

MASTER PLAN
FOR
OWEN SOWERWINE NATURAL AREA
January 21, 2003

Prepared Jointly by
Montana Audubon
and
The Department of Natural Resources and Conservation

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
NATURAL AREA MASTER PLAN AGREEMENT

THIS AGREEMENT, entered into between the Montana Department of Natural Resources and Conservation, hereinafter referred to as the “Department” or “DNRC;” and Montana Audubon, hereinafter referred to as the “Managing Entity,” do mutually covenant and agree to the terms and conditions as are set forth herein.

WITNESSETH:

1. By the authority of, and in accordance with, the Montana Natural Areas Act of 1974 (Title 76, Chapter 12, Part 1 MCA) and Land Use License 3053246 (Appendix I), the Managing Entity does hereby agree to accept the management responsibility for the following described State Natural Area:

Name: Owen Sowerwine Natural Area

County: Flathead

Acres: 442.0

Legal Description: NE¹/₄; E¹/₂NW¹/₄; W¹/₂SE¹/₄; SE¹/₄SW¹/₄; N¹/₂NW¹/₄NE¹/₄SW¹/₄; E¹/₂NE¹/₄SW¹/₄; S¹/₂S¹/₂SW¹/₄NE¹/₄SW¹/₄; and Lots 1 and 2 of Section 16, Township 28 North, Range 21 West

Hereinafter referred to as the “Natural Area” or “Owen Sowerwine.”

2. The Managing Entity shall recognize and uphold the following primary duties:
 - A. Maintain the integrity of the Natural Area, and retain as nearly as possible all of the natural attributes of the site.
 - B. Assure that the use of the Natural Area is consistent with the intent of the Montana Natural Areas Act of 1974, and that the Master Plan, which is hereto affixed and made a part of this Agreement, is fulfilled in its entirety.
 - C. Designate a responsible party from within their employ as the Principal Contact for the Natural Area. The DNRC shall be notified of the name and address of the Principal Contact, and of all personnel changes that occur in this position throughout the duration of this agreement.
3. Biennial Status Reports shall be completed by the Managing Entity for submission to the Department on or before the anniversary date of this Agreement in even numbered years. Such reports shall include the following:
 - A. A brief summary of noted beneficial and adverse trends in the natural character of the area, estimates of visitor use which the area is experiencing, and a description of physical threats to the area’s natural integrity;
 - B. Recommendations for amendments to the Master Plan that would enhance the protection and use of the Natural Area.
 - C. Suggested additions to the area which would help alleviate management problems, ensure the long term viability of the area, or generally increase the Natural Area values or benefits which could be realized from the area;
 - D. Recommendations to eliminate or reduce the danger of potential public injury hazards;
 - E. Copies of all research projects and studies conducted on the area;
 - F. Copies of all press releases, news articles, and other informational materials concerning the Natural Area; and
 - G. All other information pertaining to the management of the Natural Area that the Department may request.

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MASTER PLAN CONTRIBUTORS

Montana Audubon

Raymond Johnson, Executive Director
Janet Ellis, Program Director
Susan Lenard, Wildlife Specialist

Flathead Audubon

Linda Winne, President

Neal Brown
Dan Casey
Leo Keane
Brent Mitchell
Bruce Tannehill

Department of Natural Resources & Conservation

Arthur R. Clinch, Director
Clive Rooney, Special Use Management Bureau
Jon A. Dahlberg, Area Manager
William F. Wright, Kalispell-Plains Unit Manager

I. PURPOSE AND MANAGEMENT GOALS

In 1976, Owen Sowerwine became the first Natural Area recognized under the Montana Natural Areas Act of 1974. According to that law, Owen Sowerwine has been set aside “in order to preserve their [its] natural ecosystem integrity in perpetuity” (76-12-103 MCA). Currently, Owen Sowerwine is still the only designated Natural Area under Montana’s 1974 Act. The relatively pristine riparian habitat types and the rare or sensitive species found on site are its principle natural values. The close proximity of the Natural Area to the city of Kalispell is an invaluable asset for educational purposes, and allows local citizens the rare privilege of enjoying a wild-land experience with convenience.

Owen Sowerwine Natural Area receives its character primarily from the forces of nature; the visual aspects of human intrusion on the area are minimal. The value of the area is derived from its formation at the confluence of two important waterways of the Northern Rocky Mountains, the Flathead and Stillwater Rivers; its botanical communities of dense riparian forest and shrubland; and its zoological importance for aquatic and terrestrial life.

