24E E½ NE¼ 26 20 acres Casco 7½'	NA-2	Private	A northern wet-mesic forest, surrounding an undeveloped lake, of predominantly tamarack with scattered white cedar, white pine, black ash and hemlock, with balsam fir, alder and mountain maple in understory. Cattail and several shrubs surround the lake on a very narrow peat mat. The area shows no signs of disturbance, cutting or grazing.
62	Broemmer Creek Headwaters (KEWAUNEE)	T25N R24E 1, 12, 13, 24, 25 T26N, R24E Section 26 3,500 acres Casco 15'	NA-2	Private	A huge lacustrine swamp of second growth timber (black ash is mentioned as dominant). Extensive size qualifies this area as being a wild area (not field evaluated). See Kewaunee Co. CRIP Report.
63	Alaska Lake (KEWAUNEE)	T24N R25E Section 19 NE¼ 40 acres Casco 15'	NA-2	County	A thirty acre deep, alkaline, seepage lake with no development on its shore. The lake is owned by the county, and a small pier is provided for public access. The shore is ringed by second growth birch and white cedar with a grazing history.
64	Three Mile Creek Tag Alder (KEWAUNEE)	T24N R25E SW¼ SW¼ 3, E½ SE¼4, NW¼ NW¼10 50 acres Algoma 15'	NA-2	Private	Tag alder thicket along three mile creek mixed with second growth ash and birch.
65	Silver Lake (KEWAUNEE)	T24N R25E SE¼ SW½ 8 15 acres Algoma 15'	NA-3	Private	Small, shallow lake, the edges of which have been abused by grazing and timber harvest in the past. The lake is ringed by tamarack and white cedar. No development has occurred.
66	Krohn's Lake (KEWAUNEE)	T24N R25E N½5 160 acres Algoma 15'	NA-3	County & Private	A 40-acre lake surrounded by second growth white cedar, beech, yellow birch and hemlock.
67	Ahnapee River Swamps (KEWAUNEE)	T25N R25E section 9, 16, 22 200 acres Algoma 15'	NA-3	Private	Ahnapee River edge containing white cedar, white spruce, tamarack and some hardwoods. Almost all forest is second growth. Excellent buffer for River.

DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
68	Toft Point Scientific Area (DOOR)	T30N R28E 15, 16, 21, 22 600+ acres Sturgeon Bay 15'	SA	U.W. - Green Bay	Species present: northern mesic hardwood forest with white pines and hemlock; more than a mile of Lake Michigan frontage with cobblestone and rock, dolomite beach; white cedar and spruce forest; open marsh with emergent vegetation. This area includes Lighthouse Point. Critical plant species are present.

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
69	Mud Lake (DOOR)	T30N R28E Parts of 3, 4 33, 34 (31N) 1,060 acres Sister Bay 15'	SA	DNR	An estuarian lake connected to Moonlight Bay and Lake Michigan to the south. The spring fed lake is surrounded by an extensive shrub and timber swamp, giving the area an outstanding wilderness character. Many waterfowl and fish use the wetlands for breeding and spawning. The periodic fluctuations of Lake Michigan change the water level and composition of the adjacent wetland. A National Natural Landmark.
70	The Ridges Sanctuary (DOOR)	T30N R28E 3, 4, 9, 10, 16, 17 700+ acres Sister Bay 15'	SA	The Ridges Sanctuary	Parallel abandoned beach ridges and swales from former Lake Michigan levels, over dolomitic bedrock. Some swales are wet and open, while others are forested with swamp conifers. Boreal forest habitat is present on some parts of the ridges, very disjunct from the Lake Superior region. Rich, unique flora of many local, rare and endangered species make this tract world famous. Hiking trails have been developed through part of the Ridges Sanctuary. A National Natural Landmark.
71	Sister Islands (DOOR)	T32N R28E 30 2 - 15 acres according to water level Sister Bay 15'	SA	DNR	Two low-lying dolomite gravel islands in Green Bay considered to be important gulleries. An estimated 1350-1650 breeding pairs of herring gulls were present in 1964. Bird banding and several research projects on gulls have taken place on the islands. Vegetation is primarily composed of pioneering weedy herbs and shrubs.
72	Peninsula Park Cedar-Spruce Forest (DOOR)	T31N R27E Parts of 28, 29 53 acres Sister Bay 15'	SA	DNR	An upland white cedar-white birch forest on low cliffs of Niagara dolomite formed during former levels of Lake Michigan. Open marsh dominated by bluejoint and reed grass, and an open calcareous meadow on an abandoned beach zone lie below the cedar forest. A northern dry-mesic forest above and to the east of the cliffs. White pine and hemlock occur occasionally along the cliff. Extensive northern dry-mesic forest lies adjacent to the area on 3 sides; to the west lies a marsh buffer zone. Critical plant species are present.
73	Peninsula Park Beech Forest (DOOR)	T31N R27E 22 30 acres Sister Bay 15'	SA	DNR	A northern mesic forest with sugar maple, American beech, basswood and hemlock with several large red oak and white pines scattered throughout the forest. Area was used by John Curtis and classes from the University of Wisconsin.

DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
74	Newport Conifer - Hardwoods (DOOR)	T32N R29E Parts 28, 29, 33 140 acres Sister Bay 15'	SA	DNR	This area contains a great variety of forest types. 60 acres are northern hardwoods with white birch, sugar maple, American beech and ash. A former beach line characterized by irregular dolomite chunks and an elevation difference of 3 to 5 feet traverses the site from NE to SW. Above this, hardwoods grow on a jumbled boulder substrate; to the south and east, hardwoods stabilized low dunes. Hemlock hardwood forest covers another 20 acres with hemlock, fir, spruce and white cedar. Areas of lowland brush, swamp hardwoods and 3/4 mile of Lake Michigan beach frontage are also included. The area is traversed by hiking trails.
75	Jackson Harbor Ridges (DOOR)	T34N R30E SE¼ 28 32 acres Washington Island 15'	SA	Town of Washington	A small, sheltered harbor, it features excellent example of Lake Michigan beach with low, sandy and marshy areas, low dunes and stabilized ridges. Behind the dunes is a mixed conifer-hardwood forest. As a plant refuge, the area is excellent for it contains numerous Great Lakes coastal and critical species. The shore, shallow ponds and sand flats are attractive to shore birds and waterfowl. The transition from beach to boreal forest in a 300 foot distance accounts for the great species diversity and uniqueness of the area. Adjacent lands are also high quality.
76	Whitefish Dunes and Cave Point (DOOR)	T28N R27E Parts 2, 3, 10 400+acres Jacksonport 15'	NA-1	DNR, Town, Private	This area, long known to naturalists, contains the best developed open and stabilized Lake Michigan sand dunes and high quality beach in the state. Moist forests cover steep sand dunes as well as the exposed dolomite bedrock at Cave Point. Acquisition as a state park is proceeding. Critical plant species present.
77	Marshall's Point (Pine Ledges) (DOOR)	T31N R28E Parts 23, 24, 25 About 600 acres Sister Bay 15'	NA-1	Private and Trust Lands (114 acres)	An outstanding natural area exhibiting Lake Michigan rocky shore and boreal forest of white cedar, balsam fir and other conifers and hardwoods over dolomite bedrock. The soil is a raw humus rendzina, which is an undecomposed organic soil over calcareous rock. Numerous critical plant species have been documented from this area, and it contains a rich bryophyte community. In the late 1970's, much of the shore line has been sold in large lots, and integrity of area is in question.
78	Mink River Marsh (DOOR)	T32N R28E 13. 14, 24 Ellison Bay and Sister Bay 15' 1100 acres	NA-1	Private	A 2-mile widespread of the Mink River subject to the water level fluctuations of Lake Michigan. Extensive sedge meadows line the periphery, while aquatics abound in the marsh. Numerous springs feed into the marsh, and extensive shrub and conifer swamps surround the wetland. Area has high furbearer and waterfowl significance. The Nature Conservancy owns 60 acres on the edge of the marsh.

DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
79	Boyers Bluff (DOOR)	T34N R29E 23, 24 200+ acres Washington Island 15'	NA-1	Private	Vertical cliffs showing terraces from abandoned lake levels, mesic forest, and small cedar bog are the main features. Shaded cliffs and upland forest are rich in herbaceous species. The prominent bluff is visible for great distances. Recent logging on uplands has occurred.
80	Plum Island (DOOR)	T33N R29E 26, 27 266 acres Washington Island 15'	NA-1	Coast Guard	A forested island dominated by sugar maple and basswood. Cobblestone beaches and low cliffs form the shore. Critical plants are present. Only development is a Coast Guard facility.
81	Hotz Tract Europe Lake (DOOR)	T32N R29E Parts of 4 and 9 Between Europe Lake and Lake Michigan Washington Island 15' 130 acres	NA-1	DNR	A state significant isthmus between Lake Michigan and Europe Lake features over a mile of undeveloped low dunes and limestone frontage on the former and cobblestone frontage on the latter. Virgin red pine groves and excellent beech-sugar maple mesic forest are additional features. Critical plant species are present.
82	Rock Island (DOOR)	T34N R30E 700+ acres Washington Island 15'	NA-1	DNR	A semiwilderness island entirely publicly owned. It is wooded with a northern mesic forest of white birch, Am. beech and sugar maple. Shaded cliffs and narrow beaches contain some unusual plant species Archaeological exploration has uncovered early French artifacts, an Indian cemetery and other significant items.
83	Furrer Beach and Dunes (Carlin) (DOOR)	T34N R30E Parts 27, 28 50 acres Washington Island 15'	NA-1	Private	Frontage on the protected Jackson Harbor with beach, dunes and wet beach pools, extremely rich in rare and localized Great Lakes Flora. Tract is adjacent to Jackson Harbor Scientific Area, and would make an important addition.
84	Heitzman Estate (Manager Tract) (DOOR)	T30N R28E Parts of 10, 11 106 acres Sister Bay 15'	NA-1	Private	An outstanding boreal forest of white cedar, white spruce, white pine and hardwoods. Ledges of dolomite bedrock are exposed throughout the forest. The area features 3/4 mile of Lake Michigan frontage and a relatively undisturbed growth. Critical plant species present.
85	Coffey Swamp (DOOR)	T34N R30E Parts of 29, 30 40 acres Washington Island 15'	NA-1	Private	The swamp consists of 15 acres of open sedge bog, some open water surrounded by white cedar swamp forests. The open bog is calcareous, extremely rich, with tamarack. Many critical plant species are present.
86	Gardner Swamp (Au Grande Maret) (DOOR)	T27N R24E Sec. 20-23, 28-29 2,000 acres Little Sturgeon 15'	NA-2	DNR & Private	A large wetland complex ranging from white cedar-black ash swamp, to alder-willow-dogwood thicket, to open sedge meadow. Upland edges and islands composed of second growth hardwoods (red maple-aspen). Keys Creek originates in this very impenetrable and wild area. An important wildlife habitat resource.

DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
87	Dunes Lake Area (DOOR)	T28N R27E parts 28, 29, 30, 31, 32 Sturgeon Bay, Jacksonport 15' 1200 acres	NA-2	Private	Extensive, wild tract, mostly swamp and marsh or ridge-swale topography. Maple Creek and its associated wetlands flow into Mud Lake, a shallow body of water with significant waterfowl habitat. The southeast edge is wooded ridge-swale land.
88	Sturgeon Bay Lake (DOOR)	T27N R26E 12, 13 300 acres Sturgeon Bay 15'	NA-2	Private	An extensive deep water marsh and shallow semi-wilderness lake. A narrow strip of shrub, swamp forest, and a second growth upland forest separate the marsh from Lake Michigan.
89	Clay Banks Tract (DOOR)	T26N R26E NW¼ 3 61 acres Sturgeon Bay 15'	NA-2	Town of Clay Banks	A publicly owned portion of the beach ridge swells and swales south of Sturgeon Bay Ship Canal. Forested with white cedar, hemlock, birch and poplar, the tract shows no signs of recent human disturbance in the ridges area. An unimproved road bisects the ridges area from a narrow sand beach. Critical plant species are present.
90	Schmoke Lake (DOOR)	T28N R27E Parts 16, 20, 21, 22, 27, 28, 29 Jacksonport 15' 400 acres	NA-1	Private	An extensive, wooded tract west of Whitefish Point, with red and white pine, white spruce, white cedar, and some hardwoods over old dune sands. Closer to the lake is a swamp forest of white cedar-yellow birch, with many ephemeral pools. The lake is shallow with good waterfowl habitat. This site is adjacent to the Dunes Lake area and forms a complex with a wild character. Critical plant species present.
91	Logerquist Tract (DOOR)	T29N R27E Part W½1 Sister Bay 15' 81 acres	NA-2	County & Private	Good beech-hemlock-maple woods on deeply undulating topography, two small wilderness marsh-lined lakes, unimproved frontage on Kangaroo Lake and a large (second growth) cedar-spruce swamp make this a diverse and valuable natural area. Canada yew is prolific on the mesic woodland floor. A snowmobile trail runs through much of good woodland.
92	Meridian County Park (DOOR)	T29N R27E Parts of 1, 2 93 acres Sister Bay 15'	NA-2	Door County	A northern mesic hardwood-conifer forest with some deep marsh and open wetland. The dominant feature is a low ridge which extends from SW to NE in the north end of the tract. It appears to be a former beach or dune formation.
93	Death Door Bluff (DOOR)	T33N R28E 35 Ellingson Bay 15' 50 acres	NA-2	Door County	A very high Niagara dolomite bluff overlooking Lake Michigan, with terraced lower levels indicating former wave-cut beaches. Forested with second growth Am. beech-sugar maple-white birch on summit with large trees and white cedar on the cliffs. Critical plant species are present.
94	Woodside Woods (DOOR)	T26N R26E Section 7, NE¼ 60 acres Algoma 15'	NA-2	Private	A beech-maple-birch woods that is being intensely managed for timber production. Average DBH 18" with some large old growth trees throughout area.

