

Goals Articulation Statement

Homestead & Eco-Development, Hudson River Valley

February, 2009

Goal: *We live nestled in an ecologically & culturally regenerative landscape.*

Objectives:

- Our evolving multi-functional landscape is the home for many generations to come.
 - The land supports true sustainability, regardless of the climate.
 - The underlying patterns and structures start with us, but carry on to our great-grandchildren.
- The biodiversity & ecological resiliency of our landscape is constantly increasing.
 - Our site is part of a thriving ecological corridor, supporting abundant wildlife and uninterrupted connection to conserved local ecosystems (Tivoli Bays,)
 - Riparian zones are protected
 - Well-designed Permaculture Zones of Use create balance between the managed and unmanaged portions of the site.
 - Intensively-managed areas around the home are more productive & human-guided.
 - As distance from the home center increases, the degree of management decreases. Mid-range areas are cleared and walkable, but the far reaches of the property remain unmanaged and wild.
- We work with nature to achieve low-maintenance agricultural & economic productivity.
 - Intelligent human- and animal-scale management maintains the land.
 - We shape our agriculture to fit the land, rather than the land to fit our agriculture.
- Clearly defined access & circulation facilitate flow between numerous nodes of activity & relaxation:
 - Home & work spaces
 - Swimming hole & Sauna
 - Yoga Platform & Amphitheatre
 - Outdoor kitchens, ovens & eating spaces
 - Bonfire & Celebration areas
- Beautiful views abound across the landscape.

Specifics for different areas of the land follow...

Home & Studio Area

- A beautiful and multi-functional area for living, working, and playing.
- Renting the current house supports our economic sustainability.
- Minimal economic or energetic inputs are used to improve the current house.

- The waterfall-pond is available for ice-skating & hockey in the winter.
- The home & studio area functions as a stand-alone homestead, with appropriate areas for food growing, water catchment, and energy production.

Home Farm & Pond Area

- Our home farm focuses on rotational grazing, low-maintenance fruit production, and ecological aquaculture.
- Patterns of wide-spaced tree crops over permanent pasture (silvopasture), Holistic Management rotational grazing, and adequate access through the farm define the land's layout.
- The perennial stream is a rich corridor of biodiversity, buffered by a riparian forest garden and protected from grazing animals.
- The vernal pond is expanded to support ecological aquaculture: Fish, wild rice, water celery, arrowhead, cattail, and other aquatic crops.
- A multifunctional buffer protects the waterway between the pond and the stream.
- A portion of the pond is kept as shallow wetlands for nutrient cleaning and habitat.
- Orchards & forest gardens line the slopes to reduce erosion and capitalize on good air drainage & sun exposure.

Eco-Development Area

- Four to five attractive, eco-friendly homes create a development with an intention of sustainability.
- Site disturbance is minimized. All bare soil is quickly replanted to useful plant species. Any compaction is removed by keyline plowing.
 - Buildings demonstrate the sound ecological & energy-efficient design
 - Buildings are sited for maximum passive solar gain, and to achieve the least overall road/driveway creation.
 - Excellent insulation and careful construction create low-energy use homes
 - Cisterns are included in the design of every building – for stormwater, greywater, and irrigation purposes.
- A great multifunctional barn hosts the local community with a flexible and beautiful space.
 - Contra dancing, workshops, and a value-added processing can take place.
 - An apartment in the barn houses a potential intern or farmer for the land.
- Eco-development residents have individual homes with shared decision-making for the common land.
- Agricultural land is managed by the resident community, with criteria described in the food goal below.

Forestry & Restoration Area

- We regenerate the chestnut forest through selective thinning, cutting, and replanting of the area.
- Existing canopy gaps are opportunities to direct the successional process.

- Controlled burns manage the challenging understory, support long-term nutrient cycling for trees & nuts, and remove habitat for deer ticks harboring lyme's disease.
- Fuelwood is harvested from dead and fallen trees. A trial coppice plot explores the possibility of short-rotation woody fuel crops.
- Timber is carefully harvest when the ground is frozen, following a sustainable forestry management plan and ideally the tenants of natural dynamics silviculture.