The purpose of this Natural Area is to provide an active and uninhibited ecological preserve for native species of vegetation and wildlife to evolve as they may, without human alteration of the land or water that supports them. The value of this area to humans, in addition to the maintenance of ecological diversity, lies in the growth and knowledge that people are able to derive from their observations of natural phenomena. These observations may be calculated, as those of a trained researcher; casual, for the enjoyment of a walk-through visitor; or interpretive, for the education of small groups. Regardless of the form of these observations, all humans are visitors to this area, and their presence must be unobtrusive, without enduring impact.

This Master Plan sets the direction and justification for management of the area. The goal of the Plan is to ensure protection of the perpetual integrity of the Natural Area, while allowing for its use and appreciation with minimal impact. On the premise that humans do in fact visit the area on its terms, with a sincere regard and respect for all of its intrinsic values, they may expect to offer future generations the enjoyment that this wild and intriguing Natural Area provides.

II. LOCATION AND SIZE

Owen Sowerwine Natural Area is an area of land and water in Flathead County, Montana. The Flathead and Stillwater Rivers flow through the property. The area is located approximately one-half ($\frac{1}{2}$) of a mile east of the city of Kalispell (see Appendix II, Map 1). The legal boundaries of the area are described as follows:

The NE $\frac{1}{4}$; E $\frac{1}{2}$ NW $\frac{1}{4}$; W $\frac{1}{2}$ SE $\frac{1}{4}$; SE $\frac{1}{4}$ SW $\frac{1}{4}$; N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$; E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$; S $\frac{1}{2}$ S $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$; Lots 1 and 2, of Section 16, Township 28 North, Range 21 West (Montana Principal Meridian).

Latitude of the area is 48° 08’ North, and Longitude is 114° 16’ West. The elevation range is 2,890 feet to 2,900 feet. Geographically, the area is west of the Continental Divide in the broad Flathead Valley within Montana’s Northwest Region.

The Natural Area consists of the following pieces, totaling 442.0 acres, more or less:

Mainland portion accessible from Treasure Lane	69.0 acres
Mainland portion north of the Stillwater River	15.4 acres
The Big Island	244.4 acres
Northern piece of Leisure Island	31.7 acres
Portion of small island in SE corner of Natural Area	8.9 acres
Stillwater River	42.6 acres
Flathead River	36.0 acres
<u>DNRC size adjustment</u>	<u>-6.0 acres</u>
Total (approximate)	442.0 acres

Legal public access to the Natural Area exists at several points. Treasure Lane, a 30-foot wide public roadway, is the northern most point of access. Green Ridge Drive is a 60-foot wide public roadway located one-quarter ($\frac{1}{4}$) of a mile south of Treasure Lane. Another point of access exists from the road which is constructed along the section line between Sections 16 and 21 for one-eighth ($\frac{1}{8}$) of a mile, until it turns north on Howard Drive; visitors must then continue east on foot for another one-eighth ($\frac{1}{8}$) of a mile within a permanent thirty (30) foot wide public right-of-way. These access lanes are noted on Map 3, Appendix II. Access is also available by boat from the Flathead and Stillwater Rivers.

III. REGIONAL SIGNIFICANCE

According to a 1999 study by the Montana Natural Heritage Program, "Owen Sowerwine Natural Area and several nearby islandsÉconstitute the best examples of riparian shrub and forest communities left in the Flathead ValleyÉbecause of its size, overall condition, and continued occurrence of natural processes such as flooding" (Greenlee, 1999). The full text of this report appears in Appendix VI.

Because of its significance, Owen Sowerwine is the keystone of a growing corridor of protected undeveloped land in the braided section of the Lower Flathead River. In the last 10 years, Montana Fish, Wildlife & Parks, Montana Land Reliance, and the Flathead Land Trust have been working to shelter from development as much of the braided section surrounding Owen Sowerwine as is possible. Most of the land and water now protected lies within a roughly 1-mile radius of Owen Sowerwine (Appendix II, Map 2).

The Flathead County Parks and Recreation owns most of the southern part of Leisure Island where they maintain a public boat access area. The remaining 10 acres of the southern part of this island belongs to the Flathead National Forest (FNF). FNF is currently in the process of transferring this 10-acre tract, along with all the rest of their Flathead River tracts, to Montana Fish, Wildlife & Parks (MFWP).

MFWP also owns an approximately 73-acre parcel at the southeast corner of Owen Sowerwine, which includes portions of several of the islands that border Owen Sowerwine. A 40-acre tract of land and water southeast of this is currently part of the Flathead National Forest (FNF). This tract will be owned by MFWP once the above-mentioned transfer process is completed. This tract includes a 4-acre piece on the northeast corner of Big Spruce Island. The rest of Big Spruce Island (40-acres) is already owned by MFWP. Additionally, MFWP owns a 12-acre tract on the east side of Brenneman Slough.

