PERFORMANCE AUDIT
OF THE

WILDLIFE DIVISION

DEPARTMENT OF NATURAL RESOURCES

January 2003

75-151-02

Michigan

Office of the Auditor General

REPORT SUMMARY

Performance Audit

Wildlife Division

Department of Natural Resources (DNR)

Report Number:
75-151-02

Released:
January 2003

The Wildlife Division's mission is to enhance, restore, and conserve the State's wildlife resources, natural communities, and ecosystems for the benefit of Michigan's citizens, visitors, and future generations. The Division's functions include managing wildlife populations and habitats, monitoring the health of wildlife populations, and protecting threatened and endangered species.

Audit Objectives:

1. To assess the effectiveness of the Division's operations for managing wildlife populations and habitats.

2. To assess the effectiveness of the Division's operations related to disease control for wildlife populations.

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Audit Conclusions:

1. The Division's operations for managing wildlife populations and habitats were generally effective.

2. The Division's operations related to disease control for wildlife populations were effective. Although significant disease issues exist, pursuit of remedies within current knowledge parameters has been reasonable.

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Reportable Conditions:

1. Deer Population Goals

   DNR needs to develop additional and enhance existing strategies to reduce the deer populations in areas with projected populations significantly above the population goals.

   Our review of the Division's deer management reports for 2001 disclosed that the Division projected that the total actual deer population for 6 of 8 wildlife management units (WMUs) exceeded the WMUs' population goal by over 10% (see table on the back of this summary). The Division's projections indicated that the total actual deer populations for these WMUs exceeded the population goal totals by approximately 325,000.

The projected deer populations for the 8 WMUs were as follows:

WMU	Population Goal	Projected Population	Percentage Over Population Goals
Western Upper Peninsula	371,284	378,999	2%
Eastern Upper Peninsula	117,100	105,761	(10%)
Northeastern Lower Peninsula	231,900	258,185	11%
Northwestern Lower Peninsula	251,500	336,391	34%
Saginaw Bay	173,000	246,144	42%
Southeastern Lower Peninsula	56,750	79,612	40%
South Central Lower Peninsula	220,248	264,853	20%
Southwestern Lower Peninsula	172,700	246,000	42%

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2. Master Plans for State Game and Wildlife Areas

The Division did not ensure that master plans for State game and wildlife areas were completed as required by established policy.

The Division is responsible for managing 83 State game and wildlife areas. These game and wildlife areas cover approximately 400,000 acres. Division policy requires that a master plan covering a 5- or 10-year period be developed for each State game and wildlife area. The purpose of the master plan is to establish long-term goals and objectives for an area, taking into consideration input from stakeholder groups and the public.

Our review of a sample of 20 State game areas disclosed that the Division did not have a current master plan for 16 (80%) game areas. For 5 of the 16 game areas, no master plan could be located. For 10 of the 16 game areas, the master plans had not been updated for periods ranging from 11 to 17 years.

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Agency Response:

DNR concurs with both recommendations.

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A copy of the full report can be obtained by calling 517.334.8050 or by visiting our Web site at: www.state.mi.us/audgen/

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THOMAS H. MCTAVISH, C.P.A.
AUDITOR GENERAL

January 27, 2003

Mr. Keith J. Charters, Chairperson
Natural Resources Commission
and
Mr. K. L. Cool, Director
Department of Natural Resources
Stevens T. Mason Building
Lansing, Michigan

Dear Mr. Charters and Mr. Cool:

This is our report on the performance audit of the Wildlife Division, Department of Natural Resources.

This report contains our report summary; description of agency; audit objectives, scope, and methodology and agency responses and prior audit follow-up; comments, findings, recommendations, and agency preliminary responses; description of survey, summary of survey responses, map of population goal status by wildlife management unit, map of counties with bovine tuberculosis positive deer, and exhibit of apparent bovine tuberculosis prevalence in white-tailed deer, presented as supplemental information; and a glossary of acronyms and terms.

