

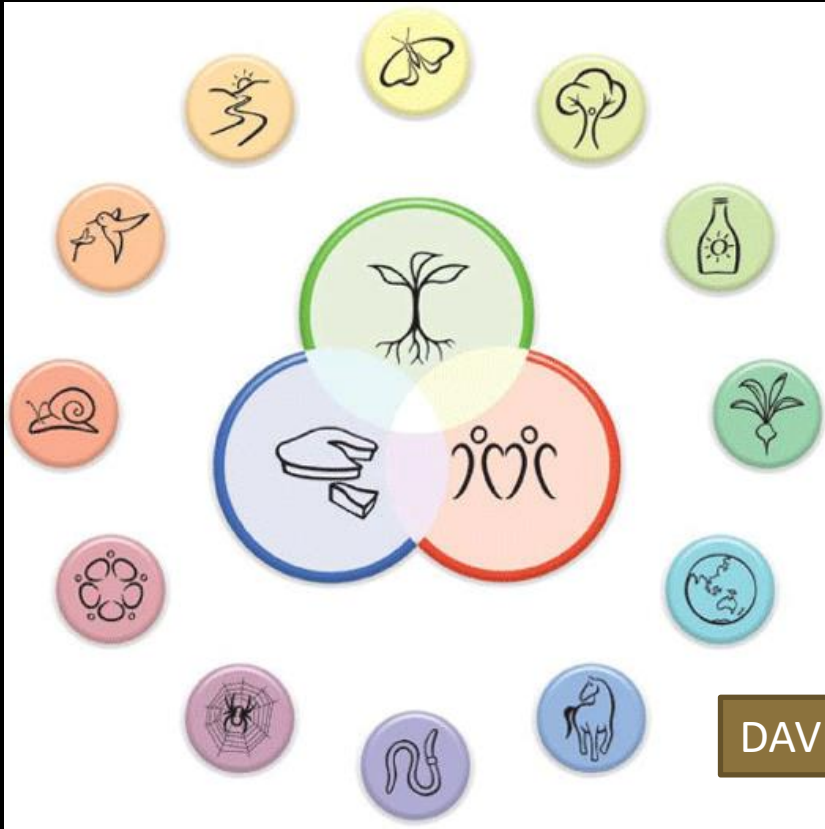
A vertical photograph of a dense forest. In the foreground, a large, moss-covered log lies horizontally across the frame. Behind it, a small stream flows through the forest. The trees are tall and thin, with vibrant green foliage. The lighting is soft, suggesting a dappled sunlight effect.

# THE ENVIRONMENTAL EDUCATION OF A GARDENER

KEITH R MASTENBROOK  
WESTLAND GARDENS INC.

Sol Duc River Valley, Olympic National Park

# Permaculture: *permanent - culture*



## *Permaculture Ethics:*

EARTH CARE

PEOPLE CARE

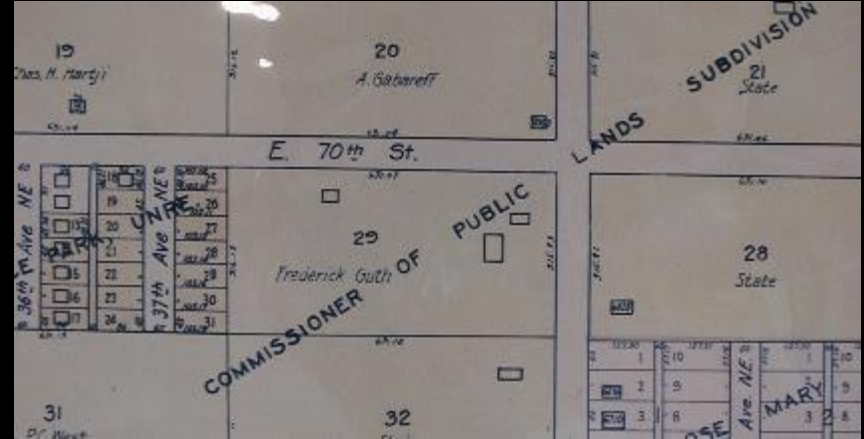
FAIR SHARE

DAVID HOLMGREN'S PERMACULTURE PRINCIPLES

# # 1 Observe and Interact



Impressions made in  
childhood are strongest



5-acre Guth Compound, c. 1916

GutHaus c. 1948 – 40<sup>th</sup> Avenue & NE 70<sup>th</sup> Street Seattle

# Gardening Role Models

Louise gave me back issues of  
Organic Gardening & Farming



Louise Guth & Irving Donnergaard

Johanna Van Brederode-Hamilton

My Grandmother had a green  
thumb & green Dutch garden



# Boy Scouts of America

Leave your campsite better than you found it.



