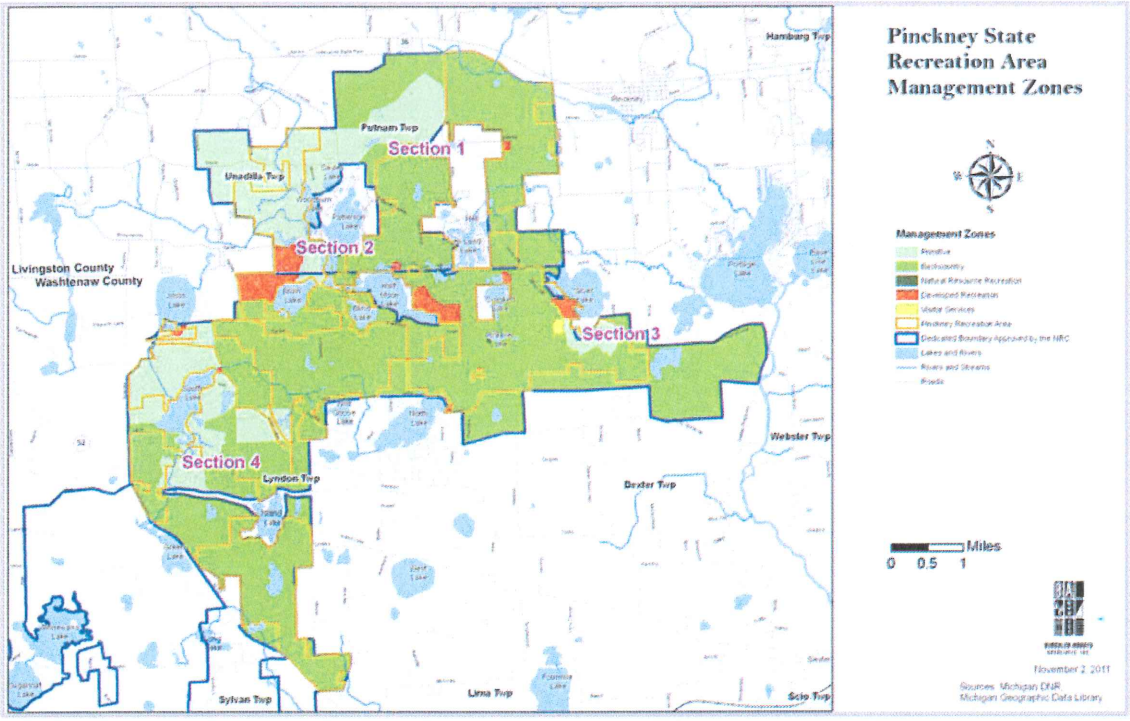
General Management Plan

Long-range management guidance focused on the specific natural resources, historic-cultural resources, recreation opportunities and the education-interpretation opportunities of…

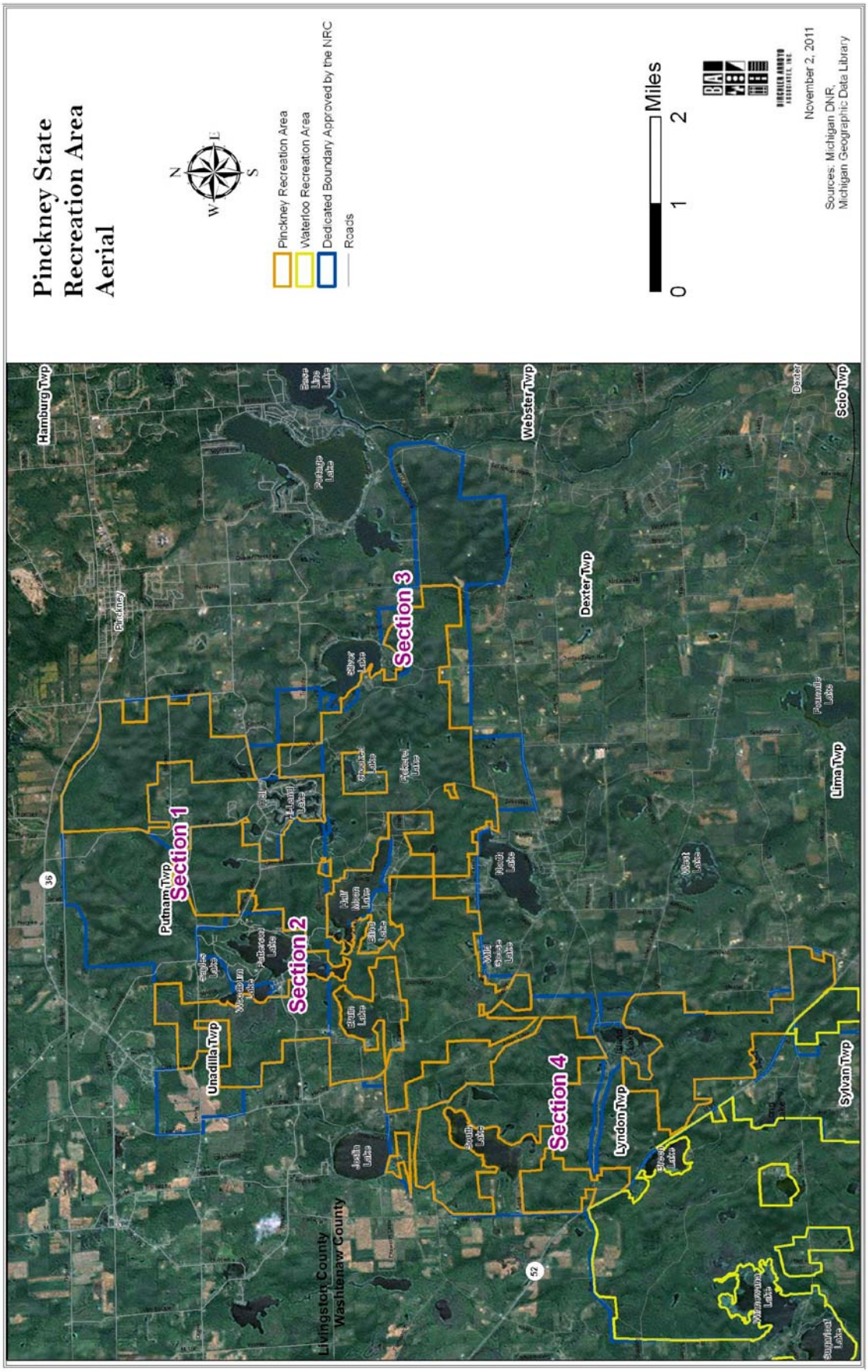
Pinckney Recreation Area



The project was directed by Paul N. Curtis, Management Plan Administrator Michigan Department of Natural Resources, Parks & Recreation Division with assistance from Birchler Arroyo Associates, Inc.;

PLAN APPROVALS:

Chief, Parks & Recreation Division	3/2/12 Date
Deputy Director, Natural Resources	3/9/2012 Date
Director, Department of Natural Resources	3/19/12 Date


Pinckney State Recreation Area Aerial
N
W
E
S
Pinckney Recreation Area
Waterloo Recreation Area
Dedicated Boundary Approved by the NRC
Roads
0
1
2
Miles
November 2, 2011
Sources: Michigan DNR, Michigan Geographic Data Library
Section 1
Section 2
Section 3
Section 4
Hamburg Twp
Putnam Twp
Unadilla Twp
Webster Twp
Dexter Twp
Lima Twp
Sylvan Twp
Lyndon Twp
Scio Twp
Pinckney
Livingston County
Washtenaw County

RESOLUTION NO. 02-2012-03

MICHIGAN STATE PARKS ADVISORY COMMITTEE (MSPAC)

RESOLUTION TO RECOMMEND APPROVAL OF THE "PINCKNEY RECREATION AREA – PHASE 1 - GENERAL MANAGEMENT PLAN"

ADOPTED: FEBRUARY 9, 2012

WHEREAS, the Department of Natural Resources' (DNR) Parks and Recreation Division has completed Phase 1 of the General Management Plan for Pinckney Recreation Area; and

WHEREAS, the planning process reflects sensitivity to natural resource values, historic and cultural resource values, recreation and education opportunities, and is inclusive of all DNR programs and representative of eco-management; and

WHEREAS, the planning process was further inclusive of stakeholder, constituent, and public input; and

WHEREAS, the General Management Plan represents sound guidance for future planning phases that will be consistent with the mission of the DNR and the Parks and Recreation Division, and reflective of the purpose and significance of Pinckney Recreation Area; and

WHEREAS, the General Management Plan has been reviewed and recommended for approval by the Parks and Recreation Division and the MSPAC Stewardship and Operations Subcommittee.

THEREFORE, BE IT RESOLVED, that the Michigan State Parks Advisory Committee recommends approval of the Pinckney Recreation Area – Phase 1 - General Management Plan; and

THERFORE, BE IT FURTHER RESOLVED, that the Michigan State Parks Advisory Committee further recommends that the DNR Director approve the Phase 1 – General Management Plan for Pinckney Recreation Area; and

THEREFORE, BE IT FURTHER RESOLVED, that upon the DNR Director's approval, the Parks and Recreation Division initiate the Phase 2 – Long Range Action Goals Plan for Pinckney Recreation Area.

Submitted by: Chris Graham, Chair, MSPAC Operations and Stewardship Subcommittee

Motioned by:	**Chris Graham**	**Yeas:**	**9**
Seconded by:	**Todd Scott**	**Nays:**	**0**
		Abstained:	**0**
		Absent:	**7**

This Resolution was adopted by the Michigan State Parks Advisory Committee at their February 9, 2012, meeting as Resolution No. 02-2012-03.

Table of Contents

Executive Summary

1.0 Plan Process Overview

- 1.1 Planning Objectives
- 1.2 Planning Team
- 1.3 Management Plan Process

2.0 Core Values

- 2.1 Mission Statements
- 2.2 Statements of Purpose
- 2.3 Statements of Significance
- 2.4 Legal Mandates
- 2.5 Land Acquisitions

3.0 Management Zone Plan

- 3.1 Primitive
- 3.2 Backcountry
- 3.3 Natural Resource Recreation
- 3.4 Developed Recreation
- 3.5 Visitor Services

Appendices

- A Supporting Analysis
- B Summary of Public Input
- C Planning Team Meeting Summaries
- D Future Plan Inserts

Executive Summary

Pinckney Recreation Area, with 10,413 acres is located primarily in Washtenaw County, Michigan, with some of the park located in Livingston County. The Department of Natural Resources (DNR) Parks & Recreation Division (PRD) oversaw the planning process. The endeavor represents a new planning philosophy of the PRD. "Management Planning," a comprehensive, resource-based process is the PRD's adaptation of National Park Service planning methodology. During Phase 1, the GMP focuses on the four principles of the PRD Mission Statement: to acquire, preserve, and protect; (1) natural resources, (2) cultural resource, (3) provide public recreation, and (4) provide education opportunities. The process includes a thorough inventory of Pinckney Recreation Area's natural and historic/cultural resources, recreational opportunities and education and interpretation opportunities.

With this base of knowledge and input of the Planning Team (made up of DNR staff, government officials, stakeholders and the public), the Core Values for Pinckney Recreation Area were developed. Pinckney Recreation Area was determined to be significant for the following reasons:

- The recreation area has an extensive, internal trail system that also provides external connections to the region via the Lakelands Trail. There is a potential to connect to other regional trails, including those of the Huron Clinton Metroparks (HCMA) and local townships.
- The recreation area features a chain of lakes that creates a water trail for boaters.
- The recreation area offers hunting, trapping, and fishing opportunities, which are unique within southeast Michigan.
- The recreation area provides a large potential habitat area, unique geology, and wildlife corridors for threatened & endangered species. There are places within the recreation area that are exemplary natural habitats.
- Archeological & pre-historic sites may be found within the recreation area, offering an educational opportunity to tell the story of early life in the region.
- The recreation area offers a variety of camping opportunities, from rustic to modern sites, and includes the modern Glenbrook yurt overlooking Half Moon Lake.
- The size of Pinckney Recreation Area is significant in relation to the regional population center, and is enhanced by its proximity to Waterloo Recreation Area. Both recreation areas offer an "up north" feel in southeast lower Michigan, due to their combination of land mass and natural features. The two recreation areas offer the largest area for recreational hunting in southeast lower Michigan.
- Pinckney Recreation Area is a destination for health and fitness group events and training, as well as recreation for individual users.

- Pinckney Recreation Area hosts a great diversity of users – hunters, birders, trail runners, geo-cachers, equestrians, hikers, mountain bikers, fishermen/women.
- One of the University of Michigan's biological research stations is within the NRC boundary of Pinckney Recreation Area. Given its proximity to the University of Michigan, the recreation area is frequently used for classes and research.
- The University of Michigan's Stichfield Woods property offers a potential trail connection to HCMA's Hudson Mills and Dexter-Huron metroparks.

Considering the identity and significance of Pinckney Recreation Area, the Planning Team, with stakeholder and public input, established appropriate Management Zones and the extent of influence on the property. From a palette of nine standard zones, five were applied to Pinckney Recreation Area. The Management Zone map and a thorough review of each Management Zone are found in Section 3 of this Plan. A condensed view of the Management Zones is as follows:

- Primitive Zone comprises 1,968 acres, or 18.9%, and will reflect a desired condition that emphasizes the natural resources. The allowance of recreational uses should depend on attaining and maintaining a high quality natural resource condition.

- Backcountry Zone comprises 7,928 acres, or 76.1%, and emphasizes resource quality over recreation, but allows for modification of landscape to allow for moderate levels of active recreation uses. Most of park's extensive trail system is located in this zone.

- Natural Resource Recreation Zone comprises 43 acres, or 0.41%, and permits active recreation with medium to high density of use conducted in natural areas. There is still an emphasis on resource quality over recreation, but in this zone, higher levels of use are allowed (e.g., high-use park trails are so designated).

- Developed Recreation Zone comprises 454 acres, or 4.4%, and allows active recreation with high density of use conducted in areas not designated for natural resource significance. In this zone, recreation dominates with natural resource attributes enhances as possible. The park's modern campgrounds, lake day-use beaches, boating access sites, and parking areas are found in this zone.

- Visitor Services Zone comprises 20 acres, or 0.19%, and encompasses those areas required for program administration and operations. This zone includes the office, contact station, and maintenance facilities that support the business of running a state park. The current headquarters for the park will be in the Visitors Services Zone.

Planning Team, stakeholder, and public input explored the concepts for trail connections between Pinckney and Waterloo Recreation Areas. Appropriate zones have been designated in general areas where such trails may be possible. Trail connections will be explored in more detail during Phase 2 of the General Management Plan.

1.0 Plan Process Overview

A General Management Plan (GMP) guides the management of resources, visitor use, and general development at Pinckney over a 20-year horizon. The GMP provides the foundation for protecting park resources while providing for meaningful visitor experiences. The long-range vision and management objectives for the park are derived from applicable legal directives, the purpose of the park, and the park's significant natural and cultural resources.

GMPs develop as a result of a series of planning steps. Each step builds upon the previous, and action decisions focus on (1) the mission of the Parks & Recreation Division (PRD), and (2) the specific Purpose and Significance of the park. There are four phases of planning, implemented in the following order:

- **Phase 1.** General Management Plan (GMP) that presents long-range goals (20-year).
- **Phase 2.** Long-range Action Goals Plan that identifies 10-year action strategies to attain the GMP (requires review of Phase 1)
- **Phase 3.** Five-Year Implementation Plan, which outlines specific actions to implement (requires review of Phase 1 and Phase 2)
- **Phase 4**. Annual Action Plan and Progress Report to answer what will be done this year, and what progress was made on last year's plan.

This Plan represents **Phase I**. In this phase of planning, a 20-year vision for the park is defined, and critical questions are answered, such as: What will be the condition of flora and fauna? How will we address historic and cultural resources? What recreational opportunities could be provided? What education and interpretation efforts will meet the visitor? What will guide the manager's operational decisions? What will be the visitor's overall experience?

Phase I determines management zones, and describes a variety of activities that may be appropriate within each zone. Phase I does not determine specific uses. Identifying specific uses within each management zone is a function of Phase 2. **Management Plans do not guarantee future PRD funding to achieve them. PRD will seek internal funding, alternative funding sources, partnerships and other potential mechanisms for implementing the desired future conditions defined in this plan.**

The tool used by this plan is the designation of “Management zones.” Management zones define specific characteristics of the land, addressing management for:

- Natural features
- Historic/cultural features
- Education/interpretation
- Recreational opportunities

These four elements represent the primary goals of the PRD Mission Statement, and provide guidance for both planning and management decisions. Appendix A presents a detailed account of each of these elements. In addition, management zones prescribe values for:

- Visitor experience
- Management Focus
- Development

Within the parameters of this guidance, “Purpose” and “Significance” statements are developed for the park that establish its unique identity and focus. No two parks are the same and emphasis is directed at ensuring that the differences found from park to park are acknowledged, highlighted and celebrated.

1.1 Planning Objectives

The objective of this General Management Plan was to bring together Parks & Recreation Division staff, stakeholders, and the public who use the park into a planning process that will define and clarify the unique “Purpose” and “Significance” of Pinckney Recreation Area. Collectively, those attributes will be reinforced in the planning and management decisions that impact the park through the implementation of the Management Zone Plan. Future action plans, whether focused on a development proposal, a resource improvement initiative, an interpretive program, or day-to-day management of the park will be guided by this General Management Plan.

Extensive input was sought throughout the planning process. The Planning Team met several times to review, develop, and comment on the plan elements. In addition, the DNR hosted a stakeholder workshop and a public participation workshop. Both the stakeholder and public participation workshops involved solicited written and verbal comments. The draft plan was available for review on a website and the public was invited to email, call or mail questions or comments concerning this initiative. The results of the public participation program are provided in Appendix B.

1.2 Planning Team

Accomplishment of our planning objectives was and is dependent upon the valuable input provided by all members of the “Planning Team.” The names listed below are those who were critical participants in this planning process. Agendas, meeting minutes and attendance at Planning Team meetings is provided in Appendix C.

DNR Staff

Paul N. Curtis	PRD	Park Management Plan Administrator
Paul Yauk	PRD	Lands Manager
Rob Corbett	PRD	Acquisitions and Exchanges Case Manager
Murdock Jemmerson	PRD	Rose Lake District Supervisor
Joe Strach	PRD	SW Michigan Region Planner
Ray Fahlsing	PRD	Stewardship Unit Manager
Lisa Gamero	PRD	Cultural Resource Analyst
Alicia Selden	PRD	Natural Resource Analyst
Chuck Dennison	PRD	Pinckney RA Manager
Barb McCarter	PRD	Pinckney RA Lead Worker
Gary Jones	PRD	Waterloo R A Manager
Greg Byce	PRD	Waterloo R A Supervisor
Katie McGlashen	PRD	Waterloo R A Interpreter
Tim Payne	WD	Southeast Region Manager
Kristin Bissell	WD	Wildlife Biologist
Chad Fedewa	WD	Wildlife Technician
Jeff Braunscheidel	FD	Fisheries Biologist (Lk. Erie Watershed)
Scott Hanshue	FD	Fisheries Biologist (Lk. Michigan Watershed)
Tom Hoane	FMD	FMD – Geologist
Bruce Miller	FMD	Fire Officer
Jane Gordon	LED	Lieutenant
Jason Smith	LED	Conservation Officer
Damon Owens	LED	Conservation Officer (Jackson County)
John Spieles	M&O	Interpreter Manager
Kevin Frailey	M&O	Education Services Manager

Consultants

David Birchler, Birchler Arroyo Associates, Inc.
Jill Bahm, Birchler Arroyo Associates, Inc.
Susan Roble, Birchler Arroyo Associates, Inc.
Sheila Starks, Birchler Arroyo Associates, Inc.

1.3 Management Plan Planning Process

Management Planning is a defined strategic process within the Parks & Recreation Division Strategic Plan (2009), reflecting the following Goals and Objectives:

- Goal 1, Objective 1.2: Strengthen, update, and implement Management Plans.
- Goal 3, Objective 3.1: Perform landscape level assessment of recreation opportunities in decision making.
- Goal 8, Objective 8.1: Continue to use the MSPAC (Michigan State Parks Advisory Committee), MSWC (Michigan State Waterways Commission), NRC (Natural Resources Commission), SWC (Statewide Council), and Ecoregion Teams and partners to advise in Parks & Recreation Division planning, policy development, and issue resolution.

2.0 Core Values

2.1 Mission Statements

Guidance for the General Management Plan stems from the Mission Statements of the Department and its Parks & Recreation Division, and the Purpose and Significance Statements that have evolved through the planning process. The core values found in these statements must be reflected in this long-range General Management Plan for Pinckney Recreation Area, and subsequently reflected in any shorter range action plans:

DNR Mission Statement

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations.

