Wildfire Hazard Identification Tool (WHIT) User Manual

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Revision History

Version	Date	Author	Description
V 1.0	December, 2017	Connor Wollis	Initial document

Disclaimer

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"Minister" means the Minister responsible of the Alberta Sustainable Resource Development;

"Their employees" means and includes each, any and every officer, employee, servant and agent of either or both of the Crown and the Minister and without limiting the generality of the foregoing, and includes employees of the Crown and the Minister employed in Alberta Sustainable Resource Development;

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The entire risk of loss relating to or associated with the quality and performance of WHIT and any product and results thereof shall be assumed by the Subscriber and by any other user of WHIT

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1.0   Introduction and Context

1.1   Introduction to WHIT

As an Occupational Health and Safety requirement, employers in Alberta are required to provide for worker safety for 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 where wildland fuels exist.

As industry and communities expand further into the forested areas of Alberta, there is greater exposure to the threat from wildfires. The Alberta Government, Department of Agriculture and Forestry (AF) developed a Wildfire Hazard Identification Tool to assist employers in Alberta in identifying where a wildfire hazard may exist. This will provide employers with a quick hazard assessment of current and planned worksites that will aid an employer in determining if further hazard assessment steps are required for identifying and quantifying wildfire hazards.

AF is the Government of Alberta (GoA) ministry charged with protecting human life, communities, watersheds and soils, natural resources and critical infrastructure from wildfire. This occurs through the implementation of wildfire prevention and preparedness programs and partnerships with many stakeholders and partners. AF is a proponent of life safety and encourages its GOA and industry partners to maintain resilient operations to wildfires while ensuring for worker safety.

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

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

The overall intent of WHIT is to offer companies a means for understanding if a wildfire hazards exists 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 at the workplace and to produce a written hazard assessment that applies to the worksite or work activities. They also must be able to demonstrate that they have identified all existing and potential hazards. Hazard assessments are to be completed at reasonably practical intervals.

WHIT requires the user to input a known location or potential worksite. Options are either to upload a shapefile or to 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 and used by employers and their contractors throughout Alberta.

1.4   Using this Manual

This manual was produced to be used as a walkthrough for accessing and running WHIT. This manual 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 provide the answer to most questions that may arise while using the tool. You are encouraged to work through this document prior to looking for further assistance.

If you have questions regarding 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

From the AF website you can access WHIT along with other applications other applications and online resources provided by AF (such as FireSmart information, current Fire Weather data and maps, current wildfire situation reports, etc.).

http://wildfire.alberta.ca/fire-smart/default.aspx

Within the AF FiresSmart website, an introduction and link to the WHIT application is located on the FireSmart for Industry page.

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 simple map viewer interface 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).

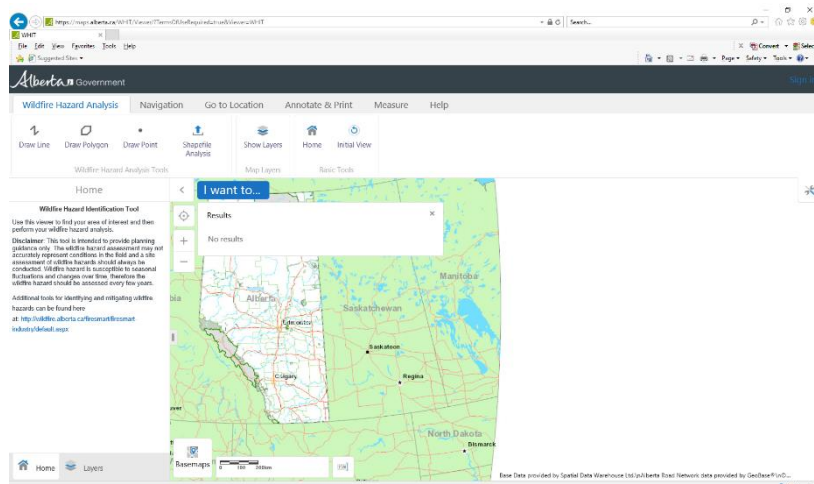## 4.0   Using the Wildfire Hazard Identification Tool

Figure 3.1 WHIT Interface

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 too 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 have the option to draw a line, polygon or point to represent an area or location that you wish to analyze. The drawing features are location under the toolbar named "Wildfire Hazard Analysis". To help you navigate and accurately define your area of interest a number of additional layers are provided that you may turn on and off to provide as much or little information on the display. Spot imagery included in the layer list is a few years old and may or may not display accurate site conditions for the area of analysis.

4.3   Uploading a Shapefile for Analysis

If you have a shapefile of the area you wish to analyze you can upload that 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 to10TM 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 location or 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 a wildland fire hazard exists and does not exist in the analysis area.

4.5   Analysis Results

Once the analysis is completed the results window will populate the percentage of the area that is exposed to a wildland fire hazard and will indicated whether a fire hazard exists for the area of interest or not. The grey area indicates where a wildland fire hazard exists and white areas indicate areas that contain no wildland fire hazard.

4.6   Completing the Report

Below the result window a tab to populate "Company" and "Site Name" appear. Only "Company Name" is required to complete the report. Once these fields are completed hit "Print" to which you are presented a link named "Click here to open the fire hazard assessment report", which when selected will open up the hazard analysis in a new browser window. Note that 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 the desired printer and settings you wish to use, then hit "print" on the preview screen to print the report.

4.8   Understanding the Report Output

The existence of a wildland fire hazard surrounding your area of interest is provided as an output in the report. The report will indicate "yes" or "no" depending on what percentage of analyzed area contains wildland fuels. If the area of analysis contains equal to or greater than 25% of wildland fuel then it is determined that an appreciable amount of hazard exists that could be hazardous to the health and safety of people if they were to be at that location if a wildland fire were to impact the area. If the percentage identified is less than 25%, then it is suggested that the fuel types associated with the fuel grid have a low amount of hazard that is not likely to directly affect the health and safety of persons that may be on site if a wildland fire impacted the area. Note that the accuracy of 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 of analysis contains wildland fuels, this does not mean that no hazard exists rather 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 nor should risk based decisions be made solely using this output. Proponents are encouraged to use additional tools and consult wildland fire professionals to determine the wildland fire hazard and wildfire risk inputs with greater accuracy. Visit FireSmart.Alberta.ca for more information.