Thinking about Hoonah-topia

What we learned about sustainable Greenhouses on POW and how we can apply it here

Today

1. Take a tour with us to see the greenhouses of Southeast Island School District on Prince of Wales that are creating jobs and feeding their community
2. Learn about how this can be applied to Hoonah
3. Help us determine future steps

What's the Big Deal on POW?

4 Communities have created biomass-linked greenhouses that provide:

1. Income for people to sell wood for the boilers
2. Vegetables for the school and for sale
3. Student involvement and learning

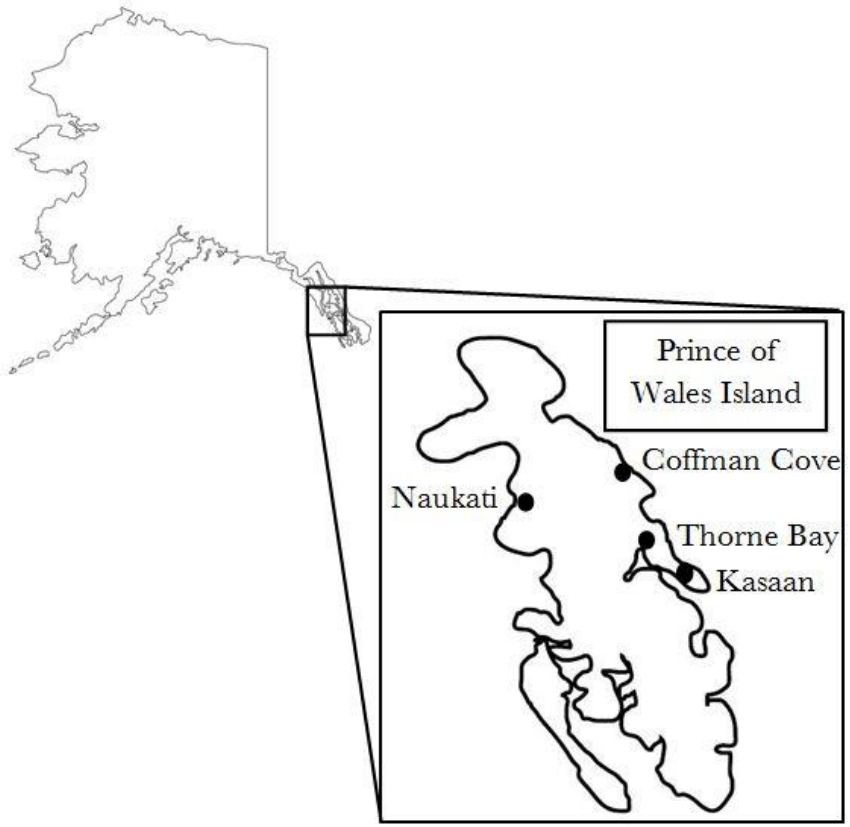


Image : http://www.eesi.org/

But Wait, What's Biomass-linked?

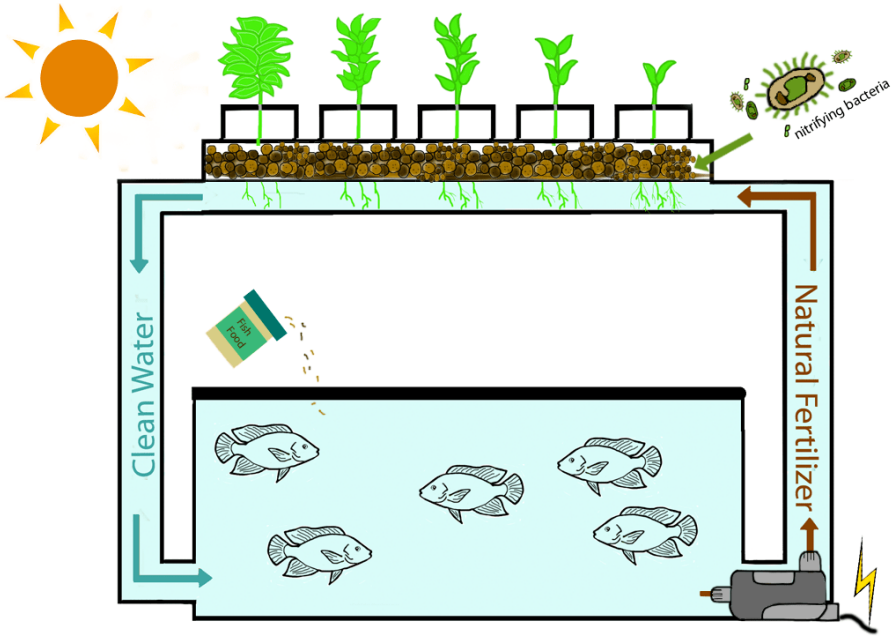
Biomass linked greenhouses are fired by wood or chips. The boilers heat pipes and the hot water is pumped into the greenhouse.

