



# joint land use study

**&**  
camp grayling joint maneuver training center  
alpena combat readiness training center

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# joint land use study

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## acknowledgments and key partners

Northeast Michigan Council of Governments  
 Michigan DNR (Gaylord)  
 Michigan Dept of Transportation (Gaylord)  
 US Forest Service  
 Michigan Dept of Environmental Quality (Gaylord)  
 US Fish & Wildlife Service (Alpena)  
 Headwaters Land Conservancy  
 USDA Natural Resource Conservation Service (Gaylord)  
 Huron Pines (conservation) (Gaylord)  
 Crawford County  
 City of Grayling (Crawford Co)  
 Grayling Twp (Crawford Co)  
 Lovells Twp (Crawford Co)  
 Maple Forest Twp (Crawford Co)  
 Frederic Twp (Crawford Co)  
 Beaver Creek Twp (Crawford Co)  
 South Branch Twp (Crawford Co)  
 Crawford County Road Commission  
 Otsego County  
 Chester Twp (Otsego Co)  
 Otsego Lake Twp (Otsego Co)  
 Bagley Twp (Otsego Co)  
 Hayes Twp (Otsego Co)  
 Otsego County Economic Alliance  
 Bear Lake Twp (Kalkaska Co)  
 Garfield Twp (Kalkaska Co)  
 Au Sable River Property Owner's Association  
 Anglers of the Au Sable  
 Mason-Griffith Founders Chapter of Trout Unlimited  
 Upper Manistee River Association  
 Michigan Association of Timbermen  
 Weyerhaeuser  
 Arauco  
 AJD Forest Products  
 Jays Sporting Goods  
 Alpena Regional Airport  
 Alpena County

City of Alpena (Alpena Co)  
 Alpena Twp (Alpena Co)  
 Maple Ridge Twp (Alpena Co)  
 Wilson Twp (Alpena Co)  
 Green Twp (Alpena Co)  
 Ossineke Twp (Alpena Co)  
 Sanborn Twp (Alpena Co)  
 Long Rapids Twp (Alpena Co)  
 Village of Hillman  
 Target Alpena  
 Alpena Chamber of Commerce  
 Michigan Sea Grant/MSU Extension  
 Northern MI Unmanned Aerial Systems Consortium  
 Thunder Bay National Marine Sanctuary  
 US Coast Guard  
 Thunder Bay Audubon Society  
 NOAA  
 Michigan United Conservation Club – Region 4  
 Camp Grayling and Alpena CRTC  
 Michigan Economic Development Corporation  
 Grayling Chamber of Commerce  
 Michigan Works!  
 Briley Twp (Montmorency Co)  
 Roscommon County  
 Lyon Twp (Roscommon Co)  
 Posen Twp (Presque Isle Co)  
 Krakow Twp (Presque Isle Co)  
 Metz Twp (Presque Isle Co)  
 Higgins Twp (Roscommon Co)  
 Antrim County

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# acronyms and abbreviations

## A

AADT	annual average daily traffic
AAF	Army Airfield
ADNL	average day/night sound level
AFB	air force base
AFFF	aqueous film forming foam
AFI	Air Force Instruction
AGL	above ground level
AICUZ	Air Installation Compatible Use Zone
ANG	Air National Guard
ANGH	Air National Guard Handbook
APN	Alpena County Regional Airport
APZ	accident potential zone
AR	Army Regulation
ARNG	Army National Guard
ATCAA	air traffic controlled assigned airspace
ATFP	antiterrorism force protection

## C

CAADT	commercial annual average daily traffic
CAB	combat aviation brigade
CACTF	Combined Arms Collective Training Facility
CAS	close air support
CEO	chief executive officer
CTRC	Combat Readiness Training Center
CZ	clear zone

## D

DA	Department of the Army
DART	Dial-A-Ride Transportation
DASR	digital airport surveillance radar
dB	decibel
DOD	Department of Defense
DRMO	Defense Reauthorization and Marketing Office
DSL	digital subscriber line

## E

ECP	entry control point
EPA	Environmental Protection Agency

## F

FAA	Federal Aviation Administration
FAMCAMP	Air Force family campground
FCC	Federal Communications Commission
FMU	Forest Management Unit
FS	Fighter Squadron
FY	fiscal year

## G

GIS	geographic information system
GSI	groundwater-surface water interface

## I

I	Interstate
ICEMAP	Installation Complex Encroachment Management Action Plans
ICRMP	Integrated Cultural Resources Management Plan
IDP	Installation Development Plan
IED	improvised explosive device
INRMP	Integrated Natural Resources Management Plan
IRP	installation restoration program
ISR	intelligence, surveillance and reconnaissance

## J

JLUS	joint land use study
JMTC	Joint Maneuver Training Center
JTAC	joint terminal attack controller

## K

K	thousand
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## M

M	Michigan state highway designation
M	million
MATES	Maneuver Area Training Equipment Site
mbps	megabytes per second

MDARD	Michigan Department of Agriculture and Rural Development
MDEQ	Michigan Department of Environmental Quality
MDHHS	Michigan Department of Health and Human Services
MDNR	Michigan Department of Natural Resources
MDMVA	Michigan Department of Military and Veterans Affairs
MDOT	Michigan Department of Transportation
MEDEVAC	medical evacuation
MIANG	Michigan Air National Guard
MIARNG	Michigan Army National Guard
MiCorps	Michigan Clean Water Corps
MOA	military operations area
MOUT	military operations on urban terrain
MSA	munitions storage area
MSL	mean sea level
MTR	military training route
MUASC	Michigan Unmanned Aerial Systems Consortium

## N

NACo	National Association of Counties
NATO	North Atlantic Treaty Organization
NEMCOG	Northeast Michigan Council of Governments
NGB	National Guard Bureau
NGR	National Guard Regulation

NOAA National Oceanic and Atmospheric Administration  
NPDES National Pollutant Discharge Elimination System

## O

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OEA Office of Economic Adjustment  
ONMS Office of National Marine Sanctuaries  
ORV off-road vehicles  
OSD Office of the Secretary of Defense

## P

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P3 public-private partnership  
Pam pamphlet  
PASER Pavement Surface Evaluation and Rating  
PC policy committee  
PEAS Pollution Emergency Alerting System  
PFAs per- and polyfluoroalkyl substances  
PFC perfluorinated compounds  
PFOA perfluorooctanoic acid  
PFOS perfluorooctane sulfonate  
ppt part per trillion

## R

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RA restricted airspace  
RPDP Real Property Development Plan  
RPX real property exchange  
RPZ runway protection zone

## S

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SME subject-matter expert  
SOP standard operating procedure  
STEM science, technology, engineering, and mathematics  
SUA special use airspace

SWOT strengths, weaknesses, opportunities, and threats

## T

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TAG The Adjutant General  
TC technical committee  
TMDL Total Maximum Daily Loads

## U

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UAS unmanned aerial systems  
UFC Unified Facilities Criteria  
UO urban operations  
UXO unexploded ordinance

## V

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VFR visual flight rules





# executive summary

## Introduction

The military and residents of Northeast Michigan have co-existed for a century. Collaboration among all groups calling the region home is critical to preserve the military mission and the residents' quality of life. The military can be a boon to any region, bringing in money, resources, and new people, and Camp Grayling Joint Maneuver Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC) have done just that in this region of the country. The installations are home to one of the largest military training exercises in the country, bringing thousands of military personnel to the region each summer.

A joint land use study (JLUS) is intended to look at the ways the military and civilian life intersect and to help ensure an optimal experience for both sides. Safety for residents while ensuring the military can train soldiers and airmen is paramount, but through the suggested strategies in this plan, partnerships can be forged to help all parties thrive. Incompatible development across the study area will be addressed to resolve any conflicts that may arise.

This study looks at the areas immediately surrounding the boundaries of Camp Grayling JMTC and Alpena CRTC. This area of Michigan is largely rural, with few urban centers and many large tracts of forest land. Natural resources, such as those forests and Lake Huron, are treasured and used often for recreation. Although there is little risk of significant land development near the installations due to the rural setting, encroachment can also take other forms in the sense of traffic, utility capacity, physical trespassing, and natural resources.

The JLUS process involves stakeholders from the military and the public from an early stage. Public meetings informed stakeholders of the project's progress and provided an arena for them to share their thoughts. The resulting information was refined into an "action plan" of suggested strategies. This JLUS is not a regulatory document, and thus it can't mandate action; it is meant to serve as a guide for local entities as a way to continue the positive relationship between the military and the local population going forward. Success in ensuring compatibility into the future depends on diligent and ongoing efforts from stakeholders in the form of the JLUS implementation team.

This plan was funded by the Office of Economic Adjustment (OEA), part of the Department of Defense (DOD), and the Northeast Michigan Council of Governments (NEMCOG) is the sponsoring agency. It is intended to provide a broad overview of the study process and the local area for a wide variety of readers and users.

## JLUS implementation team action plan

Through the public involvement process, compatibility issues were brought forth for consideration. Similar issues arise anywhere the military and the public interact on a regular basis. The JLUS project team refined a detailed set of strategies to solve those issues, which are described in more detail in Section 4 and Appendix D of the document.

In order to ensure the strategies are tracked and implemented as it is possible, it is suggested that a JLUS Implementation Team be convened, comprising members of the JLUS technical committee (TC), policy committee (PC), NEMCOG, local governments, other agencies, and the military.

For both installations covered by this JLUS, a series of key actions has been proposed as the JLUS Implementation Team Action Plan. Each key action in the plan satisfies a number of the strategies. Members of the Implementation Team should be able to roll these actions into their existing programs as funding and resources dictate.

Figure ES.1 | JLUS "Toolbox"

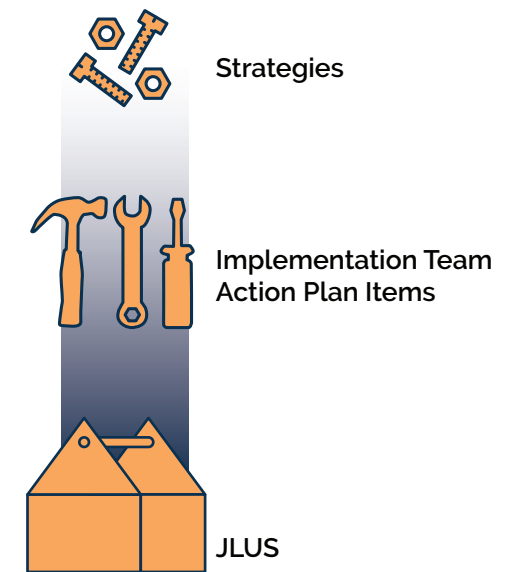


Table ES.1 | JLUS Implementation Team Action Plan Items

CAMP GRAYLING JMTC	ALPENA CRTC
Create Sensible Military Overlay Zones around Camp Grayling JMTC	Create a Military Overlay Zone
Commission a Joint MDNR and Camp Grayling JMTC Landscape Plan	Conduct a Noise Study
Conduct a Noise Study	Expand Alpena CRTC Community Relations Staff
Commission a Camp Grayling JMTC Installation Master Plan	Commission a Thunder Bay Regional Water Master Plan
Update Grayling Area Transportation Study	Conduct an Economic Impact Study
Expand Camp Grayling JMTC Community Relations Staff	Commission a Joint NOAA/Alpena CRTC Bathymetric Survey
Commission a Regional Water Master Plan	Formalize Thunder Bay Interagency Cooperation
Conduct a Fire Protection Services Study	Update the Alpena Area-wide Comprehensive Transportation Plan
Conduct an Economic Impact Study	

Note: Pages ES-3 through ES-6 are meant to be used as two-page standalone brochures to summarize the project status and key recommendations for both military installations covered by this JLUS.

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## what is the JLUS program?

The Joint Land Use Study (JLUS) process promotes and enhances civilian and military communication and collaboration, serves as a catalyst to sustain the military mission, and promotes public health, safety, quality of life, and economic viability of a region. Source: Department of Defense (DOD) Office of Economic Adjustment (OEA), <http://oea.gov/what-we-do/compatible-use>

## where are we in the process?

The Discovery and Strategy and Planning phases of this project are complete. Three sets of public meetings have been held. The draft JLUS report and the final JLUS Public Participation Plan have been submitted, and the public review period is underway. Please consult the JLUS website at <http://www.discovernortheastmichigan.org/jlus.asp> to view the report itself and associated information.

## what happens next?

Provide any comments, questions, or concerns to NEMCOG by June 30, 2018. The final report will be published in September 2018, and there will be another public meeting scheduled in October to present the final conclusions and refined compatibility strategies.

## JLUS implementation team

This is a critical piece of the success of this JLUS. The team should include membership from each participating agency, the project technical committee (TC), the project policy committee (PC), and military personnel. The strategies developed throughout the JLUS process should allow local government leaders and military personnel to roll JLUS recommendations into their existing programs.

A communications plan, zoning tools, and long-range planning are some cost-effective solutions that are part of the action plan presented in Section 4 of this JLUS. This is not a regulatory document and thus cannot mandate action, only propose solutions. Success in implementing the strategies described in this plan depends on dedicated efforts from the stakeholders in the coming years.

This JLUS is meant to be a living document, so certain strategies may need to be revisited in the future as the local situation and applicable laws evolve.

## contact information

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## more project information

Additional project information and the full JLUS report can be found at

<http://www.discovernortheastmichigan.org/jlus.asp>

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camp grayling JMTC



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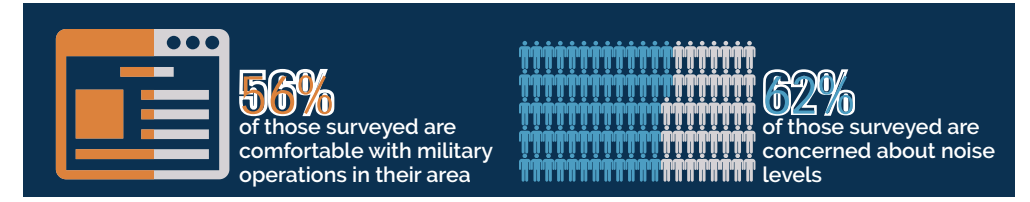
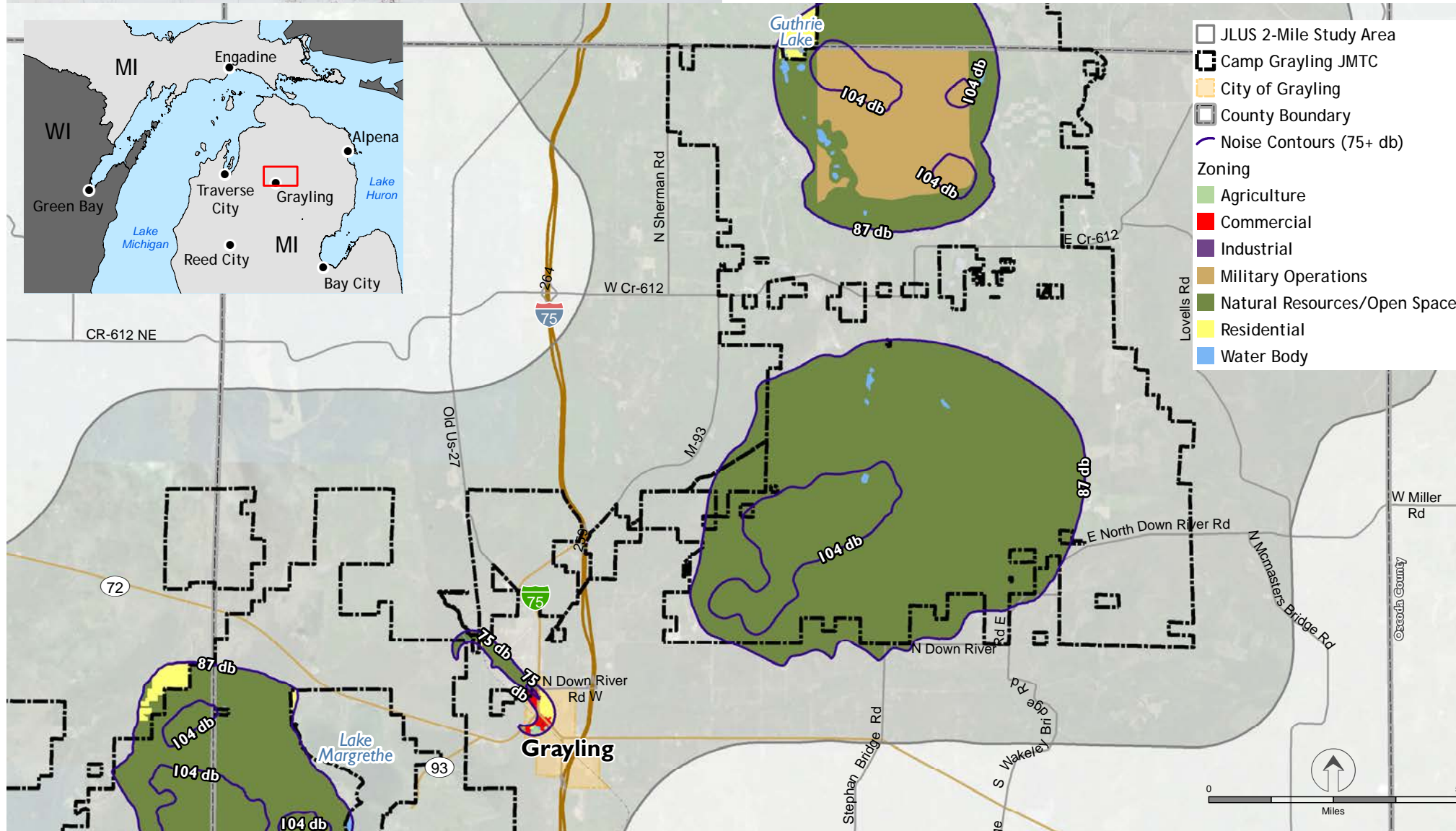


## about camp grayling JMTC

Camp Grayling JMTC is the largest National Guard training center in the country, encompassing 147,000 acres. It supports a wide cross-section of military personnel, including active-duty and National Guard forces. It provides a large ground training area, an air-to-ground range, and a large airspace all in the same complex. Nonmilitary organizations as well as international partners also use the ranges and other facilities there.

## about the surrounding area

Camp Grayling JMTC is located in the largely rural north-central portion of Michigan's Lower Peninsula. This study focuses on the installation itself and a two-mile buffer around the boundary. Though encroachment issues are few due to the low surrounding population, it is critical that the military and the public coexist.



## top issues

Public meetings, an online survey, and one-on-one interviews were some of the methods used to collect public input and determine the largest positive and negative aspects of military operations in the area. The issues that repeatedly came up in the Camp Grayling JMTC area were:

- ▶ **NOISE AND MILITARY OPERATIONS:** Several residential areas are in or near noise contours from military operations, and most of the heart of the City of Grayling lies in the accident potential zone from Grayling Army Airfield.
- ▶ **ROADS:** Public perception links degraded roads with military activity, when weather, logging, and other traffic may have an impact on road condition.
- ▶ **WILDFIRE DANGER:** Wildfires occur frequently in this heavily wooded region. Communication about controlled burns and fire mitigation activities by the Michigan Department of Natural Resources doesn't always reach the public.

## JLUS implementation team action plan

Many of the JLUS strategies have actions that overlap. To capture the best use of plan implementation, overarching actions have been defined that will ultimately serve more than one strategy. The JLUS Implementation Team would be charged with tracking these items. See Section 4 of the JLUS for more information.

ACTION	STRATEGIES
Create Sensible Military Overlay Zones around Camp Grayling JMTC	1a.4, 1a.5, 2a.1, 2a.2, 2d.1, 2d.2, 5b.4, 6a.1
Commission a Joint MDNR and Camp Grayling JMTC Landscape Plan	1b.1, 1b.2, 1b.3, 4e.1
Conduct a Noise Study	1a.1, 1a.2, 1a.3, 2a.2, 2c.1, 2c.2, 2c.3
Commission a Camp Grayling JMTC Installation Master Plan	2c.2, 2c.3, 2d.1, 2d.2, 3d.1, 3f.2, 4a.1, 4a.2, 4c.1, 4d.1, 5b.5, 6b.4
Update Grayling Area Transportation Study	4d.1, 4d.2, 4d.3, 4d.4, 4e.1, 4f.1, 4f.2, 5b.5
Expand Camp Grayling JMTC Community Relations Staff	2b.1, 2c.1, 3a.1, 3b.1, 3e.1, 3f.1, 3f.2, 4e.1, 5a.1, 5a.2, 5a.3, 5a.4, 5b.1, 5b.2, 5b.3, 5b.4, 5b.5, 6a.1
Commission a Regional Water Master Plan	3a.1, 3b.1, 3c.1, 3c.2, 3f.1, 3f.2
Conduct a Fire Protection Services Study	3e.1, 6b.1
Conduct an Economic Impact Study	6a.1, 6b.1, 6b.2, 6b.3, 6b.4, 6c.1, 6c.2

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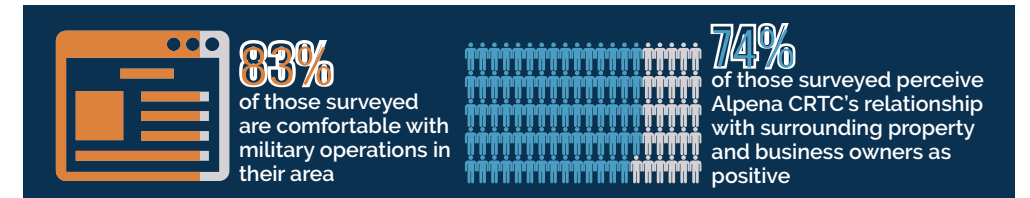
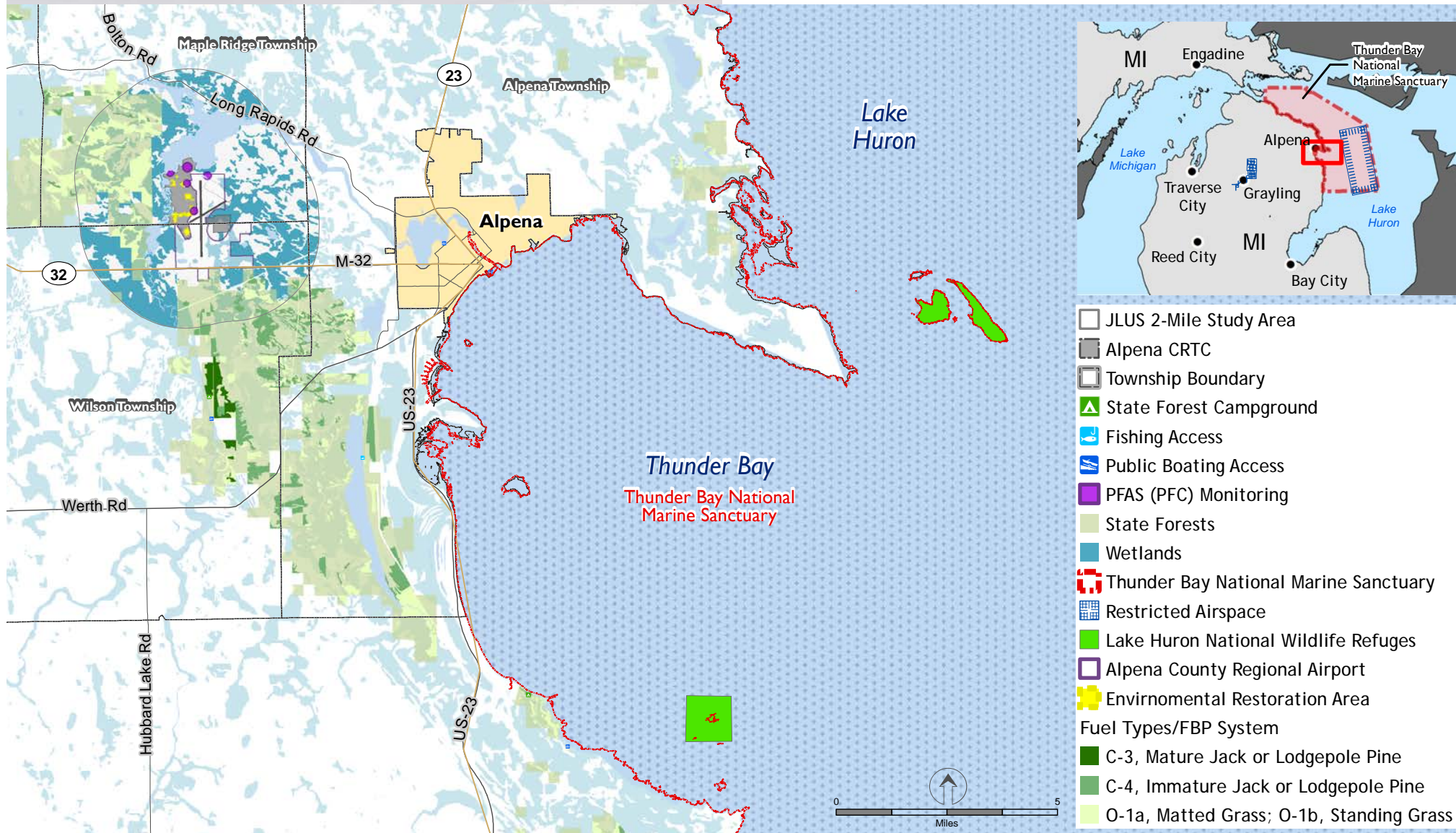


## about alpena CRTC

Alpena CRTC manages the operational aspects of the joint-use airspace used by units training at Alpena CRTC and Camp Grayling JMTC. It is colocated with the Alpena County Regional Airport, sharing functional assets including two runways. The majority of air traffic is military related. While the installation does not have any flying units of its own, it supports organizations from all branches of the military throughout the US and coalition partners.

## about the surrounding area

Alpena CRTC is located west of the City of Alpena, which is situated on Lake Huron's Thunder Bay in the northeastern part of Michigan's Lower Peninsula. This study focuses on the installation itself and a two-mile buffer around the boundary. The area directly surrounding the installation is largely rural.



## top issues

Public meetings, an online survey, and one-on-one interviews were some of the methods used to collect public input and determine the largest positive and negative aspects of military operations in the area. The issues that repeatedly came up in the Alpena CRTC area were:

- ▶ **IMPACTS AND EFFECTS ON SURFACE WATER SYSTEMS, GROUNDWATER, AND DRINKING WATER:** PFOS/PFOA substances have been detected at low levels the areas surrounding Alpena CRTC.
- ▶ **TRAINING ACTIVITIES:** Being one of the largest training areas in the US, the Alpena CRTC/Grayling JMTC complex is a national asset that easily attracts training events like that of the well know Northern Strike exercise. This can impact the community, to suddenly be inundated with thousands of visitors that need services, supplies, entertainment, vehicles, housing and the like. However, these events also bring a boost to the local economy

## JLUS implementation team action plan

Many of the JLUS strategies have actions that overlap. To capture the best use of plan implementation, overarching actions have been defined that will ultimately serve more than one strategy. The JLUS Implementation Team would be charged with tracking these items. See Section 4 of the JLUS for more information.

ACTION		STRATEGIES
Create a Military Overlay Zone		1a.4, 1a.5, 1a.6, 2c.2, 4a.2, 5a.6
Conduct a Noise Study		1a.4, 1a.5, 1a.6, 2c.2
Expand Alpena CRTC Community Relations Staff		2b.1, 2c.3, 3a.1, 3c.1, 4b.1, 4c.1, 5a.1, 5a.2, 5a.3, 5a.4, 5a.5, 5b.2
Commission a Thunder Bay Regional Water Master Plan		2a.1, 2c.3, 3a.1, 3b.a, 3b.2, 3c.1, 4e.1
Conduct an Economic Impact Study		5a.3, 5a.4, 5b.1, 5b.2, 6a.1, 6c.1, 6d.1, 6d.2
Commission a Joint NOAA/Alpena CRTC Bathymetric Survey		2a.1, 2c.1
Formalize Thunder Bay Interagency Cooperation		2a.1, 2c.1, 2c.3, 3b.1, 3b.2, 4b.1, 5a.5, 5b.1, 6b.1
Update the Alpena Area-wide Comprehensive Transportation Plan		4c.1, 4d.1, 4e.1

# 1

## introduction

### chapter overview

A joint land use study (JLUS) is a collaborative effort between the military and surrounding local communities to protect both the long-term viability of the military mission and public health and safety, while also enhancing local economies and industries. This JLUS studies the areas around Camp Grayling Joint Maneuver Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC) in Northeast Michigan. The Northeast Michigan Council of Governments (NEMCOG) is the sponsoring agency of the study.

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### 1.1 What is a Joint Land Use Study?

Military installations are critical economic engines for their surrounding communities, drawing new people to the area and also generating jobs and revenue. It is crucial that space be preserved for the fulfillment of military missions while ensuring that the health and well-being of local residents is also protected.

A JLUS is a collaborative planning effort between military installations and their surrounding communities. They are designed to address compatibility issues and foster a strong working relationship between the military and local governments.

This JLUS examines northeastern Michigan and the communities surrounding Camp Grayling Joint Maneuver Training Center (JMTC), administered by the Michigan Army National Guard (MIARNG), and Alpena Combat Readiness Training Center (CRTC), administered by the Michigan Air National Guard (MIANG).

The JLUS effort is community driven and relies on strong master planning and zoning to ensure the affected entities can coexist in a mutually beneficial manner. Public input is critical to ensure not only the success of the JLUS, but also the success of the relationship between the military and residents of the surrounding communities.

The Camp Grayling JMTC and Alpena CRTC JLUS is funded by a grant from the Office of Economic Adjustment (OEA), Department of Defense (DOD). The local sponsor and grant administrator is the Northeast Michigan Council of Governments (NEMCOG), which oversees nine counties in the northeastern portion of Michigan's Lower Peninsula. A consultant team from Tetra Tech was contracted to complete the study.

#### 1.1.1 JLUS Goals

Several goals were identified for this JLUS at the outset of the project:

1. Promote land use compatibility between the installations and surrounding communities.
2. Seek ways to manage development that is compatible with military training, testing, and operational missions.
3. Encourage cooperative action among military personnel, local community officials, and citizens.
4. Maintain and strengthen regional economic engines.



The City of Alpena's municipal marina, which lies on Lake Huron's Thunder Bay, is owned and maintained by the city.

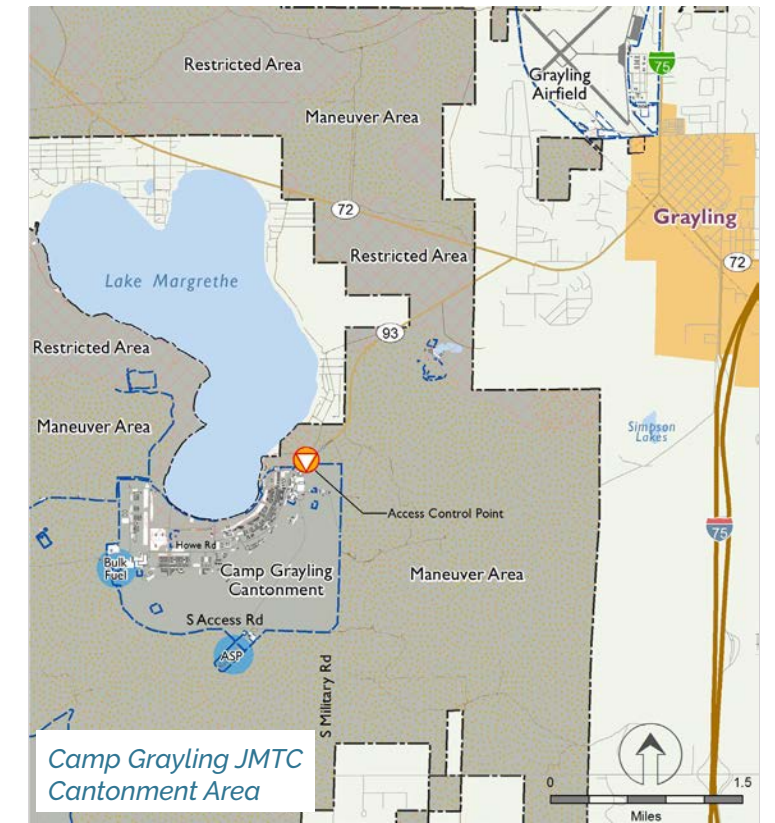
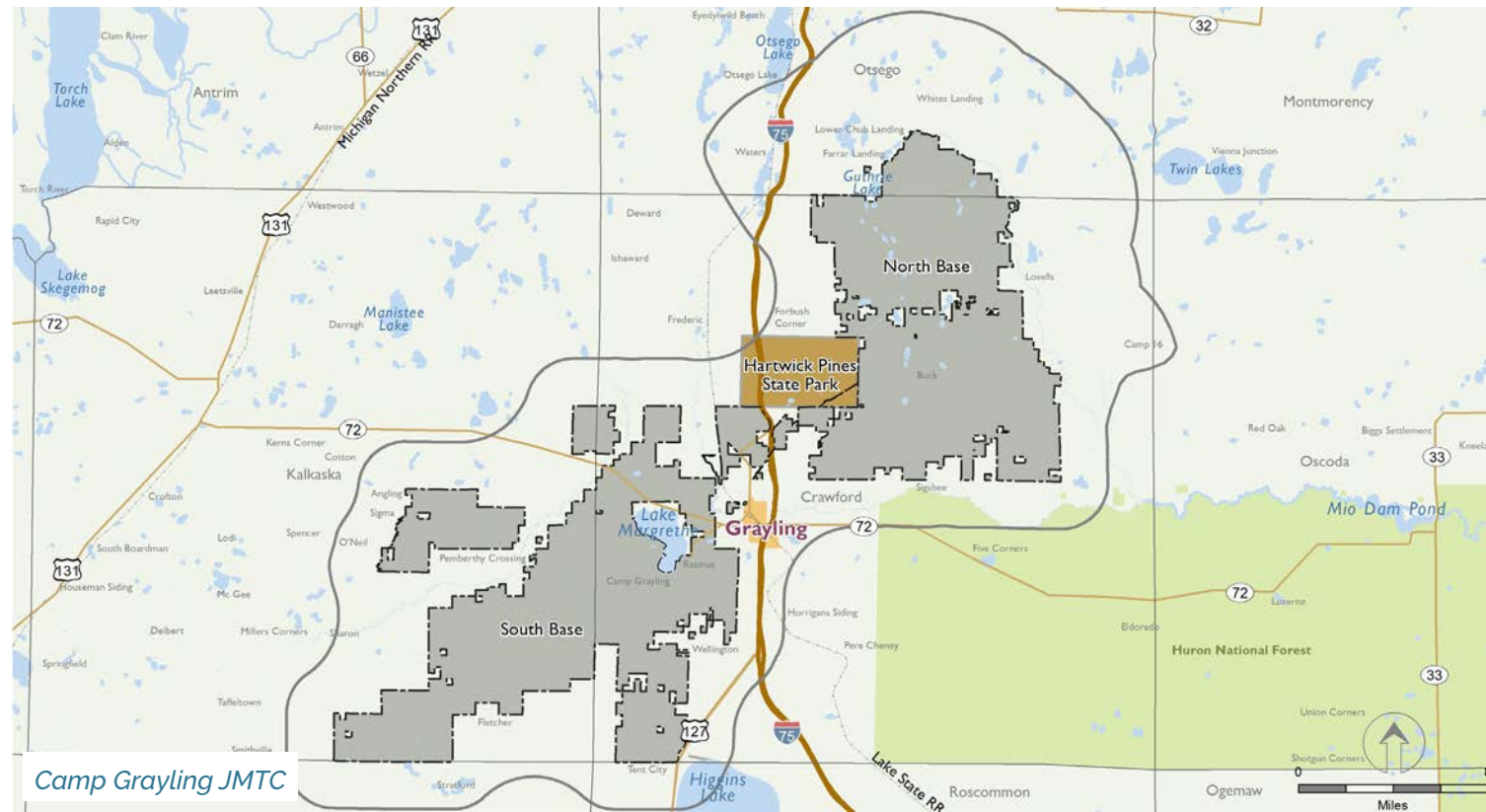
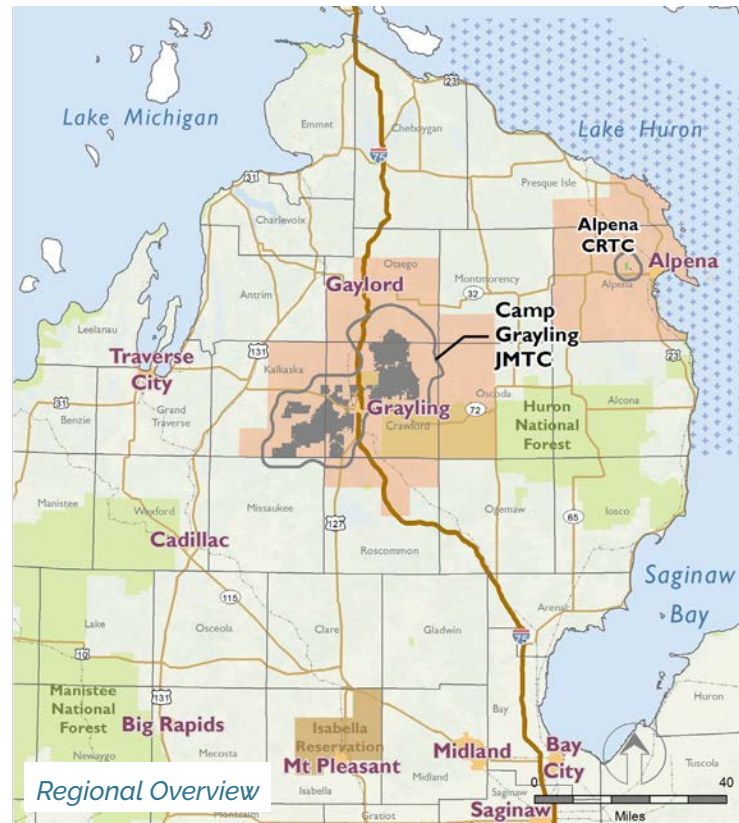
### 1.2 How to Use this Study

The strategies presented in Chapter 4 should be implemented when possible to prevent encroachment or incompatible uses from developing, as well as to mediate any existing land use issues. Consider them to be part of a "toolbox" of planning options to ensure the relationship between the military and the surrounding communities remains strong and mutually beneficial. Each strategy is listed with key participants and suggested timelines to aid the strategy lead in plan implementation. **It is important to understand that the JLUS is a recommended set of strategies and tools, not an adopted plan.** It is recommended that NEMCOG form a JLUS implementation team to monitor progress and maintain momentum after the plan is published.

#### purpose

This JLUS is a collaborative planning effort among the military, the surrounding communities, and stakeholders to create a plan to guide the future development of the lands around Camp Grayling JMTC and Alpena CRTC. It aims to enhance understanding of area issues, promote collaboration, and provide a set of tools for future planning.

Figure 1.1 | Study Area



### 1.3 Study Area Overview

NEMCOG, established in 1968, is a multicounty organization formed to help municipalities in the northeastern part of the state with grant writing, planning, digital mapping, and other tasks that rural governments typically don't have personnel or funding to manage. It is based in Gaylord and covers Alcona, Alpena, Cheboygan, Crawford, Emmet, Montmorency, Oscoda, Otsego, and Presque Isle counties. NEMCOG's board of elected officials, business leaders, and residents is drawn from throughout the nine-county region.

The JLUS study area includes Camp Grayling JMTc, Alpena CRTc, and surrounding local jurisdictions within a 2-mile radius of each installation.

- ▶ The Camp Grayling JMTc area of influence includes Crawford County and portions of Oscoda County, Roscommon County, Kalkaska County, Otsego County, Antrim County, and Montmorency County, for a total of seven counties and 33 municipalities.
- ▶ The Alpena CRTc area of influence includes Alpena County and a small portion of Presque Isle County, as well as 13 municipalities.

Camp Grayling JMTc, the largest National Guard training center in the country, is a 147,000-acre training site, spanning portions of Kalkaska, Crawford, and Otsego counties. The central cantonment area is located in Crawford County, southwest of Grayling Township, and the rest of the property is largely used as maneuver area and range land. Part of Camp Grayling JMTc is bounded by Lake Margrethe, a popular recreation spot for fishing.

Alpena CRTc is located adjacent to the Alpena County Regional Airport in Alpena, Michigan. The city of Alpena is located in the northeast part of the Lower Peninsula on the edge of Lake Huron on Thunder Bay. Alpena CRTc is bounded by Lake Winyah to the north, the Lower South Branch of the Thunder Bay River to the west, and the Alpena County Regional Airport terminal and Michigan State Route 32 (M-32) to the south.

Camp Grayling JMTc and Alpena CRTc are situated in the largest airspace complex for military training east of the Mississippi River. The annual joint Northern Strike training exercise involves more than 5,000 Army, Navy, Marine, and Special Forces personnel from across the nation and six coalition countries.

The wooded, rural surrounding region is sparsely populated. Alpena is the biggest city and transportation hub. The area grew quickly in the mid-1800s due to extensive logging activities. Logs would be transported down the Thunder Bay River to sawmills in the city of Alpena and its port on Lake Huron.

The region surrounding Camp Grayling JMTc and Alpena CRTc is rich in natural resources, and recreational lands and waters are plentiful. The climate features mild summers and cold winters with a large amount of snowfall. In spring, the freeze-thaw cycle is hard on roadways and other infrastructure. Despite that, military personnel are able to participate in year-round training at the installations.

More detailed information on the military missions and background on each site can be found in chapters 2 and 3, which are specific to Camp Grayling JMTc and Alpena CRTc, respectively.

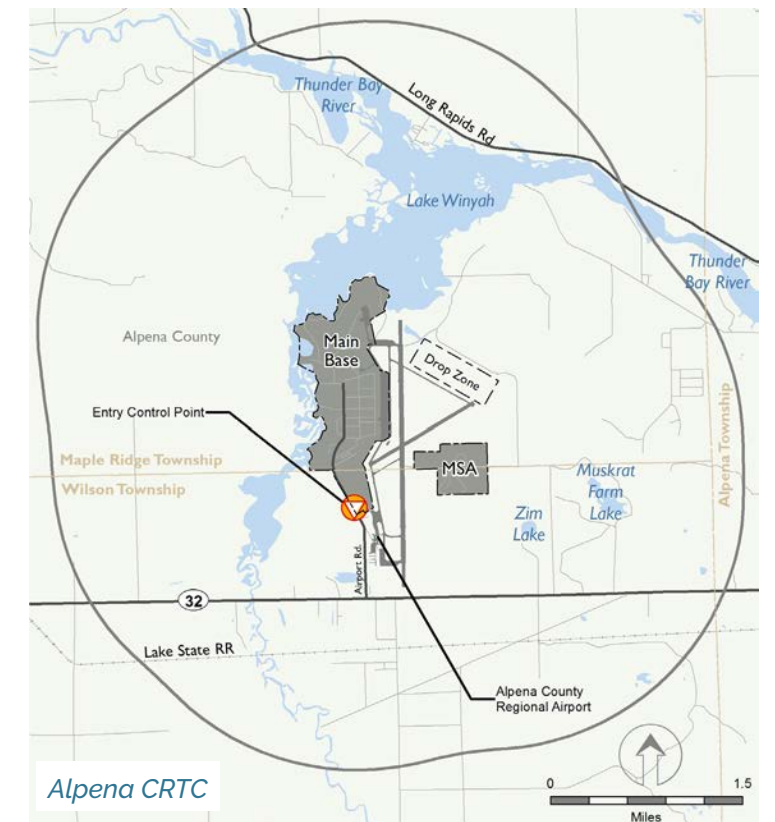
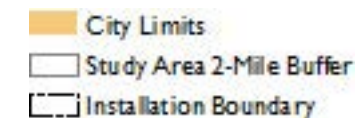




Figure 1.2 | JLUS Project Organization



### policy committee

The policy committee (PC) comprises city, township, and county officials; installation leadership; state officials; and private sector leaders. The PC meets on a quarterly basis and is charged with:

- ▶ providing overall project leadership to include policy direction and oversight, budget approval, project monitoring, and report adoption
- ▶ participating in public outreach events

### technical committee

The technical committee (TC) comprises local and Installation community planners, community staff, business representatives, and residents. The TC meets on a monthly or quarterly basis and is responsible for:

- ▶ data collection
- ▶ identifying and studying technical issues
- ▶ recommending working groups (if needed) for specific issues
- ▶ evaluating alternatives
- ▶ developing recommendations for the PC

## 1.4 JLUS Organization and Public Process

Development and subsequent implementation of this JLUS relies on a community-driven, collaborative, strategic planning process among Camp Grayling JMTTC and Alpena CRTC, surrounding local governments, jurisdictions, and other key stakeholders. The organization of the JLUS project reflects this approach, as shown in Figure 1.2. NEMCOG, as the sponsoring agency coordinating the development of this JLUS, oversees the overall process, schedule, and grant funding. To support the work of the JLUS, NEMCOG convened two stakeholder committees: a technical committee (TC) and a policy committee (PC). The TC focuses on a range of technical activities, including data collection, identifying issues and the need for issue-specific working groups, and developing recommendations for the PC. The PC focuses on providing overall project leadership, project monitoring, final report adoption, and participating in public outreach activities and events. Committee membership is provided on the following page.

Achieving the JLUS project goals requires strong public participation throughout the process. The JLUS project team developed and implemented a public participation plan to effectively engage stakeholders. The following text presents a summary of the comprehensive JLUS public participation plan, which is available in Appendix B.

The public participation plan includes five components:

1. **IDENTIFYING AND CHARACTERIZING KEY STAKEHOLDERS:** Understanding stakeholders' awareness, perceptions, concerns, values, and priorities related to Camp Grayling JMTTC and Alpena CRTC helps the JLUS project team develop targeted involvement opportunities and educational resources, as well as to understand stakeholders' communication channel preferences. Based on discussions with NEMCOG and the Camp Grayling JMTTC community relations specialist, as well as other members of the PC and TC, the community residents rely on traditional sources of information, such as newspaper, radio, and word of mouth, to obtain information.
2. **CREATING EFFECTIVE MESSAGES:** Messaging to stakeholders evolves throughout the process. Initial messages for the discovery phase focused on raising awareness and promoting engagement. Highlighting stakeholder input on issues and concerns is important to identifying solutions that will benefit local communities. Messages for the strategy and planning phase focus on reporting interim findings of the identified issues/conflicts and

emphasizing the need for stakeholders to determine if the JLUS project team accurately captured stakeholders' issues and concerns. Messages for the implementation phase focus on presenting the final report findings and recommendations in both the Grayling and Alpena areas, stating the need to collaboratively implement final recommendations based on stakeholder input to benefit local communities and address priority issues.

3. **IDENTIFYING AND CREATING EFFECTIVE STAKEHOLDER INVOLVEMENT OPPORTUNITIES AND EDUCATIONAL RESOURCES:** The JLUS project team selected a suite of stakeholder involvement opportunities, including TC and PC meetings, Camp Grayling JMTTC and Alpena CRTC PC and TC member tours and issue identification sessions, community meetings and input sessions, project fact sheets, the JLUS project website, and project presentations. Community surveys and stakeholder interviews are essential involvement opportunities, providing the JLUS project team with insights on priority issues related to Camp Grayling JMTTC and Alpena CRTC activities that would require effective strategies. The community meetings and input sessions were also critical to identifying issues, both positive and negative, that drive the overall JLUS process.
4. **IDENTIFYING EFFECTIVE DISTRIBUTION CHANNELS AND MECHANISMS:** Distribution of outreach relies on both a targeted approach to TC and PC members and a ripple approach that asks PC and TC members to use existing distribution mechanisms — such as newsletters, websites, email distribution lists, social media, meetings, and community bulletin boards — to reach their organizational members and constituents with information on involvement opportunities and educational materials. The JLUS project team also relies on local newspapers and radio to help reach stakeholders about the process, the survey, and other means of participation.
5. **ASSESSING EFFECTIVENESS:** Feedback from stakeholders on involvement activities help the JLUS project team determine if changes are necessary to improve effectiveness. The ultimate metric of public involvement effectiveness is support for the final JLUS and implementation of its recommendations over time.

Subsequent chapters of this report provide the outcomes of the public participation process including specific issues and strategies for Camp Grayling JMTTC and Alpena CRTC.

22 local cities and townships involved  
60 stakeholder interviews conducted

65 technical and policy committee members  
195 total online survey responses

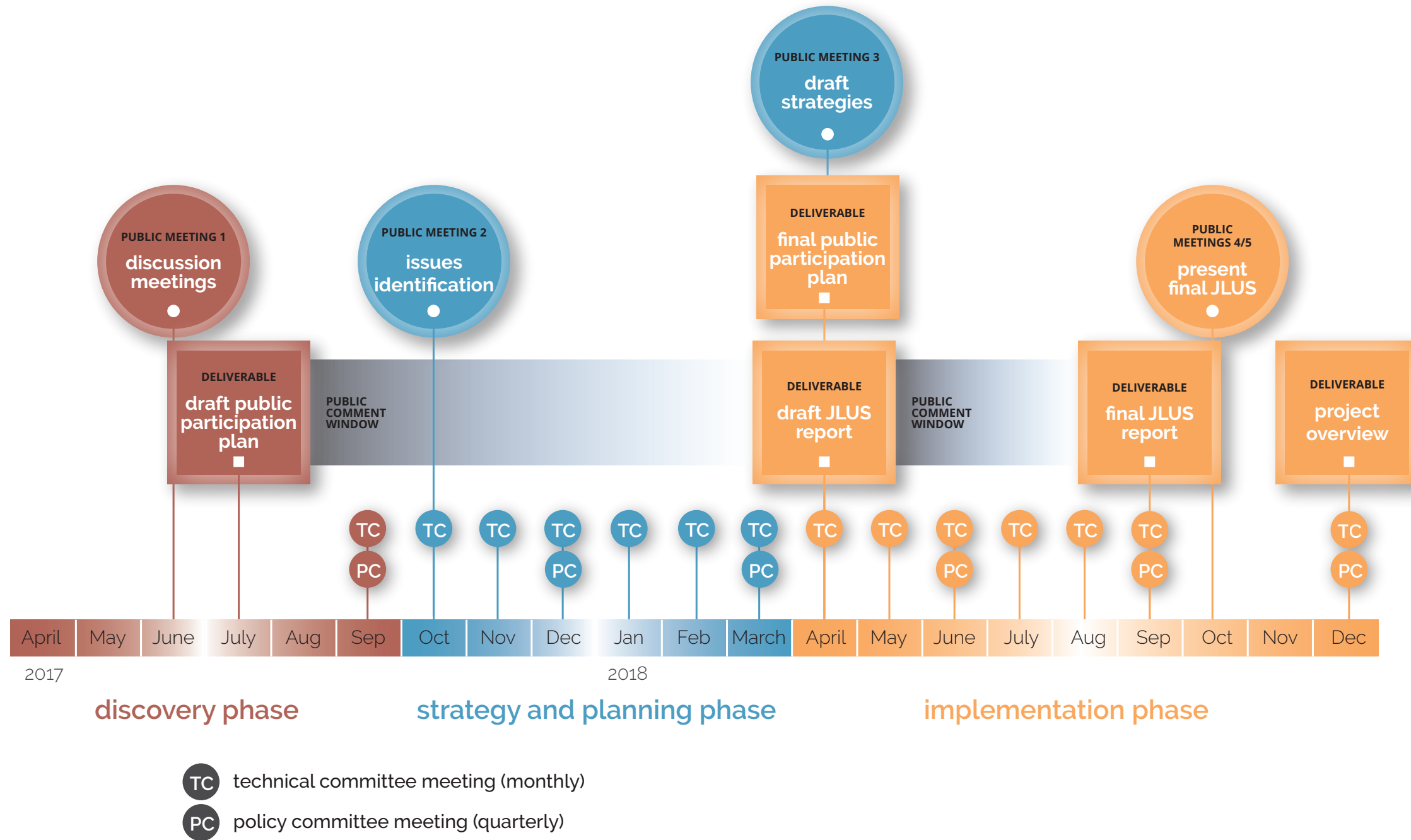
### 1.4.1 Committee Membership

Table 1.1, JLUS Policy and Technical Committee Members and Organizations, contains a list of JLUS TC and PC members. These individuals will play a key role in both developing and implementing the JLUS by serving as the core group of stakeholders.

Table 1.1 | JLUS Policy and Technical Committee Members and Organizations

JLUS POLICY COMMITTEE		JLUS POLICY COMMITTEE, CONTINUED	
Name	Representing/Title	Name	Representing/Title
<b>Ken Glasser (JLUS Chairman)</b>	Otsego County Board	George F. Banker	Bear Lake Township Supervisor
<b>Greg Sundin (JLUS Vice Chairman)</b>	City of Alpena	Chris Peterson	US Forest Service
<b>Matt Waligora (JLUS Vice Chairman Alternate)</b>	City of Alpena Mayor	Scott R. Koproski	US Fish & Wildlife Service
<b>Marc Dedenbach (JLUS Secretary)</b>	Grayling Township	Edward A. Nellist	Lyon Township Supervisor
SGM Kent Smith	Camp Grayling JMTC	James Zakshesky	Posen Township Supervisor
SFC Jeremie Mead	Camp Grayling JMTC	Michael Grohowski	Krakov Township Supervisor
LTC Brian Burrell	Camp Grayling JMTC	Nyle Wickersham	Metz Township Supervisor
Lt Col Matthew Trumble	Alpena CRTC	William E. Curnalia	Higgins Township Supervisor
Lt Col Michael Leski	Alpena CRTC	Gary Neumann	Lovells Township Supervisor
Capt Brian Blumline	Alpena CRTC	Denise Matteini	Otsego Lake Township
Jonathan Edgerly	Michigan Army National Guard – Environmental	Margaret Black, alternate	Otsego Lake Township Clerk
Kim VanNuck	Beaver Creek Township Supervisor	Bonny Miller	Chester Township Supervisor
Brandon Schroeder	Michigan State University Extension/Michigan Sea Grant	Scott Kruger	Antrim County Commissioner
Susan Thiel	MDNR	Brenda Fournier	Alpena County Commissioner
Jeff Gray	Thunder Bay National Marine Sanctuary, NOAA	<b>JLUS TECHNICAL COMMITTEE</b>	
Rob Pallarito	Otsego County Board	<b>Name</b>	<b>Representing/Title</b>
Mark Ignash	MEDC	Adam Poll	City of Alpena Planning & Development Director
Jim Klarich	Target Alpena	Erich Podjaske	City of Grayling Zoning/Economic Development
Scott Thayer	MDOT	Lisa Kruse	Alpena CRTC Environmental Specialist
Dave Stephenson	Crawford County Board Chair	Susan Thiel	MDNR
Doug Baum	Grayling City Manager	Julie Lowe	MDEQ
Steve Smigelski	Alpena Airport Manager	Alayne Hansen	Michigan Works!
David Persons	Garfield Township Supervisor	Patty O'Donnell	MDOT
Cody Werth	Wilson Township Board/Planning Commission	Doug Baum	City of Grayling
Julie Lowe	MDEQ	Denise Mattieni	Otsego Lake Township
Lisa McComb	Otsego County Economic Alliance	John Bailey	Huron Pines
Bill Johnson	Frederic Township Supervisor	SMSgt Jerome Torres	Alpena CRTC
Shelly Pinkelman, alternate	Frederic Township Zoning	SMSgt Damian Pappas, alternate	Alpena CRTC
Ken Lobert	Ossineke Township Supervisor		
Nathan Skibbe	Alpena Township Supervisor		
Dave Post	Village of Hillman		
Myron McIntire, alternate	Hillman Village President		
Cam Habermehl	Alpena County		
Brian Goebel	Bagley Township		
Ken Arndt, alternate	Bagley Township		
Jodi Valentino	Roscommon County Controller		
Bruno Wojick	Briley Township		
Howard Lumsden	Long Rapids Township Supervisor		
Sharcy Ray	USDA Natural Resource Conservation Service		

Figure 1.3 | Project Timeline



## 1.5 Project Timeline

Stakeholders were engaged in this JLUS from an early phase through a variety of methods. Tours provided an opportunity for TC and PC members to become more familiar with the missions and operations of Camp Grayling JMTC and Alpena CRTC. Public meetings gave local residents, not just TC and PC members, a chance to express their concerns and learn more about the JLUS process. Online surveys collected data from an even wider pool of stakeholders across the study area.

This project is divided into three phases:

- ▶ **DISCOVERY PHASE (APRIL-SEPTEMBER 2017):** During this phase, data collection began and the public participation plan was initiated (see Appendix B) and published in draft form. Initial public meetings were held in June 2017 to raise awareness of the JLUS process and to solicit input. A strengths, weaknesses, opportunities, and threats (SWOT) analysis was performed to begin the issues collection process. The JLUS project team began analyzing the results.
- ▶ **STRATEGY AND PLANNING PHASE (SEPTEMBER 2017-MARCH 2018):** During this phase, the interim findings on the identified issues and conflicts were reported to the stakeholders and work began on the JLUS report. The public participation plan was finalized and published.
- ▶ **IMPLEMENTATION PHASE (APRIL-DECEMBER 2018):** During the final phase of the project, the final report findings are presented to the TC and PC as well as the public. The draft JLUS is published, and the public is given a chance to weigh in on the strategies and recommendations presented in the plan. The JLUS project team then refines the plan before the final version is published and the results presented at the final public meetings. The team will help guide local governments on how to best implement the strategies presented in the JLUS.

## 1.6 Next Steps: JLUS Implementation Team

The JLUS Implementation Team should include representation from each participating agency, the TC, and the PC. The strategies developed in the JLUS should allow local government leaders and the military to roll JLUS recommendations into their existing programs. A communication plan, proper zoning tools, and long-range planning are some of the most cost-effective ways to ensure compatible development in the long term. This JLUS is meant to be a living document, so certain strategies may need to be revisited as the local situation and applicable laws evolve. For more information on the Implementation Team Action Plan, see Section 4.

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# 2

## camp grayling JMTC

### chapter overview

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*An impact range at Camp Grayling JMTC.*



*The Combined Arms Collective Training Facility (CACTF) at Camp Grayling JMTC consists of numerous structures to train soldiers in Urban Operations capabilities.*

## 2.1 Camp Grayling JMTC Study Area Overview

### 2.1.1 How to Read this Chapter

The following sections describe Camp Grayling JMTC and the areas surrounding it. The first section contains a study area overview, which includes existing conditions information about the Camp Grayling JMTC area. The next section has a description of the public participation aspect of this JLUS for Camp Grayling JMTC, and finally, the third section features a discussion of the JLUS issues brought up by local stakeholders and refined by the JLUS project team.

### 2.1.2 How Camp Grayling JMTC and its Surrounding Area Is Unique

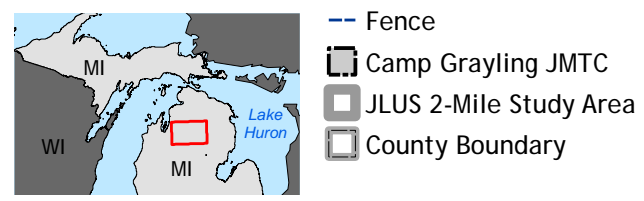
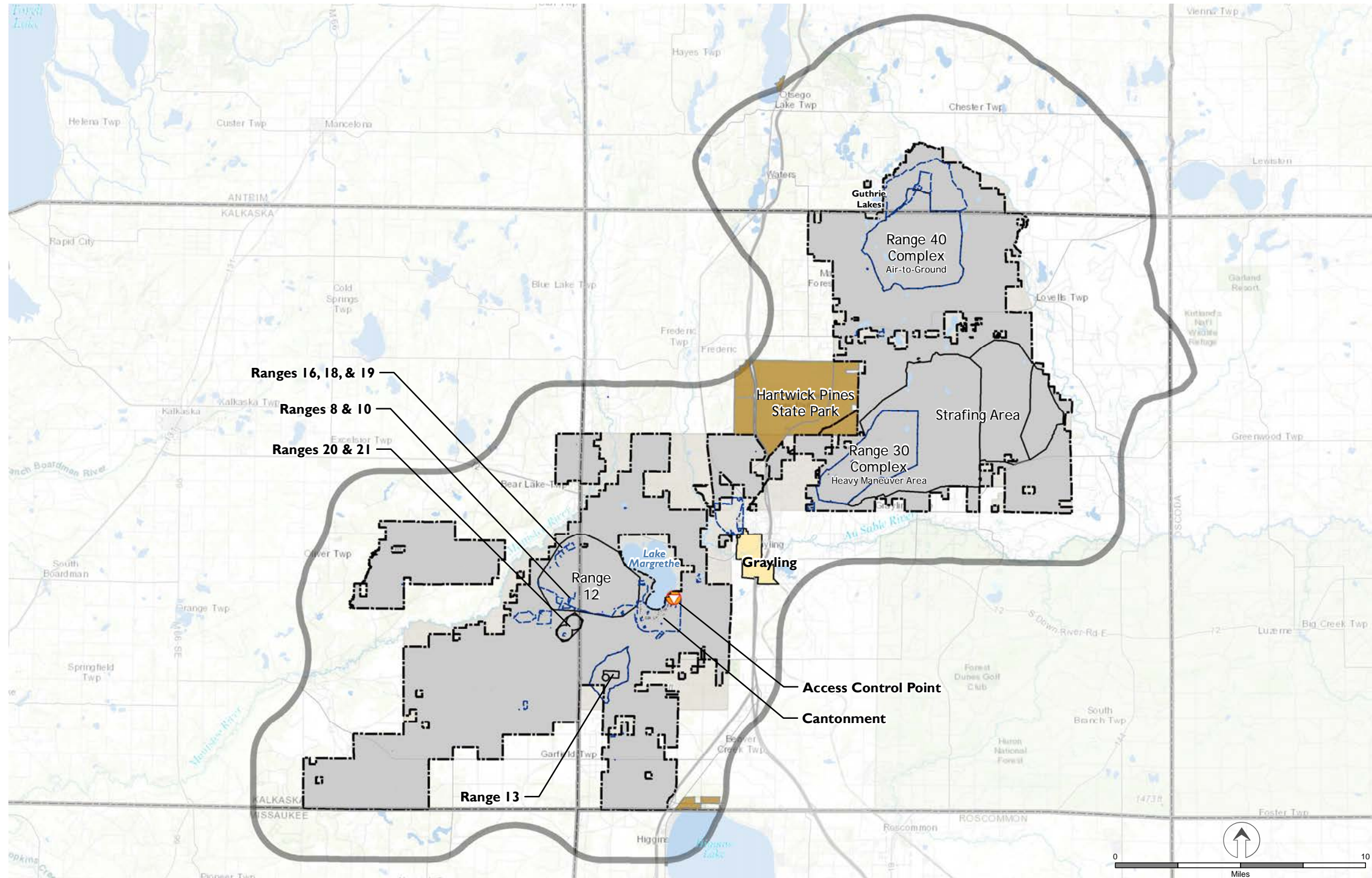
The region surrounding Camp Grayling JMTC is unique in that it provides a large training area, an air-to-ground range, and a large airspace for aerial training all in one complex. Military activity has been going on in the region for over 100 years. Camp Grayling JMTC is used by a cross-section of the U.S. military, including active-duty and National Guard forces, and as a result, the equipment used to train at the camp is also varied. Nonmilitary groups and agencies also use the ranges and other facilities, including Michigan state police, county sheriff departments, local clubs, and scout troops.

The training area is also used by international partners such as Canada, Great Britain, Australia, and Latvia and Liberia (part of the National Guard's State Partnership Program that matches states with international security partners).

The surrounding communities and townships are small, and the area is mostly rural and wooded, with abundant recreational uses. Much of the land on and around Camp Grayling is managed by the Michigan Department of Natural Resources (MDNR) and leased to the Michigan Department of Military and Veterans Affairs (MDMVA). The original 13,000-acre installation footprint was granted to the state of Michigan by lumber baron Rasmus Hanson to use as forest game preserve and military training. No hunting is allowed in the Hanson land grant area, and the public is allowed to access much of the large Camp Grayling JMTC footprint except during active military training.

Camp Grayling JMTC has a state-of-the-art Urban Operations training site, used to train soldiers to handle combat in urban environments. It features a mock village, including subterranean tunnels, to simulate wartime settings. The Michigan Army National Guard (MIARNG) mixes live training at the installation with virtual capabilities using state-of-the-art simulation software.

Figure 2.1 | Camp Grayling JMTc



Camp Grayling JMTc is a key piece of the Michigan Army National Guard arsenal, providing top-of-the-line training land, airspace, and facilities. Surrounding communities value the installation for bringing new people and economic activity to the region, and most residents feel that the installation has a positive impact on quality of life. Some have concerns about noise levels, roads, and the impact of growth on infrastructure capacity.



An image of Camp Grayling in 1917. (Source: Library of Congress Prints and Photographs Division Online)

### 2.1.3 Setting

The Camp Grayling JMTC study area is located in the rural north-central portion of Michigan's Lower Peninsula. The installation cantonment, adjacent to the City of Grayling, is approximately 50 miles east of Traverse City and 200 miles northwest of Detroit. Access to the area is generally via Interstate 75 (I-75) and Michigan Highway 72 (M-72).

The abundance of public forest land and the locations of the Au Sable and Manistee rivers make the area popular with outdoor enthusiasts; activities include hiking, fishing, golfing, canoeing, kayaking, skiing, snowmobiling, and biking.

Camp Grayling JMTC, the largest National Guard training center in the country, spans 147,000 acres in Crawford, Kalkaska, and Otsego counties and is split into North Camp and South Camp. The study area for this JLUS extends into Roscommon, Oscoda, and Montmorency counties.

The Camp Grayling JMTC main cantonment area, located in South Camp, is about 4 miles from the City of Grayling, the immediate area's largest population center. Gaylord, a city of about 3,600, is a 35-minute drive to the north.

The Camp Grayling JMTC study area has a very short and highly variable growing season. Temperatures at Camp Grayling JMTC range from an average low of 16.7 degrees Fahrenheit in January to an average high of 79.6 degrees in July, according to the Midwestern Regional Climate Center. The area averages 33.61 inches of precipitation annually. The average snowfall is 93.1 inches.

### 2.1.4 History

The forested environment surrounding Camp Grayling JMTC played a major role in its history, as many of the first settlements in the area were associated with the trapping and lumber industries, and railroad construction in the area began in the late 1800s. The first schoolhouse in Grayling opened in the 1870s, and a railroad depot was built there in 1882. In 1911, First Mercy Hospital opened in Grayling. Two

years later Rasmus Hanson, a local lumberman, donated 13,000 acres of land to the state for military training, which later became Camp Grayling JMTC. The camp's historic Officer's Club building was constructed in 1917.

In 1914, Hanson founded the Grayling Fish Hatchery, partly in an unsuccessful attempt to save the Michigan Grayling from extinction. The hatchery is now owned and operated by the Grayling Recreation Authority, and its preservation is part of a public-private partnership (P3) with Harrietta Hills Trout Farm. The area also had a DuPont Chemical Plant, as well as the Hanson and Salling Mill; both closed in 1925.

