
RUBENZ87.NL
{ZOMBIE}
{APOCALYPSE}
Geospatial Survival!

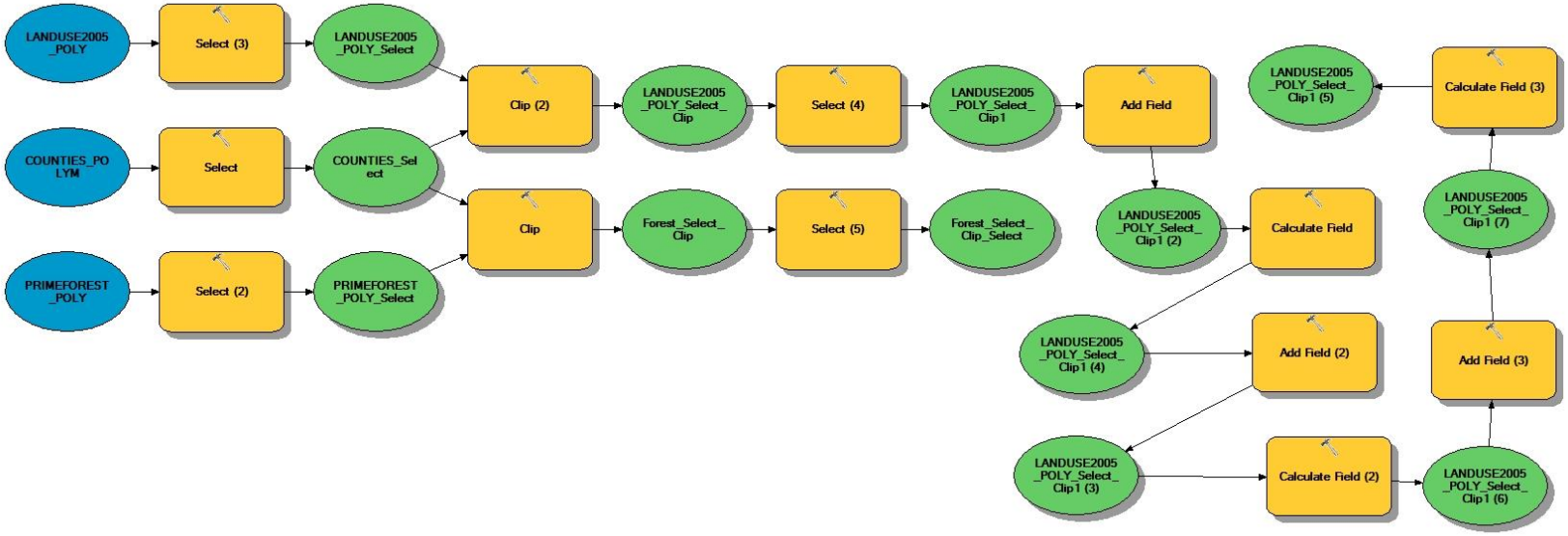
Purpose

- The purpose of this presentation is to geospatially show the renewable energy potential for the safest town in Massachusetts against a zombie apocalypse; Nantucket.
- With the break down of society, how will electric needs be met?
- What is the maximum potential kilowatt hours for biomass and wind energy?

Why Nantucket?