DOOR COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
95	Egg Harbor Escarpment Forest (DOOR)	T29N R26E 16, 20, 29 Sturgeon Bay 15' 500 acres	Not ranked	Private	More than three miles of Niagara Dolomite escarpment wooded primarily with white cedar. The escarpment ridge rises between 150 and 200 feet above the low terrace adjacent to Green Bay.
96	Sturgeon Bay Canal Beach and Ridges (DOOR)	T27N R26E SE¼ SE¼ 22 23 South of Canal Sturgeon Bay 15'	NA-3	Township	A small but significant section of undeveloped low dunes with old beach ridges behind and separated by a gravel road-parking lot. An unimproved township park.
97	Spider, Hog and Gravel Islands (DOOR)	See Washington Island, Sister Bay 15' Hog: 2 acres Gravel: 4 acres Spider Island: 23 acres	Not ranked	Bur. of Sport Fisheries & Wildlife	Three small islands important as gull nesting sites which have been designated as wilderness islands.
98	Detroit Island Beach (DOOR)	T33N R29E 13, 24 Washington Island 15' 30 acres	NA-2	Private	Sand beach, wet interdunal sand, and drier rear beach habitats. In process of state acquisition.

BROWN COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
99	Middle Lake (BROWN)	T23N R22E NE¼ 32 140 acres Poland 7½'	NA-1	County & Private	A complex of three lakes, the only in the county, surrounded by wetlands and second growth forest. A quaking mat encircles Middle Lake with cattail, marsh fern and others. The 2nd and 3rd successive zones are composed of bog shrubs (Ilex, Alnus, Larix, Betula, Aspen and White Pine). A good cedar swamp is present between Middle and Lily Lakes. The adjacent upland forest and bog make the area exceptional in Brown County.
100	Cat Island Chain (BROWN)	T24N R20E 1, 12 Green Bay West 7½' Size varies according to lake levels.	NA-1 (RSH)	Unknown	A small chain of gravel islands including Cat Island and the islands to the north and northwest. Many colonial birds use the islands for nesting and breeding. The double-crested cormorant is one example of the nesting water birds present.
101	Lone Tree Island (BROWN)	T24N R21E Green Bay East 7½ Less than 1 acre	NA-1 (RSH)	U.S. Coast Guard	A small Green Bay island which provides nesting habitat for a large number of common terns (endangered species) as well as other waterfowl.
102	Bay Port Industrial Tract (BROWN)	T24N R20E Parts of 24, NE¼ 23 200 acres Green Bay West 7½'	NA-1 (RSH)	Private	The area is surrounded by industrial development yet continues to provide many nesting sites for Forster's terns and black terns. This reserve has had a long consistent history of successful breeding that is now threatened by further development. Endangered animal species also sighted on this tract. Cattail marsh in NE¼ 23.
103	Little Tail Point (BROWN)	T25N R21E parts of 5,6,8 250 acres Little Tail Point 7½'	NA-1 (RSH)	Private	A peninsula extending into Green Bay. The tract is an important nesting area for the endangered Forster's tern, green herons and several other wetland species.
104	Long Tail Point (BROWN)	T25N R21E 19,30,31,32,5 200 acres Green Bay E, W 7½'	NA-1 (RSH) GEO	DNR	A peninsula on the west shore of Green Bay which provides nesting habitat for herring gulls, ring-billed gulls and black-crowned herons. The area is managed by the DNR as part of a wildlife area, but is threatened by recreational overuse. The sensitive interior portion of the peninsula is under water when levels are high.
105	Sensiba Wildlife Area (BROWN)	T25N R21E 18 T25N R20E 13 240 acres Suamico 7½'	NA-1 (RSH)	DNR	Although ditched and diked, this area remains a significant nesting area for black terns, little gulls, forster's terns, and other waterfowl.
106	Scray's Hill (BROWN)	T23N R21E parts of 31, 32 80 acres Bellevue 7½'	NA-2	Private	A Northern dry-mesic forest of beech, red oak, sugar maple and white pine situated on the Niagara escarpment. The understory is in good condition with seedlings of all canopy species present. A small flowing spring and a dolomite ledge occur in the center of the area.
106 a	Fonferek Glen (BROWN)	T23N R21E NW¼ 34 Approx. 2 acres Denmark 15'	GEO-1	Private	Formerly, a very unique area, but quarrying has significantly altered area. 30' waterfall, natural bridge and some dolomite bluffs remain.

BROWN COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
107	Peats Lake and Duck Creek Marsh (BROWN)	T24N R20E 1,2,11,12,13,14 Green Bay West 7½' 1200 acres	NA-2	Mostly Private	A huge wetland at the south end of Green Bay where Duck Creek enters Green Bay. Numerous industrial and urban intrusions (filling, power lines, sewers, pipe lines, highways, RR, dredging) have degraded the marsh; however, the cattail-reed marsh is a significant waterfowl and shorebird santuary. Fluctuating water levels have reduced diversity temporarily (1976).
108	Duck Creek Woods (BROWN)	T24N R20E N½SE¼19 Green Bay West 7½'	NA-2	Private	Mixed upland hardwoods of red oak and sugar maple (15-20" DBH) with other hardwoods. Part has been grazed. Forty foot tall banks above Duck Creek and conical glacial deposits are present.
109	Escarpment Woods (BROWN)	T25N R22E SE¼ 29 North of highway 40 acres New Franken 7½'	NA-2	Highway Dept. and private	A ½ mile portion of vertical cliffs and steep slopes along the Niagara dolomite escarpment. White birch and white cedar in all size classes up to 12" DBH along with basswood occur in disturbance areas; original growth sugar maple 20-26" DBH, with red elm, butternut, hackberry and ironwood mark undisturbed portion in NE¼ SE¼ 29.
110	Ruslo's Woods (BROWN)	T25N R22E SW¼ 26 20 acres Dykesville 7½'	NA-2	Private	A northern dry-mesic forest with sugar maple, red oak, white birch and scattered hickory, white and red pine, and beech. The trees are more mature in the northern segment of the tract. The forest has not been grazed or logged, but downed wood has been removed.
111	Baird Creek Park (BROWN)	T23N R21E NE¼ NW¼ 3 30 acres Green Bay East 7½'	NA-3	City	Both northern and southern dry-mesic forests occur here. Red and white oaks and white pine forest line the clay and sand ravines feeding into Bairds Creek. The ground flora is fairly diverse. The heavy use of motorbikes in the northern portion of the park has disturbed portions.
112	Trout Creek Area (BROWN)	T24N R19E 14,23 (parts) Oneida North 7½' 350 acres	NA-1 (RSH)	Oneida Tribe	Extensive wooded area, parts of which have been developed, but portions remain with natural characteristics. Wood turtles (end., Wis.) occur along Trout Creek in Section 14 and 15.
113	Suamico Lacustrine Flats (BROWN)	T24,25N R20E 2,3,27,34-36 2,500 acres Green Bay West 7½'	NA-3	Private	Extensive second growth forest on lacustrine sand deposits. Trees small sizes; aspen, white birch, oak with soft maple. Willow brush invading abandoned fields. Main feature is its undeveloped nature and size.
114	Dyckesville Iris Woods (BROWN COUNTY)	T25N R22E 22,23,25-27, 34,35 Dyckesville 7½' Acreage unknown	NA-1 (RSH)	Private	Extensive swamp and upland forest with scattered but extensive populations of Dwarf Lake Iris (Thr., Wis.), the only station outside of Door County. Roadside ditches also with Iris. Populations are scattered within 8 sections.

BROWN COUNTY
OCONTO COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
115	Flintville Upland Forest (BROWN)	T25N R20E 4,5,9, 1,500 acres Green Bay Quad Suamico 7½'	NA-3	Mostly County	Second growth northern dry-mesic forest on irregular topography (sands) with large-toothed aspen, white pine, oak, white birch, as well as swamp species in wet pockets and moist, sandy flats. All cut over and of interest primarily because of its size.
116	Rock Falls Creek (BROWN)	T25N R22E N½ 23 100 acres Dykesville 7½'	NA-3	Private	A southern wet-mesic forest. Silver maple, red maple, cottonwood and elm trees dominate a dense, mature canopy. There is evidence of Dutch Elm disease and some timber harvesting in the past. The area is recovering well from the cutting.
117	Kittle Falls (BROWN)	T23N R21E parts of 32,33 60 acres Bellevue 7½'	GEO-2	Private	The area's main attribute is a 40-foot waterfall over exposed Niagara escarpment. Red iron ore (Neda formation) is exposed, approximately 18 in. thick. Flagstone quarrying and housing development have limited the value of area.

OCONTO COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
118	Charles Pond (OCONTO)	T26N R21E Section 3 110 acres Oconto 7½'	SA	DNR	A wetland complex on Green Bay subject to the influence of water fluctuation of Green Bay. The hardwood swamp forest (second growth) on lacustrine deposits is one of the few of its kind remaining. The bay-mouth bar lake, extensive shallow marsh and shrub zones vary in extent. Extremely high water in the 1970's and Dutch Elm disease have temporarily altered the habitat.
119	County Line Swamp (OCONTO, MARINETTE)	T29, 30N R22E Peshtigo to Green Bay, 10,000 acres. Oconto, Porterfield 15'	NA-2	Primarily county	A huge lacustrine swamp of considerable diversity extending from just southwest of Peshtigo south 6 miles to Green Bay and up to 3 miles wide. One east-west road bisects the area. Topography is a controlling factor, and there are hundreds of small "islands" of hardwoods in the swamp, presumably where sand is close to the surface. These sandy islands and some larger tracts are of white birch-aspen-oak-red maple of pole size; expanses are of alder-willow-dogwoods; along east edge is pole sized black ash and more mature soft maple-elm-ash swamp forest. Area is second growth and has suffered ditching, but size is outstanding.

OCONTO COUNTY
MARINETTE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
120	Oconto County Forest (OCONTO)	T27N, 28N, R21E Sections 26,34,35 36,2,3 2,500 acres Oconto 15'	NA-3	County, Private	An extensive second growth lacustrine forest characteristic of the Lake Michigan lowland area, most irregular in pattern, with uplands and lowland occurring together controlled by peat depth. Primarily it is a forest of aspen-white birch-white pine-oak with red maple, elm and ash. Portions are of alder and other shrubs. Listed primarily because of its size.
121	Pensaukee Lacustrine Forest (OCONTO)	T72N R21E 15, 16, 21, 22 2,500 acres Oconto 15'	NA-3	Private	Extensive second growth lacustrine forest of aspen-oak-white birch with scattered white pine. More southerly portions are elm-ash-red maple-white pine or alder-dogwood-willow shrub swamp. Some old field succession. Soils sandy and peat, moist.
122	Copper Culture Cemetery (OCONTO)	T28N R21E NW¼ 24 10 acres Oconto West 7½'	ARCH	DNR	A monument erected in 1952 by the Wisconsin Archaeological Society and the Oconto County Historical Society to recognize the burial spot (7,500 years old) which at the time was the oldest manifestation of humans in northeastern North America east of the Mississippi River. Ten acres of floodplain forest occurs nearby.
123	Green Bay Shores Wildlife Area (OCONTO)	1. T29N R22E NE¼33 2. T28N R22E 8,17 3. T27N R21E 14.23 1060 acres	NA-2	DNR	A series of coastal wetlands influenced primarily by Lake Michigan water levels, composed of sedge-blue joint open marsh, cattail marsh, open water, willow shrub marsh, and second growth lacustrine swamp. Tracts of primary value for waterfowl habitat and other wetland animals.

MARINETTE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
124	County Line Swamp (MARINETTE, OCONTO)	T29,30N R22E Peshtigo to Green Bay 10,000 acres Oconto, Porterfield 15'	NA-2	Primarily county	A huge lacustrine swamp of considerable diversity extending from just southwest of Peshtigo south 6 miles to Green Bay and up to 3 miles wide. One east-west road bisects the area. Topography is a controlling factor, and there are hundreds of small "islands" of hardwoods in the swamp, presumably where sand is close to the surface. These sandy islands and some larger tracts are of white birch-aspen-oak-red maple of pole size; expanses are of alder-willow-dogwoods; along east edge is pole sized black ash more mature soft maple-elm-ash swamp forest. Area all second growth and has suffered ditching, but size is outstanding.

MARINETTE COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
125	Seagull Bar Scientific Area (MARINETTE)	T30N R24E Sections 9 and 16 Size varies according to lake level - approx. 20 acres Marinette East 7½'	SA	DNR	Sand spit, quiet lagoon, and emergent vegetation lying just south of the Menominee River mouth. The area attracts migrating shorebirds and waterfowl in great numbers. Beach and shore vegetation, submerged aquatics, and coastal wetland during low water periods are important features.
126	Bloch-Dry-mesic Forest (MARINETTE)	T29N R23E W½SE¼3 50 acres Marinette West 7½'	NA-1	Private	Northern dry-mesic forest of white pine, black (Hill's?) oak and red maple, many in the 20-26" DBH with white pine sometimes larger. There is a good diversity of overstory and understory trees and shrubs and it has the integrity of an undisturbed forest. Viburnum cassinoides, Withe Rod, occurs in the forest and is known in the state only from Marinette and Oconto Counties.
127	Wayside (Kamin) Oak Pine Forest (MARINETTE)	T30N R23E SW¼ SE¼ 27 Marinette West 7½' 40 acres	NA-2	Private	Mixed oak pine forest dominated by white pine 10-15 inches DBH, red oak up to 24", and red maple 4-10" DBH, with red pine 18-22" DBH and jack pine 8-12" DBH. Rare hemlock and white birch. A few very old stumps but no grazing indication. Red maple and white pine reproduction, good diversity of overstory type and excellent integrity.
128	Peshtigo River Floodplain Forest (MARINETTE)	T29N R23E E½ SW¼4 and SE¼4 South of river 100 acres Marinette West 7½'	NA-2	Private	River floodplain forest of Am. elm, silver maple, red maple with scattered hemlock and white cedar, all of young to medium age. Slightly higher terraces have more mesic forests of sugar maple, Am. beech, basswood, and red oak. Fences in bottomland.
129	Ansul Patterned Dunes (MARINETTE)	T30N R23E NE¼13 T30N R24E W½NW¼18 180 acres Marinette 15'	NA-2	Private	Stabilized dunes with Hill's oak - jack pine forest (and white birch, red maple)on the dry sandy ridges and ephemeral ponds and sloughs between the dunes. Wetland grasses, sedges and scattered shrubs occur in the open, ephemeral ponds, which show as patterned vegetation on aerial photos. Disturbance by ORV's exists.
130	Melka-Nicklaus Esker (MARINETTE)	T29N R23E N½ SE¼2 50 acres Marinette West 7½'	NA-2	Private	A sand esker of more than ½ mile in length and up to about 30 feet high, forested with red pine (6-15"), white pine (to 10"), jack pine, white oak and Hill's oak plus other conifers: hemlock, white cedar and balsam fir. Evidence of fire, light cutting and grazing present. This is one of several such sand ridges located below the Lake Algonquin beach line in an area characterized by a nearly level topography. Soils are peat and Dunkirk fine sand in this Lake Michigan lowland.

