

# WHITESAND FIRST NATION

***FIRESMART***®

## Plan

Ministry of Natural Resources  
Aviation Forest Fire & Emergency Services



**Whitesand  
First Nation**

[ontario.ca/fireprevention](http://ontario.ca/fireprevention)

## EXECUTIVE SUMMARY

The purpose of a FireSmart plan is to provide direction to a First Nation on the steps to be taken to make the community safer from the threat of a wildfire. These steps are a combination of operational and administrative initiatives to establish and maintain a FireSmart program. Ultimately, the First Nation may want to work toward completing the criteria and reaching the benchmarks of a FireSmart community.

The consultant team visited Whitesand First Nation in October 2017. They met with the Chief and 2 OMNRF representatives, one a Whitesand First Nation member, who gave them a ground tour of the community and the Old Whitesand Community. The purpose of the tour was to explain the program, ground truth aerial information and to determine fire hazard issues in and around the community through photos and discussions.

The plan lays out several FireSmart goals for the community, including; fuel reduction in selected areas, fire sensitive planning in future developments, ongoing public wildfire education, the establishment of a FireSmart crew in the community and the formation of a FireSmart committee.

Fuel reduction and a Fire Break are the primary FireSmart tools used to reduce a **community's susceptibility to wildfire. The community has initiated** the Fire Break program in selected forested areas along the western edge of the community. It is recommended that this effort be continued and complemented by a fuel reduction program that targets areas between the fuel break and homes with a high buildup of nearby fuels. Homes belonging to elders and others who may be unable to do the work around their homes could be selected first. This would dramatically reduce the risk of extreme fire behavior and radiation heat sources close to the housing subdivisions on the western boundary of the community

The community is currently using FireSmart principles in the development of a housing subdivision. It is recommended that future planning include considerations of lot size, house location, grassed areas and possibly building materials.

Public wildfire education goes beyond wildfire prevention and includes hazard reduction at an individual property level and evacuation preparation for the family. Over time, many of the FireSmart concepts can be passed on to community members through a variety of channels.

A fully funded FireSmart fire crew would be a valuable asset for the community. It would give the community access to a trained workforce to complete FireSmart projects within the community, such as conifer tree removal close to homes and structures, thinning projects around subdivisions, and fire prevention duties. This would also give the community immediate fire protection in the event of a wildfire or urban interface fire that affects the community. In addition to building local capacity for wildfire response, the crew could be utilized for a variety of FireSmart activities in fuel reduction and public wildfire education. Potentially the crew could become part of the volunteer structural fire

fighting force, to assist in protecting homes from structural fires as well. Once the crew is trained and certified, there is potential for the crew to be contracted to the OMNRF during high to extreme fire hazards, bringing revenue into the community.

A FireSmart committee is essential to the acceptance and continuation of the program in the community. The OMNRF should work with the Chief and Council to help facilitate the development of the committee. It is recommended that the Community Fire Officer take the FireSmart workshop prior to a committee being formed.

Whitesand First Nation, through the work of the Community Fire Officer and others, has started to apply some of the FireSmart principles. Further work on the recommendations in this plan will help the community along the path to becoming fire resistant and resilient.

Due to the value of old Whitesand community and its location in relation to high hazard fuel types, it is imperative that a FireSmart plan be developed for this area of the First Nation. While the healing lodge is surrounded by maintained grass and is close to the shores of Lake Nipigon, cottages and homes built in the area are completely surrounded by high risk fuel types and laddering fuels and roadways are small and have limited accessibility. The nearest fire truck is approximately 20 kilometers away by road. Immediate steps should be taken by the First Nation to develop FireSmart objectives for this area, for existing cottages in the area, as well as future development, to reduce the chances of catastrophic impacts on this important site to the community of Whitesand First Nation.

OMNRF should consider adding the Graveyard site across Airport Road to its sprinkler protection plan, as the site has major cultural significance to the community.

Whitesand First Nation should consider accessing emergency funds to build their own community protection kit, including sprinklers and portable pumps.

# WHITESAND FIRST NATION



## INTRODUCTION

Whitesand First Nation is located 246 km northeast of the City of Thunder Bay, at the end of Hwy 527, which runs from Hwy 11/17 to the south. It is situated .5 km north of Armstrong, on Airport Road. The total area covered by this portion of the reserve is 249 acres.

The Whitesand First Nation is an Ojibwa First Nation with a land base of 615 acres. Whitesand First Nation is composed of several parcels of land, the first being located near the village of Armstrong along the CN rail line and a second large parcel located on the northern shores of Lake Nipigon. Several other parcels are located east of Armstrong along the CN line and have homes and residents in each, made up of both seasonal and permanent dwellings. As well, Band Council has successfully obtained a parcel of land south of the community of Armstrong in the Industrial Park area, which will be the future home to a pellet plant, cogeneration plant and sawmill.

Originally located along the northwest shore of Lake Nipigon near Mount St. John and near the Whitesand River, which gives name to the group, Whitesand First Nation was without a home from 1942, when high water levels began eroding the shoreline and flooding out their buildings and burial grounds. Due to the economic influence of the CNR, many Whitesand First Nation members settled along the rail line. Largest of these settlements took place in Armstrong. Consequently, when a new Reserve was negotiated, it was located immediately north of that community. Other parcels are located along the CNR line east of the community of Armstrong, with each location having several buildings and residents. The communities include Ferland and Mud River.

For this plan, only the main Whitesand First Nation community was assessed for the FireSmart planning process. The community of Armstrong is the main community in the area. In June 2008, the total registered Whitesand First Nation population was 1086 people, of which the on-reserve population was 311.

Whitesand First Nation established Sagatay Economic Development LP in 2010. The Company was made into a reality after the First Nation realized the potential economic growth on its traditional territory. The Chief and Council of Whitesand First Nation understood the importance of separating the Economic Development activities from the Administrative structure and this allowed for greater efficiency.

First Nations located within the Fire Region of Ontario are provided wildland Fire Protection/prevention services by the OMNRF, under an agreement with INAC. Some support is provided through the Ministry of Northern Development and Mines for training and equipment.

The FireSmart initiative and the Community FireSmart Recognition program are national in scope and are designed to reduce unnecessary infrastructure losses from wildfire occurrences.

Whitesand First Nation has an identified Fire Equipment Building in the community center and provides fire response capabilities for the Armstrong community infrastructure as well. Limited volunteer fire department members restricts their ability to respond to wildfires, but they can action residential fires. Wildfire mitigation and response is supported by OMNRF and, fortunately for the First Nation, a base is located adjacent to the community to provide rapid response during the fire season. A plan is in place by the OMNRF to proactively set up sprinklers and values protection equipment to protect key infrastructure and private residences in several locations in the community.

