



# BLISSFEST MUSIC ORGANIZATION TOURISM AND RENEWABLE ENERGY FEASIBILITY



# Presentation Organization

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- Blissfest Music Organization
- Site location
- Tourism
- Alternative Energy



# Emmet Co.

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# Blissfest Music Festival

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- 2010 marks 30<sup>th</sup> anniversary of the festival
- First weekend after July 4<sup>th</sup>
- 3 stages of music for three days
- Maximum of 5,000 attendees



# Blissfest Music Organization's Goals

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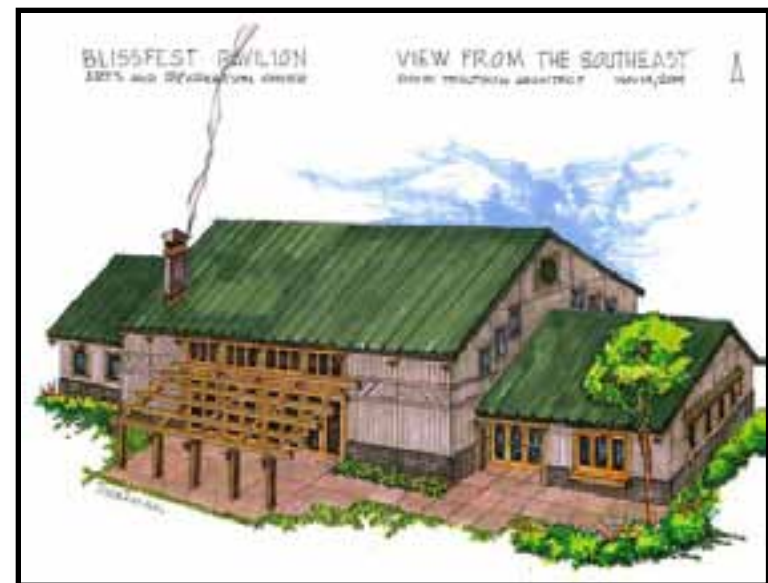
- Expand programming into year round tourism activities focusing on agricultural, ecological, cultural, and educational tourism
- Be able to market the organization as a “green” organization through the use of renewable energy to offset their energy usage throughout the year



# Blissfest Arts Recreation Center Project (BARC)

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- Emphasis on cultural heritage with performances, dances, and workshops
- Expanding the use of 120 acre site
  - ▣ Solar powered multi-use building
  - ▣ Year round camping area with up to 35 permanent camp sites
  - ▣ Ten unique resort cabins
  - ▣ A camp store
  - ▣ Smaller gazebo areas

