

# "Urban Agriculture"

**David Abazs**

*Finland, Minnesota*

**JPAC Public Meeting:**

**Greening the Economy**

**in North America**

*New Orleans, Louisiana*





**David Abazs**  
*Finland, Minnesota*





SUN MILE  
DO ME













A man with a beard, wearing a dark blue polo shirt, stands with his left hand on the roof of a dark-colored Volkswagen Golf. The car's rear window has a decal that reads "POWERED BY VEGETABLE OIL". Below the window, a blue sticker says "Renewable Energy is Homeland Security". The car's license plate is "NVB-590". In the foreground, a wooden trailer is loaded with several large, stacked coolers in blue, red, and white. The trailer has a black wheel and a license plate that reads "ONYX FLYER". The background features a rustic building with a stone lower half and a grey wooden upper half, with a window that has a flower box. The scene is set outdoors on a grassy area with trees in the distance.

**Used Vegetable  
Oil Powered Car  
50 miles/Gallon**

**Community Supported Agriculture**

Canada

# Western Lake Superior Region



**WE ARE**  
479,856 people  
on 18 million acres  
and we spend  
\$1.2 billion a year on food

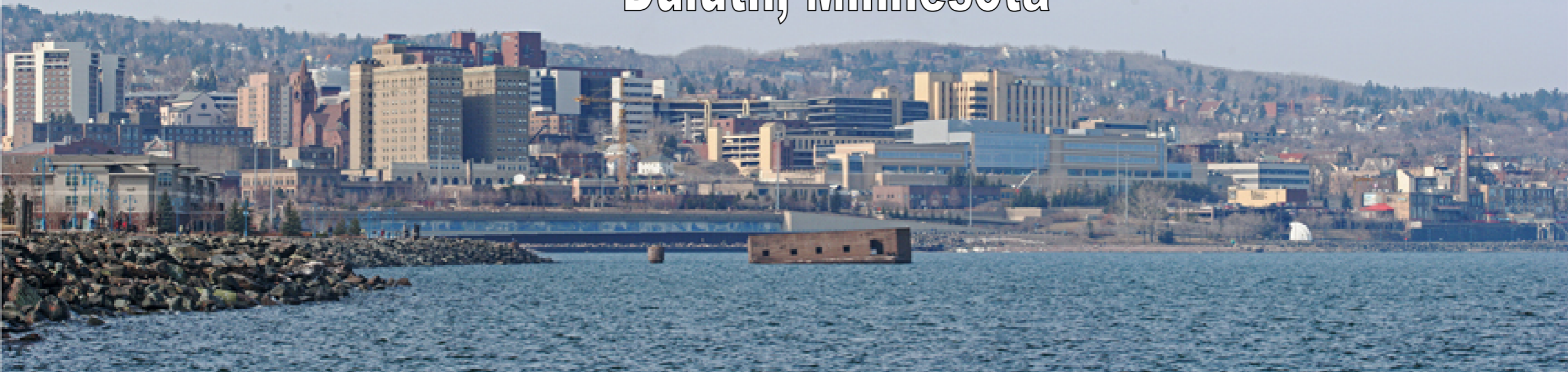
**WE HAVE**  
1,620,000 million  
acres to farm