50 Miler @ Anderson Pass



Anderson Glacier – Then & Now

# Coming of Age in the 1970's



Middle-class Seattle Suburbia



Assassinations/The Viet-Nam War/Women's Liberation/  
The Environmental Movement/Rock-n-Roll

# The Evergreen State College



Human Ecology w/ David Milne & Rob Knapp, 1972

# BROADER HORIZONS



White kid from  
Seattle isn't much  
of a statement on  
a resume.

At some point  
you want to try  
something new  
just to see how it  
plays.

In the Garden of Frida Kahlo & Diego Rivera, Mexico D.F. 1976



# # 3 Obtain a Yield

I needed to experience the world first hand, to have an Adventure.



Summer in the Okanogan orchards



Gives way to the cold of winter

*“The bus came by and I got on, that’s when it all began”* - the Dead

# # 9 Use Small and Slow Solutions



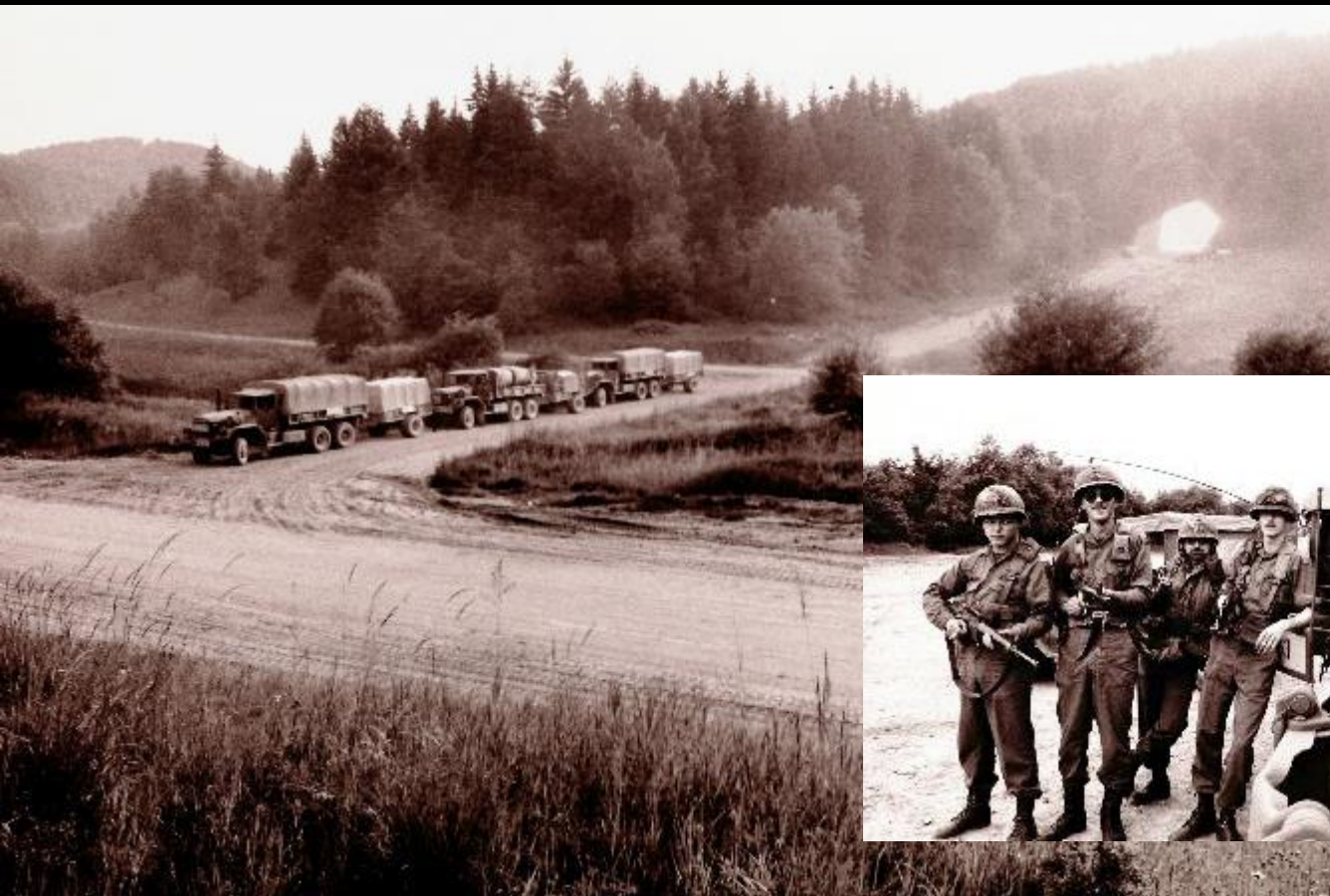
Small is Beautiful

Five Acres &  
Independence

Back-to-the-Land  
Movement

Gravenstein in bloom, planted in 1927 by the Guth Family

“19 E, Armor Crewman, that’s what I want to be.”



The Recruiter asked why? Because I want some I'll hate so much it'll be easy to get out. Damn if that wasn't true.



# # 6 Produce No Waste



Studio in Lawrence Hall



Terracing with URBANITE Walls

Matter can be  
neither  
created or  
destroyed.  
**RECYCLING** is a  
Universal  
Condition

# Learning to Read the Landscape



## A PATTERN LANGUAGE & THE TIMELESS WAY OF BUILDING

Essential resources in  
design, expanded by  
David Jacke for the  
Edible Forest Garden.

“I get my best ideas by listening to others.”



Don Brooks, Senior Gardener @ Kubota Garden

I asked Tom Kubota why he was so quiet in the meetings of the Kubota Garden Oversight Committee.

I agree completely with his response.



# Garden Design was Ornamental

Chateau de La Napoule, French Riviera



Great Dixter, England



Villandry, Ile de France

Is it  
CONTRIVED  
or  
DERIVED?

- Professor  
Ron Lovinger

September 11<sup>th</sup> 2001 changed everything.



On grounds long used as a military barracks the OAXACA BOTANICAL GARDEN preserves important BIODIVERSITY including the towering Organ Pipe Cactus, *Lemaireocereus marinales*

Jardin Etnobotanico Oaxaca, Mexico



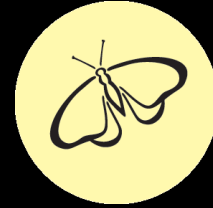
# My PERMACULTURE Revolution



Permaculture Design Course  
Transition Townes  
Edible Forest Gardening  
Hugelkultur  
Bio-Char  
Intentional Community  
Rainwater Management