The Montana Land Reliance (MLR) holds a patchwork series of conservation easements on privately owned land to protect a large part of the east shore of the braided section of the Flathead River. The acreage under protection on the east side of the river is expected to increase as MLR continues its efforts to work with the landowners in that area. Flathead Land Trust is currently negotiating conservation

easements on several tracts of land along the west shore of the lower Flathead River south of Owen Sowerwine.

IV. GENERAL PROPERTY DESCRIPTION

Owen Sowerwine Natural Area contains significant stretches of both the Flathead and Stillwater Rivers. It lies almost entirely within the 100-year floodplain (Appendix II, Map 5). The most striking feature of the Natural Area is the dense forest and brush vegetation that provides shelter for numerous species of wildlife. Natural debris from annual floods can be found along the flanks of the area, and the banks of the island have been eroded in many places in excess of ten feet above normal water levels. The general topography of the island and surrounding lands is the result of repeated meandering by the river channels. A braided pattern of waterways exists throughout the immediate area. Abandoned river channels, a system of islands, and periodic sandbars characterize the active nature of the forces shaping this Natural Area. These factors combine to give the visitor an opportunity to seek solitude along the numerous wildlife trails traversing the area, and likewise, may cause the individuals who do not choose their route carefully to lose their original bearings. The environmental intrusions the area has experienced are minimal.

Climate

The climate for the area is influenced by the topography. The Flathead Valley's high mountains to the east form an effective barrier to the severe cold waves that move east of the continental divide from Alberta. Climate information for the area is from the recording station at the airport in Kalispell (Garoogian, 2000):

Temperature Information:

Mean Annual	42.9° F
Highest Recorded	102° F
Lowest Recorded	-37° F
Mean Maximum	54.6° F
Mean Minimum	31.3° F
Average Date of First Freeze	September 23*
Average Date of Last Freeze	May 12*
Average Length of Frost-free Season	135 days*

Precipitation:

Mean Annual Total	16.75 inches
Average Snowfall	68.0 inches
Maximum Recorded	23.9 inches
Minimum Recorded	11.1 inches

Wind:

Prevailing Direction	South
Prevailing Speed	9 miles per hour

*NOTE: Frost information is from Cordell, 1971.

Geology

Bedrock geology of the area around Kalispell consists of carbonates and argillites of the Precambrian Belt series. During the Quaternary Wisconsin age, ice sheets advancing south from British Columbia covered the land to at least 2,000 feet and left glacial stratified and non-stratified deposits over much of

Northwestern Montana. Kalispell itself is built on the western edge of an extensive plain of undifferentiated glacial drift and lacustrine silt and drift that extends eastward for about fifteen miles. Overlying this material in its central part is thin alluvium deposited on the floodplain of the Flathead River. This alluvium sand and gravel comprise the Natural Area (Johns, 1970).

Soils

Specific alluvial soil type information is described in *Soil Survey of Upper Flathead Valley Area Montana* (Soil Conservation Service, 1960). The Chamokane series soil type is found on the Western portion of the area and consists of shallow, immature soils typical of floodplains in the area. The Flathead and Stillwater Rivers deposited the soils. These soils are subject to flooding in spring and early summer. Light-colored alluvium is deposited on them each year. The surface soil of the Chamokane soils is grayish brown sandy, and is underlain by pale-brown sandy material. Light-brownish gray fine sandy material occurs at an average depth of about 2 feet. These soils are generally slightly calcareous throughout.

The Banks series soils form the remainder of the area and are sandy for their entire depth. They occupy floodplains, mainly along the Flathead River. They have developed in recently deposited, very sandy alluvium. Bank soils are subject to frequent flooding, but between floods they are well drained down to the water table. These soils have been weathered little since the parent material was deposited.

Only a small amount of organic matter has accumulated in the surface soil. Vegetation has had little effect on color or other characteristics of these soils; all layers are calcareous.

Water

The Stillwater and Flathead Rivers are major features of the Natural Area. Water quality in these rivers has been studied in a systematic way since 1977 as part of efforts facilitated and funded by the Flathead Basin Commission to monitor the water quality of Flathead Lake and its catchment basin. These studies indicate that the water quality in Flathead Lake is on or near a threshold with respect to nutrient loading and algal production, and that major sources of human-caused nutrient loading are the urban centers along the Stillwater, Whitefish and Flathead Rivers (Stanford, 1997). Owen Sowerwine is situated below these urban centers. Thus it is in the more heavily loaded portions of the Stillwater and the lower Flathead Rivers.