However, the area's military contingent was growing. Between 1918 and 1921, the acquisition of 35,000 acres allowed for the first artillery range. The Grayling airport was developed for the National Guard Air Squadron of Detroit. Featuring sand runways, it opened in 1929, and the runways were paved in 1936. An exchange, control tower, fire department, and barracks were added to the camp in 1942.

In 1948, the land area of Camp Grayling grew dramatically when more than 53,000 acres were leased in perpetuity from the Michigan Conservation Department (now the MDNR). This allowed for tank training at the camp.

An additional 47,000 acres were leased from the MDNR in 1984. Among the numerous range and facility projects at Camp Grayling in that part since the 1960s, including the development of a logistical support facility, motor pools, and the Maneuver Area Training Equipment Site (MATES) facility, which was built in 1986. More recently, the wastewater treatment facility was added in 1991 and a multipurpose range complex in Range 30 was built in 1997.

### 2.1.5 Mission/Operations

The Alpena CRTC and Camp Grayling JMTC are vital and irreplaceable components of the U.S. military. They are physically separated but operationally inseparable. Camp Grayling acts as the local garrison component of the range complex while Alpena CRTC oversees and controls training



Downtown Grayling in 2018.

operations and management of the entire complex stretching from the eastern border with Canada to the western edge of the camp including the supporting special use airspace (SUA) complex. While Alpena CRTC is a Michigan Air National Guard installation, Camp Grayling JMTC is owned and operated by the MIARNG.

Camp Grayling JMTC is directly accessible from interstate highways and has its own railhead for equipment delivery. This training complex provides units from all branches of service under the DOD opportunities to train and qualify at nearly every activity necessary for national defense. It provides for joint, intra-service operational training, which is imperative in today's asymmetrical battlefield. Its massive footprint is among only a small few in the nation that can support mission command across extended distances and the ability to synchronize joint attack maneuvers to maximize the most effective use of the battle space while retaining freedom and flexibility of action, protecting against fratricide, and integrating joint and multinational forces in a dynamic, decisive operating environment. It provides realistic and simulated environments and four-season capability to train for military operations in all conditions.

This includes simultaneous integration of ground forces (both on foot and vehicular), ground-to-air (including artillery, mortar, and small arms fire), air (including rotary wing, fixed wing, fighters, bombers, reconnaissance, communications, and unmanned aerial systems [UAS]), air-to-ground (strafing, door gunnery, aerial bombing, missiles, close air support [CAS], medical evacuation [MEDEVAC], electronic detection and prevention, and laser targeting), and space assets (including intelligence, surveillance, and reconnaissance [ISR], and communications satellites and receivers).

Camp Grayling JMTC comprises a few component features:

- ▶ **RANGE 30 COMPLEX:** Includes 65,000-acre heavy and light maneuver areas, small arms firing ranges for training and qualification, sniper ranges, convoy training, improvised explosive device (IED) awareness training, military operations on urban terrain (MOUT) mock villages, a heavy multipurpose range complex, rocket launching

systems training, UAS launch and recovery and flight zone within restricted airspace (RA), and equipment storage and maintenance support facilities.

- ▶ **RANGE 40 COMPLEX:** Includes over 17,000-acres of maneuver area, 10,000 acres of live-fire area with a dud-impact zone, small-arms fire capability, artillery and mortar direct fire, mechanized live fire, combined arms live fire, rotary-wing and fixed-wing aerial gunnery, rotary-wing door gunnery, and aerial bombing from as high as 23,000 feet above mean sea level (MSL) within RA.
- ▶ **SOUTH CAMP GRAYLING:** Includes small-arms ranges for training and qualification on all current firearms, infantry squadron battle course, mortar and grenade ranges, light demolition range, fire movement range, and known distance ranges.
- ▶ **OPERATIONAL READINESS TRAINING COMPLEX AT CAMP GRAYLING:** Includes 8,000 transient bed spaces, 53 officers' quarters, 45 mess halls, seven maintenance buildings, seven classrooms, and two distance-learning centers. It has over 220,000 SF of warehouse storage space, bulk fuel storage for aircraft and ground equipment, munitions storage facilities, and a wide variety of recreational support facilities.
- ▶ **GRAYLING ARMY AIRFIELD (AAF):** Includes an area large enough to support up to a combat aviation brigade including 60 helicopter tie-downs, housing to support 300 troops plus an additional 300 person bivouac area, dining facilities, training and administrative facilities, educational and operations facilities, two paved runways (both 5,000 feet long by 150 feet wide) capable of landing a fully loaded C-17, a control tower overseeing Class-D controlled airspace, aircraft maintenance hangars, a launch and recovery runway for RQ-7B Shadow UAS, and Shadow UAS simulators. The airfield is owned and operated by the Army but is open to the public. Grayling AAF supports slightly more overall activity than Alpena County Regional Airport but fewer military flights.
- ▶ **SPECIAL USE AND PROTECTED AIRSPACE:** One of the largest airspace complexes in North America, including approximately 18,000 square nautical miles of low-altitude (below 18,000 feet MSL) and high-altitude (above 18,000 MSL) SUA, some extending as high as 45,000 feet MSL and as low as 300 feet over Lake Huron. It includes approximately 935 square nautical miles of protected airspace for dangerous activities like tactical flight maneuvering, air interdiction, aerial denial, chaff and flare release, aerial gunnery, and bombing designed to protect nonparticipating aircraft.

The training activities at Camp Grayling JMTC bring as many as 250,000 personnel through the area per year. The installation supports 44 Army National Guard personnel, 54 state employees, and 20 contract employees with an additional 56 temporary employees during training events.

## 2.1.6 Demographics

The Camp Grayling JMTc study area for this JLUS is set in a largely rural area in Michigan. As of 2017, data shows 1,820 people reside in the City of Grayling, with 5,705 residing in Grayling Township. In general, northern Michigan is much less urban than the rest of the state, and the study area is primarily rural.

Although there are only about 174 personnel housed at Camp Grayling JMTc annually, approximately 10,000 troops train there throughout the year. Camp Grayling JMTc is a continued source of economic activity for the local community. The federal funds that pay camp employee salaries are subsequently used to pay local taxes and to support schools, hospitals, churches, and local businesses.

Outside of the military, property tax is the primary generator of revenue. The City of Grayling has a workforce population of 803 people. In 2017, the leading industries in Grayling were health care, social services, retail, accommodation and food services, and public administration.

Figure 2.2 | City of Grayling Population Trend, 1910-2020

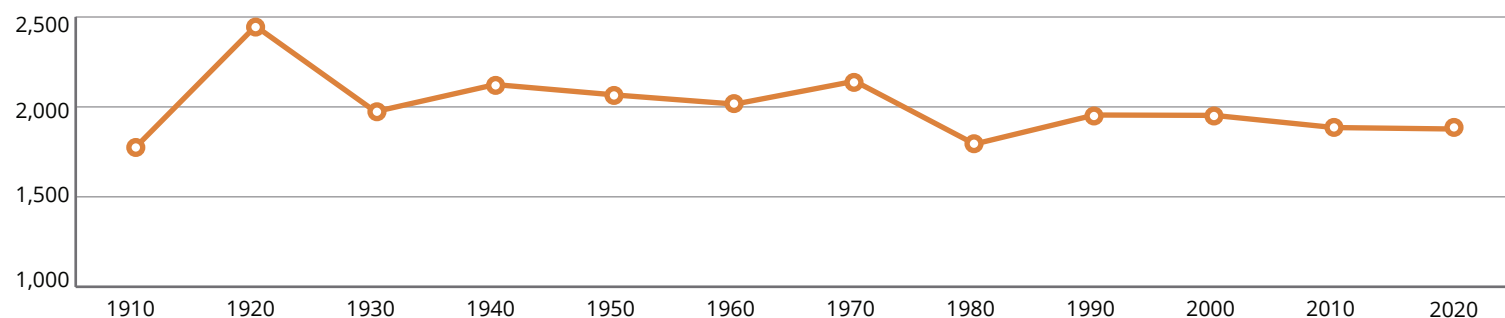


Figure 2.3 | Camp Grayling JMTc Study Area



## Population Projections

Population in the area has slowly been declining since 2000. This could be due to the aging population of Grayling and high poverty rates. However, unemployment rates have decreased significantly, dropping from 15.3 percent in 2010 to 5.6 percent in 2016. Also, the cost of living is very low compared to other rural areas in the region. The forecasted population looks to increase by the year 2022 due to key growth potential factors. See Figure 2.2, City of Grayling Population Trend, 1910-2020.

## Growth Potential

There are several key growth potential factors and strategies that the Camp Grayling JMTc study area has planned to implement. These plans are in place to help boost the economic and population growth potential in the area.

In an effort to attract skilled talent to the area and curb a decreasing population, a 10-year talent plan was commissioned for the 11-county Northeast Michigan region. The

plan focuses on long-term growth, bringing to the region full-time, higher-wage positions in the highest growth industries. The Northeast Michigan 10-year talent plan provides a timeline, best practices, and recommendations for assessing and bringing in skilled employees to the region. Northeast Michigan is looking to adequately plan for long-term growth by anticipating industry trends and educational needs. The vision for the future of Northeast Michigan is to fill 10,000 jobs in 10 years. For details, see Table 2.1, Northeast Michigan Industry Forecast.

Grayling will soon experience a resurgence in the forestry industry. A Chilean forestry company, Arauco, is opening a particle board factory in 2018. This is poised to bring in hundreds of local jobs and boost the economy significantly. Once the factory opens, it will become the second-largest county employer after Grayling's hospital, dropping Camp Grayling JMTc to third largest.

The City of Grayling has recently prepared a thorough economic development strategy. The strategy specifies detailed steps, responsible parties, and timelines for implementation to boost Grayling's economic growth. The steps focus on the key issues in the area, some of which include:

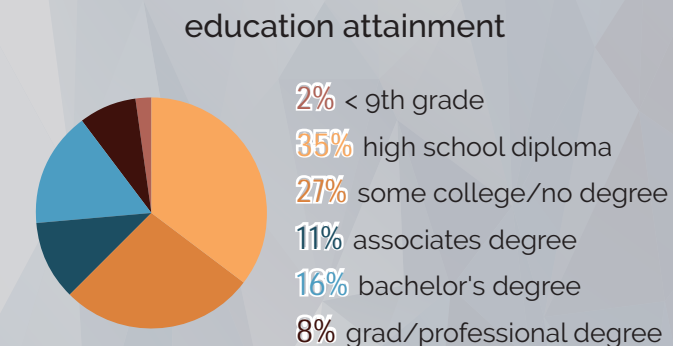
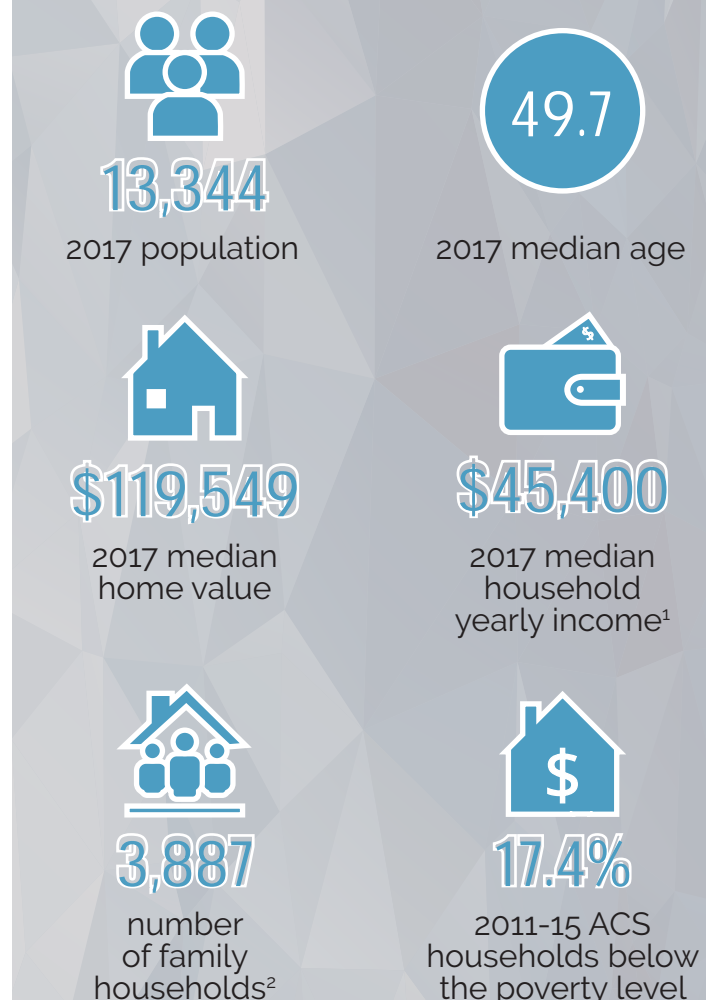
- ▶ Child care options
- ▶ Better communication with Camp Grayling JMTc
- ▶ Transportation
- ▶ Housing options
- ▶ Cell service and internet access
- ▶ Diversity in dining options
- ▶ Appearance improvement to the downtown area

Table 2.1 | Northeastern Michigan Industry Forecast

INDUSTRY	EMPLOYMENT 2012	EMPLOYMENT 2022	PERCENT CHANGE (%)
Retail Trade	10,960	10,860	-0.9
Healthcare and Social Assistance	9,560	10,212	6.8
Transportation and Warehousing	1,460	1,630	11.6
Manufacturing	5,170	5,420	4.8
Construction	2,380	2,780	16.8
Agriculture, Forestry, Fishing, and Hunting	1,790	1,850	3.4
Professional and Business Services	2,320	2,620	12.9
Accommodation and Food Services	6,410	6,860	7.0
Leisure and Hospitality	7,530	8,040	6.8
Government	6,270	6,090	-2.9
Financial Activities	2,320	2,360	1.7

Source: [http://www.discovernortheastmichigan.org/downloads/rpi\\_10\\_year\\_talent\\_plan.pdf](http://www.discovernortheastmichigan.org/downloads/rpi_10_year_talent_plan.pdf)

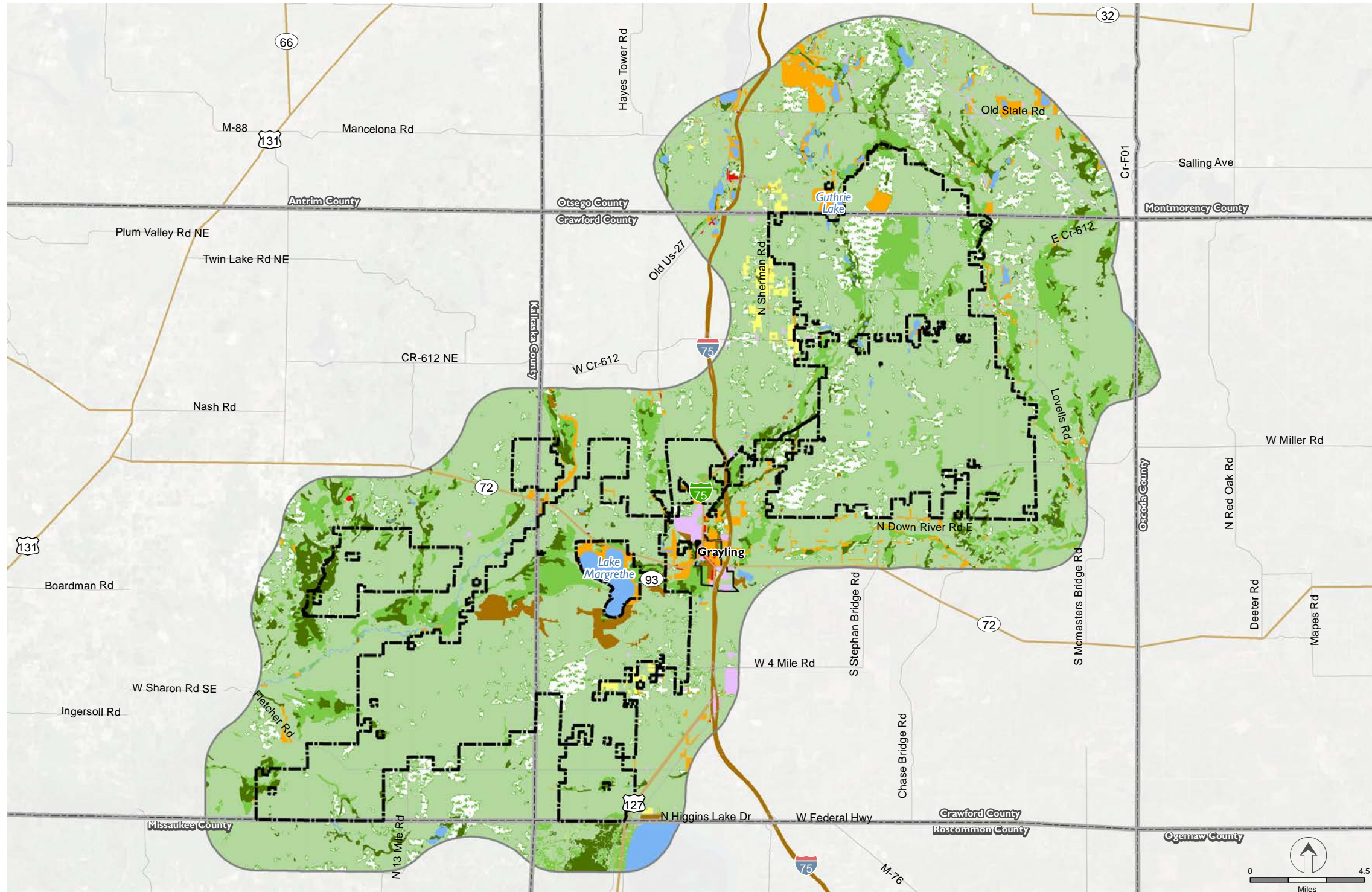
Figure 2.4 | Camp Grayling JMTc Study Area Demographics



1. Esri  
2. 2010 US Census



Figure 2.5 | Camp Grayling JMTc Land Use



- |                        |                          |                    |            |
|------------------------|--------------------------|--------------------|------------|
| Camp Grayling JMTc     | <b>Existing Land Use</b> | Agricultural       | Wetlands   |
| JLUS 2-Mile Study Area | Residential              | Non-Forest Uplands | Water      |
| County Boundary        | Commercial               | Upland Forest      | Industrial |
|                        | Institutional/Service    | Lowland Forest     |            |

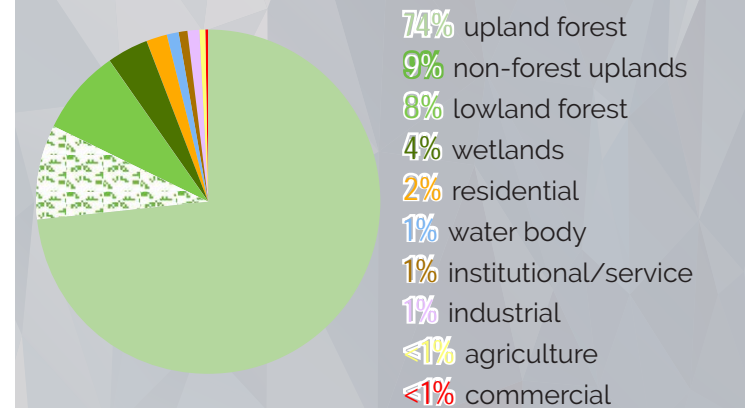
## 2.1.7 Land Use

The divisions of land use are categorized into natural areas and those created by human activity. They were organized in this manner to reconcile the differing land-use categories provided by the counties within the study area. Man-made uses are concentrated along the roadways throughout the study area but primarily located in the City of Grayling. Areas of man-made uses consist of commercial, industrial, recreational, and residential uses; the map only indicates the locations of the uses, not the density of these uses.

It should be noted that land use is a portrayal of the actual use of real property and, while it informs zoning, is not considered to be legally enforceable. It is generally used for reference and various data analytics. Many of these land uses may be in conflict with codified land-use regulations that are governed by the townships that fall within the study area boundaries. Often the land use map is used as the template for the creation of zoning laws that are compatible with the current land uses, or in some cases to alter a certain use for desired future development.

The study area for the Camp Grayling JMTc consists of over 300,000 acres of various land uses. Included in the land-use analysis are Crawford, Kalkaska, and Missaukee counties. A vast majority, approximately 96 percent, of the area are natural uses. These include lowland and upland forest, wetlands, water, and nonforested uplands. Among the land uses that are man-made, residential areas consist of 2 percent and are mainly located around Lake Margrethe and in the City of Grayling.

Figure 2.6 | Camp Grayling JMTc Study Area Land Use Distribution



## 2.1.8 Zoning

The Camp Grayling JMTc study area includes portions of six counties, each with their own zoning regulations and/or zoning controlled by the townships within. Endowed by the state of Michigan to enforce zoning, the townships included in the study area have created zoning for each of their respective jurisdictions. The zoning data analyzed for this section was taken from the townships and the City of Grayling that are within Crawford County, Kalkaska County, Otsego County, Oscoda County, and Roscommon County. Missaukee County is not zoned.

The varying zones have been grouped into eight categories that best fit the overall description of the zone. While the categories do not take into account the intensity of the zone, they lay out the legal mechanisms available within the study areas that control the use of property.

Among the zoning categories, a natural resource (or open space type district) is the largest at 72 percent of the study area. This zone contains large portions of Camp Grayling JMTc that are inaccessible by nonmilitary personnel. Recreational areas accessible to the public at Camp Grayling JMTc area not included. The second-largest zoning category is residential, at varying levels of density. This category accounts for 16 percent of the study area. Although the zone category is located throughout the area, the highest densities are within the City of Grayling. Residentially zoned areas in the eastern portion of the study area are of very low density despite covering a large area. It should be noted that the military operations zone is a category assigned by only one of the townships within Crawford County and is not representative or inclusive of the entirety of Camp Grayling JMTc.

Figure 2.7 | Camp Grayling JMTc Zoning

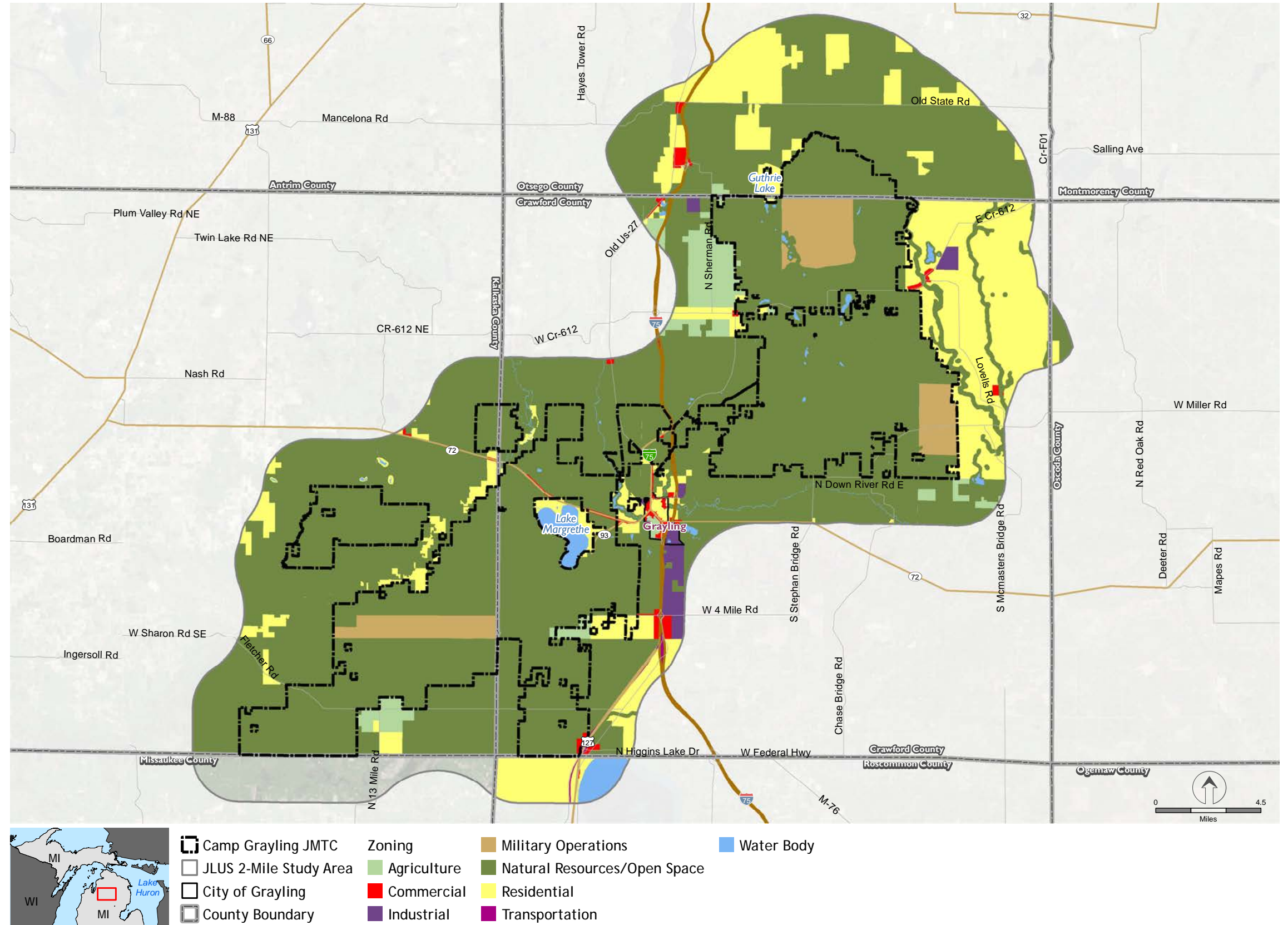


Figure 2.8 | Camp Grayling JMTc Zoning Distribution

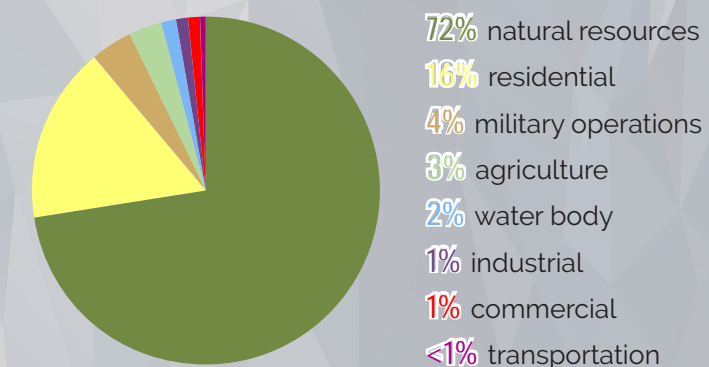
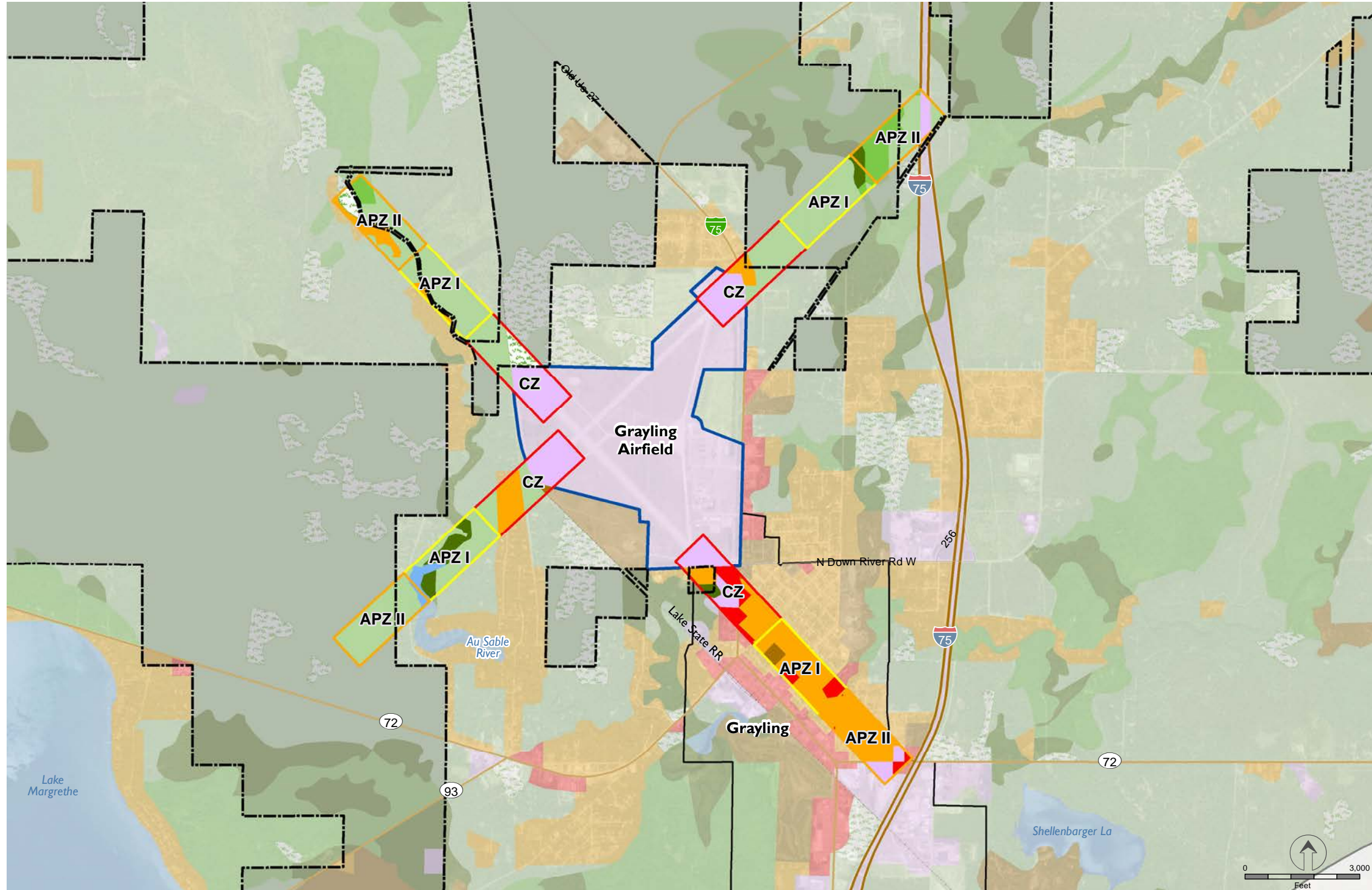


Figure 2.9 | Camp Grayling JMTC Incompatible Use – Land Use in APZs



- |                    |                           |                          |                    |            |
|--------------------|---------------------------|--------------------------|--------------------|------------|
| Camp Grayling JMTC | <b>Air Accident Zones</b> | <b>Existing Land Use</b> | Non-Forest Uplands | Water      |
| Grayling Airfield  | APZ I                     | Residential              | Upland Forest      | Industrial |
| City of Grayling   | APZ II                    | Commercial               | Lowland Forest     |            |
|                    | Clear Zone (CZ)           | Institutional/Service    | Wetlands           |            |

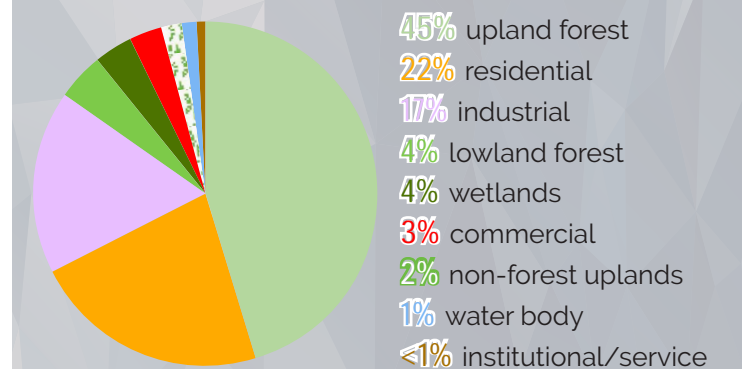
## 2.1.9 Incompatible Use

### Land Use in APZs

Clear zones (CZ) and accident potential zones (APZs I and II) occur at the ends of runways and were established based on crash patterns. For an Army Class A runway – designed for small, light aircraft – the CZ starts at the end of the runway and extends outward 3,000 feet at 1,000 feet wide. It has the highest accident potential of the three zones and has few uses that are compatible. APZ I extends from the CZ an additional 2,500 feet in an area of lower but still considerable accident potential, and APZ II extends out from APZ I an additional 2,500 feet, possessing less accident potential than APZ I but still enough to warrant land use restriction recommendations.

The majority of the APZ for Grayling AAF falls within the jurisdiction of Grayling Township and the City of Grayling. Within those areas that fall into the APZ, the majority is made up of natural uses at 56 percent. Residential use makes up 22 percent of the land within the APZs, followed by 17 percent industrial, 3 percent commercial, and less than 1 percent institutional.

Figure 2.10 | Camp Grayling JMTC Land Use Distribution in APZs



### Land Use in Noise Contours

Varying uses of the land within the 75+ dB noise contours highlights the many opportunities for harmful human exposure to increased sound levels. A vast portion of the land uses within this area are classified as either a forest or wetland and thus the likelihood of human exposure is decreased. However, 2 percent of the use is residential, which would have higher chances of exposure to higher sound levels.

Figure 2.11 | Camp Grayling JMTc Incompatible Use – Land Use in Noise Contours

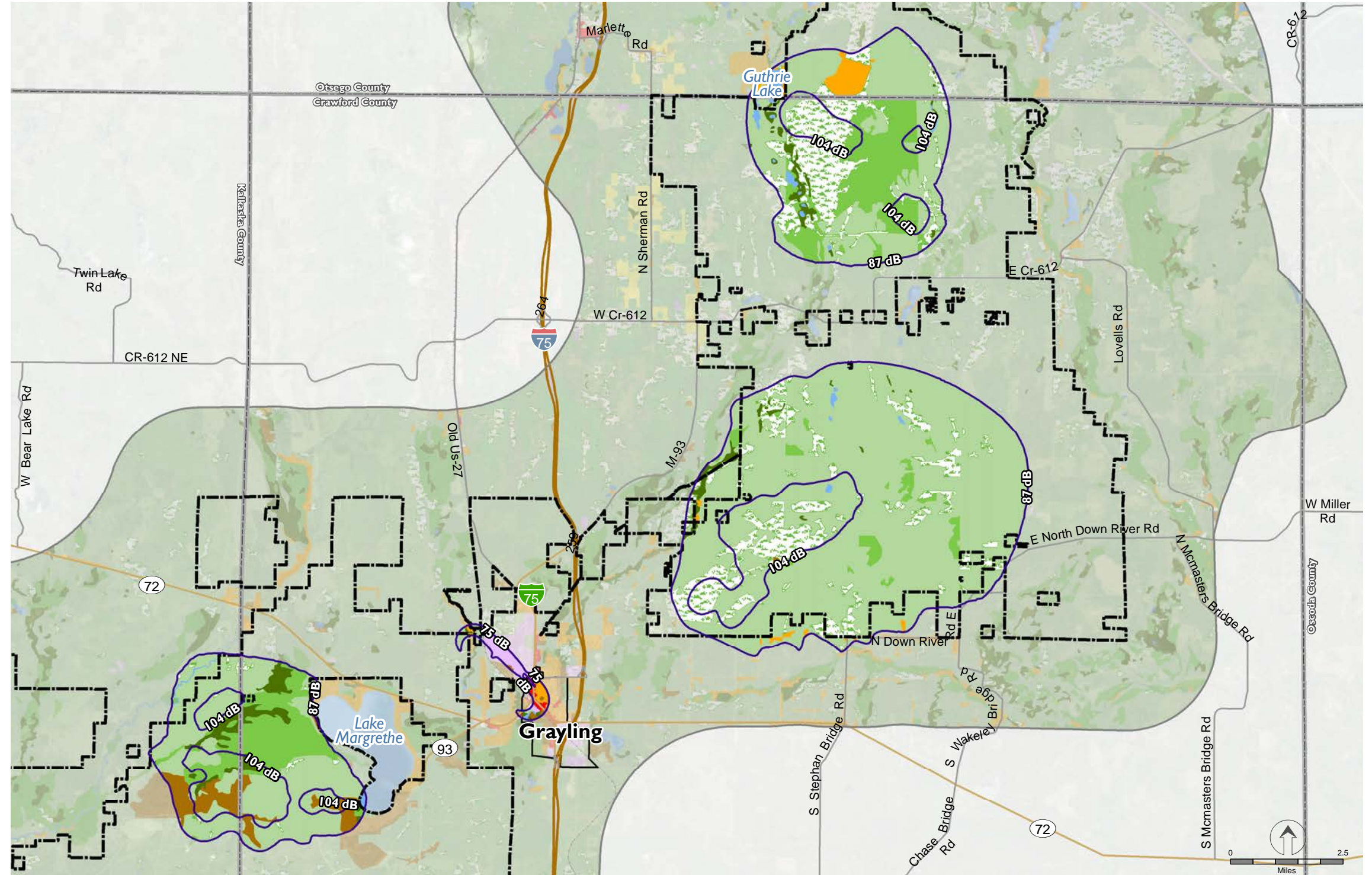


Figure 2.12 | Camp Grayling JMTc Land Use Distribution in Noise Contours

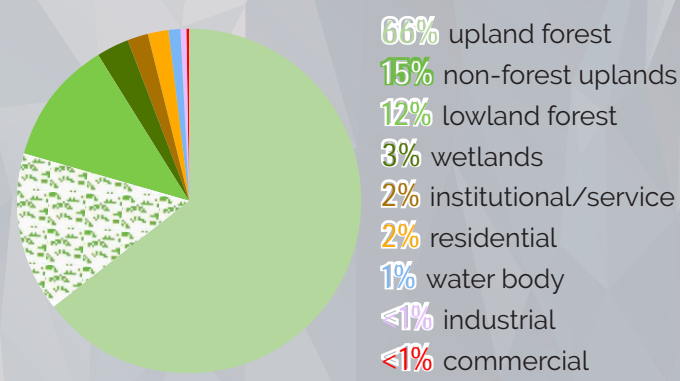
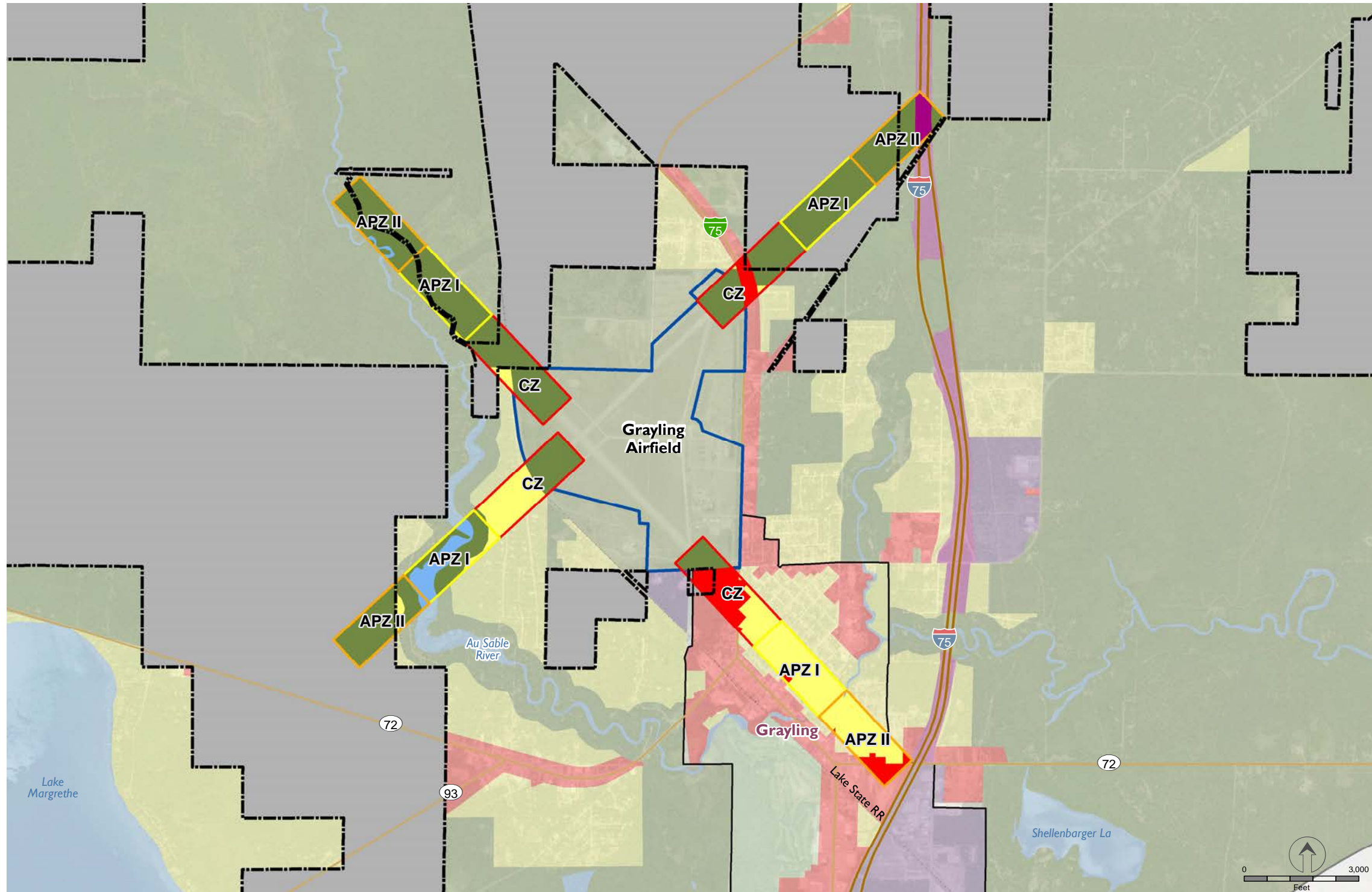


Figure 2.13 | Camp Grayling JMTc Incompatible Use – Zoning in APZs

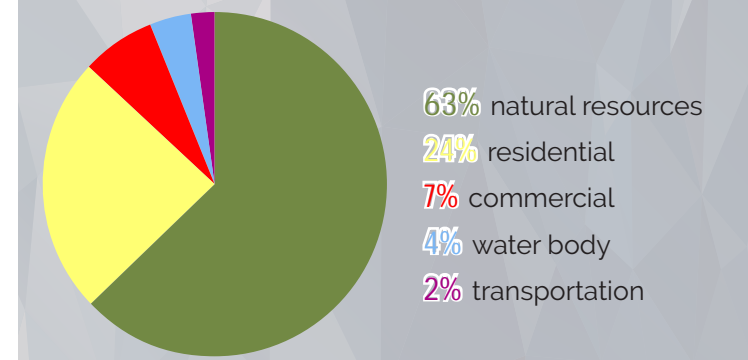


- |                    |                           |                              |             |
|--------------------|---------------------------|------------------------------|-------------|
| Camp Grayling JMTc | <b>Air Accident Zones</b> | <b>Zoning</b>                | Residential |
| Grayling Airfield  | APZ I                     | Commercial                   | Industrial  |
| City of Grayling   | APZ II                    | Natural Resources/Open Space | Water Body  |
|                    | Clear Zone (CZ)           |                              |             |

*Zoning in APZs*

The majority of the APZ for the Grayling AAF falls within the jurisdiction of the Grayling Township and the City of Grayling. Within those areas that fall into the APZs, 63 percent are categorized as natural resource/open space, and 31 percent are classified as some form of residential or commercial. Residential zones make up 24 percent, or approximately 175 acres. The commercial and residential zones that fall within the APZ and CZ areas cover the densest area of the City of Grayling, meaning a large number of residents could potentially be exposed to a potential accident scenario.

Figure 2.14 | Camp Grayling JMTc Zoning Distribution in APZs





The Guthrie Lakes residential area lies inside the Range 40 noise contours.

### Zoning in Noise Contours

A large majority, 86 percent, of the areas that fall within the 75+ dB contours are zoned as natural resources/open space. Because of the limited development in this zone, human exposure to unhealthy decibel levels is likewise limited. Exceptions include the residential areas surrounding the Guthrie Lakes, residential zones in eastern Kalkaska County, and portions of the City of Grayling. While these areas comprise only 2 percent of the 75+ dB areas, there is potential for the detrimental effects of the noise to be felt, and mitigation will need to occur in these areas.

In the worst case, residences are just 500 feet from the range boundary, 2,800 feet from established artillery firing points and approximately 1 mile from the impact area. That is too close for sound to dissipate to a reasonable level for a residential area.

Figure 2.15 | Camp Grayling JMTC Incompatible Use – Zoning in Noise Contours

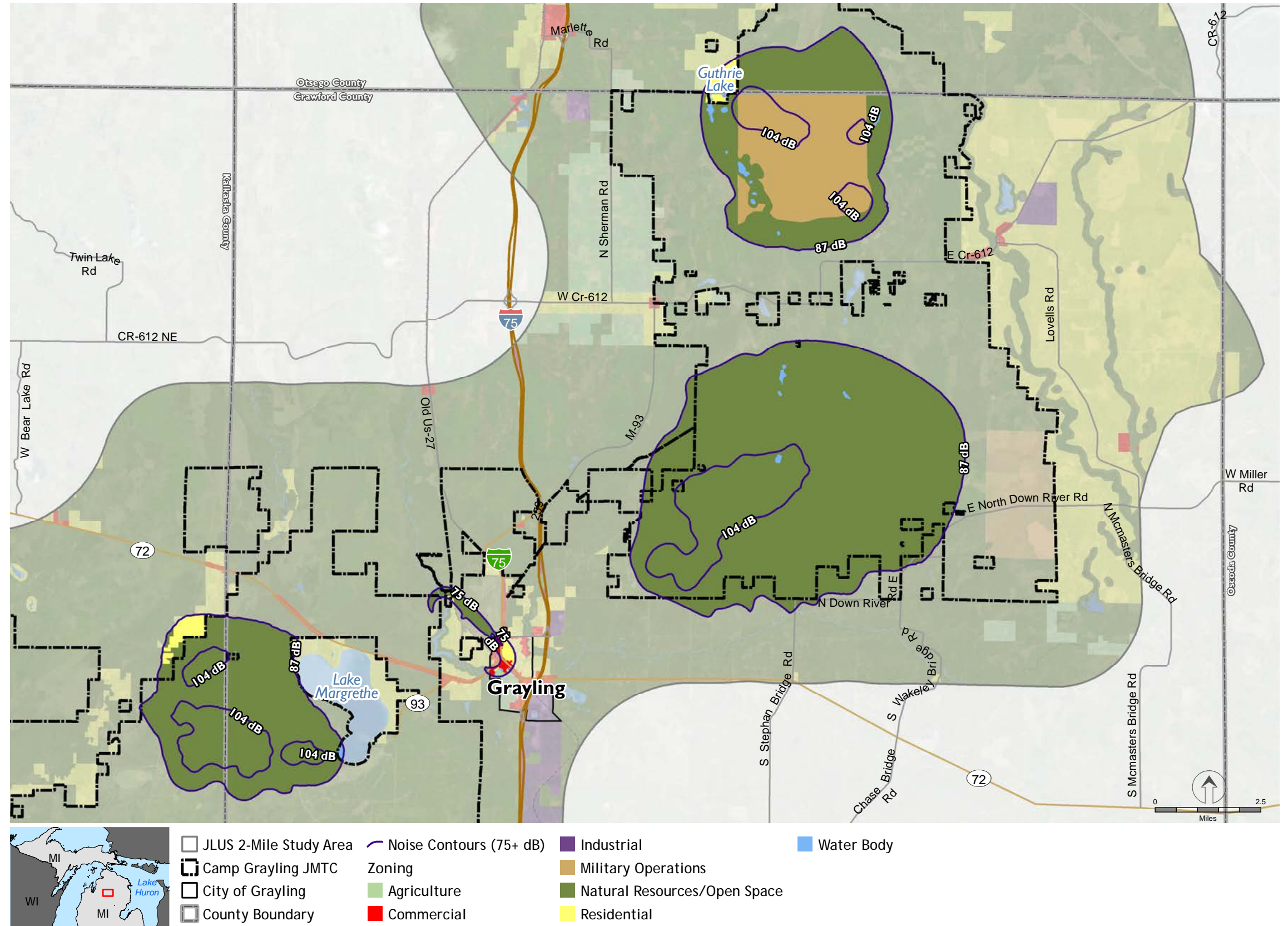
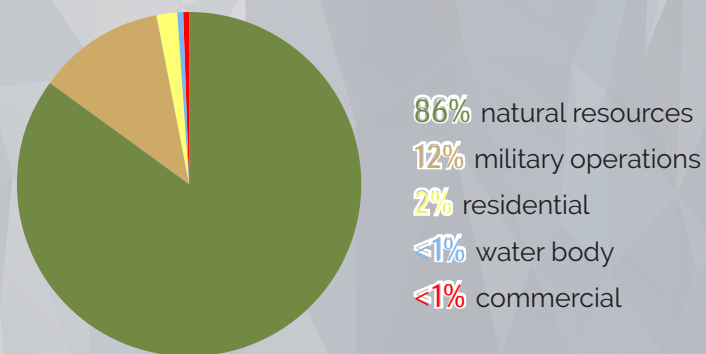


Figure 2.16 | Camp Grayling JMTC Zoning Distribution in Noise Contours



## 2.2 Camp Grayling JMTC Public Participation

The public participation process for Camp Grayling JMTC involved a suite of TC/PC meetings, stakeholder meetings, community survey, working group meetings, and one-on-one stakeholder interviews. The initial TC/PC meeting for Camp Grayling JMTC took place on April 24, 2017, at the University Center in Gaylord, Michigan. During this meeting, participants discussed expanding the TC list, approved the project work plan, and coordinated logistics for the tours.

The Camp Grayling JMTC installation tour for TC/PC members took place on June 5, 2017. The purpose of the tour was to provide TC and PC members with a more detailed understanding of the Camp Grayling JMTC operations, procedures, and facilities.

On June 6, 2017, TC and PC members met at Grayling Township Hall for a facilitated issues identification discussion. Through this meeting, TC and PC members identified an initial list of strengths, weaknesses, opportunities, and threats (SWOT) related to the Camp Grayling JMTC. Community stakeholders met the evening of June 6, 2017, at the Kirtland Health Sciences Center to engage in a similar issues identification discussion using the SWOT method. The JLUS project team advertised for this meeting in the Crawford County Avalanche and local radio stations. In addition, TC and PC members used their internal outreach mechanisms, such as email distribution lists and websites, to promote the meeting. During the meeting, the JLUS project team presented the JLUS process and facilitated an issues identification discussion. Section 2.3 provides more detail on this process and the results.

After the initial stakeholder meetings, the JLUS project team conducted a series of one-on-one interviews with key stakeholders. Sixty stakeholders participated in the interview process. In addition to interviews, the JLUS project team sought broader stakeholder input through a survey made available on the NEMCOG website for 3 months. A copy of the survey questions is available in Appendix B, as part of the Public Participation Plan. Members of the TC and PC used their existing outreach mechanisms, such as websites and newsletters, to help the JLUS project team promote participation in the survey. NEMCOG also provided information to the Crawford County Avalanche and local radio stations. Subsequent news articles and radio coverage promoted participation in the survey. Stakeholders submitted nearly 200 survey responses.

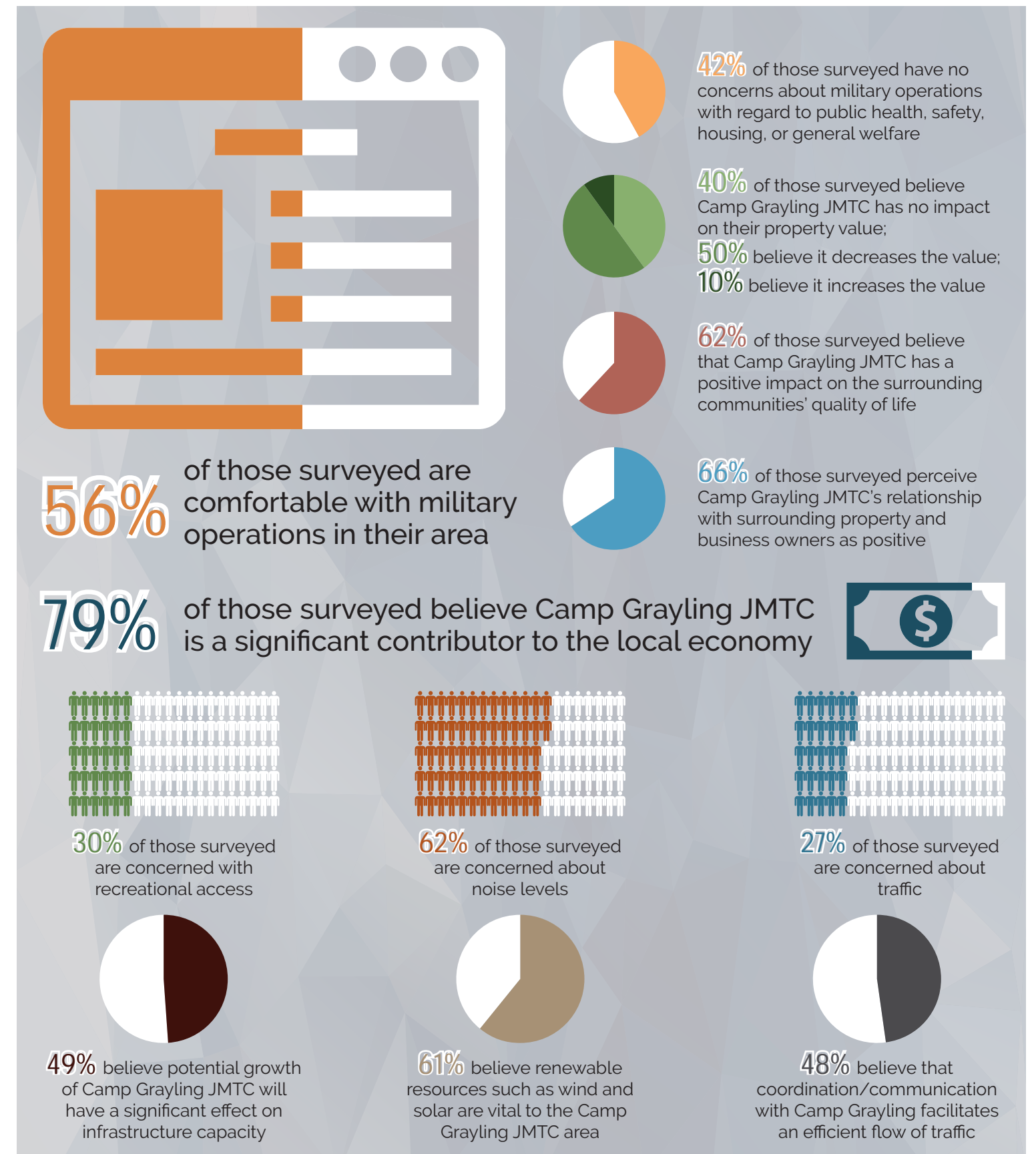
The survey results for Camp Grayling JMTC are presented in Figure 2.17. Overall, the survey responses indicate that a majority of stakeholders sharing their perspective are comfortable with the operations at Camp Grayling JMTC and believe it is a significant contributor to the local economy and has a positive impact on the quality of life of surrounding communities. Stakeholders responding to the survey have a greater concern about noise from Camp Grayling JMTC (62 percent) than recreational access (30 percent) or traffic (27 percent).

Stakeholder input from the SWOT analysis, the one-on-one interviews, and the survey helped the JLUS Project Team understand the comprehensive universe of issues and prioritize those issues for further strategy development. The second JLUS project stakeholder meeting for Camp Grayling JMTC took place October 10, 2017, at Camp Grayling JMTC. This community update and input meeting focused on reviewing the JLUS process steps, status, SWOT results, and identification of possible strategies to deal with priority issues identified by stakeholders. Additional news articles and radio coverage discussed this meeting and continued to promote participation in the online community survey.

Additional TC and PC meetings took place in November and December 2017 and continued through the spring of 2018. During these meetings, TC and PC members discussed JLUS project status and action items, data needs, and next steps.

Additional stakeholder meetings and working group sessions, both in-person and via conference calls, took place during 2018 to address details of the recommended strategies for each of the priority issues. During these meetings, stakeholders provided feedback on the strategies, identifying key information that will assist with successful implementation over time. The strategies and associated recommendations and challenges identified by the JLUS project team with input from stakeholders are described in more detail in Section 4.

Figure 2.17 | Survey Highlights





JLU stakeholders participate in a SWOT analysis during the June discussion meetings.

Figure 2.18 | Camp Grayling JMTC SWOT Results



(Items in the smallest font size got less than 5 votes.)

## 2.3 Camp Grayling JMTC Issues Overview

### 2.3.1 Issue Definition Process

The first opportunity for the public and project stakeholders to share thoughts on their proximity to Camp Grayling JMTC was at a series of discussion meetings on June 6, 2017. There, the consultant team led TC and PC members through an issues collection exercise to gather input. These issues could be positive or negative.

The issues were sorted into four categories: strengths, weaknesses, opportunities, and threats, and then meeting participants voted on which issues mattered the most to them. Later that same day, the consultant team led area residents through the same exercise at a public meeting. The results of that analysis can be seen in Figure 2.18, Camp Grayling JMTC SWOT Results. Larger font size indicates issues that received the most votes. Detailed results are provided in Appendix C. Additional notes and input were gathered during the meetings, as well as during individual interviews with stakeholders.

All of the input from stakeholders, the TC and PC, and the online survey was considered when drafting the final list of

issues. The survey was closed on November 30, 2017, with over 200 responses.

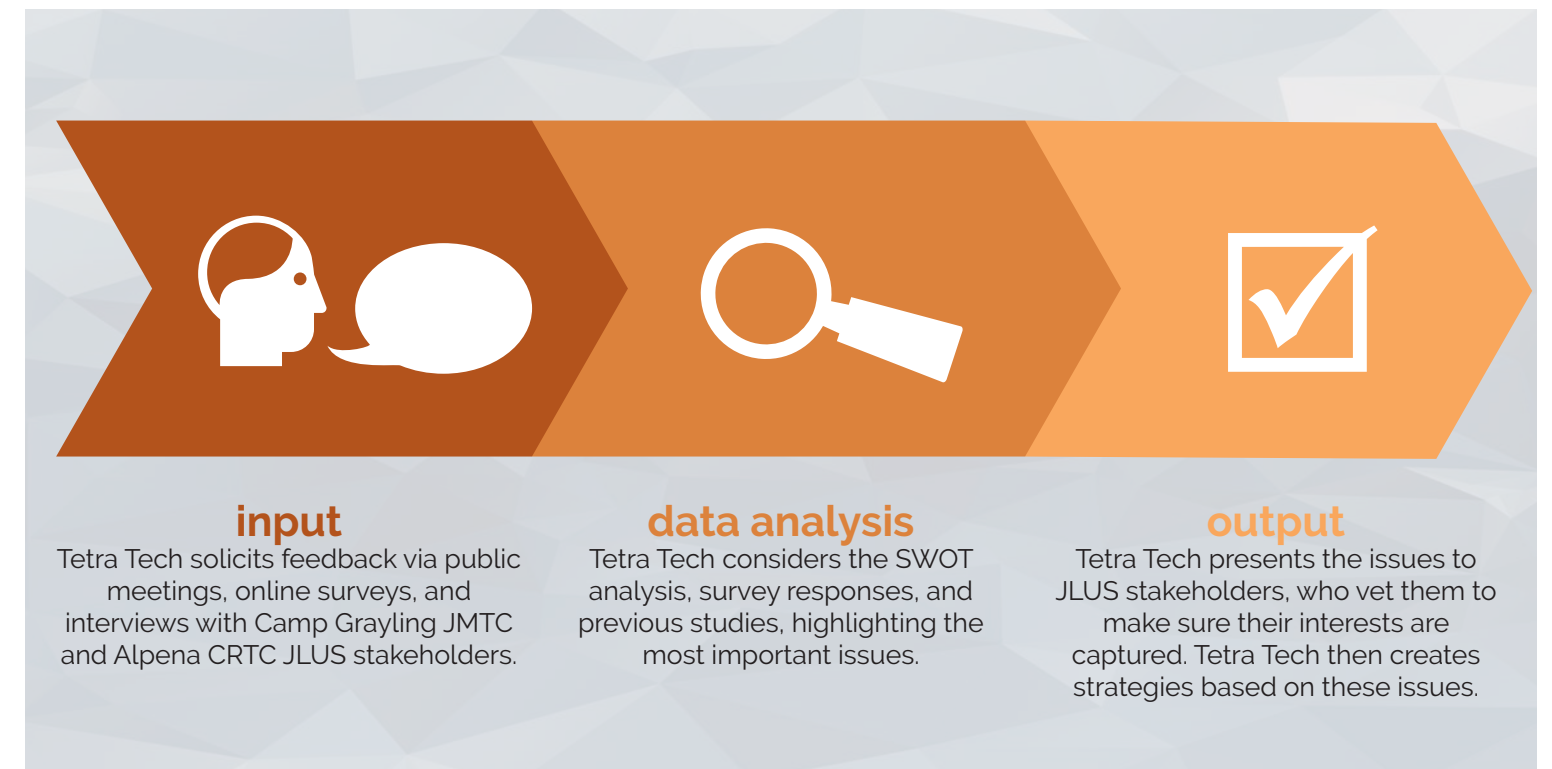
Along with stakeholder feedback, a large trove of data from NEMCOG and other local sources was considered, including demographic data, existing studies, and geographic information systems (GIS) data on land use and other facets of the region.

Six overarching categories emerged:

- ▶ Military Operations
- ▶ Noise
- ▶ Environmental
- ▶ Transportation and Infrastructure
- ▶ Community Partnerships
- ▶ Economic Development

All of the issues raised fell into one of those categories, which are described in more detail on the following pages.

Figure 2.19 | Camp Grayling JMTC Issues Analysis Process





**Table 2.2 | Camp Grayling JMTC Issues**

ISSUE ID	DESCRIPTION	SOURCE
<b>Noise</b>		
1a	Impact of Aircraft Noise on Communities	SWOT
1b	Tree Cutting Reduces Noise Buffer	Survey
<b>Military Operations</b>		
2a	Flight Path over Homes	SWOT
2b	Noise and Vehicular Disruption from MATES	SWOT
2c	Noise and Vibration from Night Training	Survey
2d	Population Growth may Encroach on the Mission	Survey
<b>Environment</b>		
3a	PFOS and PFOA Contamination of Groundwater	SWOT
3b	Impacts/Effects on Groundwater and Drinking Water	SWOT
3c	Impacts/Effects on Surface Water Systems	SWOT
3d	Base Effects on Health of Wildlife Populations	SWOT
3e	Wildfire Management	SWOT
3f	Resource Use and Sustainability	SWOT
<b>Transportation/Infrastructure</b>		
4a	Effects of Growth on Utilities	Survey
4b	Improve Internet Access	SWOT
4c	Poor Cellular Reception	SWOT
4d	Traffic	Survey
4e	Recreational Access	Survey
4f	Poor Road Condition	SWOT
<b>Community Partnerships</b>		
5a	Communications/Education	SWOT
5b	Public Relations/Community Involvement	SWOT
<b>Economic Development</b>		
6a	Effect on Property Value Mostly Perceived as Neutral or Positive	Survey
6b	Significant Contributor to Local Economy	SWOT
6c	Economic Incentivizing and Monitoring	SWOT

For a complete list of issues, see Appendix C, SWOT Results.



*Military personnel train on many different types of aircraft, vehicles, and weapons systems at Camp Grayling JMTC.*

### 2.3.2 Camp Grayling JMTC Noise and Military Operations Issues

Noise issues are generated by military operations including ground activities at the Camp Grayling JMTC ranges and air activities throughout the region stretching from the Canadian border to the north, the middle of Lake Huron to the east, and to Camp Grayling JMTC to the west. This vast area supports all manner of military activities necessary for training military personnel in preparation for combat. There are primarily three types of military airspace:

- ▶ **MILITARY OPERATIONS AREAS (MOAS):** These lie in what is considered low-altitude airspace below 18,000 feet MSL. This type of airspace does not restrict commercial or private air traffic but pilots are warned that the area (when activated) can contain high-speed military aircraft conducting potentially dangerous tactical maneuvers that may endanger non-participating aircraft.
- ▶ **AIR TRAFFIC CONTROLLED ASSIGNED AIRSPACE (ATCAA):** This is above 18,000 feet MSL. Air traffic in Class-A airspace is controlled by regional Air Route Traffic Control Centers, preventing interaction between military aircraft performing potentially dangerous activities and non-participating aircraft.
- ▶ **RESTRICTED AIRSPACE:** This extends from the surface up through low-altitude airspace and often well into high-altitude airspace. Air traffic is restricted in these areas to military aircraft under the control of a military organization conducting separation services of the various ground-borne and air activities.

In fiscal year (FY) 2017, the MOAs were activated and used in relatively small amounts of time. When not activated, they are considered open airspace for use by any and all commercial and private pilots. The annual hours recorded for those SUA are listed in Table 2.3, Airspace Use.

**Table 2.3 | Airspace Use**

AIRSPACE	HOURS ACTIVE	HOURS USED
Pike East MOA	129	104
Pike West MOA	242	189
Steelhead MOA	493	313
Lumberjack ATCAA	156	140
Garland ATCAA	211	181
Firebird ATCAA	156	140
Molson ATCAA	0	0
Steelhead ATCAA	228	193

These hours are out of the total available hours in the year (24 hours per day, 365 days per year) of 8,760. Although military training operations must be conducted at all hours and in all conditions in order to properly train, these are considered low usage totals.

#### *Issue 1a: Impact of Aircraft Noise on Communities*

Low-level aircraft operations — ones that would create the greatest noise issues for residents — occur throughout the area, near launch and recovery sites like airports and airfields and along specially designated aircraft routes called military training routes (MTRs). Proximity to these locations increases the level of noise and subsequent disruption including shockwave vibrations.

These activities are inherent in military training and are a vital component to the U.S. defense, which is why these activities are typically established in locations far separated from residential neighborhoods. City and county zoning regulations often establish buffer zones surrounding ranges and airfields not only to provide a sound barrier but also for safety reasons.

Military ranges that have high concentrations of air activity and those that fire live munitions have a protected airspace above them referred to as an RA. These are established by the Federal Aviation Administration (FAA) to protect these activities from non-participating aircraft and to protect ground activities from falling debris, wayward munitions, or accidental aircraft failure. The RA over Camp Grayling JMTC contains two sections, referred to as R-4201A and R-4201B.

It is a condition of the establishment of these areas that they be over property owned by the military or the U.S. Government. Alternatively, small portions may be privately owned if a conditional use lease agreement has been established between the land owner and the government. The R-4201B, which overlies the impact area of the range, is over a large swath of land (approximately 24,000 acres) that is not owned by the government, including the housing community in Guthrie Lakes.

This has allowed for private residences to be built very close to the range and noise-causing military training activities; too close for any reasonable degree of noise dissipation from those activities with little terrain or vegetation in between to dampen or reduce shockwave vibration.

Being within RA allows pilots to begin operations that are considered potentially hazardous to the public including arming weapons for strafing or bombing runs, flying at altitudes very low to the ground, conducting tactical aerial ma-



Logging activity in the area.

neuvering such as aerial interdiction, dropping chaff and flares, laser targeting, etc. Conducting these activities over public or private land is inconsistent with FAA criteria and military protocol.