MARINETTE COUNTY
IRON COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
131	Peshtigo River Oaks (Bloch Oaks) (MARINETTE)	T29N R23E NE¼ 4 west of County BB Marinette West 7½' 30 acres	NA-2	Private	An excellent stand of red oak 20-24" DBH with white ash, white oak and scattered white and red pine and beech. Some large silver maples and ash also occur. The stand is located 3-5 feet above the extensive bottomland forest along the Peshtigo River.
132	Pine Forest Remnants (MARINETTE)	T30N R23E 1) SW¼ SW¼17 2) NE¼ NW¼17 3) SW¼ NW¼17 Marinette West 7½' 25 acres	NA-3	Private Private UW-Marinette	Young to medium age stands of red pine and mixed red-white pine with oak on droughty Dunkirk fine sand, old lacustrine deposits. These are the only stands of their kind in the Green Bay area coastal zone, and although the areas have been altered for residential development, they represent a once common forest type.
133	Peshtigo Harbor Meadow (MARINETTE)	T29N R23E SE¼ NE¼15 10 acres Little Sturgeon 15'	NA-2	DNR	Moist, sandy meadow with little recent disturbance except for invasion by alders, aspen and tamarack. Colic root (Aletris), ladies' tresses orchid and fringed gentians occur with low prairie species, quite unusual for this region. Locally visited by naturalists.
134	Peshtigo Harbor Wildlife Area (MARINETTE)	T29N R23E 13,14,15,16 Little Sturgeon 15' 2500 acres	Not Ranked	DNR	A huge wetland and partly lacustrine forest complex at the mouth of the Peshtigo River. Old river channels and cutoff areas, now lagoons, provide a great diversity for waterfowl, its main feature. Extensive monotypes of Carex stricta, Calamagrostis canadensis occur with wetland shrubs (willow, dogwood, hardhack).
135	Lower Montreal River (IRON)	T47N R1E Parts 18,20 Little Girls Point 15'	GEO-1	Private	A scenic gorge cut into the Keweenaw Copper Range with basalt in the upper reach and conglomerate in the lower. Steep cliffs rise up to 230 feet above the river. Remnant large pines occur on inaccessible slopes, while the remainder is cut over boreal forest on the uplands.
136	Montreal River Maple Forest (IRON)	T47N R2E NE¼ NE¼ 31, 43 acres Little Girls Point 15'	NA-2	State Trust Lands	Northern mesic forest of moderate size of sugar maple, elm, yellow birch, hemlock and basswood. Although the tract has a history of selective cutting the integrity of the area is high, especially in comparison to the surrounding lands.

ASHLAND COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
137	Big Bay Sand Spit & Bog (ASHLAND)	T50N R3W Parts 13,14,23,23 Madeline Island 7½' 400 acres	SA	DNR	A bay-mouth bar lagoon with extensive quaking bog and swamp forest behind it. Numerous critical plant species occur in the bog. One-mile long sand spit is both open in spots and forested with red, white and jack pines. Located within Big Bay State Park, on Madeline Island.
138	Kakagon Sloughs (ASHLAND)	T48, 49N, R2, 3W 16,000 acres Ashland, Odanah 15'	NA-1	Bad River Indian Reservation	A huge, undeveloped area where the White, Bad, and Kakagon Rivers and several creeks enter Lake Superior; Chequamegon Point, a long sand spit, and Honest John Lake at the east end. True wilderness.
139	Long Island (ASHLAND)	T49N R3, 4W Parts 13,17,18,20 Long Island 7½' 250 acres	NA-1	Private Coast Guard	A low, curving island about 2½ miles long and ¼ mile wide with alternating ridge-swale topography, the swales being Sphagnum bog and swamps, the uplands forested with a dry, oak canopy. Large areas of open sand attract many shorebirds, while flocks of migrating waterfowl find shelter near the island. Piping plover, an endangered species, nests here.
140	Fish Creek Slough (ASHLAND-BAYFIELD)	T47N R5W 1 and 2 1,000 acres Ashland 15'	NA-1	Private	A large timber and shrub swamp with much open marsh where Fish Creek enters Chequamegon Bay. Many emergent and submerged aquatics occur over the primarily sandy bottom. Of major significance for fishery and waterfowl production.
141	Steamboat Point Devils Cauldron Cliffs (ASHLAND)	T51N R2W SE¼ 21,22,NE¼ 27 Madeline Island 15' 20 acres	NA-2	Private	Sandstone cliffs and ledges facing north and primarily shady. Several. uncommon cliff species occur there. Located on Madeline Island.
142	Amnicon Bay Bog (ASHLAND)	T51N R2W 34, 35 150 acres Madeline Island 15'	NA-2	Red Cliff Ind. Resv. and Private	A coastal wetland of open water surrounded by quaking Sphagnum bog. Although undisturbed, no unique features were observed. Located on the eastern tip of Madeline Island.
143	Stockton Island Bog (ASHLAND)	T51, 52N R2w 1, 36 400 acres Stockton Island 7½'	NA-1	Park Service	The area features a 1½ mile long, curving barrier beach separating Lake Superior from the lagoon and bog area, as well as a forested beach ridge inland. Two sand ridges connect the main island to a former island, now Presque Isle Point. Pine savanna covers 30 acres of stabilized dunes at the southern corner of the bog. The area burned several years ago and appears to be a classic savanna. The bog complex differs from others in the islands by virtue of it's wet, sandy pools and sand flats in the rear dune area. Plants of interest include Carex lenticularis, Rhynchospora fusca and Carex michauxiana. Sandhill cranes have been observed in the bog area.
144	Munsing Park Boreal Forest (ASHLAND)	T50N R3W NW¼29 60 acres Bayfield 7½'	NA-1	La Pointe	Old growth pine-spruce-fir forest with rich understory. On Madeline Island.

ASHLAND COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
145	Outer Island Hemlocks (ASHLAND)	T53N R1W 13 200 acres Outer Island 7½'	NA-1	U.S. Coast Guard	An excellent old growth northern mesic forest, historically preserved under Coast Guard ownership. Some trees exceed 4 feet in diameter (DBH). The old growth forest begins some 300 feet from the northwest shore, due to a very pronounced edge effect. The forest floor is irregular due to numerous tip-up mounds and a great number of downed trees. Soils are a very sandy reddish, and glacial till is present throughout the forest. There is unusually good hemlock and Canada yew reproduction in the understory due to the lack of a deer herd. The canopy is somewhat open, but has scattered white pine overtopping the hardwoods. Parnassia palustris, an endangered plant species, is found frequently on the sand till banks near Lake Superior.
146	Outer Island Sand Spit (ASHLAND)	T53N R1W 3,10 200 acres Outer Island 7½'	NA-1	Park Service	The sand spit, at the southern tip of the island, consists of a narrow beach zone extending from Lake Superior on the west to low dunes and eventual forest to the east. The inner beach is more diverse in vegetation, running from the rear of the 1st dune, through dry swales to second dunes where present. A line of ancient, gnarled pines separates conifer forest from the beach. Lightly wooded with white and red pine, the forest becomes a denser spruce, fir and maple mix eastward. Four small bogs occur within the forest, and there is a high quality bog-lagoon inland and to the north.
147	Gull Island (ASHLAND)	T51N R1W 12 3 acres Michigan Island 7½'	NA-1	Park Service	A small rocky island, only several hundred square feet of dry soil remains on its northern edge. The remainder is cobblestone and larger rocks. The elevation is low (610 feet) and flat. This island is the most important gullery in the Apostle Islands. Shallow water between Gull and Michigan islands and around Gull Island are significant lake trout spawning area. Vegetation is weedy. Apparently, no mammalian predators occur on the islands.
148	North Twin Island (ASHLAND)	T53N R2W 14,15,22,23 165 acres Cat Island 7½'	NA-1	Park Service	An upland island, about 1¼ miles N-S and 1/3 mile wide. It is ringed with rocky shores and low, dry, vertical cliffs and forested with an old growth canopy consisting of yellow birch (all sizes), balsam fir (dense seedling thickets) and white cedar, with some red maple and white pine. Canada yew, the dominant shrub, forms nearly impenetrable thickets up to 8 feet tall. Together with abundant mountain maple, they indicate the absence of a deer population, which contrasts with the neighboring islands. Nesting and resting sites for herring gulls are present on the cliffs. The soil is sandy and rocky over the Lake Superior sandstone. The northern ledges are the only site in the State for Senecio indecorus, a boreal species.

ASHLAND COUNTY
BAYFIELD COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
149	Devils Island (ASHLAND)	T33N R3W 10,15 300 acres Rocky Island 7½'	NA-1	Park Service	A completely wooded, upland island ringed by a rocky shore. The north end has spectacular vertical cliffs, wave cut caverns and pillars, and on these cliffs are several critical plant species. Conifers dominate the forest canopy, which is somewhat open. There is a pronounced edge effect on the north and west shores. The forest floor is dominated by Canada Yew, mosses and lichens. Lateral ground seepage emerges on the northwest shore and in part accounts for the rare flora there.

BAYFIELD COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
150	Bark Bay (BAYFIELD)	T51N R7W Pts. 34,35,36 T50N, R7W Pts 1,2,3 T50N R6W NW¼6 600 acres Bark Bay 7½'	SA	DNR & Private	The largest and most diverse coastal wetland natural area. Undisturbed features include tow parallel sand spits, the youngest with a number of old white pines, extensive wet sedge bog, springs and lagoon, and swamp forest. The lagoon has high fishery value; on the mud flats shorebirds abound. A boreal forest occurs on the east end of the sand spit. This area has a high priority for preservation, and acquisition by the DNR continues. Critical plant species are present.
151	Port Wing Boreal Forest and Bog (BAYFIELD)	T50N R8W 21, 28 110 acres Port Wing 15'	SA	Private & DNR	A boreal forest of white pine, red pine over a sub-canopy of white spruce and balsam fir with white birch, mountain ash, red maple and yellow birch developed on an older, curving sand spit ¼ mile back from the Lake Superior beach. Mosses and lichens in abundance on the dead logs and forest floor lend a "boreal" appearance. To the north of the forest is a high quality sedge bog behind the Lake Superior beach which is about 3/4 mile long.
152	Raspberry Bay (BAYFIELD)	T52N R4W 35,36 T51N R4W 1,2 300 acres York Island 7½'	NA-1	DNR, Red Cliff Ind. Resv.	Wetland complex at the mouth of the Raspberry River with open marsh, extremely rich Sphagnum bog behind a low sand spit, and low sandy uplands to the south. In Section 36, second growth uplands and vertical cliffs along Lake Superior both contain interesting flora. In all, a diverse area of high natural area significance.

BAYFIELD COUNTY
DOUGLAS COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
153	Bayview Township Bog (BAYFIELD)	T49N R4W R¾ 5, Parts of 4,8,9 200 acres Bayfield-Ashland 15'	NA-2	Bayfield Tsp. DNR Private	A linear bog behind the first beach ridge. Sedge-sphagnum bog, alder thickets and small areas of white pine forest are the main plant communities. The wet beach is nearly devoid of vegetation although a few beach plants occur on the dry sands.
154	Sioux River Outlet (BAYFIELD)	T49N R4W Parts 9,17,18,19 T49N R5W 24 Ashland 15' 350 acres	NA-2	DNR Private County Park	A class IIa and I stream with open wetlands in the lower mile near Lake Superior. Falls, rapids and a deep pool are owned by Bayfield County (120 acres) and DNR (40 acres) in Sections 24 and 19.
155	Sand Bay Bog (BAYFIELD)	T51N R5W N½1 T52N R5W 36 250 acres Sand Island 7½'	NA-2	National Park Service, Red Cliff Ind. Resv.	Open marsh, Sphagnum bog and swamp forest at the mouth of the Sand River. The best developed Sphagnum bog is found in the southeast part. A narrow point of land in Section 36 has a young red pine forest at its tip.
156	Siskiwit Bay (BAYFIELD)	T51 R6W NE¼ 32, NW¼ 33 NE¼ 33, NW¼ 34 Cornucopia 15'	NA-2	DNR & Private	A lagoon and wetland bog where Lost Creeks (3) enter Siskiwit Bay. Although the sand spit is heavily developed, the sedge bog and wetlands remain intact. In parts of 33 and NW¼ 34 is an interdunal bog rich in plant species. Critical plant species are present.
157	Flag River (BAYFIELD)	T49N R8W East ¼ of Twsp. Iron Lake 15' 10,000 acres	NA-2	Bayfield County	An extensive second growth upland forest and zones of conifers along the Flag River and its tributaries. Of high value is its roadless expanse and wild characteristics. Northward into T50N are large swamps used as deer yards.
158	Bibon Lake and Flag River Mouth (BAYFIELD)	T50N R8W 20,29,29 700+ acres Port Wing 15'	NA-2	Private	Bay mouth bar lake with undisturbed aquatic habitats, extensive fringing areas of shrub bog which grades into a tamarack swamp forest. Area large with a wild character, and providing waterfowl nesting and resting habitat.

