



Colburn Wildlife Area Interim Forest Management Plan

Property Identifiers

Property Name and Designation: COLBURN WILDLIFE AREA

County: ADAMS

Property Acreage: 5020

Forestry Property Code(s): 0115

Master Plan Date: 1980

Property Assessment

Colburn Wildlife Area is a state owned property with the primary objective of providing early successional forest habitat. Colburn Wildlife Area is located in north-central Adams County not far from the Waushara County border. It is about 13 miles northeast of Friendship and 22 miles southeast of Wisconsin Rapids. Access points are off county highway C, highway G and Chicago Avenue. The property consists of mainly lowland brush and sedge marsh with areas of aspen and oak forest scattered throughout. Carter Creek passes through the middle of the property.

LANDSCAPE AND REGIONAL CONTEXT

Colburn Wildlife Area is located within the Central Sand Plains Ecological Landscape which is an extensive, nearly level expanse of lacustrine and outwash sand that originated from a huge glacial lake characterizes much of the Central Sand Plains. In lower-lying terrain where silty lacustrine material impedes drainage, the water table is very close to the surface. These areas are where soils may be poorly drained with surfaces of peat, muck or mucky peat. Thickness of peat deposits ranges from a few inches to more than 15 feet.

The hydrology of this Ecological Landscape has been greatly disrupted by past drainage, channelization, impoundment construction, and groundwater withdrawal.

The eastern portion of the Central Sand Plains is a mosaic of cropland, managed grasslands and scattered woodlots of pine, oak, and aspen. Many of the historic wetlands in the east were drained early in the 1900s and are now used for agricultural purposes.

Groundwater withdrawals and contamination are concerns due to the sandy soils and high water table. Center pivot irrigation is common east of the Wisconsin River



Colburn Wildlife Area Interim Forest Management Plan

Use of prescribed fire as a management tool is appropriate for many savanna, grassland, and wetland communities. The spread of invasive plants threatens natural communities and other habitats and is a growing management concern. Commercial cranberry farming has been expanding in recent years; sometimes into upland sites rather than wetlands.

Hydrology: Carter Creek bisects the property from east to west. The watershed is small, totaling 40 square miles and portions of the creek have been known to go dry during hot periods of the summer. Three ditches also supply water from the north. This water supply creates a small stream known as dry creek (actually a ditch) which flows westerly out of the wildlife area and eventually joins Big Roche-A-Cri Creek. Overall drainage of the watershed is to the southwest. The north/south fire lane serves as a quasi-dike and temporarily impounds water in several spots along its 2 ½ mile length.

Current Land Cover: Three-fourths of the ownership is lowland, primarily lowland brush, off-site aspen, and open reed canary grass-sedge marsh. The remaining 25% is upland consisting mainly of aspen and oak.

HISTORY OF LAND USE AND PAST MANAGEMENT

Curtis listed the area as lowland conifer swamp. In the late 1800's timber was logged and pulped and drainage ditches were dug changing the composition of the swamp. The marshes were used for grazing and as hay meadow until the mid 1930's. The majority of what became Colburn Wildlife Area was purchased at this time by the Milwaukee based "Adams County Game Foundation" This group had a goal to conserve wildlife through preservation or development. This and other parcels were purchased by the State in 1947 for its value to forest wildlife and its potential for waterfowl development. A severe wildfire burned just about the whole wildlife area in 1948. Recent management on the property has been geared to maintaining the forested oak areas and providing different age classes of Aspen.

CURRENT FOREST TYPES, SIZE CLASSES AND SUCCESSIONAL STAGES

Oak Forests: Seedling/Sapling Stands – Young forest types with good mix of black oak, white oak, white pine, jack pine, aspen, and red maple. These stands are early successional areas that, through disturbance, are regenerating nicely and will mature over time.

Pole Stands – Maturing forest types are middle aged stands, co-dominated by black oak, white oak, white pine and red maple. These areas are middle successional stands where the aspen and jack pine are falling out and red maple, oak and white pines are taking over the sites. Oak Wilt is also present within these sites, creating small open areas of low tree densities. Some Gypsy Moth defoliation has



Colburn Wildlife Area Interim Forest Management Plan

gone on in the past, leading to slower growth rates across this size class across the property. Japanese Barberry also dominates some areas of the understory within these sites on this property.

Sawtimber Stands – Mature and over-mature forest type, co-dominated by black oak, white oak, and white pine. These areas are middle to late successional stands where the mature black oak is falling out of the system due to Oak Wilt. White pine, jack pine, and oak understories usually take over these areas where sunlight can reach the forest floor. Japanese Barberry also dominates some areas of the understory within these sites on this property.

Aspen Forest: Seedling/Sapling Stands – Young forest types with usually mixed densities of aspen, red maple, and white birch. These stands are early successional areas that, through disturbance, are regenerating nicely and will mature over time.