Our comments, findings, and recommendations are organized by audit objective. The agency preliminary responses were taken from the agency's responses subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

Thomas H. McTavish, C.P.A.
Auditor General

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DEPARTMENT OF NATURAL RESOURCES

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Description of Agency

The Wildlife Division's mission* is to enhance, restore, and conserve the State's wildlife resources, natural communities, and ecosystems for the benefit of Michigan's citizens, visitors, and future generations. The Division's functions include managing wildlife populations and habitats, monitoring the health of wildlife populations, and protecting threatened and endangered species.

The Division consists of the following organizational units:

1. Wildlife Management Section - This Section is responsible for directing the management of populations and habitats for various wildlife species, including deer, bear, elk, wild turkeys, pheasants, and geese. This Section also directs wildlife-related land acquisitions and other related land matters.

2. Research and Natural Heritage Section - This Section is responsible for monitoring the health of wildlife populations, conducting research and surveys for various wildlife species and habitat issues, and directing the protection of threatened and endangered species.

3. Budget/Administration Section - This Section is responsible for support services for the Division, including budgetary control, personnel management, and purchasing.

4. Field Operations - This unit is responsible for implementing on-the-ground management for the various wildlife species and habitats, conducting field surveys, and interacting with the public on wildlife management issues.

For the fiscal year ended September 30, 2001, the Division's expenditures totaled approximately $21.8 million. As of June 30, 2002, the Division had 181 full-time employees and 23.7 part-time and 17.7 seasonal full-time equated employees.

* *See glossary at end of report for definition.*

Audit Objectives, Scope, and Methodology and Agency Responses and Prior Audit Follow-Up

Audit Objectives

Our performance audit* of the Wildlife Division, Department of Natural Resources (DNR), had the following objectives:

1. To assess the effectiveness* of the Division's operations for managing wildlife populations and habitats.

2. To assess the effectiveness of the Division's operations related to disease control for wildlife populations.

Audit Scope

Our audit scope was to examine the program and other records of the Wildlife Division. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Audit Methodology

Our audit procedures, performed from April through July 2002, included examinations of program records and activities for the period October 1, 1999 through June 30, 2002.

We conducted a preliminary review of the Division's operations to gain an understanding of its activities and to form a basis for selecting certain operations for audit. This included interviewing Division personnel and identifying performance measures* and objectives* that the Division uses to evaluate its effectiveness. Also, we reviewed applicable laws, management plans, activity reports, and policies and procedures to gain an understanding of internal control related to pertinent Division functions. In addition, we developed a survey requesting input from informed stakeholders regarding their interaction with the Wildlife Division (see supplemental information).

* *See glossary at end of report for definition.*

To accomplish our first objective, we interviewed Division staff and examined various program reports and program performance documentation. We analyzed how the Division determined if it accomplished its mission and met its goals* and objectives. We conducted tests of records related to wildlife population management. Also, we made field visits to three wildlife management units to gain an understanding of field operations and to observe field activities.

To accomplish our second objective, we interviewed Division staff and examined various program reports and program performance documentation. Also, we visited the Division's research facility to gain an understanding of operations related to disease control.

Agency Responses and Prior Audit Follow-Up

Our audit report includes 2 findings and 2 corresponding recommendations. The preliminary response prepared by DNR indicates that it concurs with the recommendations.

The agency preliminary response that follows each recommendation in our report was taken from the agency's written comments subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and Department of Management and Budget Administrative Guide procedure 1280.02 require DNR to develop a formal response to our audit findings and recommendations within 60 days after release of the audit report.

The Division complied with the 4 prior audit recommendations.

* *See glossary at end of report for definition.*

COMMENTS, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

OPERATIONS FOR MANAGING WILDLIFE POPULATIONS AND HABITATS

COMMENT

Background: Natural Resources Commission policy 2007 provides that the Department of Natural Resources' (DNR's) goal is to manage the State's deer herd based on scientific research to maintain healthy animals and keep the deer population within limits dictated by the carrying capacity of the range and by its effect on native plants, agriculture, horticulture, and public safety.