Through proper planning, Whitesand First Nation can reduce the risk of negative wildfire impacts and increase the ability to respond to wildfire emergencies. It is normally the community and its stakeholders who are best at assessing their current condition and finding solutions that work for their community. Through FireSmart planning and the Community FireSmart Recognition program, small communities and subdivisions can proactively mitigate much of the risk and respond to wildfires successfully.

The Ministry of Natural Resources AFFES is assisting small communities and First Nations in developing FireSmart Community plans with a strategic approach to developing processes to mitigate the impacts of wildfire on the affected Fire Nation community. First Nation community plans also identify the higher risk areas inside the community and provide suggested FireSmart processes that can be conducted to help protect community values should a wildfire occur.

For this planning process, only the main Whitesand community is being assessed by the FireSmart planning team. A follow-up recommendation by the team would be for further assessment to be conducted in future years of the other sections of the community to provide ideas for better protection strategies from wildfire occurrence.

Through the efforts of the Community Fire Officer (CFO) and others, some proactive steps that blend well with FireSmart concepts have already been taken to reduce the

threat from wildfires encroaching upon the community. Through future planning and initiatives, the community can further reduce this threat. The community of Whitesand and the community of Armstrong have local knowledge of current conditions and historical threats and need to be partners in advancing and maintaining the FireSmart program in Whitesand First Nation and the areas around the community.

## THE PLANNING PROCESS

The planning process outlined in this document recommends six steps to create a comprehensive, workable fire plan. By following these steps, First Nations should be able to: achieve wide stakeholder involvement, assess vulnerabilities to the **community's** current resources and infrastructure, identify areas that need improvement and implement an emergency response and hazard mitigation plan.

Step 1 – Identify Stakeholders.....	Page	5
Step 2 – FireSmart Management Zones.....	Page	7
Step 3 – Describe the Community.....	Page	10
Step 4 – Infrastructure Assessment.....	Page	21
– Wildfire Risk Assessment.....	Page	23
- Hazard Assessment .....	Page	25
Step 5 – Wildfire Mitigation .....	Page	28
Step 6 – Wildfire Response.....	Page	32
Conclusion.....	Page	34
Appendices and Maps.....	Page	35



## STEP 1- IDENTIFY STAKEHOLDERS

### KEY CONTACTS

	Phone #	Fax #
Band Office	(807)583-2177	(807)583-2170
Sagatay Economic Development	(807) 583-2177	
Bineshiyasag School	(807)345-4441	(807)345-4448
Whitesand Nursing Station	(807)583-2671	(807)583-2513
Radio Station	(807)583-2092	
Gas Bar	(807)583-2161	
Fire Hall	(807)583-2222	
Elders Complex	(807)583-1154	
Ministry of Natural Resources, Armstrong Fire Office	(807) 583-2364	
Ministry of Natural Resources, Thunder Bay District	(807) 475-1471	(807)475-1527
Hydro One Customer Communications@HydroOne.com		
Hydro One	1(888)664-9376	
Hydro One Communications Centre	1(905)944-3251	
Armstrong Local Services Board	1(807)-583-2646	807-583-2517
Emergency CN Police	1-800-465-9239	
Canadian National Railway	1-888-888-5909	
Armstrong school	1-(807) 583-2076	(807) 583-2315

## FIRST NATION FIRE DEPARTMENT

Whitesand First Nation community is remote in nature. The First Nation and the Community of Armstrong have always shared a fire department and response duties and for a long time the only fire department in the area was in the Community of Armstrong. When employment levels dipped for several years, the area had no structural fire capabilities. For several years now, the First Nation has devoted time and money into developing structural fire capabilities. To this end, it has constructed an insulated, heated, year-round building to house fire equipment and the fire truck. It has had some success in recruiting a volunteer fire fighting force. Unfortunately, due to lack of local employment, the force is constantly looking for replacement members and training new recruits to meet the community needs.

Fire equipment is limited to one truck for both communities. Other equipment includes pumps, hose and hand tools for limited wildfire suppression tactics

Both the Whitesand First Nation and the community of Armstrong have fire hydrants located along roadways to facilitate home and business fire suppression demands, if required

Mutual aid is not available to either community, due to distances from neighbouring communities

To date, there are approximately 12 members, (2) from Armstrong and (10) from the community. This number changes rapidly...

Suppression equipment is as follows:

- (2) pumper trucks
- (1) volume pump
- (2) wick pumps
- (1) porta tank
- (40) lengths of forestry hose
- (35) lengths of 2.5 inch hose

Sagatay has a fire cache that is available as required for forestry work, or any other industrial use. It has a complete pumping unit with a wick pump.

## STEP 2 - DEVELOPING FIRESMART MANAGEMENT ZONES

### WHITESAND FIRST NATION



Whitesand First Nation is a small First Nation community located at the end of Highway 527 north of the city of Thunder Bay. The community straddles the main Canadian National Railway line. The line is very busy with rail traffic and numerous fires have been detected and actioned in the history of the community. The only major road leading in and out of the community is Highway 527 to the south. There are several logging roads that lead north, east and west of the community, but there is no egress to other communities other than south on Highway 527.

Numerous tourist lodges and fishing and hunting camps surround the community, with both fly in charters operated by private companies and canoe trips offered

Whitesand First Nation is located within the Thunder Bay District. In June 2008, the total registered population was 1086 people, of which the on-reserve population was 311. The next closest community is Gull Bay First Nation, approximately 70 kilometers to the south. Little or no services are available in Gull Bay First Nation.

Whitesand First Nation has its own gas station, but relies on the few services in the community of Armstrong for groceries and other needs. Most major purchase items must be acquired in Thunder Bay to the south

There is no regular bus service in and out of the community, so all members must rely on personal transport to travel outside the community.



Due to the size of the community and the nature of the fuels, the team has designated the whole reserve area as one zone for planning purposes.

The community of Armstrong was not part of the planning process for this exercise, but an overview is provided, as it is a neighbour to Whitesand First Nation and shares some of the infrastructure with the First Nation.

## THE COMMUNITY OF ARMSTRONG OVERVIEW

Armstrong is a compact rural community, unincorporated place and divisional point on the Canadian National Railway transcontinental railway main line in the unorganized portion of Thunder Bay District in Northwestern Ontario, Canada. The Whitesand First Nation's Armstrong Settlement is coterminous to this community. The Armstrong area is a popular tourist destination in the summer for fishing and hunting.

The community is not part of an incorporated municipality, but is administered by a Local Services Board

Armstrong is accessible via Highway 527, which extends 235 kilometres (146 mi) north from Highway 11/17 near Thunder Bay. It takes about three hours to get to Armstrong by car from Thunder Bay.

According to the Canada 2011 Census, the community had a population of 220, down from 276 in 2006, a decrease of 20.3%. There are 184 dwellings of which 91 are occupied by usual residents.

