

The Permaculture Design Process

Cascadia Permaculture Institute

I. Observation

Read the Landscape: Walk the site- ridges/gullies, Note what is there and how it interacts with its surroundings. Observe first then interpret.

II. Vision

Dreamtime...imagine whole system. State intention, purpose, and function of design.
What will it look like in 5-10-50 years?

III. Analysis-Assessment-Investigate

- a. Prioritize: challenges, constraints, and wishes that the design addresses.
Consider environmental/ecological, personal, aesthetic issues, as well as trouble spots
What specific things need to happen?
- b. List the design systems and elements that support the vision/goals of land/client...water, energy, plants, food, structures, functions.
- c. For each element list its products, activities, needs, and intrinsic qualities.
- d. Connect as many items as possible so needs of one design element is met by other elements
- e. Identify assets and limitations of the land and client
- f. Research: maps, visit neighbors, permits, what's upstream
- g. Reassess and modify

IV. Conceptual Design

Systems that support Goals and Themes. Project goals are clearly restated and reassessed

- a. Brainstorm solutions...Wild Design Game. Sketch the location of the design elements
- b. Research species and varieties.
- c. Explore many alternatives: Use patterns that support the processes and flows
- d. Optimize paths and relationships in the design. Work with color and form.

V. Master Planning

- a. Create a base map and appropriate lists, charts, and diagrams
On paper (or via models, software, etc) connect these systems and elements in mutually beneficial relationships. Apply the principles
 - b. Use zones to organize the species of a design by how often they are used or need attention, sectors to manage wind, sun, and other forces that come from outside site. Use other design methods to encourage creativity.
- Include on map:** Date, client name, north indicator, scale, legal and ecological boundaries, basic sectors, access, topography, plant communities, landmarks/outstanding features.

VI. Phasing

- a. Create a logical timeframe for implementing the design: consider budget and time
- b. Use Yeoman's scale of permanence

VII. Implementation

Long and short-term succession, schedules, sources of labor and materials, budgets, financing.

Feedback loop: how are systems functioning?

- a. Install design, be flexible—surprises appear when a paper design meets the real world.
- b. Make small-scale trials when possible, evaluate at each step, modify the design as needed.

VIII. Evaluate

- a. Consistently appraise, test, and observe how each element and process serves the goals and needs of client. At every step reflect, make adjustments, monitor, and evaluate.
- b. Consider each step in light of the design goals.

Design Methods Used in Permaculture

1. **Observation:** four seasons. Noting what is present on the site (can be non-selective, based on certain

- themes, using instrumentation, or sensory).
2. **Intuitive:** instinctive knowledge—based on strong impulse.
 3. **Traditional/Indigenous Cultures:** adopting the time-tested ways of those who have a long-term relationship to the place.
 4. **Analysis:** listing characteristics of component or elements—how do things connect
Functions: listing and matching the needs and yields of the design components
 5. **Deduction from Nature** or **Mimicking Nature:** imitating the structures and processes of natural systems...
work with nature not against it
 6. **Self-Organization:** put elements in the right relationship—everything 'clicks'--the whole is greater than the sum of the parts
 7. **Options and Decisions:** using the needs and goals of the site or client to define a decision—what are the impacts—thinking ahead
 8. **Data Overlay:** making a base map and overlaying it with selected aspects of the site. Utilize trace paper, Mylar, CAD (Computer Assisted Design)
 9. **Flow Diagrams:** via bubble charts, process flows
 10. **Random Assembly:** connecting random elements with random connecting words (e.g. greenhouse *over* pond). Question logical mind.
 11. **Zone and Sector Analysis:** element placement by frequency of use and relative to incoming energies.

P. A. Yeoman's Scale of Permanence in the Landscape

(From *The Challenge of Landscape and Water for Every Farm* by P.A. Yeoman)

Since the planning of one aspect of a design influences other aspects, we need a logical order that helps us decide what to do first. Yeoman's scale, of landscape factors ranked from hardest to change to easiest, guides us in placing elements so they don't conflict with those placed earlier in the design.

Those factors are:

1. **Climate:** Hardiness zone, temperature, rainfall, hurricanes, etc
2. **Land shape:** Both of the above are very difficult to change intentionally and beneficially
3. **Water flow and Storage:** The patterns of water flow are the first factor we can change, and much of the design then follows these flows: a dam carries a road, a path follows a swale along a line of fruit trees.

I through 3 are the inseparable trinity of landscape design.

4. **Roads:** and paths, etc. Any trafficked place. On steep land, placement is dictated by land shape.
5. **Trees:** Functions shading water courses, pavement, and buildings. For windbreaks, orchards, etc
6. **Buildings:** The homestead, or, in a city, the centers of management and commerce. Placed in relation to all of the above.
7. **Subdivision of Land:** Fences, garden beds, neighborhoods, fields
8. **Soil:** Easily influenced by earthworks, catching water, plantings, animals