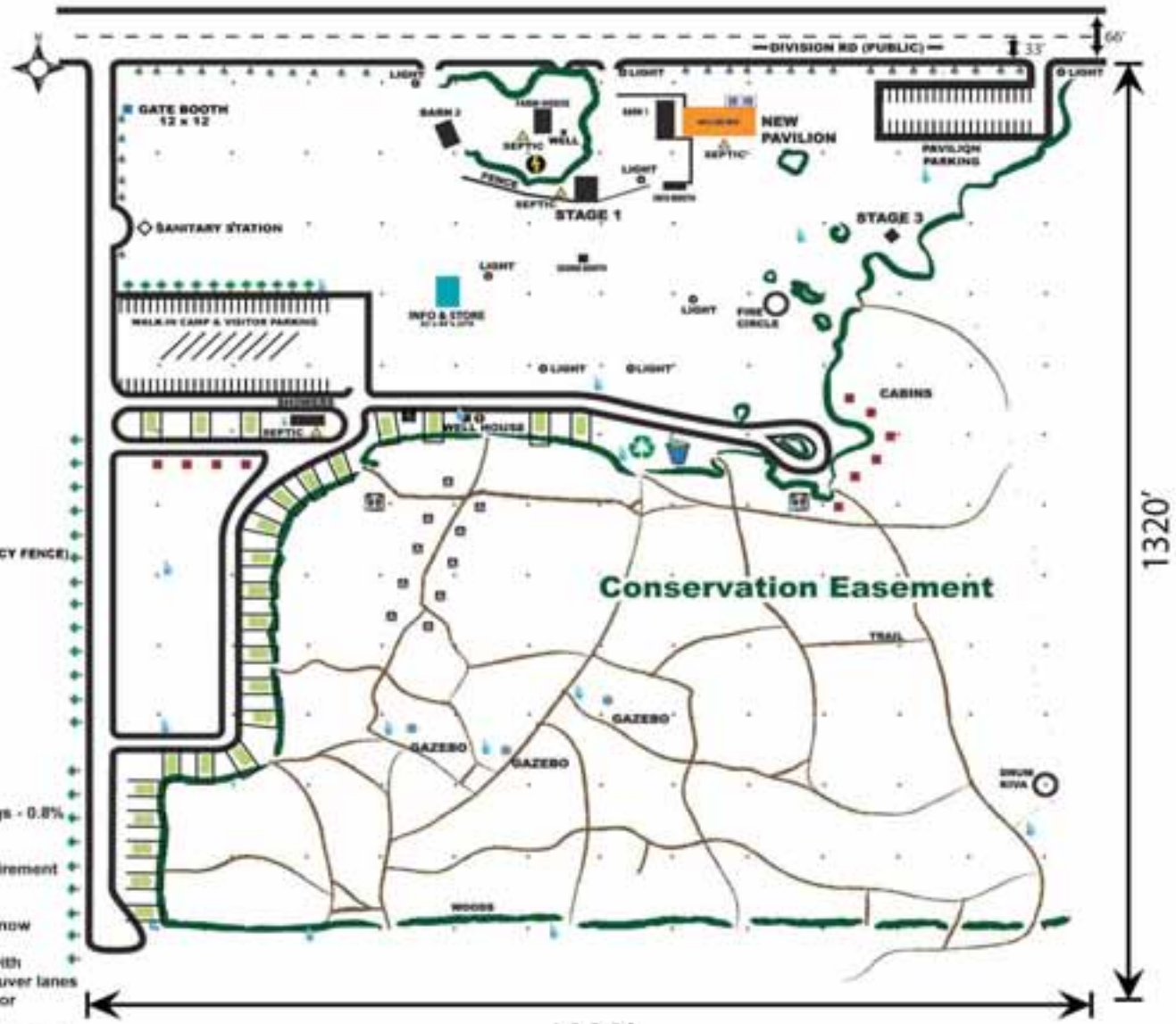


Graphic No. 2 Blissfest Arts Recreation Center Site Plan

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1"=200'

- EXISTING BUILDINGS
- LIGHT
- WATER OUTLETS
- PATH/TRAIL
- FENCE
- WOODS
- CABINS 20 x 20
- WALK-IN CAMPING
- DRIVEUP CAMPING
- GAZEBO 20 x 20
- PAVILION 40' x 120' 30"
- CAMP INFORMATION & STORE 32' x 45' x 24"
- UNISEX RESTROOM
- ♻️ RECYCLING & WASTE DISPOSAL
- ⚡ ELECTRICAL SERVICE
- ♿ HANDICAP ACCESSIBLE
- 🌳 ORCHARD
- 🌲 PINE TREES
- ⚠️ SEPTIC
- ⚡ WELL
- GATE BOOTH 12 x 12
- DUMPSTER w/ 6' SCREEN (PRIVACY FENCE)
- ⊙ RESIDENCE
- ◇ SANITARY STATION



- Notes:
- January 18, 2009
  - Blissfest Music Organization
  - 325 East Lake Street
  - Petoskey, MI 49770
  - 231.348.7047
  - Property Zoning - FF2
  - Surrounding Property - FF2
  - Lot coverage of proposed buildings - 0.8%
  - Set Backs - 10 ft for Parking  
40 ft for Buildings
  - The 1 tree/10 parking spaces requirement is met by the deciduous trees in the Conservation Easement.
  - Sufficient area exists to manage snow removal during limited winter use.
  - Parking Lots are natural surface with 10 ft. x 20 ft. spaces and 25 ft. maneuver lanes
  - Road Screening - currently meets or exceeds ordinance requirements with 7 ft. or larger conifers on 15 ft. or less centers.

# Site Location





# Emmet County, MI

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- Population (2000): 31,437
  - ▣ Seasonal population (June-Aug 2005): 93,550
- Dominant Industry: education, health, and social services
  - ▣ 2<sup>nd</sup> leading industry: arts, entertainment and recreation, and accommodation and food services
- Varied landscape, temperate climate
- Access mainly through automobile; regional airport in Village of Pellston