PRD Mission Statement

The Parks & Recreation Division's Mission is to acquire, protect, and preserve the natural and cultural features of Michigan's unique resources, and to provide access to land and water based public recreation and educational opportunities.

The core values derived from the statements are that PRD will acquire, preserve, and protect; (1) natural resources, (2) cultural resources, (3) provide public recreation, and (4) provide educational opportunities.

2.2 Park Purpose

Park purpose statements are based on park legislation, legislative history, special designations and DNR policies. These statements reaffirm the reasons for which Pinckney Recreation Area was identified as part of the state park system.

1. To be used as a public park, pursuant to the intentions of the park first being created in the 1943 as it was acquired piece by piece by the State.
2. To preserve and protect Pinckney Recreation Area's unique natural resources for current and future generations.
3. To provide diverse recreational opportunities to nearby populations.
4. To provide educational and interpretive opportunities for the public that reflect the DNR mission and the unique qualities of Pinckney Recreation Area.

2.3 Statements of Significance

Park Significance statements capture the essence of the park's importance to our state's natural and cultural heritage. These statements demonstrate the distinctiveness of Pinckney Recreation Area. Understanding the park's significance helps managers make decisions that preserve those resources and values necessary to accomplish the park's purpose.

- The recreation area has an extensive, internal trail system that also provides external connections to the region via the Lakelands Trail. There is a potential to connect to other regional trails, including those of the Huron Clinton Metroparks (HCMA) and local townships.
- The recreation area features a chain of lakes that creates a water trail for boaters.
- The recreation area offers hunting, trapping, and fishing opportunities, which are unique within southeast Michigan
- The recreation area provides a large potential habitat area, unique geology, and wildlife corridors for threatened & endangered species. There are places within the recreation area that are exemplary natural habitats.
- Archeological & pre-historic sites may be found within the recreation area, offering an educational opportunity to tell the story of early life in the region.
- The recreation area offers a variety of camping opportunities, from rustic to modern sites, and includes the modern Glenbrook yurt overlooking Half Moon Lake.
- The size of Pinckney Recreation Area is significant in relation to the regional population center, and is enhanced by its proximity to Waterloo Recreation Area. Both recreation areas offer an "up north" feel in southeast lower Michigan, due to their combination of land mass and natural features.
- Pinckney Recreation Area is a destination for health and fitness group events and training, as well as recreation for individual users.
- Pinckney Recreation Area hosts a great diversity of users – hunters, birders, trail runners, geo-cachers, equestrians, hikers, mountain bikers, fishermen/women.
- One of the University of Michigan's biological research stations is within the NRC boundary of Pinckney Recreation Area. Given its proximity to the University of Michigan, the recreation area is frequently used for classes and research.
- The University of Michigan's Stinchfield Woods property offers a potential trail connection to HCMA's Hudson Mills and Dexter-Huron metroparks.

2.4 Legal Mandates

For all park General Management Plans, all legal mandates will be identified and will serve to further guide the development of the General Management Plan and subsequent Action Plans. For our planning purposes, the term "Legal Mandates" refers to not only state law, but also the administrative tools of "Policy" and "Directive" of the Natural Resource Commission, the Department, and the Parks & Recreation Division. Examples include Wildlife Conservation Orders, Orders of the Director, and all other laws, commission orders, and rules or directives that apply to the park. Specific to Pinckney Recreation Area, several legal mandates have been identified, which are listed below.

DNR Policy 26.04-04 - Use of State-Owned Lands Administered by the Michigan Department of Natural Resources (ISSUED: 02/01/2006)

- The NRC will manage state-owned lands in a manner that protects and enhances the public trust while providing for the use and enjoyment of those lands as outlined in the Natural Resources and Environmental Protection Act.
- Established to protect and promote the public health by establishing health code requirements specifically addressing campgrounds.
- All public (including DNR) and private campgrounds must meet these regulations
- Mandates that a campground wastewater system must meet the construction permit, design, and operation requirements under Michigan's Public Health Code.

National Pollutant Discharge Elimination System (NPDES) Permit, including Storm Water Runoff Discharge Authorization

- The purpose of this permit is to control the discharge of pollutants into surface waters of the state to protect the environment.; administered by the Michigan Department of Natural Resources.

PA 35 of 2010, Part 741 ("Recreation Passport")

- This act amended the Michigan Motor Vehicle Code to provide for a State Park and State-operated public boating access site "Recreation Passport" that a Michigan resident may obtain by paying an additional fee when registering a motor vehicle.
- The Recreation Passport is required for entry into all PRD administered facilities and takes the place of the Motor Vehicle Permit (MVP).

PA 368 OF 1978, ARTICLE 12 - ENVIRONMENTAL HEALTH, PART 125 – CAMPGROUNDS – Part 125 of the Public Health Code

- Established to protect and promote the public health by establishing health code requirements specifically addressing all public (including DNR) and private campgrounds must meet these regulations.
- Campground wastewater system must meet the construction permit, design, and operation requirements under Michigan's Public Health Code.

PA 451 OF 1994, PART 22 – CAMPGROUND WASTEWATER SYSTEMS

- These rules apply to all campground wastewater systems and regulates discharges to groundwater; administered by the Water Division, Groundwater Discharge Unit

PA 451 of 1994, PART 303 - WETLANDS PROTECTION (formerly Act No. 203, P.A. 1979 Wetland Protection Act)

- Administered by the DNR and part of the Natural Resources and Environmental Protection Act, this legislation provides clarification and guidance on interpreting Part 303 by defining specific rules for the regulation of wetlands in Michigan.
- The law requires that persons planning to conduct certain activities in regulated wetlands apply for and receive a permit from the state before beginning the activity.

PA 451 OF 1994, PART 419 - HUNTING AREA CONTROL

- Administered by the DNR, this part of PA 451 establishes the powers of the Department to establish safety zones for hunting.

PA 451 OF 1994, PART 504 - STATE LAND USE RULES / LAND USE ORDERS OF THE DIRECTOR

- Administered by DNR Law Division.

- ❑ States that the department shall promulgate rules for the protection of the lands and property under its control against wrongful use or occupancy.

PA 451 OF 1994, PART 741 - STATE PARK SYSTEM - NATURAL RESOURCE AND ENVIRONMENTAL PROTECTION ACT

- ❑ Notable in this law is Section 324.74102, which identifies the duties of the DNR and reinforces those core values concerning preservation, protection and management cited above.

WILDLIFE CONSERVATION ORDERS

- ❑ Established by the Natural Resources Commission (NRC).
- ❑ Describes hunting and trapping regulations including methods of take, bag limits, license quotas, and season dates are established by the NRC and are described in the Wildlife Conservation Orders.

2.5 Land Acquisitions & Funding Sources

Pinckney Recreation Area was obtained piece by piece over several years. Various funding sources have been used for acquisition of land in Pinckney Recreation Area. Please refer to Appendix A: Supporting Analysis for a complete detailed list of these sources.

Michigan Natural Resource Trust Fund (MNRTF)

The MNRTF has provided financial assistance to protect natural resources and open space, purchase lands for outdoor recreation, and acquire land for its environmental importance or scenic beauty.

Pittman-Robertson

Pittman-Robertson Funds have been used to acquire certain parcels of land for the park. Because this funding source is specifically dedicated to game and habitat restoration, the Parks and Recreation Division (PRD) and Wildlife Division co-manage this property. These shared responsibilities are outlined in a memorandum of understanding between the Parks and Recreation Division and the Wildlife Division.

Special Legislation

Public Act 27, 1944, appropriated $5,000,000 for acquisition of land for recreation facilities. $1,500,000 was dedicated to purchasing lands in southeastern Michigan.

Public Act 50, 1944, appropriated $632,500 for the purposes of purchasing land, construction of state parks, and repairing/remodeling the State Capitol and office buildings. Of the $632,500, $450,000.00 went to the Department of Conservation.

State Game Fund

Revenue from this fund is raised through a $1.50 tax on deer hunting licenses.

Other funding sources available for future land acquisition include:

- ❑ Dingell Johnson – modeled after the Pittman-Robertson Act, this program focuses on the management, conservation and restoration of fishery resources.
- ❑ Game and Fish Fund – provides revenues for the operation of the Fish, Wildlife, and Law Enforcement programs.

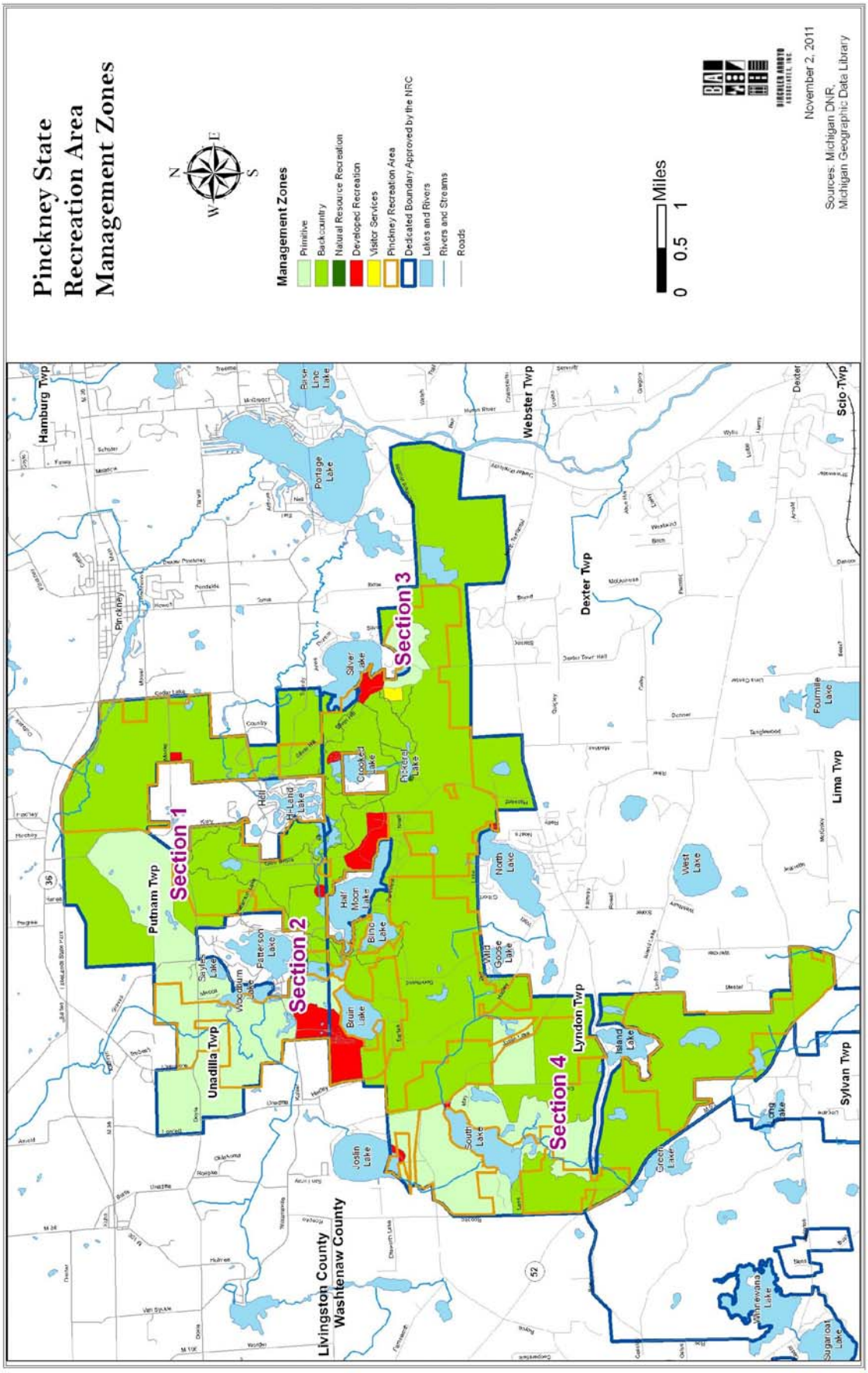
3.0 Management Zones

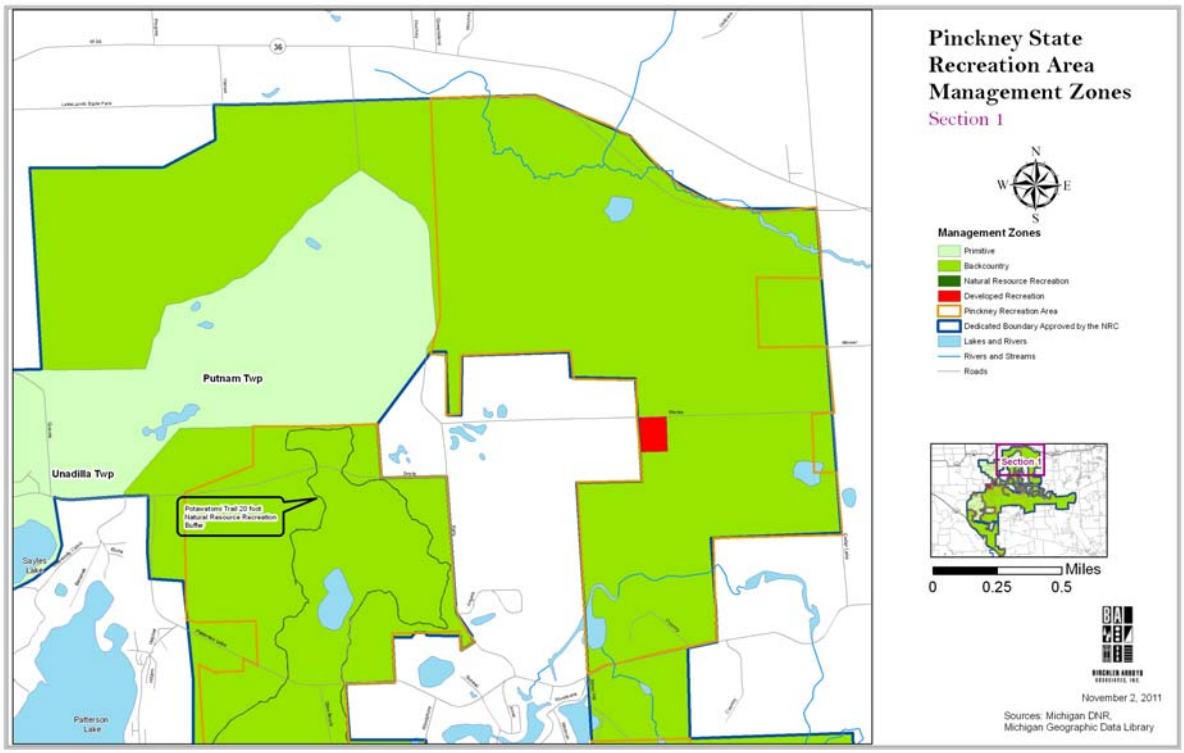
With guidance of the Planning Team and input from the park's stakeholders and the public, the "Purpose and Significance" statements were formulated for Pinckney Recreation Area. This established an identity for Pinckney Recreation Area as a place to be valued for its unique natural features, access to numerous lakes, multi-use recreational trails, and opportunity for natural resources education.

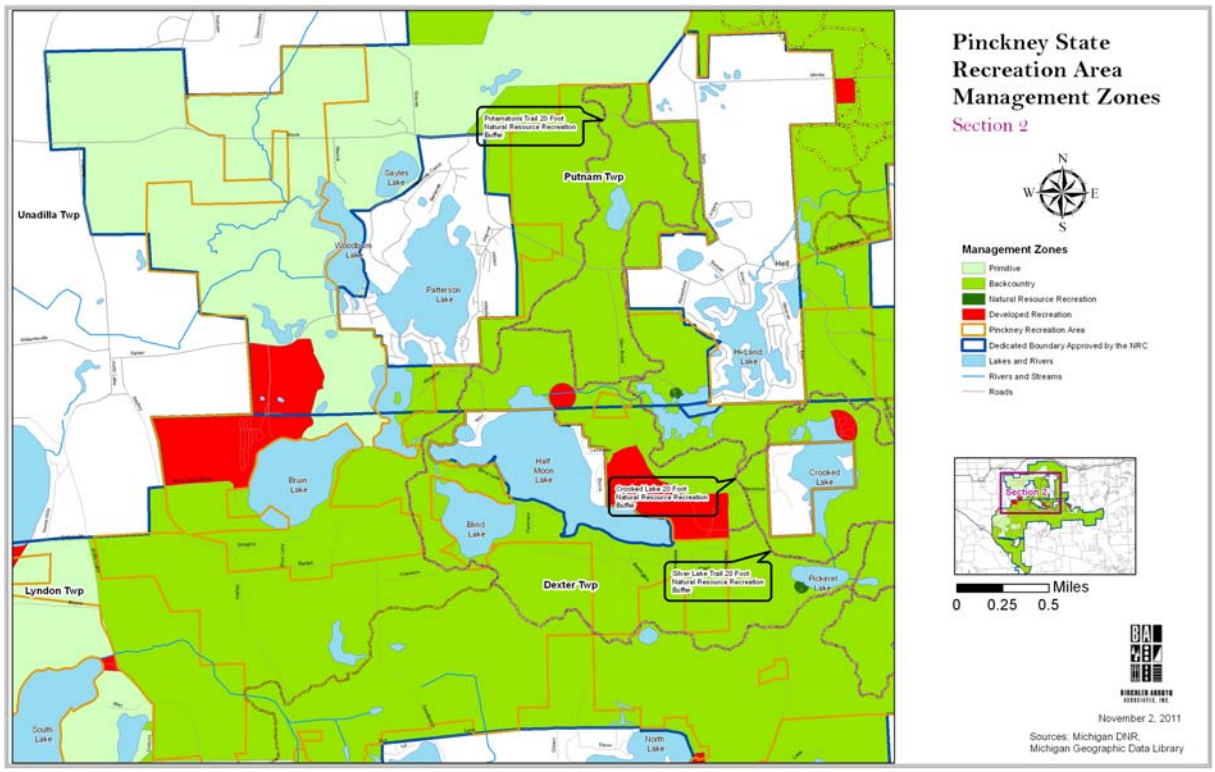
The Management Zone Plan, was developed in keeping with the park's unique Identity. Similar to the Purpose and Significance statements, the Management Zone Plan was also drafted with Planning Team, stakeholder and public support. The Management Zone Plan seeks to preserve and protect the park's natural resources, while creating opportunities for recreation, education and interpretation. To achieve this, the 10,413-acre park was divided into the following zones:

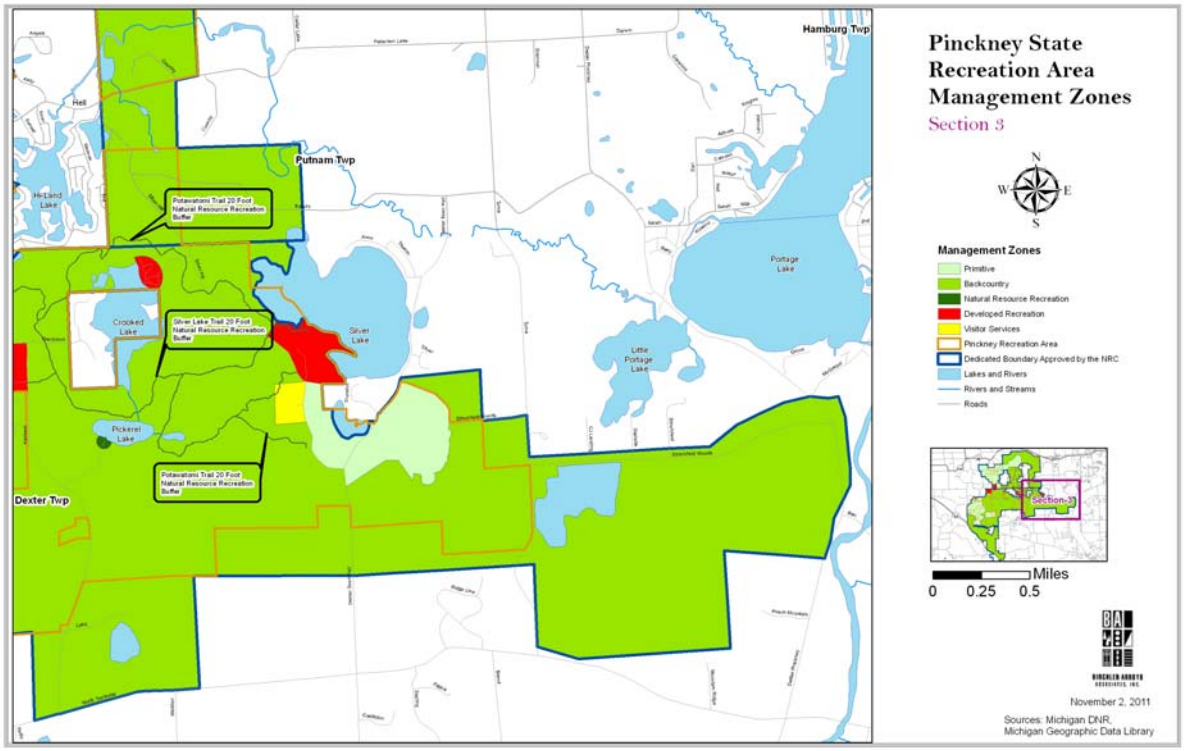
This is Phase I of the General Management Plan for Pinckney Recreation Area to determine management zones for the parkland. Management zones describe a variety of activities that **may be** appropriate within that zone. Identifying specific activities that **will occur** is a function of Phase 2 general management planning, and not a component of this phase.