Greenhouse Jargon

hy·dro·pon·ics

hīdrəˈpäniks/

the process of growing plants in sand, gravel, or liquid, with added nutrients but without soil.



aq·ua·pon·ics

ˌäkwəˈpäniks,ˌak-/

a system of aquaculture in which the waste produced by farmed fish or other aquatic animals supplies nutrients for plants grown hydroponically, which in turn purify the water.

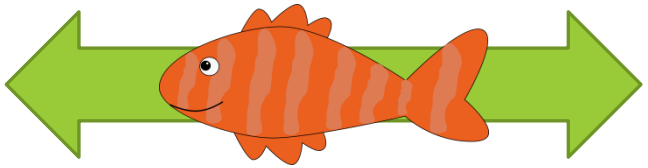
POW Greenhouse Model

Sell produce and grow s'more!

Start with a wood-linked greenhouse

Use a local student workforce to maintain the greenhouse

Add aquaponics (fish) and plants



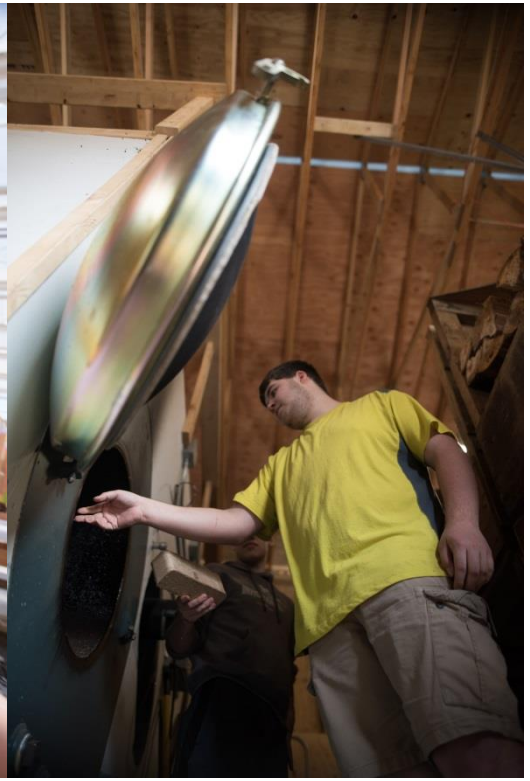
Heat the greenhouse with locally-sourced wood

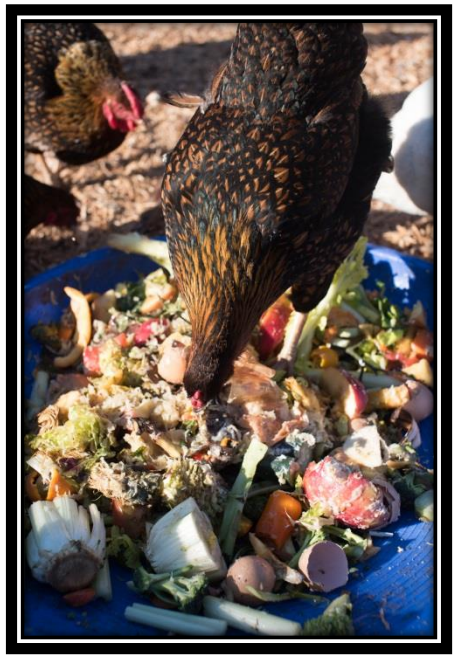
Benefits:
Student Involvement at Greenhouse