Guthrie Lakes resides within the noise contour 70 dB day/night average sound level (ADNL). Housing is typically restricted to areas registering below 65 ADNL. The range and the impact areas are well-established, and necessary functions of the range and military training activities and are impractical to relocate. It is unclear how these incompatible functions came to be located in such close proximity. Yet, both exist and both are likely to remain. The only solution to reduce the impact is sound mitigation. Residents can improve insulation values in their homes, and more vegetative cover can be added around homes to reduce the shockwave effect.

**Issue 1b: Tree Cutting Reduces Noise Buffer**

Trees and thick vegetation are good tools to help reduce noise and shockwave vibrations emanating from the range. Mixed broadleaf plantings at least 25 feet thick can reduce noise levels by up to 10 dB. Conifers would be needed for the same effect in the winter months.

These assets are most effective when located around the home rather than nearer the noise source, as the noise from a bomb blast or artillery fire does not hug the ground; rather, it radiates up into and through the atmosphere. Cloud cover can even cause a perceived increase in noise level. To be effective, trees would need to hug the structure being protected from above as much as from the sides, which is not advised, as it leads to increased danger from fires and for roof damage.

Figure 2.20 | Camp Grayling JMTC Noise

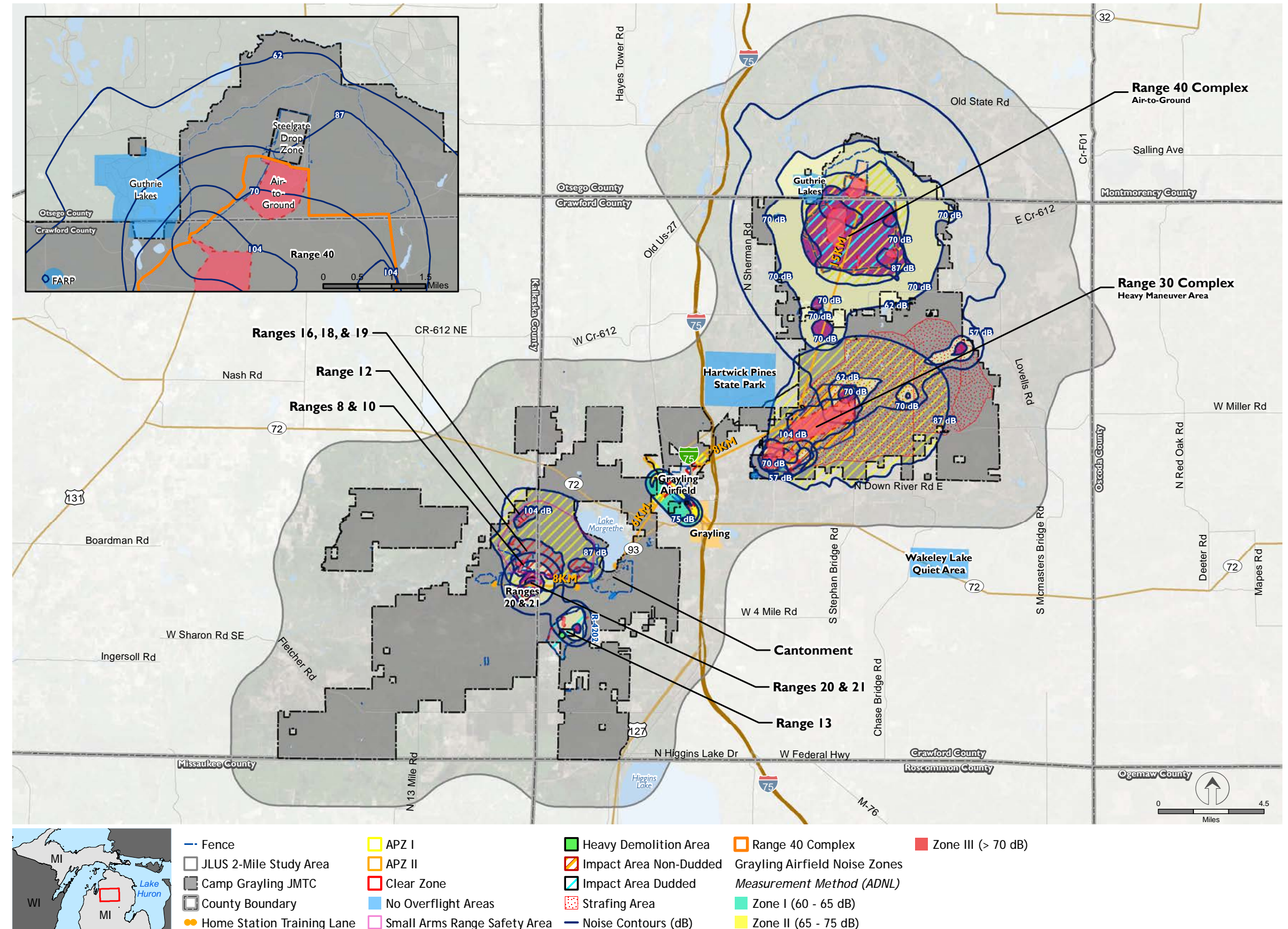
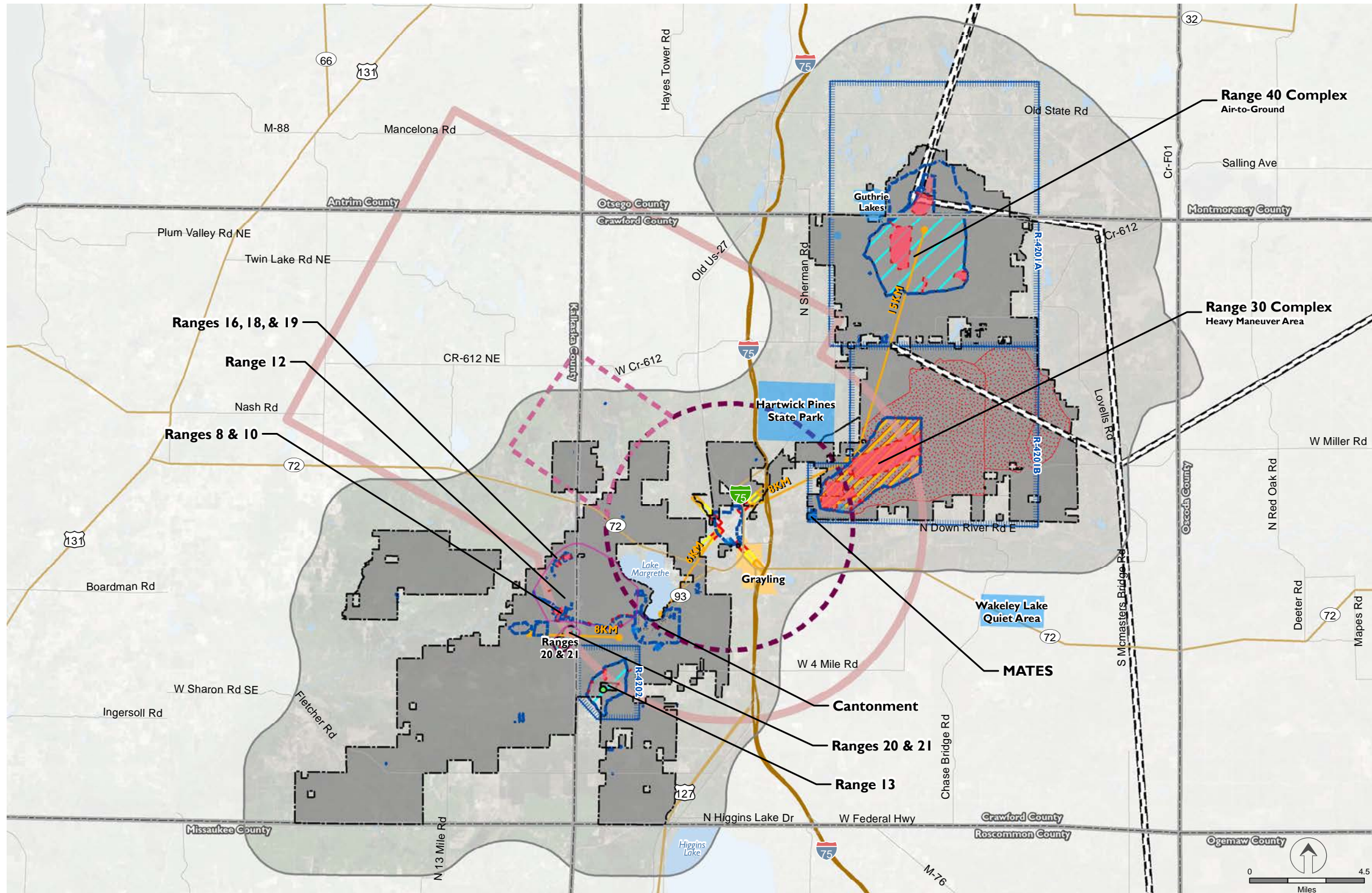


Figure 2.21 | Camp Grayling JMTc Military Operations



Placing vegetation near the impact area is inconsistent with safe range management because of the high potential for wildfires ignited from munition blast. It also degrades the usefulness of the range in visual targeting and scoring. Vegetation near firing points could slightly reduce sound vibration at lower levels.

*Issue 2a: Flight Paths Over Homes*

Most rotary-wing air traffic in the area is conducted out of Grayling AAF. This is a necessary component of training in that equipment, and personnel arrive at Camp Grayling JMTc and are transported to and from the range for training activities.

An unfortunate past development mishap was allowing private neighborhood housing to be built directly under the primary runway end of Grayling AAF (Runway 32), which is the primary egress point toward the range.

This neighborhood sits within the APZ. See Figure 2.16 for a more detailed view. APZs are delineated areas near civilian and military airports that define the highest level of potential for aircraft-related accidents. Typically, these areas are zoned by cities to restrict use to agriculture, parking, or other non-densely populated uses. Subsequently, these areas also typically have the highest noise levels, here above 65 dB ADNL. Housing is typically restricted to areas registering below 65 dB ADNL. Although the majority of traffic is transient general aviation, the airport is military owned and operated. As such, CZs, APZs, and other restrictions for this airport are established by Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design.

Even more alarming, first responders and law enforcement are located within the CZ. The CZ area is restricted from all objects fixed or mobile. If an accident occurred, it could potentially take out both the police department and the fire department.

It is possible that flights could be redirected to the other runway (5-23), which does not have a similar land use condition at its runway ends. However, that runway is in poor condition and would need to be repaved at considerable expense. It also lies perpendicular to the prevailing winds, making it more dangerous to use and potentially reducing its availability during certain climatic conditions.

Alternatively, operations requiring load transfers to the range could be conducted from the primary runway (14-32) heading northwest (from Runway 14) then circling around toward the range. Again, this is subject to prevailing winds and climatic conditions and also takes a longer route, which requires additional time and fuel.



- JLUS 2-Mile Study Area
- County Boundary
- Fence
- Home Station Training Lane
- APZ Category I
- APZ Category II
- Clear Zone Land Use Control
- No Overflight Areas
- Small Arms Range Safety Area
- Heavy Demolition Area
- Impact Area Non-Duddled
- Impact Area Duddled
- Strafing Area
- Airspace
- Class D & E2
- Class E4
- Class E5
- Restricted Airspace



*U.S. Marines from Echo Company, 4th Reconnaissance Battalion, 4th Marine Division, Marines Forces Reserve, check their gear after conducting an exercise into Lake Margrethe at Camp Grayling JMTC. Source: Alpena CRTC Public Affairs*

### *Issue 2b: Noise and Vehicular Disruption from MATES*

The MATES is an activity that naturally generates noise, although significantly less than munitions firing or aircraft activity noise generators. Current noise contour maps do not have any contours associated with the area surrounding the MATES, with a minimal noise level registration of 60 ADNL. The Range 30 complex immediately adjacent is recorded at 87 ADNL, likely associated with firing activities.

The MATES is located in the southwestern corner of the northeastern portion of Camp Grayling, about 3 miles north-east of the City of Grayling. The public and private property surrounding the MATES is sparsely populated, being primarily forested land. The closest residence is one-third of a mile to the west along W. North Down River Road. There are additional houses in increasing density as one moves farther to the west toward the city of Grayling. The highest concentration of homes is at the intersection of W. North Down River Road and N. Wilcox Bridge Road. There are also a few homes approximately 0.75 mile away to the east at the corner of W. North Down River Road and S. Headquarters Road.

Vehicular activity is unavoidable in this area, as the purpose of the MATES is vehicle and equipment repair and storage. The road it resides on (W. North Down River Road) is the connector accessway between the facility and Camp Grayling JMTC to the southwest, where the majority of transient equipment comes into the area for training, either via the airfield or the railhead. It unfortunately runs through the city of Grayling. No other alternative routes of travel are feasible.

### *Issue 2c: Noise and Vibration from Night Training*

Night time operations are crucial to successfully executing asymmetrical warfare, consistent with that being conducted in the Middle East. Training for those operations is, therefore, highly important. Disruption to residents is related to the proximity of the residences to those activities.

Mitigation tactics for the noise caused by those activities is the same as described for daytime noise issues. Vegetative cover located close to the structure and increased insulation for sound attenuation are the most effective deterrents. It could also be possible for military training schedules to be posted, which would give residents the opportunity to plan for the event, although that would not reduce the disruption.

### *Issue 2d: Population Growth May Encroach on the Mission*

Encroachment is a constant and pervasive issue with military training ranges and airfields. Safety and noise buffers should be established through property acquisition surrounding these assets. In lieu of that and because fiscal constraints make it unlikely to occur, cities, counties, and townships should establish zoning regulations that prevent the further development (allowance) of residential properties installations.

A safe buffer zone distance from ranges, installation, and airfield property boundaries is one consideration addressed in this plan. This area could be used for agriculture or other non-populated functions. Industrial activities are a better choice than residential, community, institutional, or

educational activities. As military training requirements to provide for large force and multi-force exercises increase, it should be an accepted fact that all the land area within the boundary could be utilized for training activities.

## **2.3.3 Camp Grayling JMTC Environmental Issues**

### *Issue 3a: PFOS/PFOA Contamination of Groundwater*

Contamination of groundwater and drinking water from wells from perfluoroalkyl and polyfluoroalkyl substances (PFAs, also known as PFCs), is the top environmental concern for both Camp Grayling JMTC and Alpena CRTC. The principal contamination source in the Camp Grayling JMTC area is considered to be perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) contamination from use of now discontinued aqueous film forming foam (AFFF) fire suppressants. On the national level, PFA/PFC compounds are emerging unregulated contaminants of concern with suspected but largely unknown negative human health effects. As of November 27, 2017, eight of 386 area wells tested for PFOS-PFOA by the Michigan Department of Environmental Quality (MDEQ) exceeded the Environmental Protection Agency (EPA) concentration limit of 70 parts per trillion (ppt). In addition, filters were provided to approximately 90 nearby homes.

MIARNG, funded through the National Guard Bureau (NGB), is managing a monitoring and analysis program in collaboration with concurrent monitoring, control (including filters), groundwater modeling, and remediation efforts by a number of state agencies. The MDEQ is conducting residential, business, school, and community water-supply well sampling. The MDEQ is also in the process of investigating the quality of groundwater beyond the perimeter of the Camp Grayling JMTC airfield by collecting groundwater samples from borings conducted at several locations from a monitoring well network planned for the near future. Information about the contaminants, forms to request well testing, and options for homeowners whose wells have been found to contain the substances, may be found on the state web site: <https://www.michigan.gov/pfasresponse>.

Public meeting feedback indicates some residents are finding it difficult to get clear and timely responses from the MDEQ for well testing and for other services like filter distribution. The MDEQ plans to develop and publish a plume map once the investigation is further along to provide a more complete and accurate description of the situation.

Many residents do not use or have regular internet access, so nondigital forms of communication (mailers, hotline phone number) should continue to be emphasized to ensure all residents are fully informed. During public comment, several residents requested more frequent use of local radio, television, and newspapers to not only advertise public meetings but also to convey basic information about the base and issues affecting the public. The latest content from monitoring and control programs should be updated for informational fliers. Concern over how wells are selected for testing was frequently raised at the public meetings.

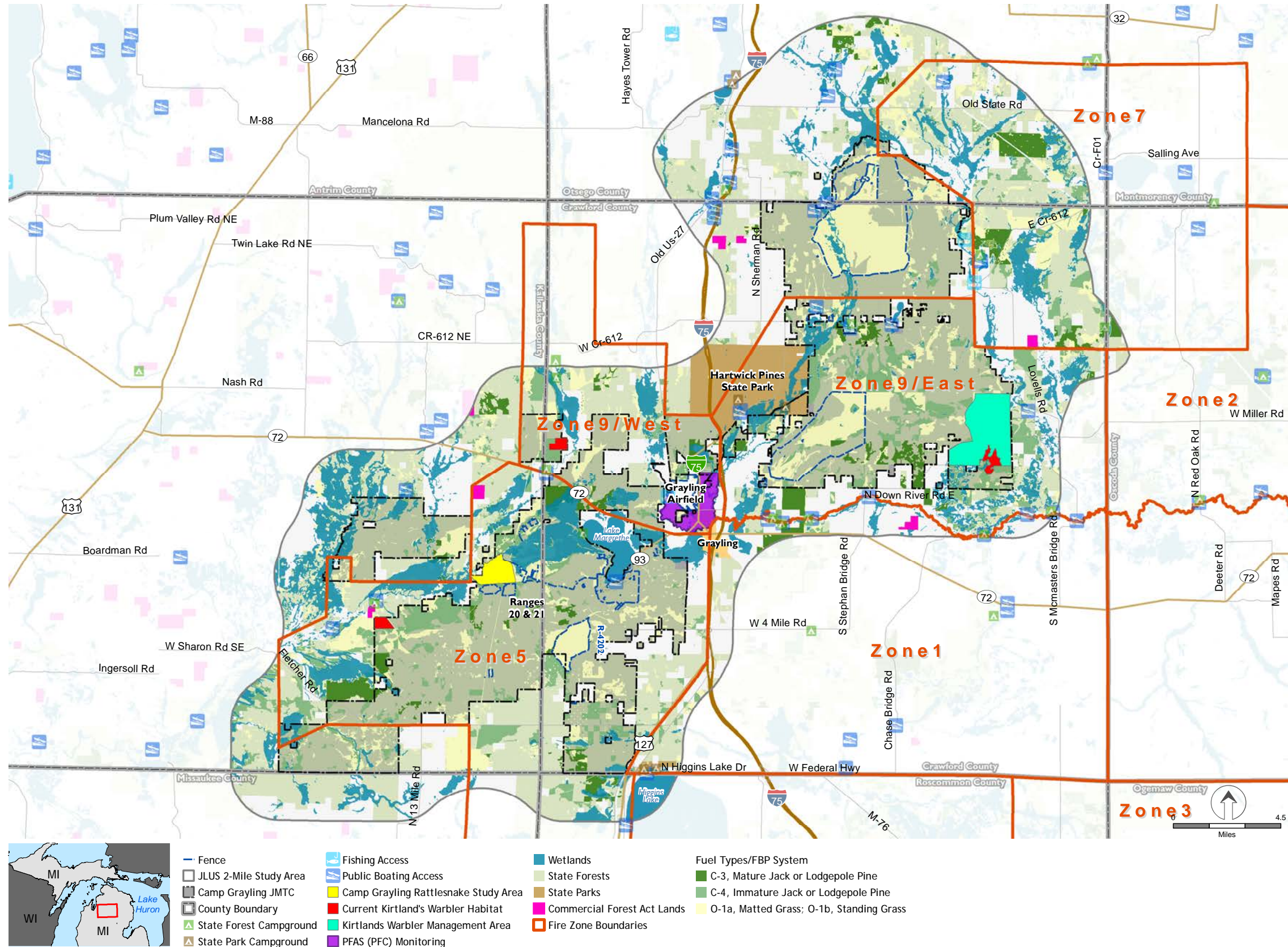
Governor Rick Snyder issued Executive Directive No 2017-4 for a PFAS Action Team. In November 2017, the governor directed the leaders of the MDEQ, the Michigan Department of Health and Human Services (MDHHS), MDMVA, and the Michigan Department of Agriculture and Rural Development (MDARD) to immediately establish a Michigan PFAS Action Response Team. The team has been assigned to direct the implementation for the state's action strategy to research, identify, and establish PFAS response actions related to the discovery, communication, and migration of PFAS to the extent practicable.

## **PFOS/PFOA Information**

More information is available at <https://www.michigan.gov/pfasresponse>

If any resident has additional questions regarding this issue, the MDEQ Environmental Assistance Center can be contacted at 1-800-662-9278 or email [deq-assist@michigan.gov](mailto:deq-assist@michigan.gov). Representatives may be reached to assist with your questions Monday through Friday, 8:00 AM to 4:30 PM.

Figure 2.22 | Camp Grayling JMTC Environmental



*Issue 3b: Impacts and Effects on Groundwater and Drinking Water*

The aquifers that provide potable water for residents near Camp Grayling JMTC are vulnerable to contamination. The depth to groundwater in some areas is as little as 9 feet. Remediation efforts have been required to treat fuel spills and other areas where groundwater was compromised, and a system to protect potable water in the cantonment area was put in place in 2001. In addition to fuels, oils, solvents, and hydraulic fluids are among the hazardous materials generated at Camp Grayling JMTC, which are disposed by the Defense Reauthorization and Marketing Office (DRMO). Environmental managers could consider providing educational materials on the newer Michigan Part 201 rules govern criteria for the groundwater-surface water interface (GSI) in addition to standing rules on groundwater criteria. Spills and environmental emergencies are reported to the MDEQ using the 24-hour Pollution Emergency Alerting System (PEAS) Hotline (800) 292-4706 or by contacting the MDEQ District Office (Alpena and Grayling area) at 989-731-4920. The public can view spills on Michigan's waterways using the Water Resources Division MiWaters Database: <https://miwaters.deq.state.mi.us/nsite/>.

*Issue 3c: Impacts and Effects On Surface Water Systems*

The negative effects of sediment and runoff on surface water quality within Camp Grayling JMTC watersheds are a high priority for the installation and surrounding communities. Traffic from military operations and industries can contribute to erosion and runoff at road/stream crossings. Regulation 200-1 prohibits military activity within 400 feet of streams and water bodies, with the exception of activities on established roads and trails, unless there is prior authorization. An industrial stormwater permit for runoff is held by Camp Grayling JMTC.

Public comment reveals potential for misperceptions that installation operations such as tank maneuvers are degrading seasonal or secondary roads when in actuality roads are being degraded by commercial logging vehicles. Camp Grayling JMTC has funded several road/stream crossing improvement projects led by Huron Pines and the Crawford County Road Commission to prevent excess sediment from entering the AuSable River watershed. Effects of erosion and runoff can be measured through bioassessment sampling around the installation. Formal bioassessments of Michigan rivers and streams are conducted by the MDEQ through the Surface Water Assessment Section Procedure 51 monitoring program that evaluates macroinvertebrate community, fish community, and habitat quality, and reports on trends in watershed health. MDEQ Procedure 51

data can supplement local and concentrated data generated through citizen volunteer monitoring and conservation organization research.

The Michigan Clean Water Corps (MiCorps) is a network of volunteer water quality monitoring programs that supplement MDEQ efforts in collecting and sharing water quality data for use in water resources management and protection programs. MiCorps is administered by the Great Lakes Commission under the direction of the MDEQ and in partnership with the Huron River Watershed Council, Michigan Lake and Stream Associations, and Michigan State University. MiCorps comprises the Volunteer Stream Monitoring Program and the Cooperative Lakes Monitoring Program, which provide training and support for quality assurance, reporting, and communications among member organizations. The MiCorps website has an online searchable database with monitoring data for selected waterbodies. Aquatic macroinvertebrate survey data, an indicator of stream ecology health, are available for select streams in study area watersheds such as the AuSable River. Monitoring data for lakes includes basic water chemistry and indicators of nutrient pollution that cause eutrophication and algal blooms. The database also contains invasive species survey data and several technical studies and reports available for download on the MiCorps website.

Organizations such as the AuSable River Restoration Committee, the Upper Manistee River Restoration Committee, and various Trout Unlimited Chapters, and Section 319 funded watershed management plans conducted by Huron Pines have contributed to restoration of many erosion sites along area waterways. Camp Grayling JMTC maintains strong relationships with these and many other local groups to help watchdog and maintain water quality in the area.

Data on water quality and aquatic ecology in the area exist from many governmental and non-governmental organizations. Questions about specific topics like fish population health, site contamination, or trends in ecological health can often be addressed from multiple sources. Sources of existing and ongoing water quality and aquatic ecology survey, assessment, and monitoring data in the area include MDEQ Procedure 51 biological and ecological trend monitoring; Part 201 contamination sites; MDEQ probabilistic water quality monitoring sites; Environmental Protection Agency (EPA) National Rivers and Streams and National Lakes Assessments survey sites; 303(d) Impaired Waters and Total Maximum Daily Loads (TMDL); National Pollutant Discharge Elimination System (NPDES) discharge permit locations; and various data from conservation organizations, citizen-based monitoring studies and lake associations. Stakeholders, developers, planners, and citizens could benefit from a clearinghouse that summarizes conditions and



*Hiking trail in the Red Pines Natural Area on Camp Grayling. (Source: MDNR)*

provides links and references to various agencies and organizations that conduct aquatic research. A webpage hosted on the installation or collaborative organization website could consolidate multiple resources into a coherent story while providing links to further information.

### *Issue 3d: Effects on the Health of Wildlife Populations*

Maintaining habitat for wildlife is important for retaining the environmental quality of the area. Surveys for wildlife have been conducted several times at Camp Grayling JMTC, including 1993-1995 and 2004. Among the flora and fauna identified, one plant and two animal species are protected by the Endangered Species Act of the State of Michigan (Public Act 203 of 1974 as amended) and/or the Federal Endangered Species Act of 1973. In addition, the bald eagle is protected by the Bald and Golden Eagle Protection Act.

Camp Grayling serves as the breeding habitat for the Kirtland's warbler, an endangered bird, which nests in the jack pine forests in the area. Camp Grayling has a permanent Kirtland's warbler management area, where suitable nesting habitat is maintained through planned rotation cuttings. Threatened species on the installation include Houghton's goldenrod and the rarely seen Eastern Massasauga Rattlesnake, the only venomous snake in Michigan. Camp Grayling researchers have led detailed surveys of Massasauga populations for over 10 years.

There is also the Red Pines Natural Area on Camp Grayling where military activity is prohibited. The Grayling Forest Management Unit (FMU) currently has two areas designated for Pine Barrens management, a rare ecosystem typically inhabited by many threatened and endangered species, such as the Kirtland's Warbler.

Maintaining unfragmented habitat is difficult because of the requirements of operation. Research such as the Lake Margrethe watershed management plan (funded by the NGB) and planned cooperative research with the Michigan Natural Features Inventory to expand on biological survey data and mapping can contribute to sustainable land use planning decisions that benefit the installation and the community. Sponsoring and pursuing future grant-funded biological surveys and watershed management planning in cooperation with conservation organizations like Huron Pines can augment biological data maintained by state and federal agencies and support Camp Grayling JMTC's environmental stewardship.

#### ▶ **PAST WILDLIFE WORK:**

- ▶ Radio-telemetry studies of federally listed Eastern Massasauga Rattlesnake movement (regular between 2002-current)
- ▶ Monitoring of Kirtland's Warblers and their habitat at specific site at North Camp
- ▶ Identification and monitoring of snake fungal disease in Eastern Massasauga Rattlesnakes
- ▶ Flora/fauna surveys in 1990s and early 2000s for Land Condition Trend Analysis and Integrated Natu-

ral Resources Management Plan (INRMP) updates

- ▶ Acoustic surveys for federally listed Northern Long-eared Bat
- ▶ Swimmer's Itch risk in Lake Margrethe

#### ▶ **CURRENT WILDLIFE WORK:**

- ▶ Mitigating military and rattlesnake interactions using translocation (finishing 2018)
- ▶ Snake fungal disease monitoring
- ▶ Kirtland's Warbler surveys
- ▶ Targeted flora/fauna survey for INRMP update (finishing 2018)
- ▶ Openings enhancement: firing point plant management and food plots (multiyear)

#### ▶ **UPCOMING WILDLIFE WORK:**

- ▶ Weeklong spring surveys to estimate abundance/size of Eastern Massasauga Rattlesnake population (multiyear study)
- ▶ Radio-telemetry study of Wood and Blanding's Turtle habitat use (both under review for federal listing); beginning 2018

#### ▶ **COLLABORATIONS:**

- ▶ National Wild Turkey Federation and MDNR: Collaborating with MDMVA to manage firing points; planting of plant species for game animals provides wildlife food source which, mostly importantly, reduces fire risk and improves vegetation growth management on military firing points
- ▶ Kirtland's Warbler Conservation Team: monitoring populations and habitat of Kirtland's Warbler
- ▶ Others: MDNR, Michigan Natural Features Inventory, U.S. Fish and Wildlife Service, Huron Pines, DLZ Associates, Purdue University, and many other groups and individuals

### *Issue 3e: Wildfire Management*

Wildfires have occurred fairly frequently within Camp Grayling JMTC boundaries and surrounding areas. According to the Adaptation Planning for Climate Resilience document published by the MIARNG in 2016, Camp Grayling JMTC averages over 100 fires annually, caused in part by the training conducted there. Environmental managers at Camp Grayling anticipate that coming effects of climate changes such as higher temperatures will contribute to increased wildfire risk.

The devastation of forests by the emerald ash borer, oak wilt, and gypsy moths also adds to the risk of potentially catastrophic wildfires. The area has a large amount of jack pine forest, which is a high-risk volatile fuel type contributing to a history of frequent small fires and large catastrophic fires, such as the 1990 Stephan Bridge fire that burned almost 6,000 acres in 5 hours and caused \$5.5 million in damage. A handful of wildfires have jumped the installation boundaries in the Range 40 area in the past 10 years.

The MDNR Grayling FMU is responsible for wildfire control and management, including on lands leased by the NGB. A key forestry management tool is prescribed burns, which may cause concern if they are perceived as wildfires.

Each year approximately 5,000 acres in Camp Grayling are subject to prescribed burns. The Grayling Unit has two areas designated for Pine Barrens management. Pine Barrens is a rare ecosystem that is typically inhabited by threatened and endangered species within volatile stands of jack pine. The North Camp Grayling Pine Barrens Management Plan designed to restore 5,120 acres of pine barrens within Camp Grayling is awaiting approval from the NGB and MDNR Divisions before prescribed harvesting and burning practices are instituted.

MDNR is working with Camp Grayling JMTC to develop an integrated wildfire management plan that should be finalized by 2020.

Facilitating public communications about management plans through open houses and outreach will help residents understand wildfire risk and MDNR and NGB forestry management plans.

### *Issue 3f: Resource Use and Sustainability*

Concepts and goals from Camp Grayling waste reduction strategies can be communicated to study area residents to convey Camp Grayling's commitments to environmental stewardship and to demonstrate investments in protecting shared natural resources while maintaining energy and water security. Features of the U.S. Army Net Zero Initiative strategy narratives could be adapted to enhance the installation strategy message. A communications campaign facilitated through press releases posted to the installation website and directed to local media are facilitation options, along with potential broadcast news stories about the waste reduction program.

## 2.3.4 Camp Grayling JMTC Transportation and Infrastructure Issues

### *Issue 4a: Effects of Growth on Utilities*

Camp Grayling JMTC has a 5-year plan to become a self-sufficient installation, and the camp has diligently worked toward net-zero status and sustainability goals. (See Issue 3f, Resource Use and Sustainability.) Future growth would be accommodated with adaptations, as necessary, to the existing infrastructure. Wind electricity generation machines, also known as wind funnels, were installed starting in 2015 and are expected to power about half the buildings on the installation. Water is provided through wells of the City of Grayling; wastewater is treated on site.

The surrounding area is serviced by Consumer Energy and Great Lakes Energy as well as DTE Energy (formerly Mich-Con), which provides three-phase electrical service. Many homes in the area are serviced by private wells. Water and sewer utilities in the City of Grayling are managed by the City. In Crawford County, there is a permitting system for private wells and septic systems, which is regulated by the District Health Department.

Construction of water and wastewater infrastructure near 4 Mile Road is ongoing to support the construction of an Arauco North America particleboard plant, which is expected to begin production in late 2018. The infrastructure development is funded through a \$3.1 million grant and \$4.1 million in loans. In December 2017, the Beaver Creek-Grayling Townships Utility Authority and C2EA, Inc., received approval from the Grayling Charter Township Board of Trustees to partner for the planning and development of infrastructure in this area.

A motion to allow for construction of a wastewater treatment facility was also passed by the board.

The City of Grayling also recently received a \$1.5 million grant to replace a sewer main, which was installed in the 1970s. Work is anticipated to begin in 2018.

Efforts to fund and replace additional aging infrastructure are ongoing.



*Sign welcoming visitors to the City of Grayling.*

### *Issue 4b: Improve Internet Access*

Internet service is limited in and around Camp Grayling because of its rural location. Cable, digital subscriber line (DSL), and wired internet options are available for residents and businesses with speeds ranging from 5 megabytes per second (mbps) to 100 Mbps. Otsego County has a fiber internet option through Winn Telecom, but the coverage area is small. Within the township of Grayling, the average download speed is only 16.53 mbps, according to data from broadbandnow.com. This is 66.5 percent slower than the average for Michigan and 156.8 percent slower than the national average.

As a state, the Michigan 21st Century Infrastructure Commission has set the following goals for internet access:

- ▶ All residents and businesses have access to a fixed broadband connection with a download speed of at least 25 mbps and an upload speed of 3 mbps by 2020 and a download speed of at least 100 mbps by 2024.
- ▶ All areas of the state (geographic) have access to a mobile broadband connection with a download speed of at least 10 mbps by 2020 and at least 25 mbps by 2024.
- ▶ Internet service has become vital as commercial, edu-

cation, medical, and government activities occur more frequently online.

- ▶ All community anchor institutions (such as schools and libraries) have access to a fixed broadband connection with download and upload speeds that meet the minimum recommended speeds for their sector by 2024.

In other areas of the state, Great Lakes Energy is conducting a feasibility study to deploy fiber internet service. If the study supports it, a pilot project is planned for the Petoskey district that could be rolled out to other areas in Michigan.

In Alpena, the city council approved a "Wired City" fund and has developed a successful campaign to improve internet infrastructure in the city, including installation of fiber optics cables. This model could be utilized in areas like the City of Grayling.

### *Issue 4c: Poor Cellular Reception*

Cellular phone reception has increased in recent years, but the rural location of the Camp Grayling area poses a challenge. Although Federal Communications Commission (FCC) data shows 3G or better coverage availability by three providers as of 2016, users report many dead spots or weak signal locations throughout the area. Most recently, the SBA Communications Corporation constructed a cell phone tower on Camp Grayling in 2013. AT&T has shown interest in acquiring a lease for a tower in the area.

### *Issue 4d: Traffic*

The most recent Grayling Area Transportation Study was published in 2008.

Michigan Department of Transportation (MDOT) data indicates small increases in annual average daily traffic (AADT) and commercial annual average daily traffic (CAADT) numbers from 2015 to 2016 on the state and federal highways and interstates in the Camp Grayling area, with the exception of a large increase in AADT in one section of the I-75 Business Loop south of the junction with M-72. That segment also had the largest AADT of 24,849.

Summer tourist traffic is a concern for local residents, especially as popular events often overlap. Convoys related to training at Camp Grayling can also cause traffic issues and may increase if the mission and number of exercises at the camp increase. This is exacerbated by the existing partial diamond interchange at I-75 and North Down River Road, as it forces some traffic to travel through the city of Grayling to access the interstate.



Harsh winters and the spring freeze/thaw cycle cause wear and tear on local roadways.

There is also concern regarding increases in traffic congestion stemming from logging truck traffic and the estimated 250 permanent jobs created by the new particleboard plant off 4 Mile Road, particularly because the I-75 exit at 4 Mile Road is considered problematic. However, improvements to the area that are ongoing for the industrial district development are anticipated to alleviate some of this.

In addition, legislation has recently raised speed limits on I-75 and US-127. Due to safety concerns, Crawford County officials are seeking to block the speed limit increase to 65 miles per hour on M-72 East between Grayling and Mio.

The Crawford County Transportation Authority has 16 buses and three vans for public transport. There are seven routes that operate on a dial-a-ride service.

At Camp Grayling JMTc, reconfiguration of the main gate was completed in 2017, allowing for better security and improved traffic flow. The gate is manned by a sheriff's deputy paid for by the MIARNG, which has been cited as an important partnership between the military and community. However, it was noted that the Crawford County Road Commission or the greater community is not always informed regarding Camp Grayling JMTc transportation projects, which can cause potential traffic issues.

**Identified Problem intersections**

In addition to the overall traffic and road conditions, several individual intersections were identified as trouble spots for the community. Problem intersections identified include Old US-27 and M-93, M-93 and I-75, M-72 and M-93, I-75 and 4 Mile Road, 4 Mile Road and Military Road, and Military Road and I-75. See Figure 2.24 for locations.

Figure 2.23 | Camp Grayling JMTc Transportation

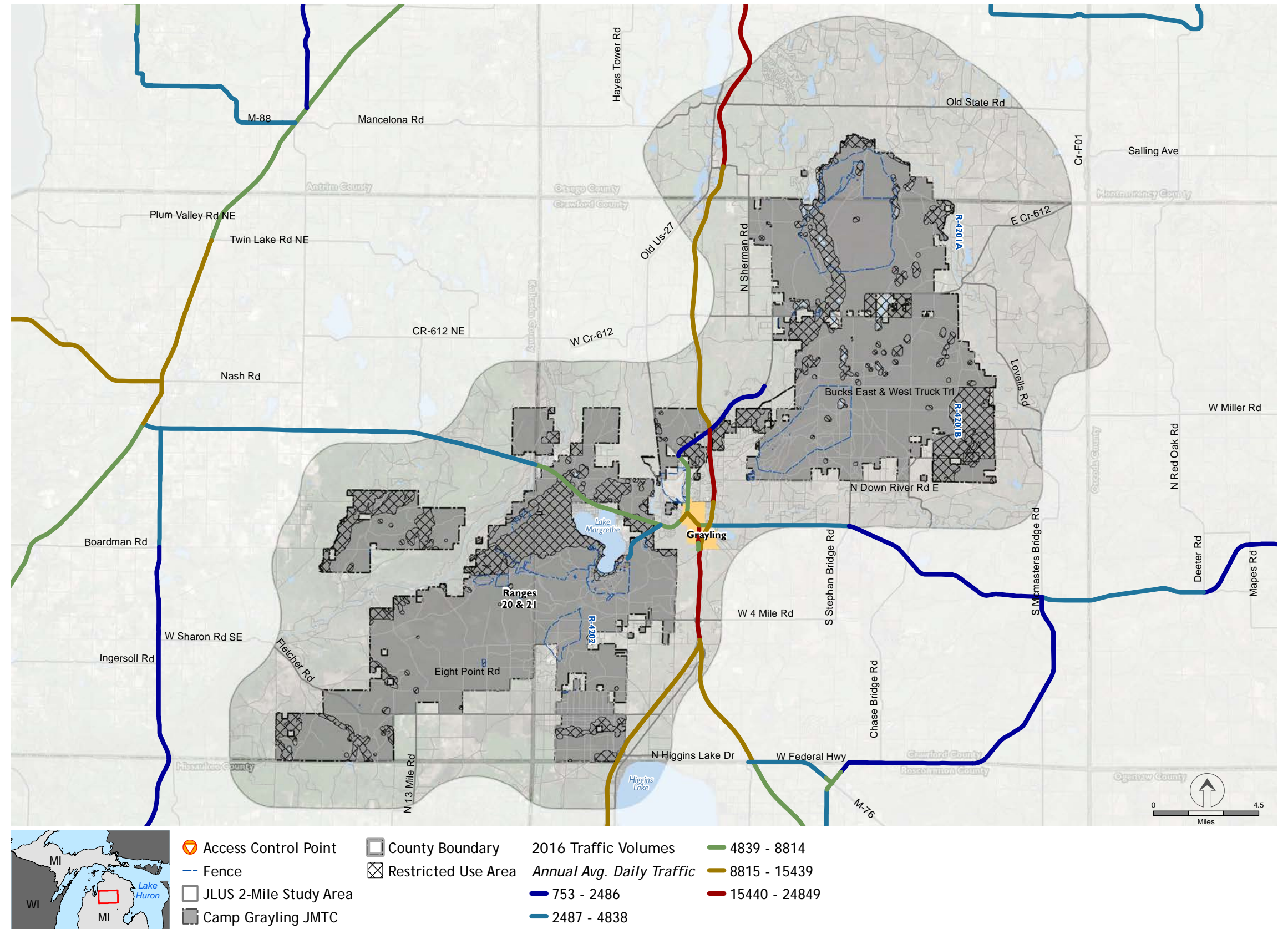
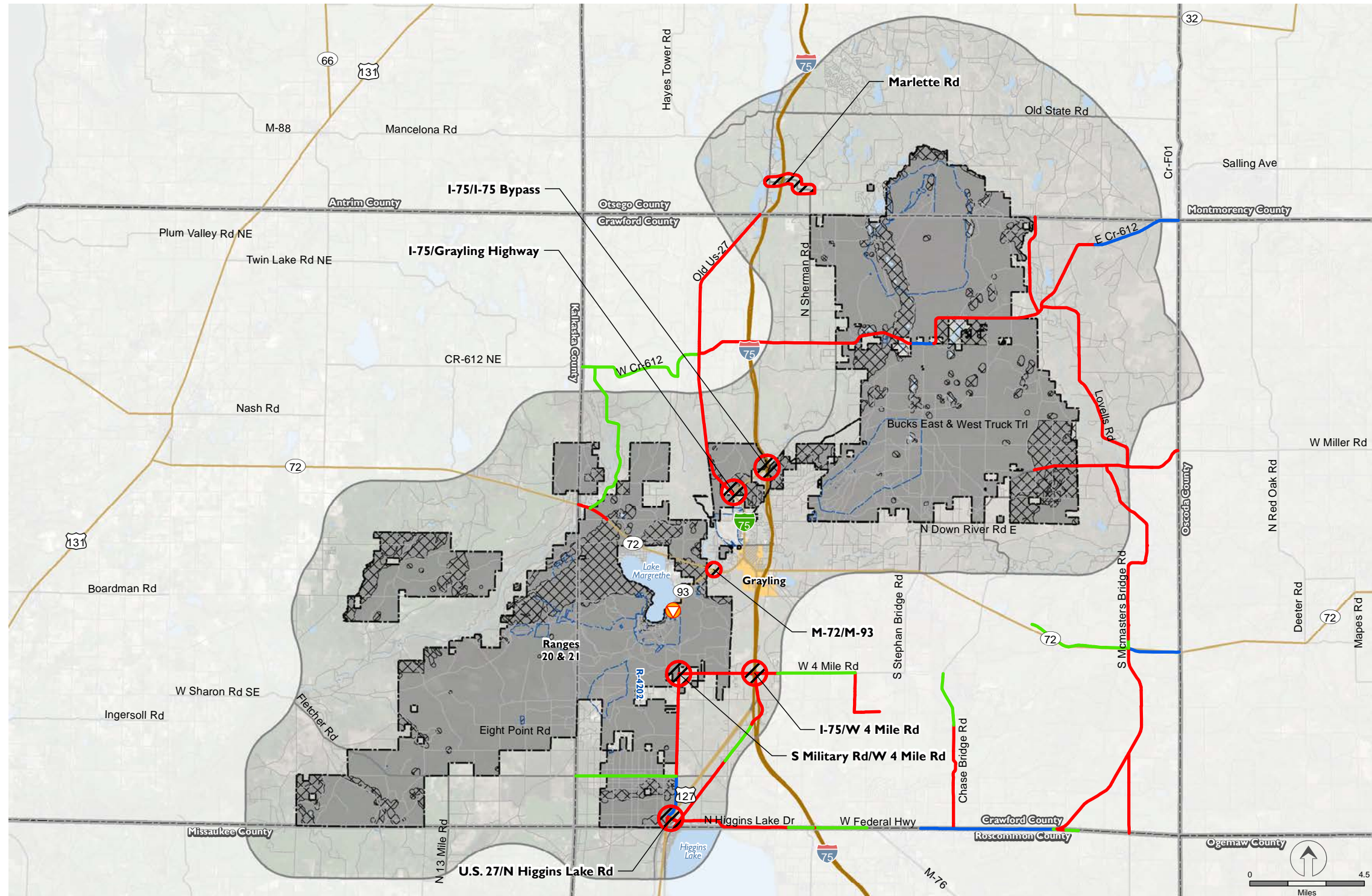




Figure 2.24 | Camp Grayling JMTc Road Conditions



- Access Control Point
- Fence
- JLUS 2-Mile Study Area
- Camp Grayling JMTc
- County Boundary
- Restricted Use Area
- Problem Intersection/Road
- Crawford County
- PASER Rating (2017)
- 1 - 4 Structural Improvements
- 8 - 10 Routine Maintenance
- 5 - 7 Capital Preventive Maintenance



Recreational pathway through the Grayling area.

#### Issue 4e: Recreational access

The region is largely composed of forested land, making it an ideal location for outdoor recreation, including hiking, canoeing, hunting, and fishing. Much of Camp Grayling JMTc is open to the public for recreational purposes when not in use for military training.

The MDNR maintains control of logging, mineral extraction, fishing, and hunting on lands leased to the military. However, there is a 14,000-acre area of Camp Grayling where hunting is not allowed, as the area is deemed a game refuge by the terms of the land grant. The MDVA controls recreation access in this area, which is referred to as the Hanson Reserve Lands. Hunting is also not allowed for safety reasons in some areas of Camp Grayling.

Public service announcements from Camp Grayling are released on a weekly basis via the Grayling Regional Chamber of Commerce website and other venues with information regarding access and military operations.

Public Act 288, which was signed by Governor Rick Snyder in 2016, requires the inventory and mapping of all state forest

roads in addition to changes in rules for off-road vehicles (ORVs). This process was completed in the northern Lower Peninsula in 2017, and maps of these roads, including designations of those open and closed to ORVs, are available on the MDNR's website and will be updated annually. Camp Grayling JMTC collaborated with the MDNR for this effort.

Among the land use objectives in the 2014 Grayling Charter Township Master Plan is maintaining road end access sites for public use on rivers and lakes. The master plan also outlines a river protection land use category.

#### *Issue 4f: Poor road condition*

Increases in traffic are expected to accelerate the deterioration of roads around Camp Grayling JMTC, and there is particular concern for side roads and dirt roads, which are susceptible to damage from heavy traffic. Maintenance for trail roads, some of which will be newly opened to ORVs, is not funded.

On Camp Grayling JMTC, among those roads noted in need of repair is Headquarters Road. Most major roads around the installation, including Military Road, the western portion of 4 Mile Road, Old US-27, portions of Federal Highway, M-144, and East North Down River Road, are considered in poor condition, with Pavement Surface Evaluation and Rating (PASER) marks of 1-4. Ratings of 1 and 2 indicate failed roads that require reconstruction, while ratings of 3 and 4 indicate that structural renewal is needed.

Traffic to and from the camp contributes to road condition degradation. Much of the equipment brought in for training exercises is transported by rail to Camp Grayling JMTC; however, equipment brought in by truck impacts traffic in and around the installation.

Increased logging traffic is expected to contribute to road damage, as is traffic created by new commercial development, particularly in the 4 Mile Road area. The logging industry does provide funding to the state for road maintenance, which is passed down to the counties, though the amount has not increased in recent years.

Public comments collected through surveys and public meetings revealed a general lack of understanding of the amount of damage caused by military and logging traffic through the area; a public education campaign may help.

Funding has been identified as the primary hindrance to road improvement projects throughout the state. The Crawford County Road Commission's 2017-18 budget identifies \$9,945,075 in anticipated revenues and \$9,899,757 in proposed expenditures.

#### **Crawford County Proposed Projects**

- ▶ 2018 Proposed Projects:
  - ▶ 4 Mile Road: from the west side of I-75, ease 1.34 miles (\$1.2 million [M])
  - ▶ Wakeley Bridge Road: from Wakeley Bridge, northerly to the intersection of North Down River road, 2.35 miles (\$531,000 [K])
  - ▶ South Grayling Road: from Dort Road, northerly to the first curve, .50 miles (\$135K)
  - ▶ County Road 502: from the south county line, north 1.5 miles to Dry Lake Road (\$130K)
  - ▶ North Higgins Lake Drive: from Military Road to Old 27, 2,100 feet (\$55K)
  - ▶ County Road 612: County Road 612 over Big Creek, Bridge rehabilitation (\$166K)
- ▶ 2019 Proposed Projects:
  - ▶ Old US 27 (Hulbert Road north 3.16 miles)
  - ▶ County Road 502: from Dry Lake Road, north to M-18, 1.55 miles
  - ▶ South Grayling Road: from Fletcher Road to 7 Mile Road, 1.0 mile
- ▶ 2020 Proposed Projects:
  - ▶ Old US-27 (Otsego County Line south 3.16 miles)
- ▶ 2021 Proposed Projects:
  - ▶ Twin Bridge Road: from County Road 612, north 4.01 miles
- ▶ 2022 Proposed Projects:
  - ▶ Military Road: Fletcher Road, north to 4 Mile Road, 3.7 miles

#### **MDOT Proposed Projects**

- ▶ Rehabilitate a 6.07-mile section of M-72 from the Kalkaska/Crawford County line to M-93 in 2019

#### **Crawford County Recent Projects**

- ▶ 2015
  - ▶ Hartwick Pines Road from M-93 to County Road 612, completed with Millage Money
  - ▶ North Down River Road from Stephen Bridge Road west 2.5 miles, completed with Millage Money
- ▶ 2016
  - ▶ Sherman Road from County Road 612 North, approximately 1.4 miles
  - ▶ County Road 612 between Petersen Road and Sherman Road, approximately 1,800 feet
  - ▶ County Road 612 from Jones Lake Road to K.P. Lake Road, 0.90 mile
  - ▶ North Down River Road from MATES east, 1.7 miles
- ▶ 2017
  - ▶ Wakeley Bridge – culvert/bridge deck
  - ▶ 4 Mile Road (Oak Road to I-75 southbound ramp, 0.81

miles)

- ▶ Sherman Road (Otsego County Line south 1 mile)
- ▶ Wakeley Bridge Road – culvert/bridge deck
- ▶ South Grayling Road – curves (between Fletcher Road and approximately Dort Road)

#### **MDOT Recent Projects**

- ▶ I-75 Business Loop bridge, 2016
- ▶ M-72 bridge, 2016

### **2.3.5 Camp Grayling JMTC Community Partnerships Issues**

The JLUS process emphasizes the importance of a community-driven planning process which relies on partnerships among Camp Grayling JMTC, communities, and local stakeholders. The JLUS survey results indicated that 62 percent of those participating in the survey believe that Camp Grayling JMTC has a positive impact on the quality of life of surrounding community residents. However, the JLUS process did reveal that stakeholders see communications, public relations, and education as issues that could be improved and, possibly, increase the perspective that Camp Grayling JMTC has a positive impact on quality of life for surrounding community residents.

#### *Issue 5a. Communications/Education*

Camp Grayling JMTC has an ongoing public relations effort, implemented by a dedicated community relations specialist. Communicating with stakeholders in surrounding communities, as well as to MIARNG leadership in Lansing and to other stakeholders throughout Michigan, is a critical function of this position. The community relations specialist is one of the principal points of contact for inquiries about what happens at Camp Grayling JMTC when community members have questions or concerns. Although the role of community relations specialist is critical to community partnerships, comprehensive documentation about standard operating procedures for this position has not historically existed. As a result, changes in staffing have affected the efficacy of communication with community partners. Gaps in institutional knowledge about key communication channels, processes, and relationships with community and media partners, can create challenges for new community relation specialists as they fill the position.

The current community relations specialist uses a variety of communication channels to share information with key

stakeholders. These communication channels used to distribute information on Camp Grayling JMTC training operations and other programs include email, Camp Grayling JMTC Facebook page, the quarterly Camp Grayling Impact newsletter distributed in both electronic and print, and, to a limited extent, the Camp Grayling JMTC webpage on the MIARNG website maintained in Lansing. When conducting an internet search for Camp Grayling JMTC information, the main MIARNG website is the most official website provided. However, the information provided on this website for Camp Grayling is limited. The community relations specialist is working with Lansing to update the website information to include new leadership. The process for updating website information is slow as a result of coordinating changes through Lansing. Communications requirements from Lansing may preclude a faster process, but it is imperative that the existing website provide key contact information and a link to more regularly updated information on Camp Grayling JMTC, such as the dedicated Camp Grayling JMTC Facebook page.

One issue stakeholders consistently raised during the one-on-one interviews and community meetings is a desire for improved communications with Camp Grayling JMTC. An important communications effort is to update surrounding communities about the weekly range firing schedule. The Camp Grayling JMTC community relations specialist sends out this weekly schedule via an email distribution list. The list includes homeowners and business associations, local elected officials, residents, and media contacts. The weekly range firing schedule is then shared by these stakeholders on various websites such as the Grayling Regional Chamber of Commerce, social media accounts such as the Twitter feed for UpNorthVoice, and email distribution lists such as those maintained by homeowners associations. However, many stakeholders are not aware that Camp Grayling JMTC has an email distribution list intended to distribute this information; there is no information on the Camp Grayling JMTC website or social media accounts on how to request to be added to this email list. Individual residents who don't belong to a homeowners association might not know the email distribution list exists and might not have the information necessary to get on the distribution list. The Camp Grayling JMTC community relations specialist is taking steps to ensure more stakeholders are made aware of this email distribution list and have the opportunity to request to be added to the list.

In addition to circulating the firing range schedule via email, Camp Grayling JMTC has cultivated strong relationships with local media that help distribute this information. Blarney Stone Broadcasting operates radio station WQON Q100.3, covering central northern Michigan, and is partnering with Camp Grayling JMTC to provide listeners with regular up-



Stakeholders participate in a JLUS issue discovery meeting in June 2017.

dates about Camp Grayling operations. WQON recently invited the Camp Grayling community relations specialist and commander to provide daily updates on Northern Strike to listeners. The listener response to the updates was positive, leading WQON to suggest partnering with Camp Grayling JMTc to provide weekly updates throughout the year. The community relations specialist identified a challenge in having local print media, such as the Crawford County Avalanche, include Camp Grayling weekly firing range schedules and other information that would be of interest to local readers.

According to the community relations specialist, the job gets easier with improved stakeholder education. Identification and reporting of unexploded ordnance (UXO) is one area where Camp Grayling JMTc sees a need for development and implementation of an education program in partnership with surrounding communities. A program on UXO would help community members know what to do if they come across historic UXO on public lands to ensure public safety.

### Issue 5b. Public Relations and Community Engagement

Public relations and community engagement is another key component of the Camp Grayling JMTc community relations specialist's role. This aspect of the position can be demanding, particularly with only one full-time community relations specialist. The recent groundwater contamination concerns have generated a need for increasing community

relations capacity, although these positions will not be permanent.

Camp Grayling JMTc receives a variety of requests for group tours and involvement in community events, such as local parades. Information for stakeholders on how to make these requests is sparse. Often the requests are in the form of an email to the community relations specialist. The community relations specialist attempts to fulfill these requests as much as possible, although there are instances where not enough lead time is provided to fulfill the request. More comprehensive information on how to make these requests and the lead time necessary would possibly allow Camp Grayling JMTc to approve a greater number of requests and expedite the process.

Despite the existing level of community engagement, stakeholders interviewed for the JLUS project often mentioned a desire to have the Camp Grayling JMTc facilities more accessible to the public. Camp Grayling JMTc has received inquiries about opening a visitor interpretative center on-site that would allow the public to experience some of Camp Grayling JMTc without having to request a tour. At the present time, the Crawford County Historical Society Museum in Grayling has a photo display of the history of Camp Grayling in the museum annex.

The strategies to address the issues related to public relations, communications, education, and community involvement are available in Section 4.



Museum in downtown Grayling.

## 2.3.6 Camp Grayling JMTc Economic Development Issues

### Issue 6a: Effect on Property Value Mostly Perceived as Neutral or Positive

A key economic development issue raised by stakeholders through the JLUS process focused on the impact of Camp Grayling JMTc on surrounding property values. Stakeholders participating in the survey are split on the perception of how Camp Grayling affects property values: 50 percent of stakeholders participating in the survey feel that Camp Grayling JMTc decreases property values, 40 percent feel it has no effect, and 10 percent feel it increases property value. News articles covering town halls held by MDEQ and Camp Grayling JMTc on groundwater contamination from the Camp Grayling JMTc airfield indicate residents' concerns about declining property values. Through the community meetings, stakeholders shared stories with the JLUS project team of concerns about home sales due to noise from training operations and real estate agents not being fully transparent with prospective homebuyers about impacts from Camp Grayling. Increased transparency on potential issues related to Camp Grayling JMTc operations such as noise and wildfire could help with managing the perception of the impact on property values.

### Issue 6b: Significant Contributor to Local Economy

Improving economic development in the communities around Camp Grayling JMTc is a priority issue identified by stakeholders through the JLUS project, as well as Project Rising Tide – an initiative to provide at-risk communities with economic development tools. Of the stakeholders that participated in the JLUS project survey, 82 percent feel that Camp Grayling JMTc is a significant contributor to the local economy. This perception is validated by information presented in the March 2017 Economic Development Study for the City of Grayling prepared through Project Rising Tide. According to the study, Camp Grayling directly spends \$16 million annually in the City of Grayling and attracts over 10,000 soldiers and their families for training during summer, which represents significant military tourism.

Locally contracted services represents a portion of the \$16 million spent annually in the City of Grayling. Camp Grayling JMTc entered into a contract with the Grayling Fire Department to provide fire services. Through the one-on-one interviews during the JLUS process, stakeholders raised the issue that the current level of service offered through the existing contract might not be adequate given wildfire threats and increased population due to Camp Grayling JMTc training operations. If a need for increased fire protection services due to Camp Grayling JMTc can be quantified and verified, the data would support increasing contractual services which would lead to additional jobs for Grayling Fire Department.

### Issue 6c: Economic Incentivizing and Monitoring

Commitment to spending Camp Grayling JMTc funding at locally owned businesses varies depends on leadership. There are no policy requirements or spending goals for locally-owned businesses for goods and services that are not subject to federal contracting requirements. Therefore, these decisions are subject to the commitment of the leadership at Camp Grayling JMTc, which changes on a regular basis.

While it is understood that military tourism, defined as soldiers coming to Camp Grayling JMTc and the family members that visit surrounding communities to accompany them during training, likely has a significant positive impact on the economy of Grayling and other surrounding communities, it is challenging to quantify the extent of the economic impact and share that information with the public. Through Project Rising Tide, the City of Grayling has identified creating and maintaining a relationship with Camp Grayling JMTc as an economic imperative for the city and its businesses. A mechanism to track the impact of military tourism on the local economy would assist Grayling and other communities in better understanding: 1) how much soldiers and their families spend while training at Camp Grayling and 2) factors that affect trends in military tourism annually and over time.

One factor that influences military tourism and integration of Camp Grayling JMTc trainees into surrounding communities is adequate transportation. Soldiers training at Camp Grayling JMTc do not have access to private vehicles for transportation into Grayling and other communities. Camp Grayling JMTc often invites local food trucks to set up within the Camp Grayling JMTc, but for soldiers to leave, they must rely on public transportation provided by Crawford County Transportation Authority (Dial-A-Ride). Stakeholders participating in the JLUS process mentioned that the early closing hours for Dial-A-Ride make it difficult for soldiers training at Camp Grayling JMTc to go into Grayling and other communities. Stakeholders also identified the challenge of the Dial-A-Ride schedule in the Grayling Economic Development Study developed through Project Rising Tide; however, the study offered no specific recommendations to address this challenge. Improved public transportation is key to improving the integration of Camp Grayling JMTc into surrounding communities as a way to increase economic contributions from military tourism.



*Top: Crawford County building in Grayling.*

*Far Left: An overlook near Guthrie Lakes.*

*Left: Grayling City Hall and police department.*

# 3

## alpena CRTC

### chapter overview

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*Control tower.*



*Base operations building.*



*Troop camp quarters.*



*Thunder Bay River.*

## 3.1 Alpena CRTC Study Area Overview

### 3.1.1 How to Read this Chapter

This chapter describes Alpena CRTC and the areas surrounding it. The first section contains a study area overview, which includes existing conditions information about the Alpena CRTC area. The next section has a description of the public participation for Alpena CRTC, and then finally, the third section features a discussion of the JLUS issues brought up by local stakeholders and refined by the planning consultant team.

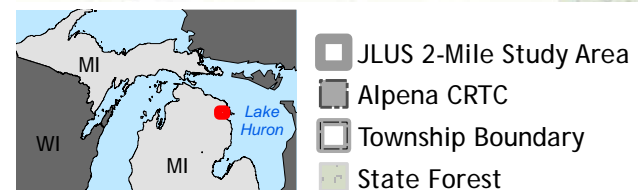
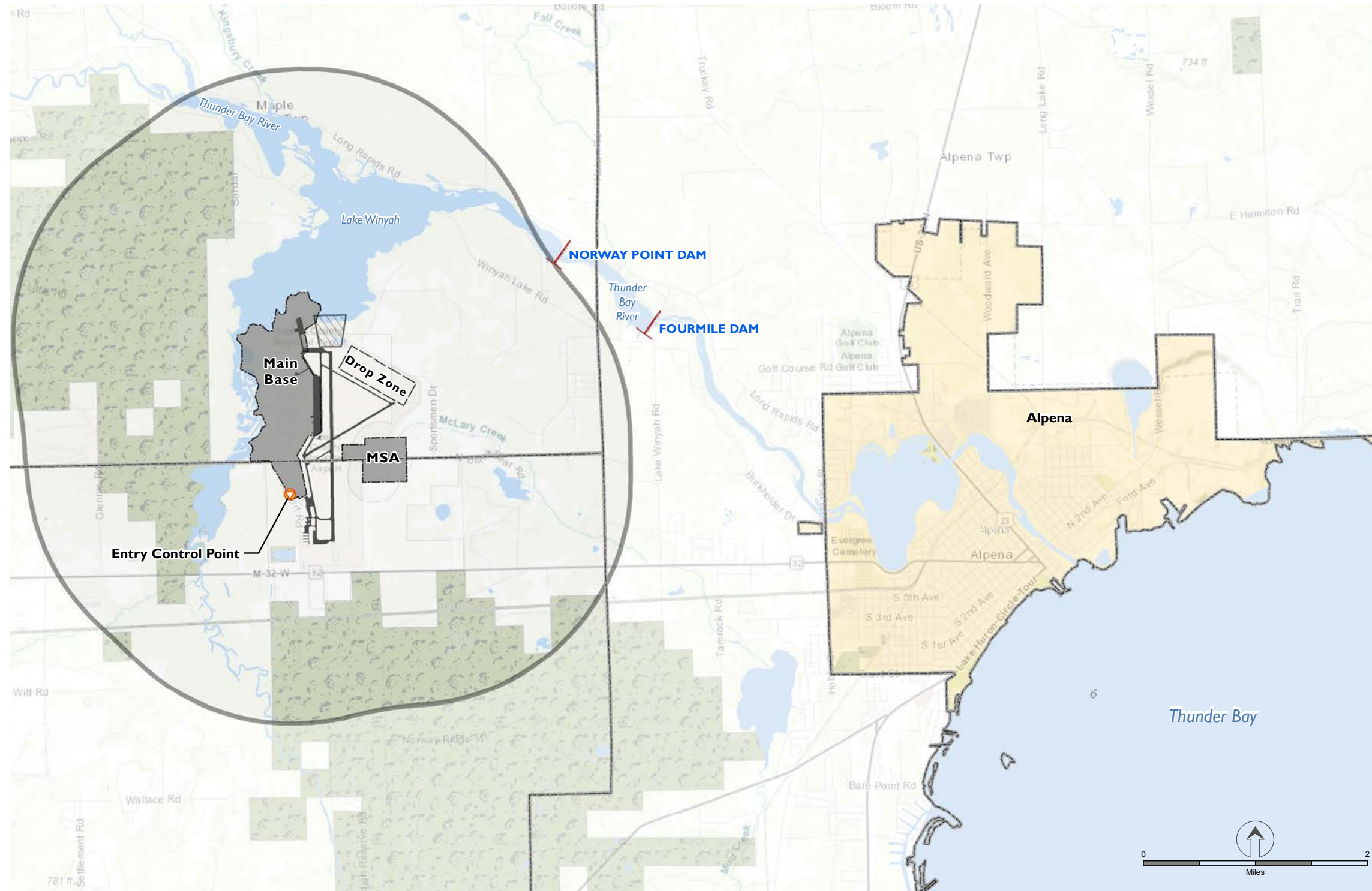
### 3.1.2 How Alpena CRTC and its Surrounding Area Is Unique

Located adjacent to Lake Huron, Alpena CRTC has access to the largest training airspace east of the Mississippi River, making it an attractive destination for joint forces training. Although there are no assigned aircraft at the base itself, the parking ramp can accommodate F-15s, F-16s, A-10s, C-130s, C-5s, C-17s, KC-10s, KC-135s, and more. The airspace over Lake Huron includes supersonic permissions at altitudes above 30,000 feet above mean seal level (MSL).

Alpena CRTC is a certified Joint National Training Center, one of just four installations like it in the country. It hosts the fourth-largest National Guard Bureau (NGB) training operation, known as Northern Strike. The exercise, originally put on by Air National Guard (ANG), is now jointly hosted with Army National Guard (ARNG) and Camp Grayling JMTTC. It brings together about 6,000 service members from 13 states and coalition countries including Canada, Great Britain, Denmark, Latvia, and Poland. Also, a quarter of the joint terminal attack controllers (JTACs) in the Air Force are trained at Alpena CRTC.

The City of Alpena draws on a rich history as a hub of transportation at the intersection of the Thunder Bay River and Lake Huron. Forest and conservation lands surround the base, and recreation opportunities are plentiful. The population is small and aging, as many retirees live in the area.

Figure 3.1 | Alpena CRTC



Alpena CRTC anchors the Michigan Air National Guard presence in the northern part of the state. Residents of the surrounding area have an overall positive view of the base, which is situated 7 miles west of downtown Alpena. Alpena is the largest city in region, and Alpena CRTC is colocated at the Alpena County Regional Airport. Encroachment is minimal and is unlikely to affect Alpena CRTC's mission in the foreseeable future.

### 3.1.3 Setting

The Alpena CRTC study area is located in Alpena County in the northeast portion of Michigan's Lower Peninsula, approximately 130 miles east northeast of Traverse City and 250 miles north of Detroit. Alpena CRTC spans 630 acres leased from Alpena County; the ANG also utilizes facilities at the Alpena County Regional Airport. Alpena is the most populated city in the area and borders Thunder Bay on Lake Huron. Access to the area is typically via Michigan State Highway 32 (M-32) (east-west) and U.S. Highway 23 (US-23) (north-south). Interstate 75 (I-75) is the nearest interstate at 65 miles west.

