1. Bois Blanc Township

Plans/Policies: Bois Blanc Township Master Plan, 2009, Zoning Ordinance

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

At Risk populations: Elderly population – 22.5%; Increase in seasonal residents and visitors during summer and fall.

Emergency Services: Law enforcement – Mackinac Co. Sheriff’s Department Deputy 9 months and on-call other 3 winter months. Volunteer Fire Department – Township Fire Hall, dry hydrant near Township dock. Fire department provides rescue transportation to ferry or airport. No central dispatch – 911 calls routed to Fire Dept. emergency number. Mackinac Straits Hospital provides a clinic with a licensed medical professional one day a week.

Public Infrastructure: Private wells and septic systems regulated by LMAS District Health Department. Township provides a transfer station with dumpsters for household rubbish and construction waste. Presque Isle Electric and Gas Cooperative, headquartered in Onaway, provides electricity. Sub-marine cable was first laid in 1968 and two additional feeder cables in 2000 capable of handling the predicted growth until 2050. Residents use propane, fuel oil or wood to heat. Telephone service is through TDS Telecom. Internet and cell phone service is sparse throughout the township.

Critical Facilities: Township Hall and Fire Hall; Airport and buildings; Ferry dock and marina; road infrastructure; Bois Blanc School; Medical clinic;

Other: Museum, primitive campgrounds located at the end of Bible Road, Lake Mary, Twin Lakes and Lake Thompson; Lake Huron shoreline; forestland - 85% of township; wetlands, 5 inland lakes

Additional Resources needed:

Annual events (large gatherings): Seasonal population increases in summer and in November for hunting season.

Mitigation Actions: Watershed/Shoreline erosion protection Wildfire planning Tree trimming program/community forestry program/Debris Management Planning Review of building codes, zoning and policies for snow loads, wind bracing, etc.
2. Brevort Township

**Plans/Policies:** Brevort Township Master Plan, 2008, Zoning Ordinance

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly population – 18.3%;

**Emergency Services:** Law enforcement is primarily Mackinac County Sheriff’s Department and Michigan State Police. Brevort Township maintains a volunteer Fire Department. Ambulance service is provided by Allied EMS Systems out of St. Ignace.

**Public Infrastructure:** Private wells for drinking water. A community sewer system is available in downtown Moran, Dukes Road and around Brevort Lake. Wastewater treatment lagoons for the sewer system are located south of Brevort Lake. Outlying residents rely on on-site septic systems. LMAS District Health Department regulates and maintains permitting system. Cloverland Electric provides electric service to the Township.

**Critical Facilities:** Brevort Township Community Center and Fire Hall

**Other:** Brevort Lake, Round Lake and East Lake, Carp River and Lake Michigan watersheds, wetlands and forest land

**Additional Resources needed:**

**Annual events (large gatherings):**

**Mitigation Actions:** Watershed/Shoreline erosion protection
Wildfire planning/Drought Mitigation/Infrastructure Protection
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
3. Clark Township

**Plans/Policies:** 2008 Clark Township Master Plan, Zoning Ordinance

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly - Shoreline residents in floodzone;

**Emergency Services:** Clark Township Fire Department and Ambulance Department provide fire and emergency services, although limited access to the Les Cheneaux Islands. Police and marine law enforcement are provided by Mackinac Co. Sheriff’s Department

**Public Infrastructure:** Public sewer system in Cedarville downtown area, west along M-134 to Hessel and Hessel Point, and east along M-134 to Connors Point, Hill Island, Island #8 and Hillcrest Lane. Outlying residents rely on private septic systems monitored by the LMAS Health Department. No public water system, although it has been recommended by the Health Department. Cloverland Electric provides electric service.