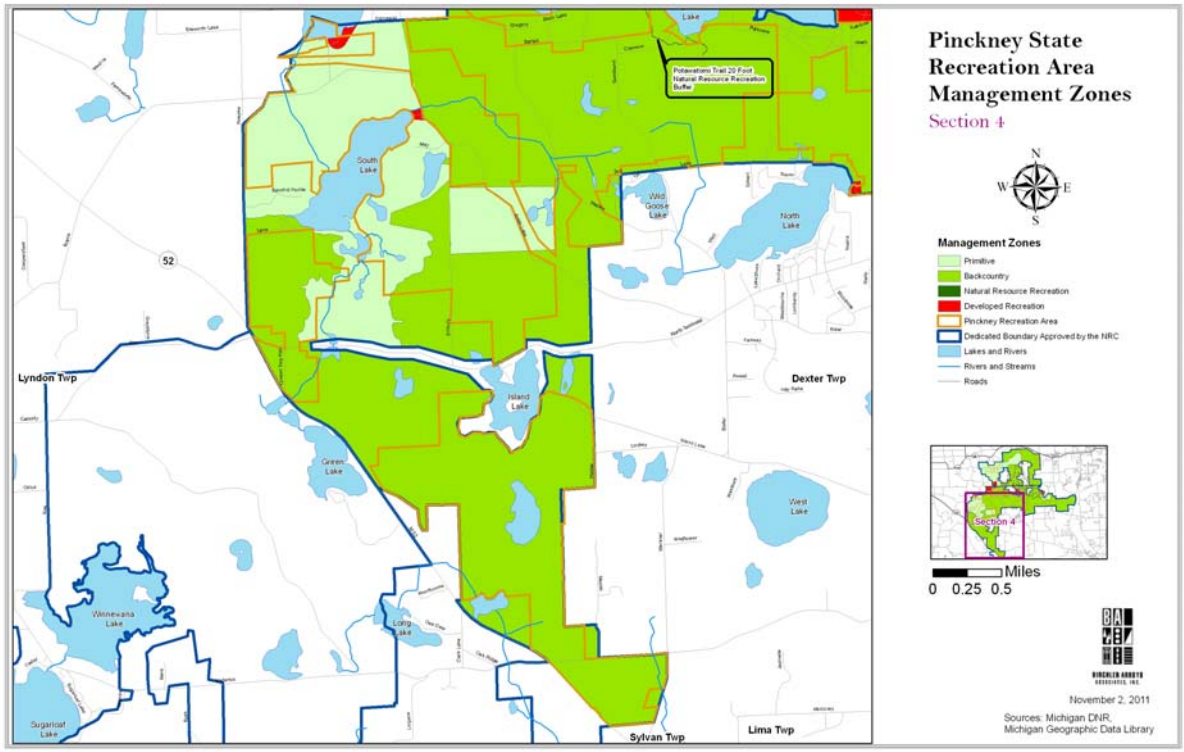
- Primitive Zone comprises 1,968 acres (18.9%) and reflects a desired condition that emphasizes the natural resources. Land is managed to only allow dispersed and low frequency use for low impact recreational purposes. This zone preserves and protects the unique areas for exemplary habitat found in the northern and western portions of this park.
- Backcountry Zone comprises 7,928 acres (76.1%) and emphasizes resource quality over recreation, but allows for modification of the landscape to allow for moderate levels of active recreation uses. Much of Pinckney Recreation Area's extensive trail system is located in this management zone.
- Natural Resource Recreation Zone comprises 43 acres (0.41%), and allows active recreation with medium-high density of use conducted in natural areas. There is still an emphasis on resource quality over recreation, but in this zone, higher levels of use are allowed. In Pincnkey Recreation Area, this zone is mainly comprised of small boat launch areas and a 20-ft wide trail buffer around specific trails that are intensively used for events.
- Developed Recreation Zone comprises 455 acres (4.4%) and allows active recreation with high density of use conducted in areas not designated for natural resource significance.. The campgrounds, picnic areas, larger boat launch areas, and lake day-use beach areas will be found within the Developed Recreation zone.
- Visitor Services Zone comprises 20 acres (0.19%) and encompasses the developed areas required for program administration and operations. This zone will include the park headquarters, maintenance facilities and all related land required to conduct the business of running a state recreation area.


Pinckney State Recreation Area Management Zones
N
E
S
W
Management Zones
Primitive
Backcountry
Natural Resource Recreation
Developed Recreation
Visitor Services
Pinckney Recreation Area
Dedicated Boundary Approved by the NRC
Lakes and Rivers
Rivers and Streams
Roads
0 0.5 1
Miles
November 2, 2011
Sources: Michigan DNR,
Michigan Geographic Data Library
Section 1
Section 2
Section 3
Section 4
Hamburg Twp
Putnam Twp
Unadilla Twp
Webster Twp
Dexter Twp
Lyndon Twp
Lima Twp
Sylvan Twp
Scio Twp
Livingston County
Washtenaw County
Pinckney
Portage Lake
Silver Lake
Crooked Lake
Pickerel Lake
Hell
Half Moon Lake
Bruin Lake
Patterson Lake
Sylvan Lake
Woodburn Lake
Joslin Lake
South Lake
North Lake
Island Lake
West Lake
Fourmile Lake
Whitewater Lake
Sugarloaf Lake


Pinckney State
Recreation Area
Management Zones
Section 1
N
W
E
S
Management Zones
Primitive
Backcountry
Natural Resource Recreation
Developed Recreation
Pinckney Recreation Area
Dedicated Boundary Approved by the NRC
Lakes and Rivers
Rivers and Streams
Roads
Section 1
Miles
0
0.25
0.5
November 2, 2011
Sources: Michigan DNR,
Michigan Geographic Data Library
Putnam Twp
Unadilla Twp
Potawatomi Trail 20 foot
Natural Resource Recreation
Buffer
Sayles
Lake
Patterson
Lake


Pinckney State
Recreation Area
Management Zones
Section 2
N
W
E
S
Management Zones
Primitive
Backcountry
Natural Resource Recreation
Developed Recreation
Pinckney Recreation Area
Dedicated Boundary Approved by the NRC
Lakes and Rivers
Rivers and Streams
Roads
Section 2
Miles
0
0.25
0.5
November 2, 2011
Sources: Michigan DNR,
Michigan Geographic Data Library
Potawatomi Trail 20 Foot
Natural Resource Recreation
Buffer
Putnam Twp
Unadilla Twp
Sayles
Lake
Woodburn
Lake
Patterson
Lake
Hell
Hi-Land
Lake
Brum
Lake
Half
Moon
Lake
Crooked Lake 20 Foot
Natural Resource Recreation
Buffer
Crooked
Lake
Blind
Lake
Silver Lake Trail 20 Foot
Natural Resource Recreation
Buffer
Pickerel
Lake
Dexter Twp
Lyndon Twp
South
Lake
North
Lake


Pinckney State
Recreation Area
Management Zones
Section 3
Hamburg Twp
Putnam Twp
Dexter Twp
Hell
Hi-Land Lake
Crooked Lake
Silver Lake
Pickerel Lake
Portage Lake
Little Portage Lake
Potawatomi Trail 20 Foot Natural Resource Recreation Buffer
Silver Lake Trail 20 Foot Natural Resource Recreation Buffer
Management Zones
Primitive
Backcountry
Natural Resource Recreation
Developed Recreation
Visitor Services
Pinckney Recreation Area
Dedicated Boundary Approved by the NRC
Lakes and Rivers
Rivers and Streams
Roads
Section 3
Miles
0 0.25 0.5
November 2, 2011
Sources: Michigan DNR,
Michigan Geographic Data Library


Pinckney State
Recreation Area
Management Zones
Section 4
Lyndon Twp
Dexter Twp
Sylvan Twp
Lima Twp
South Lake
Wild Goose Lake
North Lake
Island Lake
Green Lake
West Lake
Winnewana Lake
Long Lake
Sugarloaf Lake
52
Potawatomi Trail 20 Foot Natural Resource Recreation Buffer
Management Zones
Primitive
Backcountry
Natural Resource Recreation
Developed Recreation
Pinckney Recreation Area
Dedicated Boundary Approved by the NRC
Lakes and Rivers
Rivers and Streams
Roads
Section 4
Miles
0 0.25 0.5
November 2, 2011
Sources: Michigan DNR,
Michigan Geographic Data Library

3.1 Primitive Zones

Approximately 1,968 acres, 18.9%, of the land comprising Pinckney Recreation Area is designated Primitive Zone. Only foot traffic would be allowed in this zone to ensure that the natural features are not damaged or compromised by recreation. This zone preserves and protects the unique resources found in the northern and western portions of this park.

A. Natural Resources. This zone will reflect natural processes, with vegetative management only allowed to restore and maintain natural ecological structure and processes (such as removing invasive species), to address hazard trees, and to manage pests and disease. The management zone plan promotes the on-going maintenance and enhancement of these natural resources to ensure their success in the long-term. Native species and natural processes would take precedence over visitor accommodation.

B. Historic/Cultural Resources. There are no known historic structures in this zone, but both historic and prehistoric resources are present, particularly along the chain of lakes and waterways. Management and interpretation will be evaluated on a case-by-case basis.

C. Recreation Opportunities. With the focus of this zone being preservation, protection and enhancement of the natural communities present within the zone, recreational opportunities are limited to low-intensity uses. Any uses must be dispersed, low intensity, off-trail or trail, self-reliant, outdoor activities. Activities that could occur in this zone are hiking, back-packing, hunting/trapping/fishing, primitive camping (designated sites), cross-country skiing, nature observation. A yurt may be appropriate in this zone at South Lake with canoe/hike-in access.

D. Education Opportunities. The ecological significance of the resources in the park presents a tremendous educational opportunity. Information could be relayed through the use of kiosks at trailheads and interpretive signage along trails and other appropriate locations.

E. Visitor Experience. The visitor experience would reflect a high degree of natural feel: a significant sense of solitude, and a lack of man-made improvements. There would be low interaction with other visitors.

F. Management Focus. Management would focus on maintaining the low-impact character of the zone, with emphasis on natural resource quality. Routine maintenance would be provided. Care would be taken to eliminate any detrimental impacts such as incursion of invasive species. Vegetation will be protected from human predation.

G. Development. The focus is to maintain as little evidence of human activity as possible. Trail improvements, which can include boardwalks and/or overlooks, will be considered.

3.2 Backcountry Zone

Approximately 7,928 acres (76.1%) of Pinckney Recreation Area will be designated Backcountry Zone. This zone allows for modification of the landscape to allow for moderate levels of active recreation use.

A. Natural Resources. This zone will reflect natural processes, with vegetative management only allowed to restore and maintain natural ecological structure and processes (such as removing invasive species), to address hazard trees, and to manage pests and disease. Within the Backcountry Zone, natural resources may be modified slightly to support visitor use, but the tolerance for natural resource impacts is low.

B. Historic/Cultural Resources. There are no known historic structures in this zone, but both historic and prehistoric resources are present, along the chain of lakes and waterways. Management and interpretation will be evaluated on a case-by-case basis.

C. Recreational Opportunities. Moderate levels of recreation are allowed in the Backcountry Zone, provided the activities are compatible with the natural character. Non-motorized outdoor activities could be permitted, including hiking, backpacking, backcountry camping, canoeing, horseback riding, kayaking, mountain biking, nature observation, cross-country skiing, snowshoeing and hunting/trapping/fishing. The Potawatomi Trail, Crooked Lake Trail, Silver Lake Trail, and Waterloo-Pinckney Trail are part of the extensive multi-use trail system found in the Backcountry Zone. However, due to the intensive events that periodically take place on these trails, the Potawatomi, Crooked Lake, and Silver Lake trails are zoned Natural Resource Recreation. There is a desire to develop a hike/bike shared-use trail that would connect to the Potawatami Trail to the Bruin Lake Campground. Such a future trail would be zoned as a backcountry corridor, and may run through a differently-zoned area.

D. Education Opportunities. The ecological significance of the resources in the park presents a tremendous educational opportunity. Information can be relayed through the use of kiosks at trailheads and interpretive signage along trails and other appropriate locations. The Michigan State Park Explorer Program (also known as the Outdoor Explorer Program) offers campers and day visitors the opportunity to learn about a wide range of topics including forests, insects, and pond studies.

E. Visitor Experience. A moderate level of visitor encounters can be accommodated in the Backcountry Zone. Visitors will engage in self-reliant, non-motorized outdoor activities that may require a fairly high time commitment. Low noise tolerance and low interaction with others can be expected.

F. Management Focus. Management will focus on maintaining the low-impact character of the zone, with emphasis on natural resource quality. Routine maintenance, including maintenance for trails or access routes, will be provided. Care will be taken to eliminate any detrimental impacts such as incursion of invasive species.

G. Development. A low level of development is allowed to support visitor access to activities offered in the zone. Development would be unobtrusive and blend in with the natural environment.

3.3 Natural Resource Recreation Zone

43 acres (0.41%), of Pincnkey Recreation Area is designated Natural Resource Recreation (NRR) and is mainly comprised of smaller boat launch areas.

A. Natural Resources. This zone will reflect natural processes, with vegetative management only allowed to restore and maintain natural ecological structure and processes, to address hazard trees, and to manage pests and disease. Vegetation may be managed for soil stabilization, to maintain recreational use, and to maintain an aesthetically appealing landscape.

B. Historic / Cultural Resources. Resources in this zone could be preserved, rehabilitated, removed or allowed to waste away.

C. Recreational Opportunities. In this zone, visitors engage in *outdoor activities* in diverse land and water natural settings (ie. hiking, backpacking, back-country and rustic camping, bicycling, canoeing, kayaking, equestrian use, nature observation, cross-country skiing, and snowshoeing). Hunting/trapping/fishing are permitted in designated areas. Snowmobiling is permitted on designated routes. Moderate to high levels of recreation compatible with natural character of the zone. The Potawatomi Trail, Crooked Lake Trail, Silver Lake Trail, and Waterloo-Pinckney Trail are part of the extensive multi-use trail system found in the Backcountry Zone. Due to the intensive events that periodically take place on these trails, the Potawatomi, Crooked Lake, and Silver Lake trails are zoned Natural Resource Recreation.

D. Education Opportunities. Information can be relayed through the use of kiosks or interpretive signage at boat launch areas.

E. Visitor Experience. Visitors engaged in outdoor activities in diverse land and water natural settings for recreation and education. Hunting/trapping/fishing permitted in designated areas. Snowmobiling permitted on designated routes. Variable time commitment. Variable challenge and adventure. Moderate noise tolerance. Moderate interaction with DNR staff. High visitor encounters accommodated.

F. Management Focus. Management focuses on maintaining the use of the zone appropriate to the PRD's mission. Public safety, protection of resources, and universal access are management priorities.

G. Development. A moderate level of development of facilities for support of visitor activities is permitted in this zone. Examples of development include walkways and parking, trails, benches, and picnic tables. Site hardening is allowed as necessary to facilitate activities and protect natural resources.

3.4 Developed Recreation Zone

Approximately 455 acres, (4.4%), of Pinckney Recreation Area is designated Developed Recreation. Land in this zone is mainly comprised of the park campground, lake day-use beach, and associated parking areas. The three most developed areas within the park are Bruin Lake Campground, Silver Lake day use area, and Halfmoon Lake day use area.

A. Natural Resources. Vegetative management in this zone will address hazard trees, invasive species, and pests and disease, and will also be allowed for purposes of facilitating development and recreational use and maintaining an aesthetically appealing landscape. Natural resources are actively managed and modified to support visitor activities. Water quality is maintained or restored.

B. Historic/Cultural Resources. Resources in this zone could be preserved, adapted or rehabilitated. Non-utilized or non-stabilized structures could be removed.

C. Recreational Opportunities. High levels of recreation in a highly structured environment are found in this zone. Visitors engage in recreation activities in diverse and modified land and water settings: hiking, modern and rustic camping, bicycling, boating, canoeing, kayaking, fishing, nature observation, cross-country skiing, snowshoeing, day-use beach, picnicking, and other day-use activities. As noted in the Backcountry Zone description, there is a desire to develop a hike/bike shared-use trail that would connect to the Potawatami Trail to the Bruin Lake Campground. Such a future trail would be zoned as a backcountry corridor, and may run through a differently-zoned area.

D. Education Opportunities. Interpretive signage and information could be provided at the campground, registration building, trailheads, and/or along trails and overlooks.

E. Visitor Experience. A high level of visitor encounters can be accommodated. Activities for visitors to engage in could offer a variable time commitment, challenge and adventure. Moderate noise tolerance and moderate to high interaction with others can be expected.

F. Management Focus. Management focuses on maintaining the use of the zone appropriate to the PRD's mission. Public safety, protection of resources, and universal access are management priorities.

G. Development. A high level of development of facilities for support of visitor activities is permitted in this zone. Examples of development include restrooms, concrete/asphalt/gravel walkways and parking, fishing piers, trails, benches, picnic tables, rustic campsites, cabins and shelters for recreation and educational opportunities. Site hardening is allowed as necessary to facilitate activities, protect natural resources, and provide universal access.

3.5 Visitor Services Zone

This zone is 20 acres (0.19%), and encompasses the developed areas required for program administration and operations. It includes offices, contact stations, maintenance facilities and all related land required to conduct the business of running a state park. The Visitor Services zone in Pinckney Recreation Area includes the existing park office and maintenance facilities.

A. Natural Resources. Natural resources are actively managed and modified to support administrative and support activities. Vegetative management is allowed (primarily tree removal for safety).

B. Historic/Cultural Resources. Resources in this zone could be preserved, adapted or rehabilitated to support administrative and support activities.

C. Recreational Opportunities. Typically, there are no recreational activities permitted in the Visitor Services zone.

D. Education Opportunities. Person to person contact at park headquarters for general information; informational kiosk may be available.

E. Visitor Experience. Business and information only. High noise tolerance and moderate to high interaction with others can be expected.

F. Management Focus. Management focuses on the business of running the park, appropriate facilities for staff, employee safety. Universal access will be provided to the offices.

G. Development. A high level of development of facilities for support of administrative activities is permitted in this zone. Examples of development include office space, meeting rooms, employee locker room, eating area, shop space, and storage space.

4.0 Future Plan Inserts

The following are items that will be added to this General Management Plan (GMP) as they are developed. The GMP serves as a guide for each subsequent plan.

10-Year Long Range Action Goals Plan (Plan to attain the GMP): Phase 2 of the Management Planning Process. Includes review and update of General Management Plan.

5-Year Implementation Plan (Specific actions to implement the Long Range Action Goals Plan): Phase 3 of the Management Planning Process. Includes review and update of GMP and Phase 2 Plan.

Annual Action Plan and Progress Report: Phase 4 of the Management Planning Process.

Operational/Management Resources: The following categories are established as a guide for the park manager to use to supplement this working document. Other categories can be added as needed.