# Blissfest Farm Site Readmond Twp.

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**Red area:**

Blissfest  
property

**Blue area:**

rented from  
neighbor for  
festival use



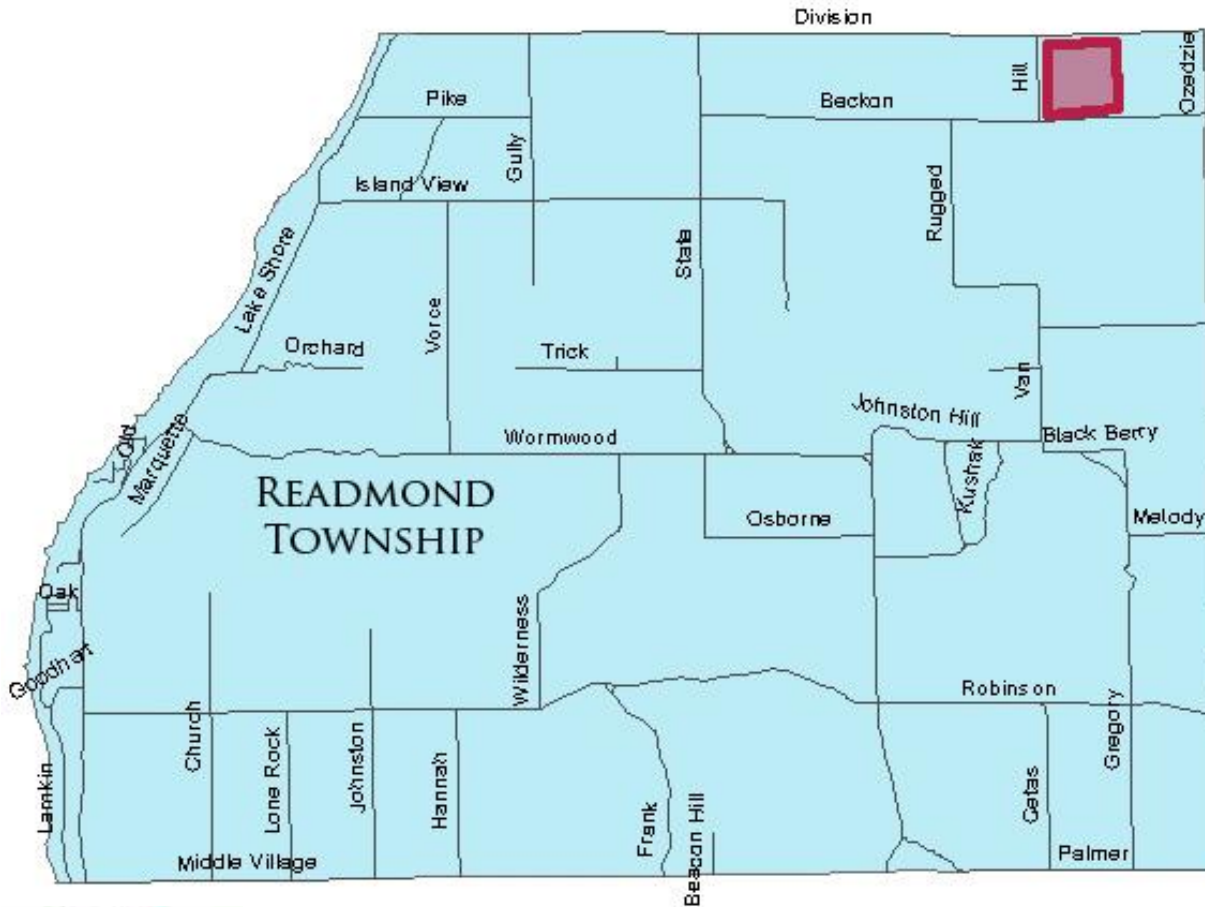
# Site Specifics

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- Special use permit to develop on 40 of the 120 acres
  - ▣ Of the 40 acres: 20 acres field, 20 acres mixed hardwoods
  - ▣ Mixed hardwoods are under conservation easement held by Emmet County
- Site drains to two separate watersheds
  - ▣ Lake Michigan and Lake Huron
- Site Zoning: FF-2 (farm forest)
  - ▣ All surrounding property also FF-2

# Access to Site

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- 1/4 mile county gravel road, Division Rd
- Main access roads include: State Rd to west, Levering Rd to north, and Pleasant View and US 31 to east

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# Tourism



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# What is Tourism?

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- For the purposes of this study:
  - ▣ Travel coming from outside your local region
  - ▣ Basic economic development strategy
  - ▣ Outside money coming into community
- **Sustainable Tourism:** providing a meaningful tourism experience that maintains economic and social advantages without sacrificing cultural, natural, historic, or social environments