Since 1980, some improvements have been made in the sewage treatment and storm water runoff systems in these centers. Comparison of the data collected before and after these improvements show only a slight decrease in the levels of nutrients contributed, however. The continued management of Owen Sowerwine as a natural area aids in the attempt to control the nutrient load in the waters of the Flathead basin. Precluding development and preserving the natural conditions in and near the Stillwater and lower Flathead Rivers, protects stream banks, river channels and backwater areas, thus preventing the addition of new sources of nutrient flow from these areas. Such management also protects the water and land-based vegetation that helps to filter the upstream flows before they reach the lake, and allows for natural flooding, which reduces the flow of extra nutrients generated by high water.

Floodplain information from Flathead County indicates that all of the islands and most of the mainland lie within the intermediate regional flood zone. Studies have shown that the seasonal water table is from 3 feet to 10 feet from the ground surface, but is normally found from 2 feet to 6 feet deep.

Vegetation

A complete list of vegetation has not been compiled at this time. Appendix III contains a list of some of the species of trees, shrubs, grasses and forbs that have been identified on site. About 90% of the island is

densely wooded, predominately with majestic black cottonwood measuring up to 4¹/₂ feet DBH (diameter breast height). Spruce is also found throughout the island, as is river birch, scattered Douglas fir, and occasional ponderosa pines. The undergrowth is thick and nearly impenetrable in places due to the abundance of alder, hawthorn, chokecherry, rose and other shrub species. The vegetation density varies from open spaces to very dense areas. Appendix II, Map 4 describes the characteristic vegetation found at different locations within the Natural Area.

Native plant communities include cottonwood forests, riparian shrublands (willow, red-osier dogwood), and herbaceous communities (sedges, etc.). Preliminary observations indicate that the main forest cover type, as categorized by the *Classification and Management of Montana's Riparian and Wetland Sites*, is "Black Cottonwood/Red-Osier Dogwood Community Type" (*Populus balsamifera ssp. trichocarpa/Cornus stolonifera* (Hansen et.al., 1995)). Additionally, the Montana Natural Heritage Program has cataloged the following rare or sensitive habitat types on site (MT Natural Heritage Program data request, October 5, 2001):

- Red-osier dogwood Shrubland (*Cornus sericea*)
- Englemann Spruce/Red-osier Dogwood Woodland (*Picea engelmannii/Cornus sericea*)
- Water Horsetail Herbaceous Vegetation (*Equisetum fluviatile*)
- Black cottonwood/Red-osier Dogwood Forest (*Populus balsamifera ssp. trichocarpa/Cornus sericea*)
- Sandbar Willow Shrubland (*Salix exigua*)
- Beaked sedge Herbaceous Vegetation (*Carex rostrata*)

The most common noxious weeds identified on site include Canada thistle (*Cirsium arvense*) and houndstongue (*Cynoglossum officinale*). The Montana Natural Heritage program (Greenlee, 1999) also identified redtop (*Agrotis stolonifera*), reed canarygrass (*Phalaris arundinacea*), spotted knapweed (*Centaurea maculosa*), St. Johnswort (*Hypricum perforatum*), and oxeye daisy (*Chrysanthemum leucanthemum*) in the area. The undisturbed natural vegetation deters invasion by noxious weeds. However, frequent flooding and a large local seed supply make this Natural Area susceptible to invasive exotics. Noxious weed management is addressed in the Management Practices section below. Appendix IV contains a list of noxious weeds found on or adjacent to Owen Sowerwine.

Wildlife and Fisheries

The Natural Area provides habitat for a diverse assortment of fish and wildlife. Although a complete inventory has not been completed, Appendix V contains a list of the fish and wildlife species that have been observed to date, and those suspected of using the Natural Area during certain periods of the year.

Owen Sowerwine provides year-round habitat for numerous species of mammals, including white-tailed deer, mink and striped skunk. This section of braided rivers, sloughs and islands makes some of the best river otter habitat in Montana. It also supports a high density of beaver (2 colonies per channel mile). The area's wetland habitats support western toads and painted turtles. The western toad is a Species of Concern for the state of Montana (Carlson, 2001).