**Critical Facilities:** Township Hall and Fire/Ambulance Building, Cedarville and Hessel marinas, Les Cheneaux Area School, Clark Township Airport

**Other:** Les Cheneaux Golf Course, Hessel Ridge Golf Course, Dolomite Quarry (deep water port), Les Cheneaux Historical Museum and Maritime Museum, senior citizen apartments, forestland, wetlands, Lake Huron Shoreline, small inland rivers and creeks

**Additional Resources needed:** Need larger capacity generators along with portable pumps; Stormwater management system, public water system

**Annual events (large gatherings):** Hessel Boat Show, 4th of July Festivities, Winter Festival;

**Mitigation Actions:** Watershed/Shoreline erosion protection
Invasive Species – weeds cleaned out of ditches/waterways
Wildfire planning, Drought Mitigation, Infrastructure Protection
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
4. Garfield Township

**Plans/Policies:** Garfield Master Plan, 2007

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly

**Emergency Services:** Volunteer Fire Department

**Public Infrastructure:** Railway line, Natural Gas – Engadine

**Critical Facilities:** Township Hall, Fire and Ambulance Hall - Engadine; Engadine School, transportation network, MDOT Garage, MCRC Garage, Fire Hall in Naubinway, MDNR Field Office, Medical Clinic

**Other:** Naubinway Marina, Hiawatha Sportsmans Club – 40% of total land area of Township; Agricultural land, forest land, wetlands, numerous inland lakes and streams, Millecoquin Lake, Lake Michigan shoreline, MDOT Roadside park, campgrounds, Snowmobile Museum - Naubinway, Historical Museum – Engadine, Historical marker – Lake Michigan northernmost point, Naubinway Pavillion, Engadine park

**Additional Resources needed:** Generator needed for the Township Hall

**Annual events (large gatherings):**

**Mitigation Actions:** Purchase generator for Township Hall
Watershed/Shoreline erosion protection
Wildfire planning, Drought mitigation activities
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
5. Hendricks Township

Plans/Policies:

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

At Risk populations: Elderly

Emergency Services: The Mackinac County Sheriff’s Department provides police protection, supplemented by the Michigan State Police. The Township maintains a contract with a private sector ambulance service. A volunteer fire department provides fire protection to the Township.

Public Infrastructure: None

Critical Facilities: Township Hall and Community Center, Fire Hall, Cut River Bridge, Railway line

Other: Hendricks Twp. Campground, Lake Michigan Shoreline, Cut River Rest Areas and Park

Additional Resources needed:

Annual events (large gatherings):

Mitigation Actions:

Watershed/Shoreline erosion protection
Wildfire planning, Drought mitigation activities
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
6. Hudson Township

Plans/Policies:

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** High elderly and low income population

**Emergency Services:** Police protection is provided by Mackinac County Sheriff’s Department and the Michigan State Police. The township has a fire protection service, and a mutual agreement with Garfield Township for fire and ambulance assistance.

**Public Infrastructure:** None

**Critical Facilities:** Township Hall/Fire Hall

**Other:** Lake Michigan Shoreline, Hog Island Campground, Garnet Lake State Forest Campground, Black River State Forest Campground, Hudson Township Park

**Additional Resources needed:** Generator needed at the Fire Hall

**Annual events (large gatherings):**

**Mitigation Actions:**

Purchase generator for Fire Hall  
Watershed/Shoreline erosion protection  
Wildfire planning, Drought mitigation activities  
Tree trimming program/community forestry program/Debris Management Planning  
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
7. City of Mackinac Island

Plans/Policies:

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

At Risk populations: Elderly; potentially the entire Island

Emergency Services: The City maintains a year-round police service with assistance from the State Police in summer months. Mackinac Island maintains a volunteer fire department. The medical center provides year-round medical services and is an affiliate of the Mackinac Straits Hospital in St. Ignace. Allied EMS provides ambulance services on the Island.

Public Infrastructure: The DPW maintains a water and sewer system which services the downtown area and other developed areas. In the community of Harrisonville the sewer system is limited and some older, single-family residences rely on private septic systems.