The Wildlife Division has divided the State into 8 wildlife management units (WMUs) and has further divided these into 93 deer management units (DMUs). The DMUs in the Lower Peninsula are counties, except for some islands and 5 smaller DMUs located within counties. The DMUs in the Upper Peninsula are not organized by county and cover areas in two or more counties.

In 1998, the Division established deer population goals for each DMU based on analyses of the carrying capacity of the range and effects of the deer population on native plants, agriculture, horticulture, and public safety. The Division annually develops actual deer population projections for each DMU, based on hunter surveys and analyses of samples of harvested deer. However, the Division believes that it does not yet have enough historical data to ensure accuracy at the DMU level but that data is adequate at the WMU level. For 2001, the Division projected that the total deer population for the State was approximately 1.9 million.

Audit Objective: To assess the effectiveness of the Division's operations for managing wildlife populations and habitats.

Conclusion: We concluded that the Division's operations for managing wildlife populations and habitats were generally effective. However, we noted reportable

conditions* related to deer population goals and master plans for State game and wildlife areas (Findings 1 and 2).

FINDING

1. Deer Population Goals

DNR needs to develop additional and enhance existing strategies to reduce the deer populations in areas with projected populations significantly above the population goals.

For the Division's field operations, it has established 8 WMUs by geographical area. The Division annually establishes an overall deer population goal for each WMU, based on the goals established for the DMUs located within the WMU. Division administrative staff informed us that deer population projections were most accurate at the WMU level. They also stated that the Division was developing improved methodologies for deer population projections at the DMU level.

Our review of the Division's deer management reports for 2001 disclosed that the Division projected that the total actual deer population for 6 of 8 WMUs exceeded the WMUs' population goal by over 10%. The Division's projections indicated that the total actual deer populations for these WMUs exceeded the population goal totals by approximately 325,000. (A map of the State identifying these WMUs is presented as supplemental information.)

The projected deer populations for the 8 WMUs were as follows:

WMU	Population Goal	Projected Population	Percentage Over Population Goals
Western Upper Peninsula	371,284	378,999	2%
Eastern Upper Peninsula	117,100	105,761	(10%)
Northeastern Lower Peninsula	231,900	258,185	11%
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Southwestern Lower Peninsula	172,700	246,000	42%

* *See glossary at end of report for definition.*

An abundant deer herd is important to provide wildlife-related recreational opportunities and economic benefits for the State. However, there are also some negative effects resulting from large deer populations, including motor vehicle accidents and crop damage. For 2001, the Michigan Department of State Police records indicated that there were approximately 67,000 motor vehicle accidents involving deer in the State. Overpopulations of deer can significantly impact the number of motor vehicle accidents and other negative effects resulting from large deer populations.

DNR's strategies for reducing the deer overpopulations have involved regulatory actions. These regulatory actions have included increasing the number of licenses available for hunting antlerless deer, extending the firearm hunting season, and issuing special hunting permits. The Division annually makes recommendations for regulatory actions to reduce deer populations in areas with overpopulations.

At the time of our review, DNR had approved some new regulations for the 2002 hunting season to assist in reducing deer populations. Without stronger methods to reduce deer populations, it is likely that significant overpopulations in many areas will continue.

RECOMMENDATION

We recommend that DNR develop additional and enhance existing strategies to reduce the deer populations in areas with projected populations significantly above the population goals.

AGENCY PRELIMINARY RESPONSE

DNR concurs with this recommendation. Significant efforts have been made to establish appropriate deer population goals for Michigan. Current research efforts will assist the Division in evaluating population goals based on ecological and social factors. In addition, significant steps have been made to bring deer population management and deer harvest objectives into alignment at the same scale. Several years of data collection will be needed in order to develop adequate data sets and confidence for management at this finer scale. Additional steps to bring the deer herd to goal levels will be made through accountability of unit supervisors for setting harvest goals and collecting harvest data at the DMU level. Performance factors will be developed for all management unit supervisors to reflect this accountability.