Because of the excellent assemblage of riparian bird species present, Owen Sowerwine has been nominated as one of Montana's Important Bird Areas. More than one hundred species of birds have been identified on the property, including 65 species of likely breeders (Appendix V). Thirteen of these birds are priority species in the Montana *Partners In Flight Draft Bird Conservation Plan*: Hooded Merganser, Bald Eagle, Peregrine Falcon, Ruffed Grouse, Long-billed Curlew, Vaux's Swift, Calliope Hummingbird, Red-napped Sapsucker, Pileated Woodpecker, Willow Flycatcher, Veery, Red-eyed Vireo, and Lazuli Bunting (Montana Partners In Flight, 2000). Bald Eagles, listed as threatened by the U.S. Fish & Wildlife

Service, use the area for wintering, foraging and nesting. Active Osprey nests occur annually in old cottonwood snags. The large diameter trees and snags provide excellent nesting and brood rearing habitat for cavity nesting ducks, woodpeckers, Vaux's Swift, and other species. Great Blue Heron, which forage and nest on the property, are also Species of Concern for the state of Montana (Carlson, 2001). In fact, the presence of a Great Blue Heron rookery was used historically as an important reason for designation of Owen Sowerwine as a Natural Area. Until 1968, a rookery existed south of the big island that consisted of 160 nests until the forest was clear-cut, forcing the birds to relocate. The current size of the rookery is approximately 14 nests.

In addition to wildlife, the aquatic habitat of the Natural Area provides excellent foraging and cover habitat for a large number of migratory and resident fish. Most notable is the importance of the Flathead River for migratory adult and juvenile bull trout, a species listed as threatened by the U.S. Fish & Wildlife Service. Additionally, the west slope cutthroat trout, a Species of Concern in Montana, also occurs in these rivers (Carlson, 2001). Both of these species use the channels, gravel bars, and overhanging banks for foraging and cover during migration.

Human Use

Prior to the 19th Century, the Flathead River Valley was inhabited solely by various Indian tribes, and the river system, in conjunction with the adjacent lands, was used as a travel corridor. Fur trading became an important use of the Flathead and Stillwater Rivers in the early 1800's with the establishment of the Northwest Fur and Hudson Companies in the Valley. In 1887, the future town site of Demersville had its beginning on the West bank of the Flathead River about 2 miles south of the Natural Area. By 1891, the town's population had grown to more than 1,000 due largely to the steamboat traffic moving upstream from Flathead Lake. The development of the Great Northern Railway through Kalispell brought about the town's rapid demise.

In more recent times, the Flathead and Stillwater Rivers, as well as the Natural Area itself, have been used by recreationalists. Recreation surveys indicate that demand for water related activities will increase in the future. However, no figures on visitor use are available at this time.

Owen Sowerwine was designated a Natural Area in 1976. An official dedication ceremony did not take place on site until September 9, 1978 (Appendix VIII). Within the boundaries of the Natural Area, a small portion of the area was grazed intensively by domestic livestock until February, 1979. Firewood was taken from the area as late as 1958. Timber was periodically harvested from the area for a period of 26 years, between 1915 and 1941, with 700,000 board feet of ponderosa pine removed from the big island between 1916 and 1919. Mineral permits were granted on the area until 1939, but there is no indication that they were exercised. Two right-of-way easements exist on the property: one approximately 1.84 acres in the E¹/₂NW¹/₄ is subject to a fifty foot (50 feet) wide right-of-way for an electric transmission pole line (Appendix VII); and the second an easement in the NW¹/₄ held by Flathead County.

V. GENERAL MANAGEMENT PRACTICES

Map 3, Appendix II denotes the access points, boundaries, and management zones of the Natural Area. Map 4, Appendix II denotes the characteristic vegetation found at different locations on the Natural Area. The following practices apply to the entire Natural Area.

1. Records

Recorded visits, field inspections, nature studies, and other materials valuable for guiding the prudent management of the area will be maintained in a retrievable fashion by the Managing Entity, for future reference.

2. Elimination of Public Injury Obstructions

Pursuant to Section 70-16-302, MCA, the Managing Entity owes no duty of care to persons visiting the Owen Sowerwine Natural Area for recreational purposes, except that the Managing Entity is responsible for injuries that may arise from an act or omission that constitutes willful or wanton misconduct.

3. Boundary Markers and Fences

The Managing Entity will post the traditional entrance points and mark boundaries where needed to facilitate management of the area. Fences may be constructed along the boundary as needed, provided that they do not unnecessarily restrict the movement of wildlife or compromise suitable points of public access. Prior to installation, all fence locations and designs must be approved by the Department. The lack of such boundary protection devices shall not restrict the Department or Managing Entity from seeking to remedy trespass of the area, or to prevent other activities that damage the area. Signage placed at access points is discussed on page 18.

4. Erosion Control

Soil erosion will be allowed to occur naturally. No riprap, channels, dikes, dams, or other bank stabilization techniques or devices may be placed in the Natural Area. In all cases, the rivers shall be allowed to seek their own courses.