Port Townsend Co-Housing, NW Permaculture Convergence

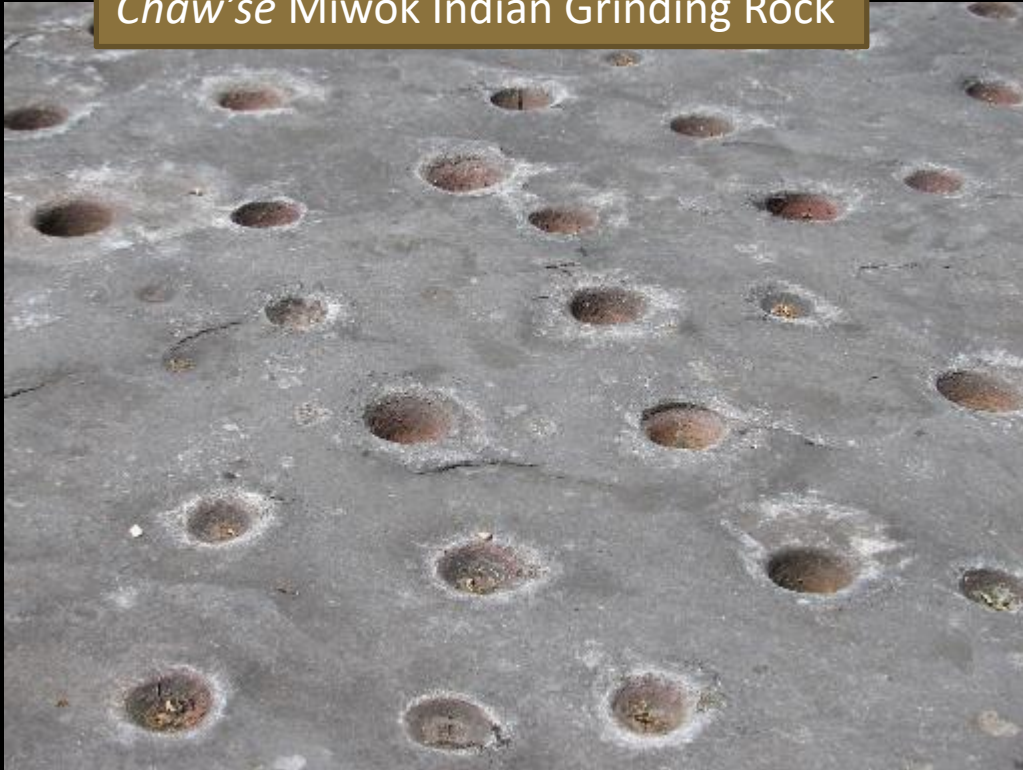
# # 12 Creatively Use & Respond to Change



In Fresno, to beat the heat, Baldasare Forestieri moved his garden underground. Over 40 years he worked & some plants are now 100 years old.

# CASCADIA BIOREGION and the SALISH SEA

*Chaw'se* Miwok Indian Grinding Rock



**TEK**

Traditional Environmental Knowledge is invaluable in returning to a resilient permaculture community.

# SUSTAINABLE NE SEATTLE

Our mission is to support the transition of our community to sustainability and resilience.