Canadian Forces Station Armstrong, located 1.1 miles (1.8 km) east of Armstrong, was closed in 1974. Later that year, the base was sold to private owners and turned into a popular gathering area for the town that included a restaurant and bar, hotel, multiple apartments, garages and a curling rink. The area, known as D&L, was closed and abandoned in 1993 and remains that way today. The community and First Nation's water supply is located here on the old base.

The town of Armstrong currently has two restaurants, a Canada Post office, a clinic, a Mini Mart gas station and motel and the Armstrong General store (formally J&J General store 1961-2015).

Armstrong Airport is located 4.5 nautical miles (8.3 km; 5.2 mi) east southeast of Armstrong. The airport is controlled by the Ministry of Transportation (MTO) Northern Airport Program and was recently upgraded with a new runway and older buildings were torn down. The Ministry of Natural Resources and Forestry, Fire Management Program, Thunder Bay District has a building and generator on the property to house fixed wing pilots when their CL 415 water bombers are stationed in Armstrong to provide fire suppression capabilities in the area.

The VIA Rail *Canadian* train travels through and stops on request in Armstrong.

Whitesand First Nation and the community of Armstrong share much of the infrastructure needed for both communities. Most of the infrastructure is located off reserve and in the community of Armstrong. It includes the school, medical clinic, OPP station, water supply and garbage dump.



### STEP 3 - DESCRIBE THE COMMUNITY

Whitesand First Nation (Appendix D Photos)



Whitesand First Nation is located in an unincorporated territory in the northern part of Thunder Bay District. The community is also located along the Canadian National Railway main line.

An integral part of the community is located east of the main Whitesand First Nation and community of Armstrong and is known as old Whitesand.







The healing center, above, is the focal point of the community at old Whitesand, with a boat launch and cottages dotting the shoreline of Lake Nipigon, both east of west of the healing center and with more cottages being built every year.

The focus of this report is only on the main Whitesand First Nation community, as their other community locations were not identified at the time of the contract. It will be a recommendation at the end of the report that someone look at the other communities in the future to assess their risk of fire and develop a FireSmart plan for the other communities. The team did observe Old Whitesand first hand and an initial observation would be that Old Whitesand has a great risk of being consumed by wildfire, due to building standards (log cabins) and close proximity to hazard fuel types (jack pine and spruce).



*Gravesite at old Whitesand*

## THE MAIN COMMUNITY OF WHITESAND FIRST NATION

Geographically, the community can be described as rolling to flat with some rocky outcrops. Surrounding the community are areas of Jack Pine sand flats which make the community susceptible to a major wildfire threat. Large areas around the community to



the south, west and north have been harvested over the years, leaving cutovers with heavy slash fuels present. Large areas have also been replanted with fire susceptible species (jack pine and spruce).

Tourism, mining exploration and forestry operations play a major role in the economic viability of the community. Forestry operations are a shadow of their former activity in **the 1980's**. With the future development of a pellet plant and cogeneration plant, the First Nation hopes to renew forest operations on the local forest. As well, a mining company has been exploring areas to the east for several years and appears to have some promising finds for the future development of a mine in the area.

At one time, the community of Armstrong hosted an industrial park with a large forestry operation working out of the area. The property now only houses the generating station run by Hydro One and a Ministry of Transportation garage. Parts of the industrial park have been granted to the Whitesand First Nation for the development of their pellet plant and cogeneration plant. The park area is located approximately 5 kilometers south of the First nation community.

#### 1. Population

Whitesand First Nation had a permanent population of approximately 300 people living on reserve (2008 census). Today, it is estimated to be over 500 residents. There is structural fire protection equipment located in the community and it provides protection for the community of Armstrong as well. There is a fire truck housed in a heated structure located on reserve and fire department staff are volunteers with some form of formal training.

#### 2. Estimated property/infrastructure values at risk

An onsite visual assessment was conducted by ground for the entire study area.



Most Home structures located in Whitesand First Nation are embedded or in close proximity to the surrounding forest and could be severely impacted by a wildfire. Many areas of the community are also at high risk for ember ignitions with a heavy fuel accumulation under the forest canopy adjacent to the community, along with accumulated personal property items within the 10-meter zone of properties



There are a substantial number of properties that would be classified as being resistant to fire. Most of the band infrastructure (Band Office, Dilco office and resource center) have metal roofs and siding and/or are constructed sufficient distances from flammable materials, providing good examples of a FireSmart property.



These buildings have skirting to prevent any embers from igniting under the structures. Most homes in Whitesand First Nation have a good fuel break of mineral soil or green lawns at the front of the properties, but some are vulnerable at the rear (backyards), with forest fuels encroaching within the 10-meter zone.





*EXAMPLE OF A FIRE SAFE PROPERTY IN WHITESAND FIRST NATION*



*EXAMPLE OF PROXIMITY OF VEGETATION TO INFRASTRUCTURE IN WHITESAND FIRST NATION*

### 3. ECONOMIC VALUES AT RISK

At present, there are no economic values at risk within the Whitesand First Nation. Any tourist camps and businesses are located outside of the First Nation. As well, most businesses are located in the community of Armstrong and were not evaluated as part of the First Nation community. There are several small businesses within the community (gas station, restaurant,) that would be impacted by an economic slowdown, if a wildfire occurred near the community and an evacuation occurred.

There are several tourist lodges and main base tourist camps and cottage subdivisions to the south of the First Nation Community that are at risk from wildfire as well

The Hydro One generating station, Bell communications tower, MTO garage and future pellet plant location are all located outside and south of the First Nation community, but must be considered for protection in the event of wildfires.

Fires occurring in the immediate area of Whitesand First Nation could pose a major impact on CNR operations in the area, as well as the Highway 527 corridor, should a wildfire or fire response effort require the shutdown of either corridor. This has occurred on several occasions in past years.

There is a major future risk of economic impacts to the site of the future pellet plant and cogeneration plant that the First Nation is working on developing.



Whitesand First Nation has an excellent opportunity to contribute to a FireSmart safe site, as the site is undeveloped at present, and before construction starts the community can ensure the site planning incorporates FireSmart principles in the development of the site and buildings.

#### 4. NATURAL RESOURCE VALUES AT RISK

Whitesand First Nation is located in mature Jack Pine and mixed wood forest. But due to the small size of the community, resource extraction is not viable, so not at risk within the Reserve area. However, outside the community, there has been continuing forest activities and any fire would impact the local economy and forestry employment opportunities. The major risk is in early spring each year (grass fires starting along the rail line), followed by summer risk of wildfire within the forested area.

#### 5. FORESTRY OPERATIONS

Appendix F shows the annual work schedule for logging operations in the area of Whitesand First Nation. Areas north, south and west of the community have been allocated for harvest. Some site preparation work is also scheduled for surrounding areas. Most of the stands being allocated surrounding the community can be classified as mixed wood, or pure jack pine stands.