Pole Stands – Mature and over mature forest type, dominated mostly by aspen, white birch and red maple. These stands are starting to fall apart due to over maturity. Japanese Barberry also dominates some areas of the understory within these sites on the property.

Paper Birch Forest: Pole Stand - Maturing forest types are middle aged stands, co-dominated by paper birch, white oak, white pine, black oak and spruce. These areas are middle successional stands where the aspen and paper birch are falling out and oak, red maple and white pines are taking over the sites. Some Gypsy Moth defoliation has gone on in the past, leading to slower growth rates across this size class, across the property.

Bottomland Hardwoods Forest: Pole Stand – Maturing forest types are middle aged stands, co-dominated by black ash, birch, bur oak, and swamp white oak. These areas are middle successional stands where the birch is felling out of the system. Some Gypsy Moth defoliation has gone on in the past, leading to slower growth rates across this size class across the property. This type is associated mostly with flood plains and river bottoms.

Sawtimber Stand - Mature and over-mature forest type, co-dominated by black ash, birch, maple, bur oak and swamp white oak. These areas are middle to late successional stands where the mature birch is falling out of the system. This type is associated mostly with flood plains and river bottoms. These areas regionally may provide important habitat for uncommon or rare species.

Red Maple Forest: Pole Stand - Maturing forest types are middle aged stands, co-dominated by red maple, black oak, white oak, and white pine. These areas are middle successional stands where the aspen and jack pine fell out and red maple, oak and white pines are taking over the sites. Oak Wilt is also present within a few of these sites, creating small open areas of low tree densities. Some Gypsy Moth defoliation has gone on in the past, leading to slower growth rates across this size class across the property. Japanese Barberry also dominates some areas of the understory within these sites on this property.



Colburn Wildlife Area Interim Forest Management Plan

Tamarac Forest: Pole Stand - Maturing forest types are middle aged stands, co-dominated by tamarack, spruce, birch, red maple, and white pine. These areas are middle successional stands where the aspen fell out and tamarack, red maple and white pines are taking over the sites. Some Gypsy Moth defoliation has gone on in the past to the hardwoods, leading to slower growth rates across this size class across the property.

RARE SPECIES

There is one federally endangered species, one state endangered species, two state threatened species and nine state special concern species identified within the general vicinity of the property. Negative impacts to these species will be avoided by following DNR's Species Guidance Documents: <http://dnr.wi.gov/topic/EndangeredResources/guidance.asp>. In cases where species guidance documents haven't yet been developed, avoidance to rare species will occur via practices such as time of year restrictions, modified harvest boundaries, and/or consultation with rare species experts.

WILDLIFE ACTION PLAN CONSERVATION OPPORTUNITY AREAS (COA):

The property is specifically identified in the Wildlife Action Plan (WAP) Implementation document as being within the Cottonville Colburn Wetlands Conservation Opportunity Area which is of upper midwest/regional significance for its large sedge meadows, fens, and prairies. Additionally, there are a number of High Priority Species of Greatest Conservation Need (SCGN), and natural communities identified within the plan for the Central Sand Plains Ecological Landscape that merit consideration for management on the property. http://dnr.wi.gov/topic/WildlifeHabitat/documents/PriorityRpt_EL7.pdf These species include: American woodcock, Golden-winged warbler, Whip-poor-will, western slender glass lizard, dusted skipper butterfly, karner blue butterfly, Persius duskywing butterfly, Olympia marble butterfly (young forest/early successional species). The natural communities include: central sands pine-oak forest, northern sedge meadow, floodplain forest, and oak/pine barrens. Additionally, there are a number of Priority Conservation Actions identified within the WAP that could be implemented on the property. These include:

Maintain lowland shrub communities like alder thicket and shrub-carr, and manage the surrounding working forest to benefit Golden-winged Warblers by leaving scattered off-site aspen, ash and tamarack in shrub-dominated areas and managing the adjacent upland forest in a shifting mosaic of patch sizes and age classes to provide continuous habitat.

Manage oaks as a large-scale mosaic of patches along a successional gradient that includes oak forest, oak woodland, oak opening, and open wetland.

Maintain or restore mixed pine-oak forests to represent the full natural range of variability in patch sizes and age classes.

Identify and restore oak/conifer barrens and shrub-dominated habitats through the application of prescribed fire and timber management.



Colburn Wildlife Area Interim Forest Management Plan

HIGH VALUE CONSERVATION FORESTS (HCVF) OR OTHER RESOURCES/ NATURAL COMMUNITY TYPES LIMITED IN THE LANDSCAPE

A small oak/pine barrens area with associated rare species and some parts of the large wetland complex that are void of invasive species could be considered HCVF.