PLANET HOME FESTIVAL

BYLAWS and 501-C3



EDIBLE HEDGE PROJECT

# TRANSITION TOWNES

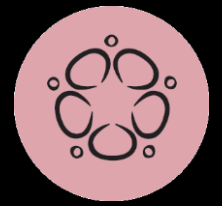


ADDRESSING  
Climate Chaos  
Resource Depletion  
Economic Instability



Transition Seattle Initiative

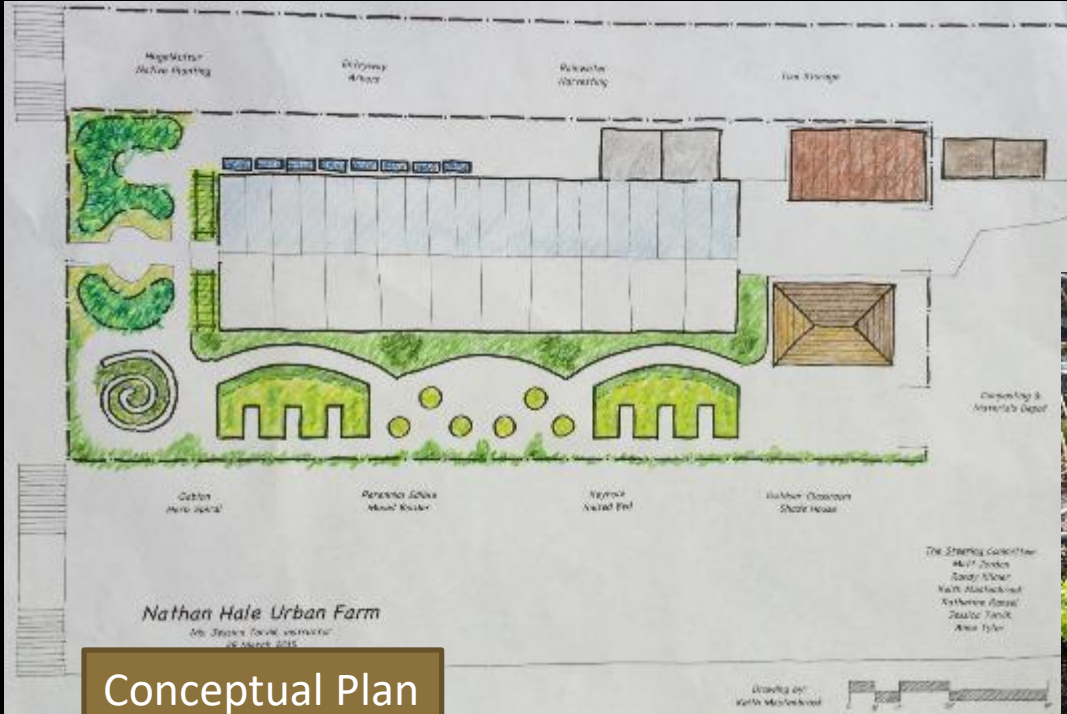
# # 8 Integrate Rather than Segregate



Before



Nathan Hale  
Urban Farm



Conceptual Plan



2016 Achievement

# LIMITS to GROWTH?



## GREENING the EMERALD CITY



Obama Limo @ GutHaus: CAN WE NOW?



# # 7 Design From Patterns to Details



In Nature patterns  
are everywhere  
that have been  
tested over time.  
Learning to see  
merely takes  
practice.