5. Water Diversion

No devices shall be constructed or introduced on the area to divert, impound or develop water for irrigation or any other purposes.

6. Scenic and Landscape Management

No effort shall be made to shape the area's features for aesthetic purposes. Trees or shrubs may be cut only in accordance with Sections V.16, VI.1.D, VI.3.F, and VI.3.G. No trees may be cleared to create scenic vistas. Horticultural practices are not permitted, and no species shall be fertilized or cultivated. No exotic plant species shall be introduced upon the area.

7. Vegetation Management

The native species of trees, shrubs, grasses, and all other vegetation shall not be harvested, or taken from the area for the mere luxury of personal comfort. The gathering of firewood is prohibited.

Exotic species and noxious weeds (as defined by law) may be removed by biological, physical or mechanical means, as the Managing Entity may determine necessary for controlling these species. Chemical herbicides may be applied with the Department's approval only when it can be documented that the natural integrity of the area is being compromised by exotic vegetation, and no other means will remove this threat. Broadcast spraying is specifically prohibited.

No threatened, rare, or endangered plant species are known to exist on the area, but the removal of such species, should they later be identified, or if presently known species become so classified, may only be undertaken with the express written permission of the Managing Entity and appropriate federal or state permits.

Those sites which have experienced a significant amount of human-caused disturbance may be reclaimed by those land management techniques which the Managing Entity determines appropriate, provided that natural regeneration will not restore the area within a reasonable period of time.

8. Regulation of Disease and Insects

The control of diseases affecting vegetation and wildlife, and the control of insects, will be left to natural biological forces. Application of chemical controls may be initiated only when evidence clearly establishes that the Natural Area is the source of a disease or insect infestation that constitutes a human health hazard to adjacent populations, and the Department has approved the use of those controls.

9. Wildlife and Fisheries Management

The taking of wild game species by firearms or bow and arrow, or the taking of fish, shall be managed by regulations promulgated by the Montana Department of Fish, Wildlife & Parks (MFWP); special hunting areas and restrictions may apply. Additionally, a DNRC Recreational Use License is required for individuals to hunt. It is also important to note that DNRC has a policy that does not allow the discharge of firearms within ½ miles of a residence. Because of the number of residences in the area, this restriction applies to much of Owen Sowerwine. Permanent shelters constructed for hunting shall not be erected in the area.

The taking of furbearers by trapping and snaring shall be managed by regulations promulgated by the MFWP. Trapping may be used as a management activity if the Managing Entity and MFWP determine a need for such activity exists. The taking of non-game species requires the authorization of MFWP, appropriate federal permits, and approval by the Managing Entity.

The Managing Entity may provide recommendations to MFWP on wildlife and fisheries activities for the following reasons:

- a. The local populations of game species have either decreased or increased to a noticeable and significant degree;
- b. Local populations of non-game species have either decreased or increased to a noticeable and significant degree, and the continued utilization of their habitat within the Natural Area should be modified; or
- c. A clear threat to the safety of other users of the area exists as a result of repeated negligent and hazardous hunting practices.

10. Domestic Animals

Domestic livestock may not be led, ridden or pastured in the Natural Area. With the exception described below for dogs, no domestic animals, including household pets and horses, are permitted within the Natural Area. Dogs may be allowed in the Natural Area for the following uses: seeing-eye dogs are allowed all year, and retrievers are allowed during the waterfowl-hunting season between September 15 and February 1.

11. Exotic Species

With one exception, no exotic species of flora or fauna may be introduced or released in the Natural Area, including domestic or feral dogs or cats. The one exception includes the introduction of biological control agents approved for use to reduce or eliminate noxious or exotic plants. The Managing Entity has the authority to remove all introduced exotic species as warranted.

12. Recreation

In keeping with the basic theme prompting the preservation of all Natural Areas, the recreational use of the area must be passive in nature. Motorcycles, snowmobiles, bicycles, all-terrain vehicles, and other similar conveyances shall not be used to traverse the area. Camping, fires, or littering are not allowed. With the exception of VI.2.B and VI.3.G no permanent improvements (duck blinds, deer stands, tent poles, etc.) are allowed on the property. No firewood may be gathered. Only walk-in use is allowed, no horses are allowed. Activities that deface or unnecessarily disturb the Natural Area are prohibited, including paintball or paintball-like activities.

The general public of age 12 and older must have a DNRC Recreational Use License to enter the area. Audubon members or people participating in Audubon events and activities may use the area without a DNRC Recreational Use License.