Continuous stands of conifer (jack pine and spruce) surround the community. Large areas have been cut over the years and have regenerated into young immature jack pine stands. There is a significant fire hazard risk due to logging slash debris in the areas south and west of the First Nation. These areas are also very popular for blueberry picking, making the area susceptible to man-caused fires as well.

The local Sagatay Economic Development LP is working with forest companies to develop their own operations. Once the pellet plant becomes operational, logging operations in the area should increase in activity.

#### 6. COMMERCIAL ENTITIES

Most of the commercial operations for the area are located in the community of Armstrong. On Reserve, there is a gas station and small take out restaurant only. The Band owned corporation (Sagatay Economic Development LP) is run from the Whitesand Community. It is involved in some road maintenance partnerships with the OMNRF, employment services with Landore mining and looking forward to securing logging rights in the area, when the pellet plant and cogeneration plant become operational.

Outside the community, but susceptible to fire impacts are the hydro plant, MTO garage, water treatment plant and most of the infrastructure in the adjacent village of Armstrong.

The Whitesand First Nation runs on electricity produced by generator. This facility is managed by Hydro One and is located approximately 3 kilometers south of the community.



*ELECTRICITY GENERATING STATION SOUTH OF ARMSTRONG*

The CNR mainline runs adjacent to Whitesand First Nation and the company maintains a large yard and bunkhouse in the center of the community of Armstrong.

## 7. CORRIDORS AND TRANSPORTATION

### Whitesand First Nation

The CNR mainline runs approximately .5 kilometers south of the First Nation. Highway 527 is a Ministry of Transportation (MTO) maintained corridor. A gravel road travels from the Armstrong community northward, thru the Whitesand First Nation. It is known as Airport Road. There are 2 entrances/exits from the community to Airport Road. The airport is located approximately 12 kilometers from the community to the east, along the CNR line. There is no infrastructure located at the airport (i.e. terminal buildings). There is a Ministry of Health helipad located at the OMNRF base, approximately 1 kilometer from the community.

## 8. PREVENTATIVE MEASURES OR BYLAWS

The area is regulated by the Federal Government, and not subject to provincial laws, but the community is very proactive in Fire Prevention measures and follows many restrictions of the Forest Fire Prevention Act. The community has a strong core group of people who have worked for the Ministry of Natural Resources and Forestry Fire Management Program and are very proactive in promoting FireSmart principles in the community. Implementation of community bylaws that consider standards for

the development of FireSmart principled in home construction and vegetation management would greatly enhance the safety of the community.

## 9. LAND USE ASSESSMENT

Due to the size of Whitesand First Nation, community development (housing) is the only designated classification for the small community. Forestry, mining and recreational land use all occur in surrounding areas outside of the Reserve.

## 10. EVALUATING FIRE HISTORY

Fire History in the area for the time period, 1987 to 2015, indicates that a limited number of fires has occurred in the First Nation community. Fires that have occurred are generally caused by residents burning brush and grass and children playing with matches.

The real potential of a catastrophic fire impacting the community, area residents and infrastructure is evident from the fire history map, where large fires within 100 km. of the community were actioned and suppressed by AFFES coordinated response services before reaching the town site. In some cases, over the past 30 years, the community has had to be evacuated due to smoke concerns or have had the main highway shut down for several days, impacting community food and supplies deliveries.

## 11. FIRE SUPPRESSION RESOURCES

The Ministry of Natural Resources and Forestry is the primary response agency for wildfires in the Whitesand First Nation area. The community has a fire truck, and trained volunteers to assist and would take first action on any fire threatening structures. There are fire hydrants available throughout the community and natural water sources have been identified around the community, if needed for additional water supply for OMNRF crews. The OMNRF has a contingent of crews stationed in Armstrong throughout the fire season, and when the hazard dictates, water bombers can and have been stationed at the airport to provide faster response times to fires in the area.



## STEP 4 - INFRASTRUCTURE AND PROPERTY ASSESSMENT

### A. ACCESS/COMMUNITY LOCATION

Whitesand First Nation is on a one way in/one way out access route. Highway 527 to the south is the only route to connect to other communities. Gravel roads lead north and east, but do not provide a means of escape to any other communities. The highway is maintained by MTO and is of high quality and meets the recommended standards for emergency vehicles.

For fires occurring in the Whitesand area, fire managers must give consideration to the timely evacuation of the community due to the restricted access/egress into and out of the community by the local road system. Fires that could potentially burn across the highway from the southwest could entrap residents and prevent them from driving out of the area, possibly forcing evacuation by plane or train out of the community. Fires have impacted food and supply delivery to the community in the past, forcing the community to evacuate band members with health concerns.

Immediate evacuation could occur to the north and east down gravel roads (Airport Road) but the community would have limited vehicular resources to enact the operation. There are school buses available within the community, but nowhere near enough for all the residents to depart safely.

### B. ROADS

#### WHITESAND FIRST NATION

The main roads in the First Nation allow for good access to the east, north and south to Highway 527 thru the community of Armstrong. The only 2 roads in the community are loop roads, off the main road entering the community from the Airport Road, just north of the Armstrong post office. The main loop goes thru the core of the community, by the Band Office, to exit the community back onto the Airport Road, north of the first entrance. Both of the other subdivisions loop off the main road to the north side and end back on the main loop road. A third road/subdivision is planned off the main road, east of the existing subdivisions. If Airport Road is blocked south of the community, the residents would be forced to evacuate eastward towards the airport. All roads are gravel, including Airport Road. The subdivision roads are wide and but could have visibility issues for vehicles in heavy smoke. There is plenty of room for fire engines to maneuver through the community and driveway entrances are wide enough to accommodate large fire engines.

There are no road signs or house numbers present in the community and some confusion could result with outside suppression resources having to find specific locations on the reserve to protect, if required. Community buildings are well identified.

### C. DRIVEWAYS IN THE COMMUNITY AND RURAL AREAS

The reserve does not have any organized community markers and there are no road signs for emergency vehicles to use to navigate. Identifying a specific area that needs protection to outside sources would be challenging.

Rural roads are generally not well maintained, and are rough to drive, making response times and evacuation times slower.

All driveways are accessible to larger type suppression vehicles. Most of the homes have a good buffer within the 10-meter zone of forest fuels at the rear of their properties.



*Examples of back yards, 10 m zones*

### E. UTILITIES

Utility services are provided by Hydro One. Whitesand First Nation and the community of Armstrong electrical supply comes from generators located approximately 3 kilometers south of the community, in the area known as the Industrial Park. Vegetation management for the main line into the First Nation community needs to be evaluated. Services within the community are all above ground on wooden poles. The main generator area is at risk from wildfire, as well as the main electrical line into the community. The generator buildings are made of metal roof and walls and provide good fire proofing, but fuel tanks are in close proximity to the buildings and surrounding forest.

A Bell communications tower is also located next to the entrance to the Hydro One generators and is at risk of wildfire.