The Grayling Air-to-Ground Range, located on Camp Grayling JMTc, is a training range for Alpena CRTC that is covered in the Camp Grayling portion of this JLU.S.

The Alpena area has mild summers, with an average daily temperature of 64.3 degrees, and very cold winters, with an average daily temperature of 19.9 degrees. The area averages 29 inches of precipitation annually, with most falling in June, July, and August. The average annual snowfall is 87 inches.

### 3.1.4 History

Commercial fishing and associated settlement in the Alpena area began around Thunder Bay in the 1830s, and 30 years later, logging began. The city of Alpena was incorporated in 1871, and Alpena Power, which is still in service today, was founded by George N. Fletcher in 1881. By 1900, the population of Alpena was more than 18,000, and railroad lines helped make the city a transportation and industry hub. Paper production and limestone quarrying were other primary economic drivers.

Alpena CRTC began as Captain Phelps Collins Field in 1931 and was Michigan's first state-owned airport. The field was built on land donated by the Alpena Power Company and brothers Harry and Phillip Fletcher. The first hangar was completed in 1937, around the same time that military personnel from Selfridge Field began using the site.

During World War II, the field was taken over by the War Assets Administration in large part to provide air defense for the Soo Locks. Following the war, several facilities built in 1942 were sold or moved and the field was turned over to the county.

A joint use agreement with the National Guard was completed in 1952 and the ANG constructed 62 concrete block buildings in the 1950s.



*Airmen listen to a mass air brief during Northern Strike, a large joint exercise hosted annually at Camp Grayling JMTc and Alpena CRTC. (Source: Alpena CRTC Public Affairs)*

The site was renamed the Alpena CRTC in 1991. Radar approach and control training, an ANG Medical Readiness Training School, and Air Combat Maneuver Instrumentation missions were added in the early 1990s, and a fire training site and military operations on urban terrain (MOU.T) area in the early 2000s.

### 3.1.5 Mission/Operations

As mentioned in the description of the military and operational section describing Grayling JMTc, these two entities are inextricably linked around the training activities of the combined asset. The JMTc acts as the garrison support function of the Grayling Range, while the Alpena CRTC manages operational aspects of the airspace and training requirements of the visiting units. Additionally, the JMTc naturally handles more of the Army-related activities and Alpena CRTC handles the Air Force-related functions.

The CRTC is collocated with the Alpena County Regional Airport, sharing functional assets including two runways, the primary being 9,000 feet long by 150 feet wide and the secondary crosswind recovery runway being just over 5,000 feet long by 150 feet wide. Taxiways and air navigation equipment are also shared. The airport has a control tower and is owned and operated by Alpena County. It is a moderately busy airport with the majority of traffic being military related.

While the installation does not have any flying units of its own, it supports organizations from all branches of the military throughout the U.S. and coalition partners. Regional



*Front entry of Alpena CRTC, which is collocated with Alpena County Regional Airport. (Source: Alpena CRTC Public Affairs)*

units supported on a regular basis by the CRTC include:

- ▶ 107th Fighter Squadron (FS) out of Selfridge Air Force Base (AFB), Michigan, flying A-10 fighter jets.
- ▶ 112th FS out of Toledo, Ohio, flying F-16 fighter jets.
- ▶ 69th and 23rd Bomb Squadrons out of Minot AFB, North Dakota, flying B-52 bomber jet aircraft.
- ▶ 171st Air Refueling Squadron out of Selfridge AFB, Michigan, flying KC-135 refueler jet aircraft.

Command and control of airspace activities is coordinated through Black Talon Scheduling located on Alpena CRTC. They provide separation services for all aircraft within the SUA of the entire complex from the RA over Lake Huron to the military operations area (MOA) west of the Grayling Range. This is done in coordination with other entities including the Alpena County Regional Airport air traffic control tower, the Grayling Range air traffic control tower, Range Control at Grayling Range and the Minneapolis Air Route Traffic Control Center, which has ultimate authority over the entire region and handles all aircraft in high-altitude airspace.

The CRTC and JMTc work in concert to promote and manage operations throughout the entire complex. This includes jointly funded projects and CRTC-funded projects on the range (an Army asset). Specific to Alpena CRTC are facilities for firefighter training, munitions storage, bulk jet fuel storage, Combat Aviation Patrol capable shelters and maintenance, Joint Terminal Attack Controllers to support range activities, a large aircraft parking apron, operations support facilities for transient units, aircraft maintenance hangars, billeting, dining, and recreational assets.

The installation employs 88 military personnel (ANG), 57 state employees, and 62 contractors with an additional 21 temporary employees during training events. Excluding airman's personal expenditures, these activities generate a local economic impact of well over \$25 million dollars annually.

The installation plays host to many visitors throughout the year for individual and unit training events as well as annual large force exercises including Northern Strike, an NGB-sponsored exercise that involves 55 units from 21 states and as many as three coalition partners from around the world. This event brings as many as 5,500 personnel at one time and flies more than 1,120 sorties out of the airfield.

Possessing the largest amount of military and restricted airspace east of the Mississippi River, and supported by advanced digital airport surveillance radar (DASR) and tracking systems technology, Alpena CRTC has the potential to become the unmanned aerial systems (UAS) destination of choice for the Department of Defense (DOD) and its contractors. The DASR and tracking systems are used by both Minneapolis and Cleveland centers to control and direct airborne craft.

Alpena CRTC has developed a 1 square mile box of airspace specifically for small military UAS missions. This airspace provides a template for a proposed 4-square-mile civilian UAS area of operation. When completed, this area would be capable of supporting conventional, maritime, hand, and catapult launched aerial systems. Launch and recovery support for military UAS is being actively pursued by the CRTC, which may eventually allow flight systems testing, mission training, and DOD validation testing. UAS can now also be flown in Class D airspace when the tower is open.

Based at the Alpena County Regional Airport in Alpena, Northern Michigan Unmanned Aerial Systems Consortium (MUASC) is a UAS consortium and flight test center. MUASC offers 11,000 square miles of airspace dedicated to research and development, certification, qualification, and systems testing for commercial UAS. It includes an MOA that belongs to ANG, with over 30 percent of airspace extending over Lake Huron. MUASC consists of UAS manufacturers, academia, research centers, military, government agencies, and private partners.

Characterized by a low population density with wide, uninhabited expanses, the area is ideal for UAS research, testing, and development. The grant is allowing Alpena to host no-cost training seminars. The seminars promote travel to Alpena, which translates into hotel stays and business for local restaurants. Growing this asset will continue to be an economic benefit to the area.

### 3.1.6 Demographics

The Alpena CRTC study area for this JLUS is located in Alpena County, the most populated county in Northeast Michigan. Alpena County has a population of 28,599 residents and functions as Northeast Michigan's commercial and cultural center. As of 2017, data shows 10,054 people living in the City of Alpena, while 8,835 reside in the Township of Alpena.

Tourism plays an important role of the area's economy. Throughout the almost 9 square miles that make up the City of Alpena, an abundance of recreational activities are available for its residents and visitors to enjoy year-round.

Alpena also has roots in industrial companies that positively impact Alpena's revenue. Alpena is home to LafargeHolcim cement plant, Besser Company, and a drywall board manufacturing facility owned by Decorative Panels International. In addition to its industrial base, Alpena is also home to many other small businesses along with a community college and a regional medical center.

Alpena CRTC is located just outside of the city, and it is a continued source of economic activity for the local community. Every year the operation brings over 1,000 people to the area. During their days off, many trainees spend money at the local business in the Alpena area. Numerous businesses offer incentives for the troops including a military discount. Alpena CRTC creates thousands of new customers a year for the local economy and also energizes the local housing market with new full-time officers/staff that live off base. Several times a year, the base will host students for a training program that offers them an introduction to the military. People involved in the program often return to the area to hunt, fish, and take advantage of Alpena's many recreational activities.

#### Population Projections

It is difficult to project population in the Alpena area due to tourism and those living in the area seasonally. Overall population in the area has rapidly been declining since the 1960s. See Figure 3.2, City of Alpena Population Trend, 1900-2010. Alpena residents are aging with few new res-

idents moving in. The distribution is heavily weighted to those of retirement age. This, along with the downturn in the economy in 2009, may have played a role in the shift of the population. Poverty rates are also high in the Alpena area, possibly also contributing to a decline in population. A reliable measure of economic health is the median household income. The median household income of the Alpena CRTC study area is \$42,883, higher than the overall Alpena County median income, which is \$35,710. Unemployment rates in 2010 were 15.5 percent and have fallen significantly to 7.4 percent in 2017. The City of Alpena is committed to enhancing and promoting its business-friendly climate and future job growth, which over the next 10 years is predicted to be 41.56 percent. The forecasted population of Alpena County looks to increase by the year 2020 from 28,599 to 35,220 residents.

#### Growth Potential

In an effort to attract skilled talent to the area and curb a decreasing population, Northeast Michigan has put together a 10-year talent plan. The plan focuses on long-term growth, bringing to the region full-time, higher-wage positions in the highest growth industries. The Northeast Michigan 10-year talent plan provides a timeline, best practices and recommendations for assessing and bringing in skilled employees to the region. Northeast Michigan is looking to adequately plan for long-term growth by anticipating industry trends and educational needs. The vision for the future of Northeast Michigan is to fill 10,000 jobs in 10 years. For details, see Table 3.1, Northeast Michigan Industry Forecast.

Figure 3.2 | City of Alpena Population Trend, 1900-2010

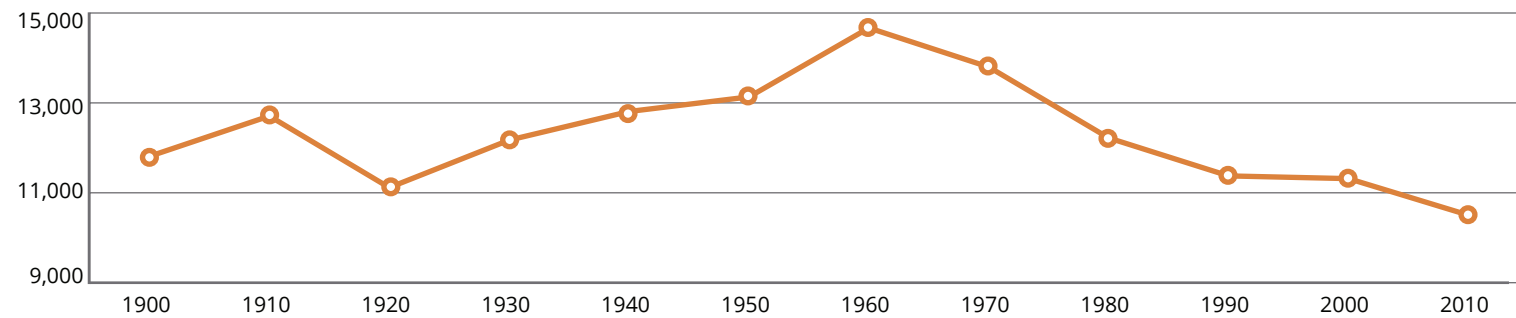


Figure 3.3 | Alpena CRTC Study Area

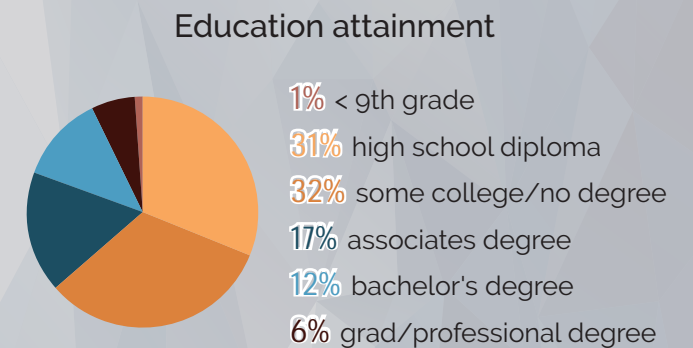
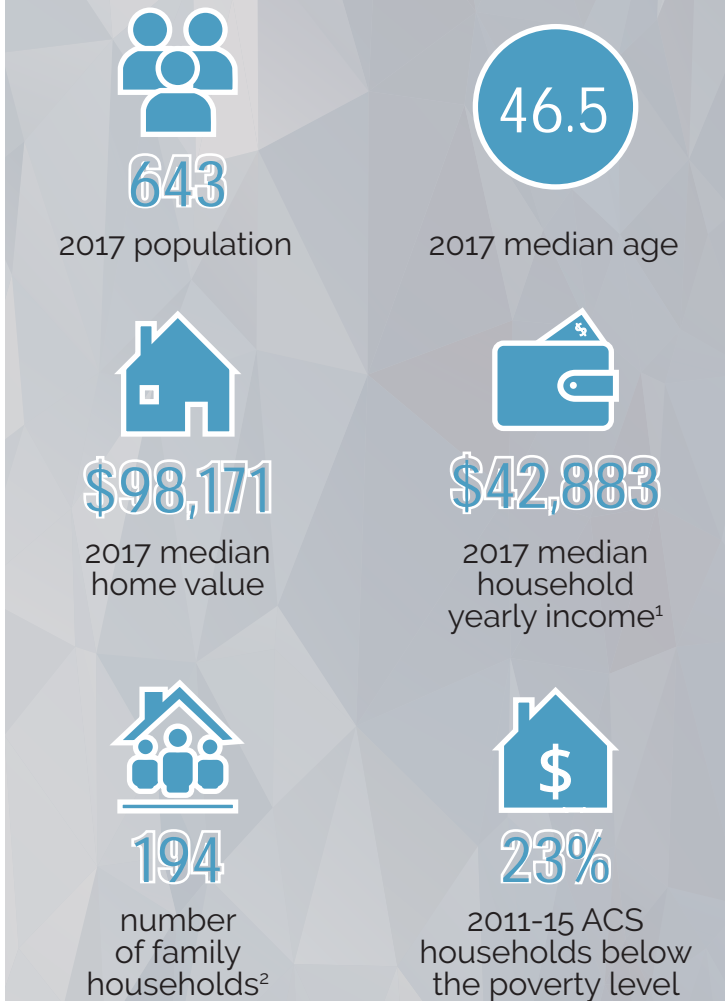


Table 3.1 | Northeast Michigan Industry Forecast

INDUSTRY	EMPLOYMENT 2012	EMPLOYMENT 2022	PERCENT CHANGE (%)
Retail Trade	10,960	10,860	-0.9
Healthcare and Social Assistance	9,560	10,212	6.8
Transportation and Warehousing	1,460	1,630	11.6
Manufacturing	5,170	5,420	4.8
Construction	2,380	2,780	16.8
Agriculture, Forestry, Fishing and Hunting	1,790	1,850	3.4
Professional and Business Services	2,320	2,620	12.9
Accommodation and Food Services	6,410	6,860	7.0
Leisure and Hospitality	7,530	8,040	6.8
Government	6,270	6,090	-2.9
Financial Activities	2,320	2,360	1.7

Source: [http://www.discovernortheastmichigan.org/downloads/rpi\\_10\\_year\\_talent\\_plan.pdf](http://www.discovernortheastmichigan.org/downloads/rpi_10_year_talent_plan.pdf)

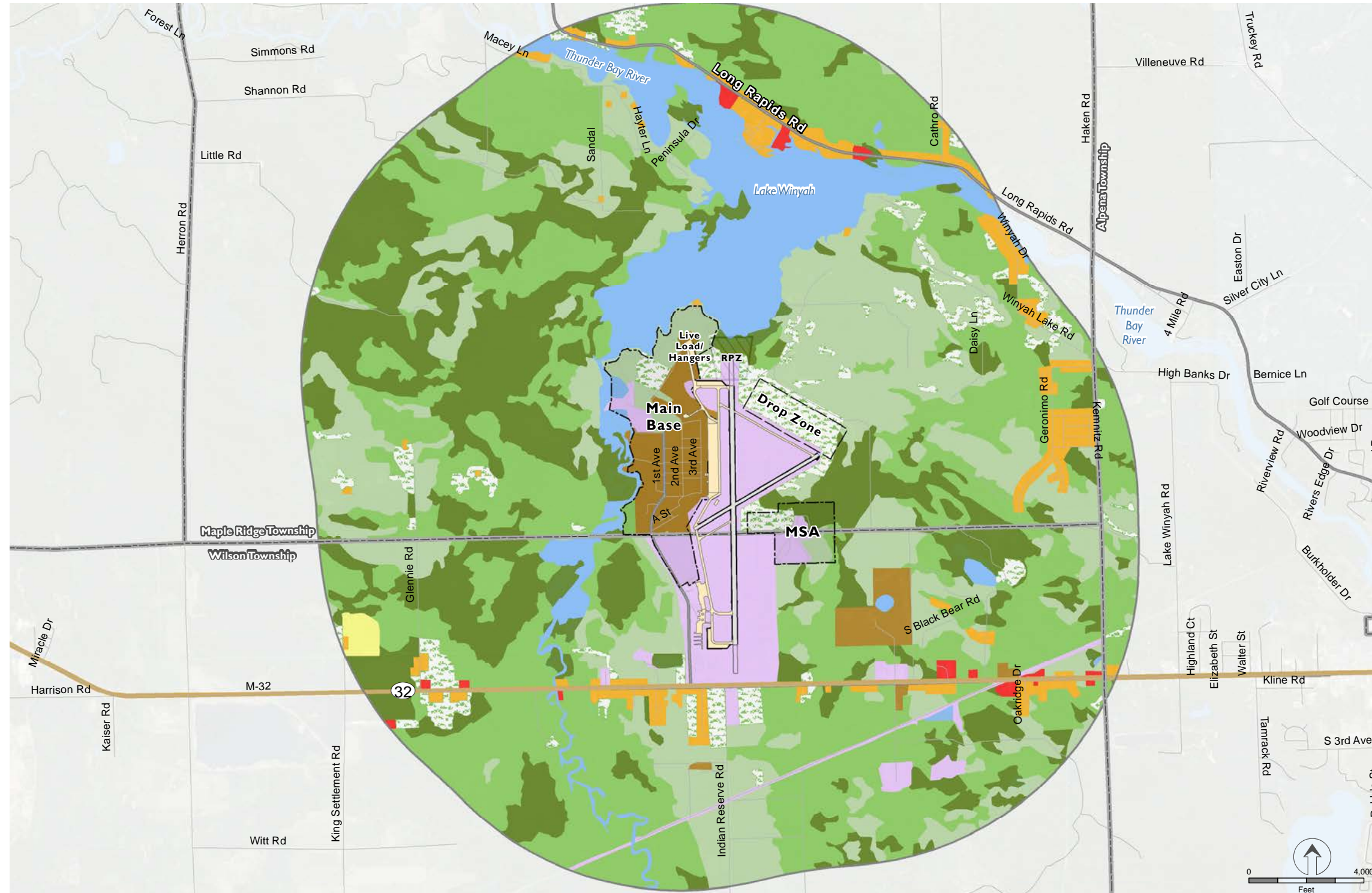
Figure 3.4 | Alpena CRTC Study Area Demographics



1. Esri  
2. 2010 US Census



Figure 3.5 | Alpena CRTC Land Use



- |  |                        |  |                   |  |                      |  |  |
|--|------------------------|--|-------------------|--|----------------------|--|--|
|  | JLUS 2-Mile Study Area |  | Existing Land Use |  | Non-Forested Uplands |  | Water  |
|  | Township Boundary      |  | Residential       |  | Upland Forest        |  | Institutional/Recreational                   |
|  | Drop Zone              |  | Commercial        |  | Lowland Forest       |  | Industrial/Extractive/Transportation/Utility |
|  | Runway Protection Zone |  | Agricultural      |  | Wetlands             |  |  |

### 3.1.7 Land Use

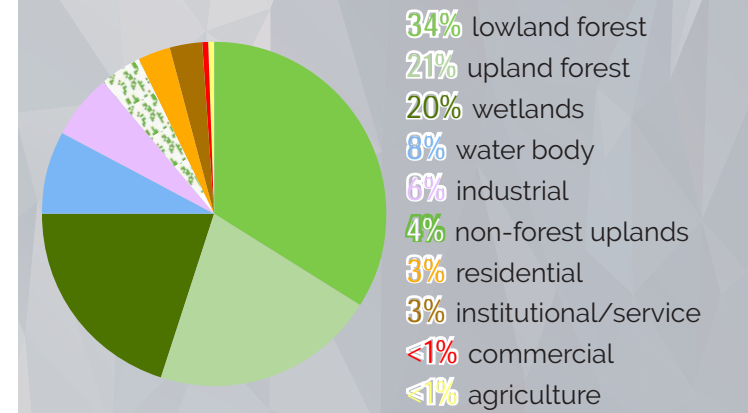
Shown in this section are the various land uses as they exist within and around Alpena CRTC. The divisions of use are categorized into natural areas and those created by a human presence. This manner of organization was used to reconcile the differing land-use categories provided by the townships. Throughout the Alpena CRTC study area, man-made uses are concentrated along major roadways, and in unincorporated portions on the north side of Lake Winyah. Areas of man-made uses consist of commercial, industrial, recreational, and residential uses. These land-use categories do not portray the intensity of the land use in any given area.

The majority of the land use around Alpena CRTC, 87 percent of the total acreage, is natural areas. Natural areas include a mix of forested uplands, lowlands, and wetlands. Among the man-made area, the highest percentage of land is the industrial, extractive, transportation and utility land-use category, in large part due to the Alpena airfield. Among the other land uses, there is a concentration of the Commercial and Residential land uses along thoroughfares in the areas. Agricultural uses are the least represented in the study area.

It should be noted that land use is a portrayal of the actual use of real property and, while it informs zoning, is not considered to be legally enforceable.

The vast majority of the concentrated land uses of the City of Alpena are well to the northeast of this area.

Figure 3.6 | Alpena CRTC Land Use Distribution



### 3.1.8 Zoning

Zoning can be enforced at the county, township, and city/village levels of government. As it applies to the Alpena study area, the zoning is enforced at the township level by the Maple Ridge, Wilson, and Alpena Townships respectively. Each township applies different names to their respective zoning districts. In order to organize these varying descriptions, the zones have been grouped into seven categories that best fit the overall description of the zone. While the categories do not take into account the intensity of the zone, it does lay out the legal mechanisms available within the Alpena study area that control the use of property. The largest zoned area within the Alpena area consists of Agricultural areas, totaling 62 percent of the total area. Commercial, Residential, and Industrial areas consist of 14 percent of the study area and notably cover more area than the identified land use. These zones are of importance when considering noise and other disruptions concerning uses at the Alpena CRTC, as these zones will likely consist of the majority of occupied spaces.

### 3.1.9 Incompatible Use

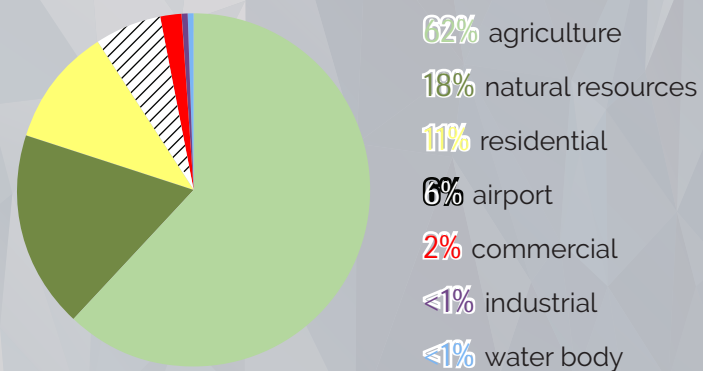
Because there is no official data on noise contours or accident potential zones (APZs) from the airport, it is difficult to complete a precise analysis of incompatible land uses. However, since the bulk of the land uses surrounding the regional airport and Alpena CRTC are agricultural or open space in nature and the City of Alpena is not directly adjacent to the installation, there are fewer complaints related to military operations in the area.

Figure 3.7 | Alpena CRTC Zoning



- JLUS 2-Mile Study Area
- Alpena CRTC
- Township Boundary
- Agriculture
- Airport
- Commercial
- Industrial
- Natural Resources/Open Space
- Residential
- Water Body

Figure 3.8 | Alpena CRTC Zoning Distribution



### 3.2 Alpena CRTC Public Participation

The public participation process for Alpena CRTC involved a suite of TC/PC meetings, stakeholder meetings, community survey, and one-on-one stakeholder interviews. The initial TC/PC meeting for Alpena CRTC took place on April 24, 2017, at the University Center in Gaylord, Michigan. During this meeting, participants discussed expanding the TC member list, approved the project work plan, and coordinated logistics for the tours.

The Alpena CRTC installation tour for TC/PC members took place on June 1, 2017. The purpose of the tour was to provide TC and PC members with a more detailed understanding of the Alpena CRTC operations, procedures, and facilities.

On June 1, 2017, TC and PC members met at the Great Lakes Maritime Heritage Center, a visitor center for the Thunder Bay National Marine Sanctuary, for a facilitated issues identification discussion. Through this meeting, TC and PC members identified an initial list of strengths, weaknesses, opportunities, and threats (SWOT) related to Alpena CRTC. Community stakeholders met the evening of June 1, 2017, at the Maritime Heritage Center to engage in a similar issues identification discussion using the SWOT method. The JLUS project team advertised for this meeting in the Alpena News and local radio stations. In addition, TC and PC members used their internal outreach mechanisms, such as email distribution lists and websites, to promote the meeting. During the meeting, the JLUS project team presented the JLUS process and facilitated an issues identification discussion. Section 3.3 provides more detail on this process and the results.

After the initial stakeholder meetings, the JLUS project team conducted a series of one-on-one interviews with key stakeholders. Sixty stakeholders participated in the interview process. In addition to interviews, the JLUS project team sought broader stakeholder input through a survey made available on the NEMCOG website for 3 months. A copy of the survey questions is available in Appendix B as part of the Public Participation Plan. Members of the TC and PC used their existing outreach mechanisms, such as websites and newsletters, to help the JLUS project team promote participation in the survey. NEMCOG also provided information to the Alpena News and local radio stations. Subsequent news articles and radio coverage promoted participation in the survey. Stakeholders submitted a total of 137 survey responses.

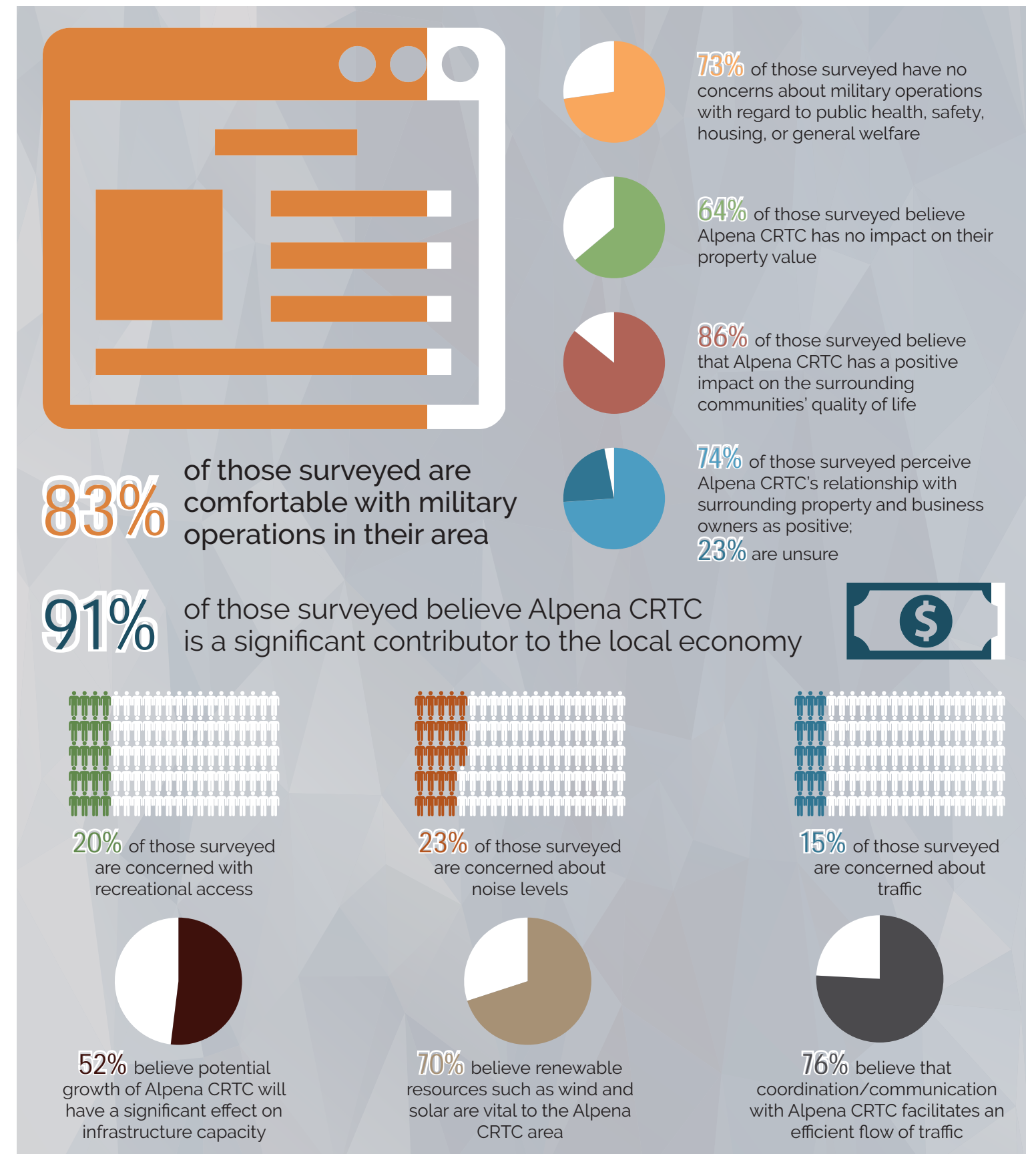
The survey results for Alpena CRTC are presented in Figure 3.9. Overall, the survey responses indicate that a majority of stakeholders sharing their perspective are comfortable with the operations at Alpena CRTC, believe it is a significant contributor to the local economy, and has a positive impact on the quality of life of surrounding communities. Stakeholders responding to the survey have a slightly greater concern about noise from Camp Grayling JMTC (23 percent) than recreational access (20 percent) or traffic (15 percent).

Stakeholder input from the SWOT analysis, the one-on-one interviews, and the survey helped the JLUS Project Team understand the comprehensive universe of issues and prioritize those issues for further strategy development. The second JLUS project stakeholder meeting for Alpena CRTC took place October 11, 2017, at the Alpena County Library. This Alpena community update and input meeting focused on reviewing the JLUS process steps, status, SWOT results, and identification of possible strategies to deal with priority issues identified by stakeholders. Additional news articles and radio coverage discussed this meeting and continued to promote participation in the online community survey.

Additional TC and PC meetings took place in November and December 2017 and continued through the spring of 2018. During these meetings, TC and PC members discussed JLUS project status and action items, data needs, and next steps.

Additional stakeholder meetings, both in-person and via conference calls, took place during 2018 to address details of the recommended strategies for each of the priority issues. During these meetings, stakeholders provided feedback on the strategies, identifying key information that will assist with successful implementation over time. The strategies and associated recommendations and challenges identified by the JLUS project team with input from stakeholders are described in more detail in Section 4.

Figure 3.9 | Survey Highlights





JLUS stakeholders participate in a SWOT analysis during the June discussion meetings.

Figure 3.10 | Alpena CRTC SWOT Results



(Items in the smallest font size got less than 5 votes.)

### 3.3 Alpena CRTC Issues Overview

#### 3.3.1 Issue Definition Process

The first opportunity for the public and project stakeholders to share thoughts on their proximity to Alpena CRTC was at a series of discussion meetings on June 5, 2017. There, the JLUS project team led TC and PC members through an issues collection exercise to gather input. These issues could be positive or negative.

The issues were sorted into four categories: strengths, weaknesses, opportunities, and threats, and then meeting participants voted on which issues mattered the most to them. Later that same day, the JLUS project team led area residents through the same exercise at a public meeting. The results of that analysis can be seen in Figure 3.10, Alpena CRTC SWOT Results. Larger font size indicates issues that received the most votes. Detailed results are provided in Appendix C. Additional notes and input were gathered during the meetings, as well as during individual interviews with stakeholders.

All of the input from stakeholders, the TC and PC, and the online survey was considered when drafting the final list of issues. The survey was closed on November 30, 2017, with

over 200 responses.

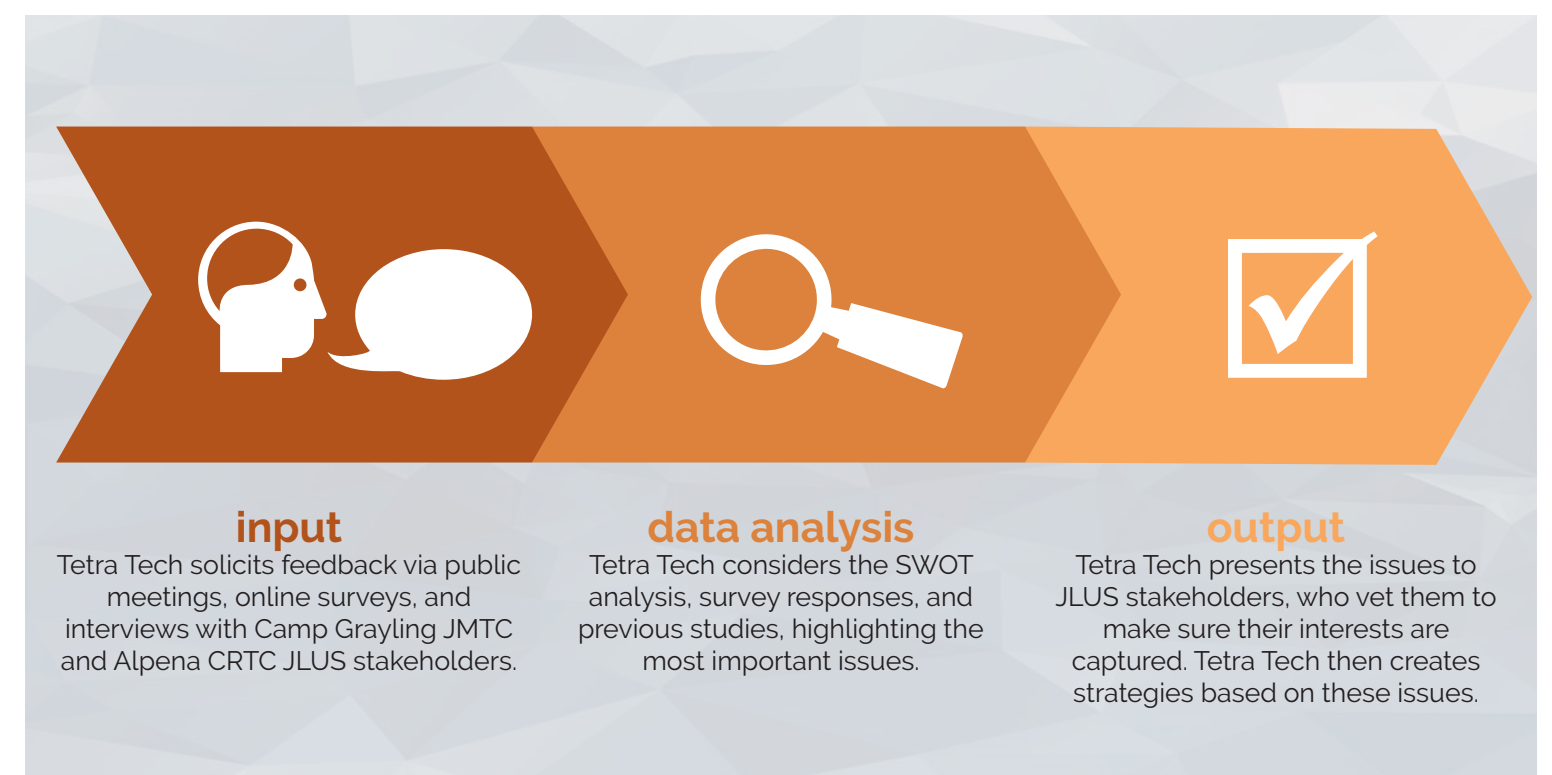
Along with stakeholder feedback, a large trove of data from NEMCOG and other local sources was considered, including demographic data, existing studies, and GIS data on land use and other facets of the region.

Six overarching categories emerged:

- ▶ Military Operations
- ▶ Noise
- ▶ Environmental
- ▶ Transportation and Infrastructure
- ▶ Community Partnerships
- ▶ Economic Development

All of the issues raised fell into one of those categories, which are described in more detail on the following pages.

Figure 3.11 | Alpena CRTC Issues Analysis Process



**Table 3.2 | Alpena CRTC Issues**

ISSUE ID	DESCRIPTION	SOURCE
<i>Noise</i>		
1a	Training/Aircraft Operations are too Low/Fast	SWOT
<i>Military Operations</i>		
2a	Live Munition Impacts to Lake Huron	SWOT
2b	Northern Strike Activity	SWOT
2c	Marine Sanctuary	Interview/Survey
<i>Environment</i>		
3a	PFOS/PFOA Contamination of Groundwater	SWOT
3b	Surface Water Quality (Lakes, Rivers, Streams, Wetlands)	Survey
3c	Groundwater Quality	Survey
<i>Transportation/Infrastructure</i>		
4a	Effects of Growth on Utilities	Survey
4b	Airport Joint Ownership/Land Use Access	Interview/Survey
4c	Road Funding	
4d	Road Condition	
4e	Recreational Access	Survey
<i>Community Partnerships</i>		
5a	Communications/Education	
5b	Public Relations/Community Involvement	
<i>Economic Development</i>		
6a	Significant Contributor to Local Economy and Military Tourism	Survey
6b	Airport Viability: UAS, Freight, Customs Border Patrol	SWOT
6c	Partnership with Sheriff's Department	SWOT

For a complete list of issues, see Appendix C, SWOT Results.



*Alpena CRTC has an operations building on Camp Grayling JMTC.*



*A MIARNG UH-72 Lakota helicopter takes off near a MIANG A-10 Thunderbolt II during Operation Northern Strike at Alpena CRTC. (Source: Alpena CRTC Public Affairs)*

### 3.3.2 Alpena CRTC Noise and Military Operations Issues

#### *Issue 1a: Training/Aircraft Operations are too Low/Fast*

The area surrounding the Alpena County Regional Airport is much better defined and controlled than that of Grayling Army Airfield (AAF). A single small housing community off the end of Runway 01 contains less than 60 houses. The clear zone (CZ) of the runway end is clearly delineated on the ground.

The rest of the vast area around this airport is forested, unpopulated land. The airfield is far enough away from the developed area of town that encroachment is not an issue. Criteria establishing protection areas for this airport is Federal Aviation Administration (FAA) Advisory Circular 150/5300-13 because it is a county-owned and operated airfield, even though the majority of air traffic is military related.

Training activities involving aircraft are low and fast when they involve jets engaged in launch or recovery operations. Once departed from the airfield and at a safe distance away, these aircraft typically ascend to above 6,000 feet MSL, which is the floor of the Pike West MOA located directly above this area. The majority of operations are intended to be conducted within these designated airspaces, including transit to and from the ranges.

The Pike East MOA located over Lake Huron is established with a floor down to 300 feet above ground level (AGL). It is possible that aircraft may transit directly from the airfield to this airspace at a lower altitude if going there for training purposes. Typically, these overflights would be restricted to flying no lower than 1,500 feet MSL until safely in the MOA. They would also be directed to avoid overflight of populated areas for safety and noise sensitivity reasons.

It is recommended that cities and counties restrict development of residential neighborhoods within 5 miles of all airports, ranges, or installations.

#### *Issue 2a: Live Munition Impacts to Lake Huron*

For several decades, Lake Huron has been a well-known location for the release of bombs, missiles, bullets, and all manner of munitions.

In more recent years this activity has been restricted in order to safely allow other uses of the resource. An area referred to as the R-4207 is restricted airspace (RA) (when activated) over restricted water for the purposes of military training. The lake-bed below is undoubtedly riddled with ages of shrapnel and unexploded ordnance (UXO).

In 1991, a live AIM-9B Sidewinder missile was identified on the shore of Lake Michigan near Sheboygan. It was later determined that it came from similar live-fire training activities conducted in the lake, then dredged up by fishermen and abandoned on the beach.

Alpena CRTC training includes exercises that employ air-to-surface weapons launching into the Lake Huron Overwater Range, approximately 20 miles offshore from Alpena. The Thunder Bay National Marine Sanctuary was designated in 2000 at 448 square miles and expanded in 2014 to 4,300 square miles. When the Thunder Bay National Marine Sanctuary boundary expansion was underway, the 2013 National Oceanic and Atmospheric Administration (NOAA) Condition Report noted that a 1,300-square-mile area has the potential for housing UXO and military-related debris. NOAA's Lake Huron chart 14860 contains a note cautioning mariners against "anchoring, dredging, or trawling in the area due to the possible existence of unexploded ordnance." MDEQ has requested assistance from the U.S. Army Corps of Engineers to evaluate the known munitions in the area and potentially address their findings via the Military Munitions Response Program. Maintaining effective communication between NOAA and Alpena CRTC is key to ensure that Alpena CRTC operations co-exist with this unique freshwater sanctuary.

### Issue 2b: Northern Strike Activity

Because it is one of the largest training areas in the United States, the Alpena CRTC/Grayling JMTCC complex is a national asset that easily attracts training events like Northern Strike exercise. The inundation by thousands of visitors that need services, supplies, entertainment, vehicles, housing, and the like can impact the community. However, these events also bring a boost to the local economy.

To balance the positive and negative aspects of training exercises, towns should plan and prepare for events as thoroughly as the military does. They should disseminate information about events, shared activities, services offered, and help wanted. They should prepare briefings and informational packages for military personnel to help them find what they are after and educate them on how to avoid areas that should be off-limits to military personnel.

The community-military partnership is key to a successful event of this magnitude. Getting the community involved and engaged will reduce the negative impacts while allowing residents to more directly realize the benefits.

Figure 3.12 | Alpena CRTC Military Operations

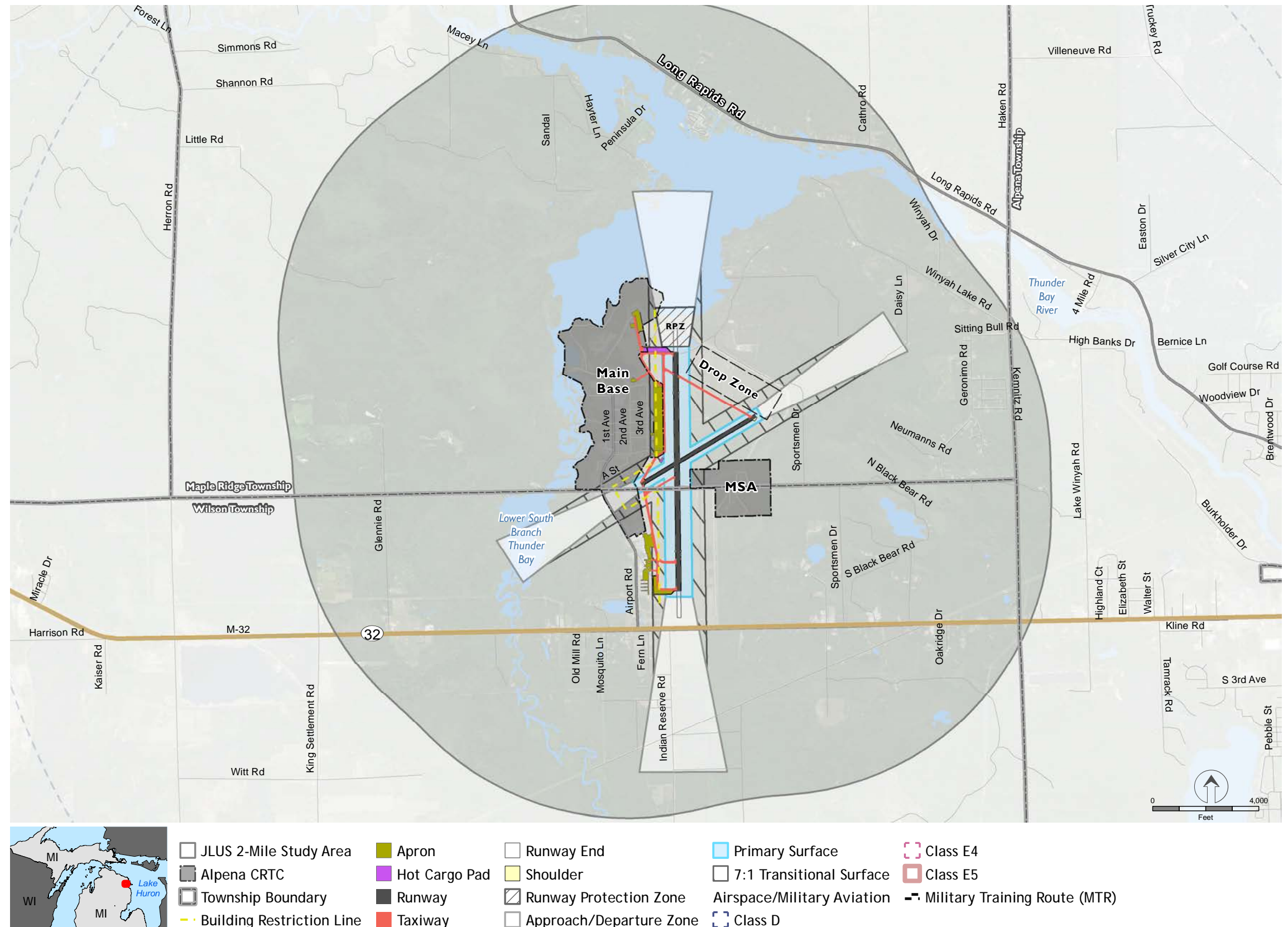
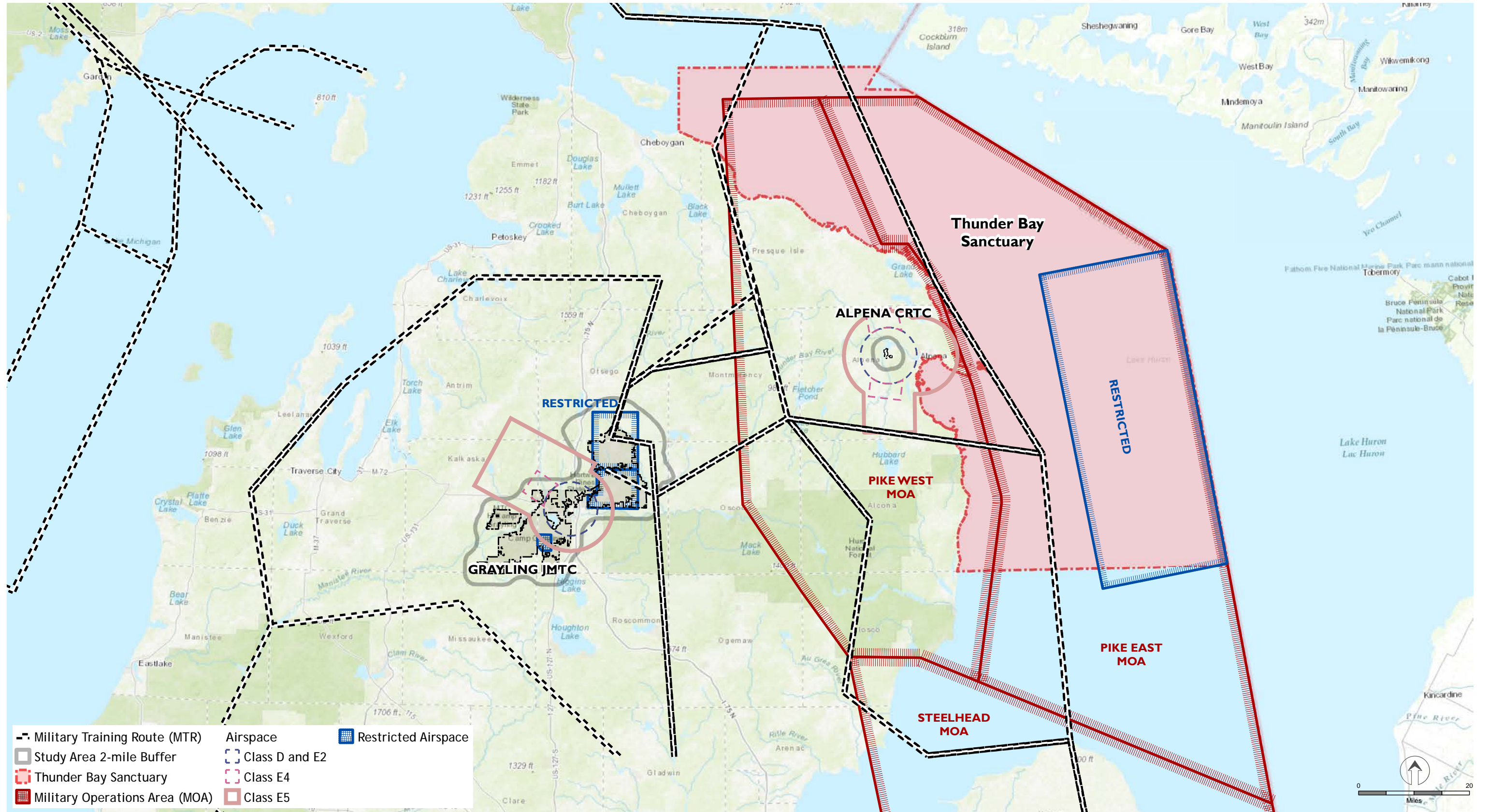


Figure 3.13 | Alpena CRTC Military Operations Overview





*Great Lakes Maritime Heritage Center, the visitor center for the marine sanctuary.*

### Issue 2c: Marine Sanctuary

The Pike East MOA airspace over a large portion of the Marine Sanctuary extends down to just 300 feet AGL and is used for high-speed, low-altitude jet fighter training. There are no identifying notations on sectional charts limiting activities that can be potentially disruptive to marine life.

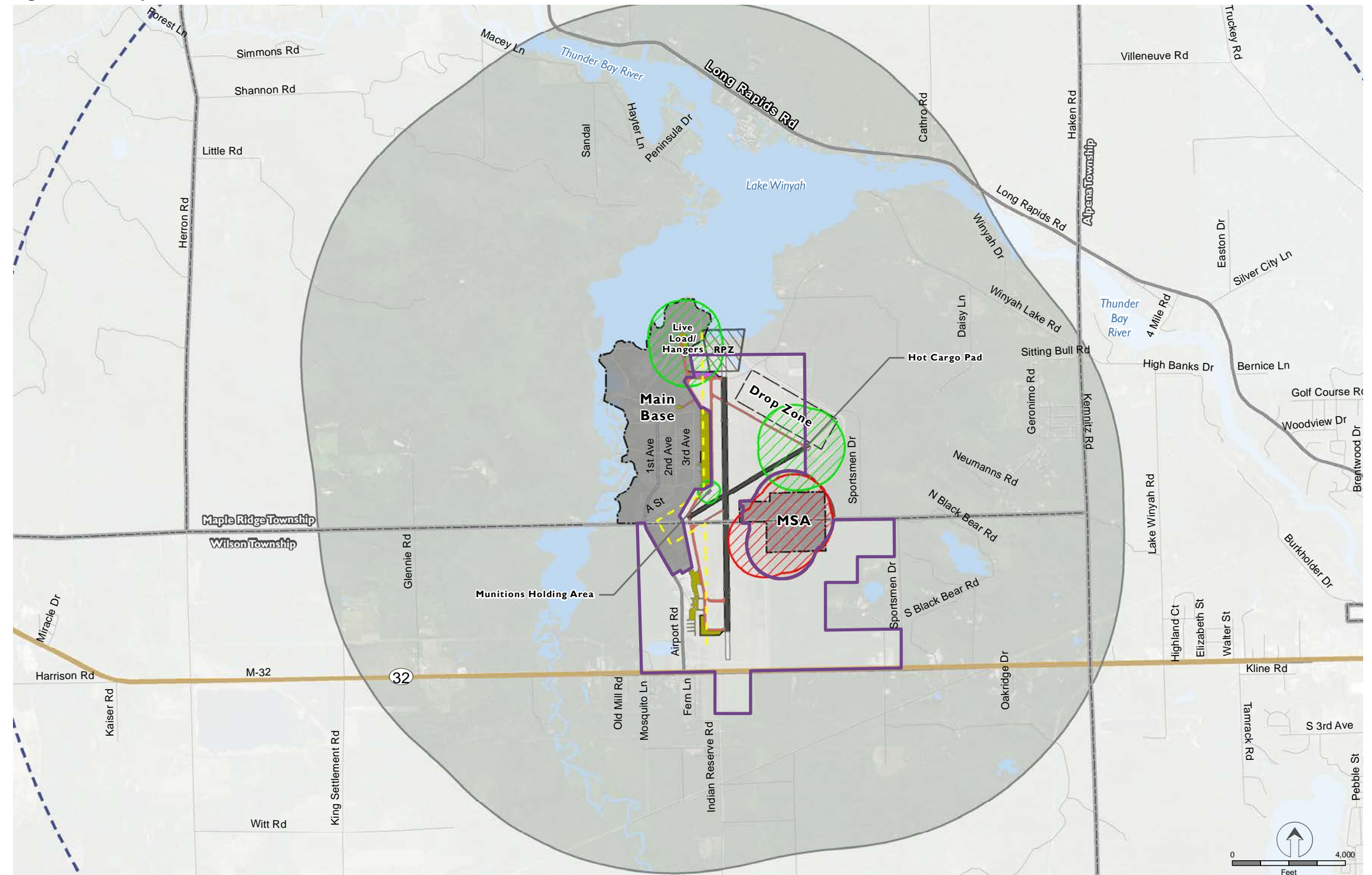
The greatest asset of the sanctuary are shipwrecks littering the lake bed. Low-level flight activities do not disturb those assets or the divers investigating them. There is the potential for munitions deployment in close proximity to the eastern edge of the marine sanctuary, and aircraft traverse the area with live munitions departing from the Alpena Airport. UXO are known to exist in this area, and most have been identified and marked to prevent accidental contact. However, there is a possibility of otherwise unknown UXO that could be dangerous to divers, fishermen, or recreational boaters.

### 3.3.3 Alpena CRTC Environmental Issues

#### Issue 3a: PFOS/PFOA Contamination of Groundwater

Contamination of groundwater and drinking water from wells from perfluoroalkyl and polyfluoroalkyl substances (PFAs, also known as PFCs), is the top environmental concern for Alpena CRTC and Camp Grayling JMTC. The principal contamination source at the Alpena CRTC is considered to be perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) contamination from use of now discontinued aqueous film forming foam (AFFF) fire suppressants. On the national level, PFA/PFC compounds are emerging unregulated contaminants of concern with suspected but largely not understood negative human health effects. As of January 1, 2018, 80 private wells had been tested for PFOS-PFOA with 17 detections all considerably below the 70 parts

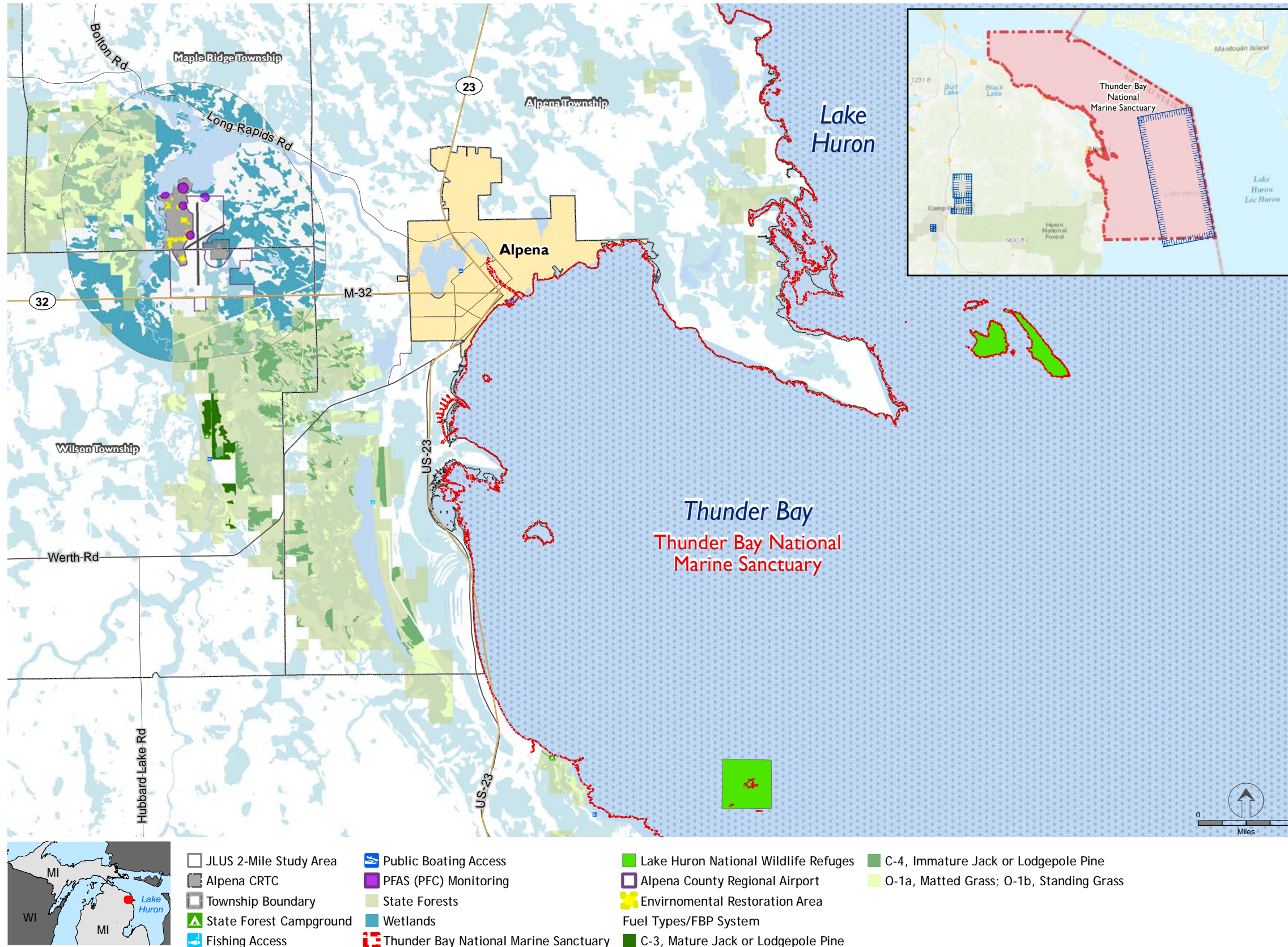
Figure 3.14 | Alpena CRTC Noise



- JLUS 2-Mile Study Area
- Township Boundary
- Drop Zone
- Building Restriction Line
- Intermittent Exposure
- Constant Exposure
- Restrictive Easement
- Apron
- Hot Cargo Pad
- Runway
- Taxiway
- Runway Protection Zone
- Alpena County Regional Airport



Figure 3.15 | Alpena CRTC Environmental



per trillion (ppt) limit. A monitoring and analysis program is in place in collaboration with concurrent monitoring, control, groundwater modeling, and remediation efforts by the Michigan Department of Environmental Quality (MDEQ), Michigan Department of Natural Resources (MDNR), Michigan Department of Health and Human Services (MDHHS), and the District 4 Health Department. Information about the contaminants, forms to request well testing, and options for homeowners whose wells have been found to contain the substances may be found on the state webpage dedicated to the PFAS contamination issue: <https://www.michigan.gov/pfasresponse>. Public meeting inputs indicate some residents are finding it difficult to get clear and timely responses from the MDEQ for well testing and for other agency services. Ongoing communications addressing the background, plume tracking, well-testing, and resident options will help residents navigate this issue and improve the resident-base relationship.

Many residents do not use or have regular internet access, so nondigital forms of communication (mailers, hotline phone number) should continue to be emphasized to ensure all residents are fully informed. During public comment, several residents requested more frequent use of local radio, television, and newspapers to not only advertise public meetings but also to convey basic information about the base and issues affecting the public. The latest content from monitoring and control programs and legacy installation restoration program (IRP) should be updated for informational fliers and public outreach materials.

Concern over how wells are selected for testing was frequently raised at the public meetings. Governor Rick Snyder issued Executive Directive No 2017-4 for a PFAS Action Team. In November 2017, the governor directed the leaders of the MDEQ, MDHHS, Michigan Department of Military and

### PFOS/PFOA Information

More information is available at <https://www.michigan.gov/pfasresponse>

If any resident has additional questions regarding this issue, the MDEQ Environmental Assistance Center can be contacted at 1-800-662-9278 or email [deq-assist@michigan.gov](mailto:deq-assist@michigan.gov). Representatives may be reached to assist with your questions Monday through Friday, 8:00 AM to 4:30 PM.

Veterans Affairs (MDMVA), and Michigan Department of Agriculture and Rural Development (MDARD) to immediately establish a Michigan PFAS Action Response Team. The team has been assigned to direct the implementation for the state's action strategy to research, identify, and establish PFAS response actions related to the discovery, communication, and migration of PFAS to the extent practicable.

More information is available at the state web page: <https://www.michigan.gov/pfasresponse>.

### Issue 3b: Surface Water Quality (Lakes, Rivers, Streams, Wetlands)

Alpena CRTC does not routinely test surface water quality on or near the base, as it is public property. Data on water quality and aquatic ecology in the Alpena CRTC area exist from many governmental and non-governmental organizations. Questions about specific topics like fish population health, site contamination, or trends in ecological health can often be addressed from multiple sources. Sources of existing and ongoing water quality and aquatic ecology survey, assessment and monitoring data in the Alpena CRTC area include:

- ▶ MDEQ Procedure 51 biological and ecological trend monitoring
- ▶ Part 201 contamination sites
- ▶ MDEQ probabilistic water quality monitoring sites
- ▶ Environmental Protection Agency (EPA) National Rivers and Streams, National Lakes Assessments, and National Coastal Conditions survey sites
- ▶ 303(d) Total Maximum Daily Loads (TMDL) impaired waters
- ▶ National Pollutant Discharge Elimination System (NDPES) discharge permit locations (including Alpena County Regional Airport)
- ▶ Various data from conservation organizations, citizen-based monitoring studies, and lake associations.

The Michigan Clean Water Corps (MiCorps) is a network of volunteer water quality monitoring programs that supplement MDEQ efforts in collecting and sharing water quality data for use in water resources management and protection programs. MiCorps is administered by the Great Lakes Commission under the direction of the MDEQ and in partnership with the Huron River Watershed Council, Michigan Lake and Stream Associations, and Michigan State University. MiCorps comprises the Volunteer Stream Monitoring Program and the Cooperative Lakes Monitoring Program, which provide training and support for quality assurance, reporting and communications among member organizations. The MiCorps website has an online searchable database with monitoring data for selected waterbodies. Aquat-

ic macroinvertebrate survey data, an indicator of stream ecology health, are available for select streams in study area watersheds such as the AuSable River. Monitoring data for lakes includes basic water chemistry and indicators of nutrient pollution that cause eutrophication and algal blooms. The database also contains invasive species survey data and several technical studies and reports available for download on the MiCorps website at [micorps.net/](http://micorps.net/)

### Issue 3c: Groundwater Quality

Residents near Alpena CRTC are concerned about contamination. Alpena CRTC monitors the water quality at the small-arms range. Environmental managers could consider providing educational materials on area contaminated sites (e.g. MDEQ Part 201 sites). Spills and environmental emergencies are reported to the MDEQ using the 24-hour Pollution Emergency Alerting System (PEAS) Hotline at 1-800-292-4706 or by contacting the MDEQ District Office (Alpena and Grayling area) at 989-731-4920. The public can view spills on Michigan's waterways using the Water Resources Division MiWaters Database: <https://miwaters.deq.state.mi.us/>.

## 3.3.4 Alpena CRTC Transportation and Infrastructure Issues

### Issue 4a: Effects of Growth on Utilities

Alpena County's population is decreasing overall, though some rural areas are growing and may require additional infrastructure.

#### Water

Water and wastewater for the area, including Alpena CRTC, are provided by the City of Alpena, which draws water from Thunder Bay.

The city's water treatment plant has capacity of 6.0 million gallons per day, with a maximum daily demand of 3.04 million gallons per day. According to the City of Alpena Comprehensive Plan, the average daily demand is 1.98 million gallons per day.

The 2013 Alpena CRTC Installation Development Plan (IDP) noted that the Alpena CRTC water system was in need of several upgrades, including eliminating dead ends, pursuing Military Construction Cooperative Agreement options with Alpena Township to address maintenance issues, and developing a cooperative agreement with the NGB to add



The current Alpena County Regional Airport Terminal, which will be replaced in 2018-2019.

a booster pump so water flow complies with Unified Facilities Criteria (UFC) 3-600-01, Fire Protection Engineering for Facilities. Additional missions at Alpena CRTC would further stress the water system.

Wastewater is treated at the city's water recycling plant, which has a capacity of 5.5 million gallons per day. Capacity to support population and military mission growth is available, as daily treatment averaged 2.3 million gallons per the 2013 Alpena County Master Plan. However, the 2013 IDP noted that Alpena CRTC needed to develop secondary containment for fuels loading/unloading and correct cross-connection issues in the base's wastewater system.

#### Electric and Gas

Alpena CRTC receives electricity from the Presque Isle Electric and Gas Co-operative, while the City of Alpena is serviced by the Alpena Power Company, which purchases electricity from Consumers Energy Company. Alpena Power Company's website states that its reliability in Northeast Michigan is 99.98 percent. The area receives natural gas from DTE Energy (formerly MichCon). According to the 2013 IDP, several elements of the on-base electrical system are nearing the end of their useful life and require replacement. They are also susceptible to the weather, which causes outages that can affect operations.

Natural gas usage is monitored on base via 30 individual building meters. Alpena CRTC also utilizes propane from Amerigas Propane and has implemented renewable energy sources into recent facility projects, including a geothermal system at the aircraft rescue and fire fighting station and solar photovoltaic panels at Building 115.

For Alpena CRTC, an energy assessment was performed in 2009, which should be updated in the near future. In the surrounding area, Alpena CRTC also has a Green Procurement Program that addresses sustainability strategies.

### Issue 4b: Airport joint ownership/land use access

The Alpena County Regional Airport (APN) is a publicly owned airport located 7 miles west of the City of Alpena. The county has leased 647 acres to the MIANG for exclusive use. The lease runs through June 2039. Additionally, a 210-acre area associated with the munitions storage area (MSA) is covered by a restrictive safety easement. The ANG has developed an IDP that details a 20-year plan for the base; the Airport Committee meets once per month.

The airport has two runways. Runway 1/19 is 9,001 feet by 150 feet and in good condition. Runway 7/25 is 5,028 feet by 100 feet and in fair condition.

According to the airport's website, of the 20 aircraft based at the field, 12 are single-engine airplanes, six are multi-engine airplanes, one is a helicopter, and one is a military aircraft. FAA data shows 10,409 enplanements at the Alpena County Regional Airport in 2015.

