



# SEA HAWK

*Presented For*

**HILLIARD'S BAY**  
ESTATE +  
PROVINCIAL PARK

# Structure Protection Plan

JULY 2022

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## INTRODUCTION

The Spring of 2022, Seahawk Services was contracted to develop a Structure Protection Plan for the community of Hilliard's Bay Estates and the Hilliard's Bay Provincial Park. The intent of this plan is to identify the wildfire risk that the community is faced with during a Wildland Urban Interface incident, and how to mitigate it.

The Structure Protection Plan was developed using standard practices and assessment tools to gather the information required to make recommendations based on the priorities of; life safety, property conservation, environment, and economy.

Together with the information gathered, current knowledge, research of Wildland Urban Interface Fires (WUI), and experiences of the writers, this plan is designed to help mitigate the threat of a wildland urban interface fire to the community.

## The objectives of the plan are;

- Identify the risk of a wildfire impact to the community of Hilliard's Bay Estates
- Identify and triage all structures in the community of Hilliard's Bay Estates
- Identify and triage all critical infrastructure owned by Alberta Parks in the Hilliard's Bay Provincial Park
- Develop a usable, practical, and cohesive operational plan to protect the community from wildfire
- Identify equipment and training recommendations to mitigate the impact of a Wildland Urban Interface event



Recommendations in this plan will help protect against the risk of catastrophic loss to the community, however it cannot completely mitigate all losses. By following the recommendations outlined in this strategy, the community of Hilliard's Bay Estates and Hilliard's Bay Provincial Park can greatly reduce

the risk of wildfire to their residents, property, and lands.

This plan recommends investment by Big Lakes County in structure protection equipment, apparatus, strategies, tactics, and training.

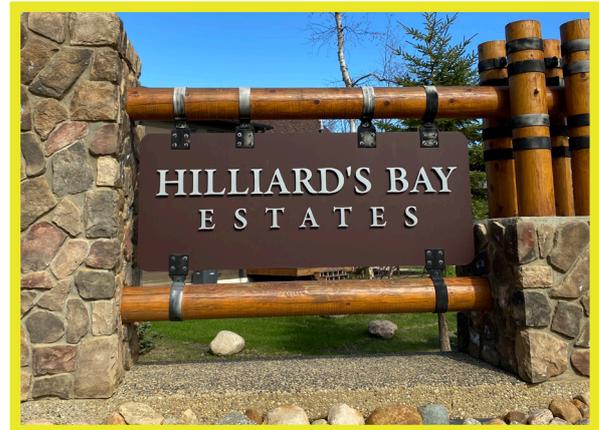
# PLANNING AREA

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The planning area for this Structure Protection Plan is within the jurisdictional boundaries of Big Lakes County, the community of Hilliard’s Bay Estates. The plan includes all of Hilliard’s Bay Estates primary structures, as well as critical infrastructure owned by Alberta Parks, which also contains critical infrastructure for the community of Grouard.

Located on the Northwest corner of Lesser Slave Lake, Hilliard’s Bay is a single road access community bordering the Boreal Forest. The adjacent forest surrounding the community of Hilliard’s Bay is classified as a Mixedwood Fuel Type, with varying ranges of coniferous fuels present.

The community of Hilliard’s Bay Estates consists of 92 primary residential structures, some of which are year round residences and some seasonal cottages. Hilliard’s Bay Provincial Park contains six pieces of critical infrastructure, two structures are not classified as critical, 172 recreational campsites, as well as three group use areas.



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# STAKEHOLDERS

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Stakeholders consulted for this plan include;

- Jason Cottingham, Fire Chief, Big Lakes County
- Luci Martinson, Deputy Fire Chief, Big Lakes County

**Wildfire Values and Risk Assessment is a tool used to determine the overall risk to the community of Hilliard's Bay Estates by looking at its values at risk, wildland fuels, fire occurrence, fire behaviour potential and suppression capability.**

**The assessment is used to identify and prioritize the recommendations for the Structure Protection Plan.**

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## **WILDFIRE VALUES**

The 92 primary structures within the community of Hilliard's Bay Estates are presented with numerous challenges given their proximity to the adjacent wildland fuels to the community. There are also wildland fuels intermixed throughout the community in pockets, as well as a fuel wick running through the community along the creek.

Development of the residences within Hilliard's Bay Estates are for the most part built with non-combustible materials. As well as the construction materials, most of the lot sizes provide good spacing between each other and wildland fuels.

The critical infrastructure in Hilliard's Bay Provincial Park is predominantly constructed with little setback from wildland fuels, with combustible material siding. These buildings include; pumphouse, water treatment, lift station, maintenance shop, and staff housing. Not listed as critical, however still counted as Provincial

Parks infrastructure is an enclosed group camp cookhouse and the old Provincial Parks office. The final piece of critical infrastructure owned by the Provincial Park is the newly constructed showerhouse/parks office. This building is however built with a better setback from wildland fuels and constructed with non-combustible materials.



## ROOF TYPES

Community division	Asphalt shingle	Tin	Cedar shake	Other
East division	49	13	1	3
West division	22	4	0	0
Parks division	1	6	1	0
<b>TOTALS</b>	72	23	2	3



## WILDFIRE RISK ASSESSMENT

The wildland fuels surrounding Hilliard’s Bay Estates are of the mixed wood fuel type being composed of both deciduous and coniferous fuels. Within a 2km range of the community there are varying ranges of mixed wood percentages, however there are some areas of concern with heavier pockets of coniferous fuels present. The wick of vegetation running through the

community along the creek is an area of concern as well. The wick being similar to the mixed fuels surrounding the community also has a risk of combustible understorey vegetation that could easily carry surface fire through the backyard of numerous properties.

The Hilliard’s Bay Provincial Park is faced with the same fuel loading and type as the Estates.