DOUGLAS COUNTY

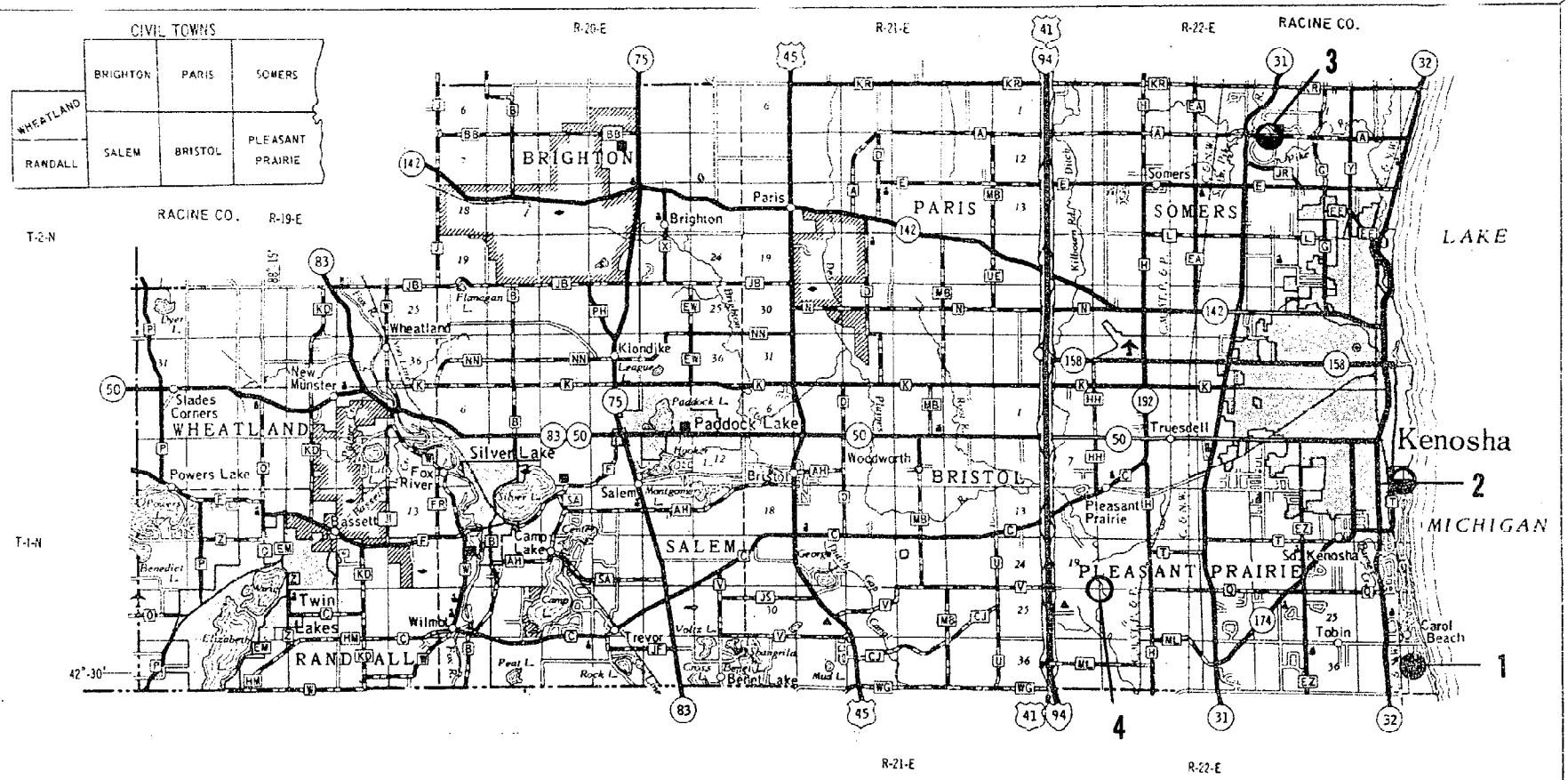
	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
159	Brule River (DOUGLAS)	Mostly T49N R10W Lower 6 miles Brule 15' 1800 acres	NA-1	Mostly DNR	The lower reaches of this famous river are included primarily because of its high water quality, fishery and aquatic habitats.
160	Allouez Bay (DOUGLAS)	T49N R13W Parts 33,34 600 acres Parkland, Superior 7½'	NA-1	City of Superior	A shallow bay between the Superior harbor and Wisconsin Point, featuring an emergent aquatic community of Sparganium, Sagittaria and Zizania and numerous submerged and floating leaved aquatics. There is good interspersion of aquatics and open water, and numerous mud flats provide excellent waterfowl and shorebird habitat. The bay is subject to the disturbances of Great Lakes shipping vessels, industrial pollution, sewage, and air pollution from the nearby ore shipping facility but still it contains natural features.

DOUGLAS COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
161	Wisconsin Point (DOUGLAS)	T49N R13W Parts 27,28,34 Superior, Parkland 7½' 300 acres	NA-1	City of Superior	A long, narrow sand spit into Lake Superior, in Wisconsin about 2½ miles long. Pine forest and open beach and dune communities are best developed, Area heavily used for picnicking and hiking and is subject to some noncompatible uses. See Allouez Bay. Critical plant species present.
162	Dwight's Point-Kimballs Bay Area (DOUGLAS)	T49N R14W SW¼ NW¼ 32 West Duluth 7½' 400 acres	NA-1	City of Superior	A two mile peninsula jutting into St. Louis River contains old-growth groves of red and white pine among more second growth deciduous-conifer mixed woodland. Such long serpentine inland bays, such as Kimballs and Pokegama Bay, are unique in Wisconsin to this naturally flooded river mouth. Wetland lines much of the bays which is used extensively by waterfowl. This area contains some of the best boreal forest remaining.
163	St. Louis River Marsh (DOUGLAS)	T48N R15W Parts 1,10,11,12 West Duluth 7½' 250 acres	NA-2	Private	Submerged and emergent plant communities along the St. Louis River, with some mud flats and shorebird habitat. Area from Red River mouth to Pokegama River mouth. Open marsh along shore and on small islands not too diverse and characteristic of large riverine systems. Dominant plants are Sagittaria, and some wild rice observed. Three species of yellow water lily present. Common tern colonies have been observed on island.
164	Nemadji River (DOUGLAS)	T48N R14W T49N R13W Sunnyside, Superior 7½' Acreage unknown	NA-2	City of Superior, Private	The river valley and extensively meandering river zone from below its confluence with the Black River to its mouth in Superior Harbor. It is a sluggish river whose channel is deeply entrenched into red clay. The river fluctuates wildly and carries a heavy silt load. Adjacent swamp timber some 15' above the river is deciduous forest of black ash, white ash, basswood, box elder, balsam poplar, silver maple and Am. elm, with scattered white cedar white spruce, all of small size. Main value is erosion control and ecological corridor value.
165	Pokegama River Wetlands (DOUGLAS)	T48,49N R14W Parts of 4,5,32 Superior 15' 200 acres	NA-2	City of Superior	A zone of emergent aquatics up to 350' wide along each side of the Pokegama River near its drowned mouth. Cattails and bur reed dominate, and some wild rice is present. Current is slow, and many floating leaved aquatics occur. Sedge marsh occurs closer to the birch-aspen uplands.
166	Amnicon River Mouth (DOUGLAS)	T49N R12W NE¼ 34 Popular NE 7½' 100 acres	NA-3	Private	Small open wetland up to ½ mile back from the Lake Superior shore, dominated by sedges and cattails, and providing a sheltered harbor for waterfowl.

DOUGLAS COUNTY

	Area Name (County)	Location Size Quadrangle	Code	Ownership	Description and Comments
167	Amnicon Falls (DOUGLAS)	T48N R12W SE¼ 29 South Range 7½' 30 acres	GEO-1 RSH	DNR	Rock cliffs and water falls along the Amnicon River where it crosses the Douglas Fault. Rare ferns occur on the dry ledges.
168	Lookout Tower Mound (DOUGLAS)	T47N R13W NE¼ 1 50 acres South Range 7½'	GEO-2	County and Private	A series of NE-SW oriented, rounded exposures of igenous bedrock at the edge of the South Range or Copper Range at elevations of 1050-1140 feet. View from the tower is unimpeded for miles and is spectacular. The north slope of the outcrop has vertical cliffs. Small trees of white spruce, white cedar, mountain ash, white birch and balsam are anchored in thin soil of rock crevices. Critical plant species are present.



COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

- State Scientific Areas
- NA-1, Natural Areas of State Significance or Critical Species Habitat
- Other Natural Areas and Features

KENOSHA CO.

SCALE 0 1 2 MILES

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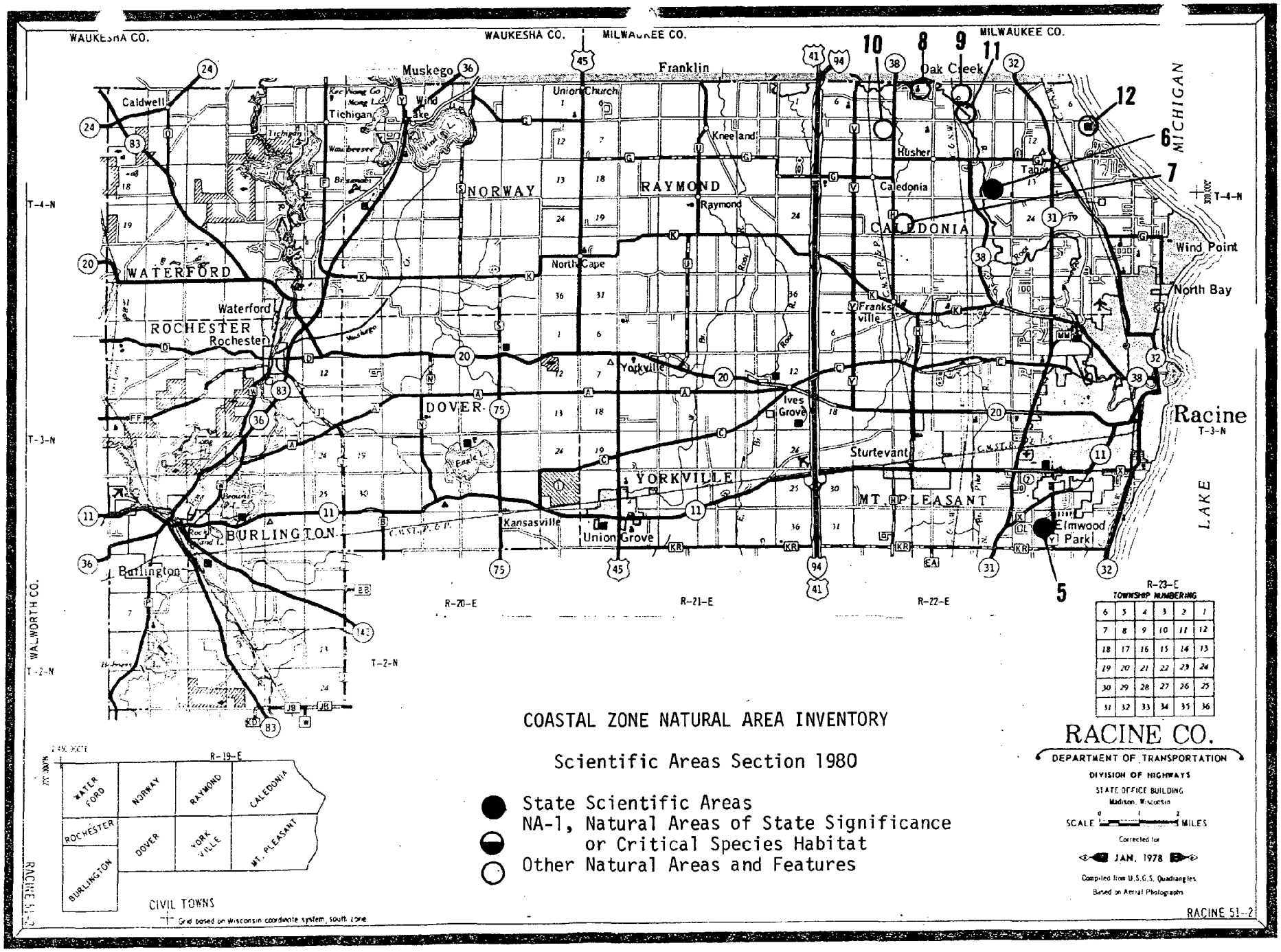
KENOSHA 30-2

KENOSHA 30-2



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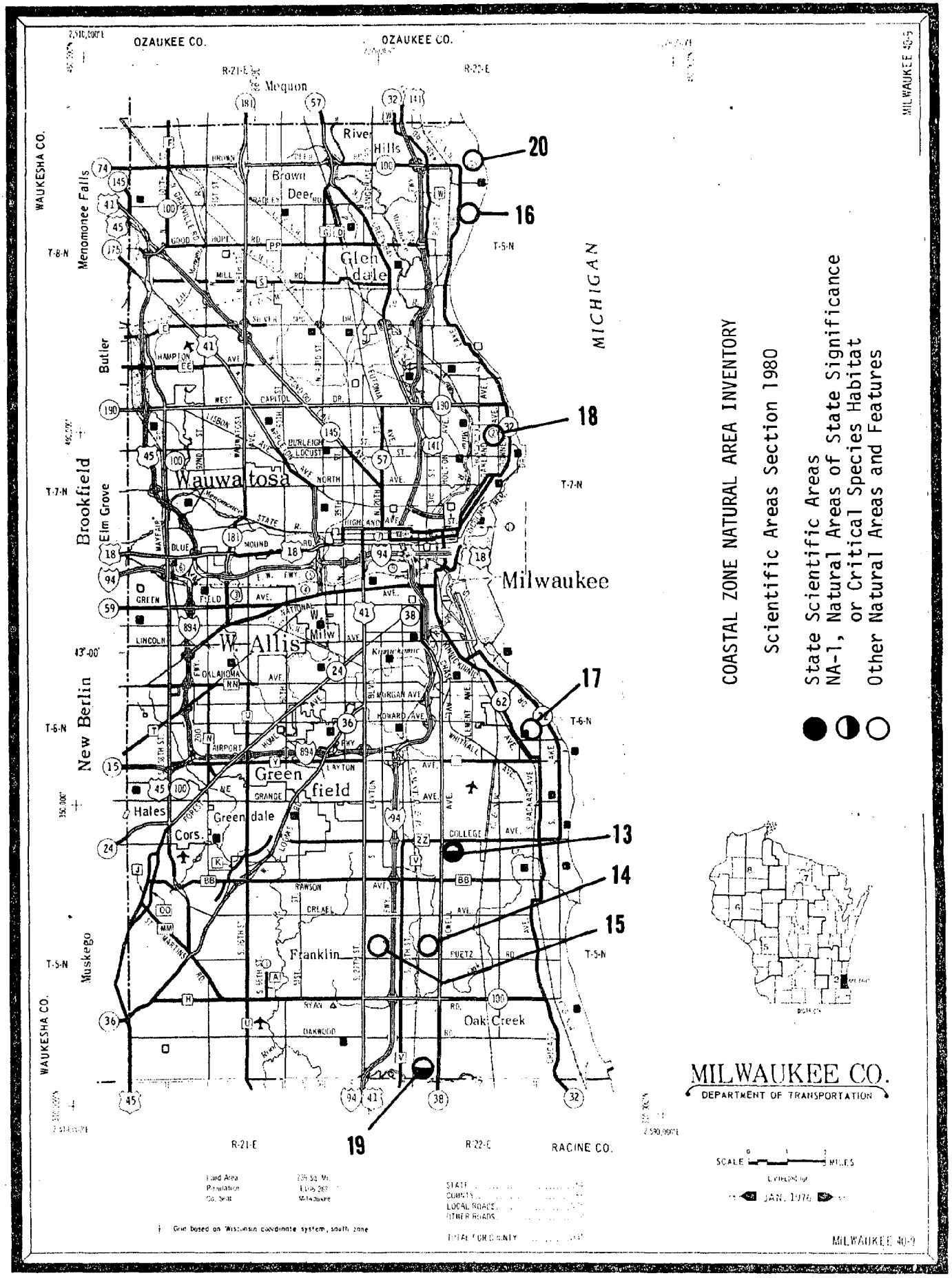
COASTAL ZONE NATURAL AREA INVENTORY
Scientific Areas Section 1980
State Scientific Areas
NA-1, Natural Areas of State Significance or Critical Species Habitat
Other Natural Areas and Features
MILWAUKEE CO.
DEPARTMENT OF TRANSPORTATION
OZAUKEE CO.
WAUKESHA CO.
RACINE CO.
MICHIGAN
Mequon
River Hills
Brown Deer
Glendale
Wauwatosa
Milwaukee
W. Allis
Greenfield
Greendale
Hales Cors.
Franklin
Oak Creek
Menomonee Falls
Butler
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MILWAUKEE 40-9

COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

- ● State Scientific Areas
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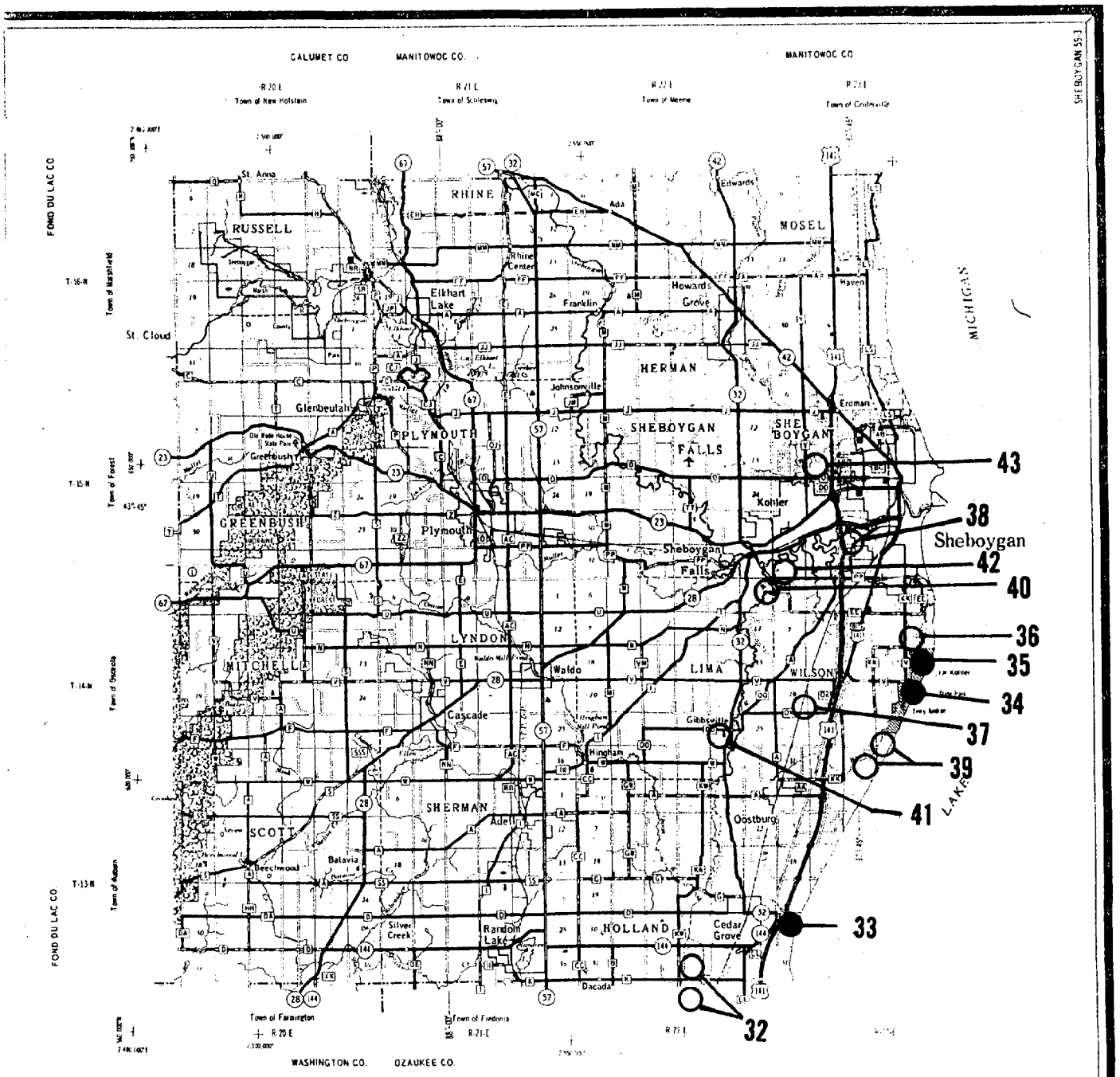
- ○ Other Natural Areas and Features



COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

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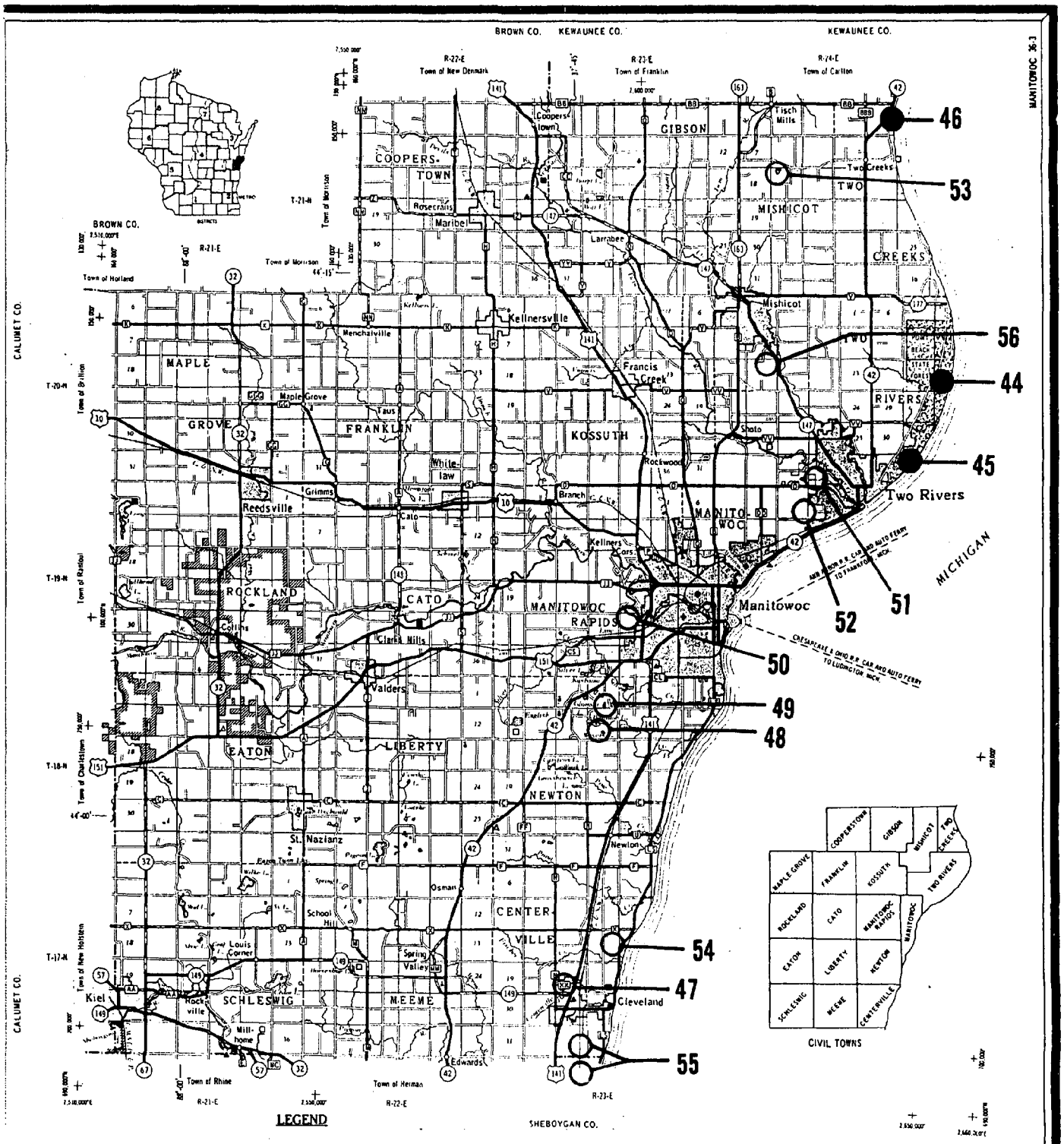
SHEBOYGAN CO.

JAN. 1978



COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

MANITOWOC CO.

- State Scientific Areas
- NA-1, Natural Areas of State Significance or Critical Species Habitat
- Other Natural Areas and Features

SCALE MILES

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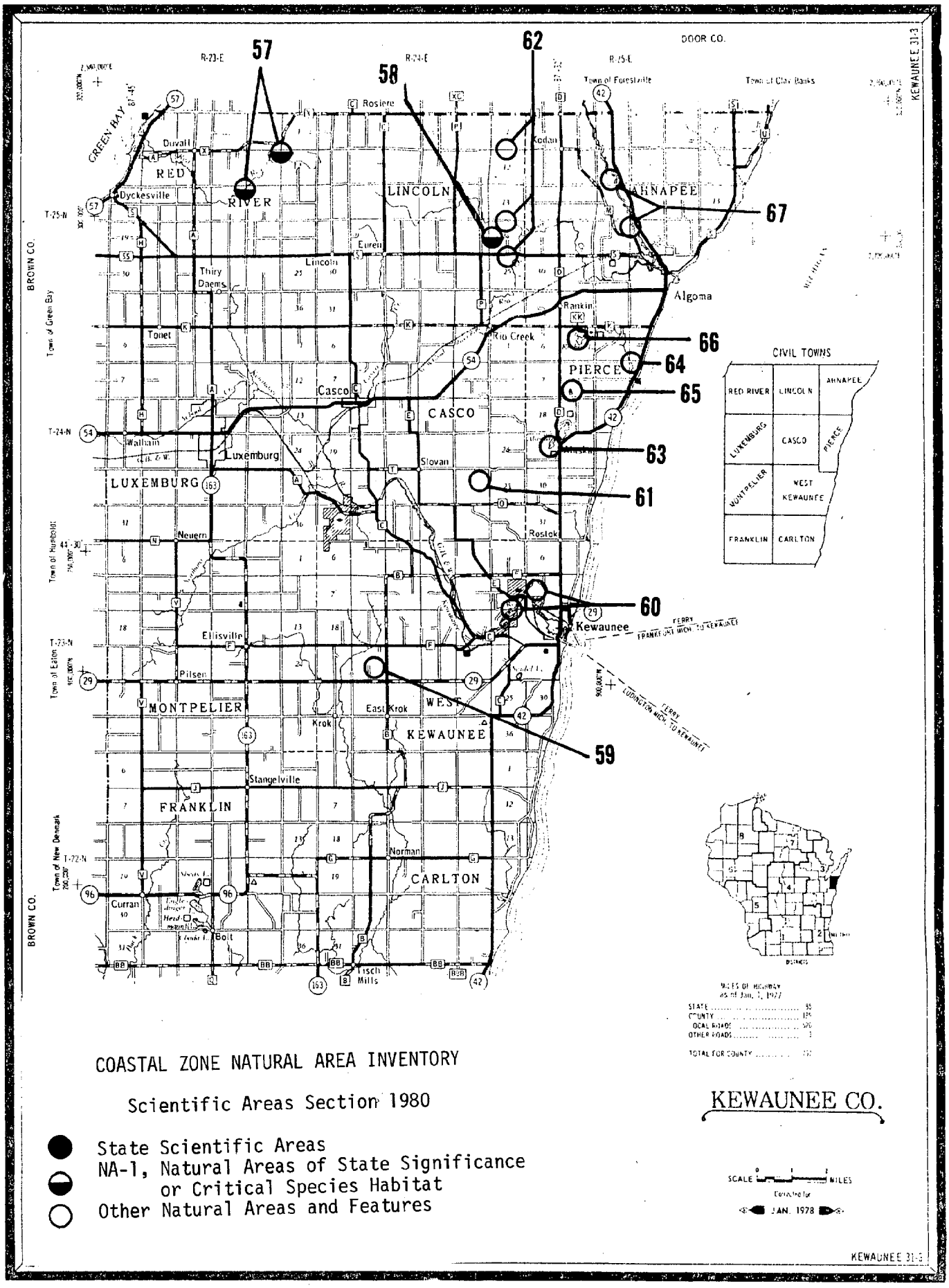
MANITOWOC 36-3