BIOTIC INVENTORY STATUS: NONE

CULTURAL AND ARCHEOLOGICAL SITES (INCLUDING TRIBAL SITES)

No archaeological or historical sites have been identified by the Wisconsin Historical Society on the Colburn Wildlife Area.

RECREATIONAL USES

Hunting, trapping and bird watching are the primary recreation uses of this property.

INVASIVE SPECIES

There is high potential for invasive establishment due to the access by recreationists. Japanese Barberry is a problem on the property in the 4th Avenue and Chicago Avenue Area. Small occurrences of Black locust, tansy, and knapweed can be found in and near the main access points and associated trails. Reed canary grass is a major grass component of the lowland.

SOILS

Colburn Wildlife Area is immediately outside the eastern shore of the former glacial Lake Wisconsin. The two dominant soil series on the wildlife area are Adrian (moderately deep organic soils) and Newton (deep poorly drained sandy soils)

FUTURE MANAGEMENT

The majority of the property is managed for the wildlife resource, to protect the wetland resource and to maintain the early successional forest. Along with this will come the recreational opportunities like hunting, trapping and wildlife watching. Some small upland openings in the northeast portion of the property will be maintained encouraging the native vegetation present and a small population of Karner Blue Butterflies.

Forest Management Objectives:

1. Conduct commercial and non-commercial cuts to provide healthy stands emphasizing early successional forest species.
2. Identify rare/endangered species and protect/provide habitat.



Colburn Wildlife Area Interim Forest Management Plan

3. Use harvest patterns to meet nesting, shelter, and feeding habitat needs.
4. Identify invasive species and implement practices to eliminate/minimize impact to property.

Property Prescriptions (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives)

Oak Forest – Natural regeneration systems have been taking place throughout this forest type for many years. This type of silvicultural system has been limiting the natural regeneration across this property. Creating and maintaining the regeneration should be thought of as a process rather than an event. A commitment to long term oak management will be required to successfully regenerate and establish new oaks. Creating large openings, removal of the overstory and releasing advanced seedlings will induce this forest type and maintain oak types within this property.

Aspen Forest – Aspen is a “pioneer” tree species generally growing in even aged stands regenerated following a major disturbance. Aspen often outgrows other associated species and can form nearly pure stand. Regenerating or clearcutting areas of aspen, across this property, are a major goal to maintain quality early successional wildlife habitat. In undisturbed stands, like many across this property over time, more tolerant associates will replace aspen through natural succession.

Paper Birch Forest – With a site index of 55 or less, in many areas that this forest type is present, it is a matter of time before it falls out of the successional system. These sites will naturally convert to aspen or oak when growing in close proximity of one another. Where more pure paper birch stands are present, shelterwood harvest will take place to try and preserve the species diversity that comes with paper birch forest types. Possible management that will take place includes maintaining the forest type or converting to other species that favor the relatively low site index that this property supports, aspen or oak.

Bottomland Hardwood Forest – Maintaining this forest type is the key goal when considering management activities for these forests. Site index, soils, and vegetation can be used as indicators of site potential. The bottomland hardwood community has important functions and attributes including: flood control, protection of water quality by absorption and filtering of chemical and sediment run-off, timber production, travel corridors for otherwise isolated populations of plants and animals, habitat for a variety of species, including some sensitive, endangered, or rare species, and recreation and aesthetics. These areas can be regionally significant and may provide important habitat for uncommon or rare species. Passive management along with extended rotations will be the management regimes to try and maintain along with preserve this forest type within the property.

Red Maple Forest – Seldom will red maple occur in pure stands or be managed in pure stands. Companion mixtures with white pine, paper birch, or oak will be compatible and generally desired as management objectives. Lower quality sites will be rotated and regenerated via coppice with fiber as the product objective. Higher quality sites will be managed with a sawlog objective by either shelterwood or group selection regeneration techniques. The group selection technique can be used to maintain patches of red maple and other semi-tolerant species if management sees the site fit enough to support the type.



Colburn Wildlife Area Interim Forest Management Plan

Tamarack Forest – Maintaining this forest type is the key goal when considering management activities for these forests. Managing for tamarack includes managing to produce the maximum quantity and quality of pulpwood and saw timber consistent with the site potential and to maintain tamarack on sites where it now exists. Passive management **will occur** within these forest types due to the minimal occurrences across the property.

All stands –

- Utilize BMP's for Water Quality to protect streams and wetlands when conducting timber sales.
- Utilize BMP's for Invasive Species to help limit the introduction and spread of invasive species when conducting timber sales
- Retain reserve/legacy/green tree retention trees as groups or individuals throughout the property within harvested stands
- Follow DNR's Species Guidance Documents: <http://dnr.wi.gov/topic/EndangeredResources/guidance.asp>. to protect rare species. In cases where species guidance documents haven't yet been developed, avoidance to rare species will occur via practices such as time of year restrictions, modified harvest boundaries, and/or consultation with rare species experts.