Ignition sources for the community of Hilliard's Bay;

- Human caused (campfires, off-road vehicles,)
- Lighting
- Powerlines (Provincial Park)



<b>Community Division</b>	<b>Wildfire risk</b>
<b>East division</b>	<b>Very high</b>
<b>West division</b>	<b>Very high</b>
<b>Parks division</b>	<b>Very high</b>

## RISK TO LIFE SAFETY

The community of Hilliard's Bay Estates and the Hilliard's Bay Provincial Park are a risk to life safety during a Wildland Urban Interface event. With a single road for access and egress there is potential of citizens being cut off from their only egress in the event of a wildfire.

With 92 residential structures in the Estates, and 172 recreational campsites, three group use areas in the Provincial Park Campground, and the community of Shaw's point all sharing the access road, it will likely quickly become congested during an evacuation.



# RECOMMENDATIONS

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Through the development of this report, it is recognized that the community of Hilliard's Bay Estates is at significant risk to wildfire. Due to the wildland fuels surrounding the community, the limited access and egress, and remote locations, there are concerns for life safety of the public. To mitigate the risk to the public and the properties Big Lakes County is responsible for protecting, the following are recommendations based on the 7 Disciplines of FireSmart;

## 1. PUBLIC EDUCATION

- Host FireSmart Community Events in Hilliard's Bay Estates to promote FireSmart Education for homeowners to better defend their properties from the threat of wildfire.
- Develop or utilize FireSmart Education materials for Provincial Park users on campfire safety, OHV use, and evacuations.

## 2. VEGETATION MANAGEMENT

- Work with Alberta Provincial Parks on developing a Vegetation Management Plan for the Hilliard's Bay Estates community and Alberta Provincial Park Campground.
- Work with Alberta Provincial Parks to develop a plan for removing wildland fuels away from critical infrastructure.

## 3. LEGISLATION & PLANNING

- Develop a secondary road running North through Alberta Provincial Park Land from Hilliard's Bay to connect back into HWY 750. This is to create a secondary means of egress for residents and Provincial Park users should their only means of egress be cut off.

## 4. CROSS TRAINING

- Invest in operational hands on Wildland Urban Interface training for firefighters.
- Train annually on wildfire behaviour and suppression.
- Invest time and resources into training opportunities with Alberta Agriculture & Forestry as well as mutual aid partners.

## 5. EMERGENCY PLANNING

- Update Hilliard's Bay Structure Protection Plan every five years to keep the plan relevant and up to date.
- Host table top exercises annually with ECC and field staff using the Emergency Management Plan and Structure Protection Plan.

## 6. INTERAGENCY COOPERATION

- Continue to work with Alberta Agriculture and Forestry on Hazard Reduction Burning within the County.
- Continue working relationship with Alberta Agriculture & Forestry.
- Continue working relationships with mutual aid partners.

## 7. CAPITAL INVESTMENT

- Invest in a Type 2 Structure Protection Trailer for Big Lakes County to ensure initial response capability for structure protection within the community of Hilliard's Bay. The Alberta Structure Protection Operational Guidelines should be followed as a minimum for parameters of a Type 2 SPU.
- Ensure wildland capability such as pump and roll, draft capability, and booster lines when ordering new apparatus for wildland use.
- When obtaining portable pumps for Big Lakes County, capability should be considered to ensure the pump is able to; suppress wildland fires, fill apparatus, and be used for sprinkler systems. To meet all of these needs future pump procurement should have 300 USGPM max flow and 200 PSI max pressure specifications or greater.

# COMMUNITY PROTECTION PLAN

## COMMUNITY DIVISIONS

- The community of Hilliard's Bay Estates can be geographically divided into two divisions for community planning. The community can be split into East and West by the following map.
- The parks division is outside of the community of Hilliard's Bay but is included in this plan.



## STRUCTURE TRIAGE

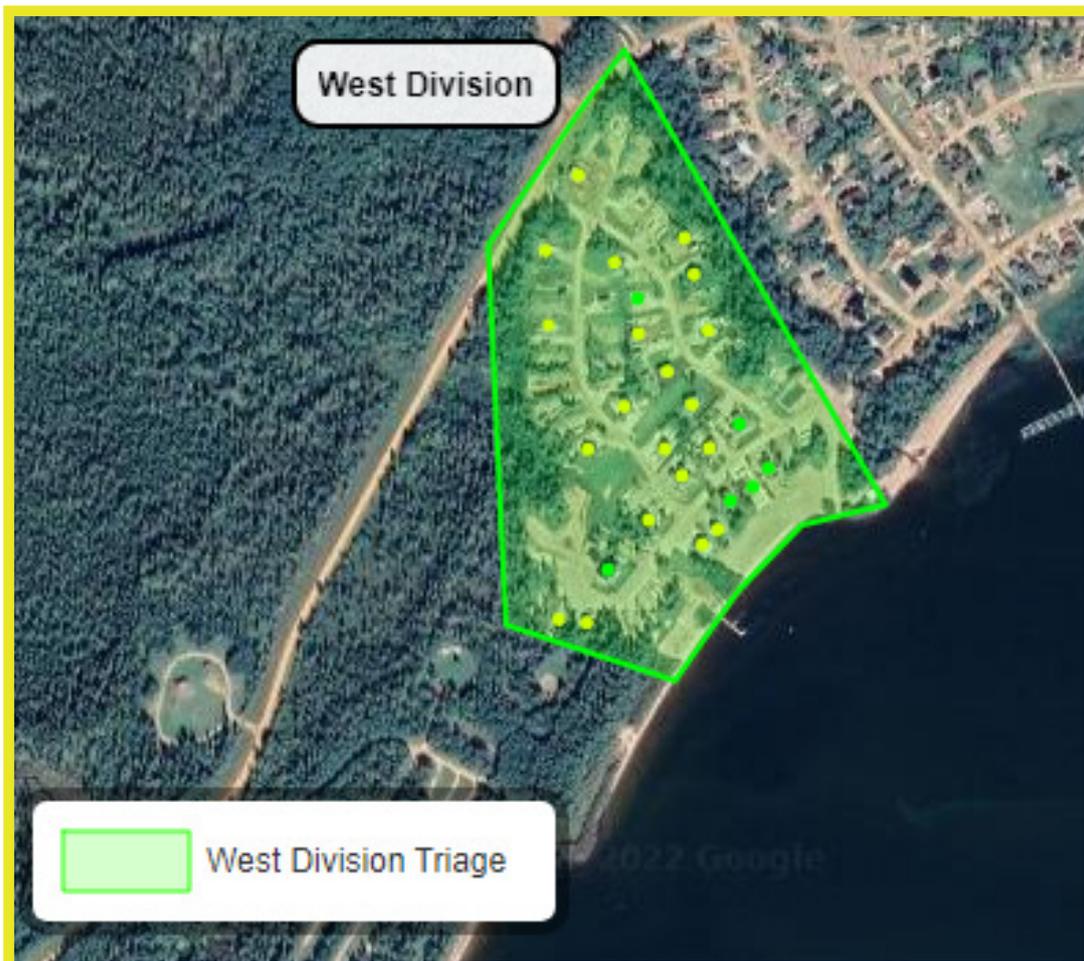
Hilliard’s Bay Estates and Hilliard’s Bay Provincial Park are situated in an area of diverse wildland fuels. Great care was taken to identify every primary structure as well as critical infrastructure, and how a wildland fire could impact them. Building construction, fuels setbacks, firefighter safety, and access/egress were the main factors in classifying each of the assessed. Each structure was classed using accepted norms of structure triage broken down as follows.