# Tourism Definitions

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**Ecological Tourism**

# Tourism Definitions cont.

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**Cultural Tourism**

**Educational Tourism**





# Tourism Definitions

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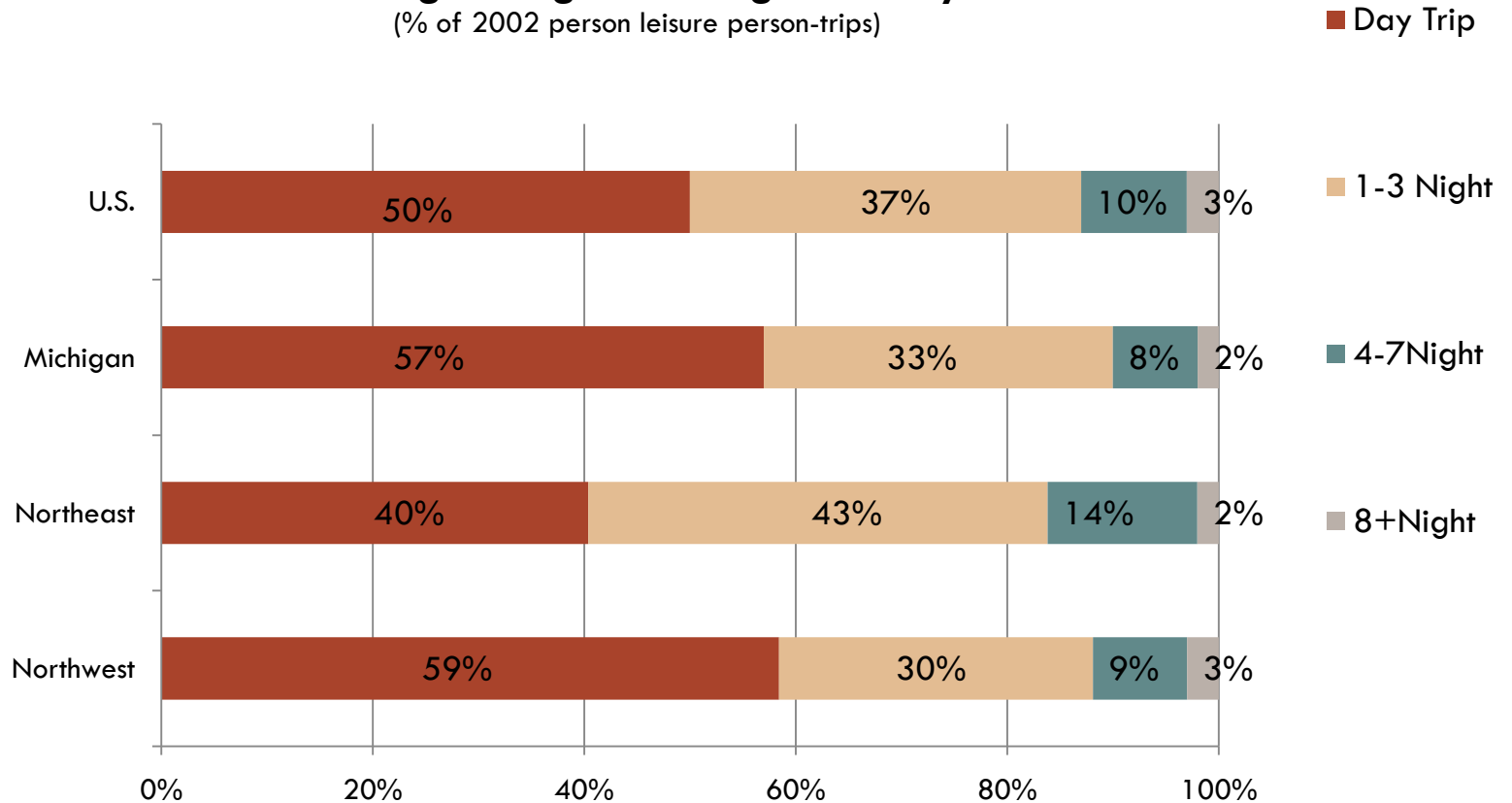


**Agricultural Tourism**

# Visitors to Northern Michigan

## Michigan Regions: Length of Stay

(% of 2002 person leisure person-trips)



# Visitors to Northern Michigan

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Activity Participation	U.S %	Michigan %	Northwest %	Northeast %
Dining	31	26	25	25
Shopping	29	25	19	19
Sightseeing	27	25	18	<b>39</b>
Entertainment	25	19	19	16
Beach/Water Front	10	14	14	<b>19</b>
Attend Sport Event	6	8	5	2
Gamble	6	8	<b>12</b>	<b>13</b>
Hunt/fish	4	7	6	<b>12</b>
Hike/bike	4	6	8	<b>12</b>
Night life	7	5	2	3
Parks (nat/stae)	8	6	7	7
Festival/craft fair	6	5	7	4
Boat/sail	2	5	4	<b>8</b>
Group tour	3	4	1	<b>6</b>
<b>Nature/culture:ecotravel</b>	4	4	4	<b>7</b>
<b>Camping</b>	3	4	<b>7</b>	3
Concert, play, dance	5	3	1	2
Golf	2	3	<b>7</b>	3