- ❑ Annual Work Plan (This report ties in with Phase 4 – Annual Report of Management Planning)
- ❑ Stewardship Plan
- ❑ Staffing
- ❑ Budget
- ❑ Equipment
- ❑ Training
- ❑ Public Relations / Marketing / Outreach
- ❑ Programming (ie. special events, MCCC, volunteers, etc.)
- ❑ Public Health, Safety, and Welfare
- ❑ Water system
- ❑ Wastewater system
- ❑ Electrical system
- ❑ Law enforcement
- ❑ Emergency Access Plan
- ❑ Wildfire Management Plan
- ❑ CRS
- ❑ FOIA
- ❑ Raster Image Index
- ❑ Raster Images of historic park plans
- ❑ Park Infrastructure data

APPENDIX A
Supporting Analysis

Table of Contents

A.1 Park Location 2
A.2 Demographics 3
A.3 General History of Pinckney Recreation Area 6
A.4 Land Ownership Issues 8
A.5 Relationship of Pinckney RA to Other Park Resources 12
A.6 Current Land Use 17
A.7 Projected Land Cover (1980 – 2040) 19
A.8 Natural Resources 20
A.9 Historic/Cultural Resources 32
A.10 Education and Interpretation 33
A.11 Recreational Resources 34
A.12 Areas of Conflict 36
A.13 Park Use Statistics and Economic Impacts 37

A.1 PARK LOCATION

Pinckney Recreation Area is located in the northwestern corner of Washtenaw County, and the southwestern corner of Livingston County. Its geographic coordinates approximate 42 °42" latitude and 84 °04" longitude. The park spans three townships in Washtenaw County, with the majority of Pinckney's area lying within Lyndon and Dexter Townships and a small portion of the park in Sylvan Township. In Livingston County, Pinckney RA is part of two townships: Unadilla and Putnam.

The Recreation Area is confined to the north by M-36 and by Roepke Road to the west. From the intersection of Roepke Road and M-52, the western boundary extends south along M-52 until Werkner Road. At this point the boundary line follows Werkner Road northeast. Territorial Road is the southern boundary for the east side of Pinckney, while Cedar Lake Road and Toma Road are the parks eastern most boundary.

Pinckney Recreation Area is easily accessed from the north and south by way of M-52, and on the east and west via I-94, exits 162 and 167.

A.2 DEMOGRAPHICS

Census data from the surrounding counties is listed below. Census data from the surrounding counties is listed below. The U.S. Census Bureau estimates the 2009 population of Washtenaw County at 347,563, a 7.7% increase since 2000. Livingston County had an estimated population of 183,118, a 16.7% increase since the 2000 census. The population densities are 454.8 and 276.3 people per square mile in Washtenaw and Livingston Counties respectively. Both county populations exceed the state average of 175 people per square mile.

2009 U.S Census Estimates for Washtenaw County

People QuickFacts	Washtenaw County	Michigan
Population, 2009 estimate	347,563	9,969,727
Population, percent change, April 1, 2000 to July 1, 2009	7.7%	0.3%
Population estimates base (April 1) 2000	322,770	9,938,492
Persons under 5 years old, percent, 2009	5.7%	6.2%
Persons under 18 years old, percent, 2009	20.7%	23.6%
Persons 65 years old and over, percent, 2009	9.8%	13.4%
Female persons, percent, 2009	50.2%	50.8%
White persons, percent, 2009 (a)	77.1%	81.2%
Black persons, percent, 2009 (a)	12.4%	14.2%
American Indian and Alaska Native persons, percent, 2009 (a)	0.4%	0.6%
Asian persons, percent, 2009 (a)	7.8%	2.4%
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)	0.1%	Z
Persons reporting two or more races, percent, 2009	2.2%	1.6%
Persons of Hispanic or Latino origin, percent, 2009 (b)	3.5%	4.2%
White persons not Hispanic, percent, 2009	74.1%	77.4%
Living in same house in 1995 and 2000, pct 5 yrs old & over	43.0%	57.3%
Foreign born persons, percent, 2000	10.3%	5.3%
Language other than English spoken at home, pct age 5+, 2000	13.2%	8.4%
High school graduates, percent of persons age 25+, 2000	91.5%	83.4%
Bachelor's degree or higher, pct of persons age 25+, 2000	48.1%	21.8%
Persons with a disability, age 5+, 2000	39,902	1,711,231
Mean travel time to work (minutes), workers age 16+, 2000	22.2	24.1
Housing units, 2009	147,576	4,541,680
Homeownership rate, 2000	59.7%	73.8%
Housing units in multi-unit structures, percent, 2000	34.7%	18.8%
Median value of owner-occupied housing units, 2000	$174,300	$115,600
Households, 2000	125,327	3,785,661
Persons per household, 2000	2.41	2.56
Median household income, 2008	$59,126	$48,606
Per capita money income, 1999	$27,173	$22,168
Persons below poverty level, percent, 2008	13.7%	14.4%

Business QuickFacts	Washtenaw County	Michigan
Private nonfarm establishments, 2008	8,132	229,310[1]
Private nonfarm employment, 2008	140,524	3,636,241[1]
Private nonfarm employment, percent change 2000-2008	-10.8%	-10.7%[1]
Nonemployer establishments, 2008	25,667	640,719
Total number of firms, 2002	28,184	735,531
Black-owned firms, percent, 2002	5.0%	6.0%
American Indian and Alaska Native owned firms, percent, 2002	0.4%	0.7%
Asian-owned firms, percent, 2002	4.2%	2.1%
Native Hawaiian and Other Pacific Islander owned firms, percent, 2002	F	0.0%
Hispanic-owned firms, percent, 2002	1.5%	1.3%
Women-owned firms, percent, 2002	28.0%	29.6%
Manufacturers shipments, 2002 ($1000)	7,622,597	221,433,262
Wholesale trade sales, 2002 ($1000)	3,024,340	165,958,945
Retail sales, 2002 ($1000)	4,071,538	109,350,139
Retail sales per capita, 2002	$12,247	$10,889
Accommodation and foodservices sales, 2002 ($1000)	511,840	12,248,269
Building permits, 2009	253	6,884[1]
Federal spending, 2008	2,996,279	82,933,158[1]

Geography QuickFacts	Washtenaw County	Michigan
Land area, 2000 (square miles)	709.94	56,803.82
Persons per square mile, 2000	454.8	175.0
FIPS Code	161	26

2009 U.S Census Estimates for Livingston County

Population Quickfacts	Livingston County	Michigan
Population, 2009 estimate	183,118	9,969,727
Population, percent change, April 1, 2000 to July 1, 2009	16.7%	0.3%
Population estimates base (April 1) 2000	156,951	9,938,492
Persons under 5 years old, percent, 2009	5.5%	6.2%
Persons under 18 years old, percent, 2009	24.8%	23.6%
Persons 65 years old and over, percent, 2009	11.2%	13.4%
Female persons, percent, 2009	49.4%	50.8%
White persons, percent, 2009 (a)	96.6%	81.2%
Black persons, percent, 2009 (a)	0.8%	14.2%
American Indian and Alaska Native persons, percent, 2009 (a)	0.4%	0.6%
Asian persons, percent, 2009 (a)	1.0%	2.4%
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)	0.1%	Z
Persons reporting two or more races, percent, 2009	1.1%	1.6%
Persons of Hispanic or Latino origin, percent, 2009 (b)	1.8%	4.2%
White persons not Hispanic, percent, 2009	95.0%	77.4%
Living in same house in 1995 and 2000, pct 5 yrs old & over	55.0%	57.3%
Foreign born persons, percent, 2000	3.0%	5.3%
Language other than English spoken at home, pct age 5+, 2000	3.7%	8.4%
High school graduates, percent of persons age 25+, 2000	91.4%	83.4%
Bachelor's degree or higher, pct of persons age 25+, 2000	28.2%	21.8%
Persons with a disability, age 5+, 2000	18,635	1,711,231
Mean travel time to work (minutes), workers age 16+, 2000	31.0	24.1
Housing units, 2009	72,862	4,541,680

Homeownership rate, 2000	88.0%	73.8%
Housing units in multi-unit structures, percent, 2000	7.9%	18.8%
Median value of owner-occupied housing units, 2000	$187,500	$115,600
Households, 2000	55,384	3,785,661
Persons per household, 2000	2.80	2.56
Median household income, 2008	$72,090	$48,606
Per capita money income, 1999	$28,069	$22,168
Persons below poverty level, percent, 2008	6.5%	14.4%

Business QuickFacts	**Livingston County**	**Michigan**
Private nonfarm establishments, 2008	4,239	229,310[1]
Private nonfarm employment, 2008	47,935	3,636,241[1]
Private nonfarm employment, percent change 2000-2008	7.7%	-10.7%[1]
Nonemployer establishments, 2008	13,253	640,719
Total number of firms, 2002	14,600	735,531
Black-owned firms, percent, 2002	F	6.0%
American Indian and Alaska Native owned firms, percent, 2002	S	0.7%
Asian-owned firms, percent, 2002	F	2.1%
Native Hawaiian and Other Pacific Islander owned firms, percent, 2002	F	0.0%
Hispanic-owned firms, percent, 2002	0.8%	1.3%
Women-owned firms, percent, 2002	29.0%	29.6%
Manufacturers shipments, 2002 ($1000)	2,884,263	221,433,262
Wholesale trade sales, 2002 ($1000)	1,122,666	165,958,945
Retail sales, 2002 ($1000)	1,812,089	109,350,139
Retail sales per capita, 2002	$10,720	$10,889
Accommodation and foodservices sales, 2002 ($1000)	142,146	12,248,269
Building permits, 2009	93	6,884[1]
Federal spending, 2008	590,152	82,933,158[1]

Geography QuickFacts	**Livingston County**	**Michigan**
Land area, 2000 (square miles)	568.40	56,803.82
Persons per square mile, 2000	276.3	175.0
FIPS Code	093	26

A.3 GENERAL HISTORY OF PINCKNEY RECREATION AREA

The Potawatomi Indian tribe initially inhabited and developed a trail system within the Hell, Michigan area. After European inhabitation, Hell became a stopping place along the trail from Lansing to Dexter. However, real growth in Hell is largely due to a man by the name of George Reeves.

In 1841, Reeves purchased a sawmill with one thousand acres of land on Hell Creek. He erected a flour mill, powered by a dam he placed on Hell Creek, to grind the wheat of farmers throughout Livingston County. Reeves also built a general store to service the local people. Several homes grew around the general store as well as a local school that could educate 70 students.

The rich soils of the areas produced ample supplies of wheat and Reeves's mill was soon producing over 100 barrels of flour a day, creating prosperity for the local people. With the surpluses of flour, Reeves decided to construct a distillery to produce whiskey. His whisky sales were plentiful and after the Civil war he build a ballroom above his tavern and a racetrack around the millpond. Reeves passed away in 1877.

The family decided to sell the one thousand acre farm to a group of Detroit investors who increased the size of the millpond by raising the level of the dam. The enlarged pond is now known as Hi-land Lake. Over time, the vicinity became known as a resort area for those who loved swimming and fishing. Today Hell's population remains near its 1940's level, around 260 people.

Nearby, the village of Pinckney was first settled in 1827, by New York resident William Kirkland and his brother-in-law James Stansbury. They bought their land from the Sanford Marble Company. Kirkland, along with Stansbury as his business manager, began the William Kirkland Company, which organized the village of Pinckney. Kirkland decided to name the community after his brother, Charles Pinckney Kirkland. The village was platted and recorded in 1837 and incorporated as a village in 1883.

By 1860 the Village of Pinckney was a thriving rural agricultural community with aspirations of growing. They were able to persuade the Grand Trunk Railroad Company to lay tracks in the village in 1883. This led to a minor business boom for the community and led to the development of a grain elevator and lumber yard near the railroad. However, Pinckney's fortune of landing a rail line had negative impacts on several surrounding communities, such as Unadilla and Pettysville. By 1910 the community had reached its height of economic prosperity.

Farming began to decline as an economic driving force in the Pinckney area by the 1940s. As a result much land was sold to be developed for other purposes, such as the development of summer homes, camps, and cottages. The state

bought land during this time period for the development of recreation and hunting.

Pinckney RA officially became a State Park in the mid- 1940's. The property was obtained piece by piece, not in one large tract. Over time Pinckney RA has grown as a function of popular use, meaning that often public use of an area has preceded its development. Most development of Pinckney RA took place in the 1940's and 1950's.

A.4 LAND OWNERSHIP ISSUES

The following funding sources have been used for acquisition of land in Pinckney Recreation Area:

Michigan Natural Resource Trust Fund (MNRTF)

The MNRTF has provided financial assistance to protect natural resources and open space, purchase lands for outdoor recreation, and acquire land for its environmental importance or scenic beauty. The Fund's Board of Trustees and the Grants Administration Division of the DNR administer the program. Only state and local governments may apply to the fund to acquire property. Annual revenue from oil, gas, and mineral leasing supports the fund.

There are eleven evaluation criteria for grant funding: the protection and use of significant natural resources, use of inland waters, population served, economic benefits, hunting, fishing and other wildlife-related values, need for proposal, capability of applicant, site and project quality, special initiatives of the Fund board, financial need of the applicant, and local match contribution. Development projects have a minimum grant amount of $15,000 and a maximum of $500,000. There is neither a minimum nor a maximum amount on land acquisition grants. Since 1976, the Fund has purchased more than 135,000 acres of land in Michigan.

Pittman-Robertson

The Federal Aid in Wildlife Restoration Act, popularly know as the Pittman-Robertson Act, was approved by Congress on September 2, 1937. The purpose of this Act was to provide funding for the selection, restoration, rehabilitation and improvement of wildlife habitat and wildlife management research. Funds are derived from an 11 percent Federal excise tax on sporting arms, ammunition, and archery equipment, and a 10 percent tax on handguns. Each state's apportionment of funds is determined by a formula which considers the total area of the state and the number of licensed hunters in the state.

Below is a portion of the agreement between PRD and Wildlife concerning the management of Pittman – Robertson Lands.

> This agreement is an update revision of the original agreement document dated on August 26, 1957, between Parks and Recreation Division and Game Division and recognizes certain changes which have occurred.
> Since the Parks Division is responsible for the administration of the southern Michigan recreation areas, and since the Wildlife Division is responsible for the planning and supervision of wildlife interests on these state lands, this agreement will define the responsibilities of each.
>
> PARKS DIVISION AGREES:

1. To furnish up to date maps designating areas of intensive use or other dedicated uses which are not compatible with a wildlife management program.
2. Review the maps at least every five years and make any changes necessary.
3. Maps will be furnished to Wildlife Division, Regional Parks and Wildlife supervisors, District Wildlife Supervisor and local Parks Manager of recreation area involved.
4. On areas other than those designated as not compatible with the wildlife management program the Parks Division will confer with Wildlife Division before undertaking any activity which will damage wildlife habitat improvements or interfere with the wildlife program.
5. To cooperate with Wildlife Division to prevent destruction or developments made under this agreement by fire or other adverse land uses.

WILDLIFE DIVISION AGREES:

1. To prepare plans and maintain records for wildlife development projects and to provide same to Parks Division upon request.
2. To provide nursery stock, lime, fertilizers, seeds, gates, fencing, or other barricades as may be needed to complete developments and protect the lands.
3. To supervise and do the wildlife habitat development work, including arrangements for labor supply, furnishing equipment, or negotiating contracts for privately owned equipment, negotiating sharecrop agreements, and supervision of field operations.
4. To keep the Park Manager informed of work currently being done in the recreation area for which he is responsible.
5. To provide the Park Manager three months in advance with a proposed work plan for projects to be done in the following fiscal year.
6. All work will be carried out according to approved plans.

Special Legislation

Public Act 27, 1944, appropriated $5,000,000 for acquisition of land for recreation facilities. $1,500,000 was dedicated to purchasing lands in southeastern Michigan.

Public Act 50, 1944, appropriated $632,500 for the purposes of purchasing land, construction of state parks, and repairing/remodeling the State Capitol and office buildings. Of the $632,500, $450,000.00 went to the Department of Conservation.

State Game Fund

Revenue from this fund is raised through a $1.50 tax on deer hunting licenses.

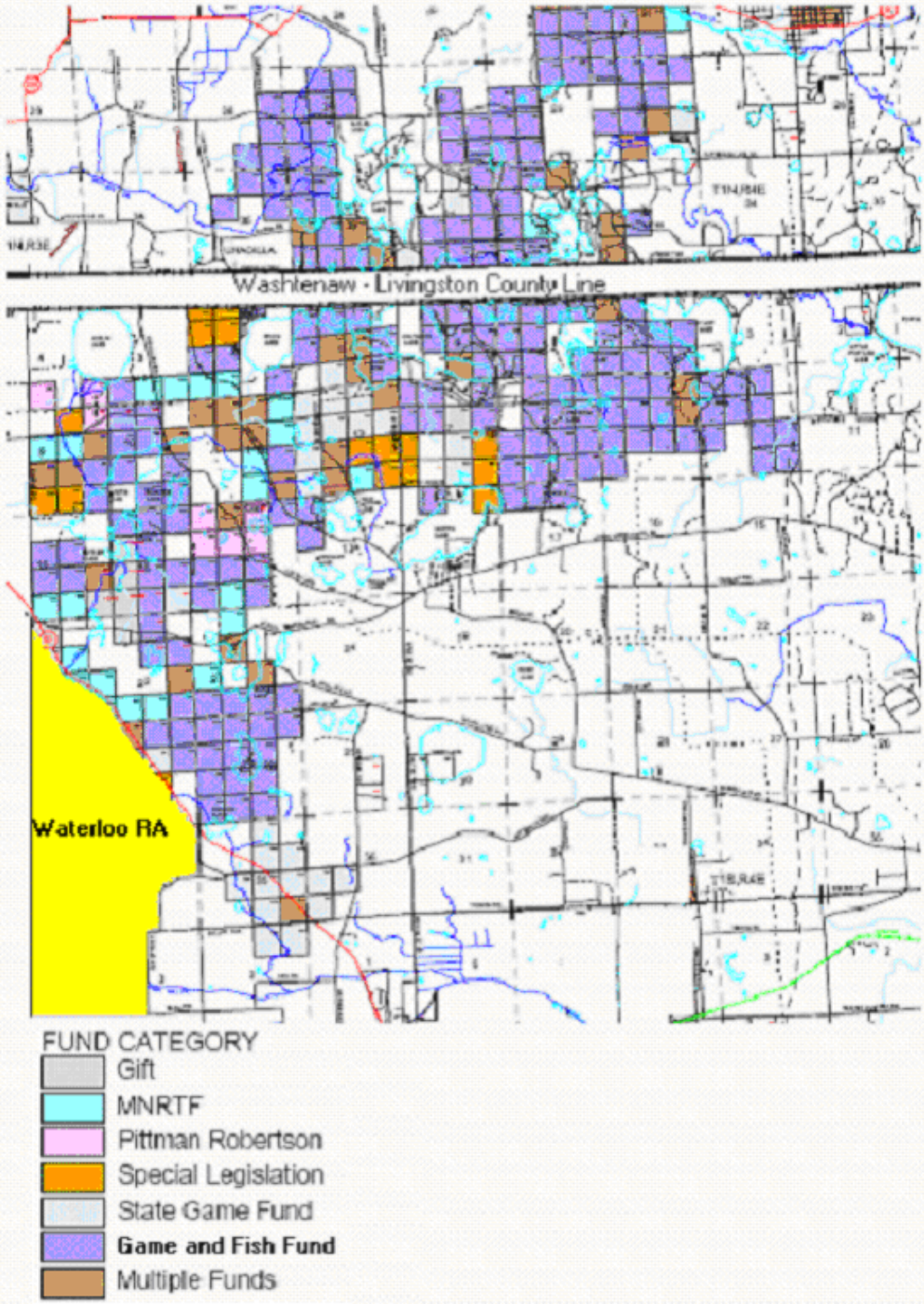
Other sources available for land acquisition include:

- Dingell Johnson
  The Federal Aid in Sport Fish Restoration Act, commonly referred to as the Dingell-Johnson act, was passed on August 9, 1950. It was modeled after the Pittman-Robertson Act to create a parallel program for management, conservation and restoration of fishery resources.

- Game and Fish Fund
  The Game and Fish Protection Fund provides revenues for the operation of the Fish, Wildlife, and Law Enforcement programs. Management, research, enforcement of fishing and hunting laws and acquisition of lands to be used for hunting and fishing purposes are examples of uses of this fund.