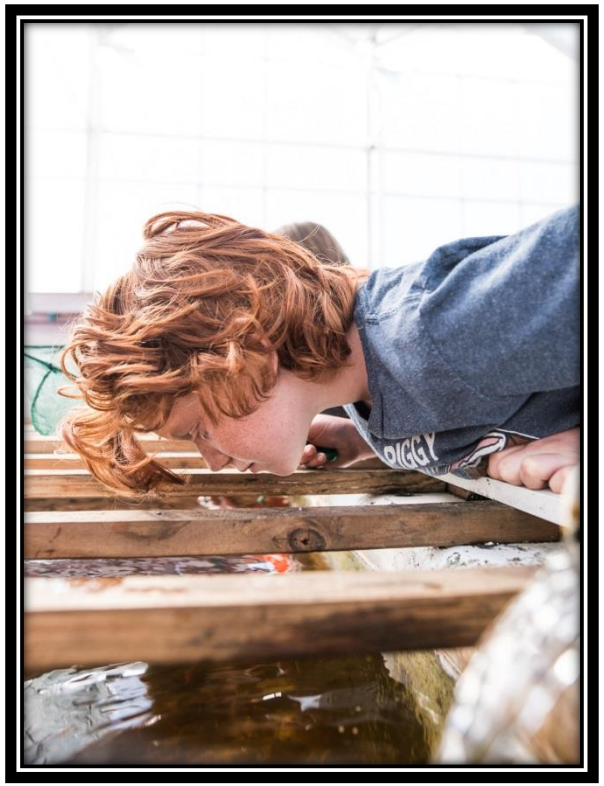
Grade-schoolers care for chickens and the compost program. Eggs are sold.

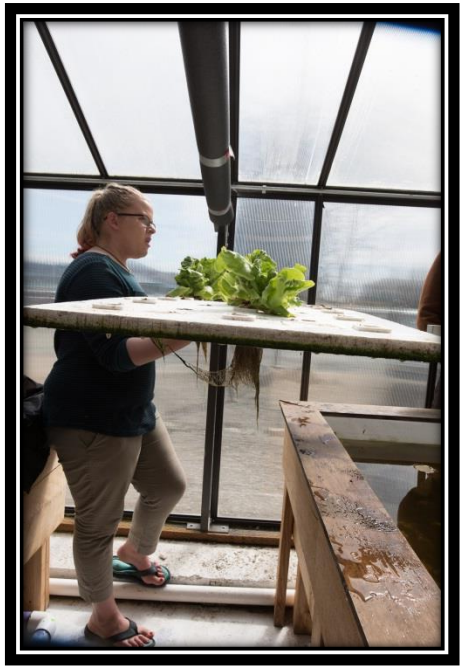
Middle-schoolers care for day-to-day in the greenhouse including harvesting.

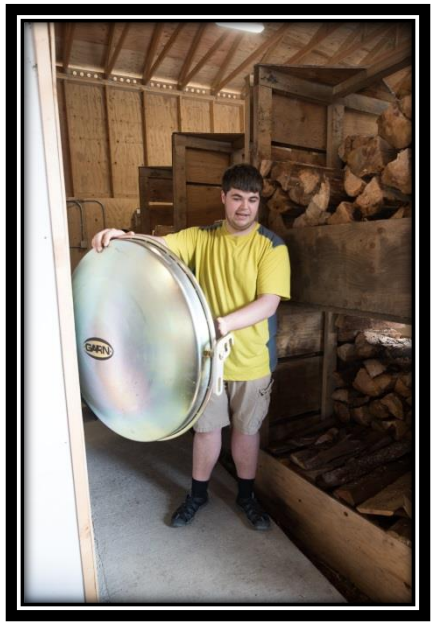
High-schoolers care for the wood boiler and are paid and are in greenhouse science class.











Benefits:
Local Economy

One way of getting biomass is to pay people to cut it. This uses POW's locally and abundant resources and keeps money in their community.

Benefits:
Locally Sold Produce

Produce supports the school and the community. The school formed an LLC to sell their product.

Challenges:
Creating a new project is difficult!

1. Personnel time is always a factor
2. Involvement by community
3. Funding the greenhouse
4. Maintaining a Greenhouse
5. Marketing produce, and other things.

POW is getting over these challenges.

Hoonah could too!