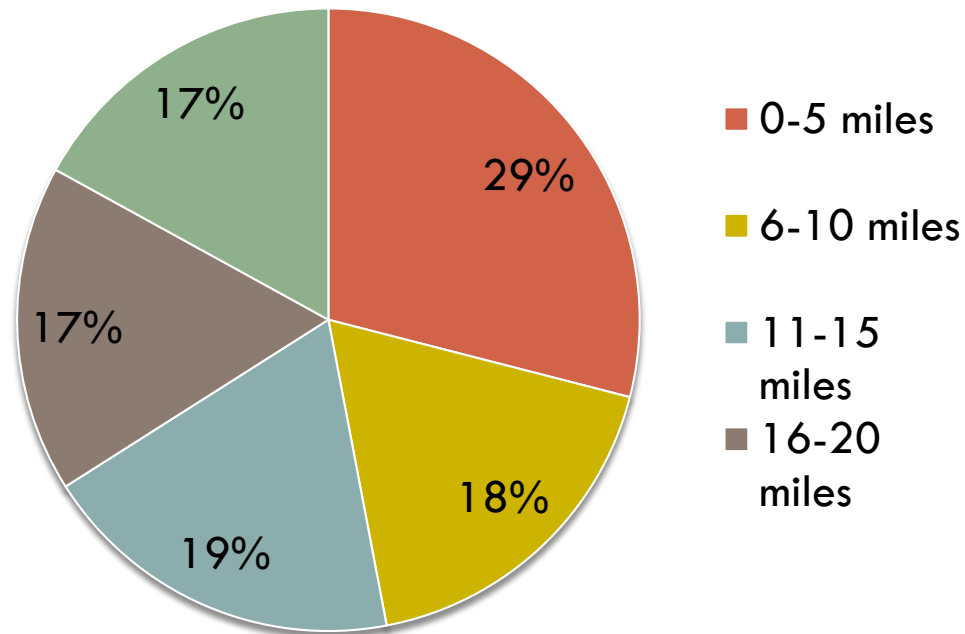
# Local Residents' Activities

<b>Consumer Recreation Preference in Tri County Area</b>		
<b>Product/Consumer Behavior</b>	<b>Percent</b>	<b>MPI</b>
Participated in backpacking/hiking	8.3%	107
Participated in bicycling (mountain)	4.1%	106
Participated in bicycling (road)	8.3%	92
Participated in canoeing/kayaking	4.8%	113
Went to beach in last 12 months	22.9%	97
Attended dance performance in last 12 months	3.5%	84
Danced/went dancing in last 12 months	7.1%	77
Attended country music performance in last 12 mo	5.5%	106
Did birdwatching in last 12 months	8.5%	141
Played musical instrument in last 12 months	7.4%	96
Did photography in last 12 months	13.4%	104

# Local Residents

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## Emmet County Distance Traveled to Recreational Facilities



# Tourism Market

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- Tourism in the US and Michigan has been in a decline since 2002.
- Northern Michigan has declined less than the rest of Michigan
  - US decline 7% drop in travel spending in 2009
  - Michigan decline 3-4% drop in travel spending in 2009
  - Northern Michigan decline 1.7% drop in travel spending in 2009
- Average visitor to region only spends \$72/day

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# Case Studies



# Case Studies

	Community Activities	Alternative Energy	Extensive Collaboration	Dance Programs	Music/Operations	U-Pick	Collection/Production	Organic Foods	Farming	Seasonal Camping	Animals on Site	Food Production	Cooking Workshops
<b>Outdoor Discovery Center of Wildlife</b>	Yes	Yes	Yes										
<b>The Strawbale House</b>		Yes											
<b>Wheatland Music Organization</b>	Yes		Yes	Yes						Yes			
<b>Apple Pond Farm and Renewable Energy Education Center</b>	Yes	Yes	Yes				Yes		Yes		Yes	Yes	Yes
<b>Learn Great Foods</b>	Yes		Yes				Yes		Yes			Yes	Yes
<b>Blissfest Music Organization</b>	Yes	Yes	Yes	Yes						Temporary			





# Strawbale House

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- Trego, WI; 2 hours from Minneapolis
- Ecological, educational tourism



# Wheatland Music Organization

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- Remus, MI
- Cultural, ecological, and educational tourism
- Annual folk music festival and traditional arts weekend



# Outdoor Discovery Center of Wildlife Unlimited

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- Holland, MI
- Ecological, educational, and cultural tourism
- Educational programming for all ages in partnership with schools and open to community at minimal cost
- Has begun implementation of renewable energy programming in conjunction with the wind turbine



# Alternative Energy



# Alternative Energy Goals

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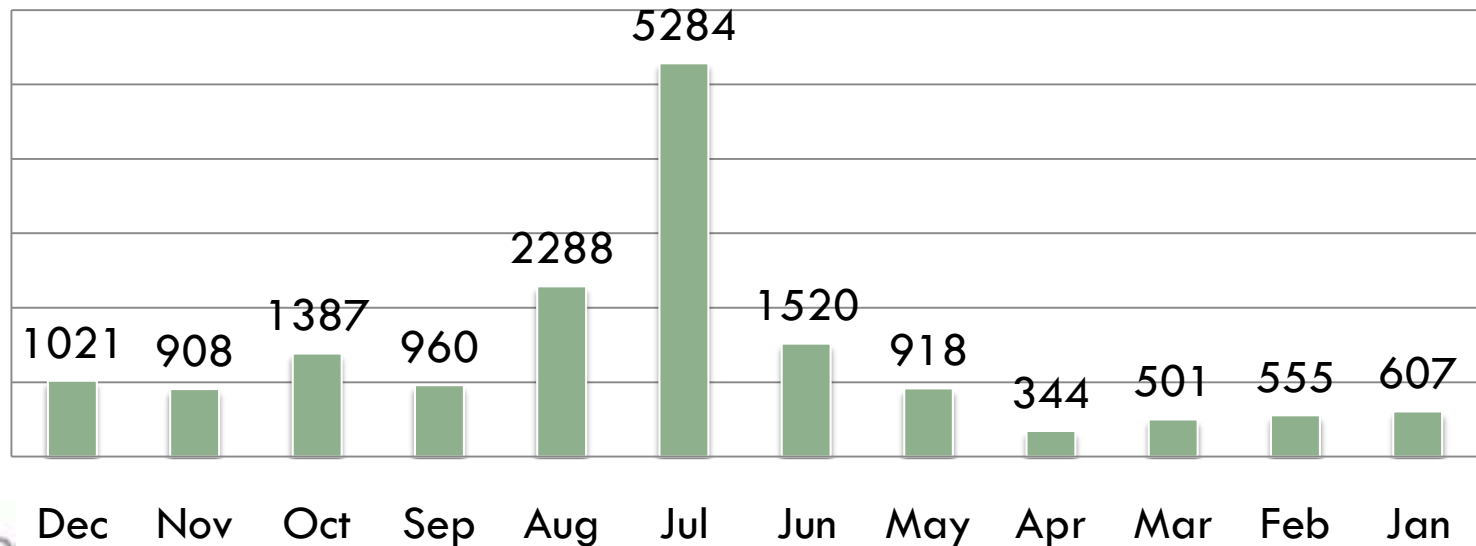
- Blissfest Music Organization's Goals
  - Use wind and solar energy to power activities year round as well as the three day music festival in July