Delta is the only commercial airline that provides service to APN: 21 flights per week to and from Detroit Metropolitan Airport and Pellston Regional Airport. Air freight service is provided by FedEx, UPS, and Airborne Express.

A new \$11.9 million terminal building will be constructed in 2018 and 2019 with a combination of federal, state, and local funding. The existing terminal is beyond its useful life,

**Figure 3.16 | Alpena CRTC Transportation**



- |                        |                        |                                  |
|------------------------|------------------------|----------------------------------|
| JLUS 2-Mile Study Area | Drop Zone              | 2016 Traffic Volumes             |
| Alpena CRTC            | Restrictive Easement   | <i>Annual Avg. Daily Traffic</i> |
| Township Boundary      | Runway Protection Zone | 4923                             |
| Entry Control Point    | Trail                  | 19133                            |

is too small, and does not comply with building or air quality codes.

While the community supports expansion of the airport, few residents use the airport, and it is seen as demanding too many resources in terms of law enforcement. It should also be noted that APN no longer has a Homeland Security representative on site, which hinders the availability of international flights, as security for such a flight needs to be arranged.

The airport has its own master plan, which was last updated in 2010.

**Issue 4c: Road Funding**

The Alpena County Road Commission generally shares costs for road projects with townships and other municipalities; however, this split has not always worked well and will be discussed with township officials.

While the military utilizes roads and public infrastructure, the military does not contribute any funds to the maintenance of these assets.

**Issue 4d: Road condition**

Poor road condition has been cited as an issue throughout the JLUS study area. This is due in large part to inadequate funding for maintenance, which is compounded by many roads reaching the end of their useful lives at the same time.

The Alpena County Road Commission's Approved 2017 Budget, published in February 2017, indicates total revenue of \$5,534,559 and total expenditures of \$6,257,905.

Alpena CRTC is accessed primarily via M-32, which is a 5 (Fair) on the Pavement Surface Evaluation and Rating (PAS-ER) scale from the City of Alpena to Herron Road. M-32 is ranked a 4 (Poor) from Herron Road east to M-65. Within the City of Alpena, there are several road sections ranked 4, including portions of 11th Avenue, 9th Avenue, 3rd Avenue, 1st Avenue, Johnson Street, Miller Street, Wessel Road, Ford Avenue, Ripley Boulevard and Genschaw Road. Notably, several sections of US-23, a primary tourist route, are also ranked poorly both north and south of Alpena.

Road projects are prioritized based on the condition of the road in question, as well as the amount of traffic.

Several road segments were identified in the 2013 Alpena County Master Plan as needing improvements:

- ▶ Wayne Road
- ▶ Indian Reserve Road
- ▶ Herron Road
- ▶ All gravel roads
- ▶ Long Lake Road
- ▶ Weiss Road
- ▶ Maple Grove Road
- ▶ Grant Street
- ▶ North Point Shores
- ▶ Emerald Acres subdivision
- ▶ Misery Bay Road
- ▶ El Cajon Road
- ▶ Werth Road
- ▶ Hubert Road
- ▶ Hamilton Road
- ▶ Bare Point Road
- ▶ Bean Creek Road
- ▶ Boilore Road
- ▶ Wessel Road
- ▶ Pearl Road
- ▶ Dietz Road
- ▶ Lake Street
- ▶ Beaver Lake Road
- ▶ Woodward Avenue
- ▶ Grover Road
- ▶ Dawson Street
- ▶ Gutches Road
- ▶ Bloom Road

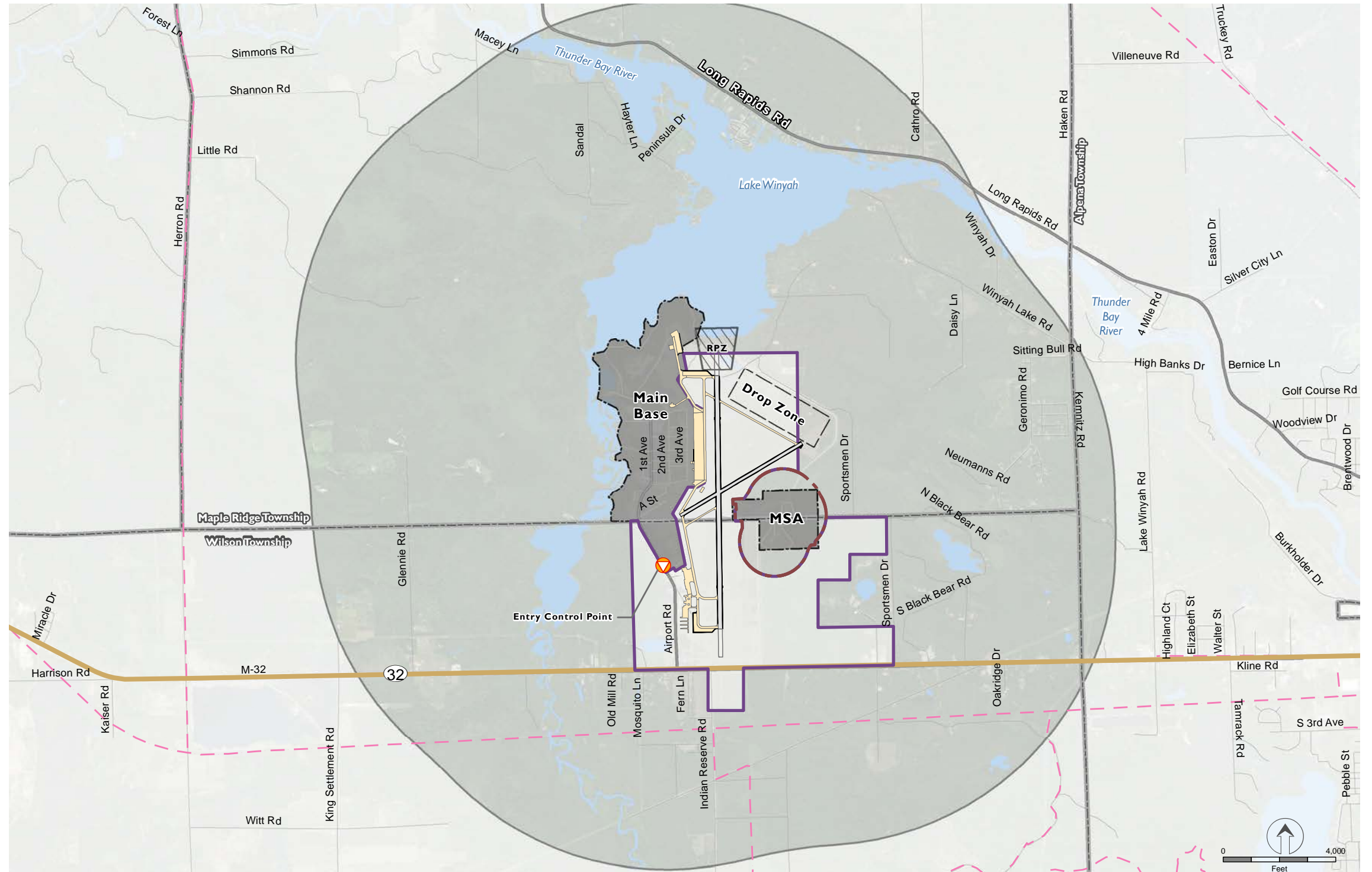
Improvement work has occurred or is planned for many of these areas. For example, a survey and project design project for Bloom Road was approved by the Alpena County Road Commission in December. The project will be completed in anticipation of future reconstruction. During 2017, the major road projects included Indian Road, Naylor Road, El Cajon Road, Gutches Road and small portions of Gitche Manitou Road, Murch Drive, and Chippewa Road.

Additional Alpena County projects include reconstruction of Indian Ranch Reserve Road (Werth South for 1.61 miles); resurfacing French Road (2.51 miles), Wolf Creek Road (Nich Hill south 2.1 miles), and Cathro Road (1.7 miles from Long Rapids to Boilore).

The Michigan Department of Transportation (MDOT) does not indicate any Alpena-area road or bridge projects in its 2018-2022 Five-year Transportation Program.

Access to the Alpena CRTC is via Airport Road from M-32. The entry control points (ECPs) do not comply with Air National Guard Handbook (ANGH) 32-1084, Facility Space Standards, or UFC 4-022-01, Entry Control Facilities Access Control Points. On base, Hangar Road needs to be resigned to meet design criteria and allow for safe two-way traffic.

Figure 3.17 | Alpena CRTC Roads



- JLUS 2-Mile Study Area
- Alpena County Regional Airport
- Drop Zone
- Restrictive Easement
- Jurisdiction
- Runway Protection Zone
- Entry Control Point
- Trail



*Great Lakes Maritime Heritage Trail near the waterfront.*

Within the Alpena area, the Thunder Bay Transportation Authority operates public transportation, including a Dial-A-Ride Transportation (DART) system that will pick up passengers at their home. The transportation authority also runs a hybrid electric trolley route that provides transportation for tourists as well as locals.

#### *Issue 4e: Recreational access*

According to the 2013 Alpena County Master Plan, among the top most-liked aspects of living in the county are access to lakes and water resources, outdoors and the environment (natural resources, wildlife, hunting/fishing, etc.), and recreation. Maintaining and providing access to recreational resources is important to many members of the community.

Alpena CRTC main base, located on the west side of the airport, is bordered by Lake Winyah (also called Seven Mile Pond) to the north and the Lower South Branch Thunder Bay River and Thunder Bay River State Forest to the west.

There is no access to the lake from the south side. Public access is available on the north shore near Norway Dam, which is owned by North American Hydro. A small portion of the lake lies within Alpena CRTC's explosive safety quantity distance arcs. Part of the lake also lies in the airport's accident potential zone.

A family campground (FAMCAMP) at the Alpena CRTC is accessible to anyone who can access the base.

### **3.3.5 Alpena CRTC Community Partnerships Issues**

The JLUS process emphasizes the importance of a community-driven planning process which relies on partnerships among Alpena CRTC, communities, and local stakeholders. The JLUS survey results indicated that 86 percent of those participating in the survey believe that Alpena CRTC has a positive impact on the quality of life of surrounding community residents. The JLUS process also revealed that stakeholders recognize the significance of Alpena CRTC to surrounding communities, leading community partners to find ways to strengthen existing community partnerships and, to use the words of the Alpena Area Chamber of Commerce President and chief executive officer's (CEO) words, "create an increasingly positive image of the CRTC among the general community, and prepare a much stronger network of support for the CRTC in case we should ever need to draw on the assistance of the community to fight on behalf of this incredible asset to our region."

#### *Issue 5a. Communications/Education*

Providing accurate and comprehensive information on Alpena CRTC services, facilities, and processes is important not only to potential visiting units, but also surrounding communities. Alpena CRTC does not have a dedicated community relations specialist responsible for coordinating communications and education related to Alpena CRTC activities.



*Alpena CRTC is located about 7 miles west of downtown Alpena, which is shown above.*

One mechanism for communicating this type of information is through the Alpena CRTC website, maintained by the MIANG. The Alpena CRTC website provides fact sheets on topics such as CRTC history, Alpena events, operations, facilities, and leadership contacts. However, many of the fact sheets and the news provided on the Alpena CRTC website have not regularly been kept up to date. The process for updating website information may be slow as a result of coordinating changes through Lansing.

Communications requirements from Lansing may preclude a faster process, but it is imperative that the existing website provide key contact information for community members. More timely updates to the Alpena CRTC website are necessary to improve communications and education of surrounding residents and business owners, community partners, and potential visiting units. The Alpena CRTC website links to the Alpena CRTC Facebook page, a communication mechanism that provides more timely updates on issues related to Alpena CRTC operations and the surrounding communities. With less than 200 followers as of early 2018, it is unclear if the Alpena CRTC Facebook page is the optimal communication mechanism to reach community members.

Alpena CRTC has a variety of options for educating the local community through educational partners. Alpena CRTC is located near STARBASE Alpena, an educational nonprofit funded by the Department of Defense (DOD) providing science, technology, engineering, and math (STEM) programs to local fourth- and fifth-grade students. According to STAR-

BASE, the goal is to "expose youth to the technological environments and positive role models found on military bases and installations." During these education programs, students have the opportunity to tour Alpena CRTC. The relationship of STARBASE to Alpena CRTC and the connection to students, schools, and community provide a unique educational opportunity. In addition to STARBASE, Alpena CRTC has had a strong relationship with Alpena Community College. In 2011, Alpena CRTC established a CRTC scholarship. Announcement of the scholarship highlighted the educational partnerships between Alpena CRTC and Alpena Community College. Alpena CRTC has offered courses and has had Alpena Community College nursing program students participate in patient exercises.



*Streetscape in downtown Alpena.*

Another key educational partner in the Alpena area is the Thunder Bay National Marine Sanctuary, the only National Marine Sanctuary in the Great Lakes or in U.S. fresh water. The sanctuary is important to Alpena's local economy, drawing tourists to the visit the shipwreck museum, take glass-bottomed boat tours of shallow-water shipwrecks, and dive to explore the shipwrecks. The sanctuary provides a staging area for scientists and researchers studying ecology, natural resources, and maritime archaeology.

### *Issue 5b. Public Relations and Community Engagement*

Public relations and community engagement is another key issue for Alpena CRTC. Without a dedicated community relations specialist, Alpena CRTC must leverage existing community partnerships to aid with public relations and community engagement-related activities. The Alpena Regional Chamber of Commerce has played a role in connecting Alpena CRTC with the community through the Alpena CRTC Community Council. Historically, this council has focused on planning and hosting social events to welcome visiting units to Alpena. In 2015, Alpena CRTC and the Alpena Regional Chamber of Commerce leadership met to discuss a concept of expanding the role of the Alpena CRTC Community Council beyond providing military support. Its more robust role was to include collecting and sharing Alpena CRTC economic value information, public relations to inform community residents about activities taking place at Alpena CRTC, and connecting military families with local support services. While an organizational concept for the expanded role of the Alpena CRTC Community Council was developed, implementing this more robust partnership plan has not yet occurred.

While students participating in educational programs at Alpena CRTC have the opportunity to tour the facilities, requesting public tours requires coordination through the MIANG website and staff in Lansing. A more localized pro-

cess with dedicated community relations staff could expedite this process. It is obvious that community residents are eager for more interaction with Alpena CRTC and that community partners, such as the Alpena Area Chamber of Commerce, are ready to collaborate to promote that interaction and engagement.

The strategies to address the issues related to public relations, communications, education, and community involvement are available in Section 4 of this document.

### **3.3.6 Alpena CRTC Economic Development Issues**

Operations at Alpena CRTC influence economic development of Alpena and other surrounding communities in numerous and significant ways. This section discusses each of these economic development issues in greater detail.

#### *Issue 6a: Significant contributor to local economy and Military Tourism*

The Alpena area sits along the US-23 Heritage Route, which spans the length of the eastern coast of the Lower Peninsula from Standish to Mackinaw City.

While tourism is a critical element of the local economy, it also creates considerable amounts of traffic throughout the area. The Alpena Area Convention and Visitors Bureau estimated that upwards of 550,000 people visit the county each year.

Of the stakeholders that participated in the JLUS project survey, 91 percent feel that Alpena CRTC is a significant contributor to the local economy. While it is understood that military tourism, defined as soldiers coming to Alpena CRTC and the family members that visit surrounding communities to accompany them during training, likely has a significant positive impact on Alpena's economy, it is challenging to quantify the extent of the economic impact. A need for mechanisms to quantify the economic impact of military tourism is an issue stakeholders raised during the JLUS process. A mechanism to track the impact of military tourism on the local economy would assist Alpena and other local communities in better understanding: 1) how much soldiers and their families spend while training at Alpena CRTC and 2) factors that affect trends in military tourism annually and over time.

Commitment to spending Alpena CRTC funding at locally-owned businesses varies depending upon current leadership. There are no policy requirements or spending goals



*Alpena Community College was named one of the top community college in the nation by the Aspen Institute.*

for locally-owned businesses for goods and services that are not subject to federal contracting requirements. Therefore, these decisions are subject to the commitment of the leadership at Alpena CRTC, which changes regularly.

#### *Issue 6b: Airport Viability*

As a rural airport, the Alpena County Regional Airport relies on subsidies from the FAA based on the number of enplanements. In 2016, the Alpena County Regional Airport failed to meet the 10,000 enplanements needed to qualify for the \$1 million FAA subsidy, although a change in federal rules allowing for 2012 enplanement data to qualify allowed the airport to receive the subsidy. In 2017, the Alpena County Regional Airport achieved 10,849 enplanements. Promoting the use of the Alpena County Regional Airport by military families traveling to the area to visit soldiers training at Alpena CRTC and Camp Grayling JMTC will assist with the viability of the airport by increasing enplanements. Plans for a new terminal are in progress and are expected to receive FAA funding for construction, anticipated in 2019. Alpena County Regional Airport is extremely key to the economic development of Alpena and surrounding communities. Ensuring the airport remains fully functioning and viable is a key concern. One issue affecting the local economy is the lack of a customs agent, allowing aircraft emanating from outside the United States to pass through an authorized customs processing facility at Alpena County Regional Airport. Aircraft now must go through customs in Sault Ste. Marie. This results in a loss of revenue for the airport.

#### *Issue 6c: Partnership with Sheriff's Department*

The State of Michigan, contracting with the United States Air Force, awards bids for the security jobs at military installations in the state. For over a decade, Alpena CRTC via the state has contracted with the Alpena County Sheriff's Department for security services. This contract provides salaries and benefits for 25 employees, pays bailiffs to provide security in the courts, and helps to pay for equipment and vehicles for the county, including patrol vehicles and dive equipment. Without this contract, Alpena County would struggle to afford some of this equipment and services. The contract helps to alleviate a financial burden on the county's general fund and local taxpayers. In addition, this contract has influenced long-term planning decisions in Alpena County, specifically the decision to locate a new jail to be constructed near the airport to align with the location of security services. As of November 2017, Alpena CRTC and Alpena County reached a 1-year contract extension agreement, with the expectation that a longer contract will be in place before the extension expires. Contract agreements typically last for 5 years. The state serves as a pass-through for the federal dollars. A new contract must go through county attorney review and obtain approval from the county's finance committee and full board of commissioners.

# 4

## implementation plan

### chapter overview

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### 4.1 Overview

Elements both physical and political exist that will need to be overcome to achieve the most optimal results of the recommended strategies. Any changes that are undertaken will need to be done under the current confines of the legal system and be in compliance with all applicable laws. Understanding these elements within the confines of the law, the needs of the military, and the concerns of citizens enables the creation of achievable strategies. To prevent the strategies from conflicting and/or contradicting any given law at any level of government, recognition of the hierarchy of laws that exist at various levels of government will be highlighted for proper implementation to occur.

Each of the stakeholders involved in this study is governed by a different set of rules within the governmental hierarchy, with certain entities not subject to laws at a lower level in the hierarchy. The recommendations laid out in this section of the report aspire to be implemented at every level, regardless of subjugation, in order to have all parties involved be willing participants in the ultimate goal of harmonious interaction. The analysis of the various levels of governance will be applied to both Camp Grayling JMTc and Alpena CRTc. Given the unique situations present in each installation, this chapter will separate each of the installations and posit strategies that are unique to each site. Specifically, these strategies will include elements addressing the following:

- ▶ Noise
- ▶ Military Operations
- ▶ Environmental
- ▶ Transportation and Infrastructure
- ▶ Community Partnerships
- ▶ Economic Development

Based on input during the public meetings, the strategies and recommendations outlined in this section will address the needs of both the communities and military installations. Putting into place the recommendations will require diligent consideration of land owners in areas that abut or are within range of the installation. Land values near the installations are affected by not only the missions taking place, but the interface of the installation with the surrounding properties.

#### 4.1.1 JLUS Implementation Team

Implementation of the recommendations will take cooperation of land owners, local governments, and the installations in order to see positive physical results that will translate into better land value for residents and an overall

operating equilibrium that will benefit all stakeholders. It is recommended that key stakeholders convene a JLUS implementation team to ensure progress is being made on the strategies and recommendations. The team should be made up of local SMEs, members of the TC and PC, and members of NEMCOG. *Every effort to implement the proposed actions should be taken so that existing and future conflicts can be resolved.*

### 4.2 Compatibility Tools

There are many existing laws, policies, and other tools in place to help ensure mutually beneficial coexistence of military activities and civilian life. This chapter provides a broad overview of such tools used or applied in evaluating and addressing compatibility issues in the study area focused around Camp Grayling JMTc and Alpena CRTc. The tools listed below are broken up by level of government. This is intended to be a sampling of the tools that are available, not an all-encompassing list.

#### 4.2.1 Federal

Federal law and policies affect many aspects of land use. The following federal programs and policies were assessed to determine their applicability in this JLUS study area.

##### *Federal Aviation Act*

FAA Regulation Title 14 Part 77, commonly known as Part 77, defines vertical obstruction compatibility in the vicinity of airfields. Local jurisdictions can assess height restrictions using a formula in this regulation and adjust their local zoning regulations accordingly.

##### *Department of the Army Pamphlet (DA Pam) 385-63: Range Safety*

This pamphlet establishes standards and procedures for the safe firing of ammunition, demolitions, lasers, guided missiles, and rockets, and the delivery of bombs for training and target practice. It describes surface danger zones (SDZs) and the appropriate activities that can take place in and around them.

##### *National Guard Regulation (NGR) 385-63: Army National Guard Range Safety Program, Policy, and Standards*

This regulation is used in conjunction with DA Pam 385-63 and provides guidance for risk management in range operations. It also prescribes standards and procedures for

firing ammunition, explosives, and lasers. It prohibits the use of areas known or suspected to contain UXO from being used for recreational purposes. The ARNG Range Safety Program is established by The Adjutant General (TAG) at the state level. TAG approves SDZ placement.

##### *Army Regulation (AR) 405-10: Acquisition of Real Property and Interests Therein*

This regulation outlines the federal government's ability to acquire property, which is only allowed when expressly authorized by Congress, according to U.S. Code. New land can only be acquired if the activity to be accommodated is mission critical, real property already held is insufficient to satisfy mission requirements, and no land held by another military branch or federal agency can satisfy the requirement.

##### *Air Force Instruction (AFI) 190-2001*

This document establishes the Air Force Encroachment Management Program with the goal of preventing or reducing encroachment issues around any Air Force installation. It defines responsibilities at all levels from Headquarters Air Force down to the installation level, including the development of Installation Complex Encroachment Management Action Plans (ICEMAPs).

##### *Air Installation Compatible Use Zone (AICUZ) Program*

This program works to prevent incompatible development around air installations by promoting compatible land use practices in an effort to preserve public health and safety and protect the military mission. It encourages a collaborative approach, working with local governments to achieve mission-compatible land development. AICUZ guidance reflects land use recommendations for clear zones, accident potential zones, and four noise zones.

#### 4.2.2 Military Installations

##### *Camp Grayling JMTc Real Property Development Plan (RPDP)*

The most recent version of the Michigan Army National Guard RPDP, including a chapter containing the Camp Grayling JMTc Site Development Plan (SDP), was published in 2011. The SDP describes the existing conditions of the installation and also proposes recommendations for future development. An analysis of the existing conditions and mission requirements led to the creation of a preferred plan-

ning alternative for the cantonment, airfield, and MATES.

### Alpena CRTC IDP

An IDP presents a road map to guide growth and development at air installations for 20 years. The most recent Alpena CRTC IDP was finalized in 2015. It assists ANG leadership and base personnel in prioritizing projects, establishing proper facility siting, implementing functional land use patterns, and coordinating infrastructure improvements. The result should achieve the vision, goals, and objectives of the plan and align with the visions of Air Force higher headquarters.

### INRMP

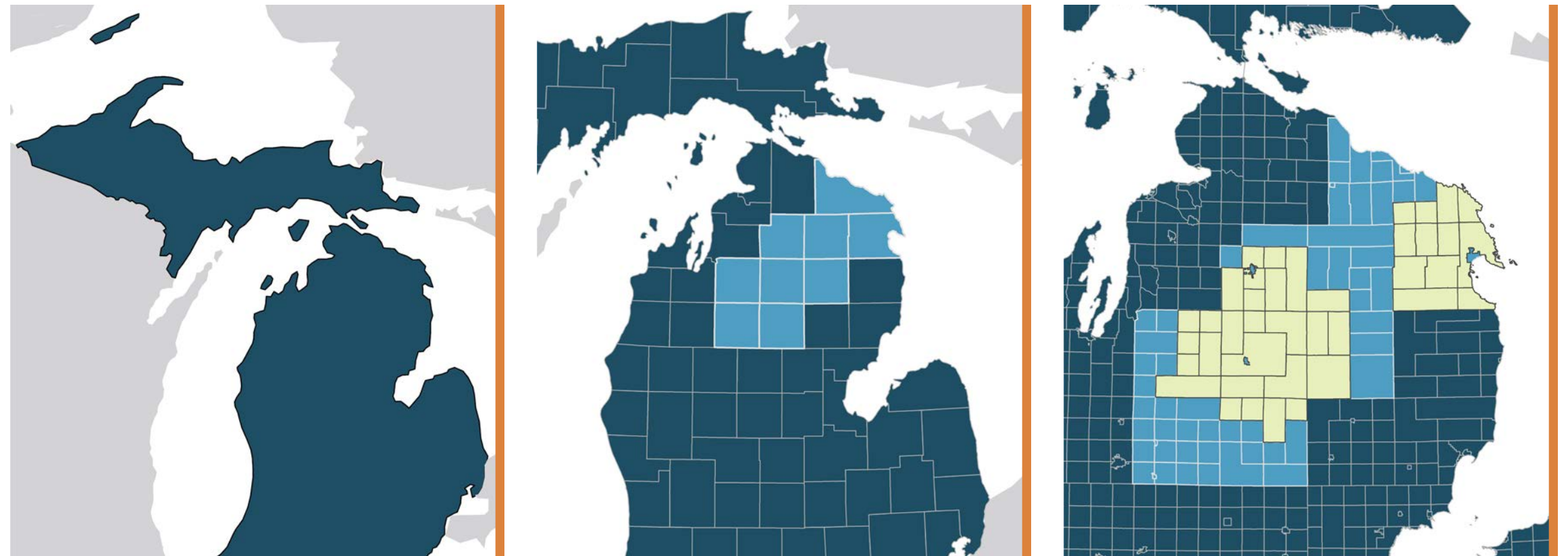
An INRMP was published in 2013 for Alpena CRTC and serves as the primary guidance document and tool for managing natural resources on the installation. Alpena CRTC is comprised of approximately 630 acres over two parcels, all owned by the County of Alpena. Alpena CRTC contains myriad habitats and species requiring monitoring and management. An INRMP helps the installation serve as a steward for the resources they oversee while ensuring its capabilities to sustain its military mission. This document is required under the Sikes Act Improvement Act of 1997, along with DOD and Air Force policy.

### Integrated Cultural Resources Management Plan (ICRMP)

An ICRMP covering Alpena CRTC and the Camp Grayling air-to-ground range was published in 2012. It is meant to be updated every 5 years, depending on available funding and staffing on the military side. It serves as the long-term plan to assign responsibility to manage any cultural resources present on the installations. An ICRMP is required by AFI 32-7065, Cultural Resources Management Program; DOD Instruction (DODI) 4710.02, Interactions with Federally-Recognized Tribes; and DODI 4715.16: Cultural Resources Management.

Note: A cultural resources survey was performed at the Camp Grayling range, and no items of note were identified. Also, the buildings under ANG jurisdiction were not old enough to merit management as cultural resources, so requirement to have an ICRMP for that area was waived.

Figure 4.1 | Michigan Governmental Hierarchy



#### 4.2.3 State

Current statutes involving the regulation of land-use stem from the constitution of the state of Michigan. There have been four constitutions since the inception of the state in 1837. The current and fourth Constitution was adopted on August 1, 1962. Article VII of the document outlines the powers granted to the various geographical divisions of the state. This portion the Constitution permits the division of the state into three major governmental entities: counties, townships, and villages/cities. Each of these entities are given their own level of power and ability to enforce such statutes they deem necessary.

Per Article VII of the Constitution dictates that these powers "...shall be liberally construed in their favor." In Michigan, the state government is specifically restricted under the constitution as to how it may interact with local governments and may not alter the boundaries of a local government without a vote by the affected residents.

#### 4.2.4 County

Upon becoming a state, Michigan, like most other states, divided itself into county governments. Per Article VII of the Michigan Constitution, each county is bound by a charter and run by a Board of Commissioners elected by citizens in their respective counties.

A county in Michigan is endowed with the power to approve platting, levy taxes, and adopt ordinances as deemed necessary for the benefit of the public. It is also able to work in tandem with townships, cities, and villages in the formation of land-use regulations.

The nine counties affected by this study have been highlighted in the lighter blue.

#### 4.2.5 Township

Each county is divided into the townships that were created along with the counties when Michigan became a state. A charter township has been granted a charter, which allows it certain rights and responsibilities of home rule that fall between those of a city (a semi-autonomous jurisdiction in Michigan) and a village. (Unless it is a home-rule village, the latter falls under the authority of the township in which it is located.)

Townships generally are governed through rules outlined in Chapter 41 of Michigan Compiled Laws. Townships may enact and enforce ordinances for public health, safety and general welfare. Ordinances enacted by townships supersede those created by the county, thus allowing for more local issues to be addressed.

Additionally, townships can construct any necessary infrastructure, including sound mitigation treatments and create improvement districts. If necessity requires, the township may acquire parkland and/or places of recreation through a majority of voters. The 39 townships within the study area are shown in tan.





## 4.4 JLUS Implementation Team Action Plan

Many of the JLUS strategies have actions that overlap. To capture the best use of plan implementation, overarching actions have been defined that will ultimately serve more than one strategy. The JLUS Implementation Team would be charged with tracking these items.

### Camp Grayling JMTC

ACTION		STRATEGIES
Create Sensible Military Overlay Zones around Camp Grayling JMTC		1a.4, 1a.5, 2a.1, 2a.2, 2d.1, 2d.2, 5b.4, 6a.1
Commission a Joint MDNR and Camp Grayling JMTC Landscape Plan		1b.1, 1b.2, 1b.3, 4e.1
Conduct a Noise Study		1a.1, 1a.2, 1a.3, 2a.2, 2c.1, 2c.2, 2c.3
Commission a Camp Grayling JMTC Installation Master Plan		2c.2, 2c.3, 2d.1, 2d.2, 3d.1, 3f.2, 4a.1, 4a.2, 4c.1, 4d.1, 5b.5, 6b.4
Update Grayling Area Transportation Study		4d.1, 4d.2, 4d.3, 4d.4, 4e.1, 4f.1, 4f.2, 5b.5
Expand Camp Grayling JMTC Community Relations Staff		2b.1, 2c.1, 3a.1, 3b.1, 3e.1, 3f.1, 3f.2, 4e.1, 5a.1, 5a.2, 5a.3, 5a.4, 5b.1, 5b.2, 5b.3, 5b.4, 5b.5, 6a.1
Commission a Regional Water Master Plan		3a.1, 3b.1, 3c.1, 3c.2, 3f.1, 3f.2
Conduct a Fire Protection Services Study		3e.1, 6b.1
Conduct an Economic Impact Study		6a.1, 6b.1, 6b.2, 6b.3, 6b.4, 6c.1, 6c.2

### Alpena CRTC

ACTION		STRATEGIES
Create a Military Overlay Zone		1a.4, 1a.5, 1a.6, 2c.2, 4a.2, 5a.6
Conduct a Noise Study		1a.4, 1a.5, 1a.6, 2c.2
Expand Alpena CRTC Community Relations Staff		2b.1, 2c.3, 3a.1, 3c.1, 4b.1, 4c.1, 5a.1, 5a.2, 5a.3, 5a.4, 5a.5, 5b.2
Commission a Thunder Bay Regional Water Master Plan		2a.1, 2c.3, 3a.1, 3b.a, 3b.2, 3c.1, 4e.1
Conduct an Economic Impact Study		5a.3, 5a.4, 5b.1, 5b.2, 6a.1, 6c.1, 6d.1, 6d.2
Commission a Joint NOAA/Alpena CRTC Bathymetric Survey		2a.1, 2c.1
Formalize Thunder Bay Interagency Cooperation		2a.1, 2c.1, 2c.3, 3b.1, 3b.2, 4b.1, 5a.5, 5b.1, 6b.1
Update the Alpena Area-wide Comprehensive Transportation Plan		4c.1, 4d.1, 4e.1



Members of the TC and PC were involved with the project from the start. See Appendix B, Public Participation Plan, for more information on how stakeholders were engaged throughout the JLUS process.

Figure 4.2 | JLUS "Toolbox"

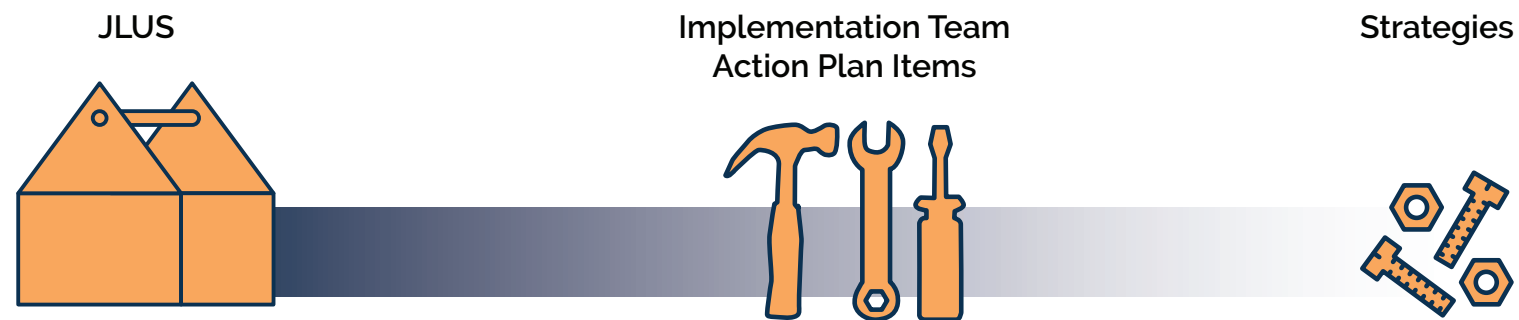
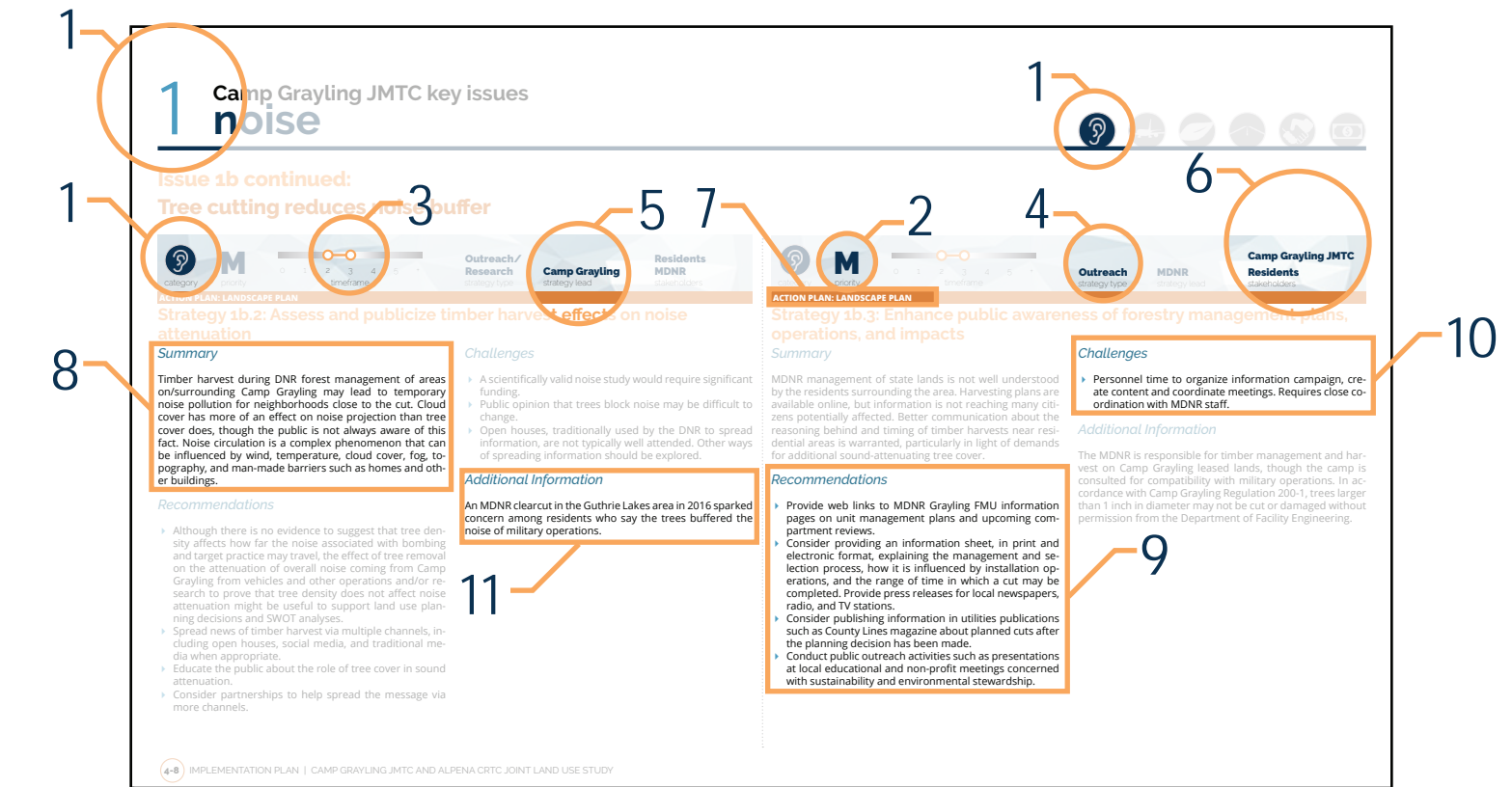


Figure 4.3 | Strategy Page Legend



## 4.5 Implementation Plan Overview and Guidelines

The following pages present the proposed compatibility strategies for the JLUS. A summary table presenting the strategy information for each base is provided in Appendix D. The strategies are presented here in a more graphic format, which includes the following elements:

- ▶ **1. CATEGORY:** This refers to the six primary categories that issues were sorted into: noise, military operations, environmental, transportation and infrastructure, community partnerships, and economic development. Each category is numbered and has a corresponding icon, which are visible along the very top of each page. The icon that corresponds with the category being discussed on that page is dark blue.
- ▶ **2. PRIORITY:** The letters H (high), M (medium), and L (low) appear here. The priorities are described in more detail in Section 4.3.
- ▶ **3. TIMELINE:** A shaded bar indicates the suggested timeline for the strategy in years. The timeline starts at 0, for strategies that can be implemented right away, and ends at 5+, for strategies that are projected to take more time.
- ▶ **4. STRATEGY TYPE:** This is another way of classifying the strategies to indicate the type of action that might be required to implement it. Choices include research, such as a new study; outreach, or finding new ways to

engage the public; funding, or finding new ways to pay for improvements; partnership, or forming new groups and alliances; and regulatory, or changing laws or other rules to improve encroachment issues.

- ▶ **5. STRATEGY LEAD:** This is the group or groups that would logically spearhead each strategy. The JLUS implementation team would need to follow up periodically with each group on the status of their actions.
- ▶ **6. STAKEHOLDERS:** This list includes any entities that could be affected or who may help implement it.
- ▶ **7. IMPLEMENTATION TEAM ACTION PLAN ITEM:** This bar indicates which key action in the Implementation Team Action Plan the strategy supports.
- ▶ **8. SUMMARY:** This provides a broad overview of the strategy, the underlying issue, and why it needs to be implemented.
- ▶ **9. RECOMMENDATIONS:** These are the concrete steps that will need to be taken by the strategy lead(s) to implement the strategy.
- ▶ **10. CHALLENGES:** Significant known roadblocks that could affect the strategy's implementation are listed in this section.
- ▶ **11. ADDITIONAL INFORMATION:** This covers anything else that relates to the strategy in question that is important for the public and other stakeholders to know.

# 1 Camp Grayling JMTC key issues noise



## Issue 1a: Impact of aircraft noise on communities



### ACTION PLAN: NOISE STUDY

#### Strategy 1a.1: Conduct a noise study

##### Summary

Current and accurate information with ADNL contours is needed in order to assess the impacts to surrounding community functions. This data could be used to inform and direct guidance for changes to military and installation operations or to create zoning to prevent encroachment.

##### Recommendations

- ▶ Contract the collection and analysis of providing ADNL contours for the entire region, specifically including areas that have been identified as bothersome to community members.
- ▶ Use that information when making zoning regulation changes to prevent residential, commercial, or service functions from being sited within the 65 ADNL contour.
- ▶ Work with the military to alter training activities to reduce the noise impact to existing sensitive areas where possible. (Note: In many cases, existing ranges cannot be relocated or inactivated because of economic and logistical reasons.)
- ▶ AICUZ recommendations should specifically address areas where the 65 ADNL noise contours extend past the installation boundary.
- ▶ Provide residents already living within the 65 ADNL contour with information about how to mitigate noise (see Strategy 1a.2).



### ACTION PLAN: NOISE STUDY

#### Strategy 1a.2: Educate the public on residential sound attenuation

##### Summary

Noise at military ranges is inherent in their function, and for residents that live near these activities, adjustments to their existing environment may be the only reasonable solution. Sound attenuating strategies can be applied to existing structures and environments to help reduce sound vibrations. It should be noted, however, that the most effective strategy to combat noise disruption is distance separation.

##### Recommendations

- ▶ Provide workshops that educate the community on what causes sound vibrations, how they travel, how they can be reduced, and what levels are tolerable for different functions. Provide visual aids depicting the noise contours measured through the activities detailed in Strategy 1a.1.
- ▶ Create information to be posted on publicly accessible websites providing this same information, with contact numbers for questions, comments, and additional information.
- ▶ Make specialists available to residents for one-on-one consultation or evaluation of specific structures, with recommendations for implementation of sound attenuating systems or strategies.



### ACTION PLAN: NOISE STUDY

#### Strategy 1a.3: Establish no-fly zones over sensitive areas

##### Summary

For certain, high-disturbance areas where sensitive functions already exist, no-fly zones can sometimes be established on a temporary basis. Sensitive areas could include dense residential areas, critical wildlife habitats or areas of environmental interest. These no-fly zones are typically set at 1,500 feet above ground level for a distance of approximately 1,000 feet from the subject function. This applies to both fixed-wing and rotary-wing aircraft.

##### Recommendations

- ▶ Specifically identify sensitive functions and their locations that require reduced noise vibration. Conduct analysis to determine the source and frequency of the disturbance. Evaluate other noise reduction techniques first to see if the disturbance can be mitigated as identified in Strategy 1a.2.
- ▶ Work with officials from Grayling JMTC and Alpena CRTC to evaluate their operations to see if changes can be made that would allow for a higher floor level over the identified location. If determined to be acceptable, work with installations, airspace managers, and the FAA to alter navigational charts and procedures to establish the no-fly zones.
- ▶ If operations cannot be altered efficiently or economically, identify locations and means for relocating the function away from the disturbance.

##### Additional Information

Certain training or operational functions may require use of this airspace and may not be relocatable for economic or logistical reasons. If this is the case, it would be more appropriate to relocate the subject function to an area that meets the newly established zoning criteria, placing it farther from the noise-generating activity as identified in Strategy 1a.4.



## Issue 1a continued: Impact of aircraft noise on communities

category: **M** priority: 1 timeframe: 1-5  
 strategy type: **Regulatory** strategy lead: **Camp Grayling JMTc/ Alpena CRTc** stakeholders: **NEMCOG Residents**  
**ACTION PLAN: MILITARY OVERLAY ZONE**

### Strategy 1a.4: Reduce housing development near military operations

#### Summary

Many homes, some in residential neighborhoods, are very close to airport runways, ranges, artillery firing positions, bombing ranges, and vehicle maintenance facilities. All of these activities, and others, are consistent with the training that is regularly conducted at Camp Grayling, the Grayling Range, and the airspace surrounding them. In one instance, portions of restricted airspace for Grayling Range resides over property that is not owned by the government. Subsequently, residential properties are under an area where unrestricted air activities are conducted, including many that are deemed hazardous to the public. It is current FAA and DOD policy that all property under restricted airspace be owned by the government or subject to a conditional use agreement with the land owner that there will be no domestic use of the property. In another instance, residential neighborhoods exist within one of Grayling Army Airfield's clear zones and APZs.

#### Recommendations – Grayling Range

- ▶ Conduct an analysis of property ownership under the R-4201A and B restricted airspace to determine the status of ownership or lease agreement. Provide mapping of boundaries and data including owner's name, location, contact information, valuation of property, and current use of property.
- ▶ Conduct an Environmental Assessment to determine the feasibility of proposed acquisition of the property.
- ▶ Properties that cannot be acquired should seek establishment of conditional use lease agreements with property owners.

- ▶ If large portions of property are found to be unattainable, work with the FAA to redefine restricted airspace boundaries to exclude those areas. This may severely impact operational capabilities at the range.

#### Recommendations – Grayling Army Airfield

- ▶ Conduct an analysis of the airfield and surrounding properties to identify potential for displacing Runway 32 to the northwest or creating a new runway with an orientation generally north-south. This would allow for the existing residential neighborhoods to remain without endangering residents' safety or negatively affecting mission objectives.
- ▶ Alternatively, an analysis should be conducted to identify the potential for relocating all structures within the clear zone as well as residential and community functions that exist within APZs I and II.

category: **H** priority: 1 timeframe: 1-5  
 strategy type: **Regulatory** strategy lead: **Grayling Alpena Crawford County** stakeholders: **NEMCOG Community**  
**ACTION PLAN: MILITARY OVERLAY ZONE**

### Strategy 1a.5: Update building codes to include better sound proofing for buildings built within the 65 ADNL noise area

#### Summary

Consider updating local building codes so that the noise level within new structures inside the 65 ADNL noise contour could be reduced to optimal levels.

#### Recommendations

- ▶ Update building codes for all applicable governing entities.
- ▶ Create incentives for existing buildings to update their soundproofing.
- ▶ Optimize available federal funding for sound abatement.

#### Challenges

- ▶ Requiring increased soundproofing could cause an increase in price for new structures.
- ▶ Developers may be unwilling to build in areas where soundproofing is required as a response to the increase in regulations.
- ▶ Monetary aid for existing residents to upgrade their structures could be limited and may not be enough to cover the full costs.

## Issue 1b: Tree cutting reduces noise buffer

category: **H** priority: 1 timeframe: 1-5  
 strategy type: **Regulatory** strategy lead: **Camp Grayling JMTc MDNR** stakeholders: **NEMCOG Residents U.S. Forest Service**  
**ACTION PLAN: LANDSCAPE PLAN**

### Strategy 1b.1: Plant trees in areas where it is appropriate and allowed

#### Summary

Selective tree planting could potentially alleviate some of the disruption caused by military training. It has been determined that these will have the greatest effect if near the source or near the receiver. Most military training activities would not allow the existence of tree stands near those activities for operational or safety reasons. This suggests that the most appropriate location for adding trees to help attenuate noise would be at the receiving end, or very near the homes being disturbed.

#### Recommendations

- ▶ Work with military training proponents to determine if any tree buffers could be planted near noise-generating activities and identify those locations specifically. Then, work with the installation and the US Forest Service to determine the proper species and placement of tree stands for greatest effect.
- ▶ Establish funding streams and a volunteer work force from the community and the military to hold a planting day activity. Ensure the event and activities are well publicized.
- ▶ Work with residents to understand how best to repair their own environment to reduce sound vibration impact to their homes as defined in Strategy 1a.2.

# 1 Camp Grayling JMTC key issues noise



## Issue 1b continued: Tree cutting reduces noise buffer

category: **M** priority: 2 timeframe: 0 1 2 3 4 5 +  
 Outreach/Research strategy type: **Camp Grayling** strategy lead: **Residents MDNR** stakeholders

**ACTION PLAN: LANDSCAPE PLAN**

### Strategy 1b.2: Assess and publicize timber harvest effects on noise attenuation

#### Summary

Timber harvest during DNR forest management of areas on/surrounding Camp Grayling may lead to temporary noise pollution for neighborhoods close to the cut. Cloud cover has more of an effect on noise projection than tree cover does, though the public is not always aware of this fact. Noise circulation is a complex phenomenon that can be influenced by wind, temperature, cloud cover, fog, topography, and man-made barriers such as homes and other buildings.

#### Recommendations

- ▶ Although there is no evidence to suggest that tree density affects how far the noise associated with bombing and target practice may travel, the effect of tree removal on the attenuation of overall noise coming from Camp Grayling from vehicles and other operations and/or research to prove that tree density does not affect noise attenuation might be useful to support land use planning decisions and SWOT analyses.
- ▶ Spread news of timber harvest via multiple channels, including open houses, social media, and traditional media when appropriate.
- ▶ Educate the public about the role of tree cover in sound attenuation.
- ▶ Consider partnerships to help spread the message via more channels.

#### Challenges

- ▶ A scientifically valid noise study would require significant funding.
- ▶ Public opinion that trees block noise may be difficult to change.
- ▶ Open houses, traditionally used by the DNR to spread information, are not typically well attended. Other ways of spreading information should be explored.

#### Additional Information

An MDNR clearcut in the Guthrie Lakes area in 2016 sparked concern among residents who say the trees buffered the noise of military operations.

category: **M** priority: 2 timeframe: 0 1 2 3 4 5 +  
 Outreach strategy type: **MDNR** strategy lead: **Camp Grayling JMTC Residents** stakeholders

**ACTION PLAN: LANDSCAPE PLAN**

### Strategy 1b.3: Enhance public awareness of forestry management plans, operations, and impacts

#### Summary

MDNR management of state lands is not well understood by the residents surrounding the area. Harvesting plans are available online, but information is not reaching many citizens potentially affected. Better communication about the reasoning behind and timing of timber harvests near residential areas is warranted, particularly in light of demands for additional sound-attenuating tree cover.

#### Recommendations

- ▶ Provide web links to MDNR Grayling FMU information pages on unit management plans and upcoming compartment reviews.
- ▶ Consider providing an information sheet, in print and electronic format, explaining the management and selection process, how it is influenced by installation operations, and the range of time in which a cut may be completed. Provide press releases for local newspapers, radio, and TV stations.
- ▶ Consider publishing information in utilities publications such as County Lines magazine about planned cuts after the planning decision has been made.
- ▶ Conduct public outreach activities such as presentations at local educational and non-profit meetings concerned with sustainability and environmental stewardship.

#### Challenges

- ▶ Personnel time to organize information campaign, create content and coordinate meetings. Requires close coordination with MDNR staff.

#### Additional Information

The MDNR is responsible for timber management and harvest on Camp Grayling leased lands, though the camp is consulted for compatibility with military operations. In accordance with Camp Grayling Regulation 200-1, trees larger than 1 inch in diameter may not be cut or damaged without permission from the Department of Facility Engineering.



## Issue 2a: Flight paths over homes

category: priority: **H** timeframe: 0 1 2 3 4 5 + strategy type: **Regulatory** strategy lead: **NEMCOG Planners** stakeholders: **NEMCOG Residents**

### ACTION PLAN: MILITARY OVERLAY ZONE

## Strategy 2a.1: Create sensible military overlay zones around Camp Grayling JMTC

### Summary

Communities and residential areas surrounding Camp Grayling JMTC have grown since the inception of the camp. This has created issues regarding noise, disruption or the possibility of accident. While the land use surrounding the camp is regulated, it does not adequately address the many affects of the camp on residences and businesses. It is recommended that the base work with existing neighbors within the noise contours to notify neighbors of training times. The installation should also look at locating training operations in more remote areas within Camp Grayling in order to reduce noise conflicts and as a sign of being a good neighbor.

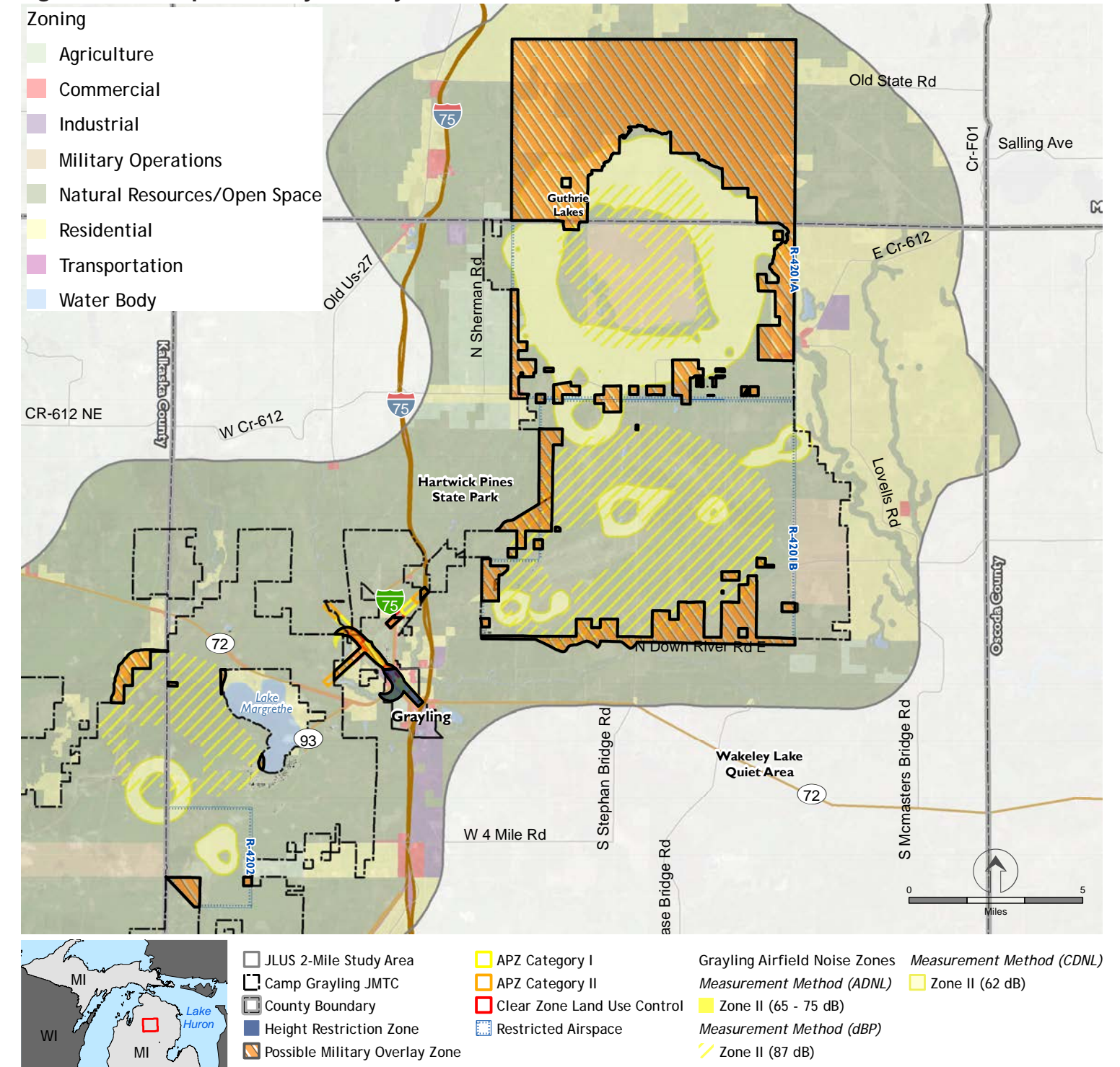
For the City of Grayling, adding an overlay zone to limit development within the APZs at Grayling AAF is more difficult to implement than in the Alpena area. This is because much of the limits of Grayling are directly within an APZ. An overlay zone should be added to restrict development heights, but it is not feasible to restrict residential and commercial development altogether.

For areas in townships or counties, it is recommended that an overlay zone be added that conforms to the noise contours and that protects the boundaries of the installation from encroachment of development. Although these areas are relatively undeveloped, it is good planning practice to plan for the future, and implementing an overlay zone in these areas now will help avoid any potential future conflicts between residential areas and noise from Camp Grayling JMTC.

### Recommendations

- ▶ Work with community leaders such as city and county planning departments to change zoning maps and codes to identify the areas around military installations and ranges as military overlay zones. Use noise contour mapping as defined in Strategy 1a.1, or newer noise data as it becomes available, to define the extent of the overlay zone following guidance for acceptable noise levels per function. Establish restrictions that only allow compatible land uses in these zones.
- ▶ Include a reference to Camp Grayling JMTC in site plan review standards in local zoning ordinances.
- ▶ Consider establishing similar restrictions under known flight paths (see Strategy 2a.2), keeping in mind that flight paths may change to suit different types of military training in the future.
- ▶ Establish height restriction zoning overlays for airport runway clear zones that extend beyond the border of the installation. These should restrict all development so as to adhere to the applicable airfield criteria.

Figure 4.4 | Sample Military Overlay Zone



# 2 Camp Grayling JMTC key issues military operations



## Issue 2a continued: Flight paths over homes



### Strategy 2a.2: Educate the public on existing established flight paths

#### Summary

Well-established flight paths help the military reduce confusion between pilots and controllers, and they also streamline training activities, which improves safety, economy, and efficiency. The JMTC/CRTC training area encompasses a vast airspace both horizontally and vertically, which is utilized by a number of entities including governmental, commercial, and private users. It also has an impact on land owners at lower altitudes. Established traffic routes for training activities are carefully delineated where they affect the lowest number of these individuals. Yet, certain activities at certain times do have a negative impact on some residents. This is unavoidable within the requirements of the training curriculum. However, educating the public can help alleviate the stress caused by these occurrences. This is already occurring, but it should be encouraged and continued.

- ▶ Establish a website that identifies training schedules that the public can use to educate themselves about these activities. Include call-in numbers or email addresses for them to submit comments about issues. Note: Antiterrorism force protection (ATFP) protocols may prevent the public release of this type of information.
- ▶ Continue to hold outreach events like air shows that serve to inspire, educate and inform the community about military training activities at the installations.

#### Recommendations

- ▶ Work with military and community leaders to put together educational briefings on training activities along established flight paths. Explain the types of activities, altitudes, aircraft utilized, times, and purpose so the community understands the need and importance of the activity as well as where and when they will occur. This type of briefing should be conducted on a recurring basis in order to maintain positive community outreach. It could be tailored to communities where noise is more of an issue, such as Guthrie Lakes, and repeated more often in these areas.

## Issue 2b: Noise and vehicular disruption from MATES



### Strategy 2b.1: Educate the public on traffic routes and needs

#### Summary

Concerns were voiced regarding the noise and traffic disruption caused by the MATES. This facility is used to repair and store equipment used at the training range and installation. It is located near the range because the majority of traffic flows between those locations. Also, the noise and disruption inherent in the activity is in keeping with that land use type. Unfortunately, logistics requires movement of vehicles among the arrival/departure location (Grayling AAF), the installations, and the MATES. The most direct route travels through the city of Grayling, which can at times be disruptive.

#### Recommendations

- ▶ Community leaders should work with military leaders to develop educational materials that explain operational needs, locations of travel, times, and types of equipment being transported. These should be disseminated through public means such as public service announcements and local newspapers, and through community forums like town hall meetings, where questions can be asked and concerns addressed directly.
- ▶ Noise disturbance should be addressed with a military overlay zoning action as addressed in Strategy 2a.1.
- ▶ Consider adding an interchange at North Down River Road as described in Strategies 4d.1 and 4d.3.

## Issue 2c: Noise and vibration from night training



### Strategy 2c.1: Educate and inform the public about night training

#### Summary

Because war is not a 9-5 job, training for night-time operations is as essential as daylight training. It is, however, intentionally conducted with lesser frequency for sake of adjacent communities. And yet, it inevitably causes disturbance to slumbering residents. Those most impacted live closest to the range, but the noise vibrations carry an impact for all in the region by comparison to daytime activities simply due to a lack of competing disturbances. Foreknowledge of the event won't make it any less disturbing, but it may help the community better cope.

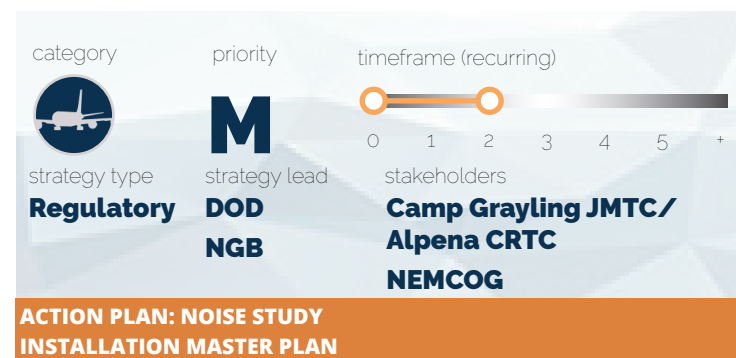
#### Recommendations

- ▶ Affected community leaders should work with military leaders to identify and publish schedules of night-time training events. These should be provided to the public in a variety of delivery methods including print and electronic formats. They should identify locations, start times, and duration.
- ▶ Community and military leaders should work together to present information about the need for and types of military training conducted in the region. This should be presented in a town hall format, allowing citizens to ask questions and freely comment on their issues.





## Issue 2c continued: Noise and vibration from night training



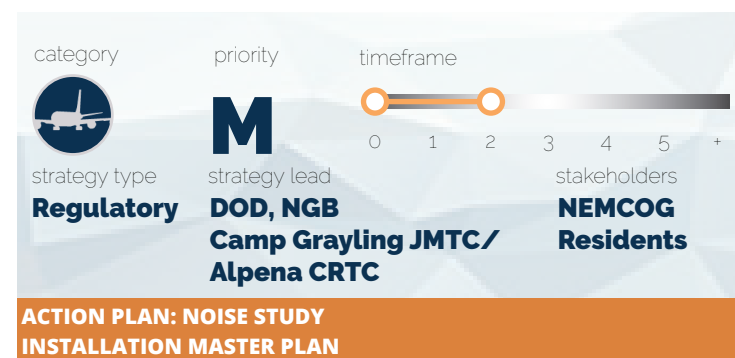
### Strategy 2c.2: Identify specific locations where night training is particularly disruptive and identify alternatives

#### Summary

Different types of training are conducted in different locations on the range. Identifying those locations and associating them with the various training activities can help the community and the military better understand how, where, and why certain training activities are more or less disruptive. These data points can then be used to determine if changes can be made to alleviate community unrest.

#### Recommendations

- ▶ A study should be prepared that creates a database comparing night-time training activities and reports of disruption from citizens by location, time, level of disruption, extent of disruption, etc. This could be an ongoing exercise allowing a greater understanding of the impact of training activities on residents by a multitude of factors including but not limited to proximity, types of training events, attenuation efforts, and disruption spread mapping.



### Strategy 2c.3: Confine military arms testing and range use to areas adjacent to state-owned lands

#### Summary

Restriction of arms testing to areas adjacent to state-owned lands has the opportunity to bring the arms testing away from highly populated areas.

#### Recommendations

- ▶ Create buffer zones that emanate from the adjacent lands into Camp Grayling where arms testing will occur.

## Issue 2d: Population growth may encroach on the mission



### Strategy 2d.1: Establish zoning regulations that prevent encroachment, particularly near potentially dangerous and noise-generating activities

#### Summary

Military overlay zoning to help alleviate noise disturbances is the same action needed to help prevent dangerous or incompatible encroachments. The most prominent example of incompatible encroachment on military activities is the town of Grayling residential neighborhoods lying within the airport runway clear zone and accident potential zones. Zoning regulations would identify areas for different types of development that are in keeping with the known and planned activities of the community.

As towns and installations grow to meet new demands, these two entities will inevitably come together in unhealthy or unsafe ways. Military overlay zoning can serve to eliminate this type of incompatible encroachment by maintaining a buffer zone surrounding military installations. The designation of growth areas for both the community and the military will also benefit both in predetermining the direction that best suits those activities.

#### Recommendations

- ▶ Community leaders strive to understand the issues affecting health, safety, and livability of their communities and create regulating criteria that provides for compatible land use supporting both community needs as well as those of military operations that are integral to the area.

- ▶ Designate buffer zones and future growth areas for the community and military installations based on current and future planning documents.
- ▶ Engage military subject matter experts (SMEs) to review plans for residential development that is to be located near installations as a condition of approval.

# 2/3 Camp Grayling JMTC key issues military operations/environmental



## Issue 2d: Population growth and mission encroachment



### Strategy 2d.2: Purchase land around installations to control growth

#### Summary

As a means to combat encroachment beyond regulation, land purchase would ensure adequate buffer zones and secure growth areas.

#### Recommendations

- ▶ Military and civic organizations should independently establish land purchase programs or foundations that define the need for land purchase, identify areas of greatest priority, work through regulatory and entitlement issues, raise funding, and purchase or receive the grant of properties.
- ▶ Research real property exchange (RPX) program used by the Army Guard to see if something comparable can be done here.

## Issue 3a: PFOS and PFOA contamination of groundwater



### Strategy 3a.1: Improve public outreach and access to information

#### Summary

Residents using the breached aquifer are concerned about the safety of their drinking water. The health effects and extent of contamination are still being researched and are not completely understood, which contributes to citizen concern about health and economic impacts. Continuing and improving ongoing communications between Camp Grayling/MDEQ and surrounding residents through public meetings, print and electronic media, and call center assistance will help provide updated information, mitigate uncertainties, ensure that those affected have access to exposure mitigation options, while enhancing public relations.

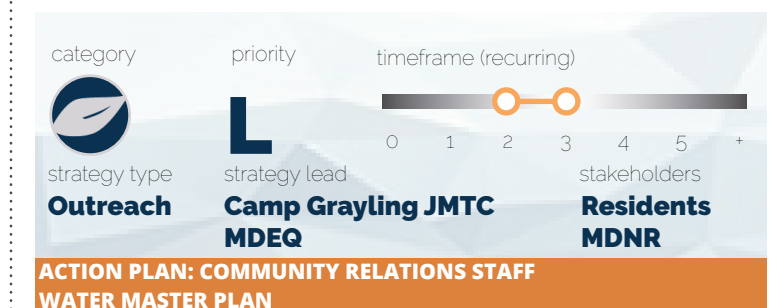
#### Recommendations

- ▶ Provide easy-to-find links on the Camp Grayling JMTC website home page to information pages on Michigan.gov and the EPA website. Include an up-to-date summary of the MDEQ monitoring program status along with links. Consider adding maps, graphics, or interactive content to provide a clear message.
- ▶ Increase non-web-based outreach to residents.
- ▶ Continue to hold frequent town hall public meetings.
- ▶ Increase transparency about how wells are selected for testing.
- ▶ Consider providing a clearer explanation of why some wells are not accepted for testing, including a visual representing the understood risk associated with different neighborhoods around the base, including maps of known contamination sites, monitoring wells and any plume models as they become available.

#### Challenges

- ▶ Effort would require dedicating personnel time to update the base website content, create information sheets, and coordinate print campaigns.