Community division	Non-threatened	Threatened defensible	Threatened non-defensible
East division	7	57	2
West division	6	20	0
Park division	1	6	4
<b>TOTALS</b>	<b>14</b>	<b>83</b>	<b>6</b>

**NOT THREATENED:** There is a safety zone nearby and a temporary refuge area present at the structure. Construction features and defensible space make the structure unlikely to ignite. Requires little to no mitigation and is likely to survive ember showers and/or fire front impact.

**THREATENED DEFENSIBLE:** There is a safety zone nearby and a temporary refuge area present at the structure. Construction features and defensible space make the structure at risk of ignition. Requires some mitigation efforts and suppression tactics to survive ember showers and/or fire front impact.

**THREATENED NON-DEFENSIBLE:** There is a lack of an adequate safety zone nearby and the structure cannot be safely mitigated. Construction features and defensible space make the structure likely to ignite. Requires a massive effort to mitigate and suppression tactics will be unsafe for personnel. Structure is unlikely to survive ember showers and/or fire front impact.





**VEGETATION MANAGEMENT RECOMMENDATION:**

Work with Alberta Provincial Parks to develop a plan for removing wildland fuels away from critical infrastructure.

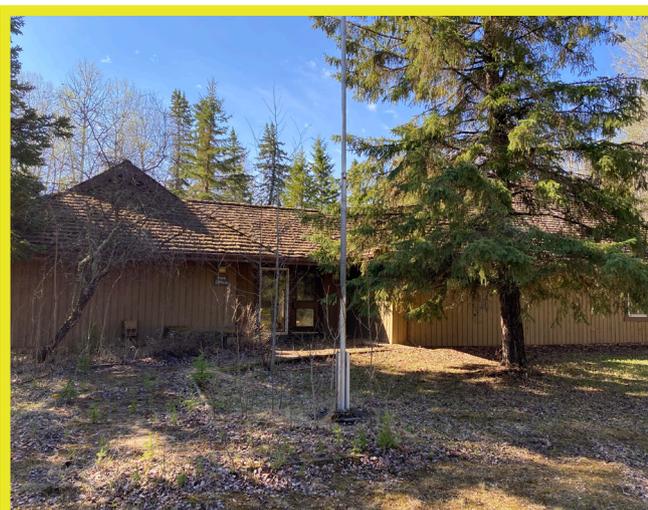
## IDENTIFIED CRITICAL INFRASTRUCTURE

The Hilliard's Bay Provincial Park contains critical infrastructure vital to the operations of the Provincial campground, as well as a water system that supplies the neighbouring community of Grouard. The majority of the triaged Critical Infrastructure are Threatened Defensible. This is due to the building construction as well as adjacent fuels to the structures.

There are three structures that are all tied to the water system, two pump houses and a water treatment site. If these buildings were to be lost, they would significantly impact the operations of the campground and more importantly Grouard's water supply. If a wildfire were to be threatening Hilliard's Bay it may very well be threatening Grouard as well, if their water supply was cut off it could further disrupt the suppression efforts of the fire department by losing hydrant supply.

To sustain the campgrounds operational ability there is a maintenance shop, newly constructed showerhouse/office

building with a communications tower, and staff housing that would all be classified as critical to the Provincial Park. The communications tower also provides boosted cell phone service within the Provincial Park. The campground has an enclosed cookhouse or group use building, not vital to operations as well as an old abandoned office building.



## **PUBLIC EDUCATION RECOMMENDATION:**

Host FireSmart Community Events in Hilliard's Bay Estates to promote FireSmart Education for homeowners to better defend their properties from the threat of wildfire.

## **IDENTIFIED RESIDENTIAL STRUCTURES**

The majority of the triaged structures within the community of Hilliard's Bay Estates are Threatened Defensible. This is due to the building construction utilized as well as structure spacing, proximity to wildland fuels, and combustibles present in the FireSmart Zone 1A and 1. There are, however, extremes of not threatened and threatened non-defensible within Hilliard's Bay Estates. Given the proper time and resources towards mitigation, most structures do stand a fair chance of survival.



