



# *Permaculture Design Certificate Practicum Workbook*

*2017 v.1*

This workbook has been developed by Michael Burns and Steve Gabriel to serve as a guide for a permaculture instruction and practicum. It can also be a framework to complete a thorough and professional assessment of any landscape.

You may choose to print and use this document as a notebook for observations. The workbook's structure and lists can be also used as a framework to create a portfolio for your practicum and your site design.

Each section provides a list of items to be surveyed, researched, recorded and mapped. Creating a complete assessment for a permaculture design can be accomplished by creating overlays, maps and written narratives for each section. These overlays could presumably be layers of data on a mapping program like Google Earth, or pages of tracing paper viewed above a basemap.

Whatever your chosen medium, the process of analyzing your site, especially using an ecological framework such as a the scale of permanence will provide a deep understanding of your site's character. This collection of assessments, seen through the lens of your goals will inform and inspire the design process.

---



---

**Base Map** *Site:*

*Date:*

Include:

- Site Name
  - Site Address
  - Owner(s)
  - Designer(s)
  - Date
  - Scale
  - Key
  - Compass rose
-

---

*Summary Assessment Narrative*

A description of key features seen in the Summary Assessment Map in no more than one page of text.

---

---

## *Summary Assessment Map*

Include:

- Site Name
  - Site Address
  - Owner(s)
  - Designer(s)
  - Date
  - Scale
  - Key
  - Compass rose
-

**Site use:**

- What are the desired uses of this property?
  
  - What is your daily routine? Weekend? Seasonal?
  
  - What special events / needs / hobbies do you and your family or community have?
  
  - What features / areas / elements do you need / want?
  
  - What utility / service / delivery / storage needs do you have (laundry lines, recycle and trash, firewood processing and storage, composting, lighting, etc.?)
  
  - Special population uses such as children or youth?
  
  - What vehicles do you currently use (bike, cars, trucks, tractors, carts, etc.)?
  
  - What structures do you have and use the most for what purposes?
  
  -
-

- What crop production areas do you have/want? Woodlot, veggies, tree crops, etc?
  
  - Do you have/want livestock/pets? What kinds and how many of each? How do you want to approach wildlife and varmints?
  
  - How do you use areas of your site presently?
  
  - Describe inside to outdoor connections, patterns (views from windows, doors used most often and for what, food processing and storage flows, firewood flows, etc.).
  
  - Do you like sun, wind, water?
  
  - Importance of privacy [sight and sound]?
  
  - Are there any important features re: legal status for the property –boundary disputes, lack of survey, liens on property, rights of way, etc?
  
  - How might these uses change in the future (family and employment changes)?
-

**Personal information**

- How many family members now, ages and interests. Future growth of family?
  
  - Where did you grow up?
  - What was your last home like?
  
  - How long do you plan to live at this site?
  - What occupation(s)?
  
  - Describe your neighbor relations
  
  - Do you have allergies?
  - Eating habits? Social or individual? Taste/ethnic cuisine preferences? Vegetarian, vegan, meat, etc.? Favorite foods: fruits, nuts, veggies, herbs, medicinals, etc.?
  
  - How self-reliant do you want to be? In what ways?
  
  - Pets livestock, wildlife enhancement?
  
  - Are plans or drawings available –property, building, septic?
  
  - What is on your wish list? What have you accomplished so far?
  
  - Budget (for design and overall)? Other resources –on land, friends, neighbors, barter for?
-

- 
- What did you want from me/us as a permaculture designer? Why did you call me?
  
  - How would you describe your lifestyle?
  
  - Why did you purchase the property? Do you intend to stay? (How long?)
  
  - Describe the site in a few words
  
  - What do you like/dislike about front/rear/other yards/neighborhood?
  
  - What would your dream home/landscape look like?
  
  - Name some favorite plants and/or building material.

**Priorities**

- Worst problems? Why?
  
  - Where on your site do you like the most? Why?
-

- 
- What kind of maintenance are you planning? How much of your own labor involved in implementation and maintenance? How much money and time is available to implement the design? To maintain it?
  
  - What do you want to do first? Do you have plans or commitments now?
  
  - What one thing on the site would make the most difference if changed?

**Constraints**

- Deed or zoning restrictions? Relationship to / flexibility of / cooperation with authorities?
  
  - Power, sewer, utility locations? Water source?
  
  - Property boundaries? Acreage?
  
  - Potential catastrophes –fire, flood, frost, hurricane, etc.?
  
  - Lighting: paths, buildings
-

---

**Goals**

Write goals in the present tense – it gives them more weight when you read them. Each goal should express an overall objective you have. Under each goal, describe 3 to 5 criteria that meet your goal – these should clearly relate to the goal and get more specific in how you will meet it.

---

---

## **The Scale of Permanence**

P.A. Yeomans developed the "Keyline" system in Australia in the 1950s based on the idea that some landscape elements are more permanent than others. His list was eventually altered by Bill Mollison and David Holmgren, then again recently by Dave Jacke and Eric Tonesmeier. The list is arranged in descending order of the time, energy and capital needed to alter.