Bell tower located south of community



Electricity generating station located south

The CNR mainline runs through the community of Armstrong, approximately 1 km, south of the First Nation.

The primary water supply for the community is a well system located south and east of the First Nation on the old military base.

Cell phone service is through Bell Canada and only their phones will work in the community, as no network sharing has occurred with other service providers. Land line telephone service is again through Bell.

OMNRF radio communications is through a tower in the community of Armstrong, and utilizes Channel 7.

#### G. WILDFIRE RISK ASSESSMENT( APPENDIX I) HAZARD MAPPING)

Historically, wildfires that occur in the general vicinity of the First Nation tend to remain small. (OMNRF workforce located in the community of Armstrong). The largest fire reported in the past 20 years had only burned 6.5 ha. Approximately 80 fires have been actioned over the past 30 years in the vicinity of the First Nation community. The community area was damaged several years ago by an ice storm, that damaged large areas of the forest, including young regenerated areas. Most of these areas have been cleaned up (logged) and then replanted with jackpine species. As well, large areas around the community have been harvested over the years and replanted with fire prone species.

Larger fires have occurred in the area farther away from the community, to the south and west. They have impacted the First Nation with smoke concerns and/or highway closures, affecting food and services deliveries to the community.

Ignition sources in the area are generally railway and lightning, with some of the fires over the years in the community caused by brush burning and children playing with matches. Approximately 8 fires have been actioned within Whitesand First Nation, along with an additional 8 fires actioned within the town of Armstrong.

The community is under federal jurisdiction, but does follow the Forest Fire Prevention Act in principle. Band Council would determine if any infractions have occurred on the Whitesand First Nation. Wildfire investigations would only occur if permission is granted by the Chief and Council.

Due to the close proximity of the OMNRF fire base to the reserve, it is expected that fires will be actioned quickly and hard, to limit their impacts on structures in the area. Weather conditions could be such that initial attack may fail and structural protection and evacuation occur, especially in the spring, when fuel and weather conditions could create volatile situations.

#### WHITESAND FIRST NATION COMMUNITY

The fire hazard rating for the First Nation community is primarily moderate to high. Most of the community infrastructure is safely in the interior of the community and built with metal roofs and siding and surrounding areas are cleared sufficiently to eliminate the risk of fire impacts. However, homes are built in close proximity to mature jack pine stands surrounding the community and very little maintenance has been done to make the homes FireSmart safe. The community water system building is located off Reserve and, while constructed of FireSmart materials (metal building and roof), the location is in a moderate to high risk area. Consideration should be given to clear the area around the building to reduce potential impacts to the water plant. Under high to extreme fire indices, wildfires that ignite close to the community can be expected to impact multiple structures in many areas along the western flanks of the community.

## HAZARD ASSESSMENT- WHITESAND FIRST NATION

Due to the size of the community, the hazard assessment looks at the whole community, rather than breaking up the area into smaller blocks. The overall hazard assessment for Whitesand First Nation is rated as extreme, based on fuel hazard **type and the probability of ignition based on “green up” conditions. There has been** very little fire activity within the actual community, once the First Nation partnered with the OMNRF to create a Community Fire Officer position for the First Nation. This person assists the OMNRF in delivering Fire Prevention messages to the community and promotes fire safety within the community and school system.

The FireSmart Area Hazard Assessment normally looks at the hazard in a zone 30-100 meters out from a structure(s)/facility(s) in the community and sometimes beyond that distance. This plan is directed at taking a holistic view of an assessment for the entire community.

The primary concern for Whitesand First Nation would be the general fire season. Spring time potential includes railway fires in dry grass conditions, south and west of the community, along with outside cottage subdivisions and tourist operators clearing property from winter storm damage and general yard clean-up. Summer risks increase due to frequent lightning storms, giving the potential for large fires to impact the community.

Heavy fuel loading to the west of the community and cutovers to the south and west, with immature conifer trees, gives the community the following assessment.

Forest Vegetation (Overstory) - Based on the site assessment completed in October 2017, forested areas around the community to the south and west have moderate to high fuel loading of immature and mature Jack Pine and Balsam Fir and Spruce undergrowth. Areas to the east and north are a combination of cutover coming back in deciduous species (birch and poplar) and pose an overall reduced risk of fires occurring or impacting the community. The hazardous conditions to the west and south contribute to a score of 30 for the hazard rating.

Surface Vegetation – throughout the community, there is a mix of gravel, some lawns and cleared areas surrounding homes and community infrastructure. There are some dead and downed woody materials behind homes on the western and northwestern edges of the community. This range of conditions gives 5 points to the hazard rating.

Ladder Fuels – at the forest edge, on the western boundary of the community, ladder fuels are scattered to continuous, in between the fuel break and the housing subdivisions. Around most of the critical infrastructure, the community has removed any fuels and/or practiced FireSmart principles in the design of the properties by removing flammable fuels close to any buildings. Overall, the community rating is continuous, contributing 10 points to the hazard rating.

Slope – most of the community is flat to rolling topography. Slope hazard rating for the community as a whole is 0.

The total hazard rating for the community is 45 points, falling in the extreme range.

Formal home and site-specific hazard assessments were not completed during this exercise. It was noted that some residences in the subdivisions along the western boundary do not have significant buffers around structures. Some combustible materials are located near homes and most residential structures are not constructed of fire resistant materials. The OMNRF sprinkler plan concentrates efforts on protecting these homes.

Using the AREA HAZARD ASSESSMENT FORM, we find the following:

FACTOR	PAGE REF	CHARACTERISTICS	AND		POINT RATINGS		SCORE
Forest Vegetation(overstory)	Page reference  2-18	Deciduous	Mixed wood		Coniferous		30
		0	15	Separated	Continuous		
				15	30		
Surface vegetation	2-18	Lawn or non-combustible materials	Wild grass or shrubs	Dead and down woody material		5	
				Scattered	Abundant		
		0	5	5	15		
Ladder Fuels	2-18	Absent	Scattered		Continuous		10
		0	5	10			
Slope	2-19	0 – 10%	10 – 25%		>25%		0
		0	Even	gullied	Even	Gullied	
			4	5	8	10	
Position on Slope	2-20	Valley bottom or lower slope	Mid-slope		Upper-slope		0
		0	3		5		
					TOTAL SCORE FOR FACTORS		45
					AREA HAZARD LEVEL		EXTREME

## STEP 5 – WILDFIRE MITIGATION

### GOALS

To implement further fuel reduction initiatives in the Whitesand First Nation and Armstrong area to lessen the severity of wildfires which originate within the community.

To proactively design the lots of future residential subdivisions to FireSmart standards with respect to lot size, dwelling location and ground cover and to consider the use of fire resistant building materials in the development of new homes (metal roofs, etc.).

To consider FireSmart principles in the development of the Industrial park area, including the pellet plant location and the future location of the cogeneration facility.