Bullock's Permaculture Homestead, Orcas Island WA



# SCALES OF PERMANENCE



Quinault Moses Prairie before burn



Greenhouse Microclimate



Gabion @ Old Goat Farm

CLIMATE / WIND

LANDFORM / SOLAR ACCESS

WATER / DRAINAGE

LEGAL ISSUES

ACCESS & CIRCULATION

VEGETATION & WILDLIFE

MICROCLIMATE

BUILDINGS & INFRASTRUCTURE

ZONES OF USE

SOILS

AESTHETICS / VIEWS & PRIVACY

# EDIBLE FOREST GARDENS



Glen Hurley @ Beacon Food Forest

FOREST STRUCTURE  
MIMICRY

Trees

Shrubs

Herbs

Perennials

Ground Covers

Roots

Vines

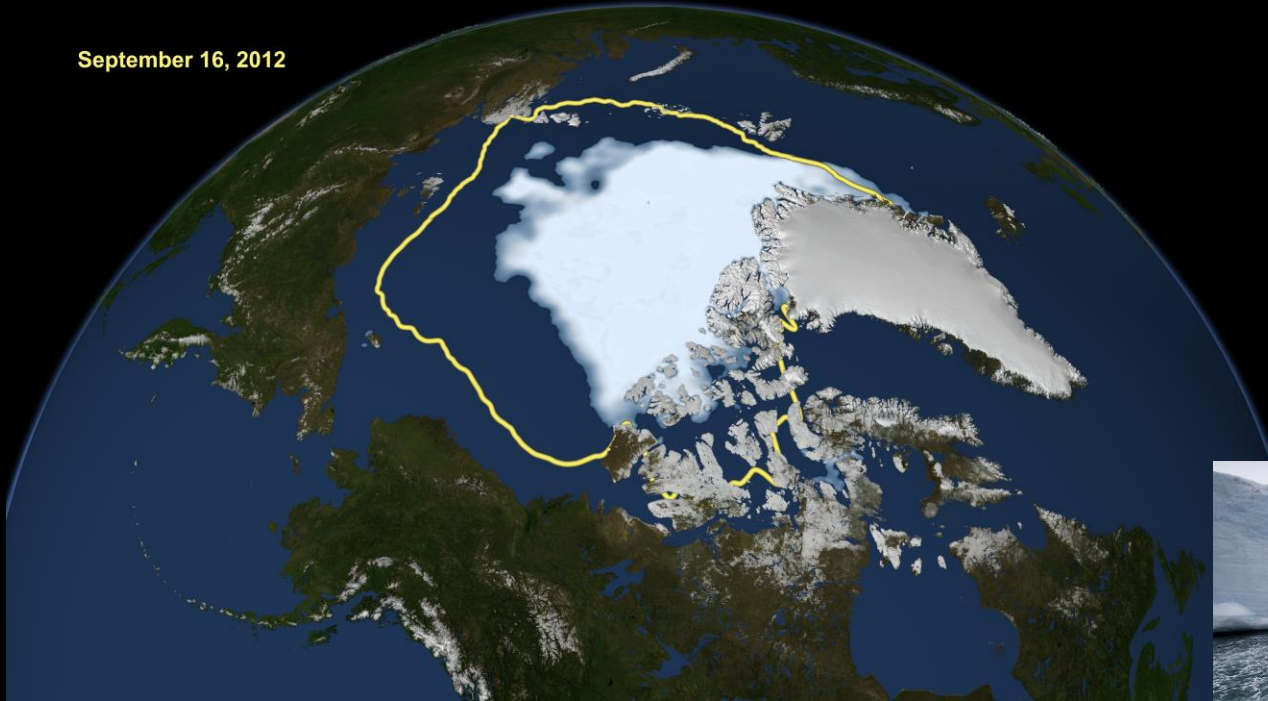


David Jacke @ Helena MT Design Charrette

# # 2 Catch and Store Energy



September 16, 2012



Use appropriate  
technology



# CARBON SEQUESTRATION



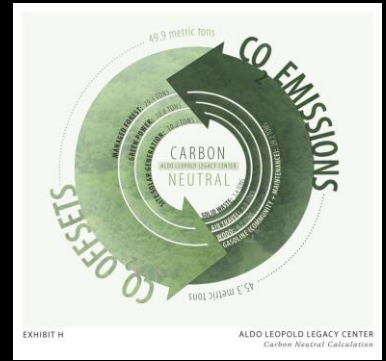
Hugelkultur Soil Building



Humanure



Green Cylinder



Plant Trees  
Hugelkultur  
Compost On Site  
Arborist Chips!

# # 10 Use Small & Slow Solutions

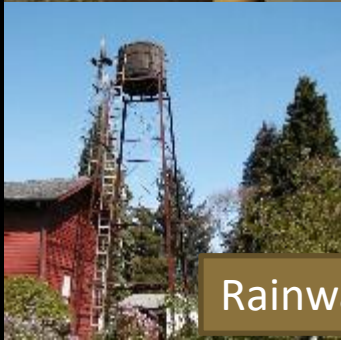


Eastern Cherokee Handcrafting



Bio-Char

It is going to come down to people learning to work together, finding solutions that are local more than global.



Rainwater Harvest



Wild Land Management

# # 5 Use & Value Resources & Services



Tomco Tree Farm



Bone Lake Huckleberry