## SPRINKLER SYSTEMS

Sprinkler systems are an excellent way to prevent structure loss during an interface fire. Sprinklers work by wetting down fuels around the structure that protect it from ember showers and fire front impact. Sprinkler systems are not a stand-alone solution that will guarantee structure survival. They need to be reinforced with suppression capability to be effective.

Recommended sprinkler systems have been identified by division and can be modified during an interface fire as it is difficult to plan for every fire.

The following recommendations for sprinkler systems are based primarily on how the structures will be impacted by ember transplanted and by direct flame impingement. This is determined by assessing the building construction, fuel types in FireSmart Zones 1a-3, fuel loading, likely areas of impact, locations of water sources, and the most effective use of time and resources.

During pre-impingement, the determining factors for where to start and which systems to deploy are time and resources. The time factor is simply how much time is available before ember showers and fire front impact are expected.

The resources factor is how much equipment, staff, and capabilities are available to deploy sprinklers before the fire arrives. Structures should be triaged quickly in these areas to identify which structures to deploy sprinklers on.

The triage in this plan is an accurate rating at the time of writing, but should be updated every five years to account for new construction, improvements, and fuel reduction. The following is a breakdown by division for sprinkler zones. Care has been taken to account for expected flow, friction loss, and other variables in a sprinkler system.

While efficiencies can be found during sprinkler deployment when utilizing this plan, we have taken into account the likely varying levels of training and experience with sprinklers and have recommended systems that have more than adequate equipment counts to complete the zone being sprinkled.

### EMERGENCY PLANNING RECOMMENDATION:

Update Hilliard's Bay Structure Protection Plan every five years to keep the plan relevant and up to date.

# HILLIARD'S BAY SPRINKLER SYSTEMS | GEAR TOTALS BY ZONE



GEAR	ZONE 1A	ZONE 1B	ZONE 2	TOTAL
Large rainbirds	22	16	26	64
Mini rainbirds	7	3	7	17
Butterfly sprinklers	0	0	0	0
1 ½" hose	25	18	18	62
5/8" hose	58	38	66	162
1 ½" thieves	29	19	33	81
1 ½" wyes	6	6	8	24
5/8" wyes	9	6	10	25
Bladders	1	1	0	2
Pump 300 US GPM max flow & max 200 PSI	2	2	2	6
Suction hose with foot valve	2	2	2	6
Pump kits	2	2	2	6
5/8 female females	7	3	7	17
1.5" reducers	4	1	5	10
1.5" end caps	0	0	0	0
Estimated completion time (crew of 4)	6 hours	4 hours	6 hours	16 hours

## HILLIARD'S BAY SPRINKLER SYSTEMS | GEAR TOTALS BY ZONE



GEAR	ZONE 1	ZONE 2	TOTAL
Large rainbirds	22	7	29
Mini rainbirds	7	2	9
Butterfly sprinklers	0	0	0
1 ½" hose	30	6	36
5/8" hose	54	18	72
1 ½" thieves	38	9	47
1 ½" wyes	7	2	9
5/8" wyes	9	3	12
Bladders	1	0	1
Pump 300 US GPM max flow & max 200 PSI	2	0	2
Pump 98 US GSM max flow & max 380 PSI	0	1	1
Suction hose with foot valve	2	1	3
Pump kits	2	1	3
5/8 female females	7	2	9
1.5" reducers	4	1	5
1.5" end caps	0	0	0
Estimated completion time (crew of 4)	4 hours	2 hours	6 hours

# HILLIARD'S BAY SPRINKLER SYSTEMS | GEAR TOTALS BY ZONE



<b>GEAR</b>	<b>TOTAL</b>
Large rainbirds	9
Mini rainbirds	7
Butterfly sprinklers	0
1 ½" hose	17
5/8" hose	32
1 ½" thieves	16
1 ½" wyes	0
5/8" wyes	4
Bladders	7
Pump 80 US GSM max flow & max 85 PSI	7
Suction hose with foot valve	7
Pump kits	7
5/8 female females	7
1.5" reducers	7
1.5" end caps	0
Estimated completion time (crew of 4)	6 hours

# SPRINKLER SYSTEM WATER SOURCES

## EAST DIVISION

To effectively sprinkle the East Division, a minimum of two Type 2 Structure Protection Units would be required. The SPU would specifically require six pumps to achieve a total of 682 GPM to sufficiently run all three zones in the East Division. Water sources and pumps for the sprinkler system zones are;



### Zone 1A:



CREEK | Pump 300 US GPM max flow and max 200 PSI



DITCH | Pump 300 US GPM max flow and max 200 PSI

### Zone 1B:



DITCH | Pump 300 US GPM max flow and max 200 PSI



LAKE | Pump 300 US GPM max flow and max 200 PSI

## Zone 2:



CREEK | Pump 300 US GPM max flow and max 200 PSI



CREEK | Pump 300 US GPM max flow and max 200 PSI

If the creek does not suffice as an adequate water source due water level portable bladders and will need to be utilized which can be placed closer to the structures to allow for reduction in the amount of hose required.

## WEST DIVISION

To effectively sprinkler the West Division a Type 2 Structure Protection Unit should be utilized. The SPU would specifically require three pumps to achieve a total of 292.5 GPM to sufficiently run both zones in the West Division.

## Zone 1:



CREEK | Pump 300 US GPM max flow and max 200 PSI



LAKE | Pump 300 US GPM max flow and max 200 PSI

## Zone 2:



CREEK | Pump 98 US GPM max flow and max 380 PSI

If the creek does not suffice as an adequate water source due water level portable bladders and will need to be utilized which can be placed closer to the structures to allow for reduction in the amount of hose required.