Colburn Wildlife Area Interim Forest Management Plan

Approvals:

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6/24/14

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Forester

6-2-14

Date

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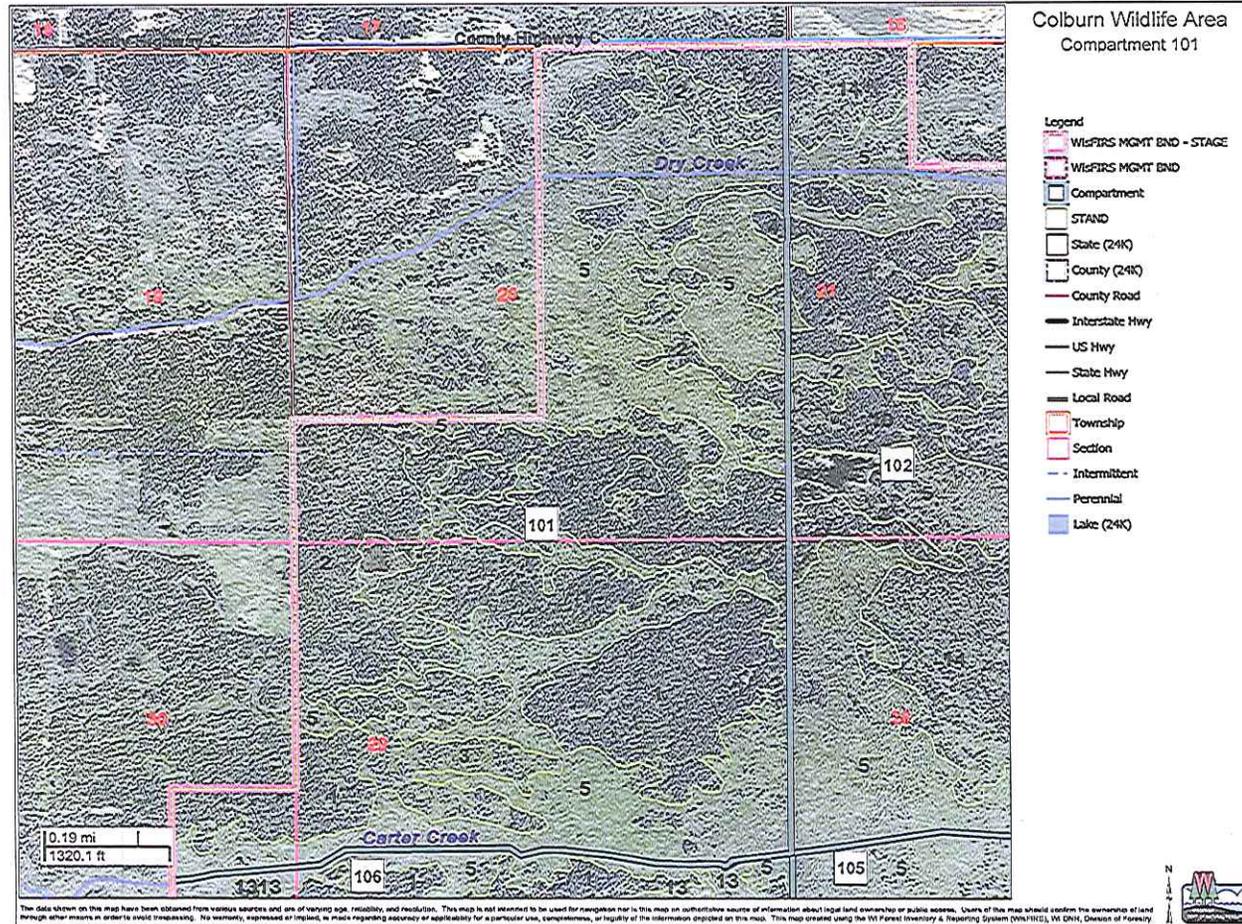
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Colburn Wildlife Area Interim Forest Management Plan