- Other Funds
  Land purchased with any of the following: Recreation Bond, Waterways, LEFF, Harbor Development Fund, Environmental Settlement Fund, General Fund, and Swamp Tax Fund

Pinckney Land Acquisition Map



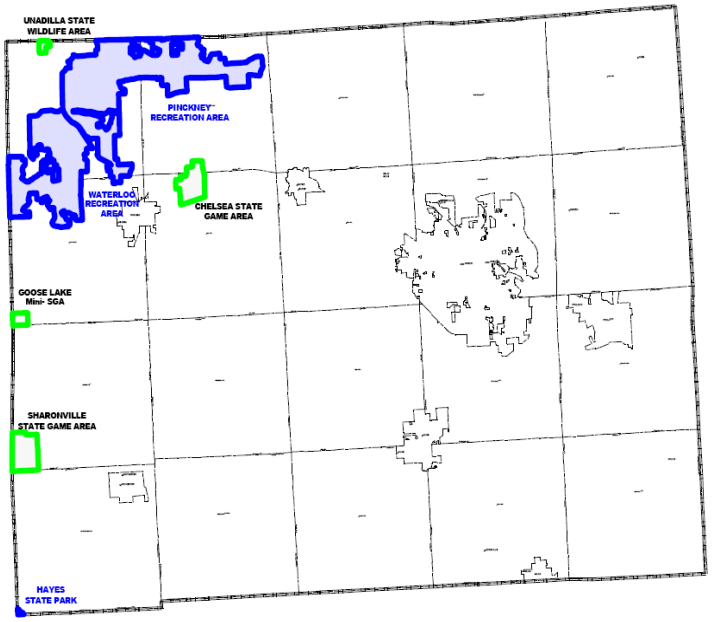
A.5 RELATIONSHIP OF PINCKNEY RA TO OTHER PARK RESOURCES

State Owned Resources in Washtenaw County

In addition to Pinckney RA, State recreational resources in Washtenaw County include four State Game Areas, Waterloo RA, and a portion of Hayes State Park,

Waterloo Recreation Area is closely tied to Pinckney Recreation Area, due to their proximity. The main trail system, known as the Waterloo-Pinckney Hiking Trail, is common to both Recreation Areas and spans 29 miles through both parks. Similar activities are common to both Recreation Areas, such as camping, hiking, biking, horse riding, camping, fishing, and hunting.

The State Game Areas in Washtenaw County are Unadilla, half a mile to the north; Chelsea State Game Area, half a mile to the east; Goose Lake, two miles south; and Sharonville State Game Area, six miles south.



County Owned Resources in Washtenaw County:

12 parks and 6 nature preserves are located in Washtenaw County. Many parks share activities similar to those found at Pinckney RA, such as swimming, hiking, fishing, and picnicking. Both state and county have historical resources within their parks. Two county owned facilities offer water parks.

County Parks and their significant features:

- Sharon Mills Park: Sharon Mill is a historic building built in 1835, formerly owned by Henry Ford in the 1930's
- Cavanaugh Lake Park: lakeside picnic area, no swimming
- Pierce Lake Golf Course and Park: 18 holes, with pro shop and picnic pavilion
- Park Lyndon: trail system that ties into the Waterloo-Pinckney Trail

- Osborne Mill Park: maintained as a natural area, no services
- Independence Lake Park: a feature similar to a water park called a “Spray Zone”, boat rental, and swimming beach.
- Northfield Park: roadside park with restroom and playground
- Parker Mill Park: Parker Mill is a historical building built in 1873, scenic fishing setting where Fleming Creek joins the Huron River
- County Farm Park: community garden
- Meri Lou Murray County Recreation Center: swimming pool, gymnasium, workout facilities
- Rolling Hills Park and Water Park: water park, trail system, sledding, 18 hole disc golf, fishing
- Superior Center: 1 acre, picnic pavilion

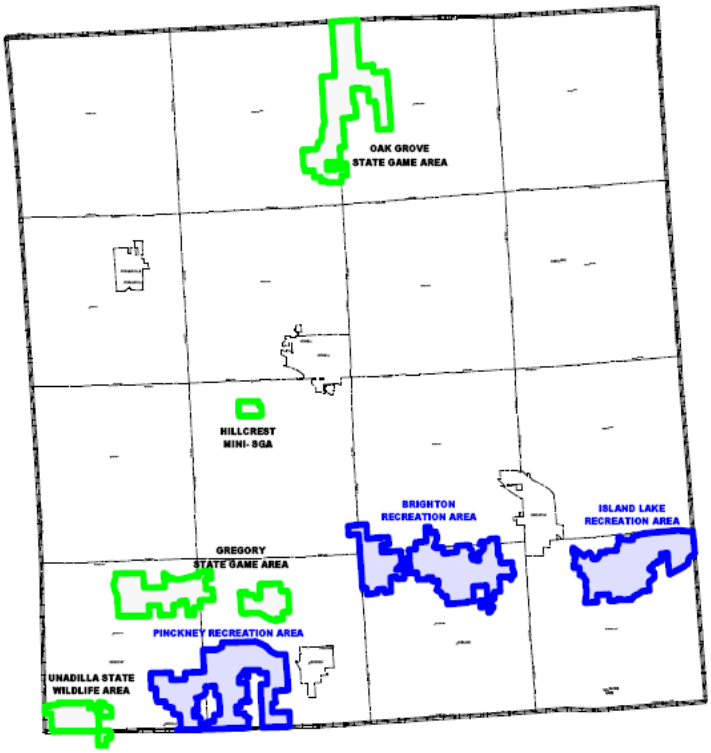
There are also six county nature preserves: Leonard Preserve, Ervin-Stucki Preserve, Brauer Preserve, DeVine Preserve, Burns-Stokes Preserve, and LeFurge Woods Preserve.

State Owned Resources in Livingston County

There are three Recreation Areas, three State Game Areas, and a Wildlife Area within Livingston County.

Brighton RA is located to the northeast of Pinckney RA. With almost 5,000 acres its recreational activities are similar to those found at Pinckney. The recreation area offers a number of lakes. It also offers trails for horseback riding, hiking, and mountain biking. Hunting and fishing are allowed.

Island Lake RA is northeast of Pinckney and Brighton. It contains 4,000 acres of wilderness. Recreational activities include hunting, fishing, hiking, biking, and canoeing on the Huron River. There are two campsites that can be accessed from the river. Hunting and fishing are allowed.



Oak Grove State Game Area is at the northern edge of Livingston County in Cohoctah and Deerfield Townships. Hillcrest mini State Game area is centrally located in Livingston County in Marion Township. Gregory State Game Area is

just north of Pinckney in Unadilla and Putnam Townships. Unadilla Wildlife Area is west of Pinckney in Unadilla Township and partially extends into Washtenaw County, Lyndon Township.

Metro Park Owned Resources in Livingston County

- Huron Meadows Metro Park – 1,500 acres containing an 18 hole golf course, walking trails, fishing area, baseball diamond, and volleyball court.
- Kensington Metro Park – includes an 18 hole golf course, softball diamonds, disc golf course, volleyball courts, playgrounds, trails for hiking, biking, and horseback riding, fishing, swimming, boating, and boat rentals. In the winter sledding, cross country skiing, ice skating, and tobogganing are available.

Southeast Livingston County Recreation Authority Owned Resources in Livingston County (SELCRA)

Brighton

- Meijer Park "Recreation on Wheels" Skate Park – includes a hockey rink, a half mile skating trail, and a skate park.

Municipal Owned Resources in Livingston County

Howell

- Howell City Park – activities include a playground, a boat launch, a swimming area, fishing, softball, and volleyball. Daily vehicle permit required, $1 for residents, $3 for non-residents.

Brighton

- Mill Pond Area – located in downtown Brighton, with a wooden playground and the "Mill Pond Walkway." Free concerts are held on Sundays in July and August.

Note: Hell Creek Ranch is a private riding stable located on Cedar Lake Road. It offers one or two hour horseback tours through Pinckney RA's equestrian trails.

University of Michigan

U of M owns two tracts of land adjacent to Pinckney RA. The northern tract is enclosed by a 12 ft. high fence to contain and study white tail deer. The eastern tract is known as Stinchfield Woods. This 770-acre property was formerly owned by the DNR. The trails tie into Hudson Mills Park.

Table #1: Summary of Regional Recreational Resources
Sources: Livingston County, Washtenaw County, State of Michigan

Recreational Resource	County	Municipality	Features																	
			Picnic Area	Hiking	Hunting/ Trapping	Biking	Play-ground	Equestrian	Swimming	Boat Launch	Snow Mobil	XC Skiing	Concession/ Vending	Camping	Drinking Water	Rest Rooms	Showers	Sport Field/Ct	Fishing	Wildlife Viewing
State Resources																				
Waterloo Recreation Area	Jackson, Washtenaw	Multiple	X	X	X	X	X	X	X	X	X	X	X	X		X			X	x
Hayes State Park	Washtenaw, Jackson, Lenawee	Multiple	X				X		X	X				X		X			X	
Unadilla State Game Area	Washtenaw, Livingston	Unadillla, Lyndon			X															
Chelsea State Game Area	Washtenaw	Dexter, Lima			X															
Goose Lake State Game Area	Washtenaw	Sylvan			X															
Sharonville State Game Area	Washtenaw, Jackson	Multiple			X															
Brighton Recreation Area	Livingston	Brighton, Howell	X	X	X	X	X	X	X	X				X				X	X	
Island Lake Recreation Area	Livingston	Brighton, Green Oak	X	X	X	X			X		X	X		X				X	X	
Oak Grove State Park Area	Livingston	Cohoctah, Deerfield			X															
Gregory State Game Area	Livingston	Unadilla, Putnam			X															
Hillcrest Mini State Game Area	Livingston	Marion Twp			X															
County Resources																				
Sharon Mills Park	Washtenaw	Sharon	X																X	
Cabanaugh Lake Park	Washtenaw	Sylvan	X				X												X	
Pierce Lake Golf Course and Park	Washtenaw	Chelsea	X																	
Park Lyndon	Washtenaw	Lydon	X	X			X								X					
Osborne Mill Park	Washtenaw	Ann Arbor																		
Independence Lake Park	Washtenaw	Whitmore Lake	X	X					X										X	

County Resources	County	Municipality	Picnic Area	Hiking	Hunting/ Trapping	Biking	Play-ground	Equestrian	Swimming	Boat Launch	Snow Mobil	XC Skiing	Concession/ Vending	Camping	Drinking Water	Rest Rooms	Showers	Sports Field/Ct	Fishing	Wildlife Viewing
Northfield Park	Washtenaw	Northfield	X	X			X									X		X		
Parker Mill Park	Washtenaw	Ann Arbor		X											X	X			X	
County Farm Park	Washtenaw	Ann Arbor																		
Meri Lou Murray County Recreation Center	Washtenaw	Ann Arbor							X						X	X	X			
Rolling Hills Park and Water Center	Washtenaw	Ypsilanti	X	X			X		X			X						X	X	
Superior Center	Washtenaw	Superior	X																	
Lutz County Park	Livingston	Howell	X	X																
Municipal Resources																				
Howell City Park	Livingston	Howell	X				X		X	X								X	X	
Mill Pond	Livingston	Brighton					X								X					
SELCRA																				
Meijer Park (Skate Park)	Livingston	Brighton																		
Metro Parks																				
Huron Meadows Metro Park	Livingston		X									X						X	X	
Kensington Metro Park	Livingston	Milford	X	X		X	X	X	X			X						X	X	
Privately Owned Resources																				
Hell Creek Ranch								X												

A.6 CURRENT LAND USE

Pinckney Recreation Area is a multi-use park with a variety of outdoor recreational opportunities including camping, day-use areas, hunting, fishing, and a trail system. One of the most important features of Pinckney is its untarnished natural state in a region that is swiftly being developed into urban communities. Thus, development has been restricted and concentrated into a few areas of the park. The three most developed areas within the park are Bruin Lake Campground, Silver Lake day use area, and Halfmoon Lake day use area.

- Bruin Lake Campground – A modern campground featuring 186 campsites and two restroom facilities, multiple access sites for potable water, a sanitation station, and a campground office. Recreational resources include horseshoe pits and volleyball courts, plus access to Bruin Lake for swimming and boat launching.

- Silver Lake Day Use Area – Recreational resources include concessions, access to the trail system, a playground, volleyball courts, horseshoe pits and a fishing pier. There are seasonal modern toilet facilities. From Memorial Day to Labor Day boats, kayaks, and canoes can be rented at the concession store.

- Halfmoon Lake Day Use Area - A boat launch, two picnic shelters, trail access, volleyball court, horseshoe pits, and playground are available at Halfmoon Lake Day Use Area.

There are other developed areas within the park:

- Blind Lake Campground – Blind Lake is a rustic campground with five campsites. It is located along the Pinckney-Waterloo Trail, and serves as an excellent rest stop for anyone hiking the entire trail. A vault toilet and potable water are available in the campground.

- Crooked Lake Campground – Crooked Lake Campground is rustic with 25 sites and a boat launch. A vault toilet and potable water are available in the campground.

- Pickerel Lake –This site was completely re-constructed and opened to the public in 2005. Use of the site is primarily for swimming, with carry-down launching and retrieval of boats allowed. There is a special land use order that prohibits the launching of any boat with a gasoline motor from the shores of Pickerel Lake, although gasoline motor boats can access Pickerel Lake from Crooked Lake through a connecting channel. Fisheries Division used to plant trout in Pickerel Lake, but no longer does. A fishing pier that used to be located here was removed because of safety concerns.

- Boat Launches - There are developed boat launches on Bruin, Halfmoon, South, North, Joslin and Portage lakes. Unimproved ramps are located on, Crooked, Gosling, and Hiland Lakes. There are hand-carry access sites onto Sullivan Lake and Pickerel Lake. The chain of seven lakes can be accessed from Bruin Lake and Halfmoon Lake.

- Trail Resources - Pinckney RA has miles of multi-use trails. For a map and description of the trails refer to "Recreational Resources."

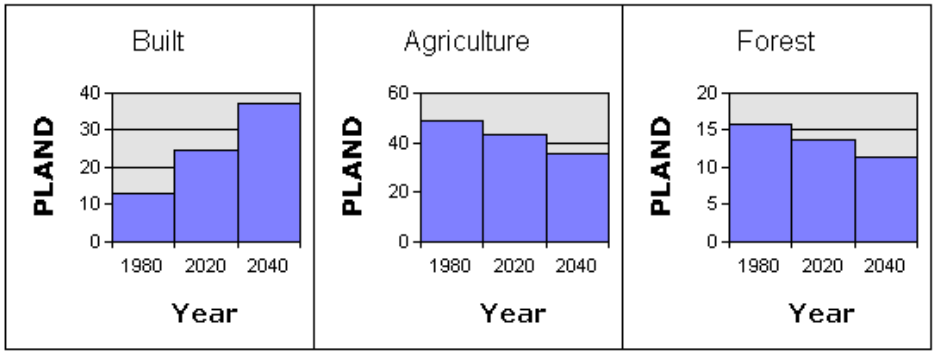
A.7 PROJECTED LAND COVER (1980 – 2040)

Both Washtenaw and Livingston counties will continue to experience urban development over the next 40 years. As such, agricultural and forested land around the Ann Arbor area will be developed into urban land.

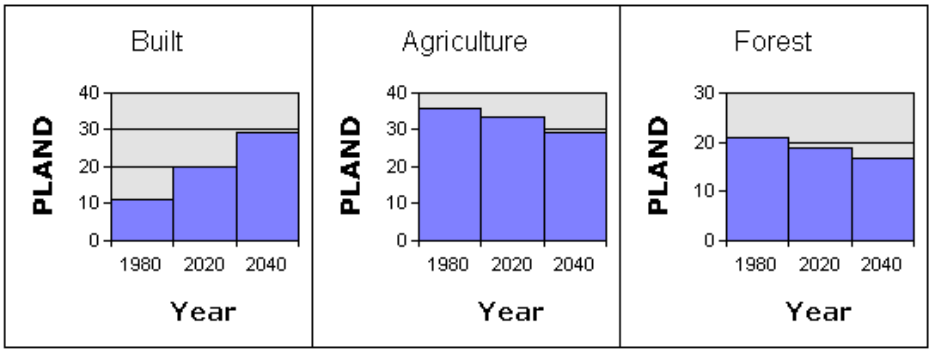
Currently forest cover makes up about 20% of land cover in Livingston County, while less than 20% of Washtenaw County is forested. Agricultural land covers about 45% of land in Washtenaw County and about 36% in Livingston County. Urban built environment covers approximately 10% of both counties.

It is projected that by the year 2040 the built environment in Washtenaw and Livingston Counties will at least triple. As a result forests and agricultural lands will decline greatly. For this reason it is important to maintain state parks in areas where they may be the only natural landscape available for recreational purposes.

Washtenaw County: Built Environment, Agriculture, and Forest as a Percentage of Total Land Use

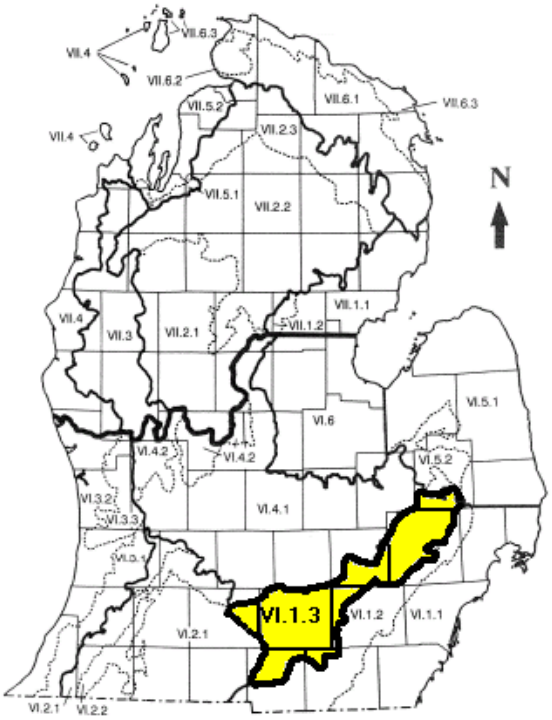


Livingston County: Built Environment, Agriculture, and Forest as a Percentage of Total Land Use



A.8 NATURAL RESOURCES

Information contained in this section was obtained from: Regional Landscape of Michigan and Wisconsin, A Working Map and Classification. Dennis Albert. September 20, 1995.



Map excerpted from Michigan Natural Features Inventory (MNFI) Report, page 22

Pinckney Recreation Area is located in section 6, subsection 1.3, known as the Jackson Interlobate. It contains coarse textured end moraine, outwash, and ice contact topography; oak savannah and oak-hickory forest, hardwood swamps, prairie fens, and bogs.

Geology and Topography

The underlying Mississippian and Pennsylvanian bedrock, primarily sandstone, is locally exposed at the surface in the southwestern end of the subsection. Drift thickness is generally less than 100 feet. In the northeastern part bedrock is overlain by 250 to 300 feet of glacial drift.

There are broad expanses of outwash sands that surround sandy and gravelly end moraines and ground moraines. End and ground moraines remain as island-like hills surrounded by flat outwash. Larger linear segments of end moraine, broken by only narrow outwash channels are typically located along the margins of the subsection.

The Jackson Interlobate region includes areas of ice contact topography. Kettle lakes, kames, eskers, and segments of outwash channels are predominant features of the ice contact areas. At the west edge the topography is more gentle; broad coarse textured ridges are surrounded by deposits of outwash land.

Soils

Soils found in the moraine areas of the park are either well drained or excessively drained. In the outwash regions drainage ranges from excessively well drained to poorly drained. Ice contact areas are excessively well drained on upland kames and eskers, and are poorly drained in the kettles and outwash channels. Sandy loam is the most prevalent soil type in the moraine ridges, while sand is most prevalent on the outwash plains. The glacial drift that forms the moraine ridges is made up of local limestone bedrock. Illuviation is responsible for the clay rich horizon in many of the soils on the moraines, providing a good water holding capacity. Ice contact areas contain sand and gravel.

Climate

Growing season is 140 to 150 days. Danger of late spring frosts is great due to numerous lowland depressions, including outwash and kettle lakes. Average snowfall is 40 to 50 inches. Annual precipitation is 30 to 32 inches. Extreme minimum temperatures range from -22° F to -28° F.

LIVINGSTON COUNTY CLIMATE		
MONTH	**AVG. MIN TEMP**	**AVG. MAX TEMP.**
January	14F./-10C.	28F./-2C.
July	60F./16C.	81F./27C
PRECIPITATION	**RAINFALL**	**SNOWFALL**
Average Annual	32in./81cm.	45in./114cm.
GROWING SEASON	**DAYS ABOVE 90F/32C**	**DAYS BELOW 0F/-18C**
158	7	11

Source: NOAA Climate Summary, 1995

Note: Due to Pinckney Recreation Area's southern location in the Jackson Interlobate Region, the climate data for Livingston and Washtenaw Counties will vary slightly from the averages recorded for region VI.1.3. Only the Livingston County data is shown here.

Water Resources

Many kettle lakes and ponds can be found on the outwash, end moraines, and ice contact areas. Extensive wetlands surround many of the lakes and occupy entire ice-block depressions. Both marl and peat deposits were extensively mined in the past. The headwaters of many major rivers originate in the extensive wetlands. These are the Huron, Grand, Kalamazoo, and St. Joseph Rivers. Pinckney is a part of two major watersheds, the Grand and the Huron. The Huron is represented by the unique "chain of lakes" which forms the

downstream headwaters for the Portage drainage system (the Portage River is a major tributary of the Huron River).

