Wildfire Hazard Identification Tool (WHIT)

User Manual

Alberta

Wildfire Hazard Identification Tool User Manual (WHIT) | Forestry Division

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1.0 Introduction and context

1.1 Introduction to WHIT

As an Occupational Health and Safety requirement, employers in Alberta must identify hazards that could compromise worker safety. Approximately 1500 wildfires ignite annually in Alberta within the Forest Protection Area, with many additional wildfires occurring within municipal and federal jurisdiction.

As industry and communities expand further into the forested areas of Alberta, there is greater exposure to the threat from wildfires. The Alberta Government, Forestry Division developed a Wildfire Hazard Identification Tool to assist employers in Alberta in identifying where a wildfire hazard may exist. This tool provides employers with a quick hazard assessment of current and planned worksites that helps determine if further hazard assessment steps are required.

The Government of Alberta is charged with protecting human life, communities, watersheds and soils, natural resources and critical infrastructure from wildfire. GOA accomplishes this through wildfire prevention and preparedness programs and partnerships with many stakeholders. GOA is a proponent of safety and encourages its industry partners to maintain resilient operations to wildfires while ensuring worker safety.

Employers and other users of this tool are encouraged to conduct a further hazard assessment to better quantify the wildfire hazard. Tools such as the FireSmart Field Guide for Upstream Oil and Gas Industry can aid in evaluating wildfire hazards and other risk components.

WHIT is a web-based application accessed through the GOA website. The application contains an analysis tool and a map to view the area of interest.

The overall intent of WHIT is to offer companies a means for understanding if wildfire hazards exist in their area of interest, to inform mitigation strategies and ultimately increase worker safety in the event of an emergency wildfire.

Note that the Government of Alberta does not collect any company or personal information or data resulting from the use of this application.

1.2 WHIT requirements and conditions

In Alberta, employers are required to identify and evaluate conditions that could lead to workers becoming injured or ill and to produce a written hazard assessment. They must also demonstrate that they have identified all existing and potential hazards. Employers should complete hazard assessments at reasonably practical intervals.

WHIT requires the user to input a known location or potential worksite. You can either upload a shapefile or draw the area of interest using the provided tools.

1.3 Roles and responsibilities within WHIT

No specific roles are managed within this application, only the level of “user” exists.

No controlled access is required for the use of the application. The tool was designed to be open and public facing so it can be easily accessed by employers and their contractors throughout Alberta.

1.4 Using this manual

This manual serves as a walkthrough for accessing and running WHIT. It will take a step-by-step approach to the process of accessing the application, uploading or drawing a worksite location, running the analysis and printing a hazard assessment report.

1.5 WHIT technical support

This document should answer most questions that may arise while using the tool. You are encouraged to work through this document before looking for more help.

If you have questions about the application, please contact aws.service@gov.ab.ca. Support is available Monday to Friday from 8:15 AM to 4:30 PM and availability is dependent on seasonal wildfire considerations and holidays. Staff will return your inquiry as soon as possible.

We ask that you please include a screen capture of the error/issue in your email to support staff; this will help to narrow down the cause and to further troubleshoot.

2.0 Accessing the WHIT application

No authentication/authorization is required to operate WHIT. The following section outlines the steps for accessing the application.

2.1 WHIT access

You can access WHIT on the GOA website along with other applications and resources provided by Forestry Division (such as FireSmart information, current Fire Weather data and maps, current wildfire situation reports, etc.).

https://www.alberta.ca/firesmart

You may also use the URL link to access the WHIT application directly:

WHIT APPLICATION LINK

3.0 Navigating within WHIT

The WHIT main page contains a map viewer and mapping tool bar. At the bottom of the page there is a link to map layers which you can turn on and off to display a variety of data.

The default page in WHIT contains the map viewer and analysis tool (Figure 3.1).

