



# WREIS

## WILDFIRE RISK EVALUATION INDEX FOR STRUCTURES


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STRUCTURE ADDRESS		
COORDINATES:		
DATE:		
INSPECTOR NAME:		
WILDFIRE ANALYST:		

### STRUCTURE RISK ASSESSMENT CARD DUE TO WILDFIRE

This assessment card is based to Wildfire Risk Evaluation Index for Structures (WREIS) and is divided into 2 parts. Part 1 is completed by an expert in the analysis of wildfire characteristics, while Part 2 is completed by the structure managers themselves. Each sub-index of the card requires information about the structure, surrounding vegetation, as well as individual and community infrastructure and firefighting resources available at the specific location. At the end, a final score is calculated to reflect the vulnerability of the structure due a wildfire event.

#### PART 1

	SUB-INDEX 1. FUEL, TOPOGRAPHY and WEATHER	
	RANKING CATEGORY	SCORE*
1.	LOW LEVEL	5
2.	MEDIUM LEVEL	10
3.	HIGH LEVEL	15
4.	EXTREME LEVEL	20
	TOTAL SUB-INDEX SCORE	

\* Completed by an expert in the analysis of wildfire characteristics


## PART 2


For each Hazard Factor - select one point rating score and enter in score column on right.

<b>SUB-INDEX 2. BUILDING ENVELOPE</b>							
HAZARD FACTOR		CHARACTERISITCS AND POINTING RATINGS				SCORE	
1.	Structure Material	Concrete, bricks, cement blocks		Wood		Chipboard, plastic	
		0		5		10	
2.	Roof Material	Concrete, asphalt shingles, cement blocks		Clay Tiles Sheets		Wood, Chipboard, plastic	+
		0		5		10	
3.	Shutters	Aluminum, metallic	Wooden, new	Plastic or older wooden	There are no covers on the openings		+
		0	5	5	10		
4.	Gutter type and cleanliness	Metal gutter – no leaf debris	Plastic gutter – no leaf debris	Metal gutter with leaf debris	Plastic gutter with leaf debris	+	
		0	5	5	10		
5.	Unprotected openings (chimneys, ventilation, etc.)	Openings are protected by dense metal mesh		Some openings, unprotected		Many unprotected openings	+
		0		5		10	
6.	Window glass	Strengthened (tempered)		Double glazed		Single paned	+
		0		5		10	
7.	Position on Slope	Structure is located on the bottom or lower portion of hill		The structure abuts the hill and has more than 2 floors		Structure is located on the mid to upper portion or crest of hill	+
		0		5		10	
<b>TOTAL SUB-INDEX SCORE</b>							



HAZARD FACTOR		CHARACTERISTICS AND POINTING RATINGS				SCORE
Defense Zone 1 (0-2 m)						
1.	2 m from the ground level exterior footprint of the structure including any attachments or extensions	Surface with non-combustible debris or materials, fences or plants present		Surface with combustible debris or materials, fences or plants present		
		0		10		
Defense Zone 2 (2 – 5 m)						
2.	Forest vegetation	Deciduous trees	Mix of tree types (deciduous and coniferous)	Coniferous		+
				>3 m distance between trees	<3 m distance between trees	
		0	5	5	10	
3.	Surface vegetation and combustible materials	Grass <10 cm height or non-combustible surface, non-combustible materials stored		Grass >10 cm height or highly flammable plants, combustible materials stored. (Firewood, branches)		+
		0		10		
Defense Zone 3 (5 – 10 m)						
4.	Forest vegetation	Deciduous trees	Mix of tree types (deciduous and coniferous)	Coniferous		+
				>3 m distance between trees	<3 m distance between trees	
		0	5	5	10	
5.	Flammable shrubs	None		Scattered	Abundant	+
		0		5	10	
6.	Surface vegetation and combustible materials	Grass <10 cm height or non-combustible surface, non-combustible materials stored		Grass >10 cm height or highly flammable plants, combustible materials stored. (Firewood, branches)		+
		0		10		
7.	Low-lying coniferous branches (< 3 m from the ground)	None		Present		+
		0		10		
Defense Zone 4 (10 – 30 m)						
8.	Forest vegetation	Deciduous trees	Mix of tree types (deciduous and coniferous)	Coniferous		+
				>3 m distance between trees	<3 m distance between trees	
		0	5	5	10	
9.	Flammable shrubs	None		Scattered	Abundant	+
		0		5	10	
10.	Surface vegetation and combustible materials	Grass <10 cm height or non-combustible surface, non-combustible materials stored		Grass >10 cm height or high flammability plants, combustible materials stored (Firewood, branches)		+
		0		10		
11.	Low-lying coniferous branches (<3 m from the ground)	None		Present		+
		0		10		
TOTAL SUB-INDEX SCORE						

		SUB-INDEX 4. FIRE SUPPRESSION SYSTEM			
SAFETY FACTOR		CHARACTERISITCS AND POINTING RATINGS			SCORE
1.	Water supply	None	Permanent water supply system connected to the settlement's network	Independent water tank with its own pump and backup power source	
		10	5	0	
2.	Self-contained water suppression system	None	Water pumps	Fire suppression foam	+
		10	5	0	
3.	Self-contained wildfire sprinkler systems	None	Indoor fire sprinklers	Exterior fire sprinklers	+
		10	5	0	
TOTAL SUB-INDEX SCORE					

	SUB-INDEX 5. COMMUNITY INFRASTRUCTURE					
SAFETY FACTOR		CHARACTERISITCS AND POINTING RATINGS				SCORE
1.	Access to the community	Road width where, after parking of vehicles, will leave a free width of <3 m		Road width where, after parking of vehicles, will leave a free width of >3 m		
		5		0		
2.	Fuel breaks around the Community	No fuel breaks	<100 m width		>100 m width	+
		10	5		0	
3.	Community firefighting network	No fire hydrants in the specific area (radius of 200 m)	Fire hydrants connected to the city network		Fire hydrants connected to an independent water tank with its own pump and spare pump	+
		10	5		0	
4.	Fire extinguishing water cannons and/or systems for humidity increase	None	Water cannons	Sprinklers for humidity increase	Water cannons and sprinklers	+
		10	5	5	0	
TOTAL SUB-INDEX SCORE						

<b>WREIS TOTAL SCORE</b>	
<b>SUB-INDEX 1. FUEL, TOPOGRAPHY and WEATHER</b>	
<b>SUB-INDEX 2. BUILDING ENVELOPE</b>	
<b>SUB-INDEX 3. DEFENCIBLE SPACE</b>	
<b>SUB-INDEX 4. FIRE SUPPRESSION SYSTEM</b>	
<b>SUB-INDEX 5. COMMUNITY INFRASTRUCTURE</b>	

**TOTAL SCORE**

<b>TOTAL SCORE (points)</b>	<b>HAZARD CLASSIFICATION</b>
<b>Up to 21</b>	<b>Lowest Damage Likelihood (LDL)</b>
<b>21-30</b>	<b>Moderate Damage Likelihood (MDL)</b>
<b>31-35</b>	<b>High Damage Likelihood (HDL)</b>
<b>Above 35</b>	<b>Extreme Damage Likelihood (HDL)</b>

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