Critical Facilities: Township Hall, Fire Hall, Medical Clinic, Police Department Offices – Downtown and in Harrisonville, Airport, DPW Department, Boat (Ferry) docks, Marina

Other: Historical buildings, homes and tourist attractions, 3 Golf Courses, Grand Hotel, Round Island Lighthouse, museums, theater

Additional Resources needed:

Annual events (large gatherings): Mackinac Island, as a tourist destination, sees a large influx of visitors from Memorial Day to Labor Day and holds many festivals and activities all summer long.

Mitigation Actions: Watershed/Shoreline erosion protection
Wildfire planning, Drought mitigation activities, Infrastructure Protection
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
8. Marquette Township

Plans/Policies: Marquette Township Mater Plan, 2011

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

At Risk populations: Elderly population – 14%

Emergency Services: Police protection – Mackinac County Sheriff, Michigan State Police; Fire protection – mutual aid Pickford/Marquette/Clark Townships; Ambulance – Pickford Township and Clark Township mutual aid.

Public Infrastructure: Public sewage/wastewater disposal system is located in the downtown district of Pickford, extending ½ mile in each direction from M-129. Cloverland Electric provides electric service.

Critical Facilities: Township Hall, transportation network, Medical Clinic

Other: Fourteen miles of Lake Huron shoreline, forestland, agricultural land, wetlands, numerous inland creeks and streams, national forest land

Additional Resources needed:

Annual events (large gatherings):

Mitigation Actions: Watershed/Shoreline erosion protection
Wildfire planning
Drought mitigation activities
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
9. Moran Township

**Plans/Policies:** Moran Master Land Use Plan, 1994

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly population; those reliant on public water/sewer services

**Emergency Services:** Mackinac Co. Sheriff’s Department, Michigan State Police, Fire and Ambulance services provided out of City of St. Ignace.

**Public Infrastructure:** Public water and sewer services available in a small portion of Township adjacent to City of St. Ignace; transportation network

**Critical Facilities:** Township Hall, Fire Hall, US Hiawatha National Forest Office, Mackinac Bridge

**Other:** Approximately 80% of land public owned. Numerous inland lakes, creeks and rivers, forest land, wetlands; Recreation Park – ski/tubing hill; disc golf; Brevort Lake campground, historical sites; Lake Michigan shoreline, Lake Michigan National Forest Campground, Roadside Park, Ozark One-Room School Museum

**Additional Resources needed:** More reliable cell and internet services.

**Annual events (large gatherings):**

**Mitigation Actions:** Watershed/Shoreline erosion protection, natural sand/snow fencing along Highway US-2; Research and pursue additional communication towers for cell phone and internet service; Wildfire planning; Drought mitigation activities
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
10. Newton Township

Plans/Policies:

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

At Risk populations: Elderly

Emergency Services: Mackinac Co. Sheriff’s Department, Michigan State Police, Newton Township Fire Department - volunteer

Public Infrastructure: Private wells and septic systems. Transportation network – railway line

Critical Facilities: Township Hall

Other: Lake Michigan shoreline, Milakokia Lake, Milakokia Lake State Forest Campground, Scott Point Park, Township Park, Roadside Park, numerous small creeks rivers and inland lakes,

Additional Resources needed:

Annual events (large gatherings):

Mitigation Actions: Watershed/Shoreline erosion protection
Wildfire planning
Drought mitigation activities
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
11. Portage Township

**Plans/Policies:** Portage Township Master Plan, 2011; Zoning Ordinance (Revised, 2013)

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly population -

**Emergency Services:** Portage Township Volunteer Fire and EMS Corps provide emergency services of fire protection and ambulance. Mackinac County Sheriff’s Department and Michigan State Police provide police protection.