FINDING

2. Master Plans for State Game and Wildlife Areas

The Division did not ensure that master plans for State game and wildlife areas were completed as required by established policy.

The Division is responsible for managing 83 State game and wildlife areas. These game and wildlife areas cover approximately 400,000 acres and are located primarily in the southern part of the State. The game and wildlife areas provide habitats for various wildlife species and are also used by the public for hunting and various other types of activities.

The Division's Field Operations staff are responsible for developing long-term plans for the State game and wildlife areas. Division policy requires that a master plan covering a 5- or 10-year period be developed for each State game and wildlife area. The purpose of the master plan is to establish long-term goals and objectives for an area, taking into consideration input from stakeholder groups and the public.

Our review of a sample of 20 State game areas disclosed that the Division did not have a current master plan for 16 (80%) game areas. For 5 of the 16 game areas, no master plan could be located. For 10 of the 16 game areas, the master plans had not been updated for periods ranging from 11 to 17 years.

To ensure that long-term plans are properly developed for State game and wildlife areas, master plans should be completed as required by Division policy.

RECOMMENDATION

We recommend that the Division ensure that master plans for State game and wildlife areas are completed as required by established policy.

AGENCY PRELIMINARY RESPONSE

DNR concurs with this recommendation. The Division, as part of a DNR effort, has been moving toward a more comprehensive approach to overall habitat and land management planning, called ecosystem management. This more comprehensive planning effort will create plans for Michigan's habitat at a broader scale than has historically been done. The finding that planning efforts have not been ensured for game area lands in the southern lower portion of the State have been the result of

directing planning efforts to this ecosystem management effort. The Division policy, which establishes the guidelines for management planning, has been reaffirmed by the Division Management Team.

Performance factors will be established for all field technicians and field planners and biologists with the goal of having completed and/or updated management plans for all Division administered lands within the next four years. A new Habitat Unit within the Wildlife Management Section is being created to provide additional technical information and expertise to assist field personnel to meet this important objective.

OPERATIONS RELATED TO DISEASE CONTROL FOR WILDLIFE POPULATIONS

COMMENT

Background: Bovine tuberculosis (TB) is a bacterial disease that infects domestic livestock and wildlife. The first known case of bovine TB in deer in the State involved a deer shot by a hunter in 1975 in Alcona County. A second infected deer, also shot by a hunter, was identified in 1994 in Alpena County approximately 9 miles from the 1975 case. Subsequent surveys in the surrounding area disclosed further cases of infection in deer and domestic livestock.

As of December 2001, a total of 398 deer had tested positive for bovine TB in 12 counties in the State. (A map of the State identifying the counties with bovine TB positive deer is presented as supplemental information.) The deer that have tested positive for bovine TB have been found mainly in a core area in 4 counties in the northeastern Lower Peninsula. (An exhibit identifying the rate of prevalence of bovine TB in the core area and Presque Isle County for 1996 through 2001 is presented as supplemental information.)

In 1996, the State established a multi-agency team to develop strategies for bovine TB eradication. The multi-agency team consists of staff with disease control expertise from DNR, the Department of Agriculture, the Department of Community Health, the U.S. Department of Agriculture, and Michigan State University. The strategies developed by the team include surveying wildlife populations, testing livestock, eliminating baiting and

feeding of deer, reducing the deer density through legal hunting in the affected areas, and educating the public.

The long-term goals of the multi-agency team are to reduce the occurrence rate of infected deer in the core area to less than 1% by fall 2003 and to completely eradicate bovine TB disease from the State's deer herd by the year 2010. For the year 2001, the occurrence rate for tested deer for the core area was 2.3%.

Audit Objective: To assess the effectiveness of the Division's operations related to disease control for wildlife populations.

Conclusion: We concluded that the Division's operations related to disease control for wildlife populations were effective. Although significant disease issues exist, pursuit of remedies within current knowledge parameters has been reasonable.