Pinckney RA contains more than twenty major lakes, ranging in size from a few acres to over two hundred acres. Most of the lakes are primarily spring fed. The depth of the lakes ranges from two- to eighty feet. Due to the irregular glacial topography of the terrain, lakes in this region are also irregularly shaped. The bottoms of the lakes are generally made up of sand, gravel, marl, or muck. Shores are sometimes marshy, with pond lily, arrowhead, cat tails, reeds, marsh grasses, and shrubs such as dogwood, elderberry, buttonbush and willows. Occasionally, tamarack is found in the flat swamps that make up former lakebeds.

Major Lakes in Pinckney RA

- Crooked Lake: 113 acres, maximum depth 20 feet, natural lake.
- Bruin Lake: 145 acres, maximum depth 48 feet, natural lake with an outlet.
- Joslin Lake: 180 acres, maximum depth 20 feet. Natural lake with an inlet to the lake on the southern shore and an outlet on the northeastern shore, flowing into Portage Creek.
- South Lake: 193 acres, maximum depth 70 feet. Natural lake, inlet at the southern shore and an outlet at the western shore that flows into Joslin Lake.
- Half Moon Lake: 236 acres, maximum depth 87 feet. Natural lake, outlet to Hi-Land Lake.
- Sullivan Lake: 18.5 acres, maximum depth 22 feet. Natural lake with an outlet on the northern shore.
- Canfield Lake: 3.5 acres, maximum depth 24 feet. Natural lake with an inlet and an outlet.
- Clarke Lake: 15 acres, maximum depth 19 feet. Inlet and outlet.
- Patterson Lake: 15 acres, maximum depth 19 feet. Inlet and outlet.
- Bass Lake: 67 acres, maximum depth 26 feet. Inlet and outlet.
- Mud Lake: 33 acres, maximum depth unknown.
- Hi-Land Lake: 123 acres, maximum depth unknown. Artificial lake with an inlet and an outlet.
- Blind Lake: 68 acres, maximum depth 80 feet. Natural lake with an outlet.
- Silver Lake: 175 acres, maximum depth 47 feet. Natural lake with a dam, inlet, and outlet.
- Gosling Lake: 12.2 acres, maximum depth unknown. Inlet.
- Beaver Lake: 9.4 acres, maximum depth unknown. Natural lake with an outlet.

- Pickerel Lake: 23.7 acres, maximum depth 56 feet. Natural lake with an inlet and an outlet.
- Losee Lake: 13 acres, maximum depth unknown. Inlet.
- Gorman Lake: 52 acres, maximum depth 31 feet. Natural lake.
- Island Lake: 100 acres, maximum depth unknown. Natural lake with a dam.
- Snyder Lake: 12 acres, maximum depth unknown. Natural lake with an inlet and an outlet.
- Watson Lake: 30 acres, maximum depth unknown. Natural lake with an inlet and an outlet.

The lakes host a variety of warmwater fish species which include largemouth bass, smallmouth bass, black crappie, bluegill, redear sunfish, northern pike, yellow perch and others. There are also many smaller lakes in Pinckney Recreation Area with no supporting information available.

Information on water resources was obtained from "State of Michigan Environmental Assessment – Pinckney RA"

Topography and Soils

The highest point in Pinckney is Stofer Hill at 1,150 feet. Other high points are Shanahan Hill (1050 feet) and Prospect Hill (1,053 feet). The Fort Wayne branch of the Erie Lobe of moraines runs diagonally from the southwest to the northeast across Pinckney RA.

Within Pinckney RA there are several soil types. Usually each soil boundary encloses an association of soils rather than one definite soil. The association is made up of one dominant soil. Information on the soil make up was obtained from "State of Michigan Environmental Assessment – Pinckney RA"

- Bellefontaine: This soils system consists of well drained soils with a loamy surface layer over sandy clay loam or clay loam. Runoff is slow in the nearly level areas and rapid in the more sloping areas.
- Coloma: Well drained soils with a sandy surface layer over alternate layers of sand and loamy sand or light sandy loam over sand. It consists of low dunes, lake plains, and moraines. The soil is droughty and susceptible to erosion.
- Miami: The Miami series consist of light cooler, well drained soils formed in highly calcareous glacial till made up of loam to light clay loam.
- Kerston: The Kerston soils consist of alternate layers of black muck and alluvial sands and silts. The layers of mineral material are generally thinner than the layers of muck. The soils are poorly drained and have a high water table, which causes frequent flooding.

- Rifle: The Rifle series consists of organic soils mainly formed from slightly decomposed woody plants including tamarack, red maple, elm, and white birch. The soils are similar to Carlisle and Houghton soils, but the surface layer of the Carlisle soils consist of much more decomposed muck and the Houghton soils have formed mainly from fibrous plant remains.
- Houghton: The Houghton series consists of organic soils that have formed from fibrous plant remains deposited in wet depressions. In the uppermost few inches, the sedges and grasses from which these soils formed are partly or completely decomposed. They are successively less decomposed at increasing depths. These soils occur mainly in marshy areas, some of which are bordered by lakes. They differ from Carlisle muck, which has formed mainly from woody plants rather than from fibrous materials. The thickness of organic deposits ranges from five to twenty feet. The degree of decomposition varies; in a few areas the surface is somewhat woody.
- Carlisle: The Carlisle series consists of black to very dark brown, well decomposed organic soils. The soils take form from mixed woody and fibrous materials under a swamp-timber type of vegetation. The organic soil materials are generally more than 42 inches thick. The Carlisle soils occur in old lakebeds and in drainage ways, but the most extensive areas are in closed depression in the uplands. A few areas occur in bottom lands, outwash plains, and in old glacial valleys.

Flora – Presettlement

Prior to European settlement, mixed oak forests dominated the hilly upland areas of ice contact. Soils of these forests were dry and supported a dominance of white oak and black oak but also contained significant amounts of pignut hickory, black cherry, and sassafras. Black oak was an especially important component of dry and dry-mesic southern forests in this region of the state.

Wetland communities surrounded many lakes and ponds, in some cases occupying the smaller ice block depressions in their entirety. Wet prairie, mixed conifer swamp, and mixed hardwood swamp were most common, but emergent marsh – shrub swamp also occurred. Conifer swamps were dominated by tamarack in southern Michigan, and southern hardwood swamps contained elms, ashes, and maples. Emergent marsh – shrub swamp was found along lake margins and included areas of emergent sedges that graded into dogwood, willow, and buttonbush shrub swamp.

The northern boundary of Pinckney RA extends slightly into outwash plain, where large areas of wet prairie occurred prior to settlement. In fact, all of Woodburn Lake was once wet prairie. Most of what was documented as wet prairie included wet prairie, wet meadow, emergent marsh, shrub swamp, and prairie fen. Prairie fens are globally rare and in Michigan they are known almost exclusively from the Interlobate region.

*Information on pre-settlement flora was obtained from: "Inventory and Management Recommendations for Pinckney and Waterloo State Recreation Areas' Natural Communities, Rare Plants, and Rare Wildlife." Prepared by: Jeffrey L. Cooper, Phyllis J. Higman, Jodi Spieles, Michael R. Penskar, David L. Cuthrell, Yu Man Lee, Dennis A. Albert, and Lori Peltz-Lewis

Flora – Current Land Cover

The forested sections of Pinckney RA are confined to many small woodlots, the largest of which does not exceed 100 acres in size. Stands are irregular in outline and mostly in areas where the topography is too sloped for agricultural use. The woodlots are composed of unevenly aged, deciduous stands of trees.

Much of the level upland is old agricultural land that is now open fields. Many of these fields contain a dominance of non-native plants including spotted knapweed, white sweet clover, timothy grass, Kentucky bluegrass, and quack grass. However, native plants also common to these openings include tall goldenrod, hairy aster, black-eyed susan, common cinquefoil, and wild strawberry. Non-native, autumn olive is a dominant component along the edges and spreading into most of these open fields. On uplands where steep slopes occur, there is second growth dry or dry-mesic southern forest. Dry southern forests are dominated by white oak and black oak, and dry-mesic southern forests are dominated by white oak, black oak, red oak, and hickory. Non-native plants, including garlic mustard and multiflora rose, are common in most of these forests. Patches of the non-native black locust are scattered throughout upland areas, mostly on edges of oak forests.

There are many different types of wetlands in Pinckney RA. Kettle depressions most often contain inundated shrub swamp or a ring of emergent marsh surrounding relict conifer (tamarack) swamp. Southern wet meadow, cat-tail marshes and southern shrub swamp are also common in kettle depressions. In lowlands around lakes and drainage streams, emergent marsh, southern shrub swamp, relict conifer swamp, southern wet meadow, and prairie fen occur. A notable change is the significant amount of shrub swamp at present that was not evident in pre-settlement times. It is clear that some of the present day shrub swamp has resulted from succession due to fire suppression. Several areas of prairie fen degraded by the encroachment of woody shrubs were identified during surveys. Since prairie fens are rare Pinckney RA is providing conservation for several of these communities. Pinckney RA also contains small areas of wet mesic and mesic sand prairie, globally rare natural communities.

*Information on flora – current landcover was obtained from: "Inventory and Management Recommendations for Pinckney and Waterloo State Recreation Areas' Natural Communities, Rare Plants, and Rare Wildlife." Prepared by: Jeffrey L. Cooper, Phyllis J. Higman, Jodi Spieles, Michael R. Penskar, David L. Cuthrell, Yu Man Lee, Dennis A. Albert, and Lori Peltz-Lewis

Fauna - Common

Animal populations in Pinckney RA are typical of the region. Common animals include: deer, rabbit, fox, raccoon, opossum, squirrels, and coyotes. Avian species include swans, snow and blue geese, Canada geese, mallards, black

ducks, blue wing teal, wood ducks, bitterns, great blue herons, black terns, coot, egrets, pheasant, quail, ravens, crows, red winged blackbirds, and a number of songbird species. One bird of note is the sandhill crane, which attracts bird watchers from all across the nation to Pinckney RA. Unfortunately, many domestic animals, such as dogs and cats, have been abandoned in the park and are now part of the habitat.

Special Concern, State Threatened, or State Endangered Species
Hairy angelica (Angelica venenosa)
Dwarf hackberry (Celtis occidentalis)
Horsetail spike-rush (Eleocharis equisitoides)
Umbrella-grass (Fuirena squarosa)
Dwarf-bulrush (Hemicarpa micrantha)
Bald-rush (Psilocarya scirpoides)
Rose-pink (Sabatia angularis)
Prairie dropseed (Sporobolus heterolepis)
White lady's-slipper (Cypripedium candidum)
English sundew (Drosera Xanglica)
Mat muhly (Muhlenbergia richardsonis)
Bog bluegrass (Poa paludigena)
Clinton's bulrush (Scirpus clintonii)
Tall nut-rush (Scleria triglomerata)
*list taken from "Inventory and Management Recommendations for Pinckney and Waterloo State Recreation Areas' Natural Communities, Rare Plants, and Rare Wildlife"

Special Concern, State Threatened, State Endangered and Federally Endangered Species
Blanding's turtle (Emydoidea blandingii)
Blazing star borer (Papaipema beeriana)
Cerulean warbler (Dendroica cerulean)
Eastern massasauga rattlesnake (Sistrurus catenatus catenatus)
Hooded warbler (Wilsonia citrine)
Poweshiek skipper (Oarisma powesheik)
Red-legged spittlebug (Prosapia ignipectus)
Spotted turtle (Clemmys guttata)
Tamarack tree cricket (Oecanthus laricis)
Woodland vole (Microtus pinetorum)
*list taken from "Inventory and Management Recommendations for Pinckney and Waterloo State Recreation Areas' Natural Communities, Rare Plants, and Rare Wildlife"

Michigan Natural Features in Washtenaw County*

Scientific Name	Common Name	Federal Status	State Status
Acris crepitans blanchardi	Blanchard's cricket frog		T
Acronicta falcula	Corylus dagger moth		SC
Adlumia fungosa	Climbing fumitory		SC
Alasmidonta marginata	Elktoe		SC
Alasmidonta viridis	Slippershell		T
Ambystoma texanum	Smallmouth salamander		E
Ammodramus henslowii	Henslow's sparrow		E
Ammodramus savannarum	Grasshopper sparrow		SC
Angelica venenosa	Hairy angelica		SC
Anguispira kochi	Banded globe		SC
Aristolochia serpentaria	Virginia snakeroot		T
Artemisia ludoviciana	Western mugwort		T
Asclepias purpurascens	Purple milkweed		T
Asclepias sullivantii	Sullivant's milkweed		T
Aster praealtus	Willow aster		SC
Astragalus canadensis	Canadian milk vetch		T
Astragalus neglectus	Cooper's milk vetch		SC
Baptisia lactea	White or prairie false indigo		SC
Battus philenor	Pipevine swallowtail		SC
Betula murrayana	Murray birch		SC
Bog			
Botaurus lentiginosus	American bittern		SC
Bouteloua curtipendula	Side-oats grama grass		E
Bromus nottowayanus	Satin brome		SC
Buteo lineatus	Red-shouldered hawk		T
Calephelis mutica	Swamp metalmark		SC
Carex davisii	Davis's sedge		SC
Carex festucacea	Fescue sedge		SC
Carex lupuliformis	False hop sedge		T
Carex seorsa	Sedge		T
Carex squarrosa	Sedge		SC
Carex trichocarpa	Hairy-fruited sedge		SC
Castanea dentata	American chestnut		E
Celtis tenuifolia	Dwarf hackberry		SC
Chelone obliqua	Purple turtlehead		E
Cistothorus palustris	Marsh wren		SC
Clemmys guttata	Spotted turtle		T
Clinostomus elongatus	Redside dace		E
Clonophis kirtlandii	Kirtland's snake		E
Coregonus artedi	Lake herring or Cisco		T
Cryptotis parva	Least shrew		T
Cyclonaias tuberculata	Purple wartyback		T
Cygnus buccinator	Trumpeter swan		T
Cypripedium arietinum	Ram's head lady's-slipper		SC
Cypripedium candidum	White lady slipper		T
Dendroica cerulea	Cerulean warbler		T
Dendroica discolor	Prairie warbler		E
Dichanthelium leibergii	Leiberg's panic grass		T
Discus patulus	Domed disc		SC
Dorydiella kansana	Leafhopper		SC
Dry Southern Forest	Well Drained Forest, Central Midwest Type		
Dry-mesic Prairie	High Prairie, Midwest Type		
Dry-mesic Southern Forest			
Eacles imperialis pini	Pine imperial moth		SC
Echinacea purpurea	Purple coneflower		X
Eleocharis equisetoides	Horsetail spike rush		SC
Eleocharis geniculata	Spike-rush		X
Eleocharis radicans	Spike rush		X
Emydoidea blandingii	Blanding's turtle		SC
Epioblasma triquetra	Snuffbox	C	E
Eragrostis capillaris	Love grass		SC
Eragrostis pilosa	Small love grass		SC

Scientific Name	Common Name	Federal Status	State Status
Erynnis baptisiae	Wild indigo duskywing		SC
Etheostoma spectabile	Orangethroat darter		SC
Euonymus atropurpurea	Wahoo		SC
Eupatorium sessilifolium	Upland boneset		T
Euphyes dukesi	Dukes' skipper		T
Falco peregrinus	Peregrine falcon		E
Fuirena pumila	Umbrella-grass		T
Galearis spectabilis	Showy orchis		T
Gallinula chloropus	Common moorhen		T
Gentiana flavida	White gentian		E
Gentiana puberulenta	Downy gentian		E
Gentianella quinquefolia	Stiff gentian		T
Geum virginianum	Pale avens		SC
Great Blue Heron Rookery	Great Blue Heron Rookery		
Helianthus hirsutus	Whiskered sunflower		SC
Hemicarpha micrantha	Dwarf-bulrush		SC
Hemileuca maia	Barrens buckmoth		SC
Hillside Prairie	High Prairie, Midwest Type		
Hybanthus concolor	Green violet		SC
Hydrastis canadensis	Goldenseal		T
Inundated Shrub Swamp	Shrub Swamp, Central Midwest Type		
Isotria verticillata	Whorled pogonia		T
Ixobrychus exilis	Least bittern		T
Jeffersonia diphylla	Twinleaf		SC
Justicia americana	Water willow		T
Lampsilis fasciola	Wavyrayed lampmussel		T
Lechea minor	Least pinweed		X
Lepisosteus oculatus	Spotted gar		SC
Lepyronia angulifera	Angular spittlebug		SC
Ligumia recta	Black sandshell		E
Linum virginianum	Virginia flax		T
Liparis liliifolia	Purple twayblade		SC
Lithospermum latifolium	Broad-leaved puccoon		SC
Mesic Sand Prairie	Moist Sand Prairie, Midwest Type		
Mesic Southern Forest	Rich Forest, Central Midwest Type		
Microtus pinetorum	Woodland vole		SC
Morus rubra	Red mulberry		T
Muhlenbergia richardsonis	Mat muhly		T
Myotis sodalis	Indiana bat	LE	E
Myrica pensylvanica	Northern bayberry		T
Neonympha mitchellii mitchellii	Mitchell's satyr	LE	E
Nicrophorus americanus	American burying beetle	LE	X
Notropis anogenus	Pugnose shiner		E
Notropis photogenis	Silver shiner		E
Noturus miurus	Brindled madtom		SC
Noturus stigmosus	Northern madtom		E
Oak Barrens	Barrens, Central Midwest Type		
Oarisma poweshiek	Poweshiek skipperling		T
Obovaria olivaria	Hickorynut		E
Oecanthus laricis	Tamarack tree cricket		SC
Panax quinquefolius	Ginseng		T
Pantherophis spiloides	Gray ratsnake		SC
Papaipema beeriana	Blazing star borer		SC
Papaipema silphii	Silphium borer moth		T
Paronychia fastigiata	Low-forked chickweed		X
Penstemon pallidus	Pale beard tongue		SC
Phoxinus erythrogaster	Southern redbelly dace		E
Platanthera ciliaris	Orange- or yellow-fringed orchid		E
Platanthera leucophaea	Prairie white-fringed orchid	LT	E
Pleurobema sintoxia	Round pigtoe		SC
Poa paludigena	Bog bluegrass		T
Polemonium reptans	Jacob's ladder		T
Pomatiopsis cincinnatiensis	Brown walker		SC
Poor Conifer Swamp			

Scientific Name	Common Name	Federal Status	State Status
Populus heterophylla	Swamp or Black cottonwood		E
Prairie Fen	Alkaline Shrub/herb Fen, Midwest Type		
Prosapia ignipectus	Red-legged spittlebug		SC
Ptychobranchus fasciolaris	Kidney shell		SC
Pyrgulopsis letsoni	Gravel pyrg		SC
Rallus elegans	King rail		E
Ranunculus rhomboideus	Prairie buttercup		T
Rhynchospora scirpoides	Bald-rush		T
Rich Tamarack Swamp	Forested Bog, Central Midwest Type		
Ruellia humilis	Hairy wild petunia		T
Sabatia angularis	Rosepink		T
Sanguisorba canadensis	Canadian burnet		E
Scirpus clintonii	Clinton's bulrush		SC
Scleria triglomerata	Tall nut rush		SC
Seiurus motacilla	Louisiana waterthrush		T
Silphium integrifolium	Rosinweed		T
Silphium laciniatum	Compass plant		T
Silphium perfoliatum	Cup plant		T
Sistrurus catenatus catenatus	Eastern massasauga	C	SC
Southern Hardwood Swamp			
Southern Wet Meadow	Wet Meadow, Central Midwest Type		
Speyeria idalia	Regal fritillary		E
Spiranthes ovalis	Lesser ladies'-tresses		T
Spiza americana	Dickcissel		SC
Sporobolus heterolepis	Prairie dropseed		SC
Strophostyles helvula	Trailing wild Bean		SC
Stylurus laurae	Laura's snaketail		SC
Submergent Marsh			
Terrapene carolina carolina	Eastern box turtle		SC
Tradescantia virginiana	Virginia spiderwort		SC
Trillium sessile	Toadshade		T
Utterbackia imbecillis	Paper pondshell		SC
Valeriana edulis var. ciliata	Edible valerian		T
Venustaconcha ellipsiformis	Ellipse		SC
Villosa iris	Rainbow		SC
Wet Prairie	Wet Prairie, Midwest Type		
Wet-mesic Prairie	Tallgrass Prairie, Central Midwest Type		
Wilsonia citrina	Hooded warbler		SC
Zizania aquatica var. aquatica	Wild rice		T

*Current as of 12/10/2010 according to the Michigan Natural Features Inventory Website. http://web4.msue.msu.edu/mnfi