**WE NEED**  
500,000 acres to  
feed our population

Minnesota, USA

Wisconsin, USA

# Duluth, Minnesota



**Greens Youth Jobs Farming**



**Duluth-Superior Community Gardens**

**Farmers Markets**





# Silver Bay

# Fish - Food - Fuel

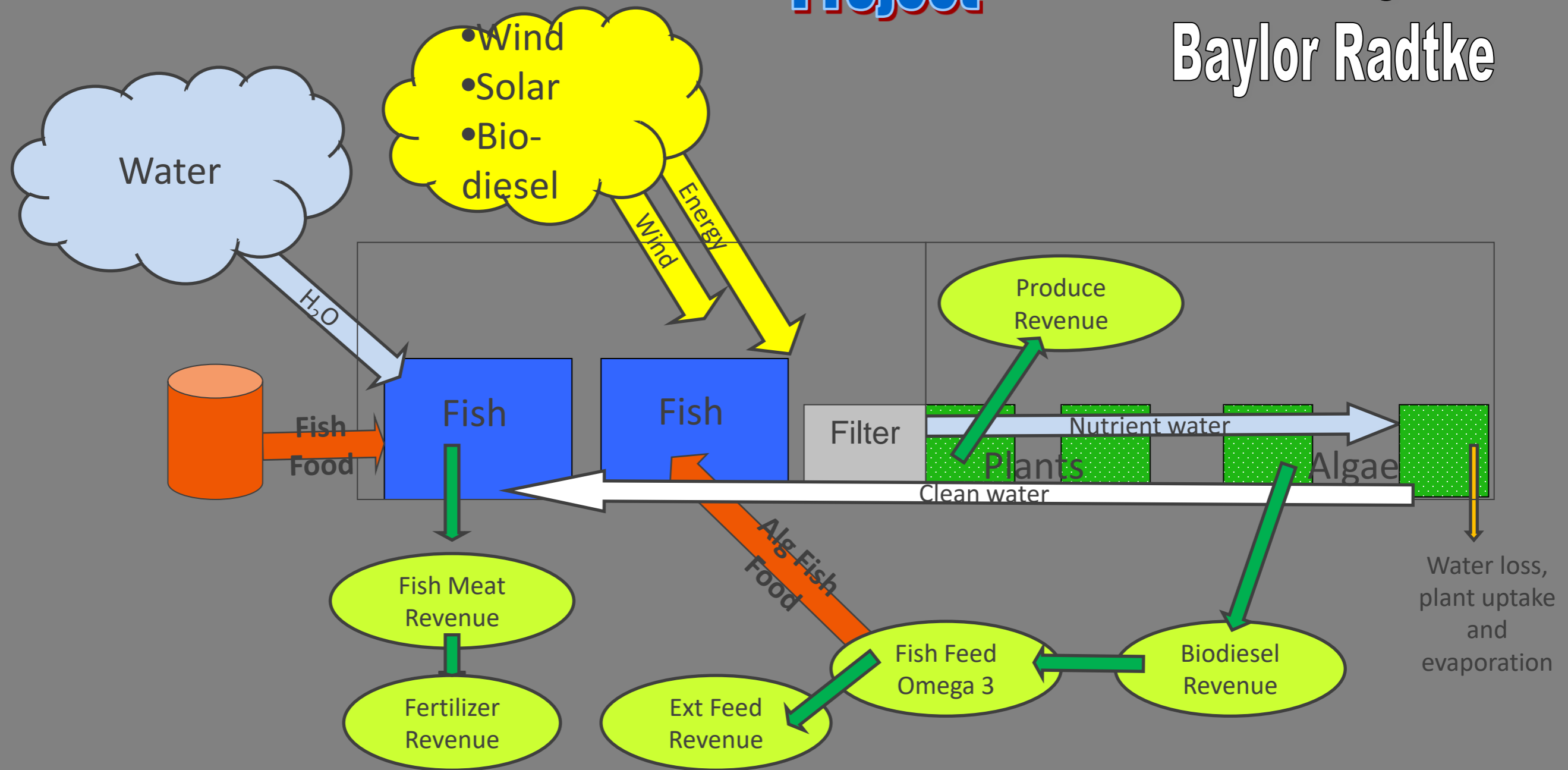
## Project

David Abazs

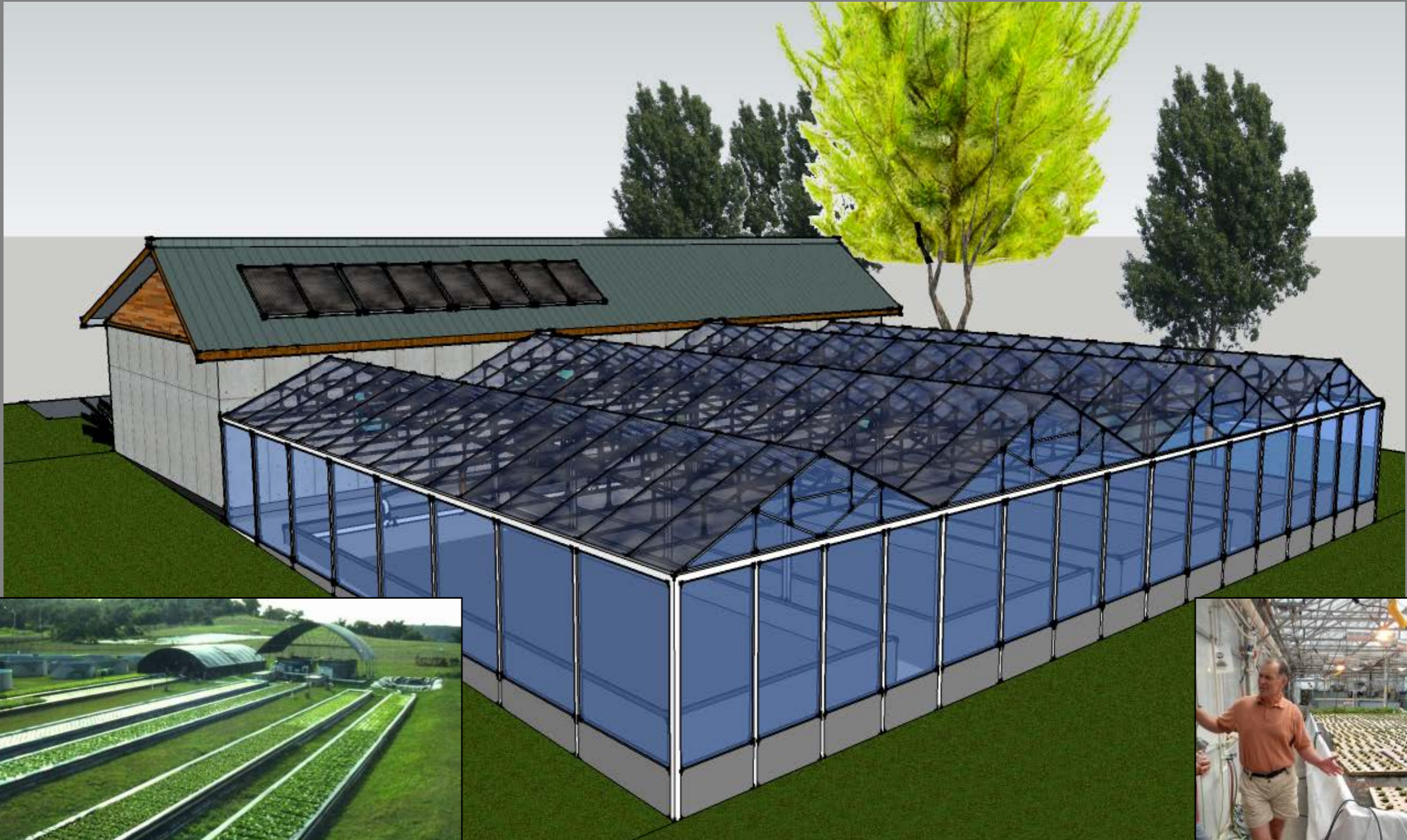
Andrew Klemer