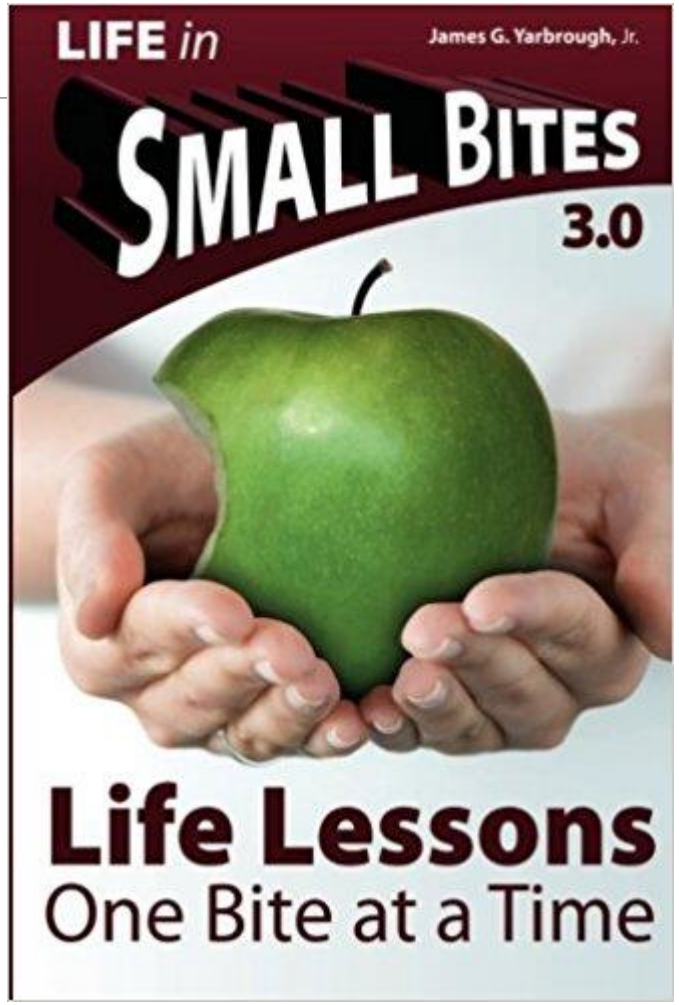
The Possibilities of a Hoonah Greenhouse

1. Run as a business and create local opportunity
2. We can provide vegetables for our school
3. Provide for our community
4. Educate our students
5. It may be the pot of gold at the end of the rainbow!

Taking A Small Bite of A Hoonah Greenhouse

POW is doing it all, but there are many ways to scale down the POW Wales model and build over time. For example:

1. A smaller greenhouse
2. Maintained by an entity other than the school
3. Learn from other Hoonah greenhouses
4. Hire a greenhouse coordinator
5. Heat with alternative methods



Crossroads for A Hoonah Greenhouse

We have working models of greenhouses here in Hoonah!

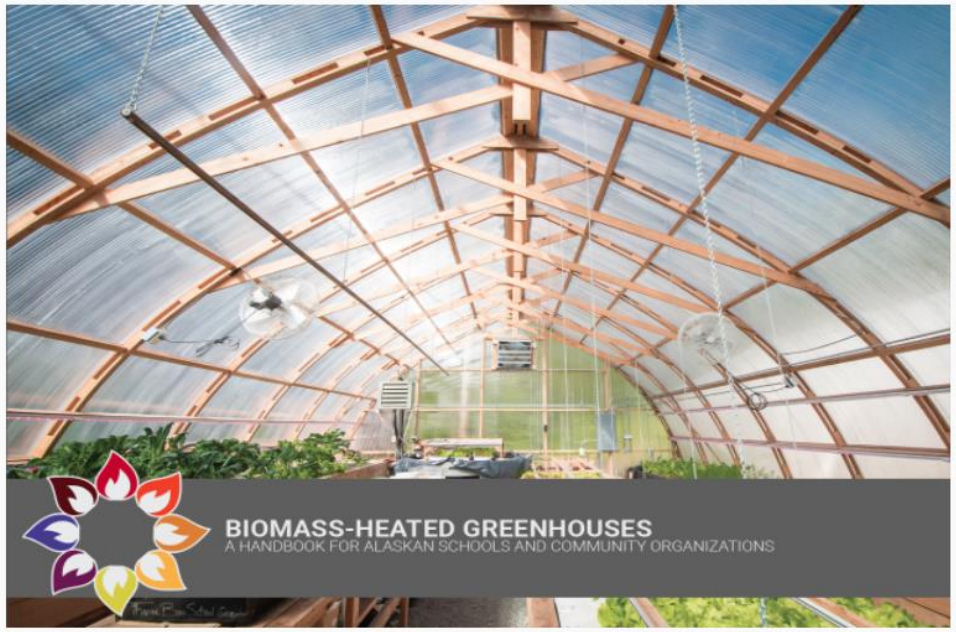
We are finalizing a biomass feasibility study

We have a working group and all of you who are interested. But what next?