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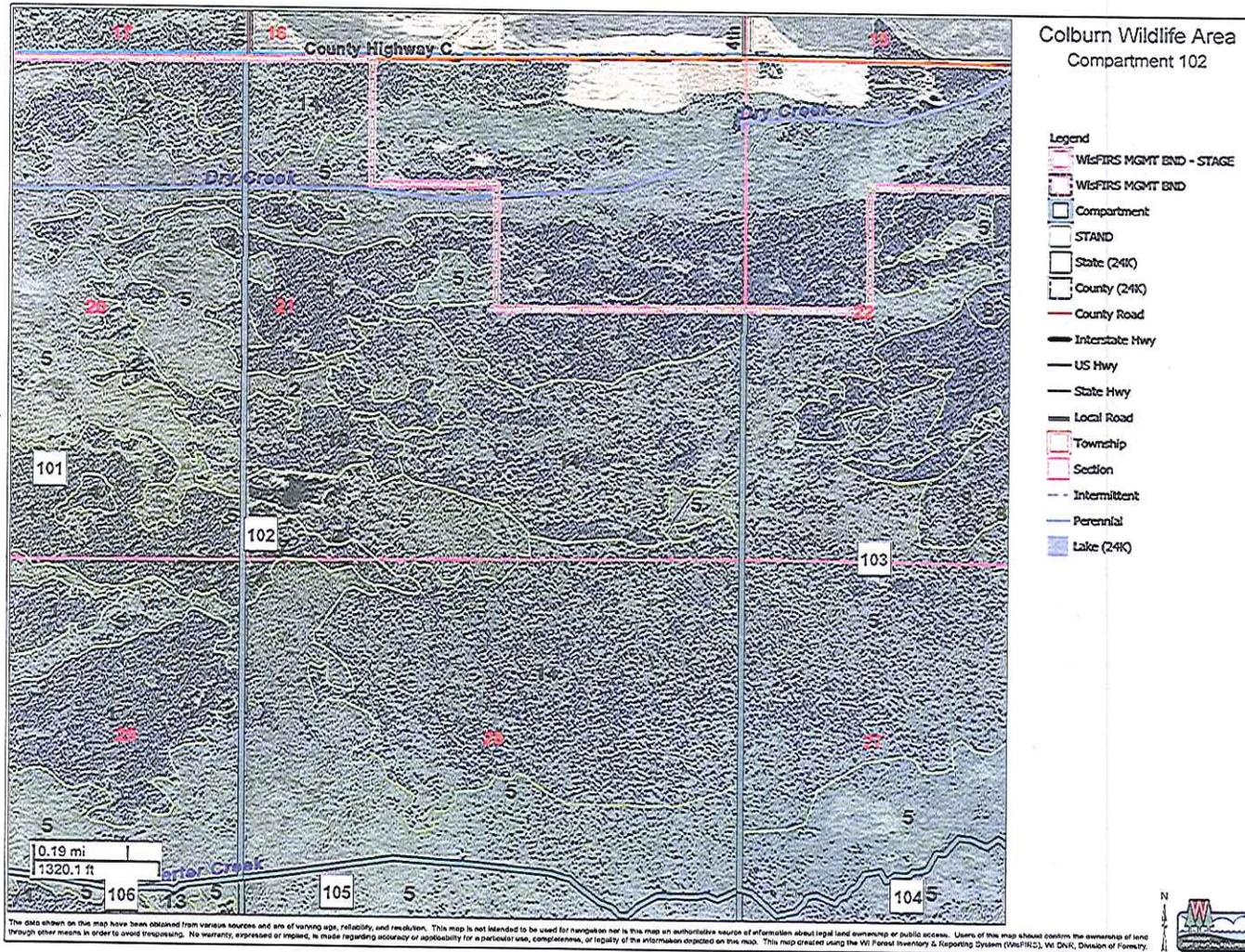
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Colburn Wildlife Area Interim Forest Management Plan