Noteworthy Accomplishments: The Wildlife Division has established an extensive surveillance program to determine the prevalence of bovine TB and monitor its spread and occurrence. During the period 1995 through 2001, the Division tested 88,455 deer for bovine TB. As part of its surveillance program, the Division also established a bovine TB public education program to explain the bovine TB problem and encourage hunters to submit deer heads to the Division for testing.

SUPPLEMENTAL INFORMATION

Description of Survey

We developed a survey requesting input from informed stakeholders regarding their interaction with the Wildlife Division. The people surveyed were administrative employees or members of conservation organizations, hunting associations, and other organizations that have an interest in the management of wildlife-related programs.

We conducted a telephone survey of 9 stakeholders. A review of the responses indicated that most respondents were satisfied with their Division contacts and interactions with Division officials. Most of the respondents indicated that they felt that the Division's programs for managing wildlife populations were effective. Approximately one-half of the respondents expressed some concerns regarding the effectiveness of the Division's programs for disease control in wildlife populations. Also, approximately one-half of the respondents expressed some concerns regarding the effectiveness of the Division's programs related to managing wildlife habitats on public and private land.

We provided a summary of this information to Division management. The total number of responses for each item may not agree with the number of stakeholders contacted because some respondents provided more than one response to an item.

WILDLIFE DIVISION
Department of Natural Resources (DNR)
Summary of Survey Responses

1. Have you ever attempted to contact or provide comments to DNR regarding Wildlife Division programs?

Yes	No
9	0

2. If you responded "yes" to Question 1, by what means have you contacted the Wildlife Division?

Telephone	Written Correspondence	In Person	E-Mail
8	6	6	3

3. If you have attempted to contact the Wildlife Division, how satisfied were you with the Wildlife Division's response and its timeliness?

Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	No Opinion
4	3	1	1	0

4. Have you had any other interactions with officials from the Wildlife Division?

Yes	No
9	0

5. If you responded "yes" to Question 4, how satisfied were you with your interactions with Wildlife Division officials?

Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	No Opinion
5	2	1	1	0

6. Have you accessed the DNR Web site to obtain information about the DNR Wildlife Division?

Yes	No
7	2

7. If you responded "yes" to Question 6, how satisfied were you with the DNR Web site in providing Wildlife Division information?

Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	No Opinion
1	4	0	2	2

8. How would you rate the Wildlife Division's programs for managing wildlife populations?

Very Effective	Effective	Ineffective	Very Ineffective	No Opinion
0	6	1	2	1

9. How would you rate the Wildlife Division's programs for disease control in wildlife populations?

Very Effective	Effective	Ineffective	Very Ineffective	No Opinion
0	4	3	1	2

10. How would you rate the Wildlife Division's programs related to managing wildlife populations and habitats on public land?

Very Effective	Effective	Ineffective	Very Ineffective	No Opinion
0	3	3	2	1

11. How would you rate the Wildlife Division's programs related to managing wildlife populations and habitats on private lands?

Very Effective	Effective	Ineffective	Very Ineffective	No Opinion
0	4	4	0	1

WILDLIFE DIVISION
Department of Natural Resources
Population Goal Status
By Wildlife Management Unit
For 2001

10% or more above population goal

Approximately at population goal
(less than 10% above or below goal)