# Historical Energy Usage

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- Blissfest farm has 5 electrical meters
- 23,642 kilowatt hours of energy used on site in 2009

Monthly Usage (KWh)



# Wind Energy Analysis

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- Suitability determination based on:
  - ▣ Wind speed
  - ▣ Microenvironment
  - ▣ Policy requirement and restrictions
  - ▣ Economic cost/Local dealers

# Wind Speed/ Turbine Models

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Average Wind Speed (Mph)	Height (meters)
15	50 (164 feet)
13.95	30 (98 feet)

16 companies'  
36 products

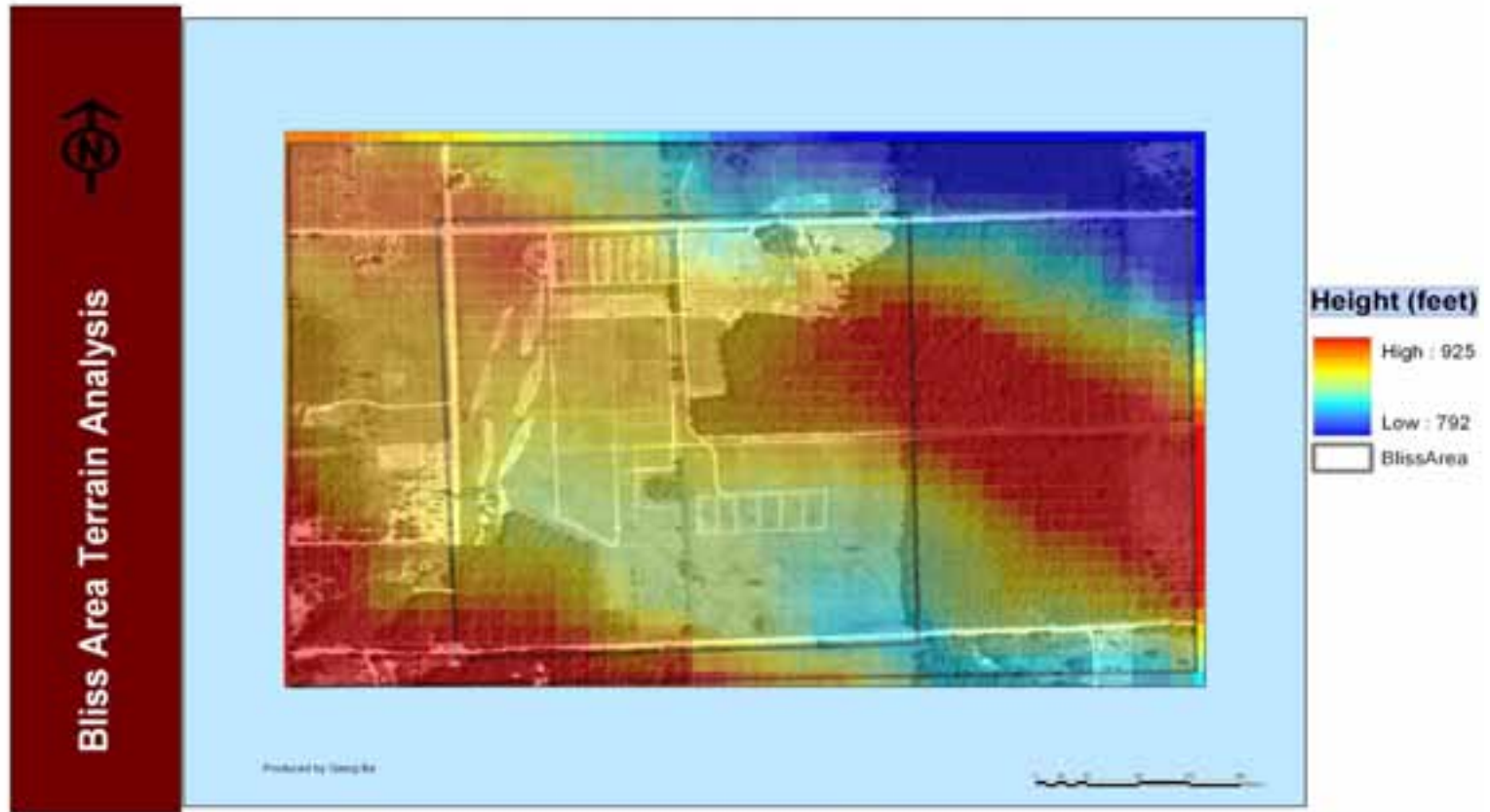