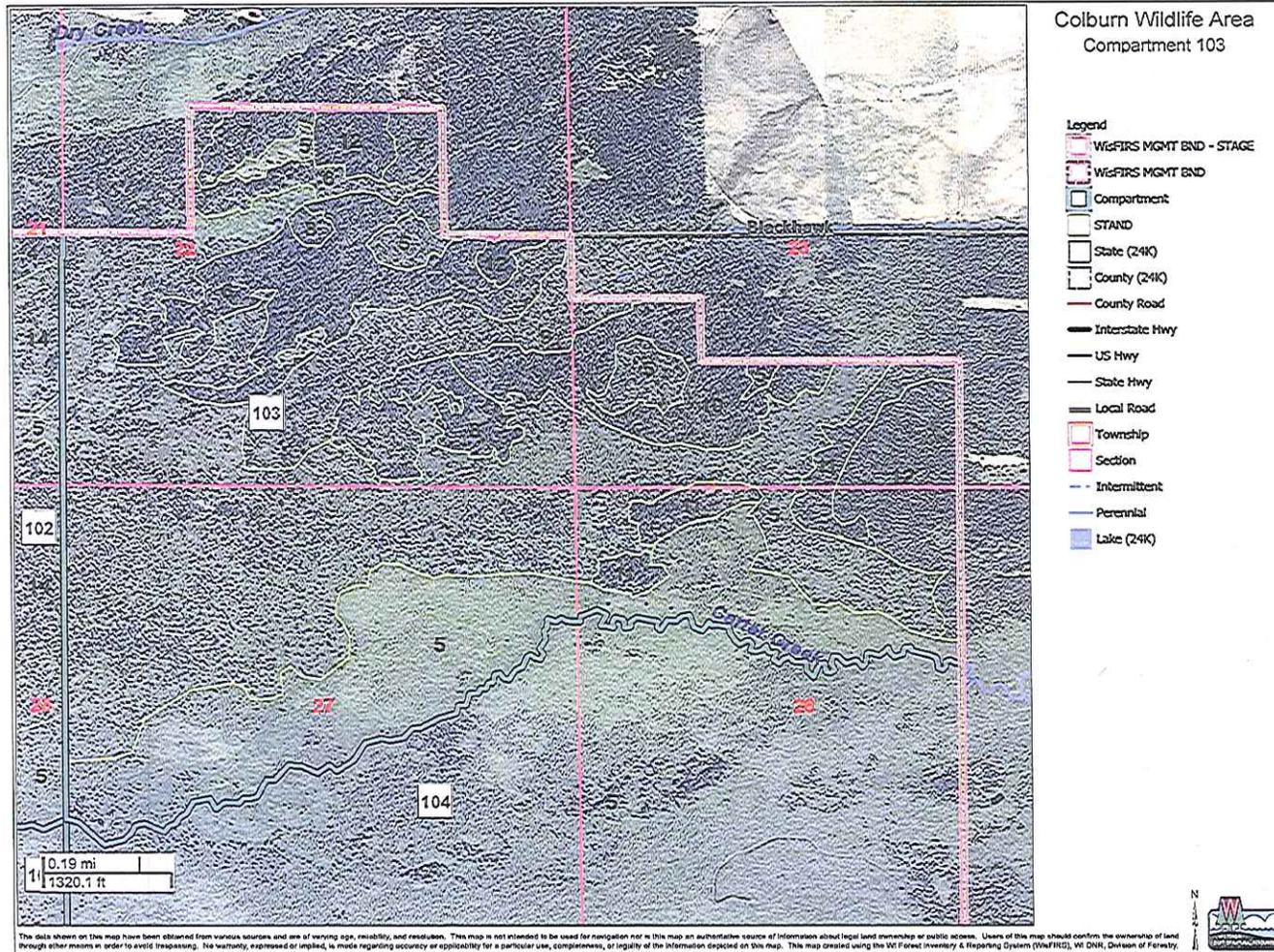
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Colburn Wildlife Area Interim Forest Management Plan

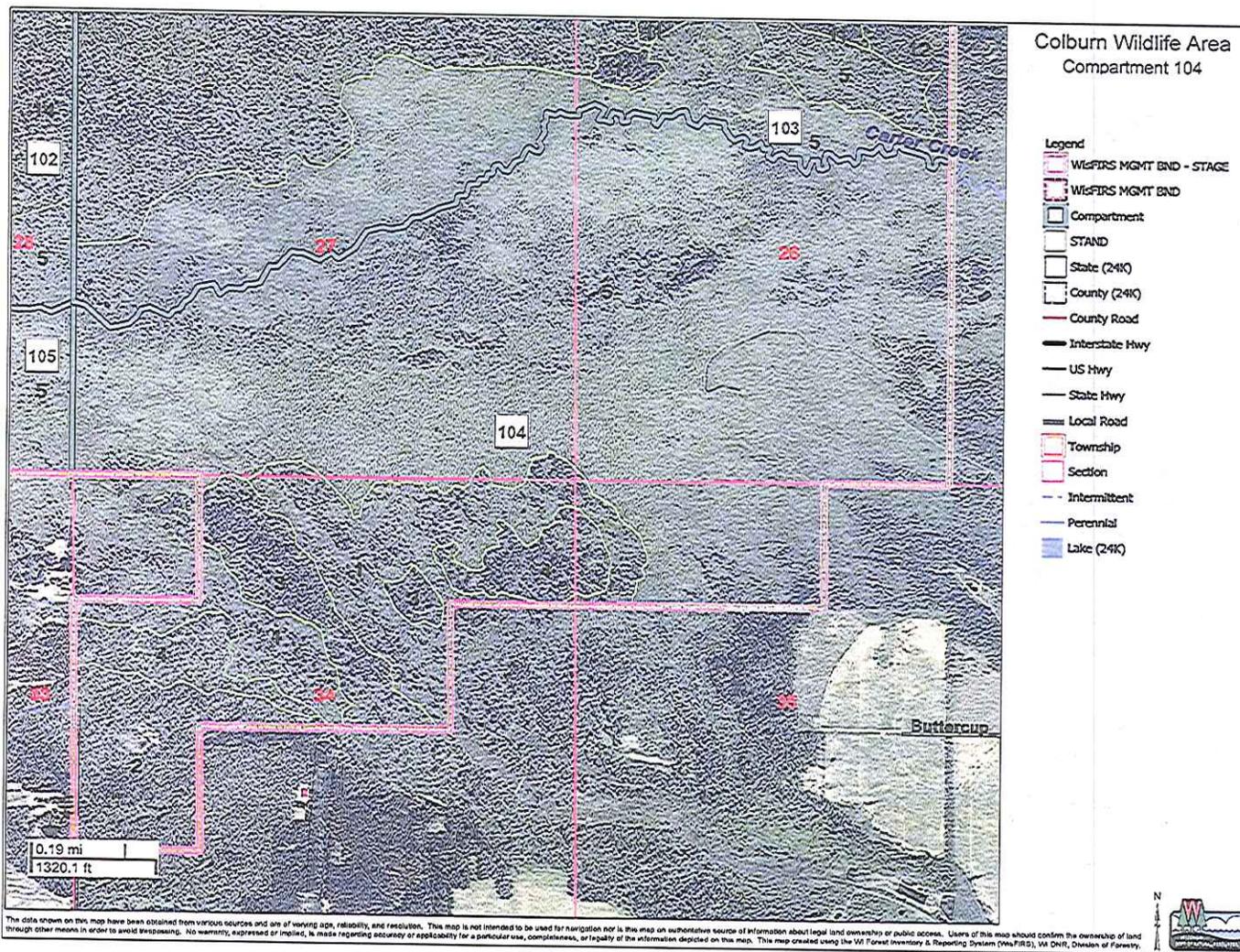
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Colburn Wildlife Area Interim Forest Management Plan