Kalmiopsis Wilderness

Resources and Service that are not USED are not fully VALUED. Stewardship takes many forms on lands both public and private, urban and rural.

# # 11 Use Edges & Value the Marginal



GutHaus On the Back Street

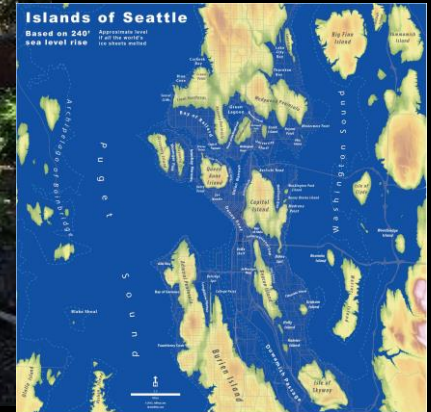
The ECOTONE  
where two  
ecosystems meet  
can present the  
greatest biological  
diversity.



# ANTHROPOCENE: a new age of Earth history



CHANGE  
is unstoppable  
RESILIENCE  
is paramount  
TIME  
is an illusion





# ASLA Sustainable SITES Initiative



A program much like LEED that establishes a method for evaluating the environmental impacts of development and provides guidance to make projects Greener.

GutHaus BOG GARDEN in flood after a heavy rain, built in 1988

# RENAISSANCE to post-carbon economy

Creating RESILIENCE will necessitate taking a holistic, inter-disciplinary approach in not only how we design solutions, but also in how we study and prepare, and what questions we ask.



# LIFE IS GOOD: maintain your perspective



We are all in this together and there isn't an escape hatch on Spaceship Earth. Detach yourself from expectations and commit to alleviating suffering.

REFORGER Exercises in West Germany, 1980  
Return Forces Germany before the Wall came down