To develop a public wildfire education program that uses existing and customized material and information covering fire prevention, property maintenance with respect to fire hazard and evacuation planning.

OMNRF to work with Chief and Council to establish a FireSmart committee to develop and maintain actions that continue to mitigate the threat from wildfires originating outside or within the community, to people and property.

### ACTIONS

#### FUEL REDUCTION AND FUEL BREAKS

As within any community, there is a range of individual dwelling susceptibility to fire in Whitesand First Nation. Many homes on relatively large lots are surrounded by gravel or lawns that extend to the treeline. Other houses have large amounts of dead grass and other small fuels around them. Some homes showed little evidence of property maintenance.

The community has initiated a program to construct a fuel break on the west side of the community. This program should be expanded to include areas south of the community. The existing fuel break was constructed several years ago and is in need of maintenance. It should be re-bulldozed and planting of fire resistant species should be considered. As well, due to the laddering fuels and mature Jack Pine present along the western boundary, consideration should be given to widening the fuel break along that edge of the community.





Constructed fuel break



Existing constructed fuel break

The fuel break should be widened as much as possible (30 meters minimum) and, once completed, the community should consider reducing ladder fuels in the area between the fuel break and the subdivision homes. The fuel break could be replanted with fire resistant species (birch and poplar), to further reduce the impacts of high intensity fires crossing the fuel break.

Homes of elders and people who are physically unable to do their own fuel reduction and maintenance could be chosen as candidates for fuel reduction. Larger fuels that are removed could be left for the residents to use as firewood. Mitigation of fire hazard on these properties could serve as models for what other residents could achieve around their homes.

This initiative could be delivered in more than one stage. Removal of fuels immediately around the home, including stacked firewood and dead grasses and other herbaceous material would be the first step. As resources become available, the focus could shift to the nearby forest, through the removal of ladder fuels and the thinning of trees.

**INAC's Emergency Management Assistance Program could be utilized for the First Nation to apply for funding for specific on Reserve projects.**

Consideration for the community water supply should be given as well. The water building, located on the old Radar Base, south and east of the community, has started to become overgrown. The area should be cleared and further protection from wildfire should be considered.

The fuel breaks should be expanded to the south of the community. OMNRF has plans in place to do this and is waiting for funding. Additionally, fuel breaks around the planned cogeneration plant in the Industrial Park area should be considered.

## FIRESMART IN FUTURE DEVELOPMENT

Many of the newer facilities and homes in the community appear to have been developed and maintained with FireSmart principles in mind. The Band Office is located in the center of the community and is constructed of non-combustible materials (metal roof and siding) and is surrounded by a large expanse of maintained lawn and gravel. The day care center has a similar large buffer of grass separating it from the forest. The structure was not built from fire resistant materials.

A new home subdivision is planned for the community to the north and east of existing homes. There is a great opportunity for Whitesand to take advantage of proactively putting in place FireSmart construction principles before roads and homes are constructed. This would include; houses sited close to the access road, thus maximizing the distance to the treeline, establishment of lawns or gravel yards, so that when lawns are established and maintained, they will have a solid buffer from the nearby forest. The next step is to encourage residents in the new homes to work on thinning out fuels in the thick forest abutting their properties. While the use of fire resistant materials in new home construction is not part of the current discussion, it may be a future consideration, if costs and conditions allow.

Design and development of the new industrial park area (pellet plant) is presently underway. Consideration should be given when the tendering process is underway to ensure the area is developed with FireSmart principles in mind. This might include fire resistant building materials, road designs, sprinkler systems and cleared areas for fire protection.

If these principles are applied in the planning and development of future infrastructure in the community, homes and other key locations will be more fire safe.

## PUBLIC WILDFIRE EDUCATION

The OMNRF has had a wildfire prevention program delivered in First Nations for many years. While it is important to maintain that program, especially to develop a fire conscience in the youth, it is equally important to develop and distribute FireSmart related materials and information that are specific to community needs.

Residents should be made aware of the importance of and how to reduce the fire hazard around their homes. Community leadership can decide on the most effective venues for getting this information out. Public meetings and information sessions and demonstrations may be more effective than reading materials. The properties of elders and others that have had their hazard reduced can be used as models for what can be achieved.

While evacuation planning is not a core part of FireSmart, it should be included in the public education process. Despite the best plans and mitigation efforts, it is a reality that the community may need to evacuate due to smoke or the direct threat from encroaching wildfire. While the overall planning for a community evacuation is the

responsibility of community leadership, it is important that residents know how to prepare for and respond to a call for an evacuation. Emergency Management Ontario provides a variety of information for families on how to be ready for an evacuation. This advance knowledge will make a stressful time more manageable.

## FIRESMART CREW

Whitesand First Nation and the OMNRF should seek permanent funding for the establishment of a FireSmart crew for the community. The crew could become members of the fire department to assist in structural protection for the community as well. Training would have to be completed for any staff to work on structural fires and a discussion with OFMEM needs to occur. The crew could be utilized to reduce fire hazards around the community, such as the elders' **complex and** the homes of community members unable to do the work. Once the crew was trained, it could be utilized to reduce grass hazards in the spring in a partnership with the OMNR and be used in the community as the first line of defense against wildfires.

## FIRESMART COMMITTEE

For any community program to be implemented and maintained, it is imperative that the Chief and Council support the initiative. The OMNRF should work with community leadership to set up a FireSmart committee. Prior to the development of a committee, it is recommended that the Community Fire Officer (CFO) take the two-day FireSmart workshop. Completion of this workshop will give the individual knowledge that he/she can share and the ability to answer informed questions from leadership and the community at large. The FireSmart committee should have a champion for the program who works with the committee. While it would appear that the CFO would be a good candidate for this position, it should be kept in mind that the CFO is seasonal, and the individual may not want to take on that role or may not be available year-round.

Many programs that begin with a good amount of momentum often die down over time for a variety of reasons. It is important that the FireSmart committee be maintained to give guidance and support to the program over the long term. The players will change over time, but the experience gained through initiatives will assist newcomers in understanding the rationale for and the benefits of the FireSmart program.

## STEP 6 - WILDFIRE RESPONSE

The OMNRF is responsible for the provision of fire management services, including suppression and prevention, for Whitesand First Nation and the surrounding area. The Armstrong Attack Base is located approximately 1 kilometer from the First Nation and provides rapid response to any wildfires in the area. A helicopter is normally stationed at the Attack Base to assist in fire response and crew delivery. Plans are in place to set up sprinklers to protect critical infrastructure in the community (see Appendix A).

Whitesand First Nation should consider accessing funding for the development of their own community protection kit, utilizing sprinklers and large hose to supplement their existing fire cache of structural equipment.