If creek levels are high enough, Zone 1 Lake Pump may be relocated to an alternative site to allow for a shorter hose lay in sprinkler system

## Zone 1 Alternate Pump Site:



CREEK | Pump 300 US GPM max flow and max 200 PSI

# PARKS DIVISION

To effectively sprinkler all structures within the Parks Division, a Type 2 Structure Protection Unit should be utilized. The SPU would specifically require seven pumps to achieve a total of 107.5 GPM.

**Zone 1:** GROUP A CAMPGROUND, SHOWERHOUSE, WATER TREATMENT | Bladders, Pump 80 US GPM max flow and max 85 PSI

**Zone 2:** PUMPHOUSE LAKE | Pump 80 US GPM max flow and max 85 PSI



## CAPITAL INVESTMENT RECOMMENDATION:

Invest in a Type 2 Structure Protection Trailer for Big Lakes County to ensure initial response capability for structure protection within the community of Hilliards Bay. The Alberta Structure Protection Operational Guidelines should be followed as a minimum for parameters of a Type 2 SPU, with consideration to all communities in the interface of the County for specific extra equipment.

## Critical Areas

Critical areas identified in the community of Hilliard's Bay Estates include water fill sites, safety zones/staging areas, and temporary refuge areas. These areas are critical to operational crews during a wildland urban interface incident due to the importance of their use during such an event.





## Fill Sites

The lake should be utilized as the primary water source for the community of Hilliard's Bay during a Wildland Urban Interface Fire. If possible, dedicated engines positioned at selected draft sites should be used for refilling of apparatus. If sufficient apparatus are unavailable, large volume portable pumps should be utilized.

Caution should be used when using the lake as fill sites due to the shallow shoreline and waves present on such a large body of water. Using a dock or proper suction hose flotation is necessary to ensure a secure pump site. Also 2.5" Hose should be utilized to run from the pump up to an appropriate access location for the filling of apparatus.

### **CAPITAL INVESTMENT RECOMMENDATION:**

When obtaining portable pumps for Big Lakes County, capability should be considered to ensure the pump is able to; suppress wildland fires, fill apparatus, and be used for sprinkler systems. To meet all of these needs future pump procurement should have 300 USGPM max flow and 200 PSI max pressure specifications or greater.

## EAST DIVISION

Eastern boat launch:



Western boat launch:



## WEST DIVISION

Eastern boat launch:

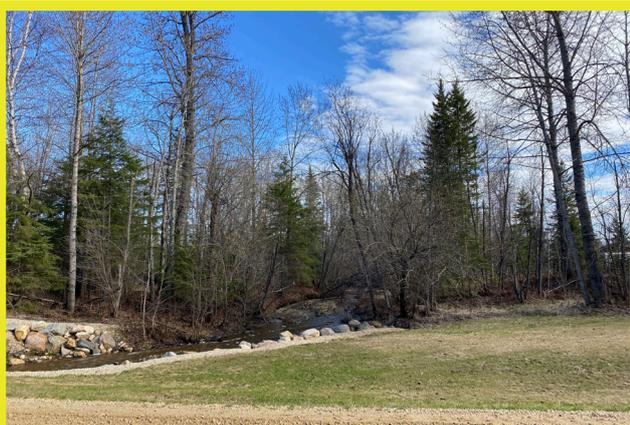


Western boat launch:



## PARKS DIVISION

Creek:



## SAFETY ZONES

Safety Zones are identified in this plan to provide a safe area for responders to escape to, should fire conditions deteriorate and become unsafe to remain in the area. Typically, at a minimum one safety zone per division is recommended.

Care must be taken to evacuate the area early of residents and set an appropriate trigger point for resources to effectively move to their safety zone. Safety zones are identified as an area that should be large enough that the distance between firefighters and the flames is four times the maximum flame height. A Safety Zone has been identified for all three divisions of Hilliard's Bay Estates.



### EAST DIVISION

Eastern boat launch



### WEST DIVISION

Playground



### PARKS DIVISION

Group A camping area

## TEMPORARY REFUGE AREA

A temporary refuge area (TRA) is an area for firefighters and the public to utilize if they are unable to be evacuated in time. There are numerous of these areas identified in Hilliard's Bay Estates, they may not even be for vehicles however for people to gather in a safe place should the worst case scenario take place and escape routes are cut off.



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## STAGING AREAS

Staging areas are defined as an established location where resources can be placed while awaiting a tactical assignment. It is a safe area not directly in the path of the fire. Due to the nature of the community layout, Hilliard's Bay Estates utilizes all three safety zones as possible staging areas. Staging areas should have controlled check in & check out procedures to have adequate resource accountability. Resources should be organized into Strike Teams, Task Forces, or Single Resources in staging areas. Once assigned, they immediately move to complete the given tasks.

# SUPPRESSION RESOURCES

It is recommended for the community of Hilliards Bay, that there be a Task Force for each division; East, West and Parks. Both East and West Division contain the exact same requirement for a Task Force along with the Single Resource Engines for Fill Sites. Parks Division Task Force will utilize West Divisions Single Resource Engine for a Fill Site.

East Division Task Force		KIND / TYPE
1		Type 7 / command unit
1		Type 6 engine
1		Type 3 engine
1		Type 1 / 2 tactical tender
East Division Single Resource		KIND / TYPE
1		Type 1 / 2 engine

West Division Task Force		KIND / TYPE
1		Type 7 / command unit
1		Type 6 engine
1		Type 3 engine
1		Type 1 / 2 tactical tender
West Division Single Resource		KIND / TYPE
1		Type 1 / 2 engine

Parks Division Task Force		KIND / TYPE
1		Type 7 / command unit
1		Type 6 engine
1		Type 3 engine
1		Type 1 / 2 tactical tender

**CAPITAL INVESTMENT RECOMMENDATION:**  
 Ensure wildland capability such as pump and roll, draft capability, and booster lines are required when ordering new apparatus for wildland use.