Mike Mageau

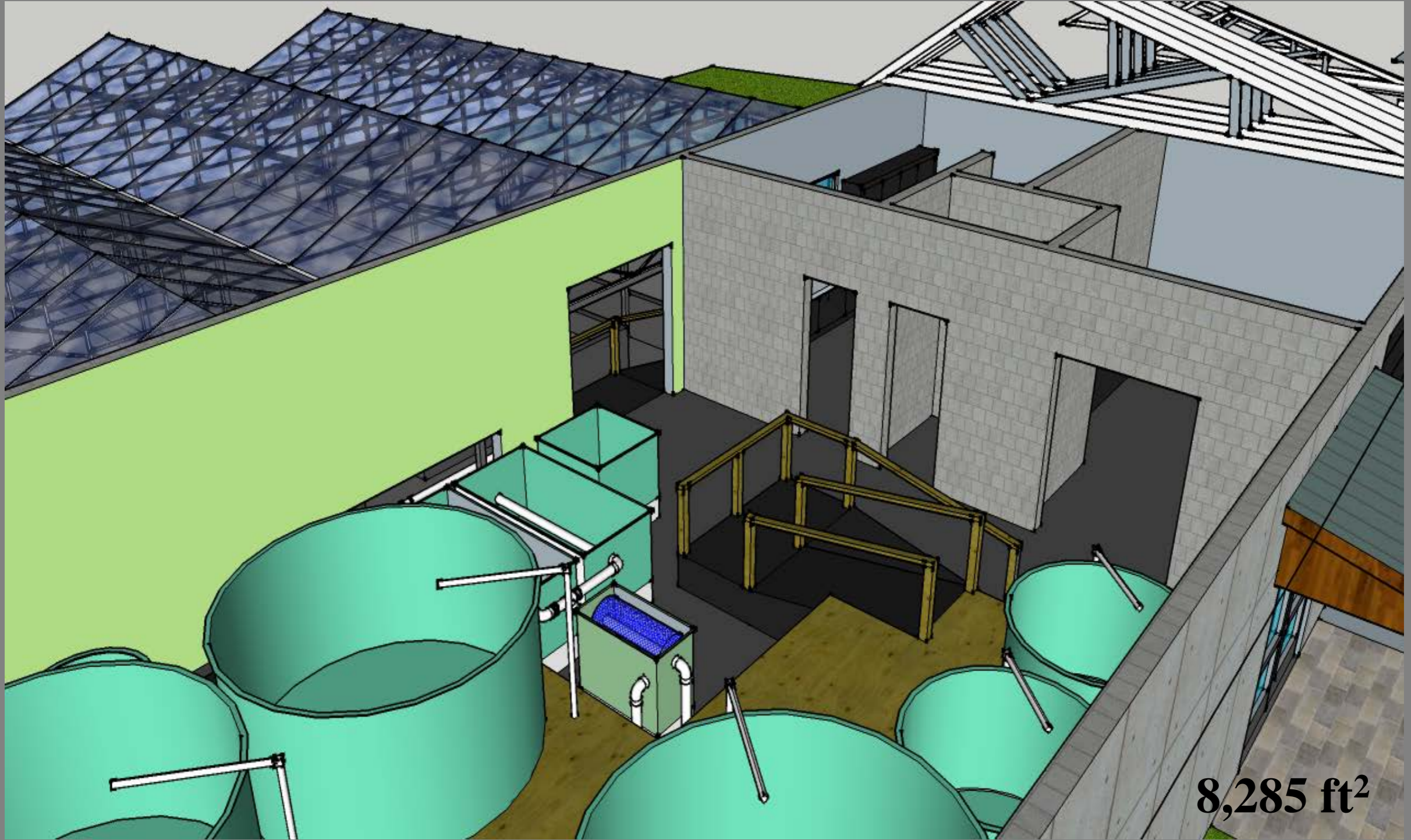
Baylor Radtke



# Single Production Unit (SPU)



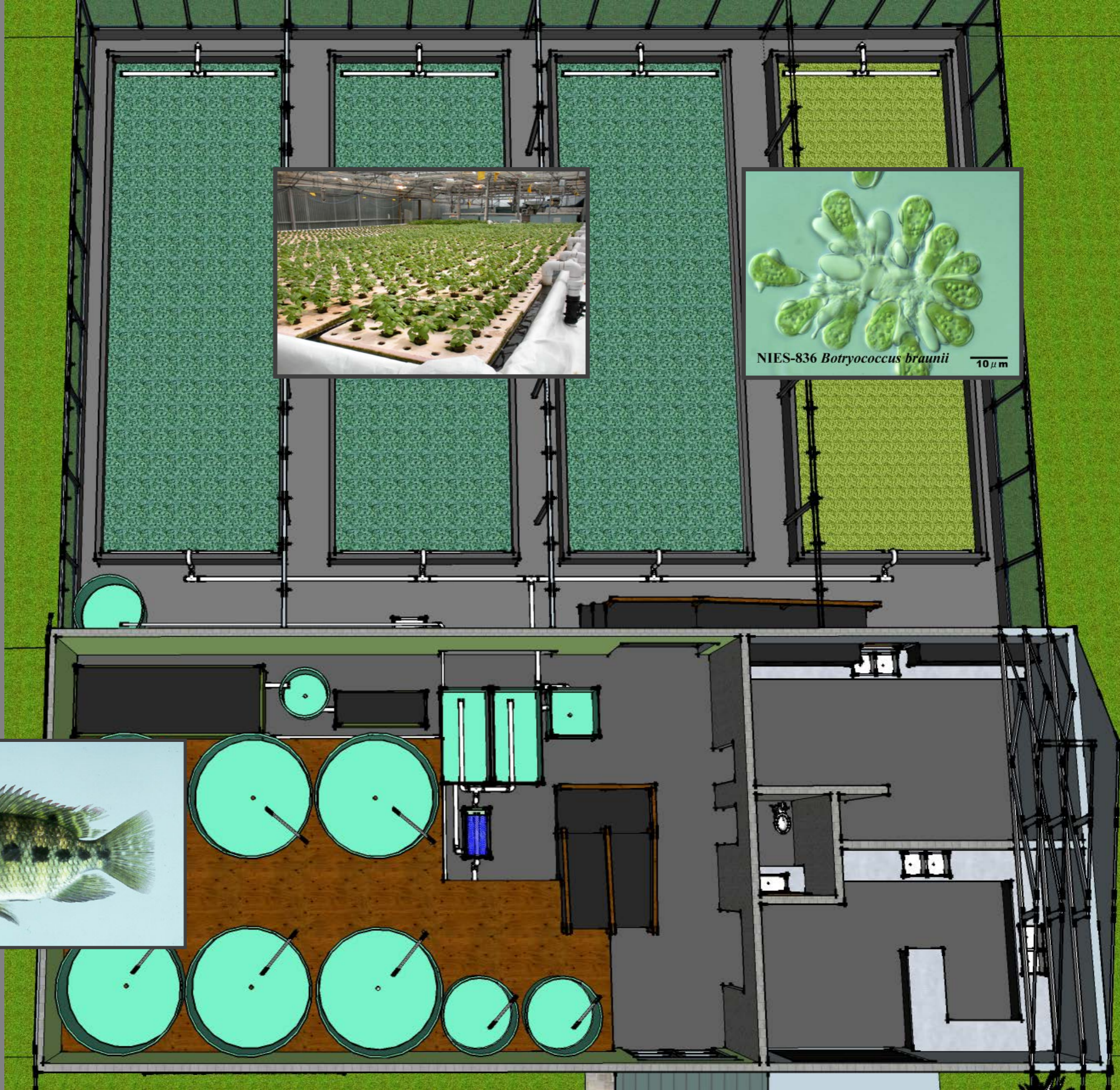
# Single Production Unit (SPU)