The Rest of Tonight

1. Help us determine what the next steps for a greenhouse would be
2. Learn about greenhouse systems
3. Take a tour of MOBY
4. Enjoy fresh food from our greenhouse and land

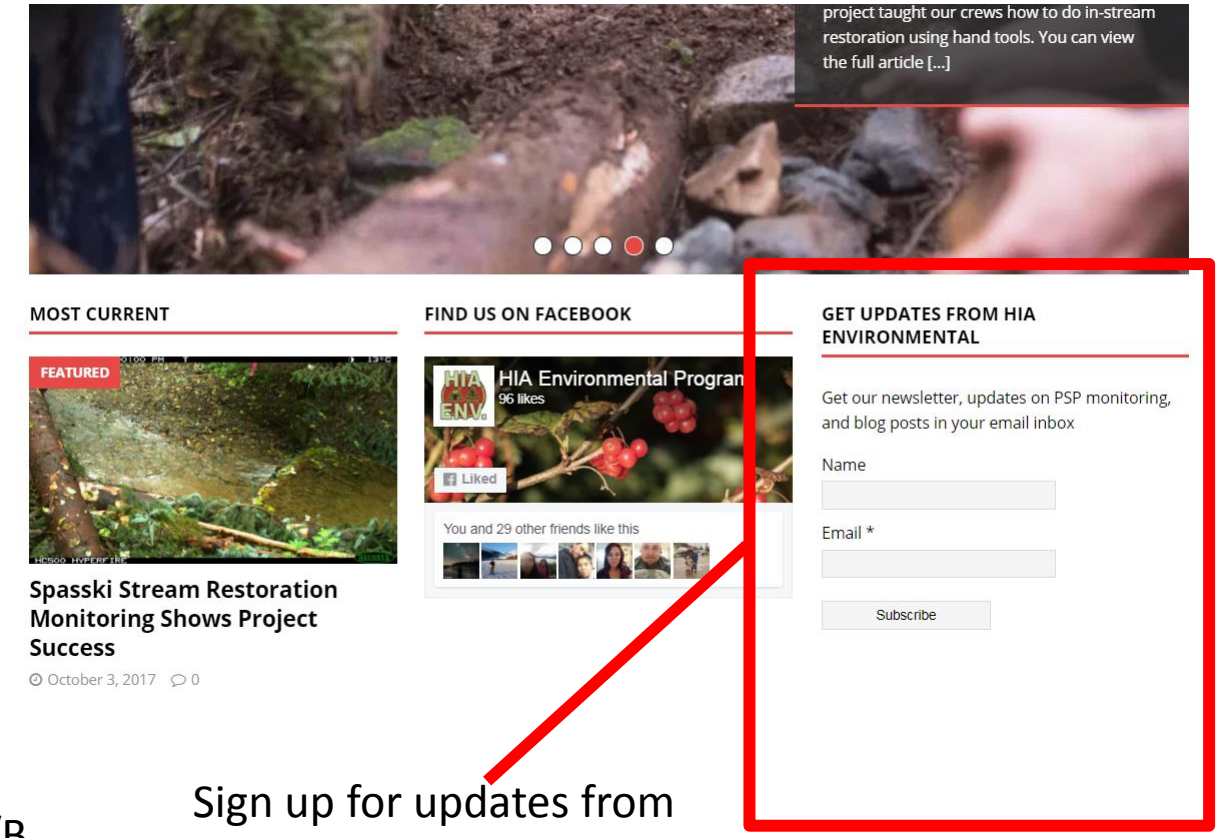
Some Resources and Staying in Touch



Click on the Image above to open a PDF version or Click here for the downloadable iBook version

A limited number of hardcopies are available to teachers on a first come, first serve basis. To request a hardcopy of the Biomass-Heated Greenhouse Hand book, please contact the AEA biomass program manager, Devany Plentovich. 907-771-3068 dplentovich@aidea.org

http://www.akenergyauthority.org/Programs/AEEE/Biomass#green%20house%20handbook



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Questions