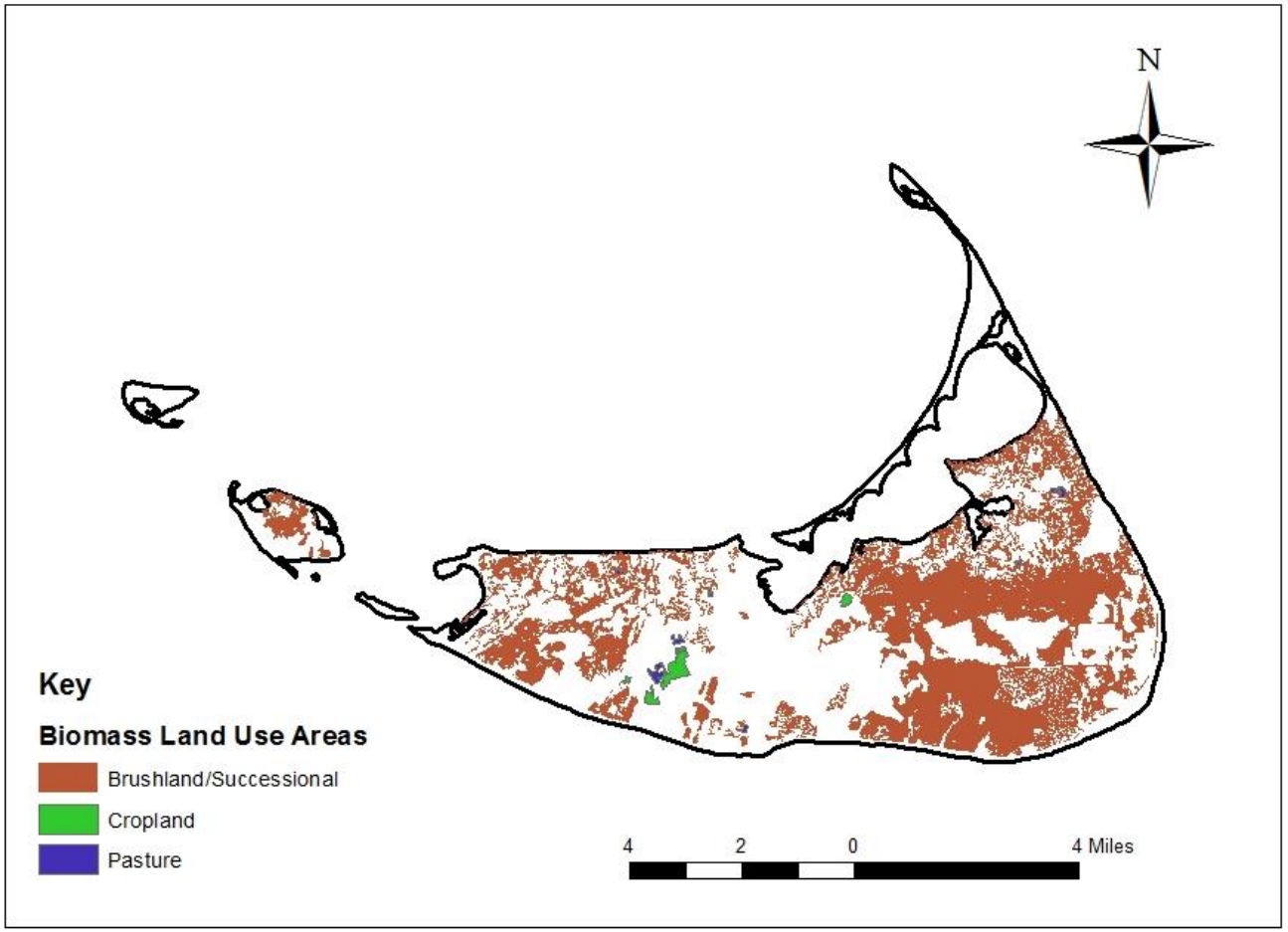
- Quarantined from the main land.
- Established infrastructure.
- Nice place to avoid the apocalypse.
- Consistent ocean breezes caused by changing temperatures over land and sea.
- Potential area to grow crops for bio-fuel.