Source: Wildlife Division

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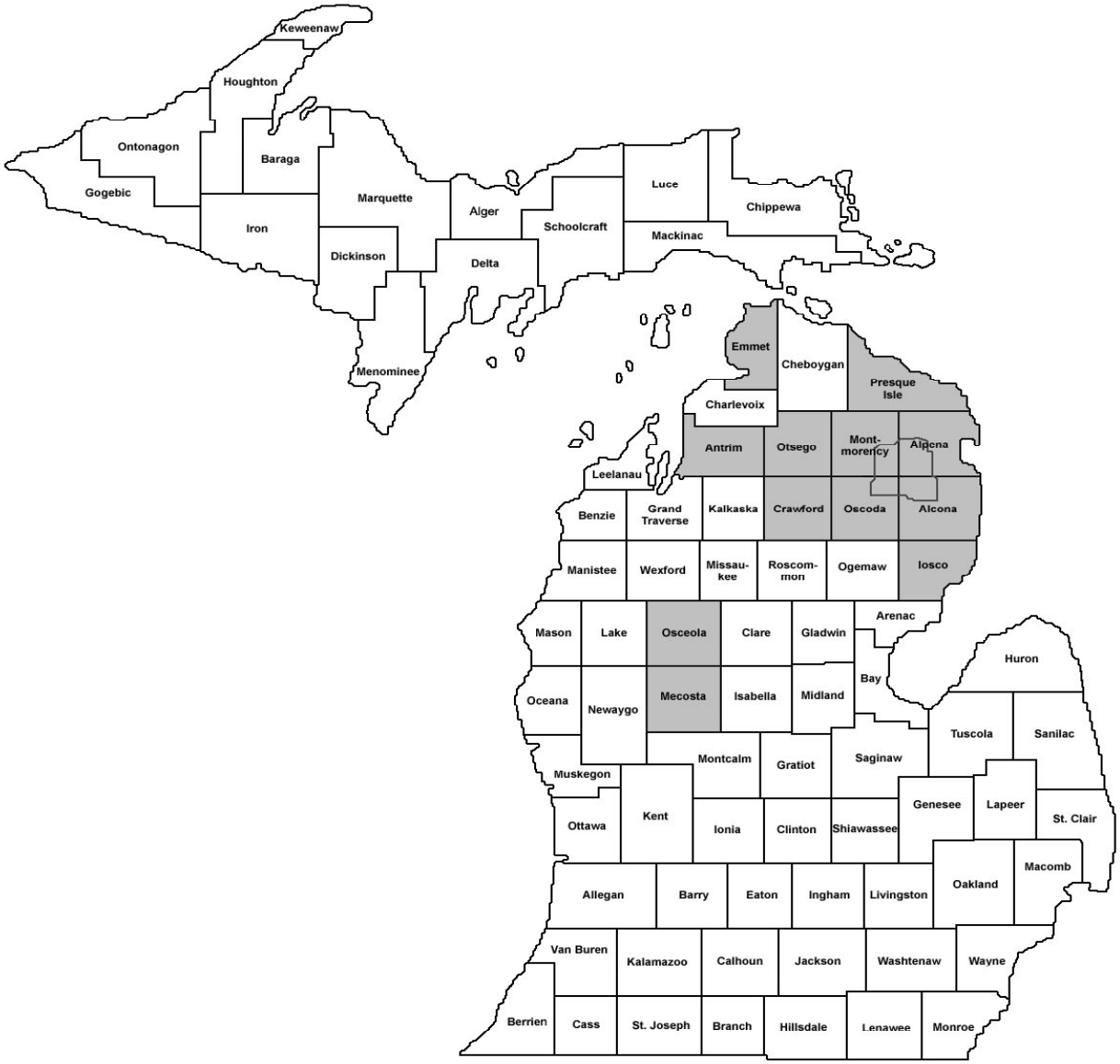
WILDLIFE DIVISION
Department of Natural Resources
Counties With Bovine Tuberculosis (TB) Positive Deer
As of December 2001

The shaded counties are the 12 counties in which TB positive deer have been found. DMU 452 (outlined in Alcona, Alpena, Montmorency, and Oscoda Counties) is the core area where most of the TB positive deer have been found. These four counties plus Presque Isle County make up the TB endemic area.