# SUPPRESSION RESOURCE TACTICS

## HILLIARD'S BAY ESTATES DIVISIONS

For both Divisions of Hilliard's Bay Estates, given the proper training and personnel it is recommended to remain in the community upon the Impingement Phase. A critical decision point must be reached in regards to the access/egress route. If a wildfire were to impact Hilliard's Bay Estates, the escape route will most certainly be compromised. Training, experience, fire conditions, and number of resources will need to be considered before crews are permitted to remain in the community during impingement. The existence of safety zones within the community as well as large setbacks from fuels on most properties, does allow the opportunity for resources to remain in place if conditions allow.

Task Forces should utilize:

- Tactical Patrol
- Bump and Run
- Prep and Defend
- Fire Front Following

The main goal of these Task Forces would be to extinguish as many spot fires as possible to protect structures within the community. To do this they must stay mobile and be efficient in deploying and rerecking attack lines. Crews can expect to be overwhelmed with spot fires due to ember transplant and rapid fire spread under extreme fire conditions.

Depending on personnel available, the tactic of Fire Front Following should be considered, where crews are to wait in a safe area outside of the community and let the fire front pass into the community, then follow up behind once it has passed.

## PARKS DIVISION

For the Parks Division it is recommended that the tactic of Fire Front Following is used while the Task Force remains in the Group A Campground Staging Area. Due to the fuel loading surrounding each structure within the Parks Division it is not advised to be at any other site than the Group A Campground when impingement occurs. After the fire front passes, the Task Force may then proceed to reinforce sprinkler systems with fire suppression capability.

### CROSS TRAINING RECOMMENDATION:

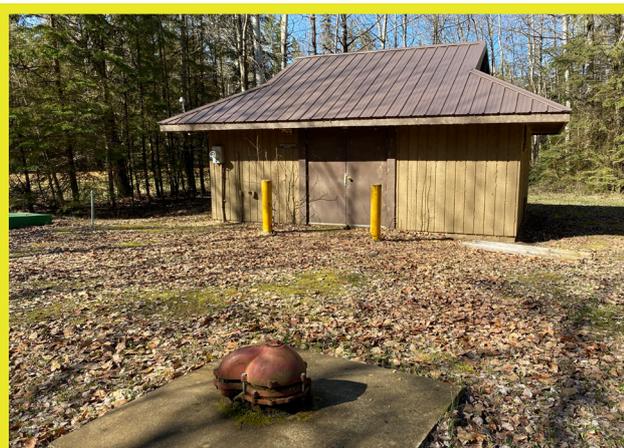
1. Invest in operational hands on Wildland Urban Interface training for firefighters.
2. Train annually on wildfire behavior and suppression.
3. Invest time and resources into training opportunities with Alberta Agriculture & Forestry as well as mutual aid partners.

# COMMUNITY HAZARDS AND DG

For the community of Hilliard's Bay Estates hazards that may be present are homeowner or recreational users propane and fuel tanks. The primary structures are supplied by natural gas with no large propane bullets supplying the structures. They are however present in the Parks Division for supplying some of the identified critical infrastructure. Underground power supplies the community of Hilliard's Bay, therefore if electrical boxes are impacted from the radiant heat of a wildfire they could become hazardous.



The water treatment station in the Parks Division contains chlorine for the treatment process which could become a hazard if the structure is lost. In the Provincial Parks maintenance yard there are also large storage tanks of gasoline and diesel on site that pose a hazard and should be protected.



The wildland fuel load in the Provincial Park Campground and surrounding the community of Hilliard's Bay Estates is considered a hazard as well. There are pockets of heavy fuels that could be problematic for responders and the public if they become entrapped within close proximity to them in the event of a wildfire.

## VEGETATION MANAGEMENT RECOMMENDATION:

Work with Alberta Provincial Parks on developing a Vegetation Management Plan for the Hilliard's Bay Estates community and Alberta Provincial Park Campground.

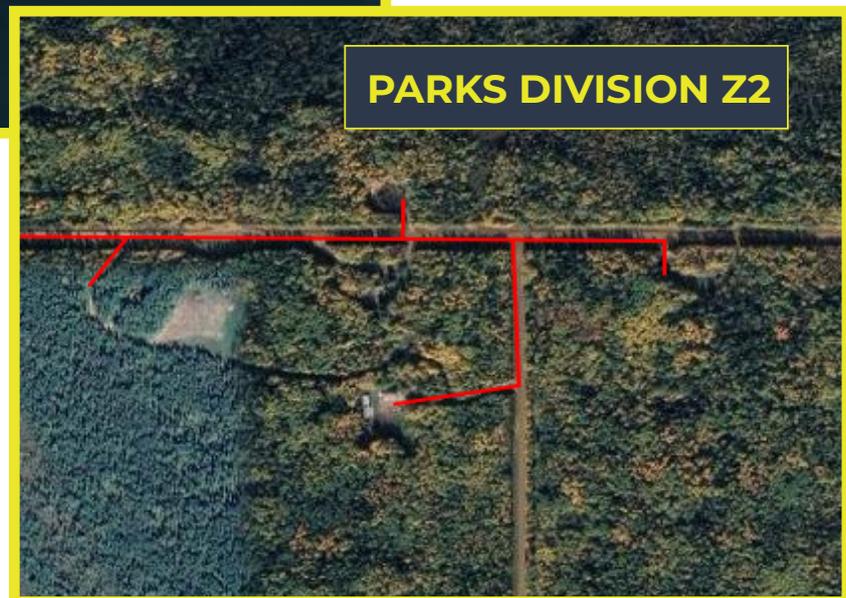
## UTILITIES

The community of Hilliard's Bay Estates is supplied by underground power and gas owned by Atco Gas and Atco Electric. Having underground power greatly eliminates the potential for fire starts caused by overhead power lines. There is no residential infrastructure for potable water, all residences have their own tank supply. The Provincial Park contains a radio tower at the new Office/Showerhouse for cellular phone coverage



# EVACUATIONS

In the event of an evacuation, residents, and recreational users should be evacuated West towards the community of Grouard. Escape routes are identified in the plan for each Division as shown below;





Due to the single access and egress issues as well as the remote location of Hilliard's Bay Estates, it is heavily recommended that evacuations are done extremely early. Even if current fire behaviour being observed is not of concern, the trigger points of an evacuation should be treated as if the fire behaviour is extreme.