## Issue 3b: Impacts on groundwater/drinking water



### Strategy 3b.1: Provide information to the public on groundwater contamination

#### Summary

Groundwater contamination in the Camp Grayling area results from exposure to a wide range of toxic compounds, chemicals, metals, and petroleum byproducts that are introduced into soils and groundwater from industrial, manufacturing, and transportation activities. While the PFA contamination issue receives the most attention, the public is also concerned with groundwater contamination from other sources and how it may effect drinking water from wells and the general environment.

#### Recommendations

- ▶ Provide a base webpage link to MDEQ information regarding groundwater contamination – this should include the link to DEQ Online Services, which includes their Environmental Mapper utility.
- ▶ Provide current bulletins on spills and plume status (as available) for any sites on the installation in a bulleting format via website and as a script for public inquiries.

#### Challenges

- ▶ Requires personnel time to maintain bulletins and webpage.



## Issue 3c: Impacts and effects on surface water systems: lakes, rivers and streams, and wetlands

 category  
**M** priority  
 0 1 2 3 4 5 + timeframe  
**Regulatory** strategy type  
**MDEQ NEMCOG** strategy lead  
**Residents** stakeholders

**ACTION PLAN: COMMUNITY RELATIONS STAFF**  
**WATER MASTER PLAN**

### Strategy 3c.1: Control runoff and support bioassessment surveys to monitor ecological and aquatic community health

#### Summary

Runoff of contaminants and sediment into surface waters is an ongoing threat to water quality and aquatic community health. Best management practices such as establishing riparian buffer zones and ongoing monitoring and bioassessments of important water bodies like Lake Margrethe and reaches of the Upper Manistee and AuSable rivers will help mitigate and control the effects of erosion and runoff.

#### Recommendations

- ▶ Review existing watershed management plans that overlay installation properties for assessment data and best management practices.
- ▶ Promote ongoing grant-funded watershed level research and planning concerned with non-point source pollution, erosion, and runoff.
- ▶ Continue to identify and assess areas at risk for non-point source contaminant/sediment runoff and apply best management practices to control erosion and runoff.
- ▶ Communicate plans and progress to the public, include actual vs. perceived effects of installation operations on roads and erosion sites.

#### Challenges

- ▶ Maintaining the survey actions from year to year may be difficult with a turnover of volunteers.
- ▶ Outside funding sources or volunteer expertise will be required to assess the samples taken by citizen volunteers.

 category  
**M** priority  
 0 1 2 3 4 5 + timeframe  
**Outreach** strategy type  
**NEMCOG** strategy lead  
**Residents MDNR** stakeholders

**ACTION PLAN: COMMUNITY RELATIONS STAFF**  
**WATER MASTER PLAN**

### Strategy 3c.2: Support water quality and aquatic ecology communications

#### Summary

Public interest in water quality and aquatic ecological health is spurred by topics such as chemical contamination, fish advisories, nutrient pollution, sedimentation, climate change, habitat loss, and invasive species. There is a wide range of research describing water quality, sediment quality, and the health of aquatic environments and species, but it can be challenging for citizens to identify and access appropriate and accurate information to satisfy their concerns. Sometimes there are public misperceptions about the location and sources of contamination, including incorrectly attributing causes to installation operations. In its role as a key community stakeholder and environmental steward, Camp Grayling could host or sponsor development of a centralized clearinghouse of information resources that includes maps and narrative summarizing scientific facts.

#### Recommendations

- ▶ Develop or sponsor development of a web-based clearinghouse that summarizes facts and organizes resource links concerning surface water quality and aquatic ecological health in Camp Grayling watersheds.
- ▶ Consider developing or sponsoring development of a Story Map presentation describing surface water quality, aquatic biology, and aquatic ecological health in the Camp Grayling area hosted on the installation website or collaborative organization website (i.e. Huron Pines).
- ▶ Conduct public outreach activities such as presentations at local educational and non-profit meetings concerned with sustainability and environmental stewardship.

#### Challenges

- ▶ Requires professional staff commitment/graduate level expertise to organize and edit research information and resources. Probably would require participation of partnering conservation organization and funding.

# 3 Camp Grayling JMTC key issues environmental



## Issue 3d: Effects on the health of wildlife populations



### Strategy 3d.1: Ongoing ecological assessment and community outreach and engagement

#### Summary

Many citizens are not aware that the DNR is ultimately responsible for management of the land (surface resources) on which Camp Grayling operates. Educating the public about this cooperative relationship and the commitment to habitat and wildlife preservation would be beneficial. Frequent communication of wildlife surveys (e.g. fish and benthic community health) and promoting new surveys of wildlife populations would increase public trust and alert installation and DNR staff to perceived or actual problems.

- ▶ Use citizen volunteers as appropriate and involve them in species protection as possible.

#### Challenges

- ▶ Maintaining the survey actions from year to year may be difficult with turnover of volunteers.
- ▶ Outside funding sources may be required to pay for the official surveys.

#### Recommendations

- ▶ Public outreach concerning current environmental management that is done on the installation to meet DNR land use requirements and beyond.
- ▶ Publicize results of upcoming comprehensive species survey being done in conjunction with a Camp Grayling JMTC INRMP update.
- ▶ Expand and maintain species habitat map layers on installation property that describe connectivity and monitor habitat fragmentation trends.
- ▶ Distribute an ongoing newsletter about the environmental management and monitoring on the installation, such as the Lake Margrethe Watershed Management Plan.
- ▶ Organize public tours of the protected and managed areas.
- ▶ Conduct public outreach activities such as presentations at local educational and non-profit meetings concerned with sustainability and environmental stewardship.

## Issue 3e: Wildfire management



### Strategy 3e.1: Increase public awareness of ongoing wildfire management efforts and gather public input

#### Summary

Wildfires within the base and surrounding areas remain an ongoing public concern. The MDNR is responsible for wildfire control on state and leased lands, including large areas of volatile jack pine forest. Prescribed burns are a common management tool that may cause alarm when perceived as wildfires.

#### Recommendations

- ▶ Conduct open houses in conjunction with MDNR to explain wildfire management plans and cooperative practices. Invite Camp Grayling personnel to participate.
- ▶ Capture public comments and concerns for future wildfire and forestry management strategies.
- ▶ Provide information and links on the installation website and social media to MDNR information on MDNR open houses, forestry management plans, and prescribed burn processes, risks, and schedules.
- ▶ Set up a hotline that could inform area residents via recording on prescribed burns or other activity.
- ▶ Provide emergency response protocol education.

#### Challenges

- ▶ Effort would require dedicating personnel time to update the installation and MDNR website content, create information sheets, and coordinate mailers.
- ▶ Consistent language across platforms and agencies is essential to spreading a clear message to residents.



## Issue 3f: Resource use and sustainability



### Strategy 3f.1: Public outreach to increase awareness of sustainability measures at Camp Grayling JMTC

#### Summary

Camp Grayling has a comprehensive waste-reduction program and is on track to become the first DOD triple-net-zero installation, whereby the installation's net energy use, water use, and waste output would effectively be zero. The camp has also implemented renewable energy measures and a lead/metals/munition removal program. The base has won awards for its sustainability actions. Public outreach detailing these efforts should alleviate public concerns with installation impacts on local resources and environment and promote public perceptions of environmental stewardship.

#### Recommendations

- ▶ Provide detailed information on the installation website about the waste reduction program.
- ▶ Consider a public broadcast, newspaper article, or letter to the editor describing the installation waste reduction program. Distribute a press release to local print and television media.
- ▶ Conduct public outreach activities such as presentations at local educational and nonprofit meetings concerned with sustainability and environmental stewardship.

#### Challenges

- ▶ Effort would require dedicating personnel time to create and update informational fliers and press releases, update the installation website content, and coordinate publicity efforts with media outlets.



### Strategy 3f.2: Consider the creation of a recycling/sorting station

#### Summary

In addition to communicating the installation's commitment to waste reduction, providing recycling space on or near the installation or contributing to the county recycling program would encourage municipal waste reduction and create interaction between the installation and residents.

#### Recommendations

- ▶ Assess the feasibility of a combined use recycling drop-off/sorting/transfer station on or adjacent to the installation, utilizing the Grayling Charter Township Recycling Center as the endpoint.
- ▶ Consider partnering with environmental organizations and using volunteers to coordinate facility upkeep.
- ▶ Consider use of installation vehicles/equipment as an in-kind contribution to facilitate recycling and community access to waste management programs.
- ▶ Organize a partnership to work on developing collaborative recycling and renewable energy programs. This could be lead by NEMCOG, the region's designated planning agency for solid waste management.

#### Challenges

- ▶ Coordinating transportation of materials to the center.
- ▶ Funding for program initiation and ongoing operation.

# 4 Camp Grayling JMTC key issues transportation and infrastructure



## Issue 4a: Effects of growth on utilities



### Strategy 4a.1: Continue to monitor capacity and community growth

#### Summary

The Grayling Charter Township Master Plan requires the monitoring of water, sewer, septage disposal/treatment, and natural gas services and the need for expansion, such as that caused by the development of the Arauco North America particleboard plant, particularly as existing systems age. A feasibility study was completed in 1999 for expanding the sewer system in Crawford County.

#### Recommendations

- ▶ Investigate ways to share military and civilian assets or energy strategies.
- ▶ Explore public-private partnership opportunities for future development of water and wastewater treatment.
- ▶ Pursue state grants to fund replacement projects.
- ▶ Update feasibility study on sewer system.

#### Challenges

- ▶ Energy improvements and ensuring service may be dependent on private companies in some cases.
- ▶ Funding is inadequate to replace infrastructure.



### Strategy 4a.2: Plan for possible mission expansion

#### Summary

The utility requirements of additions to or expansion of training missions should be investigated and integrated into existing installation plans.

#### Recommendations

- ▶ Develop an Installation Capacity Analysis to determine existing capacities and requirements.
- ▶ Align growth with existing sustainability and net-zero plans, which may include implementation of new sources of renewable energy.

#### Challenges

- ▶ Energy improvements and ensuring service may be dependent on private companies in some cases.
- ▶ Turnover at the installation can be problematic for long-term planning efforts.

## Issue 4b: Improve internet access



### Strategy 4b.1: Encourage the growth and use of high-speed internet services

#### Summary

The internet has become so widely used within modern society that a lack of high-speed internet service can be detrimental to a community, diminishing educational and career development opportunities for residents; commercial, healthcare, and governmental functions; and social interaction and community support.

#### Recommendations

- ▶ Contribute to state-wide efforts to plan digital and communications growth, such as through the Building of the 21st Century Commission and Michigan Infrastructure Council.
- ▶ Develop a “wired city” vision similar to that of the City of Alpena; consult the North East Michigan Fiber Consortium for guidance.
- ▶ Prioritize high-speed internet for schools to enhance educational and career development opportunities.
- ▶ Develop and conduct digital literacy and technical skills programs for the public.
- ▶ Consider a financing program to allow consumers to fund internet infrastructure.
- ▶ Collaborate with Camp Grayling to expand service north of the city.

#### Challenges

- ▶ Demand may not warrant additional infrastructure.
- ▶ Private companies, rather than government bodies, determine service availability.
- ▶ The low density of the population means a low return on investment for service installation.
- ▶ Installing communications infrastructure is difficult and costly.
- ▶ Set-up costs for broadband connections may be prohibitive for rural residents and small businesses.
- ▶ Monthly rates for high-speed service or costs of new technology may be too expensive for residents.
- ▶ There may be a lack of interest in, of knowledge of, various internet services and capabilities and the potential positive effects on quality of life.



# Camp Grayling JMTC key issues transportation and infrastructure 4

## Issue 4c: Poor cellular reception



### Strategy 4c.1: Grow cellular services

#### Summary

Developing a stronger cellular communications network would enhance quality of life for residents and increase the ability to utilize cellular service for necessary functions such as emergency notifications, etc.

#### Recommendations

- ▶ Map existing cellular towers by carrier and identify any areas where coverage is poor.
- ▶ Engage service providers regarding the implementation of a new cell tower.
- ▶ Lease military land for an additional cell tower.
- ▶ Consider community-wide wifi as an alternative in areas where that option is more cost-effective.

#### Challenges

- ▶ Demand may not warrant additional infrastructure.
- ▶ The cost-benefit ratio for investing in technology upgrades may be low for cellular service providers.
- ▶ If the number of providers is limited, there is less incentive to provide competitive pricing for consumers.

## Issue 4d: Traffic and road network



### ACTION PLAN: INSTALLATION MASTER PLAN TRANSPORTATION STUDY

### Strategy 4d.1: Streamline Camp Grayling traffic

#### Summary

While recent construction to the main gate improves access to the installation, the transportation network within the installation boundaries requires attention.

#### Recommendations

- ▶ Update the transportation plan for Camp Grayling.
- ▶ Communicate plans with the county road commissions and MDOT.
- ▶ Adjust the convoy schedule to avoid high-traffic times.
- ▶ Publicize the convoy schedule.
- ▶ Work with city, county, and state law enforcement to assist military convoys to flow through the city.
- ▶ Consider joint funding for transportation projects that may benefit access to and from Camp Grayling, such as a project at I-75 and North Down River Road; county road improvements; Industrial Road connection from Four Mile Road north to M-72.

#### Challenges

- ▶ Resources for a transportation plan may be limited.
- ▶ Publishing convoy movements may pose a security risk.
- ▶ Local law enforcement may not have availability to escort convoys.



### ACTION PLAN: INSTALLATION MASTER PLAN TRANSPORTATION STUDY

### Strategy 4d.2: Improve traffic flow and safety throughout the Grayling area

#### Summary

Inefficient traffic patterns create safety and quality of life issues. Identifying and addressing problem areas will enhance the community for residents, businesses, visitors, and Camp Grayling JMTC. Growth (including the Arauco North America particleboard plant), ongoing and planned road projects, and increased speed limits on highways and interstates may lead to more accidents or other vehicle issues in the coming years.

#### Recommendations

- ▶ Update the Grayling Area Transportation Study, which was last published in 2008.
  - ▶ Focus on the major intersections identified and developing solutions to improve circulation and safety.
  - ▶ Include planned and ongoing improvements to the industrial area around Four Mile Road.
  - ▶ Adjust timing of traffic lights within the City of Grayling for more efficient traffic flow following the results of the traffic pattern study.
- ▶ Encourage pedestrian traffic and alternative modes of transportation in downtown Grayling to reduce congestion, particularly during the summer tourist season.
  - ▶ Develop a bike share program at Camp Grayling that allows soldiers and visitors to borrow bicycles, allowing them to travel downtown and within the area.
  - ▶ Install bicycle racks in conjunction with the Grayling Trail Town Master Plan.
  - ▶ Lighting, benches, street art, and trash receptacles can enhance the walkability of the area.

- ▶ Monitor proposed development or land transactions, such as the Kirtland Community College Health Sciences Campus and nearby business development proposed in the Grayling Charter Township Master Plan near the Four Mile Road/I-75 interchange, for potential effects on circulation and other locations regarding Camp Grayling use.
- ▶ Increase the local law enforcement presence to help with safety and security issues arising from increases in traffic and speed limits.
- ▶ Continue staffing the Camp Grayling main gate.
- ▶ Monitor the identified problem intersections.
- ▶ Partner with the military and law enforcement to escort convoys.
- ▶ Improve I-75/North Down River Road interchange to improve confusion and traffic congestion issues.

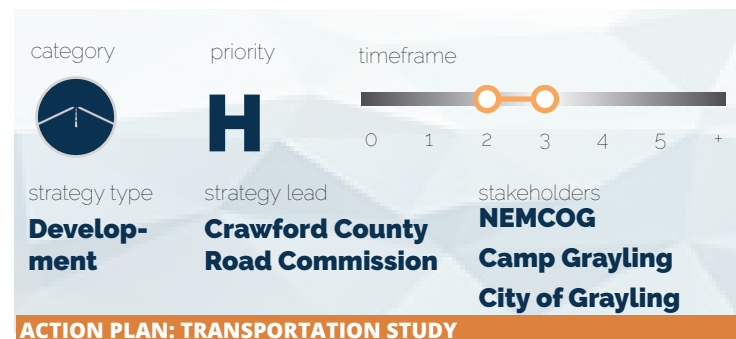
#### Challenges

- ▶ Lack of funding for road maintenance and improvement is a state-wide issue.
- ▶ The rural environment does not easily support carpool, bus, or alternative transportation forms on a day-to-day basis.
- ▶ Local efforts to retain posted speed limits on M-72 within Crawford County may be unsuccessful.
- ▶ Commercial and military growth is anticipated.

# 4 Camp Grayling JMTC key issues transportation and infrastructure



## Issue 4d continued: Traffic and road network



**ACTION PLAN: TRANSPORTATION STUDY**

### Strategy 4d.3: Improve the I-75/ North Down River Road interchange

#### Summary

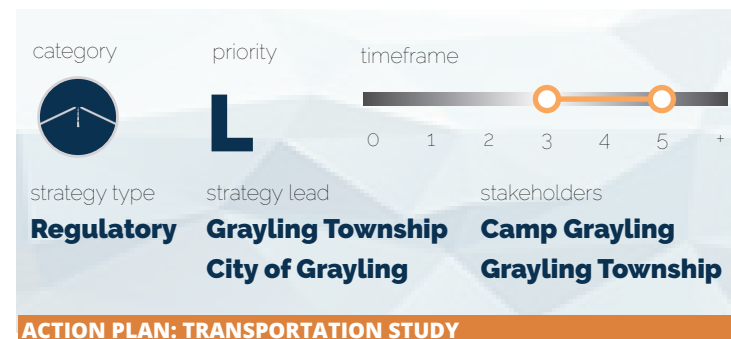
The existing I-75/North Down River Road interchange causes confusion and traffic congestion issues. Improving the intersection would create a more efficient traffic pattern, particularly for traffic to and from Camp Grayling, as well as create an opportunity for a commercial development.

#### Recommendations

- ▶ Develop and analyze multiple courses of action to address the intersection.
  - ▶ Develop a full interchange by adding southbound ramps to I-75.
- ▶ If grant opportunities are identified, solicit assistance for grant writing to fund the project.
- ▶ Consider joint or military funding for the project.

#### Challenges

- ▶ The I-75/North Down River Road issue is a community priority, but efforts to obtain funding for this project have not yet been successful. The project cost was estimated at \$1.64 million in 2008. This is not a state or federal priority.
- ▶ Private residences and the Au Sable River along the west side of I-75 may limit options for development.



**ACTION PLAN: TRANSPORTATION STUDY**

### Strategy 4d.4: Create a landmark and a symbolic entrance to Camp Grayling JMTC

#### Summary

Create a landmark structure at the entrance to Camp Grayling.

#### Recommendations

- ▶ Build an iconic entrance to Camp Grayling to create a better sense of place and connection to the surrounding environs.

#### Challenges

- ▶ Funding for construction.

## Issue 4e: Recreational access



**ACTION PLAN: COMMUNITY RELATIONS STAFF  
TRANSPORTATION STUDY  
INSTALLATION MASTER PLAN  
LANDSCAPE PLAN**

### Strategy 4e.1: Ensure appropriate recreational access and increase public outreach

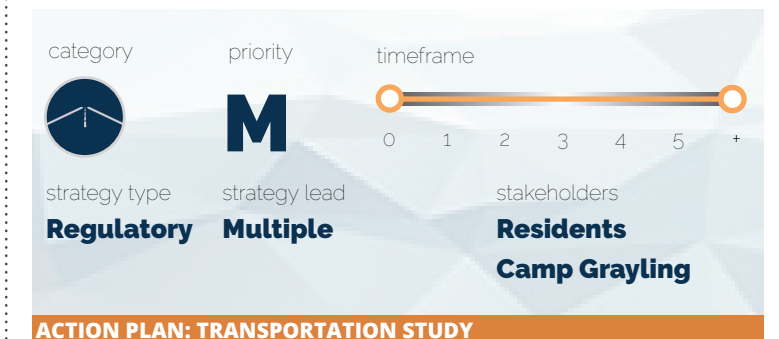
#### Recommendations

- ▶ Maintain the joint MDNR/Camp Grayling mapping effort instituted by Public Act 288 and publicize the results.
- ▶ Open the camp to the public for recreation on set days.
- ▶ Consider a land swap to provide public access to rich recreational areas in exchange for other lands more suitable to military training.
- ▶ Update the City of Grayling recreation plan in order to support applications for MDNR recreation grants.
- ▶ Increase situation awareness at the installation boundary by adding signage, a red-flag system to denote training exercises are ongoing, etc., to mitigate safety issues.
- ▶ Communicate public service announcements and closures via various methods, including social media or text updates for interested parties.

#### Challenges

- ▶ Ensuring safety for both military personnel and civilians is critical when the public is allowed access to areas where military operations take place.
- ▶ Locked gates are sometimes ignored by the public.

## Issue 4f: Poor road condition



**ACTION PLAN: TRANSPORTATION STUDY**

### Strategy 4f.1: Improve road network

#### Summary

Although road planning and improvements are continually ongoing, overall road condition in the area needs improvement. The poor condition of roads and bridges creates safety hazards for local residents and service members as well as added vehicle maintenance costs.

#### Recommendations

- ▶ Utilize PASER, traffic counts, and traffic crash data to prioritize projects.
- ▶ Develop options for an alternate truck route (Four Mile Road to Military Road) in a coordinated effort between Grayling Charter Township and the Crawford County Road Commission.

#### Challenges

- ▶ Funding for road improvements and maintenance is a state-wide and national issue.
- ▶ Military, commercial, and tourism growth support economic growth but increase road deterioration.
- ▶ Projects may not take place for several years.





## Issue 4f: Poor road condition



### Strategy 4f.2: Increase funding for road projects and maintenance

#### Summary

Road projects are costly, and aging roads, culverts, and bridges pose significant maintenance problems throughout the area that cannot all be addressed through the current limited funding availability and streams.

#### Recommendations

- ▶ Align road and infrastructure projects and schedules to save costs.
- ▶ Explore ways to monetize summer tourism for road repair projects, such as through a paid parking system in downtown Grayling.
- ▶ Pursue a public-private partnership (P3), particularly for areas of new development.
- ▶ Investigate funding agreements with the military for county roadway maintenance, such as the Defense Access Road Program.
- ▶ Investigate partnerships with major players in the logging industry and wood products industry.

#### Challenges

- ▶ Most of the land (82 percent) in Crawford County is state or federally owned, so funding is hard to come by. Each county receives a uniform amount of money to maintain dirt roads through state lands.
- ▶ Taxes or public funding sources are unpopular, and public perception of the causes of road damage may not be conducive to getting people to vote for increased taxes.
- ▶ The military and private companies may not be interested in partnerships.

## Issue 5a: Communications/education



### Strategy 5a.1: Document a comprehensive standard operating procedure (SOP) for communications/community relations at Camp Grayling JMTC

#### Summary

The person in the position of community relations specialist develops a significant amount of institutional knowledge about effective communications. Changes in staffing over time could result in a loss of that institutional knowledge without comprehensive documentation of communications and engagement processes and procedures. Creating an SOP for communications and community relations at Camp Grayling JMTC will ensure staffing changes don't result in a loss of knowledge or a gap in outreach activities, as well as documentation of the history of existing community partnerships and relationships.

#### Recommendations

- ▶ Draft a comprehensive SOP for communications and community relations at Camp Grayling JMTC, including processes, procedures, key dates, lessons learned, existing community partnerships, evaluation metrics, and future communication goals.
- ▶ Share portions of the SOP with important community partners for feedback.
- ▶ Submit SOP to Camp Grayling JMTC leadership for review and feedback.
- ▶ Establish schedule for regular review and update of the SOP.
- ▶ Provide a regular report of communications and educational activities to Camp Grayling JMTC leadership and key community partners, allowing participants to provide recommendations for continuous improvement and expansion of successful activities.

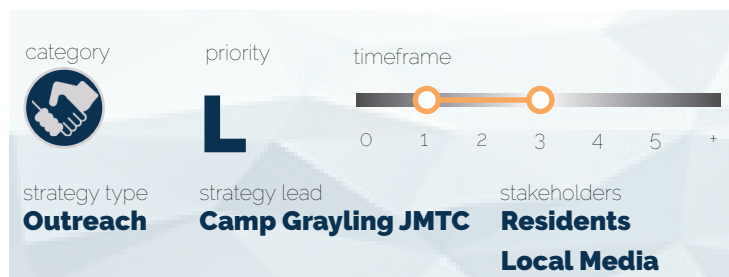
#### Challenges

- ▶ Funding and time limitations to support development of the SOP while meeting the demands of day-to-day communication responsibilities.
- ▶ Only one dedicated community relations specialist to meet the communication needs of Camp Grayling JMTC.

# 5 Camp Grayling JMTC key issues community partnerships



## Issue 5a continued: Communications/education



**ACTION PLAN: COMMUNITY RELATIONS STAFF**

### Strategy 5a.2: Use relationship with Blarney Broadcasting as a model for expanding media reach

#### Summary

Blarney Broadcasting recognized a benefit to listeners by inviting Camp Grayling JMTC staff to provide daily updates on Northern Strike activities and extended this invitation to a year-round weekly update for listeners at no cost to Camp Grayling JMTC. This type of community partnership with local media has the potential to serve as a model for other media partners by providing consumers with information.

#### Recommendations

- ▶ Craft a strategy for improving Camp Grayling JMTC reach into local media, including coordinating one-on-one meetings to discuss how to improve the installation's reach and potential partnerships.
- ▶ Develop a case study using the partnership with Blarney Broadcasting to share with other local media.
- ▶ Connect with local freelance writers to pitch Camp Grayling JMTC stories.

#### Challenges

- ▶ Local media staffing and budget constraints may affect interest and ability to craft partnerships based on the Blarney Broadcasting model.



**ACTION PLAN: COMMUNITY RELATIONS STAFF**

### Strategy 5a.3: Develop a public education program on UXO

#### Summary

Stakeholders could find historic UXO on public property adjacent to Camp Grayling JMTC from the past 100 years of operation. A public education program focused on identifying UXO, who to contact if it is found, and the historic operations of Camp Grayling would address public safety concerns and inform local residents about the history of Camp Grayling. The program could be developed and implemented in partnership with local organizations, including school districts, Hanson Hills Recreation Area, and businesses.

#### Recommendations

- ▶ Convene a working group to discuss a public education program and possible delivery opportunities, including school, recreation, and business representatives.
- ▶ Create educational materials based on format recommendations provided by working group.
- ▶ Conduct a pilot educational program to obtain feedback and make adjustments to content as necessary.
- ▶ Train key community partners on educational program.
- ▶ Distribute materials to key community partners.
- ▶ Publicize via Facebook and other media outlets.

#### Challenges

- ▶ Limited time and resources for Camp Grayling JMTC community relations specialist to engage in program development without supplemental staff members.



**ACTION PLAN: COMMUNITY RELATIONS STAFF**

### Strategy 5a.4: Ensure web resources include access to Camp Grayling contact information and resources

#### Summary

Updates to the Camp Grayling JMTC webpage on the Michigan Army National Guard website involve a centralized process coordinated through Lansing. This process hampers the ability to keep the webpage up-to-date. Adding links to Camp Grayling JMTC's Facebook page, editions of Camp Grayling Impact newsletter, and listing the contact information for the Camp Grayling community relations specialist on this webpage will allow stakeholders seeking more in-depth information a way to obtain those resources from the Michigan Army National Guard website.

#### Recommendations

- ▶ Provide Lansing with a request to add links to Camp Grayling Facebook page, as well as editions of Camp Grayling Impact newsletter.
- ▶ Engage in a discussion with Michigan Army National Guard Public Affairs staff in Lansing for ideas on how to keep the Camp Grayling JMTC webpage relevant with new educational content and expedite the process for webpage updates.
- ▶ Implement strategy to ensure Michigan Army National Guard website reflects broader suite of Camp Grayling JMTC educational resources, including who to contact with questions on specific topics.

#### Challenges

- ▶ Limited Michigan Army National Guard Public Affairs staff in Lansing to implement changes in an expedited manner.
- ▶ Limitations on the type of information Michigan Army National Guard is able to post on existing website.



# Camp Grayling JMTC key issues

# community partnerships 5

## Issue 5b: Public relations/community involvement



### Strategy 5b.1: Inform community partners on process to request Camp Grayling JMTC tours and participation in community events

#### Summary

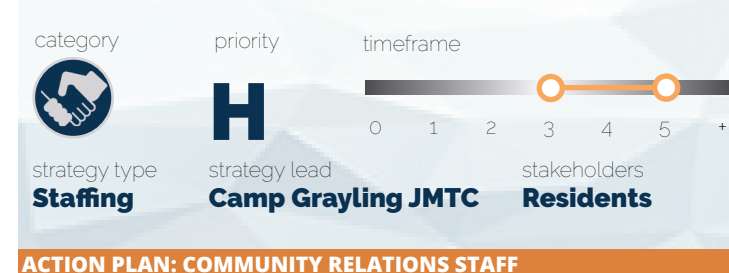
The process for requesting Camp Grayling JMTC group tours and involvement in community events is not publicly available in a clear, comprehensive manner. An effort to make the process and criteria available electronically and in print would help community partners go through the proper channels for these requests and reduce the number of questions that the community relations specialist needs to answer on this topic. Also, look for more ways to let the public view training or arms testing from a safe distance.

#### Recommendations

- ▶ Develop a concise document on the availability of group tours, the tour timeframe and content, and the process for requesting, including lead time necessary to schedule a tour and the necessary request forms.
- ▶ Develop a concise document on the availability of Camp Grayling JMTC to participate in community events such as parades and festivals. Include the criteria for events, options for participation (e.g., color guard, speaker, fly over), and provide the necessary request forms.
- ▶ Provide overview of the process on Michigan Army National Guard website, Camp Grayling Facebook page, and in the Camp Grayling Impact newsletter.
- ▶ Establish a process for emailing or mailing forms and responding to requests.
- ▶ Document in an overall SOP for future reference.

#### Challenges

- ▶ Limited time and resources for Camp Grayling JMTC community relations specialist to develop materials without supplemental community relations staff.
- ▶ Possible need for review of processes by Michigan Army National Guard Public Affairs staff.



### Strategy 5b.2: Expand Camp Grayling JMTC community relations staff

#### Summary

The current level of staffing for community relations activities may not be sustainable to support the need for more robust public relations and community engagement activities, as well as the need for additional staff to manage unexpected issues that affect the surrounding communities. This has been demonstrated through the need to increase current community relations support with temporary staffing to handle public relations surrounding the groundwater PFAS issue at Camp Grayling JMTC.

#### Recommendations

- ▶ Review community relations staffing in light of community relations needs and goals for Camp Grayling JMTC to identify increased staffing needs.
- ▶ Present staffing analysis to Camp Grayling JMTC leadership and Michigan Army National Guard.
- ▶ Create alternative staffing plan that identifies how to maximize existing resources and leverage community partnerships to assist in achieving community relations and engagement goals if additional budget is not available to increase community relations staffing levels.

#### Challenges

- ▶ Federal budget limitations to hire additional community relations specialists.



### Strategy 5b.3: Develop an interpretative visitors' center/history center at Camp Grayling JMTC

#### Summary

Community residents and tourists have voiced an interest in a facility near Camp Grayling JMTC that would provide an educational opportunity and some access to Camp Grayling JMTC facilities. A visitors' center would provide taxpayers with an on-site educational opportunity at a location that would not interfere with training operations or security protocols.

#### Recommendations

- ▶ Develop a visitors' center concept and proposal with Camp Grayling JMTC leadership to present to Michigan Army National Guard leadership for consideration.
- ▶ Explore possibility for public-private partnerships and resources to fund a Camp Grayling JMTC visitors' center that would serve as another local tourist attraction.
- ▶ Convene local committee to participate in design and development of visitors' center if MIARNG leadership provides preliminary approval to pursue the project.
- ▶ Consider involving Camp Grayling JMTC in current museum revitalization project.

#### Challenges

- ▶ Federal and private budget limitations to invest in facility development.

# 5 Camp Grayling JMTC key issues community partnerships



## Issue 5b continued: Public relations/community involvement

category 	priority <b>H</b>	timeframe 0 1 2 3 4 5 +
strategy type <b>Regulatory</b>	strategy lead <b>Grayling Township City of Grayling</b>	stakeholders <b>Developers Residents Local Governments</b>

**ACTION PLAN: MILITARY OVERLAY ZONE  
COMMUNITY RELATIONS STAFF**

### Strategy 5b.4: Revise respective zoning ordinances for governmental entities within the APZ

*Summary*

Local zoning codes should be updated to restrict height of new structures within the APZs.

#### Recommendations

- ▶ Update zoning codes in all applicable governmental entities.
- ▶ Zoning code update will also include a site review component for new structures in the APZ.
- ▶ Codify site plan review process, including timeframes.
- ▶ Include a reference to Camp Grayling JMTC in site plan review standards in local zoning ordinances.
- ▶ Any new structure must undergo review to ensure compliance with new zoning codes.
- ▶ Require new facilities to match height limits mandated by the APZ and require site plan review for any new structure built on a property within the APZ.
- ▶ Create a survey and registry of any current building that does not meet the new requirements.

#### Challenges

- ▶ Increase of regulatory requirements for residents and businesses.

category 	priority <b>M</b>	timeframe 0 1 2 3 4 5 +
strategy type <b>Partnership</b>	strategy lead <b>Camp Grayling JMTC City of Grayling</b>	stakeholders <b>Residents Local Governments</b>

**ACTION PLAN: COMMUNITY RELATIONS STAFF  
INSTALLATION MASTER PLAN  
TRANSPORTATION STUDY**

### Strategy 5b.5: Collaborate on joint-use conference/community center

*Summary*

Camp Grayling JMTC lacks a conference center on base. The City of Grayling has taken on a feasibility study to look into adding a 500-1,000-person center. The city plans to buy land near the city center and will propose it for the location of the new facility if the feasibility study is favorable.

#### Recommendations

- ▶ Increase local and regional multimodal transportation to allow soldiers on Camp Grayling JMTC to access the new center.
- ▶ Partner with Camp Grayling JMTC staff to discuss potential events to host at the center that would benefit residents on- and off-post.

#### Challenges

- ▶ Funding new construction may be difficult.

category 	priority <b>M</b>	timeframe 0 1 2 3 4 5 +	strategy type <b>Outreach</b>	strategy lead <b>Project Rising Tide Camp Grayling JMTC</b>	stakeholders <b>Residents NEMCOG</b>
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**ACTION PLAN: COMMUNITY RELATIONS STAFF**

### Strategy 5b.6: Convene a Camp Grayling JMTC Community Council

#### Summary

Camp Grayling JMTC can assist in convening the Camp Grayling JMTC Community Council. This group would leverage community partnerships to support Camp Grayling JMTC with public relations, economic valuation, visiting unit support services, and military family support services. It can capitalize on the work already done by Project Rising Tide in the area and also use the nearby Alpena CRTC Community Council as an example.

#### Recommendations

- ▶ Discuss group membership with Camp Grayling JMTC leadership and key community partners.
- ▶ Create a proposal for the formation of the group.
- ▶ Convene a planning session to develop a formal strategy for the Camp Grayling JMTC Community Council, including membership, goals, meeting schedule, and priority activities.
- ▶ Implement the strategy and evaluate effectiveness over time.
- ▶ Report on Camp Grayling JMTC Community Council successes to Camp Grayling JMTC leadership and key community partners.

#### Challenges

- ▶ Existing time demands on Camp Grayling JMTC community relations specialist are many.
- ▶ Potential requirements for Michigan Army National Guard to review communications materials developed in conjunction with community partners prior to distribution.



Grayling Township offices.



# Camp Grayling JMTC key issues economic development 6

## Issue 6a: Effect on property value mostly perceived as neutral or positive

 **M**  **Outreach**  
 category priority timeframe strategy type  
**JLUS Implementation Committee**  
**Rising Tide Initiative** strategy lead  
**Camp Grayling County Econ. Dev. Lead**  
**Local Realtors** stakeholders  
**ACTION PLAN: MILITARY OVERLAY ZONE**  
**COMMUNITY RELATIONS STAFF**  
**ECONOMIC IMPACT STUDY**

### Strategy 6a.1: Develop communication materials that highlight the potential impacts from Camp Grayling JMTC for future home buyers

#### Summary

Creating print and online communication materials that local communities and Realtors can provide to prospective home buyers would address stakeholders' concerns about a lack of transparent information about the potential impacts from Camp Grayling JMTC that local homeowners might experience due to training operations. In addition to communicating about potential negative impacts such as noise and wildfire, communication materials should also highlight the positive impacts of Camp Grayling on property values, such as benefits to the local economy.

#### Recommendations

- ▶ The JLUS Implementation Committee (made up of members from Camp Grayling JMTC, property owners, Project Rising Tide, Gaylord and Grayling Chambers of Commerce) and Realtors will work together to craft information for electronic and printed formats that highlights potential impacts of living near Camp Grayling JMTC.
- ▶ Tailor materials to highlight impacts specific to different communities because of the variations in effects.
- ▶ Distribute draft informational materials to local stakeholders for review and comment.
- ▶ Distribute final informational materials to Realtors, Chambers of Commerce, homeowners associations, libraries, and other community organizations for distribution to residents and prospective home buyers.

#### Challenges

- ▶ Implementation requires stakeholder buy-in; there may be differences in opinion about level of information to provide about Camp Grayling JMTC operations in materials.
- ▶ Distribution would be voluntary, and stakeholders may choose not to share information, depending on level of support for the project.

## Issue 6b: Significant contributor to local economy

 **H**  **Research**  
 category priority timeframe strategy type  
**Camp Grayling JMTC** strategy lead  
**Residents Grayling Fire Dept**  
**County Econ. Dev. Lead** stakeholders  
**ACTION PLAN: FIRE STUDY**  
**ECONOMIC IMPACT STUDY**

### Strategy 6b.1: Fire protection services needs study

#### Summary

Camp Grayling JMTC has contracted with the Grayling Fire Department for structural fire suppression. Local stakeholders feel there is a need to reassess the current levels of contracted services given the changes in Camp Grayling JMTC. Conducting a fire protection services needs study will determine if the current levels of service are adequate.

#### Recommendations

- ▶ Review Adaptation Planning for Climate Resilience report and implement recommendations related to supporting community-wide cooperative fire protection efforts, especially in areas where wildfire risk may be exacerbated by climate change, specifically working with the City of Grayling to secure funding for long-term structural fire protection, including personnel and equipment. ([http://www.resilientmichigan.org/downloads/final\\_report\\_miag\\_web.pdf](http://www.resilientmichigan.org/downloads/final_report_miag_web.pdf))
- ▶ Address additional Grayling Fire Department personnel for structural fire suppression as part of the 5-year update to the 2014 Crawford County Hazard Mitigation Plan and incorporate Camp Grayling JMTC seasonal demographic information under economic impact, as well as include Camp Grayling JMTC as a partner in developing and implementing this plan. (<http://www.discover-northeastmichigan.org/docview.asp?did=430>)
- ▶ Contract for an independent fire services needs study using local and Camp Grayling JMTC resources.
- ▶ Seek grants to fund study via NEMCOG and/or coordinate with Camp Grayling-funded study.

- ▶ Reevaluate the current contract and, if necessary, modify the contract based on the findings of the study.

#### Challenges

- ▶ If Camp Grayling JMTC increases its own fire protection services or there are budget cuts from Lansing, there could be a loss of fire protection jobs in Grayling Fire Department.

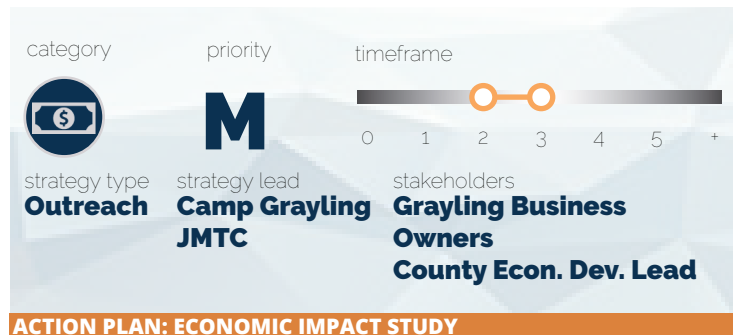


Grayling Fire Department

# 6 Camp Grayling JMTC key issues economic development



## Issue 6b continued: Significant contributor to local economy



### Strategy 6b.2: Local purchasing goal for Camp Grayling JMTC

#### Summary

Local purchasing goals for Camp Grayling JMTC would help establish an operating norm that acknowledges the importance of Camp Grayling JMTC on the surrounding economies regardless of changes in Camp Grayling leadership.

#### Recommendations

- ▶ Work with MIARNG leadership in Lansing to identify and set local purchasing goals for Camp Grayling JMTC for goods and services not subject to federal and state contracting laws to demonstrate commitment to economic development of surrounding communities.
- ▶ Track and report progress toward local purchasing goal for goods and services that are not subject to federal and state contracting laws to help quantify annual impact on local economy.
- ▶ As possible, inform chambers of commerce and local businesses know when troops will be in the local area.

#### Challenges

- ▶ Federal law controls contracting requirements, which often awards contracts to the lowest bidder.
- ▶ May be difficult due to the contracting requirements for goods and services over a certain dollar amount.



### Strategy 6b.3: Expanded public transportation from Camp Grayling JMTC to surrounding communities to support military tourism

#### Summary

Additional public transportation options, such as a partnership with Gaylord public transportation services, or an extended schedule for Crawford County Transportation Authority Dial-A-Ride could allow trainees to shop, eat, and use local services within communities surrounding Camp Grayling JMTC. This would promote military tourism and increase the economic contributions of Camp Grayling JMTC to local communities.

#### Recommendations

- ▶ Survey Camp Grayling JMTC about public transportation needs and share results with Gaylord public transportation providers and Crawford County Transportation Authority Dial-A-Ride. Continue partnerships and conversations already in progress.
- ▶ Coordinate a discussion session to identify challenges with expanding Dial-A-Ride services and identify other possible options for expanding public transportation services from Camp Grayling JMTC to local communities.
- ▶ Participate in larger community-wide discussions about expanded Dial-A-Ride and other public transportation services through implementation of Project Rising Tide economic development strategy.
- ▶ Consider a pilot program with expanded Dial-A-Ride or other public transportation service and track both usage and economic impact.

#### Challenges

- ▶ Limited staffing resources at Crawford County Transportation Authority Dial-A-Ride may limit ability to expand schedule.
- ▶ Limited funding resources to implement Project Rising Tide economic development strategy.
- ▶ Soldiers have limited free time during training.



### Strategy 6b.4: Increase public use of the Grayling AAF

#### Summary

Expand commercial and/or general aviation uses at the Grayling AAF.

#### Recommendations

- ▶ Foster ongoing dialog with Camp Grayling JMTC airfield manager.
- ▶ Utilize the current remediation of runways as a way to promote an increase in both general and commercial aviation use.
- ▶ Reach out to airlines about the addition of commercial flights to the airfield.

#### Challenges

- ▶ Convincing an airline that commercial flights are economically viable.
- ▶ Coordinating nonmilitary aviation with military operations and security issues associated with a military-owned and -operated airfield.



## Issue 6c: Economic incentivizing and monitoring

category  
**M** priority  
 0 1 2 3 4 5 + timeframe  
**Outreach** strategy type  
**City of Grayling** strategy lead  
**Camp Grayling County Econ. Dev. Lead Michigan Works!** stakeholders

**ACTION PLAN: ECONOMIC IMPACT STUDY**

### Strategy 6c.1: Economic tracking and reporting mechanisms to quantify annual military tourism impact

#### Summary

Quantifiable economic data on how dollars flow from soldiers training at Camp Grayling JMTC into surrounding communities would help communicate the contributions Camp Grayling JMTC makes to the local economy. This type of information would assist in communicating the benefits of Camp Grayling JMTC to current residents, prospective home buyers, and decision makers at the local, state, and federal levels.

#### Recommendations

- ▶ Conduct benchmarking research on other Army National Guard and training installations' efforts to track economic impact of operations on local communities.
- ▶ Convene a brainstorming session to share benchmarking results and identify potential economic tracking mechanisms to monitor the spending flow from Camp Grayling JMTC trainees in local communities. Mechanisms discussed during the JLUS process include a survey of Camp Grayling JMTC soldiers during their stay with an incentive to participate or a Camp Grayling JMTC discount card accepted at local businesses.
- ▶ Identify the most feasible tracking mechanisms from the brainstorming session and develop a monitoring plan and reporting schedule.
- ▶ Share information about the economic monitoring initiative with Camp Grayling JMTC soldiers and families.
- ▶ Collect data and analyze findings.
- ▶ Report to key stakeholders participating in brainstorming session.

- ▶ Identify next steps to adapt the monitoring approach based on findings.
- ▶ Prepare informational materials to share findings with media, decision makers, and other key stakeholders.
- ▶ Consider forming a group like Target Alpena Economic Development Corp. to handle this strategy and involve community partners.

#### Challenges

- ▶ Resource limitations to support economic monitoring mechanism development and implementation over time.
- ▶ Potential lack of widespread participation in tracking that will limit the ability to comprehensively quantify military tourism spending flow.

category  
**M** priority  
 0 1 2 3 4 5 + timeframe  
**Regulatory** strategy type  
**Camp Grayling City of Grayling Grayling Township** strategy lead  
**Chamber of Commerce County Econ. Dev. Lead** stakeholders

**ACTION PLAN: ECONOMIC IMPACT STUDY**

### Strategy 6c.2: Economic incentives to generate military tourism

#### Summary

Soldiers at Camp Grayling JMTC often bring family members into the area during training exercises. Local businesses will benefit if surrounding tourism bureaus work to create incentives for soldiers' families to extend their stay in the area before or after training. Discounts or vacation packages could create incentives that expand military tourism associated with Camp Grayling JMTC.

#### Recommendations

- ▶ Convene a working session among tourism bureaus and local business representatives to identify possible incentives for trainees and their families
- ▶ Identify and develop most feasible incentives.
- ▶ Create marketing campaign to promote incentives in partnership with Camp Grayling JMTC.
- ▶ Create an identifier for businesses that give military discounts, such as a window sticker with a logo.
- ▶ Monitor incentive effectiveness.
- ▶ Report findings to work group.
- ▶ Adapt incentives based on findings.

#### Challenges

- ▶ Resource limitations to support working group efforts and campaign to market incentives.

# 1 Alpena CRTC key issues noise



## Issue 1a: Training/aircraft operations are too low/fast



### Strategy 1a.1: Educate the public on the flight paths used for military aircraft

#### Summary

Training for fighter jet aircraft is often conducted at high speeds and low altitudes due to the necessity of pilots being able to operate under those conditions when in war-time situations that require detection avoidance for close air support activities. These activities, that are often considered dangerous to non-participating aircraft, are directed by criteria to be conducted within SUA like designated and activated MOAs. The MOA over Alpena and the surrounding area is called the Pike West MOA and it is established between a floor of 6,000 feet above MSL and a ceiling of 18,000 feet above MSL. Over Lake Huron exists the Pike East MOA, which is established with a floor of 300 feet above ground level (or surface of the water) and a ceiling equal to the Pike West MOA. This suggests that low altitude training is conducted over Lake Huron or at altitudes well above disturbing levels.

This does not however, include the need for take-off and landing from Alpena County Regional Airport, which by its nature requires low altitude flight near the airfield. These activities are typically conducted at the slowest speeds possible. Jet traffic also occurs along what are known as MTRs, when pilots need to transit from one place to another. These routes exist at 500 feet AGL for slow speed visual flight rules (VFR) flight and between 1,500 feet above MSL to 18,000 feet above MSL for fast movers. That altitude is high enough to effectively eliminate the disruption.

#### Recommendations

- ▶ Identify specific locations of stated disruption and determine the reason for those flights, what altitudes, velocities and types of aircraft are flying. Acquiring tail identification of the aircraft, aircraft type, date and time of the incident will allow for more specific identification in order to determine the purpose of those flights. This data can then be used to evaluate the need for changes to operating procedures or the need for change of flight paths.
- ▶ Completion of a noise study as described in Camp Grayling JMTC Strategy 1a.1 will also help determine trouble spots and potential encroachments on military training areas.



### Strategy 1a.2: Discourage residential uses via zoning

#### Summary

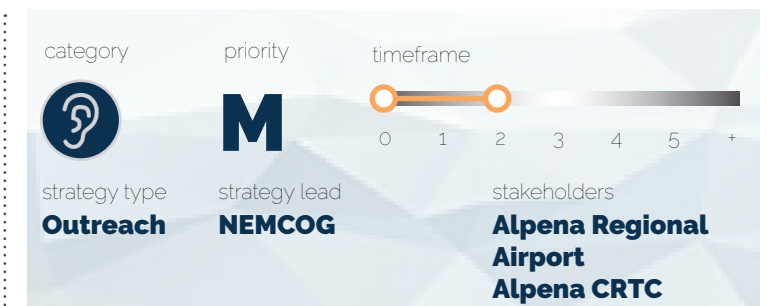
Residential encroachment around airports and other military training areas, ensures conflict between these incompatible land uses. Establishing military and airfield overlay zone regulations will help reduce encroachment of incompatible land uses near these activities, identified as disturbing to residents.

#### Recommendations

- ▶ Community leaders should review existing zoning regulations and establish or bolster military and airfield overlay zones designed to prevent conflict between incompatible land uses. These zones should restrict land use around airports and military installations to industrial or agricultural uses and strictly disallow residential, commercial, or community functions.

#### Additional Information

Noise contours and airfield imaginary surface maps should be used when establishing the boundaries of these restrictive overlay zones. The 65 ADNL noise contour should establish the closest proximity that residential neighborhoods should be allowed near airports. Also, no residences should be allowed within clear zones or accident potential zones or within the approach departure corridors of the major runways.



### Strategy 1a.3: Work with FAA and Alpena Regional Airport to control aircraft flight paths

#### Summary

The FAA, airport air traffic controllers, and military operations personnel regularly work to define flight paths of air traffic as a means to deconflict disturbance to citizens living near areas of operation. Input from residents on known disturbance areas, types of disruption, times, altitudes, etc. can help them better adjust to the needs of the community.

#### Recommendations

- ▶ Community leaders working with the controlling entities should hold regular townhall-style meetings to discuss air traffic as it relates to disturbances identified in the community. This will give valuable data to controllers and give residents an opportunity to air their grievances.
- ▶ Airport noise abatement procedures (NAPs) should be reviewed and adjusted to reduce disturbances.
- ▶ Completion of the noise study recommended in Alpena CRTC Strategy 1a.6 will provide necessary information for decision making and evaluation of complaints.
- ▶ For specifically identified sensitive areas, work with officials from Alpena CRTC to evaluate operations to see if changes can be made that would allow for a higher floor level over the identified location. If acceptable, work with installations, airspace managers, and the FAA to alter navigational charts and procedures to establish no-fly zones with a floor of 1,500 feet above MSL or higher.





## Issue 1a continued: Training/aircraft operations are too low/fast

category priority timeframe strategy type strategy lead stakeholders

**ACTION PLAN: MILITARY OVERLAY ZONE**

**Regulatory** **NEMCOG** **Residents**  
strategy type planners strategy lead stakeholders

### Strategy 1a.4: Create a military overlay zone for Alpena CRTC

Summary

Given the relative distance between the City of Alpena and the Alpena CRTC, operational interaction between the two has been limited. There are, however, still areas of low-density development that surround the Alpena CRTC that could be affected by its operations.

Applying an overlay zone that does not allow for new residential or commercial development in the APZ associated with the Alpena County Regional Airport and Alpena CRTC is recommended. The overlay zone should restrict all residential and commercial development within the APZ. Further study should be completed to determine the intensity of uses allowed in the overlay zone. For example, the study should examine whether light industrial uses such as a personal storage facility could be allowed or if the zone should be more restrictive and only allow for agricultural uses.

Creation of an overlay zone will help protect the residents and business already in the area, and it will help limit the amount of new development that could encroach on Alpena CRTC in the next 5 to 30 years. The new Alpena overlay zone will be created with the following elements:

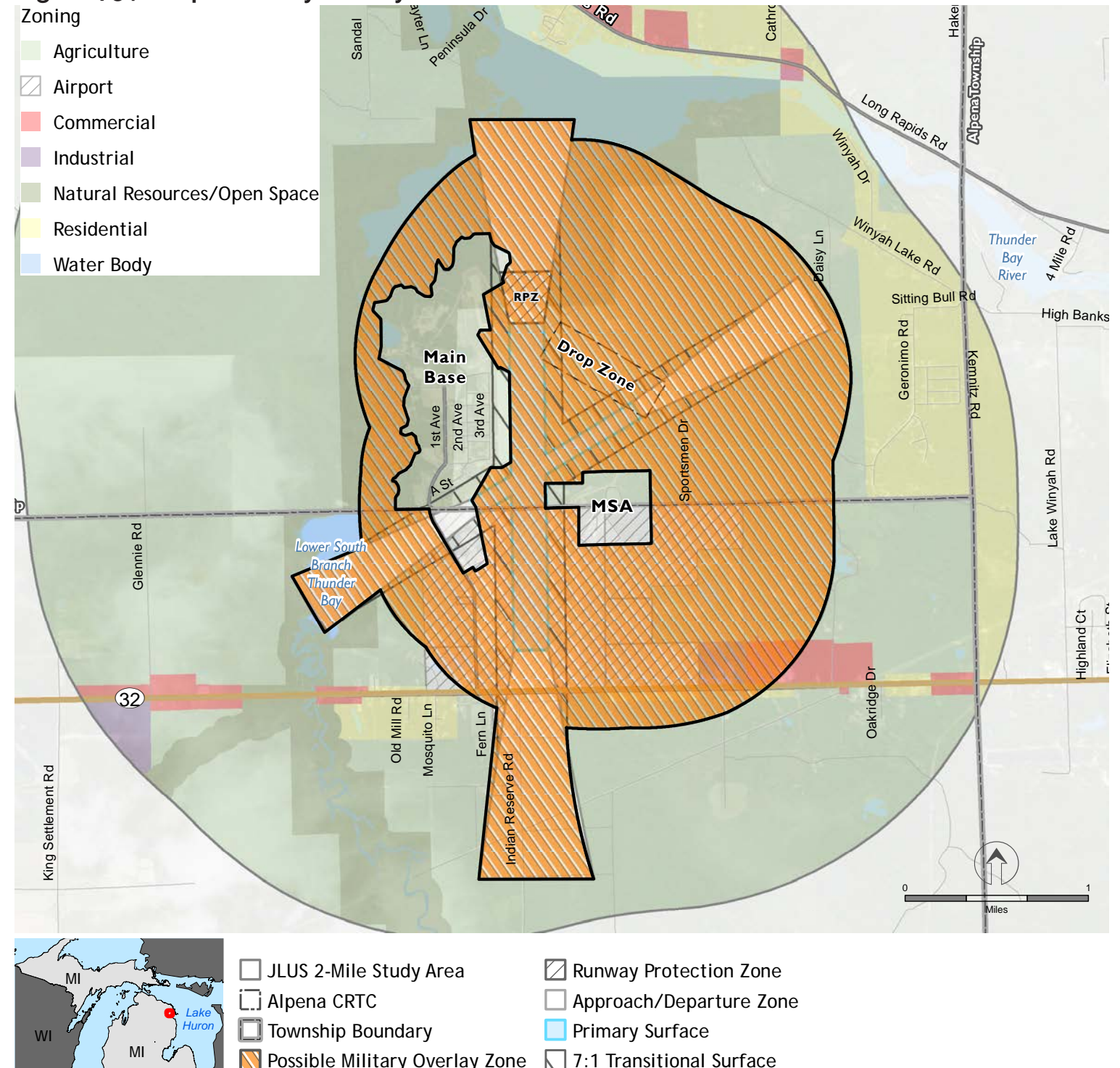
- ▶ **ACCIDENT POTENTIAL ZONES (APZS):** Currently the APZs have minimal amounts of development, however, future denser development that could occur will need to be addressed with additional regulation that match FAA height restrictions.
- ▶ **MUNITIONS STORAGE AREA (MSA):** Given the highly explosive and volatile nature of munitions the overlay zone will include a one-mile buffer that will surround the MSA. This portion of the overlay zone will likely include use restrictions due to the nature of the storage area.

- ▶ **DROP ZONE/NOISE:** Operations in this area could be of issue and necessitate the creation of a one-mile buffer in this area. The main issue will be noise not only in the drop zone area, but throughout the other parts of the CRTC. A noise study will need to be conducted in the future to help refine the boundaries of this part of the overlay.

#### Recommendations

- ▶ Language for the overlay zone should be drafted by a legal team specializing in land use law and code development.
- ▶ Work with community leaders such as city and county planning departments to change zoning maps and codes to identify the areas around military installations and ranges as military overlay zones. Use noise contour data as defined in Strategy 1a.5 and new data once noise study is complete to define the extent of the overlay zone following guidance for acceptable noise levels per function. Establish restrictions that only allow compatible land uses in these zones.
- ▶ Include a reference to Alpena CRTC in site plan review standards in local zoning ordinances.
- ▶ Consider establishing similar restrictions under known flight paths (see Strategy 1a.3), keeping in mind that flight paths may change to suit different types of military training in the future.
- ▶ Establish zoning overlays for airport runway clear zones that extend beyond the border of the installation. These should restrict all development so as to adhere to the applicable airfield criteria.

Figure 4.5 | Sample Military Overlay Zone



# 1/2 Alpena CRTC key issues noise/military operations



## Issue 1a continued:

### Training/aircraft operations are too low/fast



#### Strategy 1a.5: Update building codes to include better sound proofing for buildings built within the 65 ADNL noise area

##### Summary

Update local building codes so that the noise level within structures that exist within the 65 ADNL area can be reduced to optimal noise levels.

##### Recommendations

- ▶ Update building codes for applicable governing entities.
- ▶ Create incentives for existing buildings to update their soundproofing.
- ▶ Optimize available federal funding for sound abatement.

##### Challenges

- ▶ Creating increased soundproofing could cause an increase in price for new structures.
- ▶ Developers may be unwilling to build in areas where soundproofing is required as a response to the increase in regulations.
- ▶ Monetary aid for existing residents to upgrade their structures could be limited and may not be enough to cover the full costs.



#### Strategy 1a.6: Conduct a noise study

##### Summary

Current and accurate information with ADNL contours is needed in order to assess the impacts to surrounding community functions. This data could be used to inform and direct guidance for changes to military and installation operations or to create zoning regulations to prevent encroachment.

##### Recommendations

- ▶ Contract the collection and analysis of providing ADNL contours for the entire region, specifically including areas that have been identified as bothersome to community members.
- ▶ Use that information when making zoning regulation changes to eliminate residential, commercial or service functions from being sited within the 65 ADNL contour.
- ▶ Work with the military to alter training activities so as to reduce the noise impact to existing sensitive areas where possible. Note: In many cases, existing ranges cannot be relocated or inactivated because of economic and logistical reasons.
- ▶ Provide residents already living within the 65 ADNL contour with information about how to mitigate noise (see Strategy 1a.2).

## Issue 2a:

### Live munition impacts to Lake Huron



#### Strategy 2a.1: Identify impacts to the environment

##### Summary

For many years, possibly as early as WWI or prior, live munitions have been hurled into the waters of Lake Huron. Through the establishment of the Lake Huron Marine Sanctuary and subsequent research and investigation, many shipwrecks and debris from military activities have been identified. This includes some recent finds of unexploded munitions on the lake bed. The activity of firing munitions, albeit necessary for training, will result in changes to the environment.

##### Recommendations

- ▶ Work with the National Oceanic and Atmospheric Administration (NOAA) Office of National Marine Sanctuaries (ONMS), Thunder Bay National Marine Sanctuary, the Environmental Protection Agency (EPA), and the State of Michigan to contract a study of the environmental impact of military training activities over and within the R-4207 range on wildlife, historic and archaeological preservation, recreation, commercial uses of the lake, and military training requirements.
- ▶ The CRTC in conjunction with the US Navy and US Coast Guard should conduct a survey of the waters of the area in and surrounding the range to determine if any UXO or other dangerous conditions exist. These areas at the very least should be identified and protected from accidental or intentional intrusion with specific focus on the adjacent Marine Sanctuary, where a great deal of underwater activity occurs.



### Issue 2b: Northern Strike activity

	<b>M</b>		<b>Outreach</b>	<b>NEMCOG</b>	<b>Alpena CRTC Camp Grayling Community Leaders</b>
category	priority	timeframe	strategy type	strategy lead	stakeholders

**ACTION PLAN: COMMUNITY RELATIONS STAFF**

#### Strategy 2b.1: Organize and engage community members in advance

##### Summary

The annual Northern Strike military exercise, and others like it, bring large numbers of military and associated civilian personnel, equipment, aircraft, vehicles and activity to the region. These events bring a much-needed boost to the local economy and are embraced by the community.

However, the community should plan and prepare for the event as thoroughly as the military does. This should involve dissemination of information about events, shared activities, services offered and help wanted. They should prepare briefings and informational packages for military personnel to help them find what they are after and educate them on how to avoid areas that should be off-limits to military personnel. The community-military partnership is key to a successful event of this magnitude. Getting the community involved and engaged will help them reduce the negative impacts while more directly realizing the benefits.



##### Recommendations

- ▶ Organize and engage community members and leadership in preparing for these events well in advance. Invest in making the events more profitable to the community.
- ▶ Work with all the relative factions of the military to educate them on what is available, allowed, unwanted, etc. about these events. And likewise, get educated by them on what their needs are so as best to prepare for the event.
- ▶ Hold a townhall style meeting with members of the community and military well in advance of these events to provide information about the event so as to educate all

and share ideas to make the events more successful for everyone involved.

- ▶ Add key community members to distribution list, including Alpena Chamber of Commerce.

### Issue 2c: Marine sanctuary

	<b>H</b>		<b>Regulatory Research</b>	<b>Alpena CRTC NOAA</b>	<b>NEMCOG U.S. Navy U.S. Coast Guard</b>
category	priority	timeframe	strategy type	strategy lead	stakeholders

**ACTION PLAN: BATHYMETRIC SURVEY INTERAGENCY COOPERATION**



#### Strategy 2c.1: Identify potential UXO on the lake bed

##### Summary

Because military training has been conducted over Lake Huron for decades, there is a potential for unexploded ordnance to exist outside the boundaries of the current training range. This possibility poses a risk to human exploration of the Marine Sanctuary and could impact its proposed expansion.

##### Recommendations

- ▶ Complete a baseline review or environmental analysis of the area and research historic operations in the area.
- ▶ Work with the military (Alpena CRTC, Navy and Coast Guard) to identify potential UXO on the lake-bed. This should be in conjunction with the study proposed in Issue 2a.1. If any evidence is found, mitigate findings as best as possible. If anything dangerous is found at a depth that could threaten safety, a DOD team can be brought in to mitigate the UXO.

	<b>H</b>		<b>Regulatory Research</b>	<b>Marine Sanctuary</b>	<b>Alpena CRTC</b>
category	priority	timeframe	strategy type	strategy lead	stakeholders

**ACTION PLAN: MILITARY OVERLAY ZONE NOISE STUDY**

#### Strategy 2c.2: Establish fixed boundaries so that encroachment into the military operations area is kept to a minimum

##### Summary

The Lake Huron Marine Sanctuary encompasses areas that are used by the military for bombing exercises, and the boundary was recently expanded.

##### Recommendations

- ▶ Create a bathymetric survey of the Marine Sanctuary and bombing areas.
- ▶ Identify areas in Lake Huron that will be used for bombing training and preservation.
- ▶ Update navigational/aeronautical maps of Lake Huron to reflect bombing areas and the Marine Sanctuary.
- ▶ Continue to fund economic analyses with a focus on the primary areas used for bombing. Seek alternate funding from other entities besides the National Guard Bureau.
- ▶ Codify SOPs regarding identifying sanctuary artifacts, both manmade and biological.
- ▶ Coordinate NGB/NOAA efforts and communication.

##### Challenges

- ▶ Surveys will be costly, time consuming, and hard to fund.

# 2/3 Alpena CRTC key issues military operations/environmental



## Issue 2c continued: Marine sanctuary



### Strategy 2c.3: Author and promote cooperation story with Thunder Bay National Marine Sanctuary

#### Summary

The DOD Alpena CRTC practice bombing range lies just east of the 4,300 square mile NOAA – State of Michigan Thunder Bay National Marine Sanctuary. Interagency cooperation has developed since the 2014 Sanctuary expansion and includes sharing vessels for dive platforms and other cooperative activities. The Air Force/Air National Guard work in close cooperation with Sanctuary personnel to maintain the integrity of preserved sites and the ecology within the Sanctuary. The public has expressed concerns about the effects of UXO on both water quality/ecological health of Lake Huron and the effects of practice bombing on the archaeological sites in the Sanctuary.

#### Recommendations

- ▶ Create story content on interagency cooperation, including maps and anecdotes about actual activities such as sharing vessels for towing targets and as dive platforms. Also, explain safety and environmental health risks associated with munitions use in the lake to educate the public.
- ▶ Provide a base webpage link to MDEQ. Distribute story via web link on base home page and have available script for public meetings and outreach.
- ▶ Work with MIANG public affairs to further publicize work being doing at the sanctuary.

#### Challenges

- ▶ Requires personnel time to create narrative.

#### Additional Information

The Sanctuary works with community partners including the CRTC to improve public safety on and below the water. The Sanctuary has participated in diving and boating accident drills designed to test emergency responses from several agencies, including the U.S. Coast Guard, Alpena Combat Readiness Training Center, Alpena Central Dispatch, Alpena County Sheriff's Department, Michigan Department of Natural Resources, Mid-Michigan Medical Center-Alpena, and Alpena Fire Department. NOAA personnel who can help develop the cooperative story.

NOAA also produces joint education programs and other activities that could be promoted more widely.

## Issue 3a: PFOS and PFOA contamination of groundwater



### Strategy 3a.1: Improve public outreach and access to information

#### Summary

Residents near the Alpena CRTC are concerned about the safety of their drinking water since the detection announcements in 2017. The health effects and extent of contamination are still being researched and are not completely understood, which contributes to citizen concern about health and economic impacts. Continuing and improving ongoing communications between Alpena CRTC and surrounding residents through public meetings, print and electronic media, and MDEQ call center assistance will help provide updated information, mitigate uncertainties, and ensure that those affected have access to exposure mitigation options while enhancing public relations.

#### Recommendations

- ▶ Maintain the links on the Alpena CRTC home page to Michigan.gov PFAs contamination information pages and EPA PFA/PFC information pages, and consider adding some summary status information associated with the link.
- ▶ Increase non web-based outreach to residents.
- ▶ Continue to hold frequent town hall public meetings during the monitoring project.
- ▶ Increase transparency about how wells are selected for testing.
- ▶ Consider staff increases at Alpena CRTC to help with outreach.
- ▶ Leverage existing water quality program and publicize its benefits.

#### Challenges

- ▶ Efforts may require dedicating additional personnel time to update the base website content, create information sheets, and coordinate print campaigns.