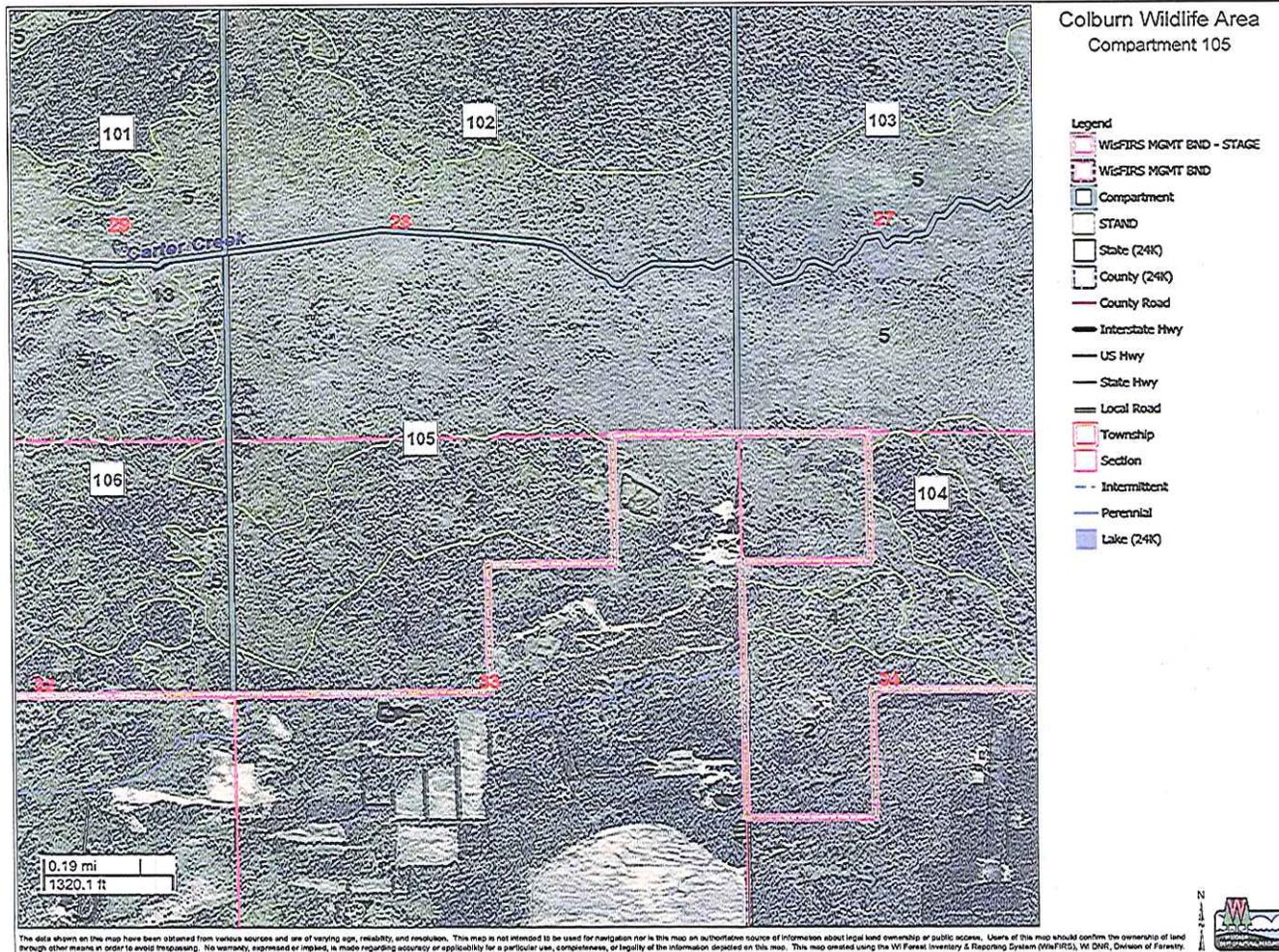
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Colburn Wildlife Area Interim Forest Management Plan