Forecasted weather can change quickly and it is better to get ahead of the evacuations than it is to be caught behind. With a strategic evacuation it could take up to 24 hours to completely evacuate the entire East and West Division along with Parks Division. This 24 hour time period is recommended to allow for a safe coordinated evacuation for residents fleeing Hilliard's Bay.

It is recommended that if a tactical evacuation takes place when there is inadequate time, Provincial Park users should leave their recreational vehicles as this could amplify the safety concerns of the evacuations. This could lead to roadways being congested further and trapping evacuees in a volatile environment.

### **LEGISLATION & PLANNING RECOMMENDATION:**

Develop a secondary road running North through Alberta Provincial Park Land from Hilliard's Bay to connect back into HWY 750. This is to create a secondary means of egress for residents and Provincial Park users should their only means of egress be cut off.

### **EMERGENCY PLANNING RECOMMENDATION:**

Host table top exercises annually with ECC and field staff using the Emergency Management Plan and Structure Protection Plan.

## **EMERGENCY COORDINATION CENTRE**

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It is recommended that procedures for the Big Lakes County Regional Emergency Plan are followed for the location and activation of the ECC. The primary location is the High Prairie Council Chambers which would act as an adequate facility for the functionality of the ECC.

An ECC is designed to support the incident, not to be the command post. It is to be staffed with personnel that can support the incident through Operations, Planning, Logistics, and Finance. They will assist in coordinating the evacuations, resource ordering, cost tracking, public information, and planning for the incident.

## **EMERGENCY RECEPTION CENTRE**

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In the event the Emergency Reception Centre is activated, the location of the ERC should be located in the town of High Prairie. This will ensure that evacuees are out of harms way of the fire, and that they are provided with the adequate amenities required for them during an evacuation.

## **PROVINCIAL OPERATIONS CENTRE SUPPORT**

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It is recommended that the Provincial Operations Centre be contacted if Hilliard's Bay Estates becomes threatened by a wildfire as soon as possible. This will allow Big Lakes County to receive any available resources that the province may be able to send. This would also allow the County to receive mutual aid support from provincial resources.

# SPECIAL CONSIDERATIONS

- Care should be taken to order resources recommended early in an interface incident from mutual aid partners, Alberta Agriculture and Forestry, and Alberta Emergency Management Agency. This is due to the remote location of Hilliard’s Bay Estates and allows reflex time for resources to respond in a timely manner.
- When operating in the community of Hilliard’s Bay Estates, crews will need to ensure they block the sensor of the entrance gates once opened to allow for continuous access and egress of crews.
- Potential for large amounts of people to be present during long weekends and summer months exists in the area. If egress is cut off from the community, evacuating by helicopter and boat may be the only alternatives. Wind conditions and visibility will ultimately determine if this is a safe alternative.
- Some of the residences within Hilliard’s Bay Estates have extremely high roof peaks as well as steep angles on roof pitches. It may be a consideration when sprinklering to utilize High Prairie’s Ladder Truck or Zoom Boom equipped with a working platform for ease of sprinklering community. Utilizing poles that are attached at lower gable ends may also be a solution.
- The bridge between East and West Division in Hilliard’s Bay Estates should not be crossed with large apparatus until an engineering certificate can prove the weight rating of the bridge.



# CONTACTS

BIG LAKES COUNTY	CONTACT	WORK	CELL
Big Lakes County CAO	Jordan Panasiuk	780-276-0062	780-523-8894
Big Lakes County Fire Chief	Jason Cottingham	780-523-8778	
Big Lakes County Deputy Fire Chief	Luci Martinson		780-523-1547
Director of Planning & Development	Pat Olansky	780-523-5127	780-523-8248
Director of Community & Protective Service	Brett Hawken	780-387-8490	
Director of Public Works	Vic Abel	780-775-2134	780-523-7854
Public Works Coordinator	Donna Duchesneau	780-523-2240	
Shop Foreman	Trevor Kucheruk	780-523-2665	780-523-8406
Manager of Utilities	Ian Willier	780-776-2443	
WTP Operators   on call			780-523-8691
Public Works   on call			780-523-8806

FIRE SERVICES	CONTACT	WORK	CELL
Enilda Fire Station		780-523-5655	
Faust Fire Station		780-355-3801	
Grouard Fire Station		780-751-3805	
High Prairie Fire Chief	Trevor Cisaroski	780-523-7723	
High Prairie Fire Station		780-523-3525	
High Prairie Duty Officer		780-536-6028	
Joussard Fire Station		780-776-0007	
Kinuso Fire Station		780-775-2706	
Swan Hills Fire Chief	Jamie Molnar	780-333-1953	780-333-1953
Swan Hills Deputy Fire Chief	Otto Fleming	780-333-1953	780-333-5747

REGIONAL MUTUAL-AID	CONTACT	NUMBER
Greenview - District 16   Regional Fire Chief	Wayne Brown	780-552-4513
Lesser Slave Lake - District 24   Fire Chief	Alex Paveck	780-805-6292
Opportunity - District 17   Fire Chief		
Smoky River - District 130   Fire Chief	Marcel Maure	780-837-0911
Saddle Hills County   Fire Chief	Protetive services	780-864-3760
Town of Fairview   Fire Chief	Bob Shmyruk	780-835-8003
Town of Fox Creek   Fire Chief	Les Paul	780-622-3757
Town of Grande Cache   Fire Chief	Brian Lott	780-827-1532
Town of High Level   Fire Chief	Rodney Schmidt	780-926-2033
Town of Peace River   Fire Chief	Trevor Gerk	780-624-2993
Town of Rainbow Lake   Fire Chief	James Barnhill	780-956-1814
Town of Sexsmith   Fire Chief	Nolan Jespersen	780-933-1792
Town of Whitecourt   Fire Chief		780-778-2342