## Issue 3b: Surface water quality (lakes, rivers, streams, wetlands)



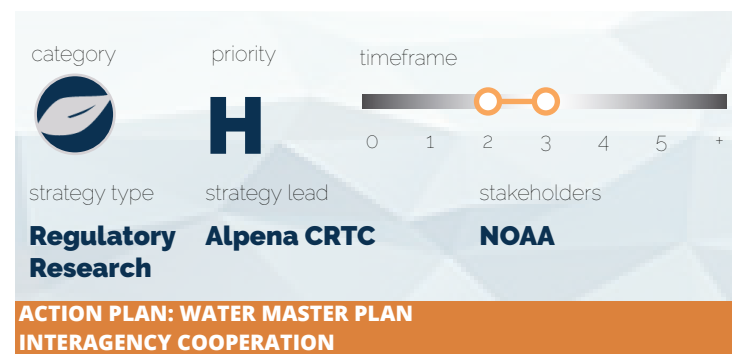
### Strategy 3b.1: Support water quality and aquatic ecology scientific communications

#### Summary

Public interest in water quality and aquatic ecological health is spurred by topics such as chemical contamination, fish advisories, nutrient pollution, sedimentation, climate change, habitat loss, and invasive species. There is a wide range of research and data available describing water quality, sediment quality, and the health of aquatic environments and species, but it can be challenging for citizens to identify and access appropriate and accurate information to satisfy questions and concerns. Sometimes there are public misperceptions about the location and sources of contamination, including incorrectly attributing causes to base operations.

#### Recommendations

- ▶ Develop an information link on the base home page that summarizes facts and organizes resource links concerning surface water quality and aquatic ecological health in Alpena CRTC watersheds.
- ▶ Include a narrative on overall water quality and aquatic ecological health as prepared response for public meetings concerned with PFOS groundwater contamination.
- ▶ Reconvene the 2004 Thunder Bay Watershed Initiative to develop a Thunder Bay Regional Water Master Plan.



### Strategy 3b.2: Use biodegradable targets for lake training

#### Summary

Alpena CRTC operations have begun using biodegradable targets for munitions operations over Lake Huron. In 2017, they also began retrieving the targets that were not destroyed or sunk.

#### Recommendations

- ▶ Continue current practices and research ways to improve.
- ▶ Consult with NOAA for more ideas on how to increase sustainability.

## Issue 3c: Groundwater quality



### Strategy 3c.1: Provide information to the public on groundwater contamination in the Alpena CRTC area

#### Summary

Groundwater contamination in the Alpena CRTC area results from exposure to a wide range of toxic compounds, chemicals, metals, and petroleum byproducts that are introduced into soils and groundwater from industrial, manufacturing, and transportation activities. While the PFA contamination issue receives the most attention, public comments from town hall meetings have demonstrated concern with groundwater contamination from other sources, with specific concerns expressed about contamination from munitions. No munitions firing is conducted at Alpena CRTC; training is done at the ranges at Camp Grayling JMTTC and over Lake Huron.

#### Recommendations

- ▶ Provide a base webpage link to MDEQ information regarding groundwater contamination – this should include the link to DEQ Online Services, which includes their Environmental Mapper utility.
- ▶ Provide current bulletins on spills and plume status (as available) for any sites on base in a bulleted format via website and as a script for public inquiries.
- ▶ Create a chart of known sites for specific pollutants, potential pollution sites, and steps the base takes to mitigate hazards.

#### Challenges

- ▶ Requires personnel time to maintain bulletins and webpage.

# 4 Alpena CRTC key issues transportation and infrastructure



## Issue 4a: Effects of growth on utilities



### Strategy 4a.1: Address utilities issues at Alpena CRTC

#### Summary

In accordance with the Alpena CRTC Installation Development Plan, projects to address aging and insufficient systems in order to accommodate current and possible future missions should be funded and executed.

#### Recommendations

- ▶ Upgrade the water distribution system and add a booster pump.
- ▶ Develop an agreement with Alpena Township to address maintenance issues.

#### Challenges

- ▶ Energy improvements and ensuring service may be dependent on private companies in some cases.
- ▶ Funding is inadequate to replace infrastructure.



**ACTION PLAN: MILITARY OVERLAY ZONE**

### Strategy 4a.2: Plan for possible mission expansion

#### Summary

The utility requirements of additions to or expansion of training missions should be investigated and integrated into existing installation plans.

#### Recommendations

- ▶ Update the existing energy assessment.
- ▶ Align growth with existing sustainability and net-zero plans, which may include implementation of new sources of renewable energy.
- ▶ Educate public on potential for mission expansion and share NGB vision for the future of Alpena CRTC.

#### Challenges

- ▶ Energy improvements and ensuring service may be dependent on private companies in some cases.
- ▶ Turnover at the installation can be problematic for long-term planning efforts.

## Issue 4b: Airport joint ownership/land use access



**ACTION PLAN: COMMUNITY RELATIONS STAFF INTERAGENCY COOPERATION**

### Strategy 4b.1: Continue positive coordination

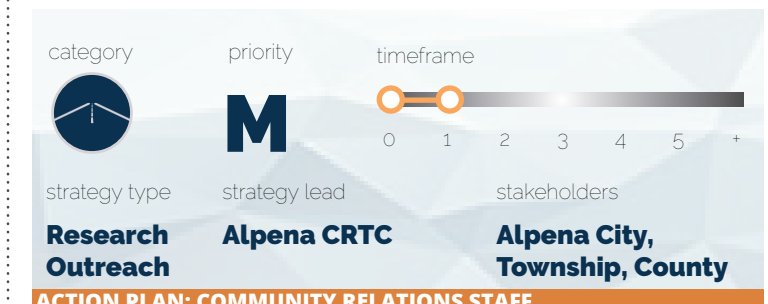
#### Summary

A long-term lease is in place for the National Guard use of the Alpena Regional Airport. Collaboration between the entities ensures strong relationships and coordinated planning efforts in the future.

#### Recommendations

- ▶ Continue Airport Committee monthly meetings.
- ▶ Coordinate regular updates with the military and public regarding the terminal construction.
- ▶ Continue to weigh effects on military operations when considering economic development opportunities related to the airport and nearby land uses.
- ▶ Consider updating the airport master plan.

## Issue 4c: Road funding



**ACTION PLAN: COMMUNITY RELATIONS STAFF TRANSPORTATION PLAN**

### Strategy 4c.1: Continue discussion between county and military officials

#### Summary

Road condition in the surrounding community affects military residents traveling to and from Alpena CRTC on M-32. Funding solutions that support Alpena CRTC and the community should be studied. While the military is unlikely to be able to fund road improvements, Alpena CRTC could provide publicity for the issue and potentially speak to the governor's office about the issue.

#### Recommendations

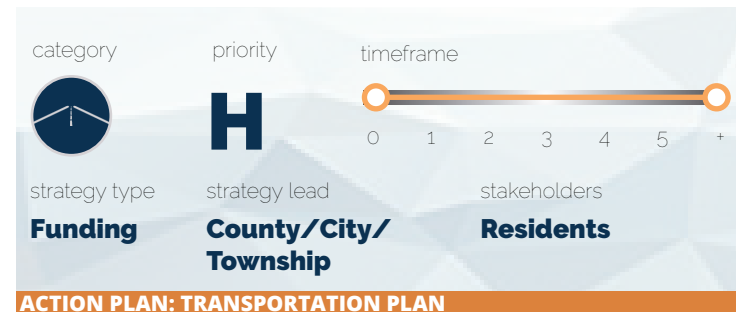
- ▶ Investigate funding options for improvements.
- ▶ Develop materials for public outreach campaign.
- ▶ Set regular meetings with the governor's office and MIANG personnel to discuss such issues.
- ▶ Communicate military transportation projects with local officials.

#### Challenges

- ▶ Funding for road improvements and maintenance is a state-wide issue.



## Issue 4d: Road condition



### Strategy 4d.1: Increase funding for road projects and maintenance

#### Summary

Road projects are costly, and aging roads and bridges pose significant maintenance problems throughout the area that cannot all be addressed through the current limited funding availability and streams.

#### Recommendations

- ▶ Align road and infrastructure projects and schedules to save costs.
- ▶ Update the Alpena Area-Wide Transportation Plan.
- ▶ Utilize PASER, traffic counts, and historical traffic accident data to prioritize projects.
- ▶ Pursue a public-private partnership (P3), particularly for areas of new development.
- ▶ Investigate funding agreements with the military for county roadway maintenance.

#### Challenges

- ▶ Grant proposals take time and money to develop and do not always yield funding.
- ▶ The military and private companies may not be interested in partnerships.

## Issue 4e: Recreational access



### Strategy 4e.1: Determine whether allowing lake access is viable

#### Summary

Allowing public access to Lake Winyah's southern side would increase opportunities for local and tourist recreational activities such as kayaking and fishing.

#### Recommendations

- ▶ Determine whether there are any security or ATRP issues associated with allowing access near Alpena CRTC.
- ▶ Invite public participation in the process to ensure voices are heard and all issues are communicated.
- ▶ Publicize any future access to draw tourists and base personnel to increased recreational opportunities.

#### Challenges

- ▶ Any potential development must be coordinated with ATRP and security officials as well as airport officials.

## Issue 5a: Communications/education



### Strategy 5a.1: Hire a dedicated community relations specialist for Alpena CRTC

#### Summary

Comprehensive and timely communication with community residents and other key stakeholders is a challenge without a dedicated community relations specialist for Alpena CRTC. Communicating controversial issues, such as concerns about groundwater contamination, magnifies this challenge. A dedicated community relations specialist will allow Alpena CRTC to create and implement a robust communications and public relations strategy.

#### Recommendations

- ▶ Review community relations and communication needs for Alpena CRTC. Discuss with community relations specialist at Camp Grayling JMTCC for benchmarking and planning insight.
- ▶ Present communications and community relations needs to Michigan Air National Guard in Lansing for consideration.
- ▶ Once a specialist is in place, develop and implement a multifaceted communications strategy for Alpena CRTC.

#### Challenges

- ▶ Federal budget limitations to hire a community relations specialist to support more robust efforts.



### Strategy 5a.2: Improve the update process for Alpena CRTC website

#### Summary

Updates to the Alpena CRTC website are centralized through the Michigan Air National Guard website and involve a centralized process coordinated through Lansing. This process can hamper the ability to keep the webpage up to date. Alpena CRTC staff can work with the Michigan Air National Guard to explore ideas for expediting and streamlining the process for website updates.

#### Recommendations

- ▶ Engage in a discussion with Michigan Air National Guard Public Affairs staff in Lansing for ideas on how to keep the Alpena CRTC webpage relevant with new educational content and expedite the process for webpage updates.
- ▶ Ensure the Alpena CRTC website reflects a broader suite of informational and educational resources for a community audience, rather than just potential visiting units.

#### Challenges

- ▶ Limited Michigan Air National Guard Public Affairs staff in Lansing to implement changes in an expedited manner.
- ▶ Michigan Air National Guard social media and website requirements that preclude an expedited process to update the Alpena CRTC website.

# 5 Alpena CRTC key issues community partnerships



## Issue 5a continued: Communications/education



### Strategy 5a.3: Promote STARBASE as an asset connected to Alpena CRTC

#### Summary

Students attending classes at STARBASE have the opportunity to tour Alpena CRTC facilities. Educational materials about Alpena CRTC appropriate for students could be distributed through STARBASE to be shared with families. This would help educate more community residents about the operations and economic benefits of Alpena CRTC.

#### Recommendations

- ▶ Work with Michigan Air National Guard, Alpena CRTC staff, and community partners to create educational materials about Alpena CRTC that address unique functions and economic benefits, as well as career opportunities.
- ▶ Distribute materials to community partners, including local educators, for feedback.
- ▶ Revise as necessary.
- ▶ Distribute educational materials to STARBASE students and families.

#### Challenges

- ▶ Limited time and resources for Alpena CRTC to develop educational materials without dedicated community relations staff.



### Strategy 5a.4: Strengthen existing partnership with Alpena Community College

#### Summary

Previous educational collaboration can serve as a foundation to reevaluate and strengthen the partnership between Alpena CRTC and Alpena Community College to provide more courses, training opportunities, and scholarships.

#### Recommendations

- ▶ Convene a working group between current Alpena CRTC leadership and Alpena Community College to discuss past educational collaboration successes and brainstorm potential new partnerships.
- ▶ Develop implementation strategy for working group recommendations, including activities, responsible parties, schedule, and resource needs.
- ▶ Implement priority educational collaborations.
- ▶ Announce new opportunities to the community, leveraging community partnerships to distribute information.
- ▶ Involve Alpena Community College in military affairs council via Chamber of Commerce.
- ▶ Look into job shadowing opportunities.

#### Challenges

- ▶ Limited time and resources for Alpena CRTC to provide on-site training, offer courses, provide equipment, or contribute to scholarship funds.



### Strategy 5a.5: Formalize communications with NOAA regarding operations over Thunder Bay National Marine Sanctuary

#### Summary

Alpena CRTC operations take place over Thunder Bay National Marine Sanctuary, requiring regular communication with NOAA to ensure continued protection of the sanctuary. Formalizing the communication mechanisms between Alpena CRTC and NOAA will promote better information exchange and identify coordinated educational opportunities.

#### Recommendations

- ▶ Schedule an initial discussion session between Alpena CRTC, NOAA, and other key community partners to identify communication needs related to Alpena CRTC operations and Thunder Bay National Marine Sanctuary protection and promotion.
- ▶ Develop communication strategy and schedule based on issues raised during discussion session.
- ▶ Implement and formalize a mechanism for regular communication between NOAA and Alpena CRTC.

#### Challenges

- ▶ Lack of community relations personnel at Alpena CRTC makes it hard for the base and NOAA to engage in communications strategy development and implementation.



### Strategy 5a.6: Revise respective zoning ordinances for government entities within the APZ

#### Summary

Update local zoning codes to restrict height of new structures within the APZs. Any new structure must undergo a review to ensure compliance with new zoning codes. Require new facilities to match height limits mandated by the APZ and require site plan review for any new structure built on a property within the APZ.

#### Recommendations

- ▶ Update zoning codes in all applicable governmental entities.
- ▶ Zoning code update will also include a site review component for new structures in the APZ.
- ▶ Create a survey and registry of any current building that does not meet the new requirements.

#### Challenges

- ▶ Increase of regulatory requirements for residents and businesses.
- ▶ Restricts landowners' use of their property.
- ▶ May dissuade economic development in affected areas.





### Issue 5b: Public relations/community involvement

category	priority	timeframe
	<b>M</b>	0 1 2 3 4 5 +
strategy type	strategy lead	stakeholders
<b>Outreach</b>	<b>Alpena CRTC</b>	<b>Residents</b>
<b>ACTION PLAN: INTERAGENCY COOPERATION ECONOMIC IMPACT STUDY</b>		

#### Strategy 5b.1: Convene expanded Alpena CRTC Community Council with Alpena Area Chamber of Commerce

##### Summary

Using the organizational model suggested by the Alpena Area Chamber of Commerce (see Appendix A), Alpena CRTC can assist in convening the Alpena CRTC Community Council. This group would leverage community partnerships to support Alpena CRTC with public relations, economic valuation, visiting unit support services, and military family support services.

##### Recommendations

- ▶ Review Alpena Area Chamber of Commerce proposal to expand the Alpena CRTC Community Council with Alpena CRTC leadership.
- ▶ Convene a planning session to develop a formal strategy for the Alpena CRTC Community Council, including membership, goals, schedule, and priority activities.
- ▶ Evaluate council's effectiveness over time.
- ▶ Report on Alpena CRTC Community Council successes to Alpena CRTC leadership and key community partners.

##### Challenges

- ▶ Alpena CRTC resource limitations to participate, particularly without a dedicated community relations specialist.
- ▶ Potential requirements for MIANG to review communications materials prior to distribution.

category	priority	timeframe
	<b>M</b>	0 1 2 3 4 5 +
strategy type	strategy lead	stakeholders
<b>Outreach</b>	<b>Alpena CRTC</b>	<b>Residents</b>
<b>ACTION PLAN: COMMUNITY RELATIONS STAFF ECONOMIC IMPACT STUDY</b>		

#### Strategy 5b.2: Inform community on process to request tours and participation in community events

##### Summary

The process for requesting tours and involvement in events is not readily available to the public. Making the process and criteria available in several forms would help local partners.

##### Recommendations

- ▶ Develop a concise document on the availability of group tours, the tour timeframe and content, and the process for requesting, including lead time necessary to schedule a tour and the necessary request forms.
- ▶ Develop a document on the availability of Alpena CRTC to participate in community events. Include the criteria for events, options for participation (e.g., color guard, speaker, fly over), and provide the necessary forms.
- ▶ Provide overview of the process on Michigan Air National Guard website, Alpena CRTC Facebook page, and other tools possibly developed in near term (e.g., newsletter).
- ▶ Establish a process for responding to requests.
- ▶ Document in an overall SOP for future reference.

##### Challenges

- ▶ Limited time and resources for Alpena CRTC without dedicated community relations specialist.
- ▶ Possible need for review of processes by MIANG public affairs staff.

### Issue 6a: Significant contributor to local economy

category	priority	timeframe
	<b>L</b>	0 1 2 3 4 5 +
strategy type	strategy lead	stakeholders
<b>Outreach Research</b>	<b>Alpena CRTC</b>	<b>Business Owners Target Alpena</b>
<b>ACTION PLAN: ECONOMIC IMPACT STUDY</b>		

#### Strategy 6a.1: Local purchasing goal for Alpena CRTC

##### Summary

Local purchasing goals for Alpena CRTC would help establish an operating norm that acknowledges the importance of Alpena CRTC on the surrounding local economies and would be less likely to change with changes in Alpena CRTC leadership over time.

##### Recommendations

- ▶ Work with leadership in Michigan Air National Guard to identify and set local purchasing goals for Alpena CRTC for goods and services not subject to federal and state contracting laws to demonstrate commitment to economic development of surrounding communities.
- ▶ Track and report progress toward local purchasing goal for goods and services that are not subject to federal and state contracting laws to help quantify annual impact on local economy.
- ▶ As possible, inform chambers of commerce and local businesses when troops will be in the local area.

##### Challenges

- ▶ Federal law controls contracting requirements, which often awards contracts to the lowest bidder.
- ▶ May be difficult due to the contracting requirements for goods and services over a certain dollar amount.

### Issue 6b: Airport viability

category	priority	timeframe
	<b>M</b>	0 1 2 3 4 5 +
strategy type	strategy lead	stakeholders
<b>Regulatory</b>	<b>Chamber of Commerce</b>	<b>Alpena CRTC Residents</b>
<b>ACTION PLAN: INTERAGENCY COOPERATION</b>		

#### Strategy 6b1: Leverage relationships to replace customs agent

##### Summary

Loss of the part-time local customs agent has had a negative economic impact on the Alpena County Regional Airport, requiring aircraft emanating from foreign locations to route to other Northern Michigan locations. Stakeholders in Alpena have been actively seeking viable options to replace the customs agent, but have had no success.

##### Recommendations

- ▶ Engage Alpena CRTC and Michigan Air National Guard in discussions on potentially helping to publicize the issue.
- ▶ Identify updated options that build on previous discussions with Congressional delegation.

##### Challenges

- ▶ Replacement of customs agent currently an issue raised by Congressional delegation without results to date.
- ▶ Alpena CRTC has a customs agent on an as-needed basis only and cannot provide resources.

# 6 Alpena CRTC key issues economic development



## Issue 6c: Partnership with sheriff



### Strategy 6c.1: Maintain relationship with CRTC and advocate for longer-term contract

#### Summary

Current contract extension will require Alpena County Sheriff's Department to compete for longer-term contract to provide services.

#### Recommendations

- ▶ Continue to provide excellent security services during contract extension period.

#### Challenges

- ▶ State of Michigan requires competitive bid for award of contract to provide services

## Issue 6d: Military tourism



### Strategy 6d.1: Economic incentives to generate military tourism

#### Summary

Soldiers often bring family members into the area during training exercises. Local businesses will benefit if surrounding tourism bureaus work to create incentives for families to extend their stay in the area. Discounts or vacation packages could create incentives that expand military tourism associated with Alpena CRTC.

#### Recommendations

- ▶ Convene a working session among tourism bureaus, local business representatives, and government entities such as NOAA to identify possible incentives for Alpena CRTC trainees and their families to extend their visit and expand military tourism.
- ▶ Identify and develop most feasible incentives.
- ▶ Create marketing campaign to promote incentives in partnership with Alpena CRTC.
- ▶ Monitor incentive effectiveness.
- ▶ Report findings to working group.
- ▶ Adapt incentives based on findings.

#### Challenges

- ▶ Resource limitations to support working group efforts and campaign to market incentives.



### Strategy 6d.2: Economic tracking and reporting mechanisms to quantify annual military tourism impact

#### Summary

Quantifiable economic data on how dollars flow from soldiers training at Alpena CRTC into surrounding communities would help communicate the contributions Alpena CRTC makes to the local economy. This type of information would assist in communicating the benefits of Alpena CRTC to current residents, prospective home buyers, and decision makers at the local, state, and federal levels.

#### Recommendations

- ▶ Conduct benchmarking research on other military training installations' efforts to track economic impact of operations on local communities.
- ▶ Convene a brainstorming session among key stakeholders to share benchmarking results and identify potential economic tracking mechanisms to monitor the spending flow from Alpena CRTC trainees in local communities. Mechanisms discussed during the JLUS process include a survey of Alpena CRTC soldiers during their stay with an incentive to participate or an Alpena CRTC discount card accepted at local businesses. Consider coordinating with Camp Grayling JMTC for this activity.
- ▶ Identify most feasible tracking mechanisms from brainstorming session and develop a monitoring plan and reporting schedule.
- ▶ Share information about the economic monitoring initiative with Alpena CRTC soldiers and families.
- ▶ Collect data and analyze findings.
- ▶ Report to key stakeholders participating in brainstorming session.

- ▶ Identify next steps to adapt monitoring approach based on findings.
- ▶ Prepare informational collateral to share findings with media, decision makers, and other key stakeholders.

#### Challenges

- ▶ Resource limitations to support economic monitoring mechanism development and implementation over time.
- ▶ Potential lack of widespread participation in tracking that will limit the ability to comprehensively quantify military tourism spending flow.

a

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## A.1 Alpena CRTC Community Council Background Information

Representatives from the Alpena Chamber of Commerce first met with representatives from Alpena CRTC in 2013 in the interest of convening a council that would focus and help foster civilian interaction with the installation. The relationship between the base and the community was recognized as positive, but all parties wanted to ensure things continued in that vein into the future.

Other areas in the state with a heavy military presence (e.g., Battle Creek and Selfridge) already had similar programs in place, and they had reported positive effects.

At right, the graphic shows some details for the proposed council, as well as the areas it would focus on. The council would be part of the Chamber of Commerce if approved by the chamber's board.

This JLUS recommends that the council be convened as described in Strategy 5b.1 for Alpena CRTC, presented on page 4-35 of this document.

Figure A.1 | Alpena CRTC Community Council



**b**

**public  
participation  
plan**

Please see the following pages.

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camp grayling joint maneuver training center | alpena combat readiness training center

# joint land use study

## public participation plan



final | april 2018





camp grayling joint maneuver training center | alpena combat readiness training center

# joint land use study

public participation plan | final | april 2018

## acknowledgments and key partners

Northeast Michigan Council of Governments  
 Michigan DNR (Gaylord)  
 Michigan Dept of Transportation (Gaylord)  
 US Forest Service  
 Michigan Dept of Environmental Quality (Gaylord)  
 US Fish & Wildlife Service (Alpena)  
 Headwaters Land Conservancy  
 USDA Natural Resource Conservation Service (Gaylord)  
 Huron Pines (conservation) (Gaylord)  
 Crawford County  
 City of Grayling (Crawford Co)  
 Grayling Twp (Crawford Co)  
 Lovells Twp (Crawford Co)  
 Maple Forest Twp (Crawford Co)  
 Frederic Twp (Crawford Co)  
 Beaver Creek Twp (Crawford Co)  
 South Branch Twp (Crawford Co)  
 Crawford County Road Commission  
 Otsego County  
 Chester Twp (Otsego Co)  
 Otsego Lake Twp (Otsego Co)  
 Bagley Twp (Otsego Co)  
 Hayes Twp (Otsego Co)  
 Otsego County Economic Alliance  
 Bear Lake Twp (Kalkaska Co)  
 Garfield Twp (Kalkaska Co)  
 Au Sable River Property Owner's Association  
 Anglers of the Au Sable  
 Mason-Griffith Founders Chapter of Trout Unlimited  
 Upper Manistee River Association  
 Michigan Association of Timbermen  
 Weyerhaeuser  
 Arauco  
 AJD Forest Products  
 Jays Sporting Goods  
 Alpena Regional Airport  
 Alpena County

City of Alpena (Alpena Co)  
 Alpena Twp (Alpena Co)  
 Maple Ridge Twp (Alpena Co)  
 Wilson Twp (Alpena Co)  
 Green Twp (Alpena Co)  
 Ossineke Twp (Alpena Co)  
 Sanborn Twp (Alpena Co)  
 Long Rapids Twp (Alpena Co)  
 Village of Hillman  
 Target Alpena  
 Alpena Chamber of Commerce  
 Michigan Sea Grant/MSU Extension  
 Northern MI Unmanned Aerial Systems Consortium  
 Thunder Bay National Marine Sanctuary  
 US Coast Guard  
 Thunder Bay Audubon Society  
 NOAA  
 Michigan United Conservation Club - Region 4  
 Camp Grayling and Alpena CRTc  
 Michigan Economic Development Corporation  
 Grayling Chamber of Commerce  
 Michigan Works!  
 Briley Twp (Montmorency Co)  
 Roscommon County  
 Lyon Twp (Roscommon Co)  
 Posen Twp (Presque Isle Co)  
 Krakow Twp (Presque Isle Co)  
 Metz Twp (Presque Isle Co)  
 Higgins Twp (Roscommon Co)  
 Antrim County

This study was prepared under contract with the Northeast Michigan Council of Governments, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the Northeast Michigan Council of Governments and all of the JLUS project stakeholders and does not necessarily reflect the views of the Office of Economic Adjustment.



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# 1

## JLUS public participation plan background and goals



### 1.1 Introduction

The Joint Land Use Study (JLUS) is a community driven, collaborative, strategic planning process among Camp Grayling Joint Maneuver Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC), surrounding local governments, jurisdictions, and other key stakeholders within an approximately 20 mile radius to:

1. Promote community development that is compatible with military training, testing, and operational missions;
2. Seek ways to manage operational impacts on adjacent lands; and
3. Optimize the use of private and community involvement and support.

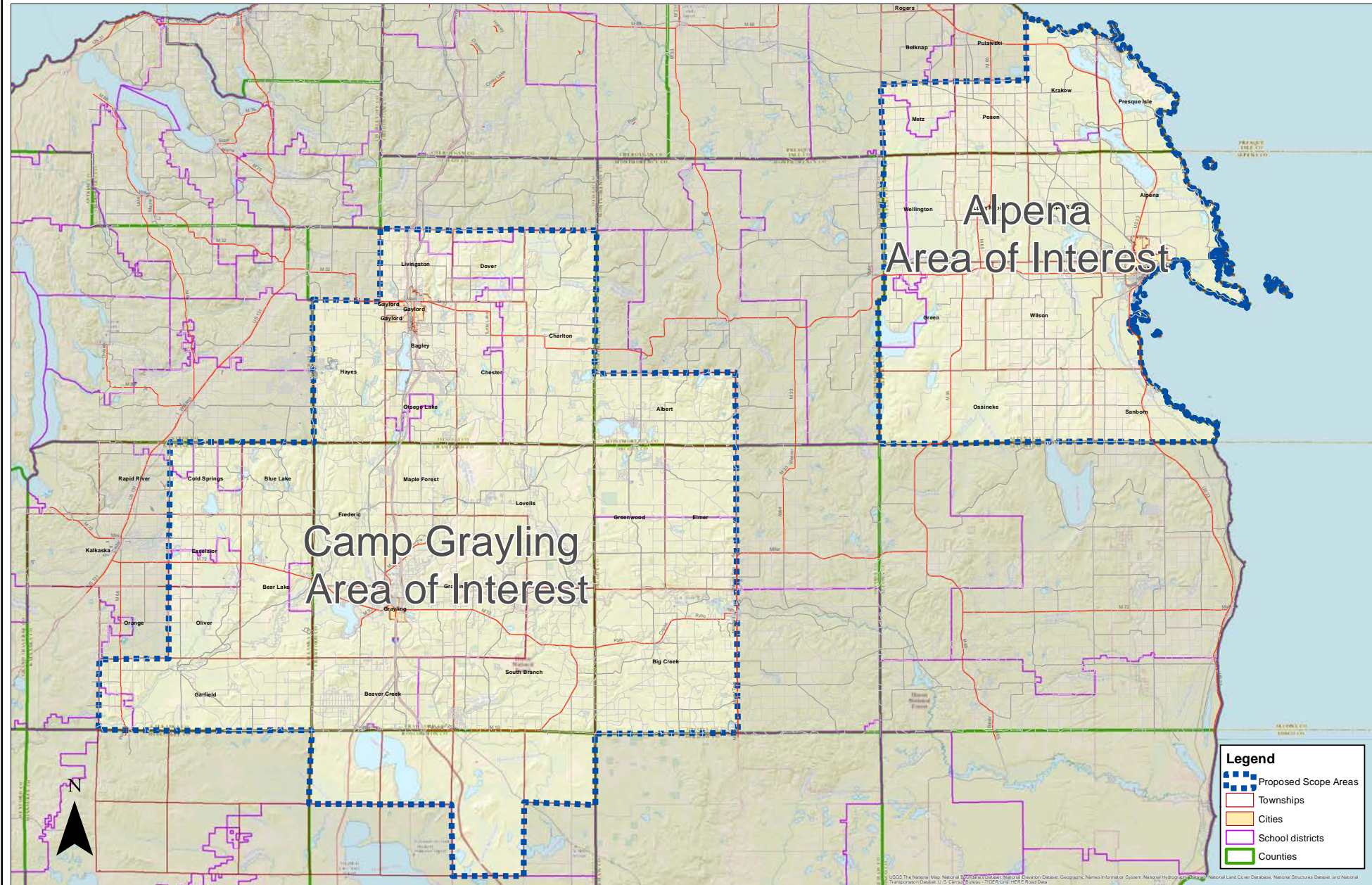
The Northeast Michigan Council of Governments (NEMCOG) received a grant from the U.S. Department of Defense (DOD) Office of Economic Adjustment (OEA) and is the sponsoring agency coordinating the development of this JLUS.

See Figure 1.1 on the following page for a map of the JLUS areas of interest



Above, stakeholders participate in Camp Grayling JMTC and Alpena CRTC public meetings.

Figure ES.1 | JLUS Areas of Interest



## 1.2 Goals

The JLUS project goals are to:

- ▶ Promote land use compatibility between the installations and surrounding communities;
- ▶ Seek ways to manage development that is compatible with military training, testing, and operational missions;
- ▶ Encourage cooperative action among military personnel, local community officials, and citizens;
- ▶ Maintain and strengthen regional economic engines;
- ▶ Convene both a technical advisory and policy committee comprised of people drawn from the surrounding areas affected by the two training centers;
- ▶ Engage the public (which includes the technical and policy committees) to identify current and future land use incompatibility issues;
- ▶ Map the identified compatibility issues and communicate them to the public;
- ▶ Solicit input from stakeholders about potential solutions to the identified incompatibilities;
- ▶ Gain agreement from the various stakeholders on the recommended future management actions;
- ▶ Educate the surrounding municipalities on the process and report to promote adoption and implementation of recommendations identified in the final report.

Achieving the JLUS project goals requires developing and implementing a Public Participation Plan (PPP) that will effectively engage stakeholders in the JLUS project area. The core JLUS Project Team, NEMCOG and Tetra Tech, has developed, implemented, and will continue to implement the stakeholder engagement activities described in this PPP throughout the duration of the JLUS project.

# 2

## public participation plan components

The five components of the PPP include:

1. Identifying and characterizing key stakeholders;
2. Creating effective messages;
3. Identifying and creating effective stakeholder involvement opportunities and educational resources;
4. Identifying effective distribution channels and mechanisms; and
5. Assessing effectiveness.

Each of these PPP components will be discussed in detail on the following pages.

### 2.1 PPP Component 1: Identifying and Characterizing Key Stakeholders

Stakeholders include individuals, groups, organizations, and governmental entities interested in, affected by, or affecting the outcome of the JLUS project. The foundational component of the PPP activities is identifying and characterizing stakeholders, with emphasis on the characterization. The goals of the JLUS project include engaging, educating, obtaining input, and seeking agreement from stakeholders. Therefore, it is imperative to tailor the engagement and education messages, formats, and distribution channels based on the stakeholders' perceptions, interests, and communication preferences. In addition to creating a comprehensive list of stakeholders for the JLUS project, it is important for the JLUS Project Team to document characterization information to inform the other PPP components and future JLUS actions.

#### 2.1.1 Key Stakeholder List

Stakeholders identified for the JLUS project include individuals, groups, organizations, and governmental entities located within the JLUS project area.

The Camp Grayling JMTC area of influence includes the whole of Crawford County and portions of Crawford County's border counties: to the east, Oscoda County; to the south, Roscommon County; to the west, Kalkaska County and to the north, Otsego County. Also included in the study areas are the southeast portions of Antrim County and the southwest portion of Montmorency County for a total of 7 counties and 33 municipalities.



*Camp Grayling Policy Committee Meeting*

The Alpena CRTC area of influence includes Alpena County and a small portion of Presque Isle County, as well as 13 municipalities.

Key stakeholders within the two primary JLUS project areas will represent the following:

- ▶ Camp Grayling JMTC staff
- ▶ Alpena CRTC staff
- ▶ Federal agency staff
  - ▶ Thunder Bay National Marine Sanctuary, National Oceanic and Atmospheric Administration
  - ▶ U.S. Forest Service
  - ▶ U.S. Fish and Wildlife Service
  - ▶ U.S. Department of Agriculture Natural Resources Conservation Service
  - ▶ U.S. Coast Guard
- ▶ State agency staff
  - ▶ Michigan Department of Environmental Quality
  - ▶ Michigan Department of Natural Resources
  - ▶ Michigan Department of Transportation
  - ▶ Michigan Economic Development Corporation
- ▶ Michigan Sea Grant/Michigan State University Extension
- ▶ Elected officials and municipal staff
- ▶ Community residents within the project area
- ▶ Local organizations

- ▶ **HOMEOWNERS ASSOCIATIONS:** the AuSable River Property Owners' Association, Lake Margrethe Property Owners' Association, Enchanted Forest Property Owners' Association
- ▶ **ECONOMIC DEVELOPMENT GROUPS:** Grayling Regional Chamber of Commerce and the Alpena Area Chamber of Commerce
- ▶ **LOCAL EMPLOYERS:** Weyerhaeuser, AJD Forest Products, Jays Sporting Goods
- ▶ **RECREATION ORGANIZATIONS:** Anglers of the AuSable and Trout Unlimited
- ▶ **ENVIRONMENTAL ORGANIZATIONS:** Headwaters Land Conservancy, Upper Manistee River Association, Thunder Bay Audubon Society, Michigan United Conservation Club
- ▶ **ACADEMIA:** Kirtland Community College and Alpena Community College
- ▶ Media
  - ▶ The Alpena News
  - ▶ Crawford County Avalanche
  - ▶ WQON-FM 100.3
  - ▶ WATZ-FM 99.3

Many of the key stakeholders within the JLUS Project Area have been asked to serve on the project's policy committee (PC) and technical committee (TC). The PC is primarily com-

posed of city, township, and county officials; military installation leadership; state officials; and private sector leaders. The PC meets on a quarterly basis and is charged with:

- ▶ providing overall project leadership to include policy direction and oversight, budget approval, project monitoring, and report adoption; and
- ▶ participating in public outreach events.

The TC comprises local and installation community planners, community staff, business representatives, and residents. The TC meets on a monthly basis and is responsible for:

- ▶ data collection
- ▶ identifying and studying technical issues
- ▶ recommending working groups (if needed) for specific issues
- ▶ evaluating alternatives
- ▶ developing recommendations for the PC

### 2.1.2 Committee Membership

Table 2.1, JLUS Policy and Technical Committee Members and Organizations, contains a list of JLUS TC and PC members. These individuals will play a key role in both developing and implementing the PPP by serving as the core group of stakeholders that help disseminate information and promote engagement in the JLUS process among their key stakeholder groups.

**Table 2.1 | JLUS Policy and Technical Committee Members and Organizations**

JLUS POLICY COMMITTEE		JLUS POLICY COMMITTEE, CONTINUED	
Name	Representing/Title	Name	Representing/Title
<b>Ken Glasser (JLUS Chairman)</b>	Otsego County Board	George F. Banker	Bear Lake Township Supervisor
<b>Greg Sundin (JLUS Vice Chairman)</b>	City of Alpena	Chris Peterson	US Forest Service
<b>Matt Waligora (JLUS Vice Chairman Alternate)</b>	City of Alpena Mayor	Scott R. Koproski	US Fish & Wildlife Service
<b>Marc Dedenbach (JLUS Secretary)</b>	Grayling Township	Edward A. Nellist	Lyon Township Supervisor
SGM Kent Smith	Camp Grayling JMTC	James Zakshesky	Posen Township Supervisor
SFC Jeremie Mead	Camp Grayling JMTC	Michael Grohowski	Krakov Township Supervisor
LTC Brian Burrell	Camp Grayling JMTC	Nyle Wickersham	Metz Township Supervisor
Lt Col Matthew Trumble	Alpena CRTC	William E. Curnalia	Higgins Township Supervisor
Lt Col Michael Leski	Alpena CRTC	Gary Neumann	Lovells Township Supervisor
Capt Brian Blumline	Alpena CRTC	Denise Matteini	Otsego Lake Township
Jonathan Edgerly	Michigan Army National Guard – Environmental	Margaret Black, alternate	Otsego Lake Township Clerk
Kim VanNuck	Beaver Creek Township Supervisor	Bonny Miller	Chester Township Supervisor
Brandon Schroeder	Michigan State University Extension/Michigan Sea Grant	Scott Kruger	Antrim County Commissioner
Susan Thiel	MDNR	Brenda Fournier	Alpena County Commissioner
Jeff Gray	Thunder Bay National Marine Sanctuary, NOAA	<b>JLUS TECHNICAL COMMITTEE</b>	
Rob Pallarito	Otsego County Board	<b>Name</b>	<b>Representing/Title</b>
Mark Ignash	MEDC	Adam Poll	City of Alpena Planning & Development Director
Jim Klarich	Target Alpena	Erich Podjaske	City of Grayling Zoning/Economic Development
Scott Thayer	MDOT	Lisa Kruse	Alpena CRTC Environmental Specialist
Dave Stephenson	Crawford County Board Chair	Susan Thiel	MDNR
Doug Baum	Grayling City Manager	Julie Lowe	MDEQ
Steve Smigelski	Alpena Airport Manager	Alayne Hansen	Michigan Works!
David Persons	Garfield Township Supervisor	Patty O'Donnell	MDOT
Cody Werth	Wilson Township Board/Planning Commission	Doug Baum	City of Grayling
Julie Lowe	MDEQ	Denise Mattieni	Otsego Lake Township
Lisa McComb	Otsego County Economic Alliance	John Bailey	Huron Pines
Bill Johnson	Frederic Township Supervisor	SMSgt Jerome Torres	Alpena CRTC
Shelly Pinkelman, alternate	Frederic Township Zoning	SMSgt Damian Pappas, alternate	Alpena CRTC
Ken Lobert	Ossineke Township Supervisor		
Nathan Skibbe	Alpena Township Supervisor		
Dave Post	Village of Hillman		
Myron McIntire, alternate	Hillman Village President		
Cam Habermehl	Alpena County		
Brian Goebel	Bagley Township		
Ken Arndt, alternate	Bagley Township		
Jodi Valentino	Roscommon County Controller		
Bruno Wojick	Briley Township		
Howard Lumsden	Long Rapids Township Supervisor		
Sharcy Ray	USDA Natural Resource Conservation Service		

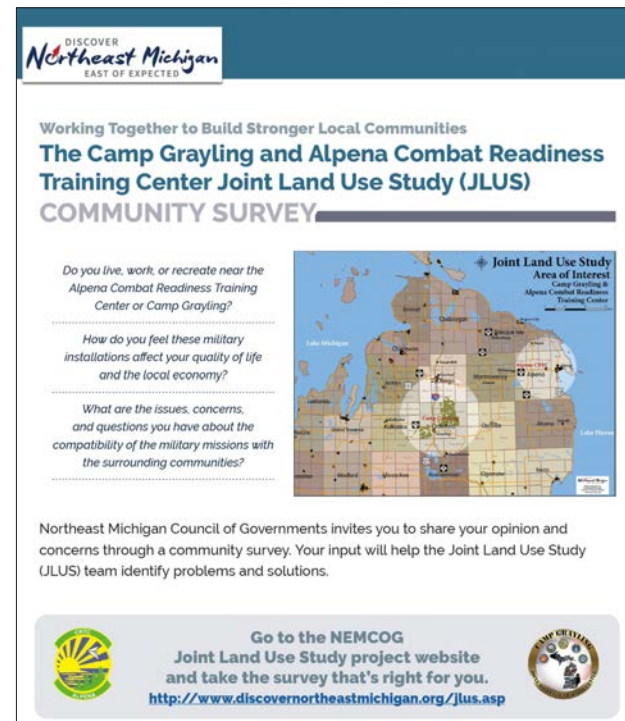


Alpena CRTC community land use strengths identified during June 2017 discussion and public meetings.

### 2.1.3 Stakeholder Characterization

Understanding stakeholders' existing awareness, perceptions, concerns, values, and priorities related to Camp Grayling JMTc and Alpena CRTC will help the JLUS Project Team develop and implement involvement opportunities and educational resources. Characterization information can influence the level of detail in educational materials and highlight where issues might serve as potential roadblocks to participation or agreement on strategies.

Compiling characterization information for each stakeholder group is an iterative process that starts with a core group of key stakeholders and, over the course of the project, becomes more specific. Stakeholder characterization information evolves over time and could augment approaches for initiating and sustaining stakeholder involvement and educating stakeholders on the JLUS project. The JLUS survey process, as well as public meetings, aided in characterizing stakeholders' perspectives of Camp Grayling JMTc and Alpena CRTC.



JLUS June 2017 Community Survey Announcement

The June 2017 PC and TC discussion sessions and the public meetings offered early insights into stakeholders' perspectives of and concerns about Camp Grayling and the Alpena CRTC. Stakeholders in the project area have a broad array of challenges, including noise, water quality, wildfire, traffic, property value, military operations, and public safety concerns, that are more prevalent and will promote increased levels of stakeholder participation.

Another key aspect of stakeholder characterization is understanding communication channel preferences. Based on discussions with NEMCOG and the Camp Grayling community relations specialist, as well as other members of the PC and TC, the community residents rely on traditional sources of information, such as newspaper, radio, and word-of-mouth, to obtain information. Social media is more limited in use, particularly for the older demographic in the study area.

## 2.2 PPP Component 2: Creating Effective Messages

Raising stakeholder awareness and motivating participation in the JLUS process are key to achieving project goals. Doing so successfully requires effective messaging for educational materials and announcements for public involvement opportunities. Stakeholder characterization information on perceptions, concerns, and interests related to Camp Grayling JMTc and Alpena CRTC installation complexes and mission footprints aid in crafting effective messages for education and engagement collateral. The messages change with each phase of the project and as stakeholder characterization is further refined. Messages for each phase of the project are presented below.

- ▶ **DISCOVERY PHASE (APRIL 2017 - JULY 2017):** Initial messages for the discovery phase focus on raising awareness and promoting engagement. Messages raise stakeholder awareness about the JLUS project and their proximity to the JLUS project area, addressing their potential curiosity and concerns about the activities taking place at Camp Grayling and Alpena CRTC, and promoting the unique opportunity to share their concerns through the JLUS process. Message: Your input on issues and concerns is important to identifying solutions that will benefit your community.
- ▶ **STRATEGY AND PLANNING PHASE (AUGUST 2017 - MARCH 2018):** Messages for the strategy and planning phase focus on reporting out the interim findings for the identified issues/conflicts uncovered in the discovery stage. Messages focus on validating issues identified in the discovery phase and providing input on potential solutions. Message: Please tell the JLUS Project Team if we accurately captured your issues and concerns and contribute to developing possible solutions.
- ▶ **IMPLEMENTATION PHASE (APRIL 2018 - ONGOING):** Messages for the implementation phase focus on presenting the final report findings and recommendations in both the Grayling and Alpena areas. This phase focuses on initiating the process of local municipal adoption of the JLUS report in effected communities. Message: The JLUS Project Team heard and incorporated your input throughout the JLUS process, and your views are reflected in the final recommendations. It is now time to implement these recommendations, which require continuous support to help execute the necessary actions to benefit the community.

A subset of the PC and TC members with experience in local communications will have the opportunity to review and comment on project-related messaging. This subset of PC and TC members will include the JLUS project officers, the Camp Grayling community relations specialist, NEMCOG staff, and local economic directors, as well as other PC and TC members that have an interest in providing constructive feedback on messaging.

## 2.3 PPP Component 3: Identifying and Creating Effective Stakeholder Involvement Opportunities and Educational Resources

This component of the PPP focuses on identifying and creating effective stakeholder involvement opportunities and educational resources.

### 2.3.1 Meetings, Tours, and Surveys

Stakeholder involvement opportunities include meetings, tours, interviews, and surveys. The JLUS Project Team selected this suite of stakeholder involvement opportunities to allow stakeholders a variety of options based on schedule constraints, communication preferences, and project needs. Each opportunity is described below in greater detail.

- ▶ **TC AND PC MEETINGS:** These meetings are coordinated and facilitated by NEMCOG staff throughout the JLUS project. They serve as working forums for these key stakeholders to provide input on JLUS project information and developing recommendations to address issues and concerns. The project website will include a project schedule and calendar of events for the TC and PC meetings.
- ▶ **CAMP GRAYLING JMTc AND ALPENA CRTC PC AND TC MEMBER TOURS AND ISSUE IDENTIFICATION SESSIONS:** The tours provide an opportunity for PC and TC members to better understand the mission and operations of Camp Grayling JMTc and Alpena CRTC during



*JLUS Policy and Technical Committee Members touring Camp Grayling JMTc and Alpena CRTc*

the discovery phase of the JLUS project. The tours also provide PC and TC members with an additional opportunity to discuss the JLUS project, goals, and objectives. An added benefit is promoting PC and TC team building, communication, and cooperation to benefit the overall JLUS process. The tours for Camp Grayling JMTc and Alpena CRTc took place on June 1 and June 5, 2017.

- ▶ **COMMUNITY MEETINGS AND INPUT SESSIONS:** The JLUS process provides broader stakeholder involvement opportunities using a series of community meetings and input sessions at each phase.
  - ▶ **ISSUE IDENTIFICATION COMMUNITY MEETINGS (DISCOVERY PHASE):** The purpose of these meetings is to raise stakeholder awareness of the JLUS project and identify issues and concerns related to Camp Grayling JMTc and Alpena CRTc from local stakeholders. The initial community meetings and input sessions took place on June 1, 2017, for Alpena CRTc and June 6, 2017, for Camp Grayling. Appendix A contains agendas and a list of participants for these meetings.
  - ▶ **ISSUE REPORT OUT COMMUNITY MEETINGS (STRATEGY AND PLANNING PHASE):** During these meetings, the JLUS Project Team will report out the issues and conflicts identified during the discovery phase of the JLUS process. These meetings will give local stakeholders the opportunity to validate the interim findings of the discovery phase, clarify any issues, and identify additional issues that were not adequately captured during the discovery phase. The PC meeting is ideally held on the same day as the community meeting and also open to the public.
  - ▶ **PRELIMINARY RECOMMENDATIONS COMMUNITY MEETINGS (STRATEGY AND PLANNING PHASE):** These community meetings will provide stakeholders with the opportunity to voice their opinions and ideas on preliminary recommendations crafted to address issues and concerns. The JLUS Project Team documents stakeholder feedback on the preliminary recommendations and finalizes the recommendations, considering that feedback. The PC meeting is ideally held on the same day as the community meeting and also open to the public.
  - ▶ **FINAL RECOMMENDATIONS AND IMPLEMENTATION COMMUNITY MEETINGS (IMPLEMENTATION PHASE):** The purpose of these final community meetings is to present the final report findings and recommendations to stakeholders, as well as initiate the early stages of the implementation process. This could include identifying steps needed for local municipal adoption of the JLUS report in affected communities.
- ▶ **STAKEHOLDER INTERVIEWS:** This stakeholder involvement strategy involves conducting one-on-one interviews with key stakeholders in the JLUS project area.

Stakeholder interviews are critical to gaining an understanding of existing issues or situations that will contribute to the conflict/compatibility analysis of the JLUS project. Interviews also provide an opportunity to gain a deeper understanding of stakeholder perceptions and opinions about compatibility and conflicts, as well as details on sensitive topics that stakeholders may feel uncomfortable discussing in a group setting. This information will not only feed into development of management strategies, but will also assist in refining stakeholder characterization for the PPP and future stakeholder involvement and education activities in the latter stages of the JLUS process. Appendix B contains the survey questions developed for the JLUS project administered both in-person and via telephone.

- ▶ **COMMUNITY SURVEYS:** The community surveys are another stakeholder involvement mechanism to allow a wider range of stakeholders in the JLUS project area to share their opinions. The community survey questions are the same as those found in Appendix B, but the responses are self-entered without assistance from JLUS Project Team members. Ensuring widespread participation in the community survey is a potential challenge that will likely require an iterative approach to make stakeholders aware of the survey, educate stakeholders on the benefits of participating in the survey, and motivate participation. As such, a multi-pronged approach that capitalizes on opportunities as they arise to communicate the survey with the public.

### 2.3.2 JLUS Educational Resources

Stakeholder educational resources include meeting announcements, fact sheets, presentations, project website, and press releases. The JLUS Project Team selected this suite of stakeholder educational resources to provide stakeholders with a variety of formats based on communication preferences and project needs. Each educational resource is described below in greater detail.

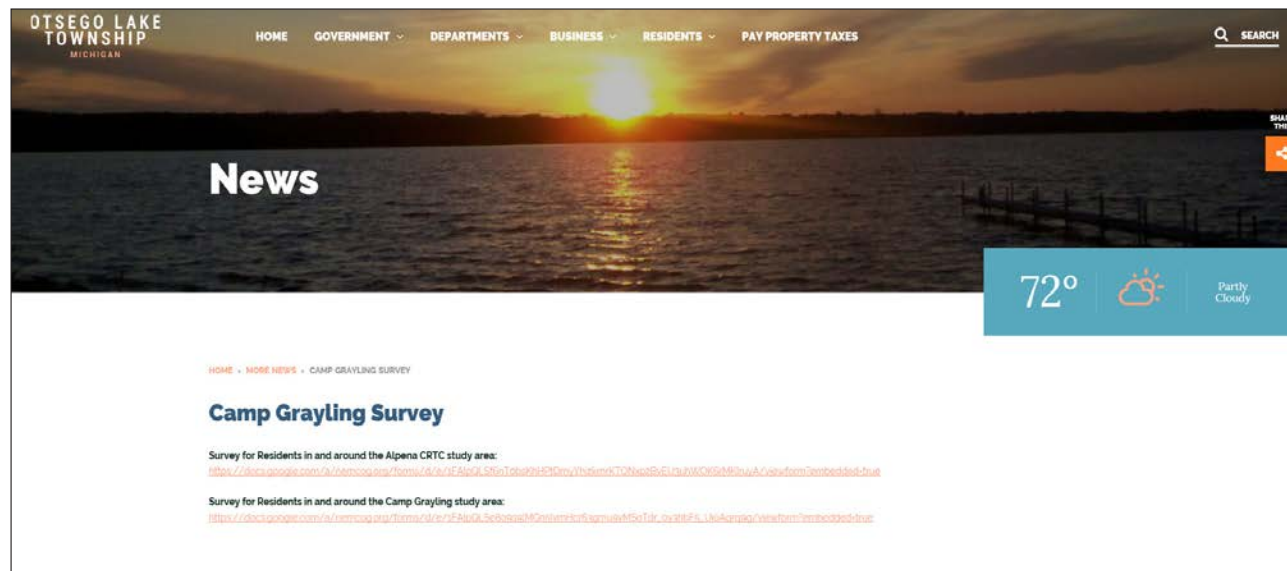
- ▶ **JLUS PROJECT WEBSITE:** NEMCOG staff created a JLUS project web page within the current NEMCOG website that provides comprehensive project information. The project website is available at <http://www.discover-northeastmichigan.org/jlus.asp>. The JLUS Project Team will update the project web pages throughout the JLUS process. It is the primary source of educational information on the JLUS project. All stakeholder involvement opportunities and educational resources will be available to stakeholders, including the link to the community surveys.

- ▶ **JLUS PROJECT FACT SHEETS/MEETING ANNOUNCEMENTS:** This educational resource provides an easy-to-read summary of the JLUS project, including an overview of the project purpose, expected outcomes, involvement opportunities during the process, and where to obtain additional information. For each of the community meetings described above, the JLUS Project Team uses the project fact sheet as a meeting announcement. The project fact sheet will be updated with new project information (e.g., identified issues) and updated meeting information. Appendix C provides examples of the project fact sheet/initial meeting announcements.
- ▶ **JLUS PROJECT SURVEY ANNOUNCEMENT:** This resource announces the availability of the community survey to stakeholders in the JLUS project area and provide a link to the survey on the JLUS Project web page hosted by NEMCOG. Appendix D contains the project survey announcement.
- ▶ **JLUS PRESENTATIONS:** For each community meeting, the JLUS Project Team develops a presentation that provides context for the JLUS project, a review of the process and the current process status, as well as information related to the current phase of the project. The presentations are made available on the project website after each meeting.
- ▶ **JLUS PRESS RELEASES:** The JLUS Project Team develops press releases announcing stakeholder involvement activities related to the JLUS project. This is done in coordination with the community relations staff at Camp Grayling JMTc and Alpena CRTc to ensure a consistent JLUS project message. The press releases target print media and offer educational background on the JLUS project goals and process, including the link to the JLUS project web pages, to promote comprehensive news stories on the process.

## 2.4 PPP Component 4: Identifying Effective Distribution Channels and Mechanisms

This component of the PPP focuses on effective distribution channels and mechanisms in the JLUS project area. Ensuring meaningful participation in stakeholder involvement opportunities and effective delivery of educational resources requires that information successfully reaches targeted stakeholders. For purposes of the JLUS project, the JLUS Project Team employs both a targeted and ripple approach to distribute information. Both of these approaches are described below.





Otsego Lake Township website promoting the JLUS community survey.

**TARGETED APPROACH:** This approach ensures delivery of information directly to the intended targeted stakeholders. Members of the PC and the TC are key stakeholders in the JLUS Project. When the JLUS Project Team distributes stakeholder involvement opportunity information and project educational resources to the PC and TC members, key stakeholders directly receive that information. The targeted approach involves email as the primary distribution channel to PC and TC members, as well as PC and TC meetings.

**RIPPLE APPROACH:** This approach focuses on enlisting the help of NEMCOG and the JLUS PC and TC members to use their existing distribution mechanisms, such as newsletters, websites, email distribution lists, social media sites, meetings, and community bulletin boards to further disseminate information on JLUS project stakeholder involvement opportunities and educational resources to their organizational members and constituents. For example, the Camp Grayling JMTC community relations specialist distributes notification of range activities on a regular basis to local property owners' associations and maintains a Camp Grayling JMTC Facebook page. The JLUS Project Team requested that the Camp Grayling JMTC community relations specialist post information about the community survey on the Camp Grayling JMTC Facebook page where this information has been shared. In addition, the JLUS Project Team will email information about stakeholder involvement opportunities to individuals who attend community meetings with a request to help share the information with neighbors. Given the size of the JLUS project area, as well as resource constraints, the ripple approach leverages existing stakeholder contacts for

minimal project investment. Another advantage of this approach is the familiarity local stakeholders have with these local organizations and elected officials; trust and familiarity with the messenger can help to increase participation.

Each approach described above rely on specific distribution mechanisms. Each distribution mechanism will reach different stakeholder subgroups. The suite of distribution mechanisms will expand over time as the JLUS Project Team develops a more refined understanding of stakeholder communication preferences and most effective distribution channels. Key distribution mechanisms are described in more detail below.

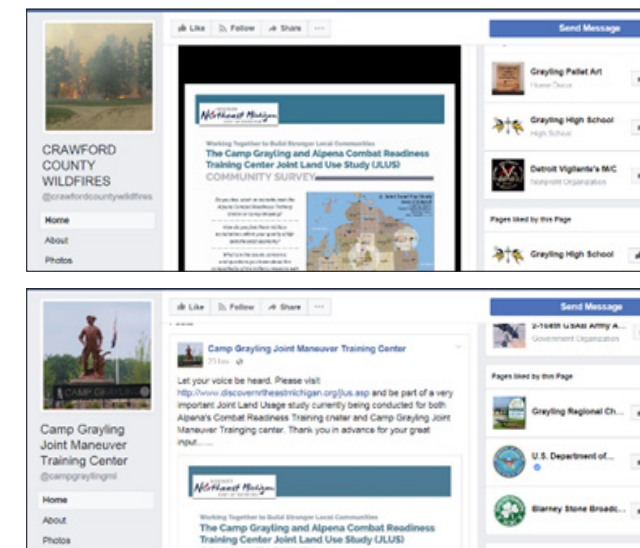
- ▶ **EMAIL DISTRIBUTION LISTS:** NEMCOG and the JLUS PC and TC email distribution lists are the primary distribution mechanisms to engage these stakeholders in committee activities. The JLUS Project Team asks members on this email distribution list to forward community information to relevant stakeholders using their email distribution lists.
- ▶ **NEWSLETTERS:** NEMCOG and many of the JLUS PC and TC members, as well as other stakeholder organizations, develop and distribute regular newsletters for both mail and electronic distribution. For example, the Grayling Regional Chamber of Commerce develops and posts a weekly newsletter and included information about the JLUS survey in the June 29 newsletter.
- ▶ **WEBSITES:** As discussed, the primary project information distribution channel is the JLUS project web pages hosted on the NEMCOG website. Using the ripple ap-



JLUS survey news story on WATZ website.

proach, the JLUS Project Team is encouraging PC and TC members to post links to the JLUS Project web pages on their own organizational websites and encourage other stakeholders to do the same. For example, the Enchanted Forest Property Owners' Association posted JLUS survey information and a link to the JLUS web page on the association's main website, as well as Alpena Township and Otsego Lake Township, as shown above. The JLUS Project Team will encourage PC and TC members to continually post information on their websites to help disseminate information throughout the JLUS project.

- ▶ **LOCAL MEDIA:** Both newspaper and radio are key distribution mechanisms in the JLUS project area. Experience shared by NEMCOG staff and the Camp Grayling JMTC community relations specialist indicate that local residents rely heavily on local newspapers (Crawford County Avalanche and the Alpena News). Stakeholders attending the initial community meeting for Camp Grayling on June 6 indicated that the primary source of meeting information was the Crawford County Avalanche. The Houghton Lake Resorter also included information on their website about the JLUS community survey. Radio is another popular distribution mechanism in the JLUS project area; in addition to airing news stories, radio stations often have websites that also post news. For example, WATZ aired a story about the JLUS community survey and posted a story on their website. The Camp Grayling Community Relations Specialist has an existing relationship with local newspapers and radio; therefore, promotion of the JLUS related events and surveys can come from Camp Grayling, particularly in conjunction



JLUS Survey postings on Camp Grayling and Crawford County Wildfire Facebook pages.

with media coverage related to key activities, such as Northern Strike, scheduled for July 29 through August 12, 2017.

- ▶ **SOCIAL MEDIA:** This distribution mechanism reaches a younger demographic within the JLUS project area, but is assumed to be less effective than newspaper and radio. Grayling Visitors Bureau posted information on the initial community meetings on the bureau's Facebook page, resulting in 31 shares. The Camp Grayling community relations specialist updates the Camp Grayling Facebook page on a regular basis and included information on the JLUS community survey, which was then further shared. It is possible search Facebook to identify groups discussing Alpena CRTX and Camp Grayling issues and then request that they post JLUS project information. The JLUS Project Team found a Crawford County Wildfire group that has over 1,000 members that posts information on Camp Grayling's controlled burns. A simple message request led to the posting of the survey information on the group's Facebook page.
- ▶ **FLIER DROPS AND POSTING:** Through the ripple approach, PC/TC members are encouraged to print and drop JLUS project fliers that announce community meetings and survey availability at local businesses, chambers of commerce, libraries, and other locations frequented by local stakeholders. The Camp Grayling community relations specialist uses this approach to post range activities at a local bakery, barbershop, restaurants, and grocery stores. NEMCOG staff members have dropped fliers at visitor centers.
- ▶ **DIRECT MAILINGS:** This is a distribution mechanism

that would reach local residents in a very direct manner. However, this distribution mechanism is both time-consuming and more expensive than other distribution mechanisms. It could, however, be useful in targeted areas within the JLUS project area where the JLUS Project Team feels more engagement from stakeholders is necessary. It could be beneficial to consider if online survey numbers remain low as the project moves out of the Discovery Phase and more data are needed to characterize issues and concerns.

## 2.5 PPP Component 5: Assessing Effectiveness

This PPP component focuses on assessing the effectiveness of stakeholder involvement activities and educational efforts. Feedback from stakeholders on involvement activities helps the JLUS Project Team determine if there are changes necessary for subsequent activities to improve effectiveness. This information can help to sustain stakeholder participation in the process over time. Mechanisms include workshop evaluation forms, interview questions, and tracking participation rates over the course of the project.

### 2.5.1 PPP Activities and Schedule

Table 2.2, JLUS Project Public Participation Plan Activities and Effectiveness Metrics, presents the PPP schedule. This schedule is likely to evolve over time, depending on the overall JLUS project schedule, as well as factors such as stakeholder availability, facility availability, and other planned activities scheduled at Camp Grayling JMTc and Alpena CRTC. Table 2.2 also identifies PPP roles and responsibilities for PPP activities under each component.

**Table 2.2 | JLUS Project Public Participation Plan Activities and Effectiveness Metrics**

INVOLVEMENT AND OUTREACH FORMAT	TARGET AUDIENCES	DISTRIBUTION CHANNELS AND DATES	JLUS PROJECT TEAM LEAD	EFFECTIVENESS METRICS
<i>Discovery Phase: Objectives: Increase awareness of JLUS process and motivate participation in meetings and survey. Messaging: Your input on issues and concerns is important to identifying solutions that will benefit your community.</i>				
JLUS Website (Status: Complete)	All stakeholders in project area	Link provided on all communications; updates occur throughout project	NEMCOG (web page update) Tetra Tech (content)	# of views and page visits
PC/TC Tour and Issue Identification Session invitation in electronic one-page PDF or hard copy flier (Status: Complete)	PC and TC members	Emailed to all PC/TC members; two weeks prior to meeting	JLUS Project Team	# of RSVPs
PC/TC Tour and Issue Identification Session (Status: Complete)	PC and TC members	Alpena CRTC and Camp Grayling facilities	JLUS Project Team Camp Grayling staff Alpena CRTC staff	# of participants
Initial project fact sheet/community meeting announcement electronic one-page PDF or hard copy as flier (Status: Complete)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites); two weeks prior to meeting	JLUS Project Team PC/TC members	# of postings; # of meeting participants
Initial community meetings (Status: Complete)	All stakeholders in project area	NOAA Maritime Heritage Center (Alpena CRTC) Kirtland Health Sciences Center (Camp Grayling)	JLUS Project Team	# of meeting participants; meeting evaluation responses
Community survey announcement electronic one-page PDF or hard copy flier (Status: Complete)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites)	JLUS Project Team PC/TC members	# of postings; # of survey participants
Community survey (Status: Ongoing)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites) Specific help requested from Camp Grayling Community Relations Specialist to include in Northern Strike related press releases and open houses (prior to July 29)	JLUS Project Team PC/TC members	# of online search results for survey mentions; # of completed surveys
Stakeholder interviews (Status: Ongoing)	Key stakeholders identified by JLUS Project Team	JLUS Project Team one-on-one discussions coordinated during initial meetings; follow-up phone calls	JLUS Project Team	# of completed interviews
JLUS project fact sheet with opportunities for participation (Status: In development once new PC/TC dates established)	All stakeholders	JLUS website for easy downloading and printing	JLUS Project Team	# of fact sheets distributed; # of meeting participants
<i>Strategy and Planning Phase: Objective: Increase and sustain participation in the JLUS process and verify the issues and concerns compiled during the Discovery Phase, while seeking input on possible solutions and recommendations to generate early buy-in for implementation.</i>				
<i>Messaging: Please tell the JLUS Project Team if we accurately captured your issues and concerns and contribute to developing possible solutions.</i>				
JLUS Website	All stakeholders in project area	Link provided on all communications; updates occur throughout project	NEMCOG (web page update) Tetra Tech (content)	# of views and page visits
Issue report out community meeting announcements (electronic one-page PDF or hard copy as flier)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites); two weeks prior to meeting Follow up with targeted outreach to property owners' associations, local businesses	JLUS Project Team PC/TC members	# of meeting participants

**Table 2.2 Continued | JLUS Project Public Participation Plan Activities, Audiences, Distribution Channels, Roles, and Effectiveness Metrics**

INVOLVEMENT AND OUTREACH FORMAT	TARGET AUDIENCES	DISTRIBUTION CHANNELS AND DATES	JLUS PROJECT TEAM LEAD	EFFECTIVENESS METRICS
Issue report out community meetings	All stakeholders in project area	Select facilities in project area; possibly varied from initial community meeting locations based on stakeholder feedback	JLUS Project Team	# of meeting participants; meeting evaluation responses
Preliminary recommendation community meeting announcements (electronic one-page PDF or hard copy as flier)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites); two weeks prior to meeting Follow up with targeted outreach to property owners' associations, local businesses, chambers of commerce	JLUS Project Team PC/TC members	# of participants
Preliminary recommendation community meeting	All stakeholders in project area	Select facilities in project area; possibly varied from initial community meeting locations based on stakeholder feedback	JLUS Project Team	# of meeting participants; meeting evaluation responses
<i>Implementation Phase: Objective: Solidify support for final JLUS recommendations and transform sustained participation into meaningful implementation. Messaging: The JLUS Project Team heard and incorporated your input throughout the JLUS process into the final recommendations that now require your support and action to benefit the community.</i>				
JLUS Website	All stakeholders in project area	Link provided on all communications; updates occur throughout project	NEMCOG (web page update) Tetra Tech (content)	# of views and page visits
Final recommendations and implementation community meetings announcements (electronic one-page PDF or hard copy as flier)	All stakeholders in project area	PC/TC targeted email PC/TC ripple (email, social media, websites); two weeks prior to meeting Follow up with targeted outreach to property owners' associations, local businesses	JLUS Project Team PC/TC members	# of meeting participants
Final recommendations and implementation community meetings	All stakeholders in project area	Select facilities in project area; possibly varied from initial community meeting locations based on stakeholder feedback	JLUS Project Team	# of meeting participants; meeting evaluation responses

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a

meeting  
participants

Please see the following pages.



TETRA TECH, INC.