Methods for Biomass



Output

Nantucket Useable Biomass Land



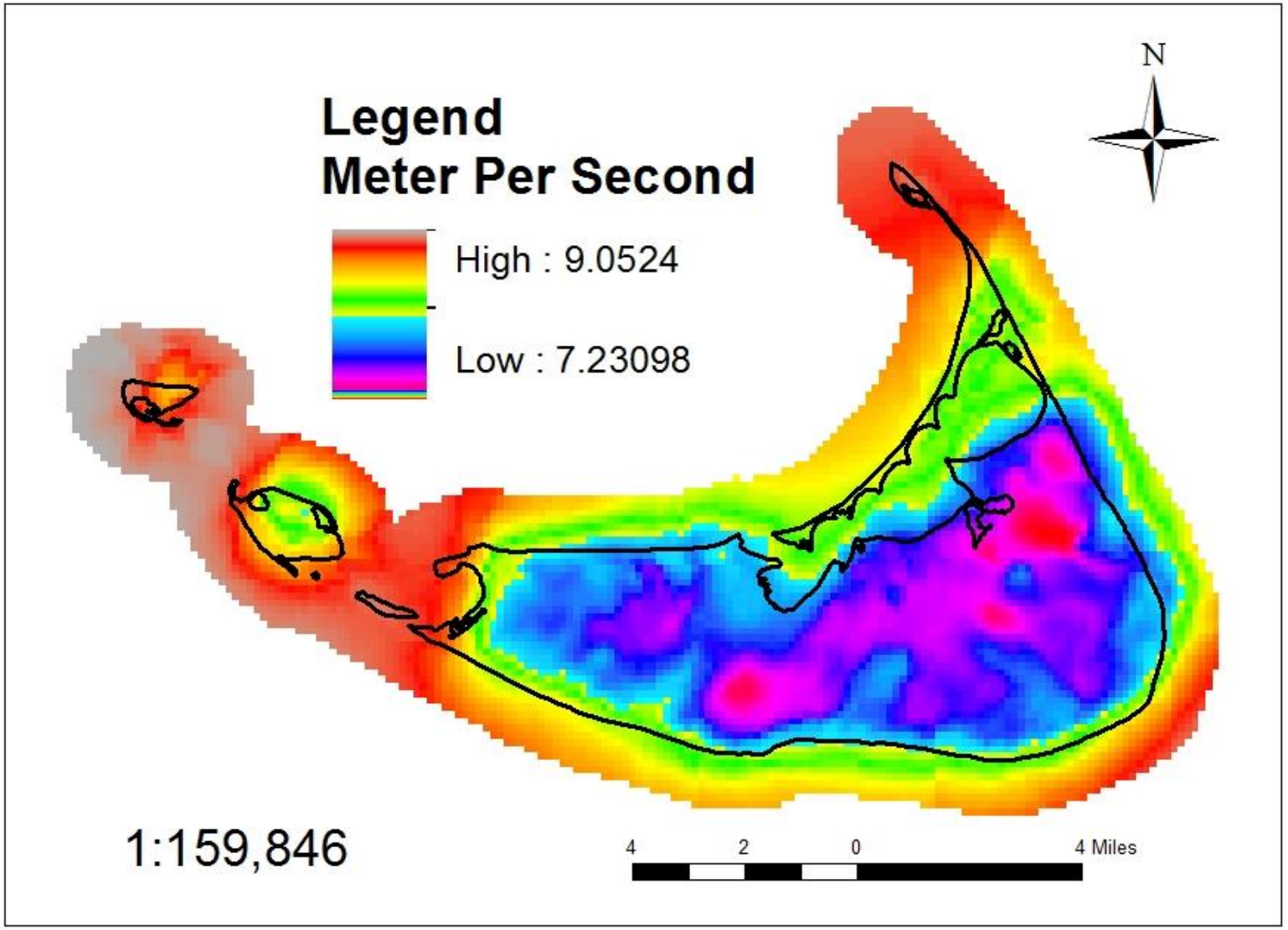
Biomass Results

	YPH	UFL	BTU	KWH	Homes
Low	6.75	1%	4960728923	1453846.134	145.384613
Medium	11.25	10%	82678818469	24230769.8	2423.07698
High	15.75	20%	2.31501E+11	67846155.43	6784.61554
Z	15.75	30%	3.47251E+11	101769235.7	10176.9236