**Public Infrastructure:** No public water or wastewater infrastructure, except for a small localized storm water system in the downtown district of Curtis. Cloverland Electric Cooperative provides electrical service

**Critical Facilities:** Township Hall and Fire/Ambulance Hall; Medical Clinic – open 4 days a week and Wellness Center; Community Arts Center; Charter School K-7th;

**Other:** Manistique Lake and South Manistique Lake, forest land, wetlands, Township Park, public lake access sites, ball fields, tennis/basketball courts, recreational trails

**Additional Resources needed:** The community of Curtis is located on a strip of land between two lakes. There is one main street (H-42) traveling east and west across this strip of land which crosses a river. If the bridge were ever washed out, those affected in the community would have to make a long detour to M-77 which could be detrimental in the case of an emergency.

**Annual events (large gatherings):** 4th of July Celebration; Labor Day Weekend Art Festival

**Mitigation Actions:** Watershed/Shoreline erosion protection
Wildfire planning, Drought mitigation activities, Storm Drainage Mitigation
Producing/distributing family emergency preparedness information/public education
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
Additional road crossing/bridge over Manistique River
12. City of St. Ignace

**Plans/Policies:** Master Plan; Zoning Ordinance

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Infrastructure Failures

**At Risk populations:** Elderly population

**Emergency Services:** Police Department which employs 5 certified officers who provide law enforcement services for the City of St. Ignace, 24 hours a day, 7 days a week. The City also maintains a Fire Department, with 27 certified personnel, which services a 236 square mile area including the City, Moran Township and St. Ignace Township.

**Public Infrastructure:** The Department of Public Works is responsible for the maintaining of the street system within the City of St. Ignace including snow plowing, street repair and installation, utility repairs and installation, along with any other work pertaining to the City. The City has a Water and Sewer Department who operates and maintains the City’s Water Treatment Plant and Wastewater Treatment Plant. This department also maintain the Water Distribution and Wastewater Collection lines, with the assistance of the Department of Public Works. The distribution system covers almost the entire City of St. Ignace, with service provided to St. Ignace Township, Evergreen Shores and extends to the Sault Tribe Housing and Casino properties.

**Critical Facilities:** City Hall and Fire Hall; Public Works infrastructure and facilities; Mackinac Straits Hospital, St. Ignace Area School, Little Bear East Ice Arena and Conference Center (which serves as an emergency operation center)

**Other:** The City is home to two museums, a State campground and National Memorial, as well as, many other tourist oriented businesses. Lake Huron shoreline – boardwalk, swimming beaches and parks.

**Additional Resources needed:** Extreme cold temperatures affect the public water and sewer systems – mitigative actions needed in some areas.

**Annual events (large gatherings):** St. Ignace hosts many large festivals, sports events and shows throughout the year.

**Mitigation Actions:** Watershed/Shoreline erosion protection
Drought mitigation activities, Infrastructure Protection
Distributing family emergency preparedness information/public education on website
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
13. St. Ignace Township

**Plans/Policies:** Land Use Plan 1996; Zoning Ordinance

**Past Hazards experienced:** Severe Winter Weather; Thunderstorms/High Wind Events; Flooding; Drought; Extreme Temperatures, Wildfires

**At Risk populations:** Elderly; those connected to public water/sewer system

**Emergency Services:** Mackinac County Sheriff’s Department and Michigan State Police provide law enforcement. Township contracts with City of St. Ignace for fire and ambulance protection.

**Public Infrastructure:** Public water and sewer extended into portions of the Township which are adjacent to the City of St. Ignace.

**Critical Facilities:** Township Hall

**Other:** Kewadin Shores Casino, Lake Huron Shoreline, 2 National Forest campgrounds – Foley Creek & Carp River, Horseshoe Bay Wilderness Area

**Additional Resources needed:**

**Annual events (large gatherings):** Entertainment events at the Casino

**Mitigation Actions:** Watershed/Shoreline erosion protection
Wildfire planning, Drought mitigation activities, Infrastructure Protection
Distributing family emergency preparedness information/public education on website
Tree trimming program/community forestry program/Debris Management Planning
Review of building codes, zoning and policies for snow loads, wind bracing, etc.
14. Sault Tribe of Chippewa Indians