Goal: *We work with the land to create an abundance of delicious food.*

Objectives:

- Every year, the health of my local ecosystem increases. Our interaction with the site regenerates the land, constantly building soil and improving the environment.
 - We use rotational grazing on permanent pastures, agroforestry & forest gardening, no-till vegetable production, and ecological aquaculture to grow a full 50% of the food for all site residents. This includes:
 - Grains & Beans
 - Vegetables
 - Fruit, Berry & Nut Crops
 - Animal Products (Eggs, Dairy, Meat, Fish)
 - Mushrooms & Herbs
 - Composting, mulching, & Keyline plowing decrease compaction and increase the soil's organic matter, decreasing disease pressure and water-logging.
 - Organic & Integrated Pest Management practices support a healthy environment.
- Vegetables & Fruits
 - Permaculture gardens produces a diversity of fresh delicious vegetables
 - We grow local heirloom vegetables & varieties from organic, open-pollinated, non-GMO sources.
 - Greenhouses & cold frames grow greens year-round and provide important season-extending cover in the fall and spring.
 - Thriving orchards & forest gardens spread outwards from all homes, providing an abundance of fruits and nuts throughout the growing season.
 - Along with more exotic fruit crops like hardy banana, northern passionfruit, pawpaw, persimmon, fig and mulberry, we grow a diversity of berries & nuts for fresh eating and storage.
 - A few cash crops (like hardy kiwi, sandraberry, seaberry, and hazelnut) support the overall farm economy.
- Animals
 - Well-managed rotational grazing systems grow healthy animals and support the a resilient productive landscape.
 - Animals are moved every 12-72 hours for the ideal balance between productivity and pasture health.
 - A mix of permanent and temporary electric fencing define paddock boundaries

- A gravity-fed watering system delivers drinking water to animals in their daily paddocks.
- A herd of goats provides company, economy, fresh dairy and meat.
 - The herd starts with 3 animals and grows to as many as ???.
 - Goats are well-protected from predators through secure housing and guard-animals.
 - Goat milk is collected for fresh consumption & cheese-making.
- Scottish Highland cattle work with the goats to clear the land in an environmentally-friendly non-fossil-fuel way.
- Chickens happily forage the landscape, providing fresh eggs and meat year-round.
 - Chickens contribute their manure, scratching, and pest-control to the food ecosystem.
 - Local organic grain supplements food scraps and forage in the winter months.
 - >>>Free-range or tractorated?
- Farmers & Interns
 - Sarah contributes 6 hours per week to the maintenance of a productive ecosystem. Peter contributes 10 hours per week.
 - Interns contribute time and energy during the establishment phase of the farm & food systems, but are not part of the long-term management strategy.

Goal: *The land is economically self-sufficient – “The project stands on its own”*

Objectives:

- Sale of residential lots in an eco-development setting provides the primary income for the project. In addition, the eco-development:
 - Populates the land with people and energy
 - Works with the land towards economic sustainability
 - Demonstrates our ideals and skills as eco-architects
- Appropriately-scaled grid-tied renewable energy systems provide 100% of our energy usage. We move towards this goal as grants and financing become available.
 - Micro-hydro
 - Solar hot water
 - Solar photovoltaic
 - Water wheel (for mechanical energy)
 - Noria for irrigation (<http://en.wikipedia.org/wiki/Noria>)
 - Surplus energy is sold back to the grid for a small profit.
- Economic self-sufficiency is supported by a diversity of nutritious foods grown on-site (see above).
 - Based on the crops (especially cash crops), an agriculture assessment eases tax burden.
 - Land is leased or rented to ecological land-based enterprises (e.g. farm, coppice crafts, farm store).

- Timber & fuelwood harvested from the land reduce overall costs.

Goal: *Engaging with the land, we expand our abilities as ecological architects.*

Objectives:

- This project is a springboard for deeper connection to the land and ecological design.
 - Our other architecture projects connect more deeply with the landscape through our deepening understanding of our own land.
 - This process culminates in excellent marketing material for our design businesses.
- We explore different avenues for time-lapse landscape modeling of the property.
 - Our conceptions of sustainability are widened as we observe the 10, 50 & 100 year outlook for our plan. We visualize strategies for intergenerational growth.

Facets of EcoVillage Design & Development

From GaiaEducation’s Ecovillage Design Education Course 2006

Worldview

- Holistic Worldview
- Listening to and Reconnecting with Nature
- Awakening & Transformation of Consciousness
- Celebrating Life: Creativity and Art
- Socially Engaged Spirituality

Social

- Building Community & Embracing Diversity
- Communication Skills: Conflict, Facilitation, and Decision-Making
- Personal Empowerment and Leadership
- Health and Healing
- Local, Bioregional and Global Outreach

Economic

- Shifting the Global Economy to Sustainability
- Right Livelihood
- Social Enterprise
- Community Banks and Currencies
- Legal and Financial Issues

Ecological

- Green Building & Retrofitting
- Local Food
- Appropriate Technology
- Restoring Nature and Rebuilding After Disasters
- Integrated Ecovillage Design

