A Design Proposal for the Georgia Tech Community Garden

By Brent Verrill
Communications Manager, BBISS
Prepared as a final project in my Permaculture Design Certification
What is Permaculture?

Permaculture is a design methodology rooted in the observation and emulation of natural systems that outlines a path for people to reintegrate themselves with the entirety of the community of life.
Permaculture Cognitive Hierarchy

Prime Directive

Earth Care
People Care
Return of Surplus (Future Care)

Three Ethics

The only ethical decision is to take responsibility for our own existence and that of our children. Do it now.

12 Design Principles

1. Observe and Interact
2. Catch and Store Energy
3. Obtain a Yield
4. Apply Self-Regulation and Accept Feedback
5. Use and Value Renewable Resources
6. Produce No Waste
7. Design from Patterns to Details
8. Integrate Rather than Segregate
9. Use Small and Slow Solutions
10. Use and Value Diversity
11. Use Edges and Value the Margins
12. Creatively Use and Respond to Change
What is a PDC?

- 72 hour standardized curriculum
- Survey course of regenerative technologies
- Garden as metaphor for design

Main Purpose: Paradigm shift from people as a destructive force separate from "Nature," to people as a regenerative force integrated with Nature.

paradigm: a distinct set of concepts or thought patterns, including theories, research methods, postulates, and standards for what constitutes legitimate contributions to a field.
Example: Worldstove
Example: Garden Tower Project
The Georgia Tech Community Garden
Why Redesign the GT Garden?

• Tenuous tenure
• Mismatched academic & gardening schedules
• Inconsistent results
• Demonstration site for urban farming efforts at GT

Project Goals - Infrastructure – Hardwire systems in place that will make success easier.

• Awareness — Food Issues, Ecology, Regenerative Paradigm
• Graduates — Exposure to student body, PD C grads?
• Knowledge — Extend technical knowledge of GT context, new innovations
Site Analysis

30 yr. avg. rainfall: 49.71
Prevailing winds: Not significant
Latitude: 38° N orth
Altitude: 990 ft.
Effective Latitude: 35°
USDA Zone: 7b/8a
Season: Apr 15 – Nov 21
Soil Type: Loamy Sand
Soil pH: 6.5 – 7
Climate Analogue: Southern Turkey, Northern Iraq/Syria
Zone Analysis

Zone 1: Garden beds, outdoor furniture, tool shed, cooking infraX, Yields: goodwill, credibility, produce, sense of place
Zone 2: Fence, border, vertical spaces, dwarf fruit trees, bushes, birdhouses, composting, worms, small water features/aquaculture
Zone 3: Landscaped areas near garden, increase biodiversity, beehives, EcoCommons integration. Yields: training, enthusiasm.
Zone 4: Foraging/gleaning maps, campus resources cycled into garden. Yields: collaborations
Zone 5: Wilderness hikes, service projects, rewild a section of campus. Yields: biodiversity, pedagogical inspiration
Client Needs & Requests

- Fence
- Rainwater Catchment
- Tool Shed
- Outdoor Classroom Infrastructure
- Seating
- Shade
- Composting Infrastructure
- Mitigate nearby chemical use
- Perennials, Fruit Trees
- Tenure, Goodwill
Phase 1 Elements

- Perimeter fence and gate
- Signage/Wayfinding
- Mulched paths
- Redesigned raised beds
- On-site composting
- Tool shed
- Complement of tools (basic hand tools and site maintenance tools, like a wheel hoe)

- Outdoor furniture (picnic tables, benches)
- Outdoor classroom awning
- Bee hives
- Espalier and vine trellis structures
- Comfrey tractors
- Productive tree and bush guilds
- Social systems – Individual Plots!!!
Phase 1 Elements
Phase 1 Elements
Phase 2 Elements

- Greenhouse
- Rainwater catchment and storage
- Hugelkultur
- Stand-alone perennial herb bed
- Mushroom log cultivation
- Mushroom bed
- Wicking beds
- Garden towers
- Solitary pollinator, insect predator hotel
- Bird houses
Phase 2 Elements
Phase 3 Elements

- Swales and food forest systems
- Aquaponics system
- Water features
- Solar PV systems
Phase 3 Elements
Concluding Remarks

• “No battle plan ever survives contact with the enemy.”
• Planning helps us to:
  – explore constraints/degrees of freedom,
  – develop creativity,
  – learn problem solving,
  – set goals,
  – dream about aspirations,
  – set benchmarks.
• Complexity is simple, design for complexity.
• Understand the conditions under which something thrives, and design for those conditions to be present.
• I can’t change the world, but I can change my little piece of it.
Resources

• OSU Intro to Permaculture MOOC, May 2nd-30th
  http://open.oregonstate.edu/courses/permaculture/

• Greening the Desert – Geoff Lawton
  https://www.youtube.com/watch?v=1WwG6zC7M

• Green Gold – John D. Liu
  https://www.youtube.com/watch?v=aFgmt8M_NoU

• Bill Mollison – Global Gardener Series
Humbly Submitted...