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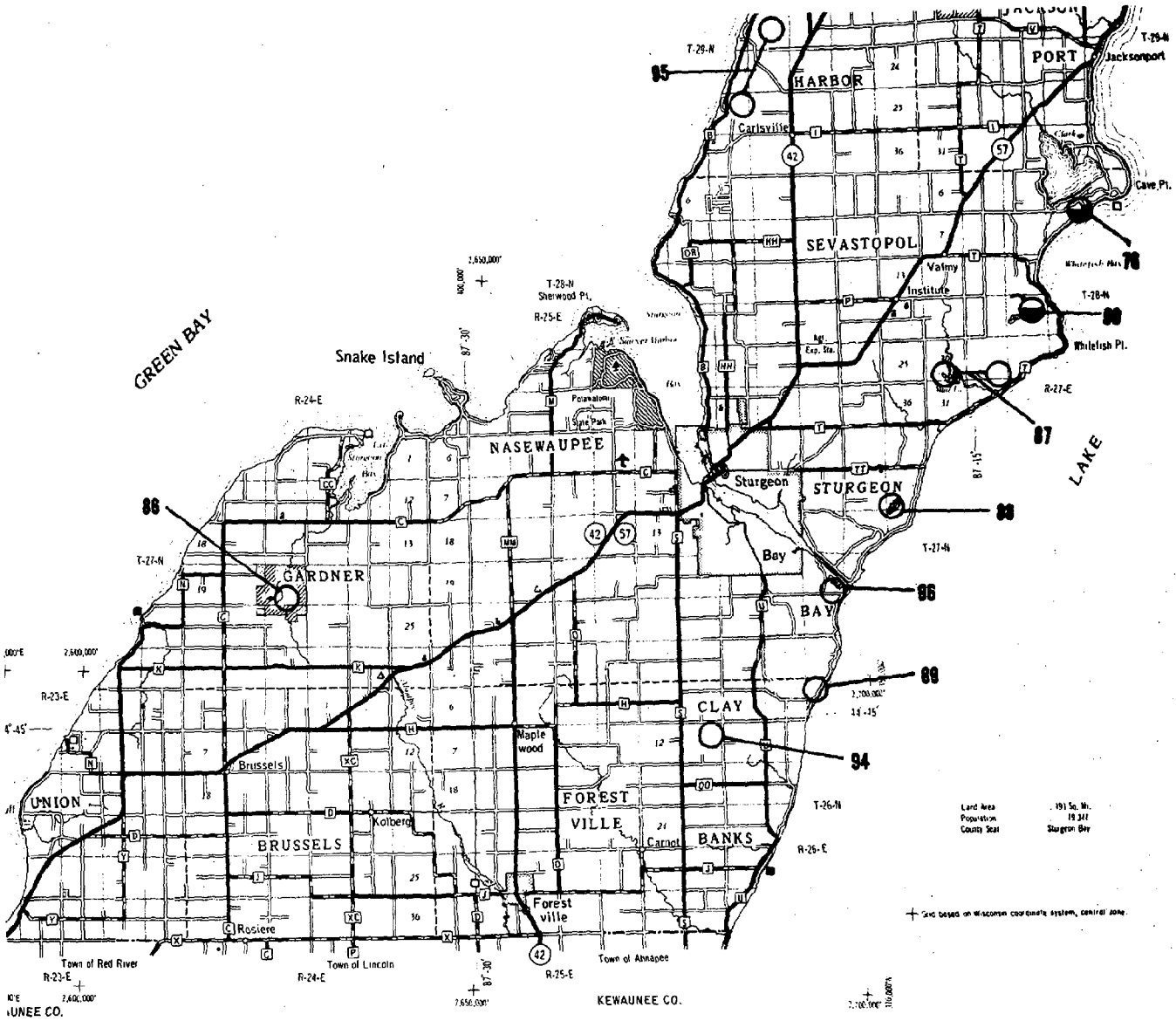

Door County - South Half

COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

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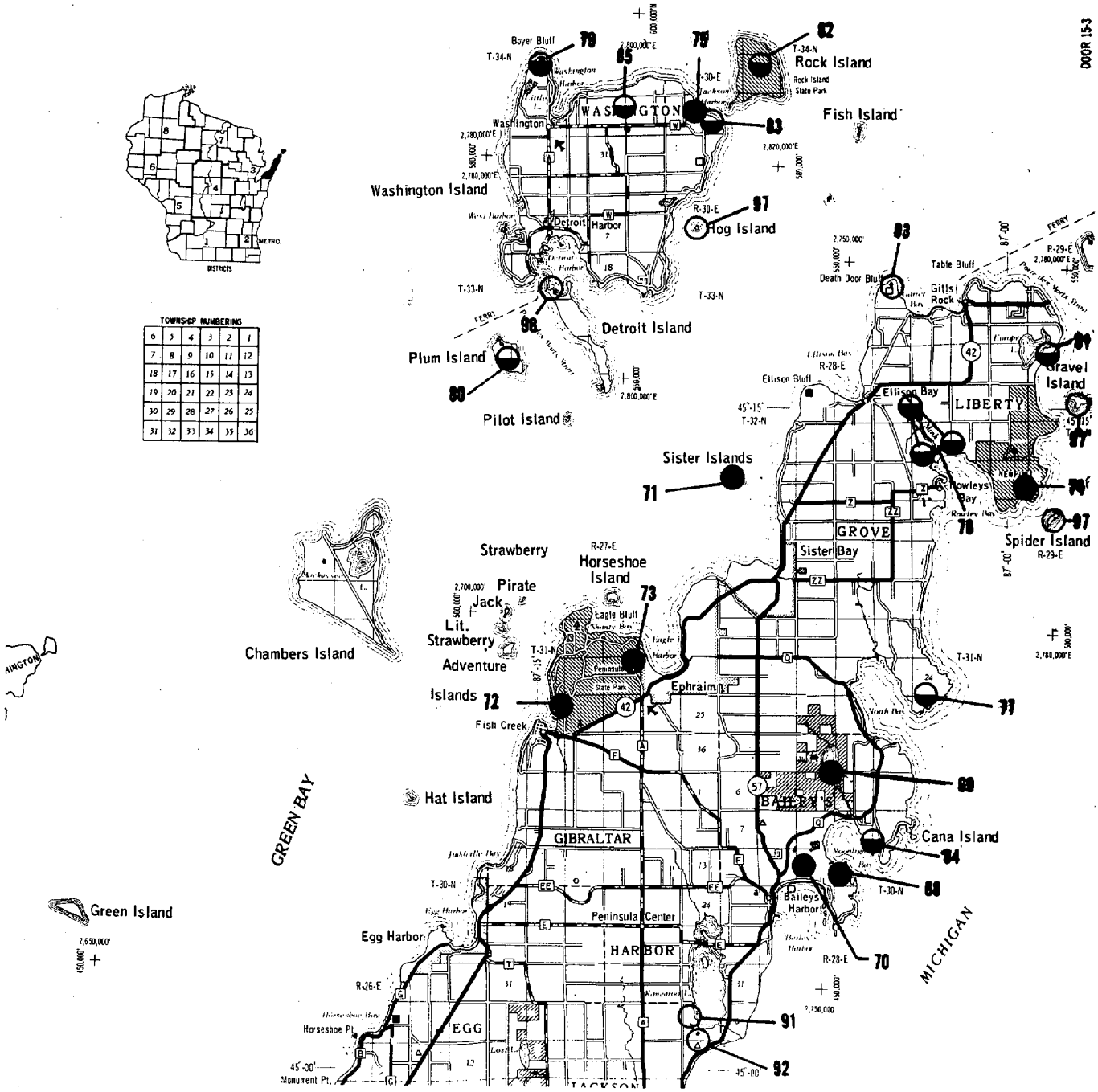
- Other Natural Areas and Features

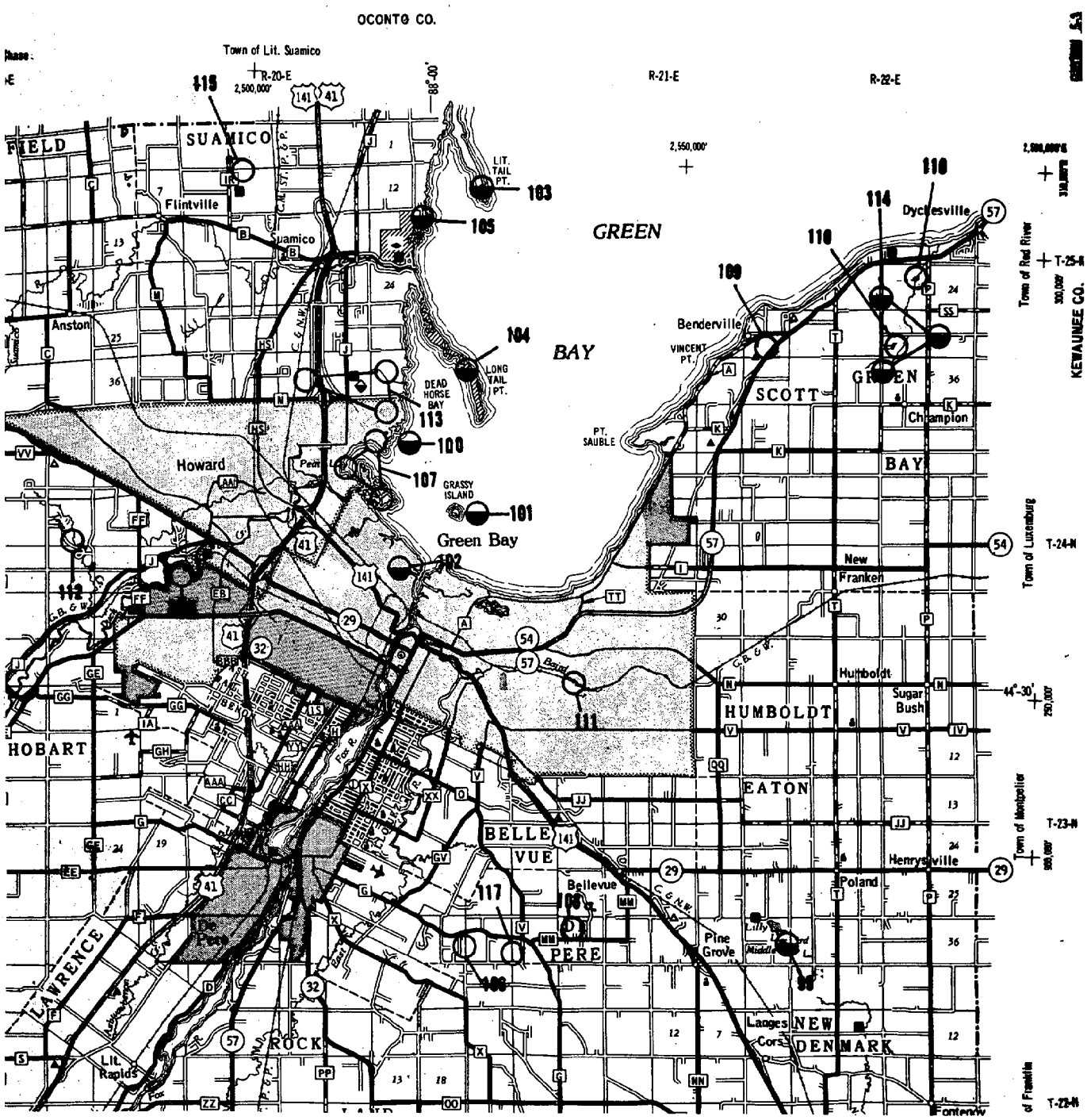


COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

Door County - North Half

- State Scientific Areas
- NA-1, Natural Areas of State Significance or Critical Species Habitat
- Other Natural Areas and Features



COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

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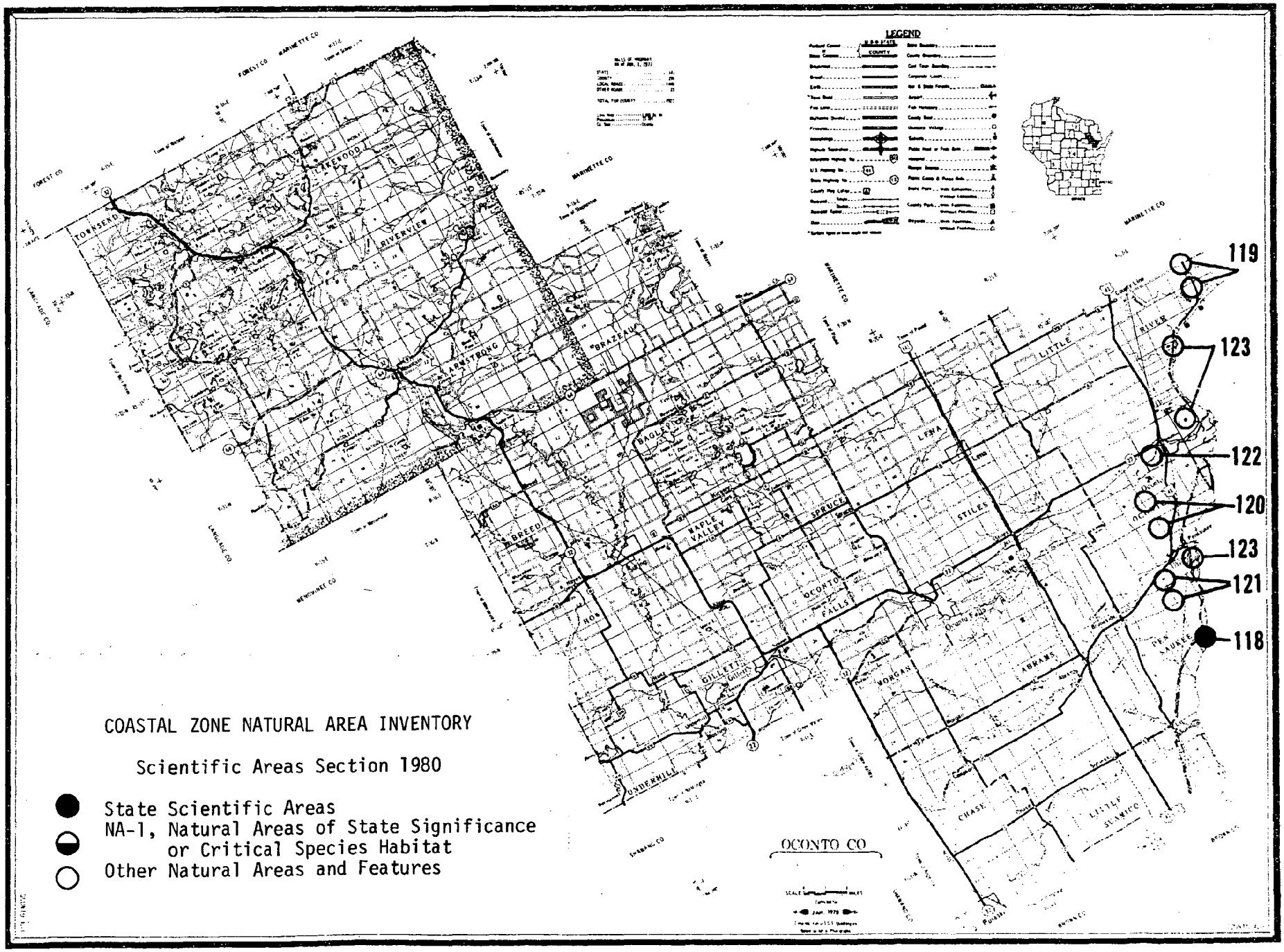
- ○ Other Natural Areas and Features