The cemetery is located on the east end of the community across Airport Road. There is also another cemetery located near Old Whitesand, in a high hazard area. Through their beliefs, First Nations people have a strong connection to the cemetery. Most of the grave markers are wooden and are susceptible to wildfire. Their destruction could have a significant impact on the community. It is recommended that the sprinkler protection plan be amended to include coverage of the cemetery.

## WILDFIRE PREPARATION PLAN

In addition to a community emergency response plan that covers all contingencies, Whitesand First Nation should develop a shorter wildfire preparation plan. The plan would outline, often in chronological order, the steps that must be taken when a wildfire is discovered in or near the community. Following is a list of considerations that should be included in the plan. Leadership may want to add other concerns that may be **specific to the community's needs**.

1. Emergency notification procedures – who is contacted, in what order, to advise of the situation?
2. Local actions – what activities can members of the community safely carry out prior to the arrival of OMNRF resources? Will groups or teams with predetermined responsibilities be set up to address operational, social and safety needs?
3. Evacuation versus Shelter-in-place – the plan should outline the positives and negatives of each method and other considerations for keeping the population safe in advance of an approaching wildfire.
4. Evacuations – the plan should include a public education component that outlines how people can prepare for an evacuation. This information should be shared with the community on a continuing basis well before any emergency occurs.

The plan should outline the steps to be taken in evacuating the community, either by road, air, or potentially train, if feasible. Roles and responsibilities, procedures, outside agencies and evacuation options need to be clearly delineated.

5. Safe Zones – the community may want to establish safe zones where community members can be kept until being evacuated or the wildfire threat has passed.

## EARLY WARNING SYSTEM

The community may want to develop a system to let people know when there may be a threat of wildfire.

## WATER SOURCES

The community has approximately 20 fire hydrants within the road network. The 2 pumper trucks (Fire Trucks) provide portable water sources for structural fires and urban interface fires. Additional water could be drawn from creeks to the northeast of the community and a small lake to the north. The OMNRF and the community have cleared a trail to this water source. The OMNRF plan for passive sprinkler protection utilizes the lake and creek system for the water sources for pumps. Since the Band Office is FireSmart constructed, the OMNRF sprinkler plan is focused on protecting homes and the daycare center on the western side of the community.

## CONCLUSION

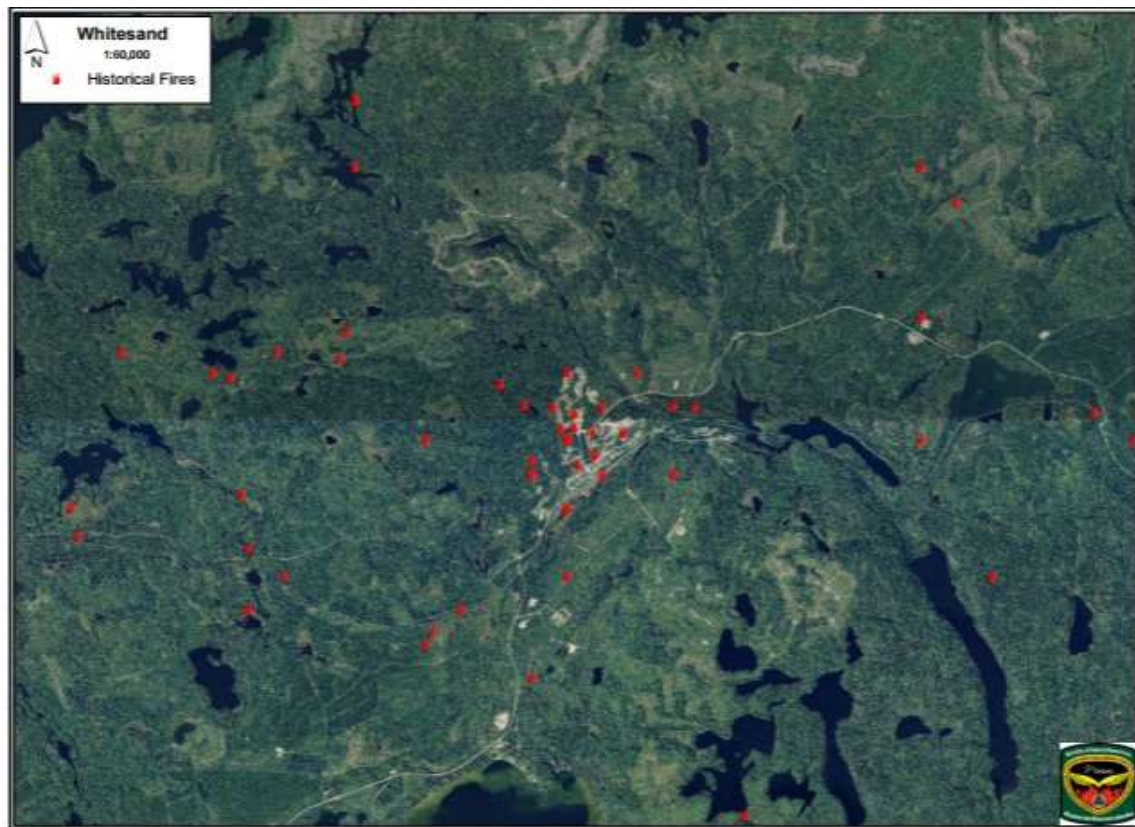
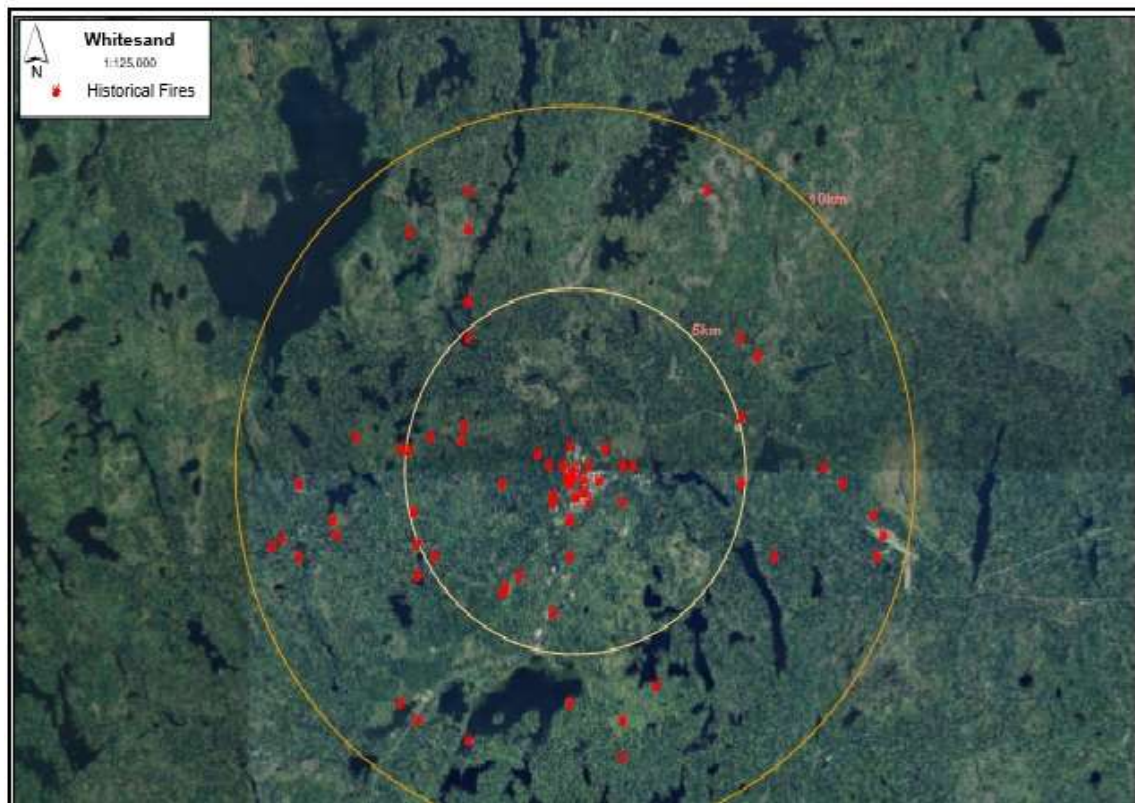
Through proper planning, First Nations can take proactive measures to prevent or mitigate the impacts of a wildfire on their communities. The key to successful wildfire planning is participation from a range of community representatives who have the knowledge and skill sets to be key players in the process. The FireSmart program outlines steps that need to be taken to make a community more fire safe. This plan sets out a strategy for Whitesand First Nation to follow on a path to becoming a FireSmart community. It is encouraging to see that some of the recommended initiatives have already been started in the community and they should be extended and expanded.

