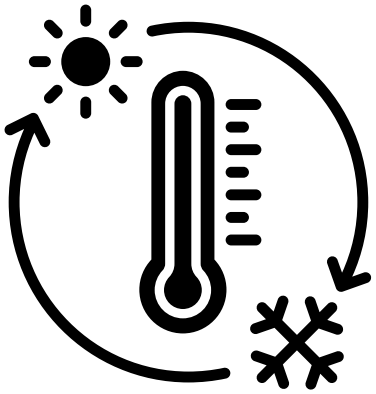
LANDSCAPE DESIGN CLIMATE ANALYSIS



PROPERTY INFORMATION	
OWNER(S):	
ADDRESS:	
ELEVATION:	

PROPERTY CLIMATE DATA

Researching local climate data is crucial for creating successful & sustainable landscapes. Ignoring this data can lead to inefficient designs, wasted resources. This data in foundational to plant selection, water management, & analyzing environmental impacts on the land in order to design resiliency & efficiency into the landscape.

USING LOCAL WEATHER DATA, FILL IN THE FOLLOWING DATA FOR YOUR PROPERTY LOCATION

USDA GROW ZONE:	AVERAGE ANNUAL RAINFALL:	AVERAGE ANNUAL SNOWFALL:
_____	_____	_____

AVERAGE MONTHLY RAINFALL											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

+

AVERAGE MONTHLY SNOWFALL											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

=

TOTAL PRECIPITATION PER MONTH											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

AVERAGE MONTHLY HIGH / LOW TEMPERATURE												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
HIGH												
LOW												

Diurnal temperature range is a measure of how much the temperature varies over a 24-hour period. To get the average monthly diurnal temperature range, subtract the HIGH and LOW temperature data for each month. Input the results below.

DIURNAL TEMPERATURE RANGE IN DEGREES												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
DTR°												

RECORD HIGH	
TEMPERATURE:	
DATE:	

RECORD LOW	
TEMPERATURE:	
DATE:	

AVERAGE HUMIDITY %	
WINTER:_____ %	SUMMER:_____ %

SEVERE WEATHER SEASONS		
☑	WEATHER	SEASON DURATION IN MONTHS
	Monsoon Season	
	Hurricane Season	
	Tornado Season	
	Avalanche Season	
	Lightning Risk Season	
	Flood Season	
	Severe Storm Season	
	Extreme heat &/or Humidity Season	

PREVAILING WINDS

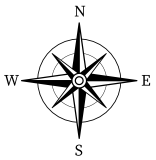
Draw a directional arrow of the seasonal winds for Winter & Summer. Spring & Autumn winds are less predictable, less prevailing, & tend to swing directions during the shift to the more stable winter & summer prevailing winds. Generally speaking, in the Northern hemisphere the winter winds come from the north, northwest, or northeast, & the summer winds come from the south, southwest, or southeast depending on your location.

WINTER:

SUMMER:

HIGHEST WIND SPEED RECORDED IN AREA:	**SPEED: _____ DATE: _____**

Draw a rough sketch of your property & map out where windbreaks are needed



FROST POCKET ZONES

Mapping frost pockets using seasonal observation or temperature monitoring helps you make smarter plant placement decisions and extends your growing season.

➔ **Avoid placing frost-sensitive crops, young fruit trees, or structures in frost pockets. Instead, use these areas for hardy perennials, wetland plants, or water catchment.**

Common frostbelt locations include: *(Check all that apply to your property)*

- ☐ Next to ponds, rivers, or water features,
- ☐ North sides of structures or land slopes
- ☐ Lowest point of property
- ☐ Elevated or raised garden beds with overhead sprinklers
- ☐ Open clearings that are lower in elevation
- ☐ On/near concrete or stone
- ☐ On/near metal structures such as poles, gates, or sculptures
- ☐ Bottom of slopes
- ☐ OTHER:_____

AVERAGE FROST DATES

FIRST AUTUMN FROST DATE:_____	LAST SPRING FROST DATE:_____

FROST DEPTH / FROST LINE

This refers to the maximum depth to which the ground is expected to freeze in a specific location during winter. This is crucial for determining minimum foundation depths to prevent frost heave damage to structures & water catchment systems. Online frost depth calculators and maps can provide estimates, but always cross-reference with local sources for accuracy. For more exact data, refer to local building codes or authorities, which often specify minimum footing depths based on frost line requirements.

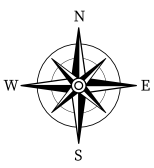
FROST LINE DEPTH: _____

COLOR IN THE MONTHS WHERE FROST IS POSSIBLE IN YOUR AREA

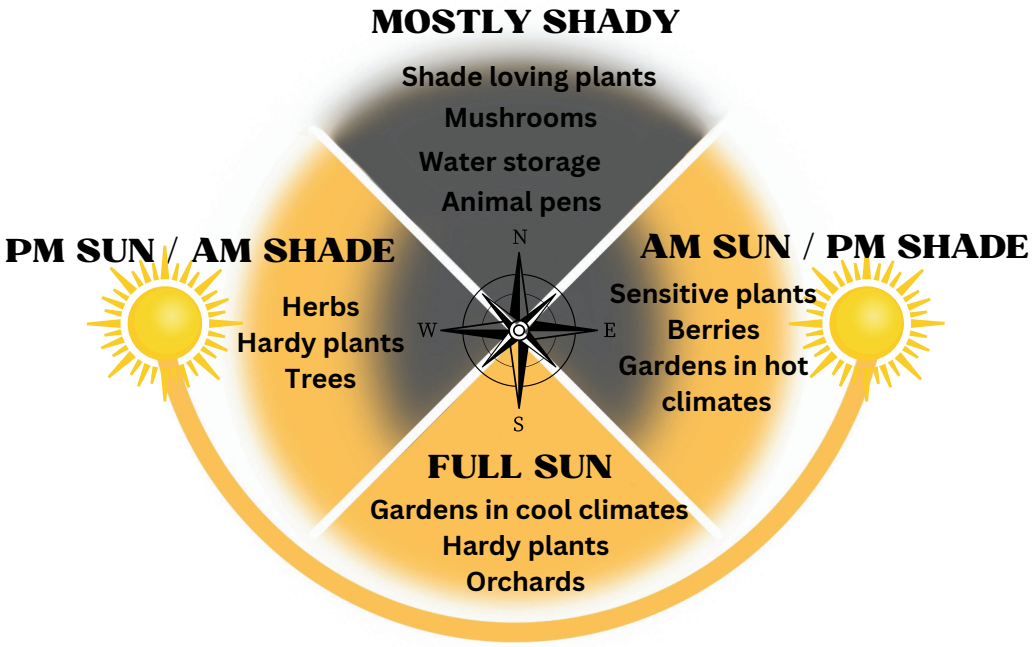
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

PROPERTY FROST POCKET MAP

Draw a rough sketch of your property & map out where the frost pockets are. These places are where cold air collects & are frost prone. Frost pockets are unique microclimates that can be used advantageously if identified & utilized correctly.



SUN / SHADE ASPECT MAP



Draw a rough sketch of your property & map the shade dynamics on the property