1. Climate
  2. Landform
  3. Water
  4. Invisible Structures
  5. Access and Circulation
  6. Vegetation and Wildlife
  7. Microclimate
  8. Buildings and Infrastructure
  9. Zones of Use, Nodes of Activity, & Sectors
  10. Soil
  11. Aesthetics and Experience
-

---

***Climate*** Site:

Date:

Plant Hardiness Zone

Predicted Climate Changes

Annual Precipitation, Seasonal Distribution

Latitude

Wind: prevailing, seasonal, storms, effect on vegetation, change with time of day, use as energy source

Frost free dates (average, extremes)

Extreme weather potential; drought, flood, fire,

Fire: evidence of former fires, direction, fire-species, hazardous areas

Flood: evidence, vulnerable areas, use for capturing/store energy

Temperature Fluctuations

Sunshine

Weather Patterns

---

---

**Landform** Site:

Date:

Slope

Aspect

Topographic Position (midslope, crest, valley floor)

Bedrock Geology: permeability, depth, nutrients

Surface Geology: parent material, permeability, depth, nutrient content, suitability for various uses

Estimated Depth of Seasonal Water Table

Estimated Depth to Hardpan, Bedrock

Elevation

Landslide/Erosion Potential

Natural Features

Gravity Feed

Storage Sites

---

---

**Water** Site:

Date:

Existing Sources of Supply: location, quality, quantity, dependability, network layout and features in the buildings and landscape (spigots, pipes, etc.)

Watershed Boundaries and Flow Patterns: concentration and dispersion areas, roof runoff, driveway and road runoff, storm drains, flood-prone areas, vernal or temporary ponds

Pollution Sources: autos, neighbors, nearby commerce, industry or farms, entry points on the site

Potential Sources Of Water Supply: location, quality, quantity, cost to develop

Existing Infrastructure: on site & nearby culverts, wells, water lines, tanks, sewage lines, septic tanks, leach fields, cisterns

Erosion: existing and potential

Broadscale Sources: Springs, mains, wells, streams, aquifers, ponds, pond sites

Broadscale Needs: irrigation, animals, aquaculture, domestic use, food processing

Domestic Sources: wells, tanks, town/city supply lines, taps, roofs and downspouts, grey water

Domestic Needs: drinking, toilet and sewage systems (black/grey), cooking, dishes, other sanitary needs, laundry, gardens and plants, land drains

---

---

*Invisible Structures* Site:

Date:

People: with ownership or a stake in the site

Groups: who own, use, support or benefit from the site

Events: family, cultural, food-based, holidays, educational

Off-site Relationships: transport, deliveries, commuting, other services, markets

Zoning: land use restrictions, setbacks, permit system, well protection and other legal limits

Flora & Fauna Restrictions: neighborhood regulations, septic, invasive species laws; livestock zoning

Permits Held, Needed

Social Relations & Cultural Conditions: ideas about land use, workplace practices and schedules, site appearance, acceptable activities, noise, music

Political, Economic Systems: safety and security, class divisions, dominant businesses, presence of multinationals, large extractive industries, land values, employment opportunities, labor availability, local governments

---

Activity Nodes

Storage Areas

Access Points: pedestrian, cart, vehicle, current and potential patterns

Material Flows: mulch, compost, produce, firewood, laundry

Path and Roads Features: tracks, gates, doors, bridges. sighting, traffic types, steepness, condition, erosion potential, seasonality

Desire lines

---

Ecosystem Assessments

Existing Plant Species: locations, size, quantity, patterns, uses, site indications

Ecosystem Architecture: layers, density, character, quality

Habitat Types: food/water/shelter availability

Animal Species: domesticated, wildlife, pests

Old Trees

Established Communities/Guilds

Invasive/Non-native

Rare/Medicinal Plants

Native Species

---

---

**Microclimate** Site:

Date:

define microclimate areas

aspect for slopes (direction facing relative to sun)

sun/shade patterns

cold air drainage, frost pockets

soil moisture patterns

precipitation patterns

local wind patterns

Broadscale site climate vs. area climate

Exposure to wind

Suntraps

Temperature

Moisture

Combined Effects

Weather patterns

---

Building Dimensions: size, shape, locations, entryways and windows

Building Use: existing and possible functions, condition, energy potential, relationships to land

Walls: aspect, condition, use

Fences and Gates

Permanent Pavement

Power Lines and Electric Outlets

Utilities and Plumbing: outdoor faucets, wells, septic, underground pipes

Other Waste Management

Snow Piles

---

Existing Nodes of Land/Water Use

Property Lines, Easements, Right-Of-Way

Interactions with Bordering Areas

Use History And Impacts, Current/Future Uses

Current Use Zone 1: visited daily or more

Current Use Zone 2: visit/intervene daily or on a regular basis

Current Use Zone 3: visit/intervene dozens of time per year

Current Use Zone 4: visit/intervene several times a year

Current Use Zone 5: visit once a year or less

Sun Sectors

Wind Sectors

Pollution Sectors: air, water, light, noise, odor

Traffic: auto, pedestrian, wildlife

---

---

**Soil** Site:

Date:

Soil Types: texture, structure, consistence profile, drainage

Topsoil Fertility: pH, % OM, N, P, K, Ca

Toxins: lead, mercury, asbestos, cadmium, etc.

Management History

<http://websoilsurvey.nrcs.usda.gov>

---

Outdoor Rooms: walls, qualities, feelings, functions, features

Arrival And Entry Experience: sequencing, spacing, eye movements, visual cues

View Lines And Corridors

Visual Integration: elements, unity, variety, compositions, textures, colors

Public/Private Continuum, Formal/Informal Continuum

Disharmonies: views, noise, spaces, feelings

Overall Setting, Mood

---

---

*Schematic Description*

---

---

*Schematic Map(s)*

---

---

*Patch and Detail Design*

---

---

*Descriptive Overlays*

---

---

*Schedules & Budgets*

---

---

*Appendix*

---