Source: Wildlife Division

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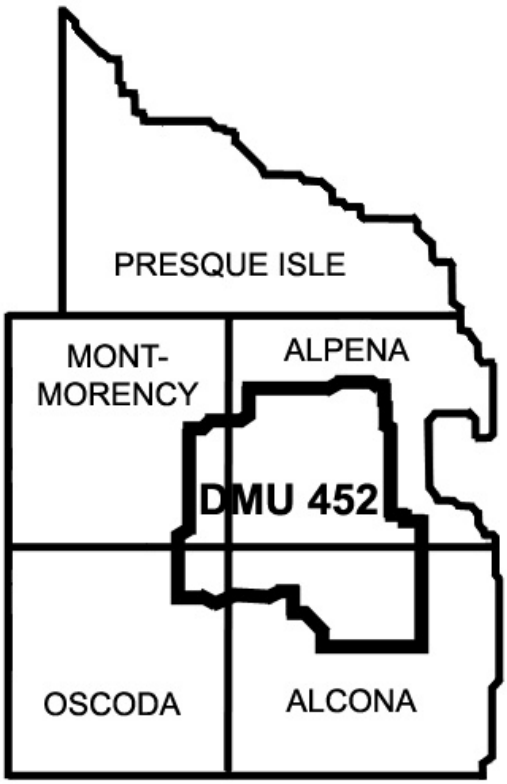
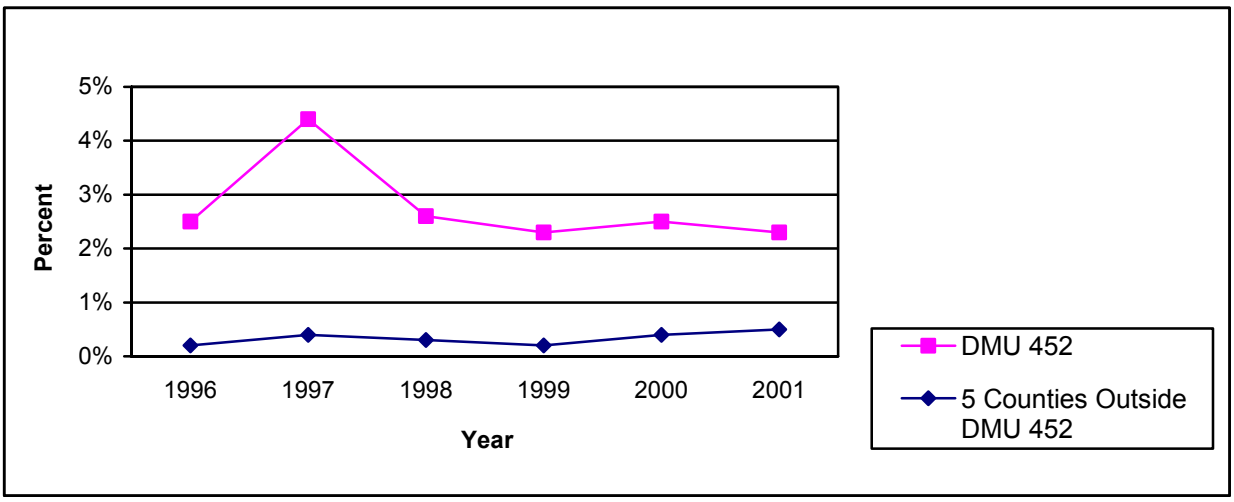
WILDLIFE DIVISION
Department of Natural Resources
Apparent Bovine Tuberculosis Prevalence in White-Tailed Deer
For 1996 through 2001





Source: Wildlife Division

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Glossary of Acronyms and Terms

DMU	deer management unit.
DNR	Department of Natural Resources.
effectiveness	Program success in achieving mission and goals.
goals	The agency's intended outcomes or impacts for a program to accomplish its mission.
mission	The agency's main purpose or the reason that the agency was established.
objectives	Specific outcomes that a program seeks to achieve its goals.
outcomes	The actual impacts of the program.
performance audit	An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by parties responsible for overseeing or initiating corrective action.
performance measures	Information of a quantitative or qualitative nature used to assess achievement of goals and/or objectives.
reportable condition	A matter that, in the auditor's judgment, represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.
TB	tuberculosis.
WMU	wildlife management unit.