The Sault Tribe's federally designated service area is the 7 eastern counties of Michigan's Upper Peninsula, inclusive of Chippewa, Mackinac, Luce, Alger, Schoolcraft, Marquette and Delta counties. This is an area of 8,572 square miles in the shape of a triangle 90 miles wide at the base and 170 miles long. It is a high rural area with an average population of 20.6 persons (Native and Non-Native) per square mile. The Tribe has 9 reservations/trust land sites in the service area. The largest is Sault Ste. Marie (Chippewa County) followed by Kincheloe (Chippewa County). Other sites include Manistique (Schoolcraft County), Hessel (Mackinac County), Escanaba (Delta County), Marquette (Marquette County), Wetmore (Alger County), Newberry (Luce County), and St. Ignace (Mackinac County).

Plans/Policies:

Past Hazards experienced: Severe Winter Weather; Thunderstorms/High Wind Events; Drought; Extreme Temperatures; Flooding:

At Risk populations: Very young, elderly or disabled persons.

Emergency Services: The Sault Tribe Law Enforcement Department currently has 18 sworn Police Officers, with a main office in Sault Ste. Marie, Michigan and satellite offices in Kincheloe, St. Ignace, and Manistique, Michigan. Tribal Law Enforcement officials serve the communities of: Sault Ste. Marie, Kincheloe, Hessel, St. Ignace, Newberry, Manistique, Wetmore, Escanaba, and Marquette. Conservation Enforcement takes place in Lake Superior, Lake Huron, and Lake Michigan. Sault Tribe Emergency Management: Emergency Management provides emergency support to the Sault Tribe of Chippewa Indians Seven County Service area – to include information, equipment, emergency notification and planning. It also manages the Sault Tribe Emergency Operations Center (EOC) and develops all operational plans, and procedures to ensure public safety during an emergency event. An emergency management blog is also available to the public.; Anishnaabek Community and Family Services provide human services or social services for the Sault Ste. Marie Tribe of Chippewa Indians. Two of the tribe's natural resource programs provide biological services for the tribe’s hunting, fishing and gathering reserved rights under the 1836 Treaty of Washington — the Inland Fish and Wildlife Department and the Inter-tribal Fisheries and Assessment Program. The third, the Environmental Department, provides solutions and information on environmental issues and concerns affecting the tribe, tribal members and tribal enterprises.

Public Infrastructure: Transportation network, city water and sewer extended to casino area in St. Ignace Township

Critical Facilities: The Sault Tribe Health Division has seven health clinics or centers providing various levels of medical services throughout their seven-county service area located in the Upper Peninsula of Michigan, one of which is located in St. Ignace. In general, services are
offered to all Native Americans, ages infant to adult. Warning Sirens installed throughout service area. Tribal offices, garages and businesses. Kewadin Shores Casino and Hotel complex, Little Bear Recreational Center

**Other:** The Cultural Division, is comprised of four departments: Cultural Training, Repatriation, Mary Murray Culture Camp, and Language Department. Cultural Division staff collectively work on Sault Tribe powwows, traditional funerals and other ceremonies. The Education Division is dedicated to the concept that all students, from earliest childhood to adulthood, can learn and master basic educational skill. Services and departments include Child Care Center, Early Head Start, Head Start, Youth & Education Activities, Workforce Investment, Adult Education, Higher Education and JKL Bahweting School. The Elder Services Division was established in January 1996. The division offers, in order of priority, personal care, respite care, homemaking assistance, transportation, outreach service, and advocacy.

**Additional Resources needed:**

**Annual events (large gatherings):** Pow-wow; entertainment/concerts

**Mitigation Actions:**

- Shoreline erosion protection
- Review current Codes and Policies
- Producing/distributing family emergency preparedness information/public education
- Tree trimming program/community forestry program
- Wind/Lightning protection on critical facilities
- Culvert Inspections/Upgrades