JOB Alpena PC + JTC SHEET NO. \_\_\_\_\_  
 SUBJECT \_\_\_\_\_ FILE NO. \_\_\_\_\_  
 COMPUTED BY \_\_\_\_\_ DATE \_\_\_\_\_ CHK. BY \_\_\_\_\_ DATE \_\_\_\_\_

Name

ORG

Mike Groffowski	KRAKOW Township
Myron McIntire	U.O.H.
Julianne Heinlein	GLEC,
Scott Koproski	USFWS
Julie Lowe	MDEQ
SGM JAMES RYBA	Camp Grayling
SCOTT THAYER	MDOT
Cody Werth	Wilson Twp.
Dave Post	Village of Hillman
Rob Pallarito	Otsego County
Denise Pallarito	State Rep. Tristan Cole
KEN GLASSER	OTSEGO COUNTY
Lisa Kruse	ALPENA CRTC
Brian Blumline	ALPENA CRTC
Ken Lobert	OSSINEKE Twp
Steve Smigelski	ALPENA AIRPARK
Jim Klarich	ALPENA Chamber EDC
Nathan W. Skibbe	Alpena Township
Shelley Pinkelman	CRAWFORD County.
Diane A	NEMCOG
Adam Poll	City of Alpena
Howard Lumsden	Long Rapids Twp

### RSVP for Tours

#### Alpena JTC - June 1

- ✓ 1. Adam Poll, Planning & Development Director, City of Alpena
- ✓ 2. Steve Smigelski, Alpena County Airport Manager
- ✓ 3. LTC Theresa Brown, Camp Grayling
- ✓ 4. SGM Ryba, Camp Grayling
- ✓ 5. SFC Jeremie Mead, Camp Grayling
- ✓ 6. Ken Lobert, Ossineke Township Supervisor
- ✓ 7. Matt Waligora, Mayor, City of Alpena
- ✓ 8. Scott Thayer, Michigan Department of Transportation
- ✓ 9. Brian Blumline, Capt, PE, MIANG
- ✓ 10. Susan Thiel, MDNR
- ✓ 11. James Booth, Big Creek Township Supervisor
- ✓ 12. Ken Glasser, Otsego County Board of Commissioners
- ✓ 13. Shelley Pinkelman, Frederic Township
- ✓ 14. Michael Grohowski, Krakow Twp Supervisor
- ✓ 15. Scott Koproski, US Fish & Wildlife Service
- ✓ 16. Matt McCauley, Networks Northwest
- ✓ 17. Nathan Skibbe, Alpena Township Supervisor
- ✓ 18. Mark Ignash, MEDC
- ✓ 19. Dave Post, Hillman Village Manager
- ✓ 20. Myron McIntire, Hillman Village President
- ✓ 21. Julie Lowe, MDEQ
- ✓ 22. Rob Pallarito, Otsego County Commissioner
- ✓ 23. Denise Pallarito, Legislative Director for Representative Tristan Cole
- ✓ 24. James Zaksbesky, Posen Township Supervisor
- ✓ 25. Lisa Kruse, State Env. Quality Analyst, MI ANG - Alpena CRTC
- ✓ 26. Cody Werth, Wilson Township
- ? 27. Jeff Gray, Thunder Bay National Marine Sanctuary
- ✓ 28. Howard Lumsden, Long Rapids Township
- ✓ 29. Denise Cline, NEMCOG
- ✓ 30. Diane Rekowski, NEMCOG
- ✓ 31. Ethan Cline, NEMCOG Intern
32. Julianne Neuhoff

Alpena Issues Identification Session only (afternoon)

1. Jim Klarich, Target Alpena



TETRA TECH, INC.

JOB Public SHEET NO. \_\_\_\_\_  
 SUBJECT \_\_\_\_\_ FILE NO. \_\_\_\_\_  
 COMPUTED BY \_\_\_\_\_ DATE \_\_\_\_\_ CHK. BY \_\_\_\_\_ DATE \_\_\_\_\_

<u>Name</u>	<u>organization</u>	<u>email</u>
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DENISE MATTEINI	Comm. OTSEGO LKTWP	djm290djm@gmail.com
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Dave Stephenson	Crawford w. Pot	dave@charter.net
Shelley Brinker	Crawford	sbrinker@charter.net
David Smith	Anglers of the Au Sable	Drsmith721@gmail.com
Leonard Lobsinger	Old Dam Rd	
Jeri Selthoffer	Grayling Twp	lmarugo@charter.net
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JAY SWEAT	DOD-DEA	
Rosalie Myers	RCEDC	myersr@roscommoncounty.net
RICH Calkins	Grayling	
Jim Kitch	Grayling	
VIRGINIA WATSON	GRAYLING	
Ed/Mary Martella	Grayling	e.martella@yahoo.com
Rade Rakoczy	Resident	rakoczyr@yahoo.com

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E Rosa	"	"
ROGER WILCOX	"	rwilcoxf1@earthlink.net
Dave Gillahan	DMVA	david.m.gillahan@mail.com
Susan	DNR	smail@mail.com

Name	Organization
Denise Matteini	OTSEGO LK TWP
Gary Neumann	Supervisor - Louches Twp.
Dave Gillahan	DMVH
Dave Stephenson	Crawford County Bd
Geo. Banker	Bear Lake Twp
Joan Charlebois	DNR
Brian Blumline	Alpena CRTC
Jay Sweat	DOD-OEA
Shelly Pinkelman	Crawford County <sup>Frederic</sup> <del>Twp</del>
Ed O'Neil	Lyon Twp.
Scott Thayer	MDOT
Marc T. Dedenbach	GRAYLING TOWNSHIP
William Johnson	FREDERIC TWP.
Therese Brown	Dip Camp Grayling
JAMES RIBA	Ops Sgt Grayling
Mike Ravasi	CG Environmental
Ken Glasser	OTSEGO COUNTY COMM.
SFC Jeremie A. Mead	Camp Grayling Community Relations
Patty O'Donnell	MDOT North Region
Abigail Ertel	Huron Pines
Kim Van Nuck	Beaver Creek
Julie Lowe	MDEQ

- Camp Grayling JMTC - June 5**
1. Rob Pallarito, Otsego County Commissioner
  2. Denise Pallarito, Legislative Director for Representative Tristan Cole
  3. Kim VanNuck, Beaver Creek Township Supervisor
  4. Ken Lobert, Ossineke Township Supervisor
  5. Jay Sweat, Office of Economic Adjustment, US Department of Defense
  6. Scott Thayer, Michigan Department of Transportation
  7. George Banker, Bear Lake Township Supervisor
  8. Marc Dedenbach, Grayling Township Planning Commission
  9. Scott Kruger, Antrim County Commissioner
  10. Denise Matteini, Otsego Lake Township
  11. Margaret Black, Otsego Lake Township
  12. Dave Stephenson, Crawford County Board Chair *interested*
  13. Susan Thiel, MDNR
  14. James Booth, Big Creek Township Supervisor
  15. Ken Glasser, Otsego County Board of Commissioners
  16. Shelley Pinkelman, Frederic Township
  17. William Johnson, Frederic Township
  18. William Curnalia, Higgins Township
  19. Erich Podjaske, City of Grayling
  20. Doug Baum, City of Grayling *CBR*
  21. Alayne Hansen, Michigan Works!
  22. ~~Matt McCasley, Networks Northwest~~
  23. ~~Nathan Skiles, Alpena Township Supervisor~~
  24. Dave Post, Hillman Village Manager
  25. Myron McIntire, Hillman Village President
  26. Julie Lowe, MDEQ
  27. ~~Mary Sanders, Hayes Township Supervisor~~
  28. Cody Werth, Wilson Township
  29. Abigail Ertel, Huron Pines
  30. Edward Nellist, Supervisor
  31. Howard Lumsden, Long Rapids Township
  32. ~~Denise Cline, NEMCOG~~
  33. Diane Rekowski, NEMCOG
  34. ~~Ethan Cline, NEMCOG Intern~~
  35. Patty O'Donnell, MDOT North Region Planner
- Juliana Neuman  
Mike Ravasi - Camp Grayling Env. office  
Scott  
Capt Blumline



b

## surveys

Please see the following pages.

**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Resident Survey for Areas Surrounding Alpena Combat Readiness Training Center (CRTC)**

1. In what City, Village, or Township do you reside? \_\_\_\_\_

2. Are you (Please check one):

- On the Planning Commission for your area
- A Municipal staff member
- An Elected official
- A Resident

3. What is your gender?    Male                  Female

4. What range does your age fall into?

- 18 and under
- 19 - 30
- 31 - 50
- 51 - 64
- 65 plus

**Questions relating to your perceptions of Alpena CRTC.**

5. How familiar are you with Alpena CRTC and the military operations that take place there?

Unfamiliar      Somewhat Familiar                  Familiar                  Very familiar

6. Are you comfortable with military operations at Alpena CRTC?

Not Comfortable      Somewhat Comfortable                  Comfortable

Comments: \_\_\_\_\_

\_\_\_\_\_



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

7. Do you have any concerns about military installation operations with regard to noise, traffic, or other issues around Alpena CRTC? Please select all that apply?

- Noise
- Traffic
- Recreational Access
- Other

Comments: \_\_\_\_\_

\_\_\_\_\_

8. Do you have concerns about military installation operations with regard to public health, safety, housing, or general welfare around Alpena CRTC? Please select all that apply.

- Public health
- Safety, housing
- General welfare
- All of the above
- None of the above

Comments: \_\_\_\_\_

\_\_\_\_\_

9. Do you believe that current or future missions of Alpena CRTC effect your property value?

- Increases the value (>10% than if the Base wasn't there)
- Decreases the value (>10% than if the Base wasn't there)
- Has no effect on the value

Comments: \_\_\_\_\_

\_\_\_\_\_

10. Have you ever participated in a military sponsored community event? Circle one

Yes - Which one(s)?                  No

Comments: \_\_\_\_\_

\_\_\_\_\_



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Questions relating to the local economy.**

11. Do you believe that Alpena CRTC has a positive impact on the surrounding communities' quality of life?

- Yes
- No
- Unsure

Comments: \_\_\_\_\_

\_\_\_\_\_

12. How would you rate your agreement with this statement:

Alpena CRTC is a significant contributor to the local economy?

Strongly Disagree    Disagree    Agree    Strongly Agree

If you answered Strongly Disagree or Disagree, then please describe what is:

\_\_\_\_\_

13. Alpena CRTC's significant economic contributions have been (check up to 2)

- Jobs
- Local Attraction
- Construction
- Other \_\_\_\_\_
- Unsure

14. What is your impression of Alpena CRTC's relationship with surrounding property and business owners?

Negative    Somewhat positive    Positive    Very positive    Unsure

Comments: \_\_\_\_\_

\_\_\_\_\_

15. How would you rate your agreement with this statement:

Our local businesses find it easy to conduct business with Alpena CRTC?

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure



3

Resident Survey for Alpena Area



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Questions relating to local planning.**

16. Are you familiar with NEMCOG?    Yes    No

17. Are you familiar with any of the comprehensive plans for your area?

- Yes
- No
- Unsure

18. Our Comprehensive Plan recognizes Alpena CRTC as a significant local resource?

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

19. Do you believe that future missions and potential growth of Alpena CRTC will have a significant effect on the following infrastructure capacity? Please check all that apply.

- Water
- Sewer
- Electricity
- All of the above
- None of the above

Comments: \_\_\_\_\_

\_\_\_\_\_

20. Do you believe renewable resources such as wind and solar energy are vital to the area?

- Yes
- No
- Unsure

21. Do you see current and/or future land use conflicts occurring around Alpena CRTC?

Comments: \_\_\_\_\_

\_\_\_\_\_



4

Resident Survey for Alpena Area



**Joint Land Use Study**  
Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

22. There is sufficient control over development in my community.

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

23. The local zoning ordinances, currently in place, protect residents from adverse impacts from military training initiatives at the local installation.

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

24. I feel it would be more helpful to have more zoning in effect.

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

25. I am in support of development controls.

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

**Questions relating to transportation planning.**

26. Municipal transportation plans for Alpena CRTC are reasonable? (i.e. the transportation system can adequately accommodate the current volume of traffic, the quality of the roads support the volume)

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

Comments: \_\_\_\_\_  
\_\_\_\_\_

27. How would you rate your agreement with this statement:

Coordination/communication between Alpena CRTC and local communities facilitates an efficient flow of traffic.

Strongly Disagree    Disagree    Agree    Strongly Agree    Unsure

Other

Would you like to receive updates on the JLUS process? If so please leave us your name, email or address.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Joint Land Use Study**  
Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Resident Survey for Areas Surrounding Camp Grayling Joint Military Training Center (JMTC)**

1. In what City, Village, or Township do you reside? \_\_\_\_\_

2. Are you (Please check one):

- On the Planning Commission for your area
- A Municipal staff member
- An Elected official
- A Resident

3. What is your gender?    Male            Female

4. What range does your age fall into?

- 18 and under
- 19 - 30
- 31 - 50
- 51 - 64
- 65 plus

**Questions relating to your perceptions of Camp Grayling.**

5. How familiar are you with Camp Grayling and the military operations that take place there?

Unfamiliar    Somewhat Familiar    Familiar    Very familiar

6. Are you comfortable with military operations at Camp Grayling?

Not Comfortable    Somewhat Comfortable    Comfortable

Comments: \_\_\_\_\_  
\_\_\_\_\_

**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

7. Do you have any concerns about military installation operations with regard to noise, traffic, or other issues around Camp Grayling? Please select all that apply?

- Noise
- Traffic
- Recreational Access
- Other

Comments: \_\_\_\_\_

\_\_\_\_\_

8. Do you have concerns about military installation operations with regard to public health, safety, housing, or general welfare around Camp Grayling? Please select all that apply.

- Public health
- Safety, housing
- General welfare
- All of the above
- None of the above

Comments: \_\_\_\_\_

\_\_\_\_\_

9. Do you believe that current or future missions of Camp Grayling effect your property value?

- Increases the value (>10% than if the Base wasn't there)
- Decreases the value (>10% than if the Base wasn't there)
- Has no effect on the value

Comments: \_\_\_\_\_

\_\_\_\_\_

10. Have you ever participated in a military sponsored community event? Circle one

Yes - Which one(s)?                      No

Comments: \_\_\_\_\_

\_\_\_\_\_



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Questions relating to the local economy.**

11. Do you believe that Camp Grayling has a positive impact on the surrounding communities' quality of life?

- Yes
- No
- Unsure

Comments: \_\_\_\_\_

\_\_\_\_\_

12. How would you rate your agreement with this statement:

Camp Grayling is a significant contributor to the local economy?

Strongly Disagree      Disagree      Agree      Strongly Agree

If you answered Strongly Disagree or Disagree, then please describe what is:

\_\_\_\_\_

\_\_\_\_\_

13. Camp Grayling's significant economic contributions have been (check up to 2)

- Jobs
- Local Attraction
- Construction
- Other \_\_\_\_\_
- Unsure

14. What is your impression of Camp Grayling's relationship with surrounding property and business owners?

Negative      Somewhat positive      Positive      Very positive      Unsure

Comments: \_\_\_\_\_

\_\_\_\_\_

15. How would you rate your agreement with this statement:

Our local businesses find it easy to conduct business with Camp Grayling?

Strongly Disagree      Disagree      Agree      Strongly Agree      Unsure



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

**Questions relating to local planning.**

16. Are you familiar with NEMCOG? Yes No

17. Are you familiar with any of the comprehensive plans for your area?

- Yes
- No
- Unsure

18. Our Comprehensive Plan recognizes Camp Grayling as a significant local resource?

Strongly Disagree Disagree Agree Strongly Agree Unsure

19. Do you believe that future missions and potential growth of Camp Grayling will have a significant effect on the following infrastructure capacity? Please check all that apply.

- Water
- Sewer
- Electricity
- All of the above
- None of the above

Comments: \_\_\_\_\_

\_\_\_\_\_

20. Do you believe renewable resources such as wind and solar energy are vital to the area?

- Yes
- No
- Unsure

21. Do you see current and/or future land use conflicts occurring around Camp Grayling?

Comments: \_\_\_\_\_

\_\_\_\_\_



**Joint Land Use Study**

Camp Grayling Joint Military Training Center (JMTC) and Alpena Combat Readiness Training Center (CRTC)

22. There is sufficient control over development in my community.

Strongly Disagree Disagree Agree Strongly Agree Unsure

23. The local zoning ordinances, currently in place, protect residents from adverse impacts from military training initiatives at the local installation.

Strongly Disagree Disagree Agree Strongly Agree Unsure

24. I feel it would be more helpful to have more zoning in effect.

Strongly Disagree Disagree Agree Strongly Agree Unsure

25. I am in support of development controls.

Strongly Disagree Disagree Agree Strongly Agree Unsure

**Questions relating to transportation planning.**

26. Municipal transportation plans for Camp Grayling are reasonable? (i.e. the transportation system can adequately accommodate the current volume of traffic, the quality of the roads support the volume)

Strongly Disagree Disagree Agree Strongly Agree Unsure

Comments: \_\_\_\_\_

\_\_\_\_\_

27. How would you rate your agreement with this statement:

Coordination/communication between Camp Grayling and local communities facilitates an efficient flow of traffic.

Strongly Disagree Disagree Agree Strongly Agree Unsure

Other

Would you like to receive updates on the JLUS process? If so please leave us your name, email or address.

\_\_\_\_\_

\_\_\_\_\_



C

project  
fact sheet/  
announcements

Please see the following pages.



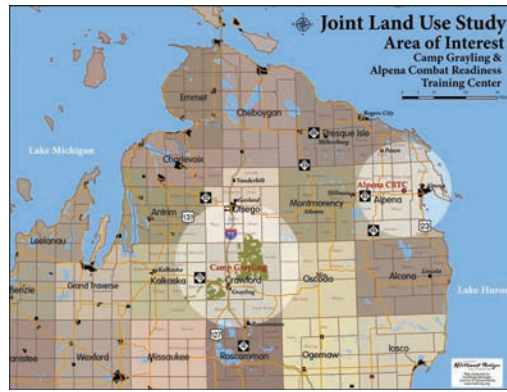
Working Together to Build Stronger Local Communities

## The Camp Grayling and Alpena Combat Readiness Training Center Joint Land Use Study (JLUS) Community Meetings

Do you live, work, or recreate near the Alpena Combat Readiness Training Center or Camp Grayling?

Have you wondered about the military installations and how they contribute to our economy?

What are the issues, concerns, and questions you have about the compatibility of the military missions with the surrounding communities?



Northeast Michigan Council of Governments invites you to participate in upcoming public meetings for the JLUS project that will address the issues related to military installations in our communities. Join staff from Camp Grayling and the Alpena Combat Readiness Training Center, local community officials, and other interested residents and business owners to hear a presentation about the military installations, learn about the JLUS project, and share your issues, concerns, and questions. Light snacks will be provided.



**Alpena Combat Readiness Training Center Public Meeting**  
 Thursday, June 1, 2017 | 7:00 pm – 9:00 pm  
 Maritime Heritage Center (NOAA) Sanctuary Theater, 500 W. Fletcher Street, Alpena, MI

**Camp Grayling Public Meeting**  
 Tuesday, June 6, 2017 | 7:00 pm – 9:00 pm  
 Kirtland Health Sciences Center, Community Room B, 4800 W. 4 Mile Road, Grayling, MI

Read more about the JLUS project at NEMCOG's website <http://www.discovernortheastmichigan.org/jlus.asp>



The Northeast Michigan Council of Governments invites Joint Land Use Study (JLUS) Policy and Technical Committee members to participate in the

## Camp Grayling and the Alpena Combat Readiness Training Center JLUS Installation Tours and Issues Identification Discussion



**Alpena Joint Training Center Installation Tour and Issues Identification Discussion**  
**Thursday, June 1, 2017**  
 9:00 am – 12:00 pm Installation Tour and Lunch (details provided upon receiving RSVP)  
 1:30 pm – 4:00 pm Issues Identification Discussion  
 at the Maritime Heritage Center (NOAA) Education Room,  
 500 W. Fletcher Street, Alpena, MI  
*(Please consider staying for the JLUS Public Meeting from 7:00 pm – 9:00 pm in the Maritime Heritage Center Sanctuary Theater)*

**Camp Grayling Joint Maneuver Training Center Installation Tour and Issues Identification Discussion**  
**Monday June 5, 2017**  
 9:00 am – 4:00 pm Installation Tour and Lunch (details provided upon receiving RSVP)  
**Tuesday, June 6, 2017**  
 9:00 am – 11:30 am Issues Identification Discussion  
 at the Grayling Township Hall, 2090 Viking Way, Grayling, MI  
*(Please consider attending the JLUS Public Meeting from 7:00 pm – 9:00 pm Kirtland Health Sciences Center, Community Room B, 4800 W. 4 Mile Road, Grayling, MI)*

**RSVPs are required to participate in the installation tours.**

All Policy Committee and Technical Committee members should RSVP for the installation tours to **Denise Cline**, Deputy Director/Chief Planner, Northeast Michigan Council of Governments (734) 648-9295 (direct phone line), (989) 705-3730 (main office), (989) 705-3729 (fax) or [dmcline@nemcog.org](mailto:dmcline@nemcog.org). **RSVPs due no later than 12:00 pm Friday, May 26.** Anyone who has not provided an RSVP will not appear on the installation security list and will not be able to participate in the tour. You will receive additional details about the tour logistics upon submitting your RSVP.



d

# surveys announcement



## Working Together to Build Stronger Local Communities The Camp Grayling and Alpena Combat Readiness Training Center Joint Land Use Study (JLUS) COMMUNITY SURVEY

*Do you live, work, or recreate near the  
Alpena Combat Readiness Training  
Center or Camp Grayling?*

*How do you feel these military  
installations affect your quality of life  
and the local economy?*

*What are the issues, concerns,  
and questions you have about the  
compatibility of the military missions with  
the surrounding communities?*



Northeast Michigan Council of Governments invites you to share your opinion and concerns through a community survey. Your input will help the Joint Land Use Study (JLUS) team identify problems and solutions.



**Go to the NEMCOG  
Joint Land Use Study project website  
and take the survey that's right for you.**  
<http://www.discovernortheastmichigan.org/jlus.asp>



If you would like a paper copy of the survey, please call NEMCOG at 989-705-3730 or email [dmcline@nemcog.org](mailto:dmcline@nemcog.org)

**Read more about the JLUS project at NEMCOG's website <http://www.discovernortheastmichigan.org/jlus.asp>**

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# C

## SWOT results

During the June 2017 public meetings for the Camp Grayling JMTC and Alpena CRTC JLUS, the JLUS project team conducted a SWOT analysis with project stakeholders. Stakeholders included members of the TC and PC as well as the public.

A SWOT analysis is a consensus-building exercise to sort previously identified issues into the categories of strengths, weaknesses, opportunities, and threats so that individuals can vote to share their preferences.

This voting it turn leads to the creation of a weighted matrix, which reveals the issues that stakeholders consider most important to their daily lives.

Some questions to consider while placing issues in the various categories include:

- ▶ **STRENGTH:**
  - ▶ What is working or has worked?
  - ▶ What are the technologies, programs, policies, or resources to build on?
- ▶ **WEAKNESS:**
  - ▶ What is not working and requires modification or abandonment?
  - ▶ What has been unsuccessful in the past and why?
- ▶ **OPPORTUNITY:**
  - ▶ What could work?
  - ▶ Are there untapped resources available?
  - ▶ Are there assets, like geographic location, that are not being maximized?
- ▶ **THREAT:**
  - ▶ What will work against the program if there is no charge?
  - ▶ What needs to be planned for now to prevent failure?

Results of the analysis performed at the NEMCOG public meetings is provided in the following tables and graphics. These weighted issues were used to develop the refined list of issues that was later presented to the public in October 2017.



*Above: The SWOT exercise facilitator collects issues, which can be positive or negative, on sticky notes. Then, the facilitator encourages participants to answer "in one voice" as they sort the issues into the four categories.*



*Once all the issues have been categorized, participants in Alpena (top left) and Grayling (below left) are given a number of stickers and instructions about how to use them. They can place their stickers as they see fit, selecting the issues that matter the most to them and their communities.*



**Table C.1 | Camp Grayling JMTC SWOT Results – TC and PC Members**

STRENGTHS		WEAKNESSES		OPPORTUNITIES		THREATS	
Issue	Votes	Issue	Votes	Issue	Votes	Issue	Votes
Economic Impact	9	Camp Grayling Operations: Noise	11	Airport: Sound and View Buffer	6	PFCs	19
Sustainability and Recycling	5	Tax Burden	7	MATES	6	Road Conditions	16
Community Cooperation	3	Internet Access	7	Communication with Area Surrounding Camp Grayling	5	Wildfires	12
Sounds and Sights of Freedom	3	Noise: Aircraft	7	Emergency Response Notification	4	Runway Expansion: Trees	8
Positive Community Interaction	3	Noise: Impact on Communities	6	Communication about Operations	3	ASP Protection	3
Simulated Training	2	DNR Tree Cutting	6	Camp Grayling 5 Year Expansion Plan	3	Unexploded Ordinance	2
Positive Members of the Community	2	Poor Cell Phone Reception	6	Future of Joint Recycling	1	Fuel Point Protection	2
Historic Reputation	2	Flight Path	5	Lake Recreation Effects	1	Anti-Terrorism/Force Protection	0
No Land Growth	1	Night Operations Impact on Communities	4	Summer Peak	1		
Continuing Improvement with Public Relations	1	Camp Grayling Operations: Low Flying	4	Increase Tanks	1		
Camp Grayling Operations: Noise Improvement	1	Displaced Wildlife	3	Tank Trails	0		
Threatened and Endangered Species Habitat	1	Clear Cutting	3	Double Northern Strike	0		
Wide Name Recognition	1	Emergency Response: Summer Peak	2	In Grants	0		
Best Group EVER	1	New Gates	1	Out Grant Disposal	0		
Multi-County Collaboration	0	Infrastructure Disrepair	0				

**Table C.2 | Camp Grayling JMTC SWOT Results – Public**

STRENGTHS		WEAKNESSES		OPPORTUNITIES		THREATS	
Issue	Votes	Issue	Votes	Issue	Votes	Issue	Votes
Wildlife: Contiguous Habitat	4	PA288 Enforce Resources	6	Public Relations	9	Fire Control	7
Community Support	3	Camp Grayling Operations: Noise	5	Economic Monitoring	7	Ground Water Contamination	6
Economic Impact	3	Problem Intersections	4	PA 288	5	Airfield Water Contamination	3
Wildlife: Partnerships	3	Cell Coverage	4	Education	5	Fire Impact to Local Training	2
Emergency Responders	2	Road Conditions	4	Social Media	2	Vertical Hazards	2
147,000 Acre Facility	2	North Down River I-75 Road	3	Silent Sports	2	PFCs	2
Maintaining Protected Habitat	1	Disaster Communications	3	Forest Health	2	Public Safety	1
Air Space	1	Water Quality	3	Energy Efficiency	1	In Grants and Out Grants	1
Wildfires Required Burns	1	Four Mile/I-75	2	Stormwater Management	1	PA288 ORV Trail Posting	1
UASs	1	Siltation	2	Interoperability	1	Property Damage due to Wildfires	0
Grayling Army Airfield	1	Infrastructure	2	Facilities as a Community Resource	1	UXOs	0
Wildlife: T&E Species	1	Shortage of Emergency Responders	1	Airfield Expansion Opportunities	1		
State Partnerships	1	Swimmers Itch	1	Virtual Pipe Line	1		
Research and Development	1	Soil Erosion	1	Population Surge (Carrying Capacity)	1		
Wildlife: T&E Research	1	BAPs	1	COA 4 UAS to Restricted Airspace	0		
Positive Deterrent	0	Fire Fighting Costs	1	Public Recreation	0		
Alpena-Grayling Partnership	0	Visitors Tail	1	Public Access	0		
Restricted Air Space	0	High Season Problem Intersections	1				
CG MATES Partnership	0	Traffic Congestion	1				
Increased Throughput	0	Social Media Perception	0				
Rising Tide	0	Removal of Vegetation	0				
DSCA	0	Logistical Trail	0				
Varieties of Land Ownership	0	Freeway Interchanges (choke points)	0				
Designated Natural Rivers	0						
NWTF Cooperative WL Management	0						
Facilities	0						
Hanson Hills Rec Area	0						
Boundary Management	0						
Frequency Capacity	0						

**Table C.3 | Alpena CRTC SWOT Results – TC, PC, and Public**

STRENGTHS		WEAKNESSES		OPPORTUNITIES		THREATS	
Issue	Votes	Issue	Votes	Issue	Votes	Issue	Votes
Northern Strike Activity	9	Noise: Training/Aircraft Operations (Too low and fast)	5	Base Community Council	9	Closing Alpena CRTC	10
Commercial Partnership with Sheriff's Department	7	Delayed Budget/Congressional Approval	3	Northern Strike	7	Live Munition Impacts to Lake Huron	7
Draws New People/Tourist to Community	6	Flight Path	2	Increase Local Awareness of Alpena CRTC Economic Impact	6	PFCs	5
Base Population Economic Impact	6	Training Accidents	2	Increase Community Involvement	6	Impact of Munitions on Groundwater Quality	4
Airport Viability	5	Infrastructure Issue – Roads and Matching SRM	2	Sustainability	5	Unexploded (UXO)/Dummy Ordinance in Lake Huron	1
Joint Response Emergency Services	5	FAA Oversight	1	Attract DOD Prime Contractors	5	Impact on the Marine Sanctuary	1
Star Base	5	PT SES Trigger Northern Strike	0	Identify the Carrying Capacity of Alpena	3	Security Breach	0
Members of the Community	4	Sling Load Training	0	PSA	2	Civilian Intrusion	0
New Hangar	3	Drop Zone Accidents	0	Parade	1		
Construction is a positive Economic Impact	3			Public Air Show	0		
Expansion Potential	3						
Northern Strike and Economic Assess	2						
Current Sonar Scan	2						
Surge Capacity - Rental Vehicle	0						

**Figure C.1 | Camp Grayling JMTC SWOT Results**



**Figure C.2 | Alpena CRTC SWOT Results**



(Items in the smallest font size got less than 5 votes.)

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d

## strategy index

Please see the following pages.

**Table D.1 | Camp Grayling JMTC Strategies**

JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<b>Category 1: Noise</b>							
<i>Issue 1a Impact of Aircraft Noise on Communities</i>							
Noise Study	1a.1	Conduct a noise study	H	0-3	Research	Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
Noise Study	1a.2	Educate the public on residential sound attenuation	M	0-1	Outreach	NEMCOG, Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
Noise Study	1a.3	Establish no-fly zones over sensitive areas	M	0-4	Regulatory	NEMCOG, Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
Military Overlay Zone	1a.4	Reduce housing development near military operations	M	0-5+	Regulatory	Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
Military Overlay Zone	1a.5	Update building codes to include better sound proofing for buildings built within the 65 ADNL noise area	H	0-1	Regulatory	Grayling, Alpena, Crawford County	NEMCOG, Residents
<i>Issue 1b Tree Cutting Reduces Noise Buffer</i>							
Landscape Plan	1b.1	Plant trees in areas where it is appropriate and allowed	H	2-5+	Regulatory	Camp Grayling JMTC, MDNR	NEMCOG, Residents, U.S. Forest Service
Landscape Plan	1b.2	Assess timber harvest effects on noise attenuation	M	2-3	Outreach	Camp Grayling JMTC	Residents, MDNR
Landscape Plan	1b.3	Enhance public awareness of forestry management plans, operations, and impacts	M	2-3	Outreach	MDNR	Camp Grayling JMTC, Residents
<b>Category 2: Military Operations</b>							
<i>Issue 2a Flight Paths over Homes</i>							
Military Overlay Zone	2a.1	Create sensible military overlay zones around Camp Grayling JMTC	H	0-4	Regulatory	NEMCOG Planners	NEMCOG, Residents
Noise Study Military Overlay Zone	2a.2	Educate the public on existing established flight paths	M	0-5+	Outreach	Camp Grayling JMTC/Alpena CRTC, NEMCOG	NEMCOG, Residents
<i>Issue 2b Noise and Vehicular Disruption from MATES</i>							
Community Relations Staff	2b.1	Educate the public on traffic routes and needs	M	0-2	Outreach	Camp Grayling JMTC Public Affairs, NEMCOG	NEMCOG, Residents
<i>Issue 2c Noise and Vibration from Night Training</i>							
Noise Study Community Relations Staff	2c.1	Educate and inform the public on night training	M	3-5	Regulatory	DOD, NGB, Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
Noise Study Installation Master Plan	2c.2	Identify specific locations where night training is particularly disruptive and identify alternatives	M	0-2	Regulatory	DOD, NGB	NEMCOG, Camp Grayling JMTC/Alpena CRTC
Noise Study Installation Master Plan	2c.3	Confine military arms testing and range use to areas adjacent to state-owned lands	M	0-2	Regulatory	DOD, NGB, Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
<i>Issue 2d Population Growth may Encroach on the Mission</i>							
Military Overlay Zone Installation Master Plan	2d.1	Establish zoning regulations that prevent encroachment, particularly near potentially dangerous and noise-generating activities	H	1-2	Regulatory	NEMCOG	NEMCOG, Residents, Camp Grayling JMTC
Military Overlay Zone Installation Master Plan	2d.2	Purchase land around installations to control growth	L	2-5+	Regulatory	NEMCOG, Camp Grayling JMTC	Landowners
<b>Category 3: Environmental</b>							
<i>Issue 3a PFOS and PFOA Contamination of Groundwater</i>							
Community Relations Staff Water Master Plan	3a.1	Improve public outreach and access to information	M	1-5+	Outreach	Camp Grayling JMTC, NGB	NEMCOG, Residents, MDNR
<i>Issue 3b Impacts/Effects on Groundwater and Drinking Water</i>							
Community Relations Staff Water Master Plan	3b.1	Provide information to the public on groundwater contamination in the Camp Grayling area	M	2-3	Research	Camp Grayling JMTC, MDEQ	NEMCOG, Residents, MDNR



JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<i>Issue 3c Impacts/Effects on Surface Water Systems</i>							
Community Relations Staff Water Master Plan	3c.1	Control runoff and support bioassessment surveys to monitor ecological and aquatic community health	H	2-3	Regulatory	NEMCOG, MDEQ	Residents
Community Relations Staff Water Master Plan	3c.2	Support water quality and aquatic ecology communications	L	2-3	Outreach	NEMCOG	Residents, MDNR
<i>Issue 3d Effects on Health of Wildlife Populations</i>							
Installation Master Plan Community Relations Staff	3d.1	Ongoing ecological assessment and community outreach and engagement	M	3-5+	Research/ Outreach	Camp Grayling JMTC, MDNR	Residents
<i>Issue 3e Wildfire Management</i>							
Community Relations Staff Fire Study	3e.1	Increase public awareness of ongoing wildfire management efforts and gather public input	M	0-5+	Outreach	Camp Grayling JMTC, MDNR	Residents, MDNR
<i>Issue 3f Resource Use and Sustainability</i>							
Community Relations Staff Water Master Plan	3f.1	Public outreach to increase awareness of sustainability measures at Camp Grayling JMTC	L	0-5+	Outreach	Camp Grayling JMTC Public Affairs	Residents
Installation Master Plan	3f.2	Consider the creation of joint recycling/sorting station	L	2-3	Regulatory	Camp Grayling JMTC, NEMCOG	Residents
<b>Category 4: Transportation and Infrastructure</b>							
<i>Issue 4a Effects of Growth on Utilities</i>							
Installation Master Plan	4a.1	Continue to monitor capacity and community growth	L	0-5+	Regulatory	Grayling Township	Residents, MDNR
Installation Master Plan	4a.2	Plan for possible mission expansion	M	0-5+	Planning	Camp Grayling JMTC	City of Grayling, Residents
<i>Issue 4b Improve Internet Access</i>							
	4b.1	Encourage the growth and use of high-speed internet services	L	0-3	Regulatory	City of Grayling	Residents, County, Military
<i>Issue 4c Poor Cellular Reception</i>							
	4c.1	Grow cellular services	L	2-3	Regulatory	Camp Grayling JMTC, Local Communities	Residents, MDNR
<i>Issue 4d Traffic</i>							
Installation Master Plan Transportation Study	4d.1	Streamline Camp Grayling JMTC traffic	M	2-3	Regulatory	Camp Grayling JMTC, Local Communities	Residents
Installation Master Plan Transportation Study	4d.2	Improve traffic flow and safety throughout the Grayling area	H	2-3	Regulatory	NEMCOG/City of Grayling	Residents, County, Military
Transportation Study	4d.3	Improve the I-75/North Down River Road interchange	H	2-3	Development	Crawford County Road Commission	NEMCOG, Camp Grayling JMTC, City of Grayling
Transportation Study	4d.4	Create a landmark and symbolic entrance to Camp Grayling JMTC	L	3-5	Regulatory	Grayling Township, City of Grayling	Camp Grayling JMTC, Grayling Township
<i>Issue 4e Recreational Access</i>							
Community Relations Staff Transportation Study Installation Master Plan Landscape Plan	4e.1	Ensure appropriate recreational access and increase public outreach	M	2-3	Regulatory	Camp Grayling JMTC, Local Communities, MDNR	Residents, MDNR
<i>Issue 4f Poor Road Condition</i>							
Transportation Study	4f.1	Improve road network	M	0-5+	Regulatory	Multiple	Residents, Camp Grayling JMTC
Transportation Study	4f.2	Increase funding for road projects and maintenance	H	0-5+	Funding	Multiple	Residents, Camp Grayling JMTC

JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<b>Category 5: Community Partnerships</b>							
<b>Issue 5a Communications/Education</b>							
Community Relations Staff	5a.1	Document a comprehensive SOP for communications and community relations at Camp Grayling JMTC	M	1-2	Outreach	Camp Grayling JMTC	Residents
Community Relations Staff	5a.2	Use relationship with Blarney Broadcasting as a model for expanding media reach	L	1-3	Outreach	Camp Grayling JMTC	Residents, Local Media
Community Relations Staff	5a.3	Develop a public education program on UXO	M	1-2	Outreach	Camp Grayling JMTC	Residents
Community Relations Staff	5a.4	Ensure web resources include access to Camp Grayling contact information and resources	L	0-1	Outreach	Camp Grayling JMTC	Residents
<b>Issue 5b Public Relations/Community Involvement</b>							
Community Relations Staff	5b.1	Inform community partners on process to request Camp Grayling JMTC tours and participation in community events	M	0-1	Outreach	Camp Grayling JMTC	Residents
Community Relations Staff	5b.2	Expand Camp Grayling JMTC community relations staff	H	3-5	Staffing	Camp Grayling JMTC	Residents
Community Relations Staff	5b.3	Develop an interpretive visitors' center/history center at Camp Grayling JMTC	L	3-5	Outreach	Camp Grayling JMTC	Residents, Chambers of Commerce
Military Overlay Zone Community Relations Staff	5b.4	Revise respective zoning ordinances for governmental entities within the APZ	H	1-2	Regulatory	Grayling Township, City of Grayling	Developers, Residents, Local Governments
Community Relations Staff Installation Master Plan Transportation Study	5b.5	Collaborate on joint-use conference/community center	M	4-5	Partnership	Camp Grayling JMTC, City of Grayling	Residents, Local Governments
Community Relations Staff	5b.6	Convene a Camp Grayling JMTC Community Council	M	2-3	Outreach	Project Rising Tide, Camp Grayling JMTC	Residents, NEMCOG
<b>Category 6: Economic Development</b>							
<b>Issue 6a Effect on Property Value Mostly Perceived as Neutral or Positive</b>							
Military Overlay Zone Community Relations Staff Economic Impact Study	6a.1	Develop communication materials that highlight the potential impacts from Camp Grayling JMTC for future homebuyers	M	0-1	Outreach	JLUS Implementation Committee, Rising Tide Initiative	Camp Grayling, County Economic Development Leads, Local Real Estate Agents
<b>Issue 6b Significant Contributor to Local Economy</b>							
Fire Study Economic Impact Study	6b.1	Fire protection services needs study	H	0-1	Research	Camp Grayling JMTC	Residents, Grayling Fire Department, County Economic Development Leads
Economic Impact Study	6b.2	Local purchasing goal for Camp Grayling JMTC	M	2-3	Outreach	Camp Grayling JMTC	Grayling Business Owners, County Economic Development Leads
Transportation Study Economic Impact Study	6b.3	Expanded public transportation from Camp Grayling JMTC to surrounding communities to support military tourism	M	0-1	Outreach	City of Grayling	Grayling Business Owners, County Economic Development Leads, Gaylord, Michigan Works!
Installation Master Plan Economic Impact Study	6b.4	Increase public use of Grayling Airfield	L	4-5	Development	Camp Grayling JMTC	Grayling Township, Camp Grayling, FAA, MDOT, County Economic Development Leads
<b>Issue 6c Economic Incentivizing and Monitoring</b>							
Economic Impact Study	6c.1	Economic tracking and reporting mechanisms to quantify annual military tourism	M	0-1	Outreach	City of Grayling	Camp Grayling JMTC, County Economic Development Leads, Michigan Works!
Economic Impact Study	6c.2	Economic incentives to generate military tourism	M	2-3	Regulatory	Camp Grayling JMTC, City of Grayling, Grayling Township	Chambers of Commerce, County Economic Development Leads

**Table D.2 | Alpena CRTC Strategies**

JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<b>Category 1: Noise</b>							
<i>Issue 1a Training/Aircraft Operations are Too Low/Fast</i>							
	1a.1	Educate the public on the flight paths used for military aircraft	M	0-2	Outreach	Alpena CRTC, NEMCOG	NEMCOG, Residents
	1a.2	Discourage residential uses via zoning	M	2-4	Regulatory	NEMCOG	NEMCOG, Alpena Regional Airport
	1a.3	Work with FAA and Alpena Regional Airport to control aircraft flight paths	M	0-2	Outreach	NEMCOG	Alpena Regional Airport, Alpena CRTC
Military Overlay Zone	1a.4	Create a Military Overlay Zone	H	0-4	Regulatory	NEMCOG Planners	Residents
Military Overlay Zone Noise Study	1a.5	Update building codes Alpena CRTC to include better sound proofing for buildings built within the 65 ADNL noise area	M	1-3	Regulatory	City of Alpena, Alpena County	Residents, Alpena CRTC
Military Overlay Zone Noise Study	1a.6	Conduct a noise study	H	0-3	Research	Camp Grayling JMTC/Alpena CRTC	NEMCOG, Residents
<b>Category 2: Military Operations</b>							
<i>Issue 2a Live munition impacts to Lake Huron</i>							
Bathymetric Survey Water Master Plan Interagency Cooperation	2a.1	Identify impacts to the environment	H	2-5+	Research	NEMCOG, MDNR, MDEQ	NEMCOG, Residents, NOAA, Alpena CRTC
<i>Issue 2b Northern Strike Activity</i>							
Community Relations Staff	2b.1	Organize and engage community members in advance	M	2-3	Outreach	NEMCOG	Alpena CRTC, Camp Grayling JMTC, Community Leaders
<i>Issue 2c Marine Sanctuary</i>							
Bathymetric Survey Interagency Cooperation	2c.1	Identify potential UXO on the lake bed	H	1-5+	Regulatory/ Research	Alpena CRTC, NOAA	NEMCOG, U.S. Navy, U.S. Coast Guard
Military Overlay Zone Noise Study	2c.2	Establish fixed boundaries so that encroachment into the military operations area is kept to a minimum	H	2-3	Regulatory/ Research	Thunder Bay National Marine Sanctuary	Alpena CRTC
Community Relations Staff Interagency Cooperation Water Master Plan	2c.3	Author and promote cooperation story with Thunder Bay National Marine Sanctuary	M	2-3	Research/ Outreach	NEMCOG, NOAA	Thunder Bay National Marine Sanctuary, MDEQ
<b>Category 3: Environmental</b>							
<i>Issue 3a PFOS and PFOA Contamination of Groundwater</i>							
Community Relations Staff Water Master Plan	3a.1	Improve public outreach and access to information	H	1-3	Outreach	Alpena CRTC	MDEQ, Residents
<i>Issue 3b Surface Water Quality (Lakes, Rivers, Streams, Wetlands)</i>							
Water Master Plan Interagency Cooperation	3b.1	Support water quality and aquatic ecology scientific communications	M	2-3	Outreach	Alpena CRTC	MDEQ, Residents
Water Master Plan Interagency Cooperation	3b.2	Use biodegradable targets for lake training	H	2-3	Regulatory	Alpena CRTC	NOAA
<i>Issue 3c Groundwater Quality</i>							
Community Relations Staff Water Master Plan	3c.1	Provide information to the public on groundwater contamination in the Alpena CRTC area	M	2-3	Outreach	Alpena CRTC	Residents, MDNR

JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<b>Category 4: Transportation and Infrastructure</b>							
<b>Issue 4a Effects of Growth on Utilities</b>							
	4a.1	Address utilities issues at Alpena CRTC	L	1-4	Regulatory	Alpena CRTC	City of Alpena, Alpena County Townships, Alpena County
	4a.2	Plan for possible mission expansion	M	0-5+	Regulatory	Alpena CRTC	Alpena County, Residents
<b>Issue 4b Airport Joint Ownership/Land Use Access</b>							
Interagency Cooperation Community Relations Staff	4b.1	Continue positive coordination	H	0-5+	Outreach	Alpena CRTC, Alpena Regional Airport	
<b>Issue 4c Road Funding</b>							
Transportation Plan Community Relations Staff	4c.1	Continue discussion between county and military officials	M	0-1	Research/ Outreach	Alpena CRTC	City of Alpena, Alpena County Townships, Alpena County
<b>Issue 4d Road Condition</b>							
	4d.1	Increase funding for road projects and maintenance	H	0-5+	Funding	City of Alpena, Alpena County Townships, Alpena County	Residents
<b>Issue 4e Recreational Access</b>							
	4e.1	Determine whether allowing lake access is viable	L	0-1	Regulatory/ Research	Alpena CRTC, Alpena Regional Airport	Residents, MDNR
<b>Category 5: Community Partnerships</b>							
<b>Issue 5a Communications/Education</b>							
Community Relations Staff	5a.1	Hire a dedicated community relations specialist for Alpena CRTC	H	2-3	Regulatory	Alpena CRTC, MIANG	Residents
Community Relations Staff	5a.2	Improve update process to Alpena CRTC website	M	2-3	Outreach	Alpena CRTC, MIANG	Residents
Community Relations Staff Economic Impact Study	5a.3	Promote STARBASE as an asset connected to Alpena CRTC	M	2-3	Outreach	Alpena CRTC	Residents
Community Relations Staff Economic Impact Study	5a.4	Strengthen existing partnership with Alpena Community College	M	2-3	Partnership	Alpena CRTC	Residents
Interagency Cooperation Community Relations Staff	5a.5	Formalize communications with NOAA regarding operations over Thunder Bay National Marine Sanctuary	M	0-3	Outreach	Alpena CRTC	Residents
Military Overlay Zone	5a.6	Revise respective zoning ordinances for governmental entities within the APZ	H	1-2	Regulatory	Alpena County Townships, NEMCOG	Developers, Residents, Local Governments
<b>Issue 5b Public Relations/Community Involvement</b>							
Interagency Cooperation Economic Impact Study	5b.1	Convene expanded Alpena CRTC Community Council with Alpena Area Chamber of Commerce	M	2-3	Outreach	Alpena CRTC, JLUS Implementation Committee	Residents
Community Relations Staff Economic Impact Study	5b.2	Inform community on process to request tours and participation in community events	M	2-3	Outreach	Alpena CRTC	Residents
<b>Category 6: Economic Development</b>							
<b>Issue 6a Significant Contributor to Local Economy</b>							
Economic Impact Study	6a.1	Local purchasing goal for Alpena CRTC	M	2-3	Outreach/ Research	Alpena CRTC	Business Owners, Target Alpena
<b>Issue 6b Airport Viability</b>							
Interagency Cooperation	6b.1	Leverage relationships to replace customs agent	M	2-3	Regulatory	Alpena Regional Airport	Residents

JLUS IMPLEMENTATION TEAM ACTION PLAN ITEMS	ID	ISSUE/STRATEGY	PRIORITY	TIME	TYPE	STRATEGY LEAD	STAKEHOLDERS
<i>Issue 6c Partnership with Sheriff</i>							
Economic Impact Study	6c.1	Maintain relationship between sheriff and Alpena CRTC and advocate for longer-term contract	M	2-3	Regulatory	Alpena CRTC/Alpena County Sheriff	
<i>Issue 6d Military Tourism</i>							
Economic Impact Study	6d.1	Economic incentives to generate military tourism	M	2-3	Outreach/Research	Alpena County	Local Businesses, Tourism Bureaus, Target Alpena
Economic Impact Study	6d.2	Economic tracking and reporting mechanisms	M	2-3	Outreach/Research	Chamber of Commerce	Alpena CRTC, Local Businesses, Target Alpena

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## draft report comments

See the following pages for comments received from key stakeholders.

**Camp Grayling JMTC and Alpena CRTC JLUS Comment Matrix**  
 Draft Submittal, May 2018

Comment Number	Reviewer	Page Number	Heading Number	Comment	Contractor Response	Contractor Resolution
1	Denise Cline	2-6	2.1.8	Missaukee County is unzoned (text says zoning information was unavailable)	Concur	Text corrected
2	Denise Cline	2-7	2.1.9	Could we include a description of what APZ I and II mean? How are they different?	Concur	Text adjusted
3	Denise Cline	2-13	2.3.2	Text says that small portions of the RA may be privately owned if they have a conditional use lease agreement between the land owner and the US Government. Does this exist at Guthrie Lakes? I'm assuming not since the text also says it is unclear how they came to be in such close proximity. Issue 1b talks about trees needing to hug the structure to be effective, but this is in conflict with wildfire prevention strategies.	Concur	Additional research is needed to better understand what agreements were in place when the Guthrie Lakes development was approved. Tetra Tech will resolve this comment before the Final Submittal. Regarding wildfire, the narrative has been adjusted.
4	Denise Cline	2-16	2.3.2	Issue 2.d - add "township" to zoning recommendations. "Cities, counties, and townships....". Also - report recommends preventing future development to limit future encroachment, etc. However, it's already been stated that this large amount of private property and development was allowed to exist/develop (without really knowing why). Questions that the communities will likely ask when the implementation committee starts working on this are: <b>How do you limit someone's ability to use their property without it being considered a taking? Or maybe a taking is justified in these cases due to safety concerns? Could the property owner demand just compensation?</b>	Concur	Added "townships." See updated language on page 4-9, 4-27, and Appendix F.
5	Denise Cline	2-16	2.3.3	Change the "More Information" box to include the new consolidated website: <a href="https://www.michigan.gov/pfasresponse">https://www.michigan.gov/pfasresponse</a>	Concur	Text adjusted
6	Denise Cline	3-3	3.1.5	Typo - Top paragraph on right-hand column. "The installation employees 88 military personnel..."	Concur	Text corrected
7	Denise Cline	3-13	3.3.3	Change the "More Information" box to include the new consolidated website: <a href="https://www.michigan.gov/pfasresponse">https://www.michigan.gov/pfasresponse</a>	Concur	Text adjusted
8	Denise Cline	3-14	3.3.4	3rd column - 2nd paragraph - reference for the wastewater treatment numbers were probably from the City of Alpena Comprehensive Plan, not the Alpena County Master Plan.	Concur	Text corrected
9	Denise Cline	4-12	2.d.2	No real comment here - I just wanted to say that this is a very interesting strategy. I'm very interested in learning more about the RPX program mentioned.	Concur	Thanks! No action
10	Denise Cline	4-22	5.b.4	I'm thinking that communities should be coordinating with Camp Grayling/Alpena CRTC for their site plan reviews - especially if there isn't a military overlay zone in place. Camp Grayling/Alpena CRTC should at least be on the list of potential entities that site plans are distributed to in order to obtain feedback. This comment would apply to all strategies concerning the military overlay zone. Should add reference to Camp Grayling/Alpena CRTC in site plan review standards in local zoning ordinances.	Concur	Text adjusted - pages 4-9, 4-22, 4-27
11	Denise Cline	b-9	2.1.1	Add Michigan Sea Grant/Michigan State University Extension to list of stakeholders	Concur	Text adjusted
12	Denise Cline	b-10	2.1.2	Update list of committee members (attached) - delete Mary Sanders, add Brenda Fournier. Check for other changes (changes within Camp Grayling as well).	Concur	Text adjusted per Word document



Comment Number	Reviewer	Page Number	Heading Number	Comment	Contractor Response	Contractor Resolution
13	Denise Cline			General Comment - NEMCOG should continue developing the JLUS web presence. Each issue could have a separate page with the recommended strategies and also other resources which address that strategy. Then, as new developments occur, this additional information could be added.	Concur	This is a great idea!
14	Steven P. Smigelski, Airport Manager	3-3	3.1.5	Drones can now be flown in the Class D airspace when the tower is open.	Concur	Text adjusted
15	G. Sundin, Alpena City Manager	Pg. before 1-1	Surround Area	CRTC located west of Alpena, not northwest	Concur	Corrected
16	G. Sundin, Alpena City Manager	Same as Above	Top Issues	2nd arrow - I do not believe that events like Northern Strike are a burden to the community. Where does this come from?	Concur - We heard from some that the activity is a burden while others see it as a boon.	Changed to "impact the community"
17	G. Sundin, Alpena City Manager	Pg. 1-2	1.3	2nd column, 2nd paragraph, 4th line - "bound" should be "bounded". Later in paragraph, does not say what it is bounded by to the east.	Concur	Changed to "bounded." No major constraints/boundaries to the east except wetlands.
18	G. Sundin, Alpena City Manager	Pg. 3-4	3.1.6	Population projection for Alpena County is unrealistically high. Where did you get your data?	Discuss	Our source is Esri community analyst, which pulls Census data. The population graph is for the city of Alpena, not the study area.
19	G. Sundin, Alpena City Manager	Pg. 3-10	3.3.2	Issue 2b - I have never heard that Northern Strike and other events are a burden to the community.	Concur - We heard from some that the activity is a burden while others see it as a boon.	Changed "burden" to "impact" like in comment above.
20	G. Sundin, Alpena City Manager	Pg. 3-17	3.3.5	3rd column, 2nd paragraph, 3rd line from bottom - Add the word "been" after "regularly".	Concur	Changed
21	G. Sundin, Alpena City Manager	Pg. 3-17	3.3.5	4th column, last paragraph - need an explanation as to why visits through STARBASE are not providing information that can be shared with family members. This is a generic statement as currently written.	Concur	Removed sentence
22	G. Sundin, Alpena City Manager	Pg. 3-18	3.3.6	Issue 6.a, 2nd column, 2nd paragraph - Statement that summer tourism adds more than 4,000 people to the area seems outdated. Number seems low. Check with CVB.	Concur	Figure revised
23	G. Sundin, Alpena City Manager	Pg. 3-18	3.3.6	Issue 6.b., 3rd column, 15th line - change "Airfield" to "Airport".	Concur	Corrected
24	G. Sundin, Alpena City Manager	Pg. 4-2		1st column, ICRMP Heading - paragraph states that last ICRMP expired in 2017. Has a new one been completed or is it at least planned for?	Concur	Added language about the ICRMP update process
25	G. Sundin, Alpena City Manager	Pg. 4-30	Issue 2c	1st column, 3rd arrow - need a period after MDEQ. Change "has" to "have".	Concur	Corrected
26	G. Sundin, Alpena City Manager	Pg. 4-30	Issue 2c	2nd column under "Additional Information" - Change "Alpena Regional Medical Center" to "Mid-Michigan Medical Center - Alpena".	Concur	Corrected
27	G. Sundin, Alpena City Manager	Pg. 4-32	Issue 4b	3rd column, last arrow under Recommendations - Wasn't the airport master plan recently updated as part of the terminal project? I could be wrong.	Concur	Design plans for the new terminal were released, but that's different from the master plan.

Comment Number	Reviewer	Page Number	Heading Number	Comment	Contractor Response	Contractor Resolution
28	G. Sundin, Alpena City Manager	Pg. 4-33	Issue 4d	1st column under Recommendations - I strongly disagree with using trolley fares or possible future downtown paid parking to subsidize road repairs. These funds help pay trolley expenses and any future paid parking would offset equipment and maintenance costs.	Concur	Removed recommendation
29	G. Sundin, Alpena City Manager	Pg. 4-35	Issue 5b	1st column under "Summary" - a Copy of the Chamber's organizational model should be included in the Appendix. If not to be included, it should not be mentioned.	Concur	Will include graphic in references appendix (A).
30	G. Sundin, Alpena City Manager	Pg. 4-35	Issue 6a	3rd column,last recommendation - Eliminate the word "know" in the 2nd line	Concur	Corrected
32	G. Sundin, Alpena City Manager	Throughout		When recommendations are made, such as improving direct lines of communication between the CRTC and the community; need for a dedicated community relations specialist; improving the CRTC's webpage; and other digital outreach, etc., the challenges listed seem to be ready made excuses for nothing actually being done (the unlikelihood of the base getting a dedicated community relations specialist, even though Camp Grayling has one; problems with having to have any changes to the base's website or other digital communications needing ANG headquarters review and approval, etc.). <b>The report needs to be more forceful in saying certain recommendations need to be taken seriously and every effort made to make them happen.</b> This is especially true of the community relations specialist position, which is at the center of many of the needs and recommendations. Otherwise this is nothing more than an academic exercise.	Unfortunately, this is not a regulatory document. The most forceful we can get is to recommend actions.	Narrative updated in section 4.1.1.
33	Julie Lowe, MDEQ	Throughout		Incorporate metion of new PFAS website: <a href="https://www.michigan.gov/pfasresponse">https://www.michigan.gov/pfasresponse</a>	Concur	References adjusted - pages 2-16, 3-13
34	Rob Pallarito, Otsego County Commissioner	Throughout		I like the study as presented. I do wish it included a recommendation to correct for zoning/planning mistakes from the past.... possibly an avenue to acquire land now occupied and creating a "buffer area".	Concur	Zoning recommendations have been revised in Section 4
35	Ken Glasser	Pg. 2-14	Issue 1b	Trees hugging a home is a fire, roof damage issue. An insurer may cancel a policy due to the increased hazard!	Concur	Text ajusted
36	Ken Glasser	Pg. 2-16	Issue 2d	A 5-mile setback is economically devastating to the townships and counties which rely on property taxes to operate. Private individuals are also detrimetnally affected.	Concur	Recommendation for a 5-mile buffer revised.
37	Ken Glasser	Pg. 4-7		Same comment as above	Concur	Recommendation for a 5-mile buffer revised.
38	Ken Glasser	Pg. 4-9		Building code changes create consequences of higher building cost and potential out-of-pocket expense in an insurance claim due to costs to retrofit home.	Concur	Recommendation rephrased to only include new construction
39	Patty O'Donnell	Entire		The Study should be in a format that is practical to read and to print such as 8.5x11	Do not concur	The format was chosen to better represent the maps.
40	Patty O'Donnell	Page 4-17	4d.2	Challenges: What does this bullet point mean: "Local efforts to retain posted speed limits on M-72 may be unsuccessful" <b>I think I know what this means but where on M-72 or would they like it throughout the County?</b>	Discuss	Text adjusted to say within Crawford county
41	Patty O'Donnell	Page 4-18	4d.3	Recommendations: first arrow: combine the two sub-bullits to - <b>Develop a full interchanges by adding southbound ramps to I-75.</b> Challenges: first bullet, last sentence - This is not a <b>State or</b> federal priority	Concur	Text adjusted
42	Patty O'Donnell	Page 4-18	4f	<b>Make Issue 4f Poor road condition that includes 4f.1 Improve Road network and 4f.2: Increase funding for road projects and maintenance, to 4e for better flow</b> instead of after Recreational Access. <b>Recreational access would be 4f.</b>	Discuss	This adjustment would affect the layout in multiple locations.

Comment Number	Reviewer	Page Number	Heading Number	Comment	Contractor Response	Contractor Resolution
43	Patty O'Donnell	Page 4-19	4f (4e)	(Please note that the State, County Road Commission, and the City of Grayling have started to receive increased funding from the increased gas tax and registration fees that began January 2017) 4e.2 Recommendations: add at the end of the last bullet: and wood products industry.	Concur	Text adjusted
44						
45						
46						
47						

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# overlay zone research and analysis

## F.1 Down Zoning

*How do you limit someone's ability to use their property without it being considered a taking? Is a taking justified in these cases due to safety concerns? Could the property owner demand just compensation?*

At the core of these questions is the question of legality as it relates to down zoning a property without it being considered a taking. In the situation of the JLUS, it is recommended to limit development in areas within APZs/airport approach areas and within noise contours near the military installations. Ideally, the mechanism to achieve this goal would be to implement a zone that limits development in these areas of conflict or potential conflict. Provided below is background on case law regarding to down zoning and the possible repercussions.

Both the United States Constitution and the Michigan Constitution prohibit the government from taking private land for public use without providing just compensation to the landowner. A taking can be either the physical taking of a landowner's property by the government or it can be a regulatory taking. A regulatory taking is when a government regulation restricts the use of private property to the point that the property no longer has any real value.

There are two situations in which a regulatory taking can occur:

- ▶ when a regulation leaves the landowner with no economically viable use of the land, known as a categorical taking
- ▶ based on the balancing test established in Penn Central Transportation Co. v. New York City, 438 U.S. 104 (1978)

For the first situation, a categorical taking only occurs when a regulation abnegates land of all economic vitality. For example, the Supreme Court held that a law in South Carolina prohibiting beachfront landowners from erecting any permanent structures on their property rendered the property valueless, and therefore constituted a categorical taking under the Fifth Amendment. The court recognized that law restricted all viable economic uses of the land and rendered the land valueless, thus the court decided a categorical taking had occurred. With this ruling in place, the state ultimately ended up purchasing the land to enable the plans for the coastal area to move forward.

For the second situation, if the regulation does not deny the property of all economic value, courts will utilize the Penn Central balancing test to determine if a regulatory taking has occurred. Penn Central involved a challenge to New

York City's Landmark Preservations Law, which prevented the Penn Central Transportation Company from constructing a skyscraper on top of Grand Central Station. The court held that the application of the law did not constitute a taking based on a three-part balancing test. This test requires courts to consider the character of the state action, the economic impact of the regulation, and the extent to which the regulation has interfered with a distinct investment-backed expectation.

The three-part test has some weak points. For example, it was not established by the courts how many prongs need to be ruled in favor of the plaintiff (the property owner) in order to establish a taking. Each of the three parts is explained in more detail below.

1. **CHARACTER OF THE STATE ACTION:** The plaintiff needs to argue that there is no legitimate government interest being advanced by the zoning classification. This is difficult for the plaintiff because courts have stated that zoning ordinances are generally permissible and that local governments may enact zoning restrictions to promote the general welfare, even if they adversely affect a landowner's property interests.
2. **ECONOMIC IMPACT OF THE REGULATION:** The plaintiff needs to show that the regulation deprives the land of all economically beneficial uses. There is significant nuance to this piece, as the splitting of property rights makes this potentially complicated for the plaintiff. Just because surface rights may be limited by a regulation (e.g., building a house when zoned residential but not being allowed to in a lower intensity zone) does not mean that the property is diminished of its value. Sub-surface, mining, or water rights, or any other property rights may still be viable.
3. **THE EXTENT TO WHICH THE REGULATION HAS INTERFERED WITH DISTINCT INVESTMENT-BACKED EXPECTATIONS:** The plaintiff needs to prove that investment-backed expectations has occurred on the property and that further investment is no longer legal because of the regulation. For example, the property owner bought land and planned to build 200 homes. They build and then sell them in increments of 25. After building 50 homes, the property is down zoned to no longer allow residential development. The plaintiff in this scenario could make the argument that the regulation interfered with distinct investment-backed expectations. This part of the test veers into the world of vested rights, as well.

Applying a zone for the sake of contributing to the health, safety and general welfare of the population is generally allowable. An overlay zone can be a more effective way to achieve this than simply changing zoning.

## F.2 Overlay Zones

Information about overlay zones from the American Planning Association is presented below, followed by recommendations for this specific area.

**BASICS:** An overlay zone is a zoning district that is applied over one or more previously established zoning districts, establishing additional or stricter standards and criteria for covered properties in addition to the standards and criteria of the underlying zoning district. Communities often use overlay zones to protect specific features such as historic buildings, wetlands, steep slopes, and waterfronts. Overlay zones can also be used to promote specific development projects, such as mixed-used developments, waterfront developments, housing along transit corridors, or affordable housing.

**HISTORICAL AND LEGAL IMPLICATIONS:** As with traditional zoning, uses that can be justified as contributing to the health, safety, and welfare of the population are generally allowed to be regulated via overlay zoning. Common regulations include those for historic districts, natural resource protection, and economic development, though local governments are given broad authority to determine what regulation is in their community's best interest. As with zoning, however, communities must be careful not to violate the "uniformity clause" of the Standard State Zoning Enabling Act by ensuring that all comparable properties are treated similarly. For further court opinions on the legality of overlay zoning, see *Jachimiek v. Superior Court*, 169 Ariz. 317 and *A-S-P Associates v. City of Raleigh*, 258 S.E.2d 444.

### F.2.1 Discussion

Overlay zones have the potential to be very effective governmental regulatory tools. Since they tailor regulations to specific properties and districts to meet specific community goals, they can be more politically feasible to implement and can help communities meet stated goals or address specific inequities. On the other hand, they can create inefficiencies and inequities by applying regulations and restrictions to some properties and not others. Moreover, additional regulations may increase time and expense both for developers and for the public bodies involved in the development approval process.

## F.2.2 Recommendations

### *Alpena CRTC*

Applying an overlay zone that does not allow for new residential or commercial development in the APZ associated with the Alpena County Regional Airport and Alpena CRTC is recommended. Language for this overlay zone should be drafted by a legal team specializing in land use law and code development. The overlay zone should restrict all residential and commercial development within the APZ. Further study should be completed to determine the intensity of uses allowed in the overlay zone. For example, the study should examine whether light industrial uses such as a personal storage facility could be allowed or if the zone should be more restrictive and only allow for agricultural uses.

### *Camp Grayling JMTC*

For the City of Grayling, adding an overlay zone to limit development within the APZs at Grayling AAF is more difficult to implement than in the Alpena area. This is because much of the limits of Grayling are directly within an APZ. An overlay zone should be added to restrict development heights, but it is not feasible to restrict residential and commercial development altogether.

For areas in townships or counties, it is recommended that an overlay zone be added that conforms to the noise contours and that protects the boundaries of the installation from encroachment of development. Although these areas are relatively undeveloped, it is good planning practice to plan for the future, and implementing an overlay zone in these areas now is more feasible than when the area develops more. Implementing an overlay zone in these areas now will help avoid any potential future conflicts between residential areas and noise from Camp Grayling JMTC.

For the Guthrie Lakes area, it is not advisable to implement an overlay zone because the area is already developed, and an overlay zone would only be implementable on the grounds of reduction of noise conflicts. This argument may not hold the same weight as restricting development in APZs because that restriction can be directly tied to improving safety for general public. Reducing noise conflict between the general public and the installation is not as straightforward. It is recommended Camp Grayling JMTC work with existing neighbors within the noise contours to notify neighbors of training times. The installation should also look at locating training operations in more remote areas within Camp Grayling in order to reduce noise conflicts and as a sign of being a good neighbor.





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