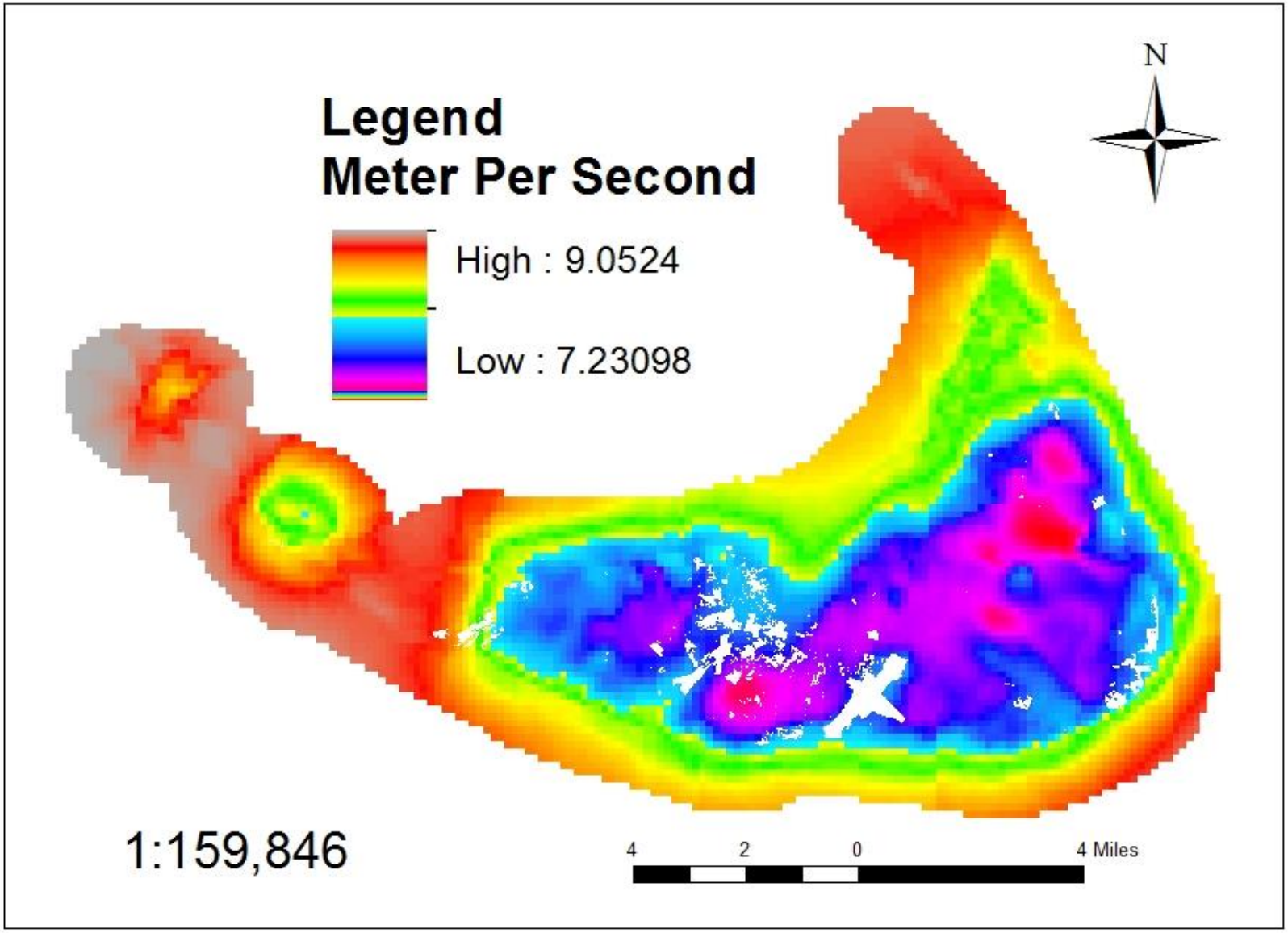
Why wait?

- To prepare for the zombie apocalypse, make the island energy self sufficient before the end of the world, using wind!

Nantucket Wind Speed at 70 Meters



Nantucket Wind Speed at 70 Meters



GE 2.5 -100 Wind Turbine

- 48.7 meter blade length.
- 85 meter hub height.

Wind Methods and Results

- According to the latest census, Nantucket has 9210 households on the island.
- 9210households X 10000kwh/yr = 92100000 kwh/yr of need.
- Enter all variables into calculation
- Air density (ρ)=1.25kilogram/meter^3 =1.25kilogram/meter^3
- Rotor swept area (A)=7916.939150752422527meter^2
- Coefficient of performance (Cp)=.3
- Wind velocity (V)=8.14169meter/sec
- Generator efficiency (Ng)=.59
- Gear box bearing efficiency (Nb)=.59
- Yield = 929576.28274157 watt = 8,148,489,075.02 KWH annual maximum

$$P = 0.5 \times \rho \times A \times Cp \times V^3 \times Ng \times Nb$$

Conclusions

- Biomass at the Z value will suffice with 10176.9236 homes
- One wind turbine at full capacity will provide more than enough energy.
- Run…