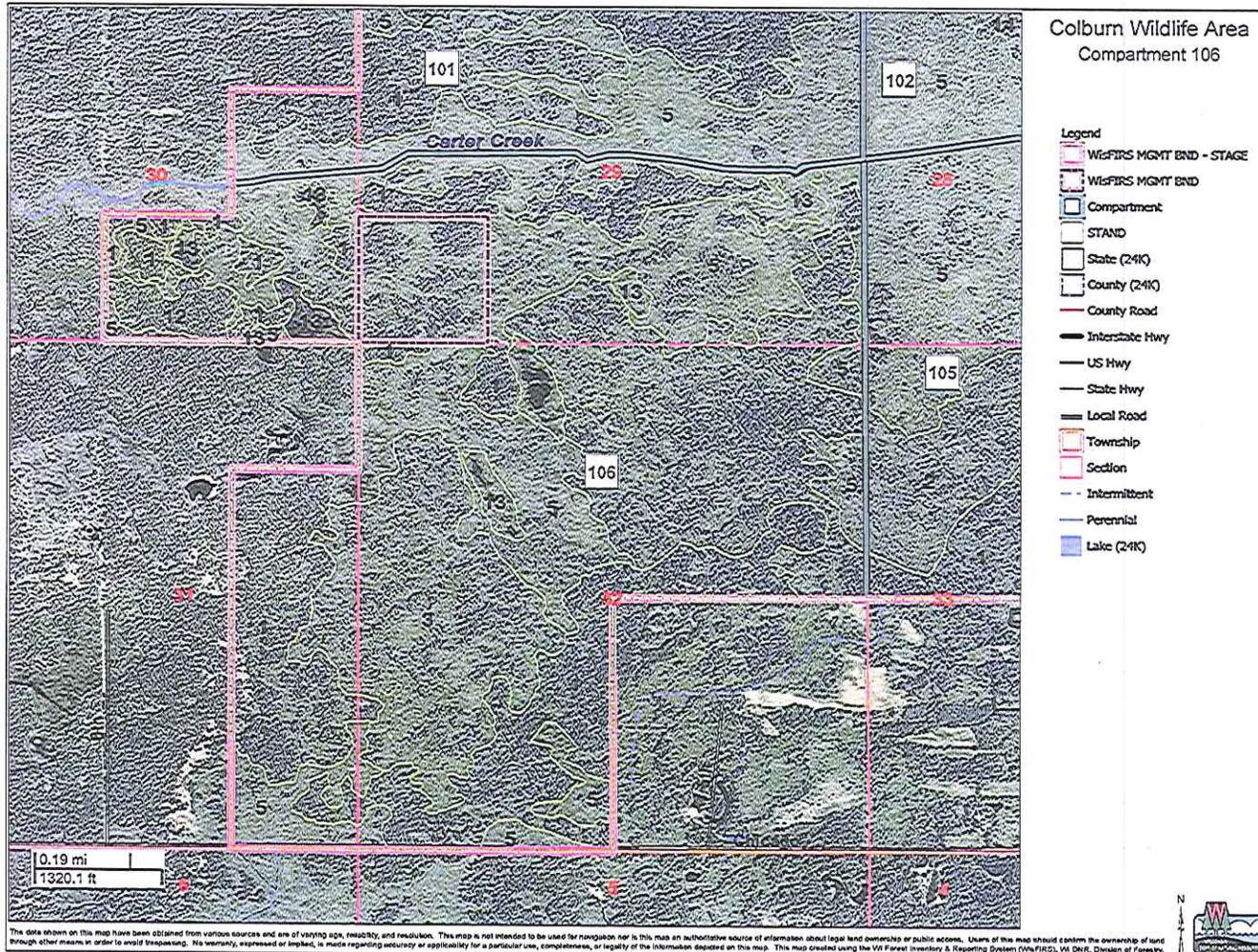
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Colburn Wildlife Area Interim Forest Management Plan

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MAP OF COLBURN WILDLIFE AREA