8,285 ft<sup>2</sup>

Single  
Production  
Unit

Silver Bay  
Minnesota



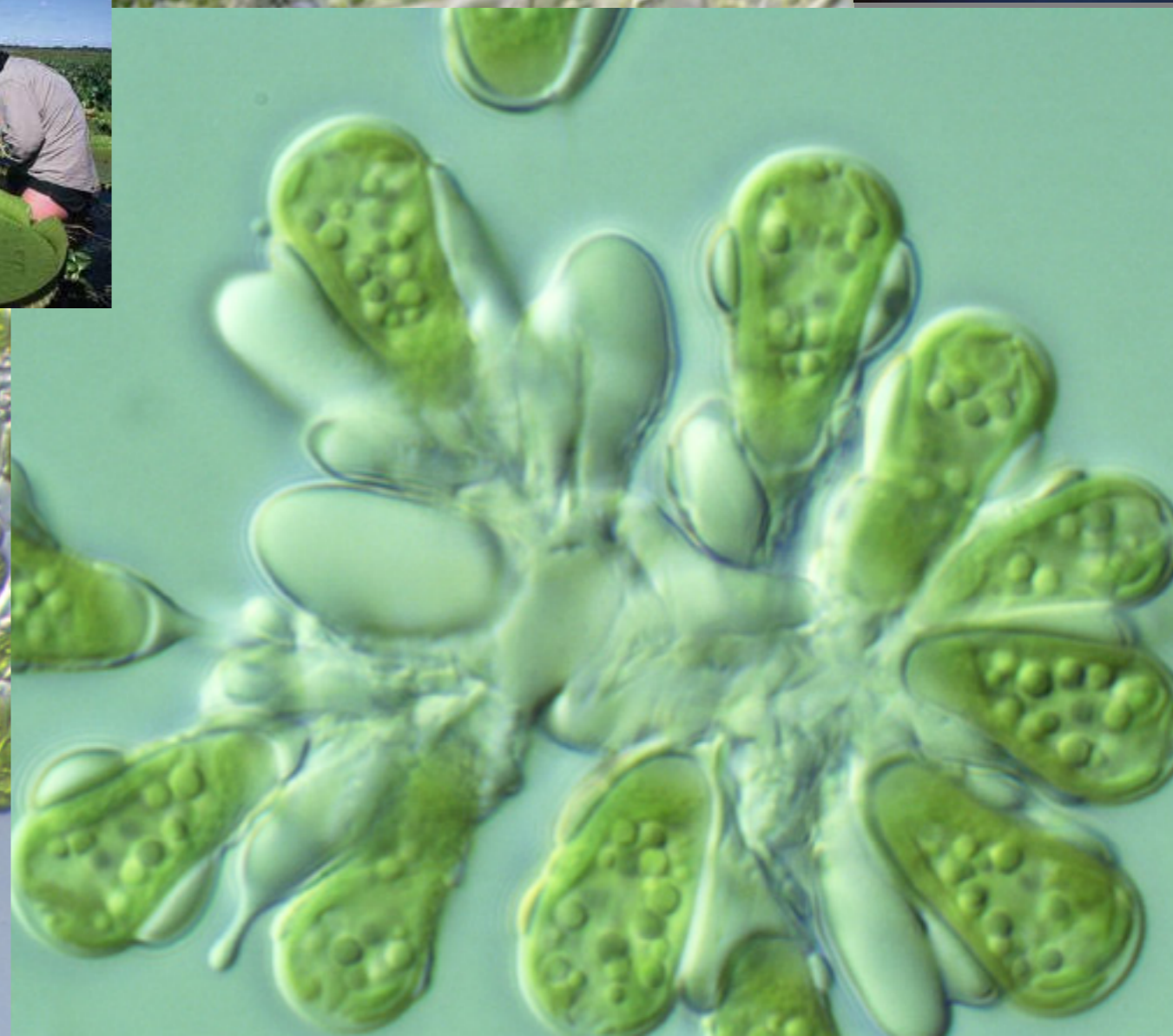