Manufacturers Website Closest dealer	Models (Rated Capacity, Rotor Diameter)	Options of Tower heights feet <sup>10</sup>	Wind speed (mph)	Equivalent Annual Production (kWh)
Abundant Renewable Energy <a href="http://www.abundantre.com">www.abundantre.com</a> Closest dealer: Randall S. Smith 6222 Bunker Hill Road Williamsburg, MI 49690 (231) 933-1264	ARE110 (2.5KW,11.8feet)	43	12.84	3914
		64	13.36	4409
	ARE442 (10KW,23.6feet)	85	13.75	17637
		106	14.05	17826
		127	14.31	21674



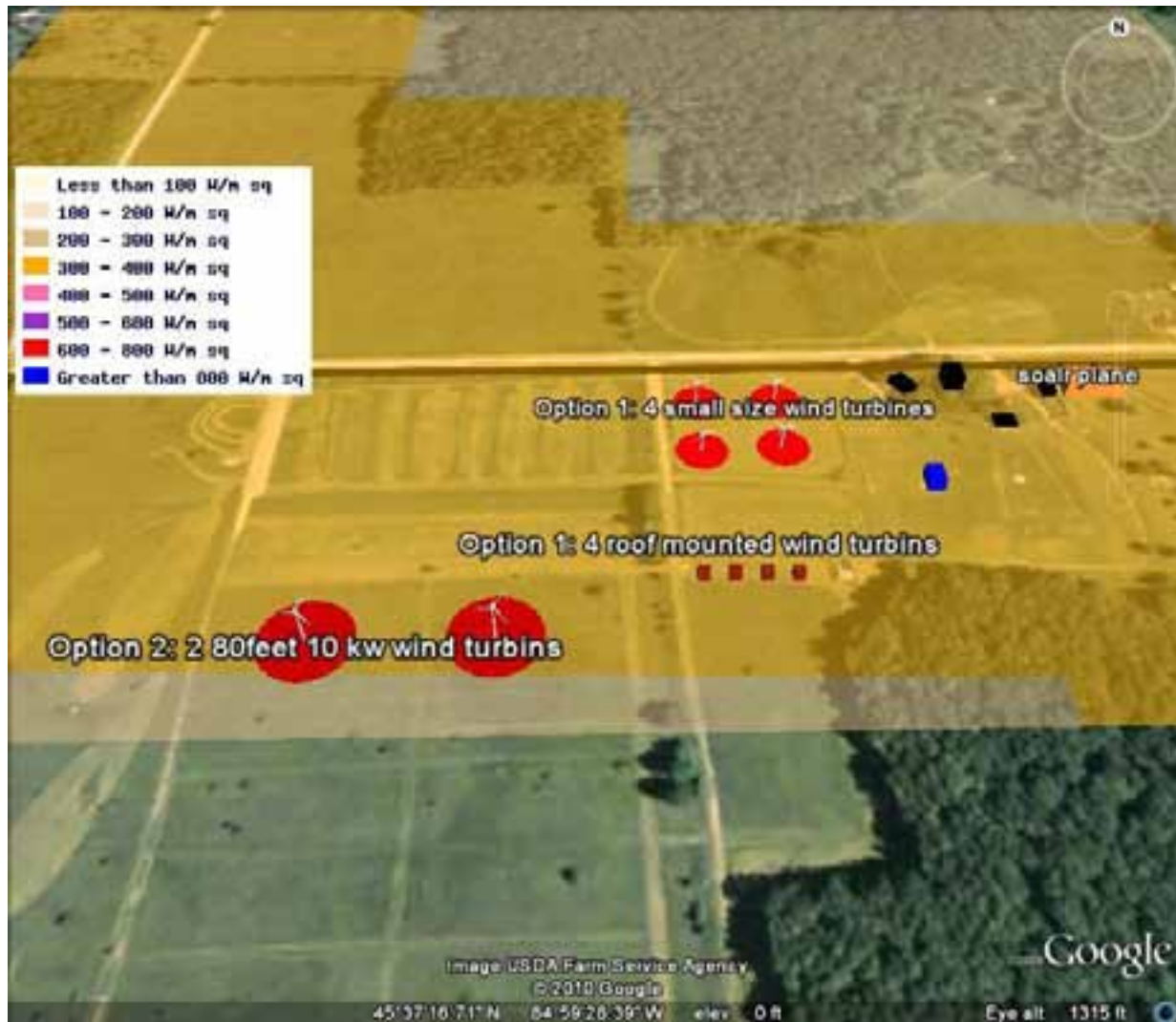
# Microenvironment

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# Wind Turbine Sites

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# Policy Requirements/ Economic Cost