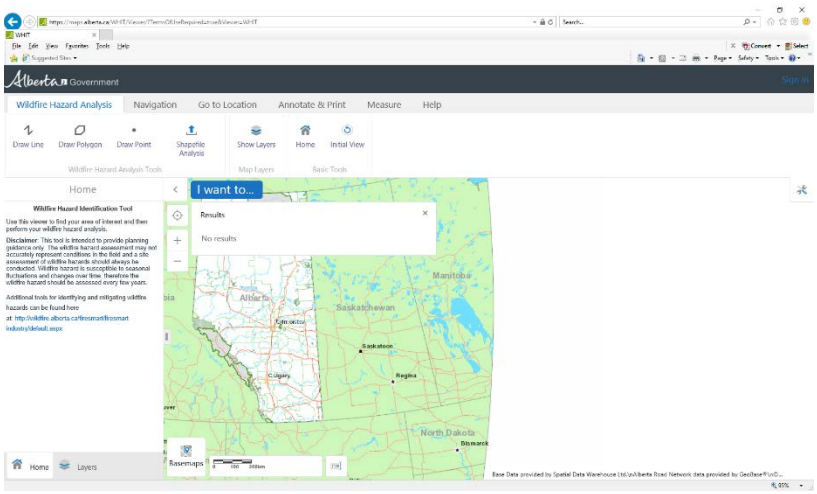

Figure 3.1 WHIT Interface

4.0 Using the Wildfire Hazard Identification Tool

WHIT is a simple analysis tool that will help you understand where a wildfire hazard exists. This section will walk you through how to locate or draw in your area of interest, run the analysis tool and print a simple report.

4.1 Locating your area of interest

Use “zoom in,” “zoom out” and cursor to move the map to the location of interest. You can also use the “Go to Location” tool in the toolbar selection and search by address, name, ATS or NTS.

4.2 Drawing area of analysis

One you have zoomed into the area of interest, you can draw a line, polygon or point to represent an area that you want to analyze. The drawing features are located under the toolbar named “Wildfire Hazard Analysis.” To help you navigate and accurately define your area of interest, additional layers are provided that you can turn on and off.

4. Uploading a shapefile for analysis

If you have a shapefile of the area you want to analyze, you can upload it into the tool using the “Shapefile Analysis” feature. You will need to provide the .shp, .shx, and .dbf files for the upload. The shapefile must be projected to 10TM AEP Forest, NAD83 datum. Polygon, polyline and point features will be accepted.

4.4 Running the analysis

Once your area of interest has been drawn or uploaded, the application will automatically draw a 500-meter buffer around the area. This represents the area that will be analyzed for containing wildland fuels. Note, the maximum allowable area that can be analyzed is 25km^2. Once the buffering is completed, you can click the “Run” button to start the wildfire hazard analysis. While the analysis is running, the provincial wildfire fuel grid will flash up on screen. This fuel grid information is used to inform the wildland fire hazard calculation. The fuel grid is a 100m x 100m representation of forest cover or grass types in Alberta. The analysis will end with the buffer displaying where wildfire hazards exist and do not exist in the analysis area.

4.5 Analysis results

Once the analysis is completed, the results window will show the percentage of the area that is exposed to a wildfire hazard and will indicate whether a fire hazard exists for the area or not. The shaded area indicates where a wildfire hazard exists, and unshaded areas indicate areas that contain no wildfire hazard.

4.6 Completing the report

Below the result window a tab to populate “Company” and “Site Name” appears. Only “Company Name” is required to complete the report. Once you fill out these fields, hit “Print.” You will be shown a link named “Click here to open the fire hazard assessment report” that opens the hazard analysis in a new browser window. Your browser’s pop-up blocker will need to allow this window to open. The report will consist of two pages, the first being the map image of the analyzed area and the second being the legend listing of layers.

4.7 Printing the report

To print your report, navigate to the top left of the screen and select “file” and then “print.” Select your desired printer and settings, then hit “print” on the preview screen to print the report.

4.8 Understanding the report output

The report shows the existence of a wildland fire hazard surrounding your area of interest. The report will indicate “yes” or “no” depending on what percentage of the area contains wildland fuels. If the area contains equal to or greater than 25% of wildland fuel, then an appreciable amount of hazard to health and safety exists if a wildland fire were to impact the area.

If the percentage identified is less than 25%, then the fuel types associated with the fuel grid have a low amount of hazard that is not likely to directly affect health and safety if a wildland fire impacted the area. Note that the fuels data may not be 100% accurate and therefore a further site examination should be conducted when determining the actual wildland fire hazard at the local level.

Be aware that fuels data outside of the Forest Protection Area (FPA) is normally less accurate than within the FPA. This tool does not reflect potential wildland fire smoke that may affect a worksite and the health and safety of workers during a wildland fire event. The intent of this tool is to be the first step in examining the possible existence of a wildland fire hazard around an area of interest. If the analysis indicates that less than 25% of the area contains wildland fuels, this does not mean that no hazard exists. This is a suggested threshold for informing risk-based decisions.

5.0 WHIT usage disclaimer

The information provided in WHIT is subject to frequent change and may or may not accurately represent local or actual site conditions. The model simplifies the wildland fire hazard assessment process but should never replace a proper site assessment. Risk based decisions should not be made solely using this output. Proponents are encouraged to use additional tools and consult wildland fire professionals to determine the wildland fire hazard with greater accuracy. Visit FireSmartAlberta.ca for more information.