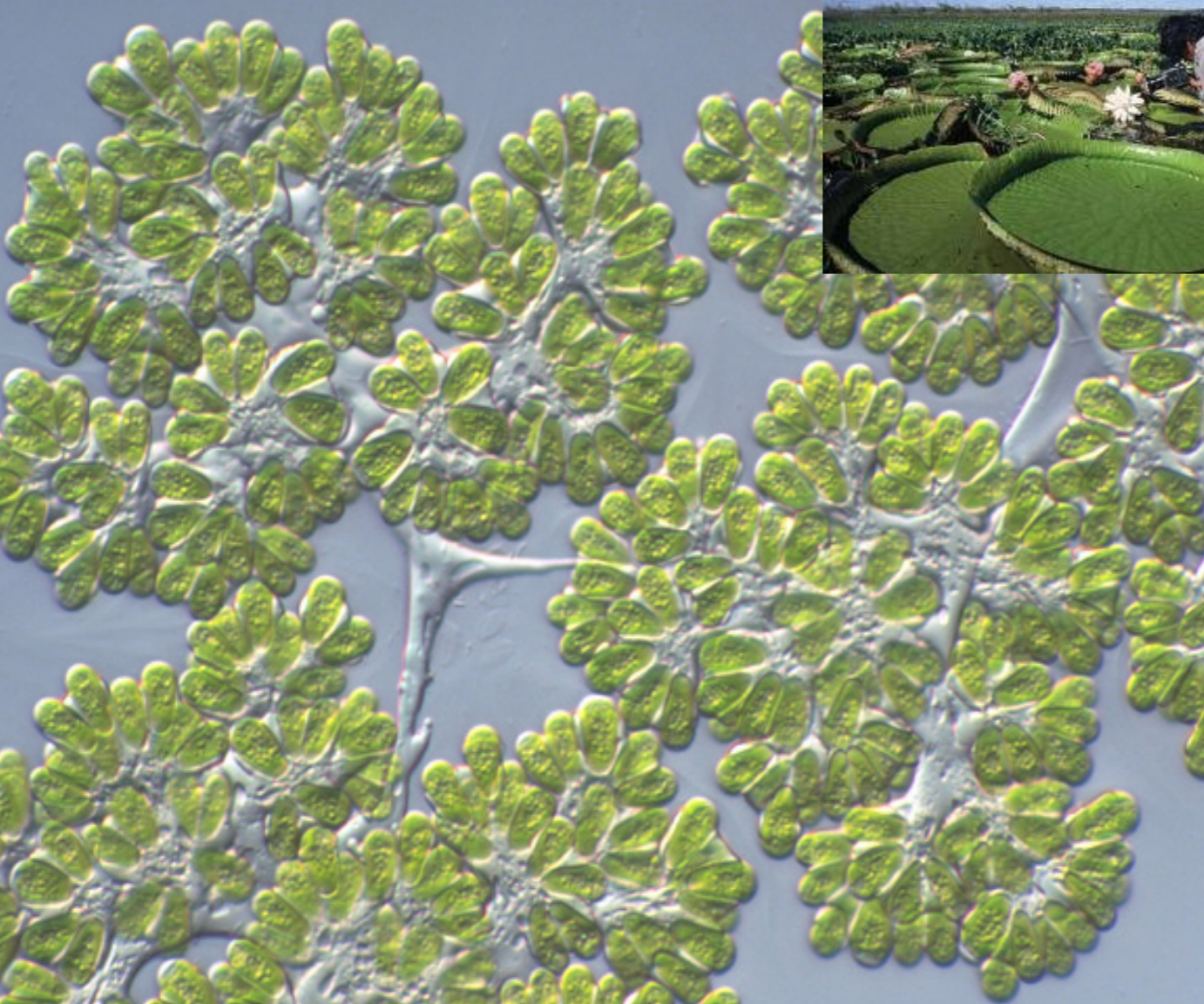
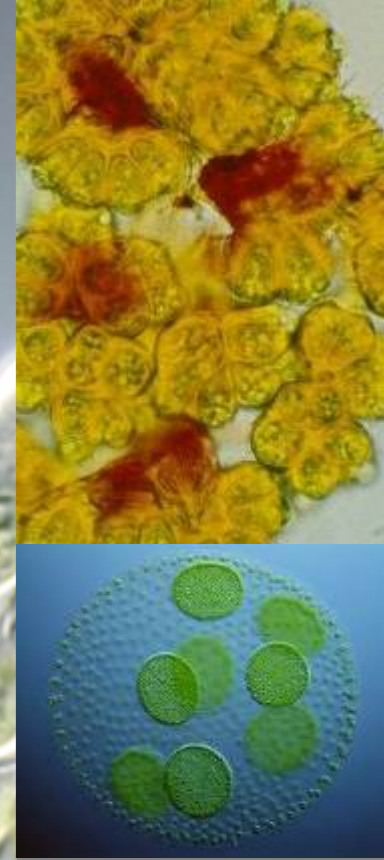
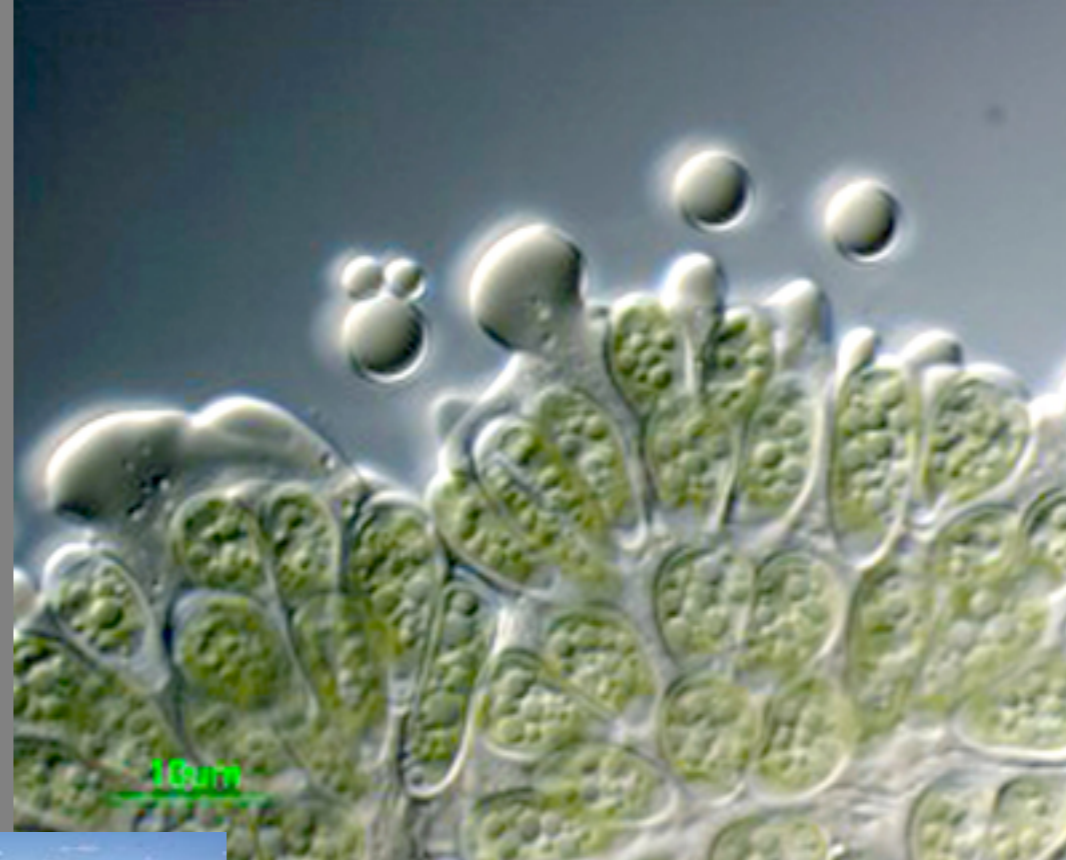