Brown County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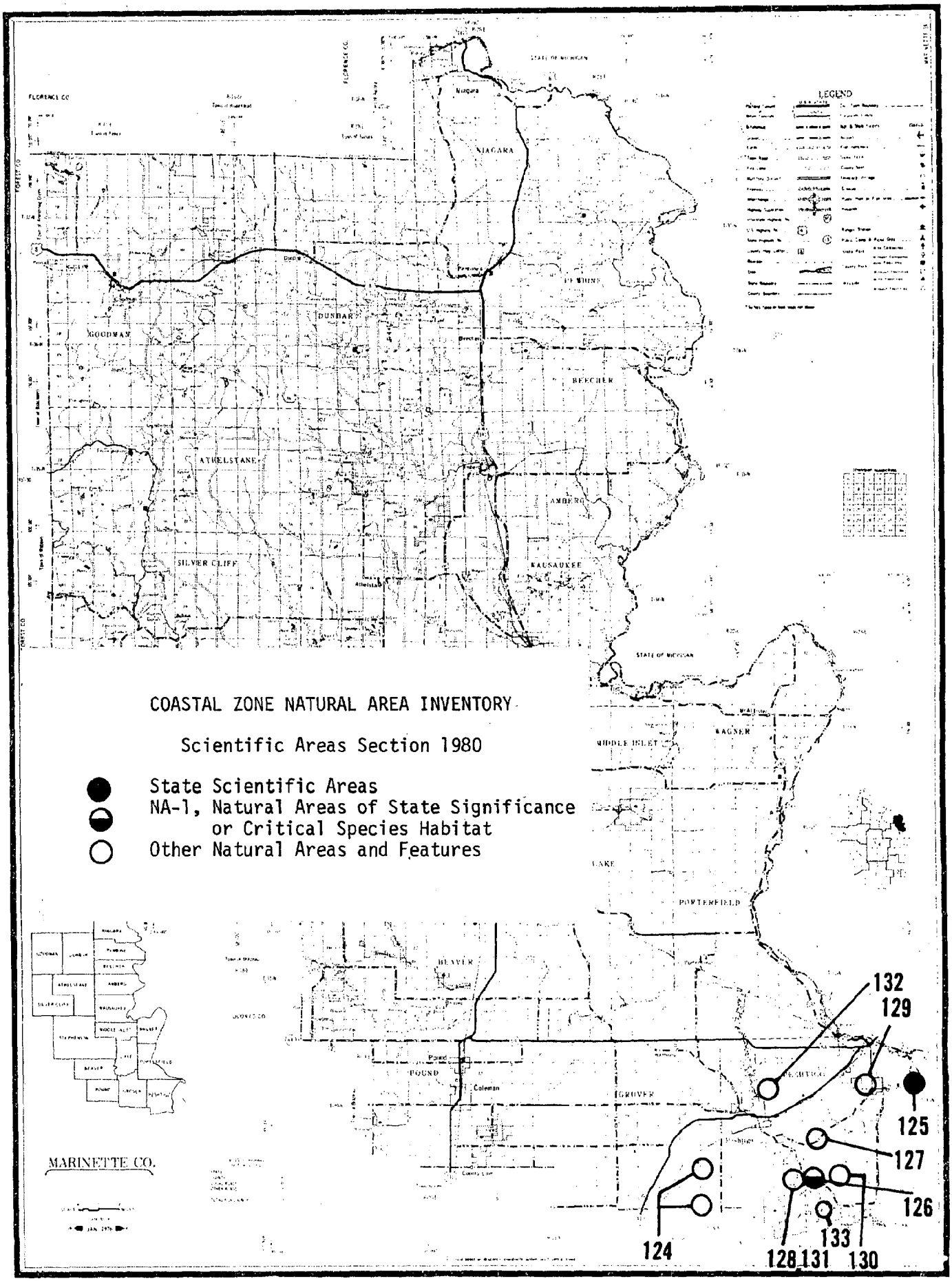
MAPLE VALLEY
SPRUCE
LENA
STILES
LITTLE
RIVER
OCONTO FALLS
GILLETT
MORGAN
ABRAMS
CHASE
LITTLE SUAMICO
UNDERHILL
OCONTO CO
MARINETTE CO
FOREST CO
LANGLADE CO
MENOMINEE CO
SHAWANO CO
BROWN CO
COASTAL ZONE NATURAL AREA INVENTORY
Scientific Areas Section 1980
State Scientific Areas
NA-1, Natural Areas of State Significance
or Critical Species Habitat
Other Natural Areas and Features


COASTAL ZONE NATURAL AREA INVENTORY
Scientific Areas Section 1980
State Scientific Areas
NA-1, Natural Areas of State Significance or Critical Species Habitat
Other Natural Areas and Features
LEGEND
FLORENCE CO
NIAGARA
GOODMAN
DUNBAR
BEECHER
ATHELSTANE
AMBERG
SILVER CLIFF
KAUSAUKEE
STATE OF MICHIGAN
WAGNER
MIDDLE INLET
LAKE
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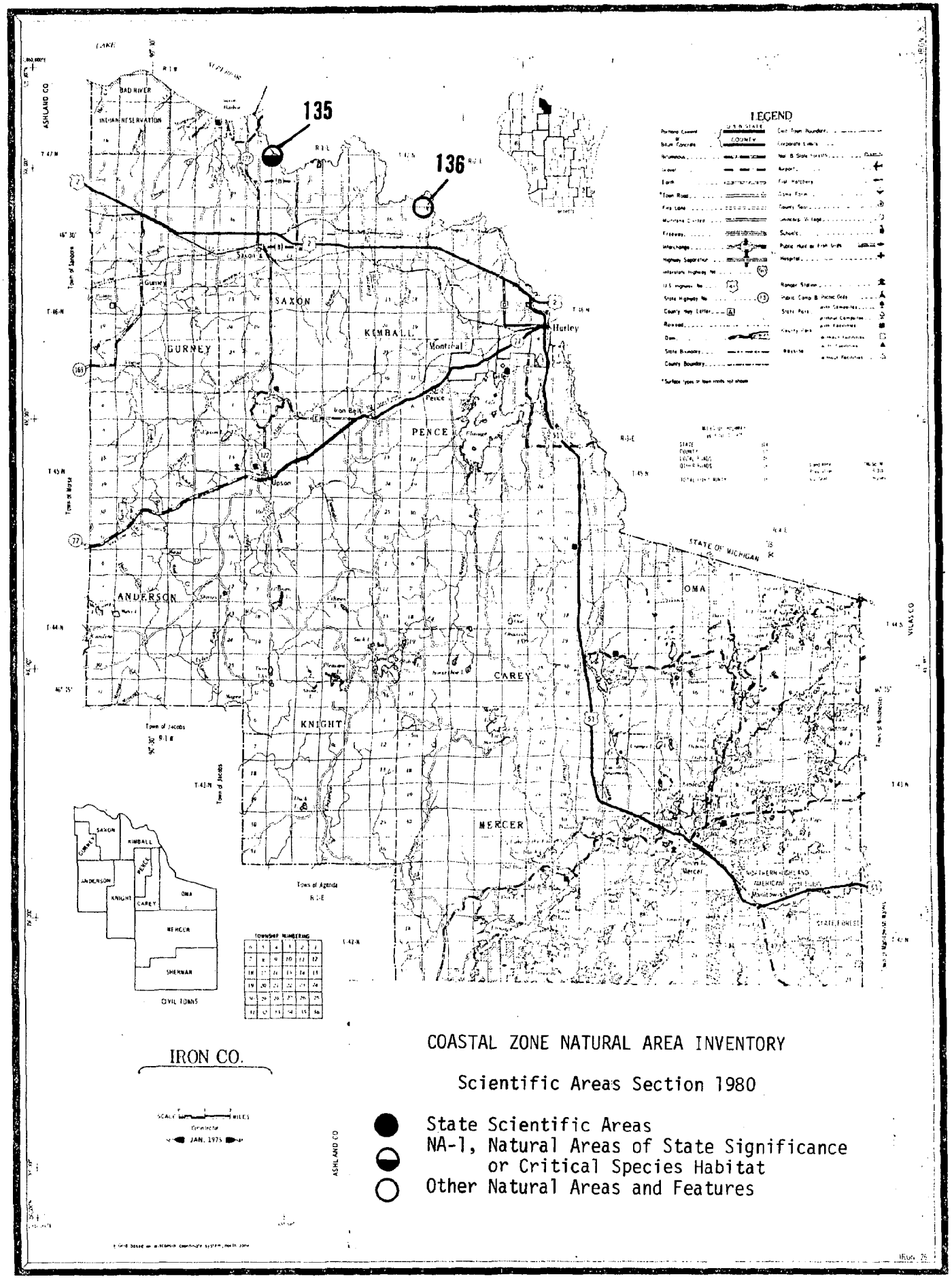

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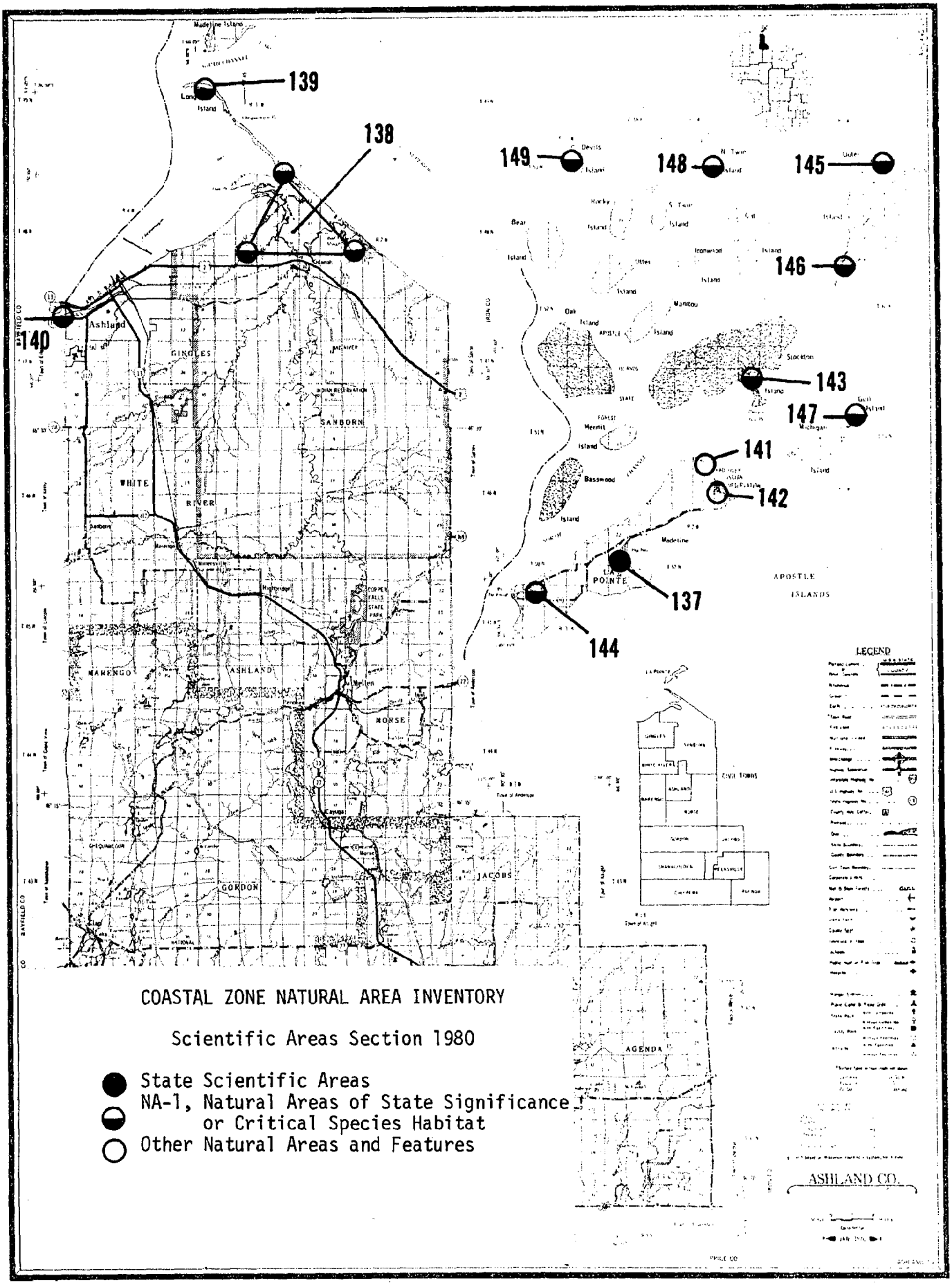