The Managing Entity may invoke further restrictions on the recreational use of the area as it deems necessary for preserving the Natural Area. Included in this discretion is the authorization to close portions of the Natural Area to public use, to allow only seasonal use of over-used or fragile areas, or to rest areas of popular use by rotating the seasons or years which they may be utilized. DNRC must be notified in writing if the Managing Entity places new restrictions on recreation uses or if it is necessary to close areas to the public. The Managing Entity will then post these restrictions at the main entrance to the Natural Area.

13. Commercial Enterprise

No concessions, business ventures, soliciting, or other practices which could be considered a commercial enterprise may be conducted on the area, or allowed to be conducted by the Managing Entity.

14. Mining Operations

No mineral or non-metaliferous materials may be removed from any portion of the Natural Area, by any means.

15. Right-of-Ways

No right-of-ways, with the exception of those presently existing, shall be granted.

16. Powerline Maintenance

The general maintenance of the powerline described in Right-of-Way Deed No. D-4074 may continue to the extent that the Natural Area does not experience undue damage (Appendix VII). Brush and trees may be removed from the existing right-of-way through the use of power tools, but no chemical defoliants may be utilized. Motorized equipment and vehicles may enter the Natural Area only when their use is required to maintain the powerline. The capacity of the transmission line cannot be increased through an expansion of the existing 50-foot wide right-of-way. Prior to entering the Natural Area for the purpose of maintaining the transmission line, the Managing Entity must be notified and be informed of the intended maintenance activities.

17. Supplemental Management Responsibilities

The Managing Entity should make all practical effort to monitor the influences shaping the character of the Natural Area. Specific attention should be given to human-caused disturbances of either the Flathead or Stillwater Rivers, as a significant change in the pattern of flow of these rivers could become a direct threat to the Natural Area. Should the Managing Entity discover a development occurring within these rivers that threatens the Natural Area, the Department should be notified immediately.

VI. SPECIFIC MANAGEMENT ZONES

The Natural Area is divided into the following management zones:

Zone 1: Island Preserve Zone

All lands within the Natural Area boundaries that presently are islands or portions of islands; and all lands which may accrete to said island(s), or which may be formed into islands by the natural alteration of the river channels in the future.

Zone 2: River Zone

All lands within the Natural Area's boundaries that presently form the beds of the Flathead and Stillwater Rivers, as are denoted on the management map, and all lands which may form the beds of these rivers in the future.

Zone 3: Mainland Zone

All lands within the Natural Area's boundaries forming the mainland portion and not included in Zones 1 and 2 above, as are denoted on the management map.

1. Management and Uses of Zone 1: Island Preserve Zone

This zone includes all islands within the Natural Area. Because of their isolation and relatively undisturbed characteristics, these islands are the most deserving area for the Managing Entity's preservation efforts. The major objective for the management of these areas shall be to maintain the islands' character much as it presently exists. The guiding principal for resolving future management conflicts, which are not addressed herein, shall be in favor of preserving the longevity and viability of the area's natural features.

A. Access

The only access presently available to the islands in this zone is via boat, fording on foot, or by swimming. Boats may be beached at any point along the islands' shores for the purposes of access. No bridges, permanent ferryboats, or cable cars may be constructed for access to the area.

Access to these islands shall remain by present means until such time as studies of the use tolerance of the area's soils and vegetation has established the allowable visitor carrying capacity. The Master Plan may then be amended to reflect the appropriate means of access that may be established.

B. Motor Powered Equipment

Motor powered equipment is prohibited from the area except when necessary for management activities under an approved weed control program.

C. Recreation

Recreational activities are limited to nature study, outdoor photography, fishing, hunting, hiking, the observation of wildlife and vegetation, and other casual uses of the area. Float-in visitors are encouraged to make use of the area, but camping and campfires are prohibited. Shelters shall not be erected on the area.

D. Trails and Interpretive Guides

The Managing Entity may provide printed nature guides concerning the natural features of the area, and post identifying or descriptive markers near features of natural interest, provided that the interpretive features are not rare, threatened, endangered, or particularly sensitive to attention. Discreet footpaths that follow current game trails may be partially cleared to allow for reasonable passage through the area. However, paths may not be surfaced with wood chips or other materials, and the materials cleared from paths may not be removed from the area.

If the Managing Entity wishes to set up a system of trails in Zone 1 that does not follow current game trails, it must prepare a planned trail design that considers the habits of local wildlife populations; the patterns and extent of visitor use of the island; and other design considerations that will make the trail system complimentary to the area. Prior to trail construction, the planned trail design must be approved by the Department.

E. Fire Suppression

The local Fire District will suppress natural fires and those started by the general public. The Managing Entity is responsible for fire prevention or suppression that may result from its authorized uses under Land Use License 3053246 (Appendix I).