The OMNRF is dedicated to helping First Nations develop and implement FireSmart plans. Staff can assist with many aspects of the planning process and can schedule on-site assistance when requested. It is imperative that Whitesand First Nation work with the OMNRF throughout the FireSmart process, to help ensure that its initiatives complement and **mesh with the fire program's plans for community protection.**

A plan provides a template for a First Nation to take the initial steps to become a FireSmart community. Once the recommendations are implemented at a community level, the next stage involves focusing down to the subdivision and individual home level to make those areas more fire safe. Therefore, it is key that a community individual(s) has taken FireSmart training, so that the knowledge and ideas can be shared with the committee.



TABLE 1 FIRE HISTORY





## APPENDIX A

### WHITESAND FIRST NATION SPRINKLER PLAN





# Whitesand Values Equipment

Mark III Power Pump = 4  
Sprinkler Heads = 48  
1½"Hose = 41  
2½"Hose = 31  
2½"Tee = 1  
2½"X 2 ½ GATED WYE = 2



## APPENDIX D

### TARGETED MITIGATION AREAS (FUEL BREAK)



Existing constructed fuel break along western boundary of subdivisions



Fireguard trail

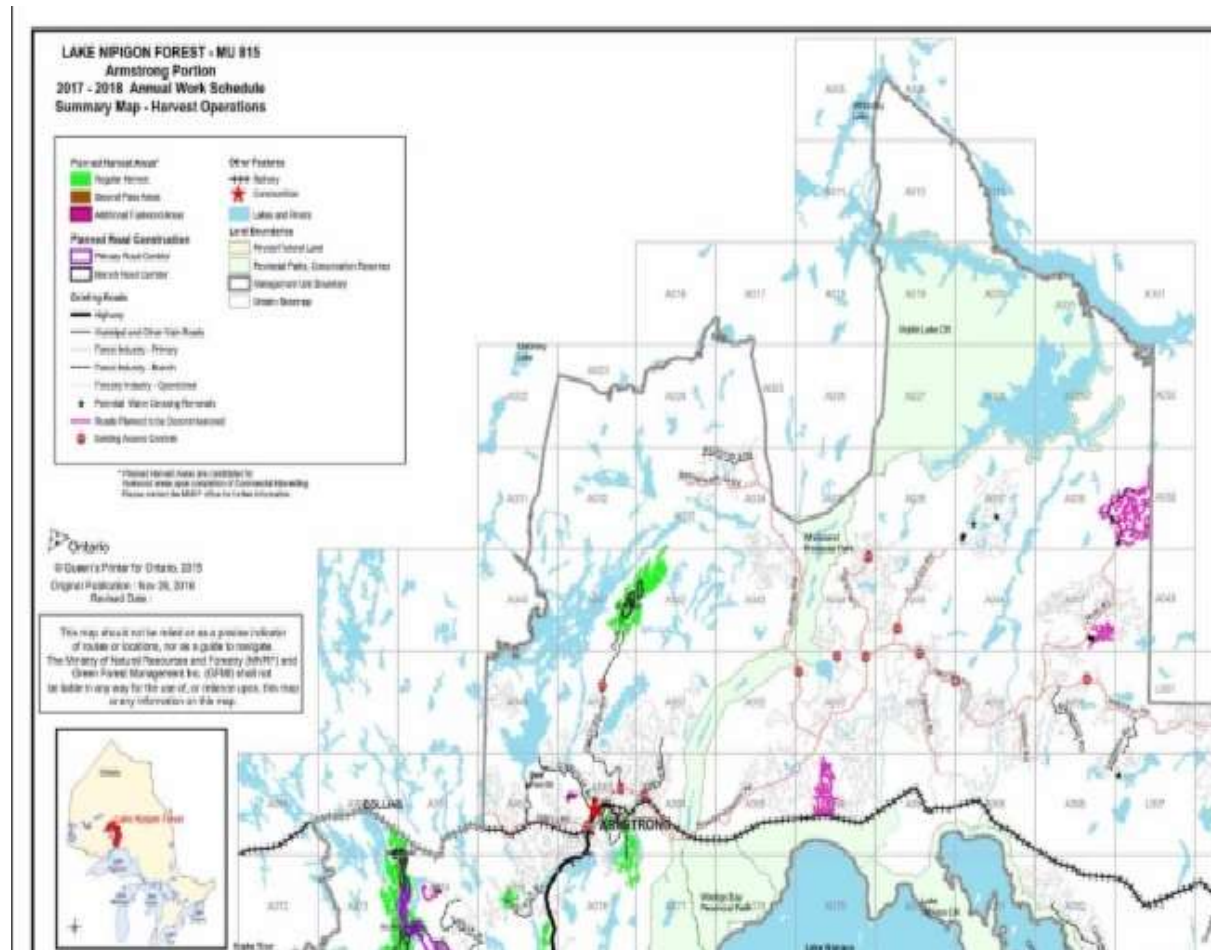


Fireguard behind subdivision



# APPENDIX F

## ANNUAL WORK SCHEDULE



## APPENDIX I HAZARD MAPPING