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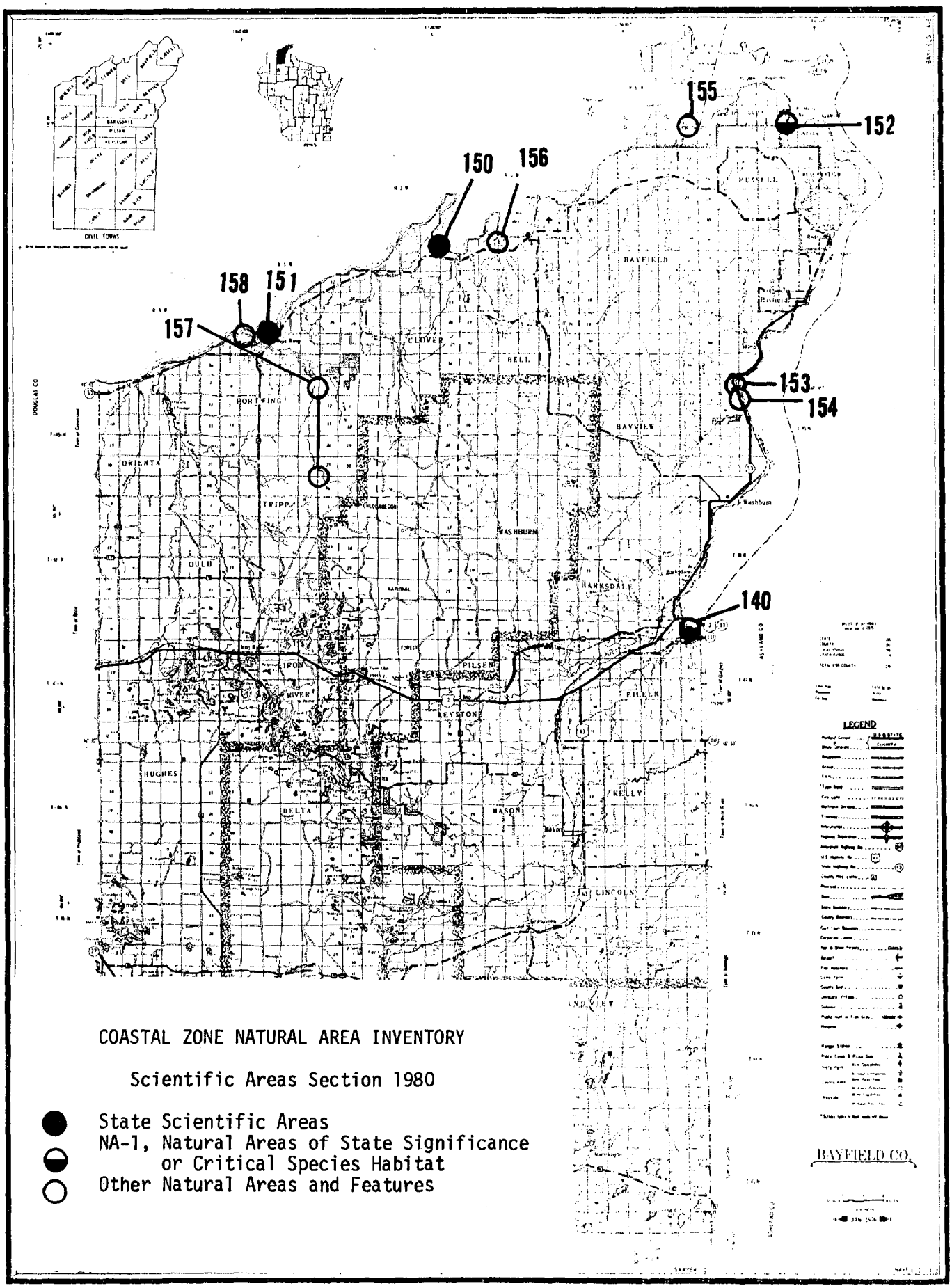
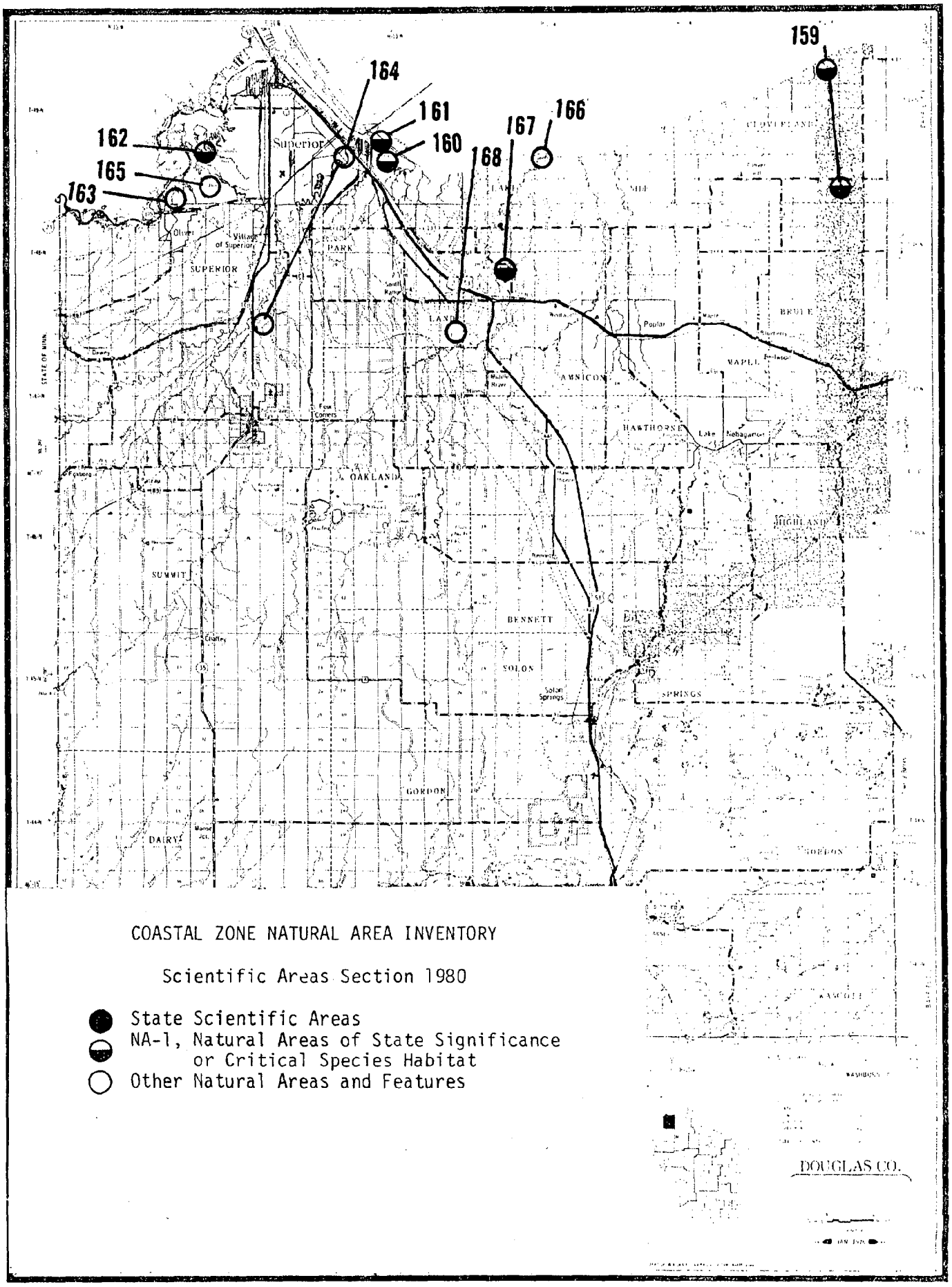


COASTAL ZONE NATURAL AREA INVENTORY

Scientific Areas Section 1980

● State Scientific Areas
◐ NA-1, Natural Areas of State Significance or Critical Species Habitat
○ Other Natural Areas and Features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HIGHLAND
SUMMIT
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SOLON
Solon Springs
SPRINGS
GORDON
DAIRY
STATE OF MINN.
DOUGLAS CO.
COASTAL ZONE NATURAL AREA INVENTORY
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or Critical Species Habitat
Other Natural Areas and Features

Appendix 1

ANALYSIS OF 1980 WI COASTAL NATURAL AREA INVENTORY

Number of Natural Areas by County

	SA	NA1	NA2	NA3	NA1-(RSH)	Geo	Arch	Not Ranked	Total
Kenosha	1	2	1						4
Racine	2		1	5					8
Milwaukee		1	1	3	1	1		1	8
Ozaukee	1	1	4	5					11
Sheboygan	3		5	4					12
Manitowoc	3		7	3					13
Kewaunee		2	6	3					11
Door	8	11	9	1				2	31
Brown		1	5	4	8	2			20
Oconto	1		2	2			1		6
Marinette	1	1	7	1				1	11
Iron			1			1			2
Ashland	1	10	2						13
Bayfield	2	1	6						9
Douglas		4	3	1		2			10
Total	23	34	60	32	9	6	1	4	169

Appendix 1 cont.

Number of Natural Areas by Ownership

	Public (%)	Private (%)	Joint Public/Private (%)	No Information* (%)
SA	18 (78)	3 (13)	2 (9)	0 (0)
NA-1	15 (44)	14 (41)	5 (15)	0 (0)
NA-2	18 (30)	27 (45)	13 (22)	2 (3)
NA-3	3 (9)	24 (75)	5 (16)	0 (0)
NA-1 (RSH)	4 (44)	4 (44)	0 (0)	1 (12)
Geo (All)	1 (17)	4 (67)	1 (17)	0 (0)
Arch.	0 (0)	1 (100)	0 (0)	0 (0)
Not Ranked	3 (75)	1 (25)	0 (0)	0 (0)
Total NA's	62 (37)	78 (46)	26 (15)	3 (2)

* Ownership information not available

Appendix 1 cont.

Summary of SA's and NA-1's - *Acreage by County

County	SA Acreage	NA-1 Acreage	County Subtotal	% of Total
Kenosha	150	185	335	Less than 1
Racine	100 +	0	100 +	Less than 1
Milwaukee	0	100	100	Less than 1
Ozaukee	60	120	180	Less than 1
Sheboygan	150	0	150	Less than 1
Manitowoc	213	0	213	Less than 1
Kewaunee	0	1,600+	1,600	5
Door	2,623 +	3,992 +	6,615	19
Brown	0	1,386 +	1386 +	4
Oconto	110	0	110	Less than 1
Marinette	20	50	70	Less than 1
Iron	0	0	0	0
Ashland	400	18,578	18,978	56
Bayfield	710	300	1,010	3
Douglas	0	3,100	3,100	9
Total	4,536	29,411	33,949	100 %

*NA-1's totals include NA-1 (RSH)'s designation

Appendix 1 cont.

Breakdown and Analysis of SA's and NA-1's * by Ownership and Acreage

*NA-1 totals include NA-1 (RSH) designations

SA's - Publically Owned

Name	County	Ownership	Acreage
Chiwaukee Prairie	Kenosha	U.W.-Parkside	150
Sanders Park Hardwood Forest	Racine	Racine Co.	30
Renak - Polak Wooks	Racine	U.W.-Parkside	70 +
Cedar Grove Ornithological Station	Sheboygan	DNR	30
Kohler Park Dunes	Sheboygan	DNR	25
Wilderness Ridge	Manitowoc	DNR	8
Point Beach Ridges	Manitowoc	DNR	175
Two Creeks Buried Forest	Manitowoc	DNR	30
Toft Point Scientific Area	Door	U.W.-Green Bay	600 +
Mud Lake	Door	DNR	1,060
Sister Islands	Door	DNR	8.5
Peninsula Park Cedar-Spruce Forest	Door	DNR	53
Peninsula Park Beech Forest	Door	DNR	30
Newport Conifer - Hardwoods	Door	DNR	140
Jackson Harbor Ridges	Door	Town of Washington	32
Charles Pond	Oconto	DNR	110
Seagull Bar Scientific Area	Marinette	DNR	20
Big Bay Sand Spit and Bog	Ashland	DNR	400
		Total Acreage =	2,971 +

SA's - Privately Owned

Name	County	Ownership	Acreage
Fairy Chasm	Ozaukee	The Nature Conservancy	60
Kohler Park Pines	Sheboygan	Private	95
Ridges Sanctuary	Door	The Ridges Sanctuary	700 +
		Total Acreage =	855 +

SA's - Joint Public/Private Ownership**

Name	County	Ownership		Acreage
Bark Bay	Bayfield	DNR & Private	Public	173
			Private	427
Port Wing Boreal Forest and Bog	Bayfield	DNR & Private	Public	46
			Private	64
			Total Acreage =	710

Total Acreage of SA's = 4,536 +
Total Acreage of SA's in Public Ownership = 3,190 + (70% of total)
Private Ownership = 1,346 + (30% of total)

** Acquisition for desired SA project not complete.

NA-1's - Publically Owned

Name	County	Ownership	Acreage
Petrifying Springs	Kenosha	Kenosha County	65
Cudahy Woods	Milwaukee	Milwaukee County	60
Root River Forest	Milwaukee	Milwaukee County	40
Plum Island	Door	Coast Guard	266
Hotz Tract	Door	DNR	130
Rock Island	Door	DNR	700 +
Lone Tree Island	Brown	Coast Guard	1
Long Tail Point	Brown	DNR	200
Sensiba Wildlife Area	Brown	DNR	240
Stockton Island Bog	Ashland	Nat. PK. Service	400
Munsing Park Boreal Forest	Ashland	Town of LaPointe	60
Outer Island Hemlocks	Ashland	Coast Guard	200
Outer Island Sand Spit	Ashland	Nat. PK. Service	200
Gull Island	Ashland	Nat. PK. Service	3
North Twin Island	Ashland	Nat. PK. Service	165
Devils Island	Ashland	Nat. PK. Service	300
Allouez Bay	Douglas	City of Superior	600
Wisconsin Point	Douglas	City of Superior	300
Dwight's Point - Kimballs Bay Area	Douglas	City of Superior	400
		Total Acreage =	4,330

NA-1's - Privately Owned

Name	County	Ownership	Acreage
Kenosha Sand Dunes	Kenosha	WI Electric Power Co.	120
Kurtz Maple Woods	Ozaukee	The Nature Conservancy	120
Duvall Swamp	Kewaunee	Private	1,500
Alaska Bog	Kewaunee	Private	100
Marshall's Point	Door	Private and Trust Land	600
Mink River Marsh	Door	Private	1,100
Boyer's Bluff	Door	Private	200 +
Furrer Beach and Dunes	Door	Private	50
Heitzman Estate	Door	Private	106
Coffey Swamp	Door	Private	40
Schmoke Lake	Door	Private	400
Bay-Port Industrial Tract	Brown	Private	200
Little Tail Point	Brown	Private	250
Trout Creek Area	Brown	Oneida Tribe	350
Dyckesville Iris Woods	Brown	Private	
Bloch - Dry - Mesic Forest	Marinette	Private	50
KaKagon Sloughs	Ashland	Bad River Tribe	16,000
Fish Creek Slough	Ashland	Private	1,000
		Total Acreage =	22,186 +

NA-1's - Joint Public/Private Ownership

Name	County	Ownership	Acreage
Whitefish Dunes and Cave Point	Door	DNR, Town Private	400 +
Middle Lake	Brown	County and Private	140
Cat Island Chain	Brown	DNR and Private	5
Long Island	Ashland	Private and Coast Guard	250
Raspberry Bay	Bayfield	DNR and Red Cliff Tribe	300
Brule River	Douglas	Mostly DNR	1,800
		Total Acreage =	2,895 +

Total Acreage of NA-1's = 29,411
Total Acreage of NA-1's in Public Ownership = 4,330 (15% of total)
Private Ownership = 22,186 (75% of total)
Public/Private Ownership = 2,895 (10% of total)

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