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- Emmet County Wind Turbine Zoning Ordinance
  - ▣ 3 categories: less than 60 ft, higher than 60 ft, over 100 ft
- Michigan Net Meter Law
  - ▣ 2 categories: less than or equal to 20 kwh or more than 20 kwh
- Price versus production

# Solar Energy

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- Factors affecting output:
  - ▣ Potential roof area
  - ▣ Output rating of solar panel
  - ▣ Intensity of solar radiation

# Potential Area for Solar Panels

<b>Proposal buildings</b>	<b>Roof areas sq ft.</b>
<b>Cabins *4 (total 10 cabins)</b>	1 600 sq ft
<b>Pavilion</b>	7800 sq ft
<b>Store</b>	1 408 sq ft
<b>Total</b>	<b>10,808 sq ft</b>



# Output Rating of Solar Panel

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- *UNI-SOLAR<sup>®</sup> Photovoltaic Laminates*
  - ▣ 3.528 KWh/m<sup>2</sup>/day
  - ▣ 68 W

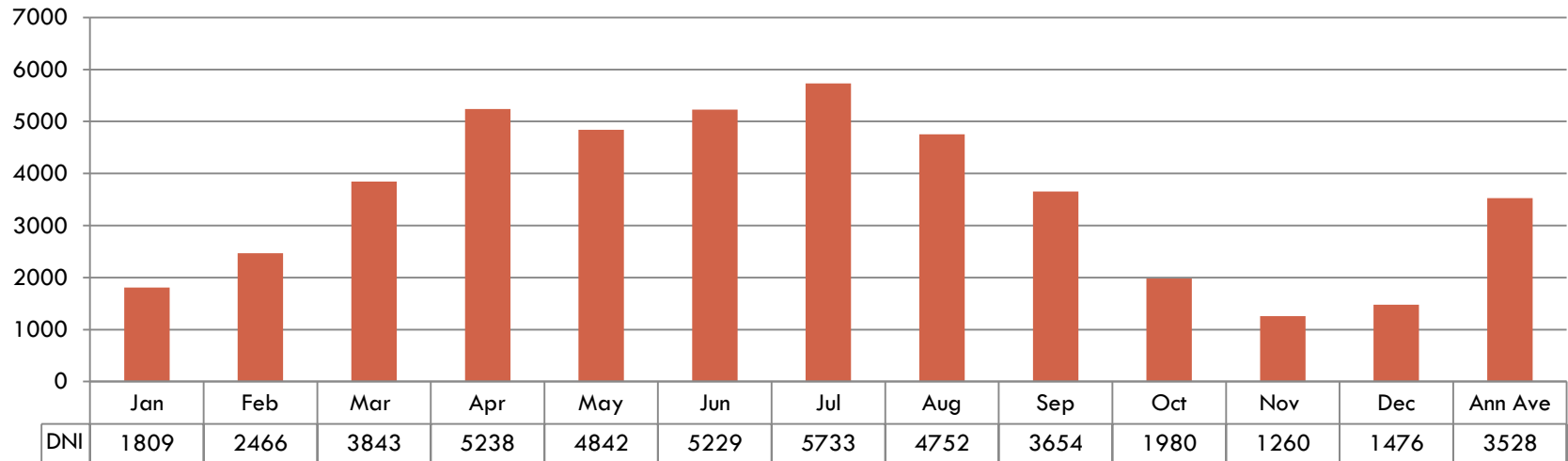


# Intensity of Solar Radiation

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- Direct Normal Irradiance (DNI) is unit to measure solar radiation
  - $\sim 3.53 \text{ KWh/m}^2$  on site

**Blissfest Property Monthly Solar Energy (DNI: W/ Sq M)**



# Option Highlights

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	Option 1	Option 2
<b>Equipment</b>	4 roof mounted turbines 4 small tower turbines 271 pieces of photovoltaic laminate paneling	2 80ft tower turbines 87 pieces of photovoltaic laminate paneling
<b>Total Cost</b>	\$113,911	\$101,317
<b>Total Energy Production</b>	100% of projected site energy demand	100% of projected site energy demand
<b>Average Levelized Cost</b>	\$0.17 per kWh	\$0.10 per kWh
<b>Challenges</b>	Space, height, efficiency	Increased setbacks, located in conservation easement



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Thank you! Happy Bliss!

Questions?