State Protection Status Code Definitions
E = Endangered
T = Threatened
SC = Special concern
X = Presumed extirpated
(legally 'threatened' if rediscovered)

Federal Protection Status Code Definitions
LE = Listed endangered
LT = Listed threatened
LELT = Partly listed endangered and partly listed threatened
PDL = Proposed delist
E(S/A) = Endangered based on similarities/appearance
PS = Partial status (federally listed in only part of its range)
C = Species being considered for federal status

Michigan Natural Features in Livingston County

Scientific Name	Common Name	Federal Status	State Status
Acris crepitans blanchardi	Blanchard's cricket frog		T
Alasmidonta marginata	Elktoe		SC
Alasmidonta viridis	Slippershell		T
Ammocrypta pellucida	Eastern sand darter		T
Ammodramus henslowii	Henslow's sparrow		E
Ammodramus savannarum	Grasshopper sparrow		SC
Amorpha canescens	Leadplant		SC
Angelica venenosa	Hairy angelica		SC
Asclepias purpurascens	Purple milkweed		T
Astragalus canadensis	Canadian milk vetch		T
Botaurus lentiginosus	American bittern		SC
Bouteloua curtipendula	Side-oats grama grass		E
Buteo lineatus	Red-shouldered hawk		T
Calephelis mutica	Swamp metalmark		SC
Carex richardsonii	Richardson's sedge		SC
Carex squarrosa	Sedge		SC
Celtis tenuifolia	Dwarf hackberry		SC
Cistothorus palustris	Marsh wren		SC
Clemmys guttata	Spotted turtle		T
Coregonus artedi	Lake herring or Cisco		T
Cryptotis parva	Least shrew		T
Cypripedium arietinum	Ram's head lady's-slipper		SC
Cypripedium candidum	White lady slipper		T
Dendroica cerulea	Cerulean warbler		T
Draba reptans	Creeping whitlow grass		T
Drosera anglica	English sundew		SC
Eleocharis equisetoides	Horsetail spike rush		SC
Eleocharis radicans	Spike rush		X
Emydoidea blandingii	Blanding's turtle		SC
Epioblasma triquetra	Snuffbox	C	E
Erynnis persius persius	Persius dusky wing		T
Floodplain Forest			
Geum virginianum	Pale avens		SC
Great Blue Heron Rookery	Great Blue Heron Rookery		
Hemileuca maia	Barrens buckmoth		SC
Hetaerina titia	Smokey rubyspot		SC
Hydrastis canadensis	Goldenseal		T
Justicia americana	Water willow		T
Kuhnia eupatorioides	False boneset		SC
Lampsilis fasciola	Wavyrayed lampmussel		T
Ligumia recta	Black sandshell		E
Linum virginianum	Virginia flax		T
Liodessus cantralli	Cantrall's bog beetle		SC
Liparis liliifolia	Purple twayblade		SC
Microtus pinetorum	Woodland vole		SC
Morus rubra	Red mulberry		T
Muhlenbergia richardsonis	Mat muhly		T
Myotis sodalis	Indiana bat	LE	E
Nicrophorus americanus	American burying beetle	LE	X
Notropis photogenis	Silver shiner		E
Noturus miurus	Brindled madtom		SC
Oak Barrens	Barrens, Central Midwest Type		
Oarisma poweshiek	Poweshiek skipperling		T
Oecanthus laricis	Tamarack tree cricket		SC
Papaipema beeriana	Blazing star borer		SC
Papaipema speciosissima	Regal fern borer		SC
Phoxinus erythrogaster	Southern redbelly dace		E
Platanthera ciliaris	Orange- or yellow-fringed orchid		E
Platanthera leucophaea	Prairie white-fringed orchid	LT	E
Pleurobema sintoxia	Round pigtoe		SC
Poa paludigena	Bog bluegrass		T
Poor Conifer Swamp			

Scientific Name	Common Name	Federal Status	State Status
Prairie Fen	Alkaline Shrub/herb Fen, Midwest Type		
Prosapia ignipectus	Red-legged spittlebug		SC
Ptychobranchus fasciolaris	Kidney shell		SC
Pyrgulopsis letsoni	Gravel pyrg		SC
Rallus elegans	King rail		E
Rich Tamarack Swamp	Forested Bog, Central Midwest Type		
Scirpus clintonii	Clinton's bulrush		SC
Scleria triglomerata	Tall nut rush		SC
Sistrurus catenatus catenatus	Eastern massasauga	C	SC
Southern Wet Meadow	Wet Meadow, Central Midwest Type		
Speyeria idalia	Regal fritillary		E
Spiza americana	Dickcissel		SC
Sporobolus heterolepis	Prairie dropseed		SC
Terrapene carolina carolina	Eastern box turtle		SC
Valeriana edulis var. ciliata	Edible valerian		T
Venustaconcha ellipsiformis	Ellipse		SC
Villosa iris	Rainbow		SC
Wet-mesic Prairie	Tallgrass Prairie, Central Midwest Type		
Wilsonia citrina	Hooded warbler		SC

*Current as of 12/10/2010 according to the Michigan Natural Features Inventory Website. http://web4.msue.msu.edu/mnfi

State Protection Status Code Definitions
E = Endangered
T = Threatened
SC = Special concern
X = Presumed extirpated
(legally 'threatened' if rediscovered)

Federal Protection Status Code Definitions
LE = Listed endangered
LT = Listed threatened
LELT = Partly listed endangered and partly listed threatened
PDL = Proposed delist
E(S/A) = Endangered based on similarities/appearance
PS = Partial status (federally listed in only part of its range)
C = Species being considered for federal status

A.9 HISTORIC/CULTURAL RESOURCES

PHYSICAL ENVIRONMENT

The physical environment was shaped by two major human forces in the past. The first force to change the landscape of the Pinckney RA region was Native Americans, who used fires to clear large sections of land. Later, farmers would use these same techniques to clear land for their crops, but also had the use of better technology such as saws, animals, and eventually machinery to clear vegetation and plow the soil. Areas with the oldest tree growth are those too steep to be used for farming or structure building, and consequently were never cleared.

A.10 EDUCATION AND INTERPRETATION

State park explorer programs are offered to campers and day visitors at Pinckney RA. State park explorer guides lead informal programs and hikes that feature natural, cultural, and historic resources. Program topics include forests, insects, night hikes, pond studies, and other topics covering the variety of plants, animals, and natural features found within Pinckney RA. These programs are designed for children and adults, often in a family setting.

A.11 RECREATIONAL RESOURCES

Pinckney Recreation Area offers a diverse array of recreational opportunities with both day-use activities and camping. Following are the recreational features of this park:

- Hunting: The majority of Pinckney RA is open to hunting during the normal season for each species. There are seasonal restrictions on shooting from April 1 to September 14. Hunting is prohibited in "Hunting Safety Zones," located around developed day use areas, camp grounds, and park offices. Target shooting is prohibited.

- Swimming: Developed swimming areas are available at Half Moon Lake, Bruin Lake, Pickerel Lake, and Silver Lake. Bruin Lake beach is open only to campers.

- Fishing: Pier fishing is available at Silver Lake and Crooked Lake. All accessible lakes within Pinckney can be fished.

- Picnic Area at Silver Lake: Located near the beach at Silver Lake, this picnic area has picnic tables, grills, fire pits, and seasonal modern toilet facilities. Recreational opportunities include access to the trail system, a playground, volleyball courts, horseshoe pits, and a fishing pier. From Memorial Day to Labor Day row boats, canoes, kayaks, paddle boats, and your-motor-on boats can be rented. A concession building is located at Silver Lake Picnic Area as well. Alcohol is prohibited from April 1 through September 30 without the written authorization of the park manager at Silver Lake.

- Picnic Area at Halfmoon Lake: The picnic area at Half Moon Lake includes a boat launch, access to the Potawatomi Trail, a volleyball court, horse shoe pits, and a playground. There are two picnic shelters which can be reserved. Alcohol is prohibited from April 1 through September 30 without the written authorization of the park manager at Halfmoon Lake.

- Trail System: Hiking, mountain biking, equestrian, and cross country ski trails criss-cross the entire park. Hikers and mountain bikers will have access to the extensive trail system that begins at Silver Lake Beach. Trailside camping is allowed within designated campgrounds. Equestrian trails are located in the northern section of Pinckney RA. Snowmobiling in designated areas is allowed if 4 inches of snow are on the ground. Hiking trails are closed to snowmobiling.
    - Pinckney-Silver Lake trail: 2 miles. Hiking, mountain biking, cross country ski
    - Pinckney-Crooked Lake trail: 5 miles. Hiking, mountain biking, cross country ski

- Pinckney-Potawatomi trail: 17 miles. Hiking, mountain biking, cross country ski
- Pinckney - Waterloo trail: 29 miles. Hiking, cross country ski
- Pinckney equestrian trails: 8 miles. Equestrian
- Pinckney - Losee lake trail: 3.3 miles. Hiking

- Boat Access/Launch Site: Improved boat launches can be found at Bruin Lake, Half Moon Lake, South Lake, North Lake, Joslin Lake, and Portage Lake. Unimproved boat ramps are located on Crooked Lake, Gosling Lake, and Hiland Lake. There are hand carry access site into Sullivan Lake, and Pickerel Lake. The chain of seven lakes can be accessed through Bruin Lake and Half Moon Lake.

- Metal Detecting: Any items found must be checked with the park staff and may be held for further investigation. Areas open to metal detecting are Halfmoon Lake Beach, Bruin Lake Campground, and Silver Lake Beach. Note: only the un-vegetated area of Halfmoon Lake Beach is open to metal detecting.

A.12 AREAS OF CONFLICT

No areas of conflict reported.

A.13 PARK USE STATISTICS AND ECONOMIC IMPACTS

Economic Impacts

Michigan State University (Dr. Dan Stynes) developed an economic analysis model known as "MGM2". This model is an update of the MGM model developed by Dr. Ken Hornback for the National Park System in 1995. The purpose of the updated MGM2 model is to estimate the impact of park visitor spending on the local economy. These economic impacts are reflected in terms of sales, income, employment, and value added.

This analysis tool relies on three primary factors in the common equation:

> Economic Impact of Tourism Spending = Number of Tourists (x) Average Spending per Visitor (x) Multiplier (to estimate extended effects of direct spending).

For our purposes of conducting a very basic review of impacts, we have utilized the "MGM2-Short Form" version of the program, which simplifies the extent of analysis required for input, and utilizes more generalized multipliers for spending outputs. For the non economist, this provides an excellent tool for establishing a baseline assessment of the economic impacts of our parks.

Following are the relative economic impacts (based on 2009 data) of Pinckney RA to the economy of Livingston/Washtenaw County.

DIRECT ECONOMIC EFFECTS TO THE COMMUNITY

- Direct spending attributable to Pinckney RA visitors totaled $8,095,000 of which $5,301,000 came from Day-Use, and $2,794,000 from Camping.

- Jobs totaled 255, with 167 related to Day-Use activity and 88 to Camping. (Note…jobs are not full-time equivalent. They include part-time and seasonal positions.)

- Personal Income total is $2,753,000 with $1,802,830 associated with Day-Use of the park and $950,260 associated with Camping.

- Value added (total income plus business taxes) totaled $4,156,000. Day-Use accounted for $2,721,800 and Camping accounted for $1,434,640.

TOTAL ECONOMIC EFFECTS TO THE COMMUNITY

(NOTE…this reflects 'Direct Effects' plus the 'Secondary Effects' of visitor spending on the local economy. Secondary Effects (sometimes called 'Multiplier Effects') capture economic activity that results from the re-circulation of money spent by the park visitors in the community.

- Total spending = $10,702,000 (32% over direct spending)
- Jobs = 298 (17% over direct job impacts)
- Personal Income = $3,621,000 (32% over direct spending)
- Value added = $5,763,000 (39% over direct value added)

NOTE….for purposes of updating economic values, the Consumer Price Index (CPI) is often used to adjust values over time. Through the following link, [**http://www.bls.gov/home.htm**] a CPI Inflation Calculator is located in the category of "Inflation and Consumer Spending".

Appendix B –Summary of Public Input

Public Participation
The Department of Natural Resources Parks & Recreation Division (DNR-PRD) emphasizes that comments on the general management plans are accepted at any time during the process. Two structured approaches to gathering public input are included in the general management plan process. The participation initiatives are summarized below, and the results are presented in this Appendix.

- **August 15-16, 2011 Stakeholder Workshop**
  The purpose of the workshop was to obtain comments on the draft General Management Plans for Waterloo Recreation Area. With assistance from the Planning Team, approximately 100 people and/or organizations were identified as stakeholders. Invitations to the Stakeholder Workshop were sent by email and via post. Approximately 60 people attended the workshop.

  Stakeholders were invited to comment at the meeting. Stakeholders could also comment by completing a survey. The surveys were provided at the workshops to complete in person or submit by mail.

- **October 13, 2011** A public input open house was held to allow the public the opportunity to express their comments about the park. The above noted people were again contacted regarding the public input workshops by mail and email. A notice was published in the local paper. Flyers were posted in the Eddy Center. Stakeholders and others were encouraged to share this information with interested members of the general public. Approximately 25 people attended.

There were two opportunities to provide comments:

1) Comment at one of the workshops
2) A hard-copy survey available at the workshops - for completion on site or submitted via mail

Meeting Summary
DEPARTMENT OF NATURAL RESOURCES
PARKS AND RECREATION DIVISION

General Management Plans – Stakeholder Meeting

DATE: August 15-16, 2011
TIME: 5:00 – 8:00 PM
PLACE: Eddy Discovery Center – Waterloo Recreation Area

Planning Team members and Stakeholders in attendance (Group Represented):
(See sign in sheet that follows)

1. Introductions and Background
   All Team members and Stakeholders introduced themselves and identified the DNR Division, stakeholder group, or issue they represented.

2. Presentations:
   - ❏ Paul Curtis (PRD) - General Management Planning Process & Overview of Draft Plan process for Pinckney & Waterloo Recreation Areas
   - ❏ David Birchler (Birchler Arroyo Associates, Inc.) - Overview of Draft Plan for Pinckney & Waterloo Recreation Areas

3. Questions & Answers/Comments Session
   The Planning Team members fielded questions and heard comments from the stakeholders present.

4. Open House / Stakeholder Survey Session
   - ❏ Open house format was explained, as well as resource maps and materials available for review
     - ☑ Progression of Management Zone Objectives
     - ☑ Aerial Photos
     - ☑ Recreational Resources Maps
     - ☑ Draft management Zones Maps
     - ☑ Detailed Description of Management Zones
     - ☑ Stakeholder Survey

   - ❏ Team members and Stakeholders engaged one another in discussions about each park's resources and its importance to the greater region
   - ❏ Stakeholders who did not return a completed survey promised to send them to Birchler Arroyo Associates, Inc. via mail

5. The meeting was adjourned at approximately 8:00 PM after all Stakeholders had departed.

Pinckney Recreation Area
Workshop Input Worksheet Results
August 15-16, 2011

1. Do you agree with the above statements? Would you add anything to the above statements?
   - ❑ Yes, no.
   - ❑ Agree
   - ❑ To preserve, "RESTORE" and protect.

2. Do you agree with the above statements? What else makes Pinckney Recreation Area significant to you?
   - ❑ Yes, I live here. I have enjoyed the area for over 50 years.
   - ❑ Agree
   - ❑ Stewardship creates a sense of care and common ownership.

3. What natural resources are important?
   - ❑ Space to move around in. Woods. Clean water. Low pollution of soils. Wide varieties of plant life & animals. Native species.
   - ❑ All
   - ❑ Sensitive habitat especially wetlands

4. What cultural resources are important? NO ANSWERS

5. What are the education and interpretation opportunities?
   - ❑ Stewardship

6. What are the recreation opportunities?
   - ❑ As varied as one wishes to have.
   - ❑ 70 mile loop trail connecting with the lakelands.
   - ❑ Stewardship.

7. What should be the visitor experience?
   - ❑ What they expect to experience in an outdoor setting. An opportunity to learn from an outdoor experience.
   - ❑ Stewardship.

8. Are there any known user conflicts or issues?
   - ❑ Land – trails – hikers/horses/bicycles/birders. Lakes – fishing/kayaking/rec. bathing.
   - ❑ Yes, all users think they are the one true user.

9. What should be the identity of Pinckney Recreation Area?
   - ❑ Natural

10. Other Comments:
    - ❑ Work on removing Autumn Olive – you introduced it.
    - ❑ Better management of invasive weed species on land and in the lakes.
    - ❑ Get rid of the Autumn Olive.

    Respondents

    Sally Rutzdy
    9640 Joslin Lake Road
    Gregory, MI
    Srutzky@earthlink.net

    John Francis / Lyndon Township Government
    17751 N. Territorial Road
    supervisor-lyndon@twp-lyndon.org

    John LaBossiere
    Jonlaboss@hotmail.com

Additional comments from Aerial boards

- Possible equestrian trail location for obstacle course? Looking for a spur trail.
- Open creek from Hell Creek Road to Little Portage Lake
- Hell Michigan should be included on all maps. Cultural and historical

Sign In Sheet from DNR Stakeholders Workshop
Pinckney Recreation Area | Waterloo Recreation Area
August 15-16, 2011

Name	Affiliation	Address	Phone #	Email Address
Tom Caplis	Chelsea R & Gun	1703 Lingane Road	475-8561	
Brad Utrup	Ruffled Grouse Society	332 Territorial Road 48158	419-302-7784	Utrupb@michigan.gov
Jason Aric Jones	MMBA			
Larry Bean	DEQ Geologists	204 Washington Chelsea MI 48118	734-475-4648	Beanl@michigan.gov
John Francis	Lyndon Township	17755 N. Territorial Road	475-2401	Supervisor-lyndon@twp-lyndon.org
Fred Fischmeister	Back Country Horsemen	7900 S. Draper Road Jackson, MI	517-937-4257	Muleman189@gmail.com
Greg Cook	MMBA	470 Fairwood Pinckney	734-878-6190	Gregck19@gmail.com
Lisa Gamero	PRD			Gramerol@michigan.gov
Alicia Selden	PRD			Seldena@michigan.gov
Ron Beyer	WHA, BCHA	15350 Waterloo Muneth Road Grass Lake, Mi 49240	734-475-1937	Horsesamron1@juno.com
Amilee Beyer	WHA, BCHA	15350 Waterloo Muneth Road Grass Lake, Mi 49240	734-475-1937	Horsesamron1@juno.com
Pat Carney	Putnam Twp	3280 WM 36 Pinckney 48169	734-878-3131	Treasurer@putnamtwp.us
Christine Linfield	Chelsea	305 S. Main St.	734-475-1898 x210	Clinfield@city-chelsea.org
Arlene Taylor	Waterloo Hunt Club	11574 Glenn Grass Lake, MI	517-522-3409	Actaylor@umich.edu
Matthew Lanx	Waterloo Hunt Club	11574 Glenn Grass Lake, MI	517-522-3409	Mlanx@umich.edu
Liz Roxberry	Cedar Lake Outdoor MUCC	2500 Pierce Road Chelsea PO Box 30235 Lansing, MI 48909	517-927-8364	Lroxberry@mucc.org
Steve Schneider	Pheasants Forever	1857 Samer Road Milan 48160	734-646-5710	Sschneider@wsr-cpa.com
Charity Steere	Legacy Land Conservancy	5259 Monte Road Grass Lake 49240	517-522-5010	Charity_steere@gmail.com

Barry Lonik	Citizen	11300 Island Lake Road Dexter 48130	734-223-2321	Blonik12 @aol.com
Chuck Dennison	DNR-PRD	Pinckney Rec Area	734-426-4913	Dennison@michigan.gov
Greg Byce	DNR-PRD	Waterloo Rec Area	734-475-8307	Byceg@michigan.gov
Bill Mayer	MMBA	Ann Arbor, MI	734-604-0414	Poto@mmba.org
Jeff Dehring	WCPARC	Ann Arbor, MI	734-971-6337	Dehringj@ewashtenaw.org
Paul Curtis	MDNR-PRD			
Ted Welsh	MMBA	7230 Fox Chase Lane Westland 48185	734-639-6182	Tswelsh@att.net
Rudy Tomborin	RGS	901 N. Elizabeth Dearborn 48128	313-564-9216	Dudpete2@wowway.com
John Colone	Hell, MI	4063 Patterson Lake Road Hell, MI 48169	810-599-9666	John@hell24.com
Lathe Claflin	Jackson/Washtenaw Audubon	11300 Glenn Road Grass Lake 49240	522-3949	Lathe.claflin@gmail.com
Ron Hoffman	Jackson Audubon	6142 Territorial Road Pleasant Lake 49272	517-769-6891	Ronandjoanhoffman@yahoo.com
Tom Norris	Waterloo	10550 Fowler Road Hanover	517-524-8680	Tbob43@msn.com
Dan Hovater	MUCC	4695 Norvell Grass Lake	517-518-1045	Hovaterdan@yahoo.com
Norm Roller	MMBA	3850 W. Loch Alpine Dr. Ann Arbor 48103	734-426-9737	Normroller@comcast.net
Stani Bohac	Potawatemi Chaper of MMBA	2800 Brockman Blvd Ann Arbor 48103	734-426-9737	Sbohac@umich.edu
Marc Keezer	Lyndon Twp		734-475-2401	Marckeez@gmail.com
GreggV. Burg	Waterloo Natural History Association	6655 Jackson Road #611 A2 48103	734-662-3238	Greggb@thomsonshore.com
Sally Rutzky	Pinckney Rec Area Steward	9640 Joslin Lake Road Gregory MI	734-433-0543	Srutzky@earthlink.com
Kris Olsson	Huron River Watershed Council	1100 N. Main Ste 210	734-769-5123	Kolsson@hrwc.org
Don Walz	Farmline Campground	8020 Clear Lake Road Grass Lake	734-260-9009	Farmlanecampground@yahoo.com
Gary O. Moore	Chelsea Road & Gun MUCC	135600 McKinley Chelsea	475-71247	
Tom Keene	WHA	6280 Baldwin	522-6482	

Randy Step	Running Fit	5700 Jackson Road A2	734-929-9026	Randy@runningfit.com
Chad Simpson	WHA	19275 Sandboen Manchester	734-323-0011	
Chris Ritter	Washtenaw PF	38395 Tyler Romulus 48174	734-740-7300	Gspman@comcast.net
Tom Brown	YMCA Camp	5305 W. Michigan Ave. Tipton, MI 49287	517-605-4934	
Ann Jarema	Pinckney DDA	2430 E. M-36 Pinckney MI 48169	734-878-6635	Jaremaann@hotmail.com
Kathy Moffit	Pinckney Trail Riders	16041 Arnold Road Gregory 48137	734-845-6996	
Elsa A. Elmore	Pinckney Trail Riders	6693 Cedar Lake Road	734-878-1356	Norway017@msn.com
Jon LaBossiere				Jonlaboss@hotmail.com
Mike Casey	Aberdeen Bike	1101 S. Main Suite 200 Chelsea Mi 48110		
Jan Herrick	Equine Trailways Subcommittee	3230 Brighton Road Howell 48843	517-540-9943	Janlherrick@gmail.com
Barb McCarter	PRD		734-426-4913	Mccarterb@michigan.gov

Meeting Summary
DEPARTMENT OF NATURAL RESOURCES
PARKS AND RECREATION DIVISION

General Management Plans – Public Input Meeting
DATE: October 13, 2011
TIME: 4:00 – 8:00 PM
PLACE: Eddy Discovery Center – Waterloo Recreation Area

AGENDA

All Team members introduced themselves and identified the DNR Division they represented.