F. Facilities and Structures

No facilities or structures shall be placed in this zone unless expressly approved by the Managing Entity for use in scientific research. Sanitary facilities are specifically prohibited from the area.

2. Management and Uses of Zone 2: River Zone

The rivers comprising this zone provide a natural barrier for the protection of the island preserve. Their waters also provide a recreational resource for the public, and sustain the aquatic life of the Natural Area. Though the maintenance of the rivers' water quality and natural flow cannot be assured through the preservation of the Natural Area, the value of these attributes is recognized as a prerequisite for the long-term viability of the area. The preservation and maintenance of the rivers as they flow through the Natural Area will be governed as this section provides.

A. Access

All forms of navigation, for recreational or commercial purposes, will not be impaired. The use of the waterways as a travel route shall continue unrestricted. No fences or other obstructions shall be placed across or in the rivers.

B. Facilities and Structures

No boat docks or ramps, bank stabilization structures, or diversions may be placed in, or on the shores of the rivers. No effluent or other debris may be discharged into the rivers. Dredging, excavation, or filling, for any purposes, is not allowed within this zone. Stream gauging devices may be placed within the area, upon the approval by the Managing Entity and the Department.

3. Management and Uses of Zone 3: Mainland Zone

The major portion of this zone consists of the mainland portion of the Natural Area, where crossing a river is not required for access. These areas provide a buffer for the islands in Zone 1; they should be managed to create an alternative area for the purpose of attracting the more active and frequent recreational visitors to the Natural Area away from Zone 1.

A. Access

Legal public access to the mainland occurs at three points: Treasure Lane is the northern most point of access; Green Ridge Drive is located one-quarter ($\frac{1}{4}$) of a mile south of Treasure Lane; and the road which is constructed along the section line between Sections 16 and 21 for one-eighth ($\frac{1}{8}$) of a mile, until it turns north on Howard Drive, and then continues to the East on foot for another one-eighth ($\frac{1}{8}$) of a mile. The access points should be marked with identification signs.

B. Motor Powered Equipment

No mechanical vehicles of any design are allowed to traverse the area. Power tools are restricted from the area as well, except as the Managing Entity finds necessary for the purpose of management.

C. Fire Suppression

Fires will be controlled in this area by conventional means by the local Fire District. The Managing Entity is not responsible for fire prevention or suppression that may result from natural causes or the general recreational use. The Managing Entity is responsible for fire prevention or suppression that may result from its authorized uses under Land Use License 3053246 (Appendix I).

D. Signs

The Managing Entity will post the traditional entrance points and mark boundaries where needed to facilitate management of the area. The Managing Entity shall determine the most desirable point of principal access to this zone and erect a suitable sign denoting the designation of the area as a natural area. Other beneficial information such as a map of the area, the location of trails and waterways, educational information, and a list of rules and regulations may be placed at the entrances. Signing may also include a notice that clearly states that visitors to the area enter at their own risk. A sign plan must be developed before signage is installed beyond the entrances to the property.

E. Recreation

Recreational activities are limited to nature studies, outdoor photography, fishing, hunting, hiking, the observation of wildlife and vegetation, and other casual uses of the area. No camping is allowed. The general public of age 12 and older must have a DNRC Recreational Use License to enter the area.

F. Trails and Interpretive Guides

Access or route markers may be placed in this zone to guide the public through the area, as the Managing Entity determines necessary. Modest trails may also be cleared through this area to allow the public to traverse the area on foot. Markers to interpret those features of natural interest may also be placed in this zone, provided that these features are not particularly sensitive to public attention.

G. Facilities and Structures

If the Managing Entity wishes to set up 1) a trail system that does not follow the current game trails, or 2) a sign system that extends beyond the entrances to the property, it must prepare a plan that considers the natural habitat of the property and is complimentary to the area. Prior to construction, the Department must approve the plan. A plan is not required if trails follow the current game trail system, including making modest improvements for reasonable passage on the current trail system.

Before development and construction can occur for facilities and structures not described in the paragraph above, the Managing Entity shall undertake a study to determine the need for facilities and structures within this zone. The Managing Entity shall consult with interested parties to determine the most appropriate disposition and character for the following:

- parking areas,
- trails,
- public service areas (picnic sites, sanitary facilities),
- outdoor lecture areas,
- research facilities,
- public safety devices, and
- other considerations that are of interest

The findings of this study, along with a plan for these improvements, will be submitted to the Department. No structures or facilities shall be introduced upon the area until such time as the Department has approved a plan for these improvements.

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