

# How to calculate shadow flicker

## Tutorial Summary:

Learn how to calculate number of shadow flicker hours per month at each specified zone and create map of shadow flicker hours.

- 1) Import turbine sites
  - Save turbine latitude and longitude (decimal degrees) to a .csv file
    - Name, Latitude, Longitude

	A	B	C	D
1	1	25.14716	-73.9204	
2	2	25.14689	-73.9177	
3	3	25.1477	-73.9144	
4	4	25.14752	-73.9111	
5	5	25.14843	-73.9088	
6	6	25.15248	-73.9232	
7	7	25.153	-73.9212	
8	8	25.15359	-73.9194	
9	9	25.15627	-73.9112	
10	10	25.15633	-73.9091	
11	11	25.16032	-73.9073	

- Go to 'Input' tab
  - Click 'Import' under 'Turbine Sites'
- 2) Import power curve
    - Go to 'Site Suitability' tab
    - Click 'Import Power Curve'

The screenshot shows the 'Site Suitability Analyses' tab in the Continuum Wind Flow Model software. The 'Import Power Curve' button is highlighted with a red box. The interface includes various input fields, buttons for running models, and data tables for Shadow Flicker, Ice Hits, and Sound Levels.

**Site Suitability Analyses**

Buttons: Run Ice Throw Model, Run Shadow Flicker Model, Run Sound Model

Hour: All, Month: All, Year: 1

# Ice Throws / Day: 300, # Ice Days / Year: 5, Turbine Noise (dBA):

Power Curve: [Dropdown], Site Suitability Model: [Dropdown]

Name	Latit...	Longt...	X Leng...	Y Length
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Buttons: Import Zone Locations, Delete Zone Location(s)

Buttons: Export Ice Throw Summary, Export Ice Throw vs. Distance, Export Shadow Flicker Summary, Export Sound Model Summary

**Shadow Flicker**

Zo...	Total Hou...
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**Ice Hits**

Zo...	Hits	Min	Max	% Prob...	% Pro...
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**Sound Levels (dBA)**

Zo...	Sound Le...
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Hours of Shadow Flicker by Month / Hour: Max. Flicker Day: 02/17/20

Zone: [Dropdown], Select Plot: [Dropdown]

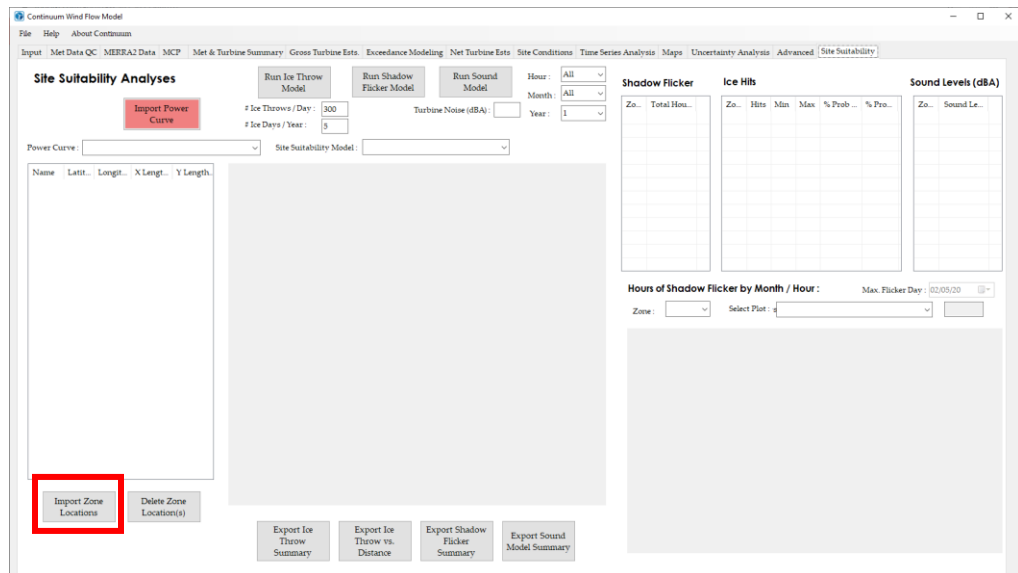
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## 3) Import zone locations

- Specify latitude, longitude, size (E-W, in meters), size (N-S, in meters) in .csv file as shown below:

	A	B	C	D	E	F
1	Z1	49.56952	-117.526	10	15	
2	Z2	49.56856	-117.531	20	20	
3	Z3	49.57949	-117.535	25	10	
4	Z4	49.57474	-117.553	5	15	
5	Z5	49.57373	-117.577	10	15	
6	Z6	49.57356	-117.574	25	20	

- Go to 'Site Suitability' tab, click 'Import Zone Locations'



## 4) Calculate shadow flicker

- Click 'Run Shadow Flicker Model'