1. Presentations:
   - ❏ Paul Curtis (PRD) - General Management Planning Process & Overview of Draft Plan process for Pinckney & Waterloo Recreation Areas
   - ❏ David Birchler (Birchler Arroyo Associates, Inc.) - Overview of Draft Plan for Pinckney & Waterloo Recreation Areas

2. Questions and Answers

3. Open House
   - ❏ Participants were invited to visit each of the map stations and talk to Planning Team members
   - ❏ Post-it notes were available to add any comments to the map
   - ❏ Participants who did not return a completed survey promised to send them to Birchler Arroyo Associates, Inc. via mail

No additional surveys were submitted at this time.

Appendix C –Planning Team Meeting Summaries

DEPARTMENT OF NATURAL RESOURCES
General Management Plan - Phase I
Pinckney & Waterloo Recreation Areas

Team Meeting #1
May 18, 2011 9 a.m. to 4 p.m.
Eddy Discovery Center, Waterloo RA

Overview: Paul Curtis explained the General Management Planning process and gave an overview of Pinckney and Waterloo Recreation Areas. He emphasized the importance of connectivity between the two recreation areas. The future transfer of property from AgIndustries was also explained. Several other observations were made for the team:

- Michigan Mountain Biking Association (MMBA) desires trails in Waterloo RA
- MMBA wants to create a "legacy" trail that would connect both parks and serve as a regional or national destination
- Equestrians want expanded trails in both parks
- There was some recent negative press about the equestrians prior to a recent trail ride at Waterloo
- There is a current multi-community approach to create branding for the region as a recreation destination ("Gateway to recreation")
- The NRC dedicated boundary for these parks is under review
- There is an interest in closure of Cassidy Lake Road (by the Township and DNR)
- The Waterloo Horsemen's Association has an interest in Camp Waterloo
- Both parks feature a Biodiversity Stewardship Area

Paul outlined the next steps in the process, which include developing Purpose and Significance statements, discussions about users, their needs, and how those relate to PRD/WD management goals. We will also discuss co-management between PRD and

WD; the last update to the management agreement was in the 1970's. Updates are needed to reflect current DNR organizational structure and processes.
David briefly described the process and emphasized the importance of participation in team meetings. Phases I and II take about 18 months to complete; both must be finished by September 30, 2012. There are typically three team meetings in the planning process before the stakeholder meeting, and the public input meeting. He asked the team to begin thinking about who stakeholder groups and individuals are and getting their contact information. These meetings are important to the process and will be held in the late fall/early winter.

Introduction to Waterloo Recreation Area (Gary Jones)

- Mill Lake Outdoor Center
    - Built by the Works Progress Administration (WPA)
    - Would be good candidate for rehabilitation and reuse
    - Eligible for National Historic Register as a historic district
- Cedar Lake Outdoor Center
    - Built by the Civilian Conservation Corps (CCC)
    - Used as a Michigan United Conservation Club (MUCC) kids camp about 6 weeks/year
    - MUCC does maintenance and built shooting range; electrical/utility upgraded in 2010
- Camp Waterloo
    - Built by the CCC; served as a POW camp during WWII
    - Condemned; buildings rotting and suffering arson damage
- Cassidy Lake Resident Work Camp
    - Under National Park Service administration in the 1930's, built through a cooperative partnership between the NPS and National Youth Administration (NYA)
    - Eligible for National Historic Register
    - Used by the Michigan Department of Corrections as a youth work camp since the 1940's
- Other cultural resources:

- Many of the lakes are natural and would likely have served as resources for native Americans
- Native American trail runs through the area
- Early Europeans settled in the area also
- Waterloo Farm Museum – run by the Waterloo Historical Society

- Natural resources include:
  - Natural Area—Black spruce bog found here
  - Haehnle Sanctuary (Audubon) – staging area for sand hill cranes
  - Many element occurrences found throughout the area
    - Animal, plant, and natural communities
    - Species of special concern, threatened, and endangered (State and Federal levels) including Blanding's turtle, eastern Mississauga, and cerulean warbler
  - Minerals (AgIndustries)
  - Wetland complex: Waterloo/Munith Road
  - Invasive species: garlic mustard, etc.
- Recreational Resources
  - Both modern campgrounds were updated recently
  - Rustic campground should be improved this year
  - Water resources: boating access on ten lakes; chain of lakes
  - Riding stable is closed; reopening would require significant renovation and would likely be a lease rather than concession – no residence for operator; no septic field
- Stakeholders include: MUCC, AgIndustries, DOC, Waterloo Hunt Club, equestrians, hikers, MMBA, Haehnle Sanctuary, Corner Deli and other stores, Washtenaw County (parks, sewer system), Waterloo Horsemen's Association, Waterloo Historical Society, two friends' groups, more….

Introduction to Pinckney Recreation Area (Chuck Dennison)

- Old homestead, right off the most popular trail – land unsuitable for farming, built late 1800's-early 1900's
    - Opportunity for interpretive signage
- Crooked lake Campground & fishing pier (25 years old)
- Potawatomi Trail (a.k.a. "the Poto")
- Invasives include garlic mustard
- ½ mile of boardwalk and bridges throughout the park (most built with DOC labor)
- Navigable waterway connecting chain of lakes
- Silver Lake Unit – most popular
    - 500 space parking lot
    - Trailhead for Poto and Waterloo-Pinckney Trails
    - Silver Lake – spring-fed, clear, clean lake – great for swimming
    - Sand beach volleyball is very popular
    - Private Boys and Girls Camp (Toledo) across the lake; campers often come across to use facilities
    - YMCA camp nearby
    - Concession building with no concessionaire; mobile food trailer will come this summer
- Half Moon Lake Unit
    - 500 space parking lot
    - 35 space boat launch
    - Underutilized; tornado in 1994 took out oak grove and concession/restroom building. Portable toilets not popular with users.
    - Two picnic shelters
    - Beach developed in low area; requires sand to be added to beach annually
- Adjacent land use conflicts:
    - Waterloo portion of Waterloo-Pinckney Trail meets Pinckney portion at M-52, across residential driveway (which is in trespass)

    - Glenn Brook Road is signed as “private road,” but state land abuts both sides for most of the road, and it is a public road
    - Top of the World subdivision is better example of public access through state rec area by easement,
    - Public access is important to demonstration area, as Federal funds were used
- Dam in hell – owned/operated by Livingston County
- Lakelands Trail – leased to adjacent communities for use and maintenance
    - Putnam Township is planning to expand to Hamburg and will accommodate hikers, bikers, and equestrians within same trail.
- Losee Lake Trail – only hikers; well-used 3-mile trail. Low growth, no forest
- Pickerel Lake
    - High demand; no boat launch from shore
    - No alcohol within ¼ mile of launch to limit “party crowd”
    - University of Michigan Edwin S. George Reserve (ESGR): About 1,400 acres wned and run by the UM since 1930 for the purposes of providing research and education opportunities in the natural sciences and preserving the native flora and fauna.
    - Bruin Lake Campground – new camper cabin
    - Gorman lake – rough road to the lake

Ray briefly discussed upcoming acquisitions; Stewardship is developing a new map and setting priorities for an updated NRC Dedicated Boundary. David noted recommendations from the planning team during this process will help Stewardship.

Field Tour: The Planning Team toured the park areas, mainly those highlighted during the discussions. Future team meetings will include additional opportunities to tour the park.

Adjournment and Next Meeting: The meeting was adjourned at 4:00 p.m. The next will be in mid-June.

DEPARTMENT OF NATURAL RESOURCES

General Management Plan - Phase I

Pinckney & Waterloo Recreation Areas

Team Meeting #2

June 20, 2011 10 a.m. to 2 p.m.

Eddy Discovery Center, Waterloo RA

Overview: David Birchler of Birchler Arroyo Associates, Inc. gave an overview of the maps available for the meeting. These included aerial photos, identification of wetlands, woodlands, park amenities, and elevation models. The team then divided into two groups to discuss unique features of both Pinckney and Waterloo Recreation Areas.

Unique features of Pinckney:

- Chain of lakes
- No clear single point of entry
- Trail systems, extensive & connect to Lakelands Trail State Park
- Hunting – fishing – boating – trapping unique to SE Michigan
- Threatened & endangered species – large potential habitat area – wildlife corridors
- Significant gaps are challenge to protecting habitat
- Exemplary natural habitat
- In area designated for biodiversity
- Archeological & pre-historic sites
  - Lakes chain and waterways – pre-historic
  - Homestead sites
- Overnight recreation opportunities from rustic pack-in to developed (Yurt, cabin, and modern campground)
- Size of Pinckney & Waterloo combined (approximately 30,000 acres)– very significant in SE Michigan.
- Destination for health and fitness events and individual users
- Location in relation to State's population center
- "Up north" feel in southeast lower Michigan due to combo of land mass and natural features.
- More concentrated day-use than Waterloo
- Unique geology and large land area assists the potential for species conservation.
- Lakelands Trail as potential connector.
- Potential trail connection to HCMA parks.

- Local Townships potential trail connections.
- Great diversity of users – hunters, birders, trail runners, geo-cachers, equestrians, hikers, mountain bikers, fishermen/women.
- University of Michigan Bio Station within NRC boundary.
- University of Michigan Stichfield Woods – potential connection to HCMA
- Used by University classes & research.

Unique features of Waterloo:

- More rare animals & plants species then any other park in system.
- More exemplary natural communities
- In area designated for biodiversity
- Co-Management by both Wildlife & Recreation Divisions
- Black Spruce bog – National Natural Landmark and State Natural Area
- National Recreation Demonstration area – 1930's.
- 4 eligible historic districts:
  - POW Camp (Camp Waterloo)
  - Mill Lake – WPA
  - Cedar Lake – CCC
  - Cassidy Lake – NYA
- Eddy Discovery Center – interpretive activities
- 70 cultural resource sites, historic sites, prehistoric and ethnological.
- Campgrounds
- Disc golf
- Aggregate Industries (future addition of 324 acres to the park)
- Access to population.
- Size – 3rd largest in system; largest in Lower Peninsula
- No clear single point of entry
- Fishing – boating – hunting – trapping – birding – cross country skiing
- Close to Audubon Sanctuary - sand hill cranes
- MUCC-operated outdoor center
- Equestrian trails
- 2 active Friends groups
- Fox hunting – Hunt Club
- WPA – Waterfowl Production Area
- Farm Museum – operated by Historical Society

- Idle stable facility
- Indiana bat – Federally endangered
- “Quiet” boat activities (gravel launches)
- Doyle Lake – exemplary aquatic community
- Large area around Discovery Center – no hunting & snowmobiles – quiet in Fall & Winter
- Private equestrian campgrounds adjacent to equestrian trails.
- State-designated Natural Beauty Roads in recreation area.

Following this discussion, groups were asked to review draft management zones for both parks. Adjustments will be made based on comments provided and the draft maps and statements of significance will be reviewed and discussed at the next team meeting.

Pinckney Draft Management Zones Notes

- Leased farm fields: offer revenue generation, but have potential for future habitat. Note in text that farming will continue as an interim activity.
- Bruin Lake Campground
  - Wet camp sites to be relocated to west.
- Intensity of Events
  - Sometimes at odds with Management Zone concept
  - Buffer “Poto” trail with 100’ developed recreation for those potential accommodations
  - Waterloo-Pinckney Trail – hiking only (1 time per year ok for bike event).
- South portion adjacent to Waterloo Recreation Area: consider trail potential across M-52.
  - Change to Back Country – North of M-52
  - West of Bruin Lake Campground – change to Back Country
- Boat launch sites: small areas around parking lots – developed recreation
- Yurt – developed recreation
- “North Unit” makes sense as Primitive
- Cassidy as “trail” could be center of a semi-wilderness area.
- Stewardship will outline Exemplary Areas at Team Meeting 3.
- Add Aggregate Industries land to Management Zone Plan
  - Potential for forest and much-needed native grassland
  - Parking area for more active use of waterbody (recognize that swim beach may be at odds with native grassland).
  - South end of Waterloo could use added parking.

Adjournment and Next Meeting: The meeting was adjourned at 3:00 p.m. The next will be July 27.

DEPARTMENT OF NATURAL RESOURCES
General Management Plan - Phase I
Pinckney & Waterloo Recreation Areas

Team Meeting #3
July 27, 2011 10 a.m. to 2 p.m.
Putnam Township Hall

Overview: The Planning Team reviewed the draft management zone maps and provided comments and input for refining the proposed zones.

Pinckney Recreation Area:

- After considerable discussion about the natural features and recreational opportunities in the proposed Ecologically Sensitive zones, the team agreed that high level of protection is not necessary and changed those areas to Primitive and Backcountry for compatibility with adjacent areas. The team agreed that the management plan text will include references to these exemplary communities (Ray will provide information to the team), and will address specific concerns including adventure racing, orienteering, primitive camping, and equestrian events, as well as educational uses.
- The team agreed to expand the Developed Recreation zone at the Bruin Lake campground west into the sharecropped fields to potentially accommodate trails for campers. The text will note the desire to develop a hike/bike shared-use trail that would connect to the Potawatomi Trail. Such a future trail would be zoned as a backcountry corridor, and may run through a differently-zoned area.
- The team discussed South Lake, and the potential for the eastern side to accommodate either a yurt or primitive hike-in/paddle-in camping in the future. Despite the area's desirability as a habitat for the Mississauga snake, the primitive and remote feel around the lake make it ideal for a rustic camping experience. Should future plans include a yurt, the area would be zoned as appropriate.

Waterloo Recreation Area:

- The team suggested reviewing the funding sources maps as we move forward to ensure that proposed zones do not conflict with restrictions that may be in place.
- Ray noted four parcels are being added to the park boundary and will forward a pdf to Birchler Arroyo Associates for inclusion into the maps.
- The team discussed the southwest corner of the park, which had been suggested for either Primitive or Backcountry and agreed to zone it Primitive.
- The team noted that Camp Waterloo and the immediate adjacent area (including the lagoons site) should be zoned Developed Recreation to accommodate future camping.
- The Aggregate Industries property and adjacent property were discussed and it was suggested that there be scenic overlay zones at the three nearby high points. The team also discussed opportunities to provide parking that could potentially accommodate an appropriate number of cars. This may be done in multiple locations, rather than in one large lot that would remain vacant for much of the year.

- The team discussed ADA-compliant trails and it was noted that there is sufficient latitude in the ADA to allow less intensive trail types to serve those with mobility issues, and the proposed management zones should not present a conflict.
- The team agreed to zone all boating access sites as Developed Recreation, as was shown in the Pinckney map.

Adjournment and Next Meeting: The meeting was adjourned at 2:30 p.m. The next meeting will be a stakeholder workshop. The tentative dates are August 15-16 at the Eddy Center and will accommodate the wide variety of stakeholder groups. Birchler Arroyo will solicit team members' input into the stakeholder list over the next few days.

DEPARTMENT OF NATURAL RESOURCES

General Management Plan - Phase I

Pinckney & Waterloo Recreation Areas

Team Meeting #4

September 14, 2011 10 a.m. to 12 p.m.

Conference Call

Overview: The Planning Team reviewed the draft management zone maps and provided comments and input for refining the proposed zones.

Document Notes:

- Future trail connection between Pinckney & Waterloo should be handled in text as an item for further evaluation during Phase 2
- Future equestrian trail connection between north Pinckney and south Pinckney can be handled in text, noting that it will require purchase of private property
- Ray Fahlsing, Gary Jones, Chuck Dennison, Joe Strach and Paul Curtis will conduct a side meeting to develop language to guide management decision to issue special use permits (frequency and intensity)
- Future yurt site(s) on South Lake can be identified in Phase 2 – appears it would be feasible to allow canoe in and hike in access without need for road
- October 6 meeting scheduled to discuss the extent of future development at Mill Lake and Cedar Lake ODCs for such things as a high ropes course and an expanded shooting range – Katie would like trail connections to remain Primitive for the experience provided to school groups
- Add a Significance Statement to both parks that identifies this as “largest area for recreational hunting opportunities in Southeast Lower Michigan”

Map Changes:

- Add Hell to all maps
- Remove Developed Recreation designation from Potawatomi Trail (rustic camping at Blind Lake already serves the trail)
- Fix the Poto Trail connection between Silver Lake and Blind Lake
- Sullivan Lake Boat Launch (east of South Lake) – change to Backcountry
- South Lake Boat Launch – delete Developed Recreation from the wetland around the river
- Joslyn Lake Boat Launch - reduce size of Developed Rec. to just the area of the launch

- Gosling Lake Boat Launch (small lake surrounded by the Poto Trail) – change to Backcountry
- Pickerel Lake Boat Launch (south of Crooked Lake) – change to Natural Resource Recreation
- Expand our Inset Map to incorporate Cedar Lake ODC – see Dave
- Doyle Lake Boat Launch – change to Primitive
- Cedar Lake Boat Launch – remains Developed Recreation but make it smaller to reflect actual area in use
- Ray F. suggested creating symbology for cemeteries – Lisa G pointed out that the Cultural Zone overlay takes cemeteries into account
- Crooked Lake Boat Launch – stays Developed Recreation
- Winnowana Lake Boat Launch – change to Backcountry with added boat launch symbol
- Green Lake Boat Launch – keep Developed Recreation (because this is new yurt site) but compare with aerial photo to make sure the red area is large enough
- Mill Lake Boat Launch - change to Backcountry
- Walsh Lake Boat Launch - change to Backcountry

Adjournment and Next Meeting: The meeting was adjourned at 12 p.m. The next meeting will be a public input open house. The date is set for Thursday October 13 at the Eddy Center, from 4 – 8 p.m. to accommodate the public. Birchler Arroyo will send the maps out to the planning team one more time for a final review.