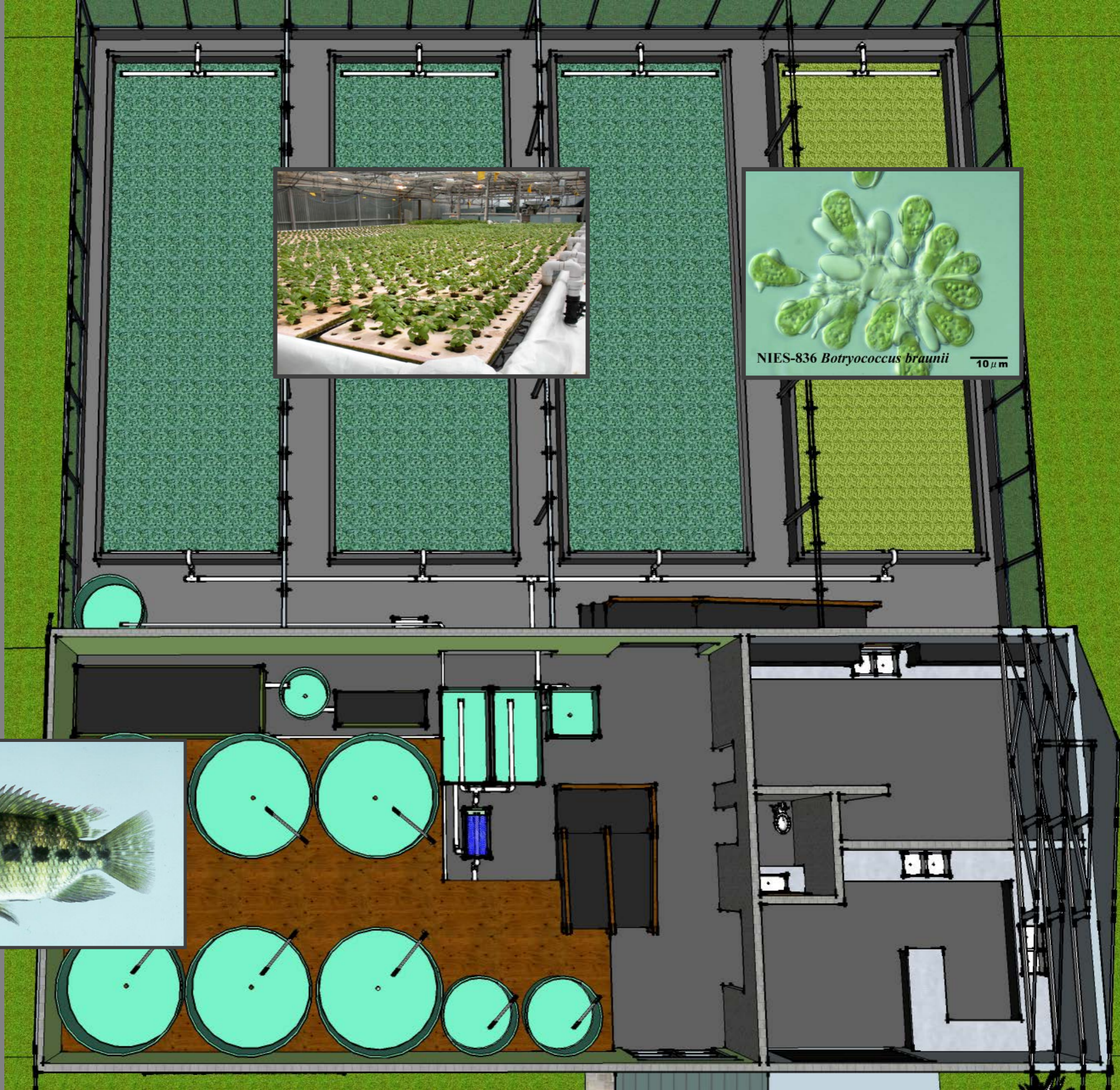


# Attached Algae Fuel & Food



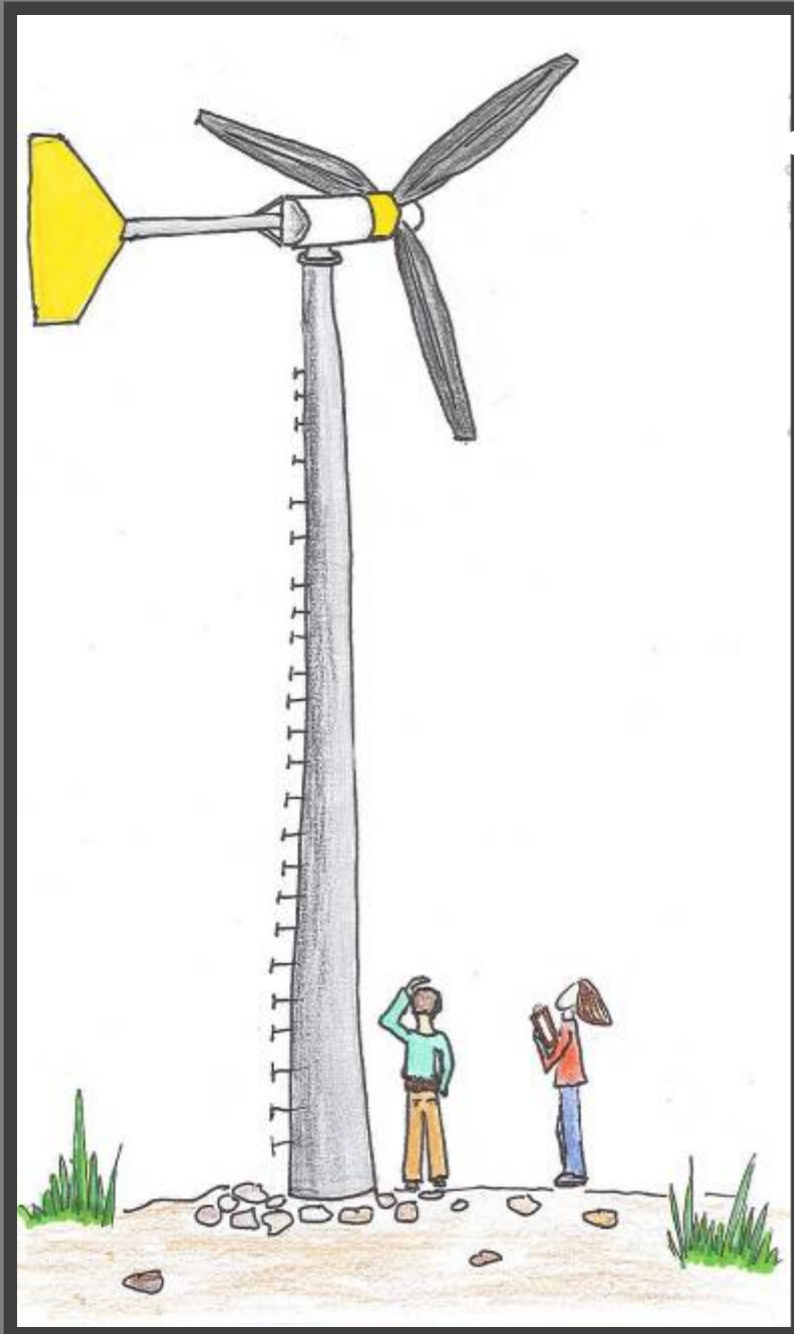
Single  
Production  
Unit

Silver Bay  
Minnesota



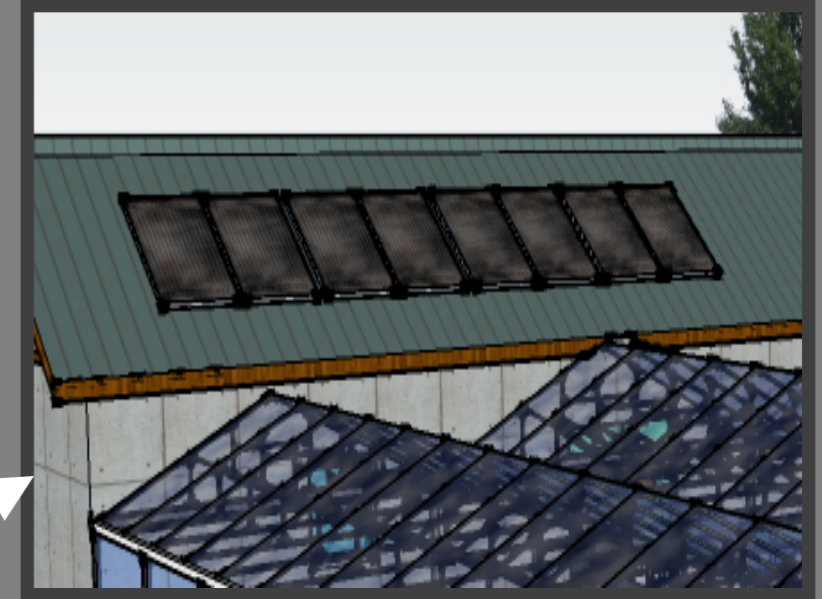
# Zero net CO<sup>2</sup> = Renewable Energy Systems

IRR Renewable Energy Grant \$250,000

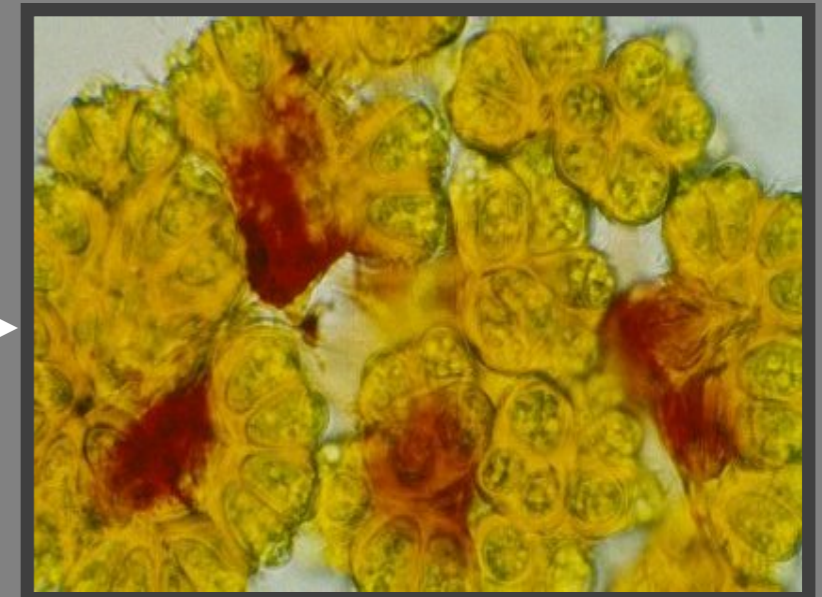


← 20 kW  
Generator

#8 4' x 10'  
Solar Hot H<sub>2</sub>O →



Algae  
for Fuel →



# Carbon Neutral Energy Use

Green Jobs

CO<sub>2</sub> & Oxygen  
Fish/Plant Exchange

Water Cycle

No "waste"

10,264# organic fish  
2600 gallons oil  
20,117# fish feed

14,976 lettuce  
4762# basil  
1805# parsley  
1459# cilantro

*“Now is the time to seize  
the day!”*