ALBERTA WILDFIRE MANAGEMENT BRANCH	CONTACT	NUMBER
Driftpile   Fire Chief & EmergencyContact	Kenneth Giroux	780-523-6069
Sucker Creek   Fire Chief	Allan Koski	780-523-7412
Swan River   Emergency Services Director / PW Director	Gerald Davis	780-843-6324

EMERGENCY NUMBERS	CONTACT	NUMBER
Provincial Operations Centre Emergencies	24 /7	1-866-618-2362
911 dispatch   Grande Prairie		1-888-538-0393
RCMP   High Prairie Detachment		780-523-3370
RCMP   High Prairie Staff Sergeant	Bryce Tarzwell	780-523-3370
Red Cross   Alberta Emergency & Disaster Services		1-888-800-6493
Alberta Emergency Management Agency Field Officer	Alan Stebbing	587-783-9201
Alberta Emergency Management Agency Field Officer	Chris Graham	825-993-4235

FIRST NATION	CONTACT	NUMBER
Driftpile   Fire Chief & EmergencyContact	Kenneth Giroux	780-523-6069
Sucker Creek   Fire Chief	Allan Koski	780-523-7412
Swan River   Emergency Services Director / PW Director	Gerald Davis	780-843-6324

MÉTIS NATION	CONTACT	NUMBER
East Prairie   Public Works/Fire Chief	Kevin Emard	780-523-0540
Gift Lake   Fire Chief	Gordon Belcourt	780-536-6122
Peavine   PW Director/Fire Chief	Chris Noskey	780-536-2514

<b>ALBERTA HEALTH SERVICES (AHS)</b>	<b>CONTACT</b>	<b>NUMBER</b>
AHS Emergency Disaster Management -NORTH	On call	1-800-282-9911
AHS NW Division	South supervisor	1-855-513-5644
High Prairie Health Complex (24/7)	Site manager	780-523-6440
AHS Emerg Mgt Officer	Dean Howard	780-536-6310

<b>ALBERTA TRANSPORTATION (AT)</b>	<b>CONTACT</b>	<b>NUMBER</b>
Coordination and Information Centre (DG CIC)	On call	1-800-272-9600
Rodney Johnston	Area manager	
La Prairie Group	Foreman - 24/7	1-800-390-2242

<b>UTILITIES</b>	<b>Number</b>
ATCO emergency	1-800-668-5506
Swan River Natural Gas Co-Op	780-775-3779
Prairie River Gas Co-Op	1-877-500-7774
Fortis Power - 24 hour emergency	310-9473
ATCO Gas - Lyle Websdate, supervisor	780-539-2418
Pembina River Natural Gas Coop   Smith - 24 hour emergency	1-888-954-3933
Prairie River Gas - after hours	1-877-500-7774
Swan River Natural Gas Coop   Kinuso - On call foreman	780-849-1408

<b>FUEL (RETAIL + BULK)</b>	<b>LOCATION</b>	<b>NUMBER</b>
Petro-Canada Cardlock	High Prairie	780-523-4282
Max Fuel Distributors Ltd	High Prairie	780-523-4282
Shell	High Prairie	780-523-2553
High Prairie Mohawk	High Prairie	780-523-5515
Esso Express Mart	High Prairie	780-523-3675
Circle K (Hyna Zier)	High Prairie	780-523-4190
UFA	High Prairie	780-523-3205
Ruby's Gas & Liquor	Enilda	780-523-5134
Ray's Gas Bar	Enilda	780-523-2812
Jerry's General Store	Joussard	780-776-3833
Jimmy's Gas Bar	Driftpile	780-355-2072
Husky	Swan Hills	780-333-2363
Esso	Swan Hills	780-333-2340
Max Fuel Distributors Ltd	Swan Hills	780-333-2345

<b>OTHER IMPORTANT NUMBERS</b>	<b>CONTACT</b>	<b>NUMBER</b>
Hilliard's Bay Provincial Park		780-523-6522
Hilliard's Bay Estate Association   President	Rick Laliberte	780-876-0761

## SUMMARY

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Through the development of this Structure Protection Plan, it is evident that there is a significant risk to the community of Hilliard's Bay Estates, as well as Hilliard's Bay Provincial Park, of being impacted by a wildfire. This plan has identified the threat level from wildfire, identified residential and critical infrastructure as well as their triage category, and formulated an operational structure protection plan for the community.

Along with a structure protection plan, recommendations have also been made to better prepare the residents, communities, and fire service for the realities of wildland fires on today's landscapes. While catastrophic loss fires are still uncommon with regards to numbers of wildfires experienced in the boreal forest, the rising number of wildland urban interface fires is of primary concern for all communities within the boreal forest.

All recommendations contribute to the mitigation of wildfire to the community of Hilliard's Bay, however priority should be to procure a Type 2 Structure Protection Trailer for the County and the proper training to supplement it as soon as possible. This will allow the capacity of Big Lakes County Fire Services to respond within their own area instead of relying solely upon mutual aid from other jurisdictions in the event of an approaching wildfire.

Working with Alberta Provincial Parks on development of a secondary roadway for egress out of the community of Hilliard's Bay should be pursued. This will greatly mitigate the risk to life safety the public is currently faced with in Hilliard's Bay Estates. Working with Alberta Provincial Parks on developing a Vegetation Management Plan within the Provincial Park is also recognized as a good mitigation strategy for the community in reduction of wildfire risk.



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