PERMACULTURE LANDSCAPE DESIGN

A WORKSHEET APPROACH TO DESIGNING REGENERATIVE & SUSTAINABLE LANDSCAPES

BOOK 1: FOUNDATIONAL DESIGN ASPECTS

⟶ ASSESSING LEGALITIES
⟶ DEFINING GOALS
⟶ BUILDING A BASEMAP
⟶ & DISCOVERING LOCAL RESOURCES

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“PERMACULTURE LANDSCAPE DESIGN- A WORKSHEET APPROACH TO DESIGNING REGENERATIVE & SUSTAINABLE LANDSCAPES, BOOK 1”

All inquiries should be directed to: www.Feffylane.com

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& DISCOVERING LOCAL RESOURCES

HOW TO FILL OUT THIS WORKBOOK

THE FOLLOWING PAGES ARE DESIGNED TO HELP YOU GATHER FOUNDATIONAL PROPERTY INFORMATION THAT IS INTEGRAL TO LEGAL DESIGN INSTALLATION. I OFFER THIS CONTENT FOR FREE TO ENSURE MAXIMUM REACH AND TO HELP FOSTER PROFESSIONALISM WITHIN THE DESIGN FIELD. THIS IS NOT AN ALL-INCLUSIVE LIST OF LEGALITIES THAT CAN BE REQUIRED OF PROPERTY OWNERS WHEN INSTALLING AND REMODELING LANDSCAPES. PLEASE SEEK LEGAL COUNSEL FOR PROPERTY SPECIFICS OR CLARIFICATION.

Every sustainable design begins with understanding the legal framework. Before making plans, it's essential to identify utility and energy providers, review city codes and ordinances for things like animal use or outbuilding restrictions, and you may even need to research local cottage food laws if the property will produce food for sale. Addressing these legalities at the start not only ensures compliance but also saves valuable time and money in the long run.

Briefly familiarize yourself with the, "Websites You Need to Know Checklist" and begin filling out all relevant sections of this workbook. This is not an all-encompassing list but does include the most common legalities associated with land use and development. These pages can be reused again and again by individuals and professionals alike to organize projects and ensure a cohesive and thorough design process and efficient use of time.

If you are interested in diving deeper and learning how to properly assess and design land regeneratively, I have other workbooks that help guide you through the process:

BOOK 1: FOUNDATIONAL DESIGN ASPECTS
BOOK 2: ASSESSMENTS & KEY CONCEPTS *(coming soon)*
BOOK 3: THE FINAL DESIGN *(coming soon)*
BOOK 4: PONDSCAPE DESIGN *(coming soon)*
BOOK 5: WORKBOOK PAGES FOR PROFESSIONALS *(coming soon)*

To discover more about those books, my other content, and my free printables visit my website at Feffylane.com

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WEBSITES YOU NEED TO KNOW:

Use this checklist to ensure you've researched the key legal considerations for your property design. Check each category by visiting the relevant city, county, state, or utility websites before beginning your design.

CITY & COUNTY GOVERNMENT WEBSITES

- ☐ County Assessor's Office – property boundaries, parcel maps, ownership details, tax info
- ☐ County Recorder/Clerk's Office – deeds, easements, water rights records
- ☐ City Planning & Zoning Department – zoning codes, permitted land uses, setbacks, outbuilding/animal restrictions
- ☐ City Ordinances Database – municipal codes (fencing, composting, noise, tree removal, etc.) City Building & Permits Department – building, grading, septic, solar permits

WATER & IRRIGATION RESOURCES

- ☐ State Water Resources Department – water rights, usage restrictions
- ☐ Local Irrigation District/Canal Company – irrigation access, water shares, schedules
- ☐ County/City Utilities Department – well permitting, water supply rules

UTILITY & ENERGY PROVIDERS

- ☐ Electric Company – easements, renewable energy programs, line setbacks
- ☐ Gas Company – easements, underground line maps
- ☐ Utility Locator Service (e.g., Call 811) – underground utility identification before digging

STATE & FEDERAL AGENCIES

- ☐ State Department of Agriculture – cottage food laws, farm stand rules, pesticide regulations
- ☐ State Environmental Quality/Natural Resources – wetlands, stormwater, habitat protection
- ☐ USDA/NRCS – soil surveys, conservation programs, erosion rules
  USGS – geology, flood maps, hazard maps
- ☐ FEMA Flood Map Service – floodplain designations/restrictions

COMMUNITY LEVEL RULES

- ☐ Homeowners Association (HOA) Website/Portal – landscaping/building rules, livestock/poultry limits
- ☐ Neighborhood/Community Boards – special design or historic district rules

PUBLIC HEALTH & SAFETY DEPARTMENT

- ☐ County Health Department – septic system, composting toilets, graywater use Local
- ☐ Fire Department – defensible space, fire-safe landscaping, burn permits

SPECIALTY RESOURCES (DEPENDING ON PROPERTY USE)

- ☐ Cottage Food & Farmers' Market Websites – selling homegrown/processed food requirements
- ☐ State Wildlife/Fish & Game – endangered species, hunting zones, wildlife corridors
  Local Land Conservation Districts – erosion control, watershed protection rules

PRO TIP: GOOGLE:

- "[County name] Assessor's Office"
- "[City name] Planning and Zoning Department"
- "[State name] Water Resources Department"
- "[Utility company name] easement map"
- "FEMA flood map + [city/county]"

LEGALITIES

OWNER INFORMATION	
NAME:	**PHONE:**
EMAIL:	
PROPERTY ADDRESS:	
PROPERTY LEGAL ADDRESS *(i.e.: 110-3-10-2)* **:**	

PROPERTY SIZE:

ZONING CLASSIFICATION + MINIMUM LOT SIZE (R- ½ = 1 residential home per ½ acre)
Circle:
Residential **Agricultural** **Commercial** **Industrial**
Combination:_____
Other:_____

ENERGY & UTILITIES	
ELECTRIC/UTILITY:	
WEBSITE:	PHONE:
GAS:	
WEBSITE:	PHONE:
PROPANE:	
WEBSITE:	PHONE:
SOLAR PANELS:	
WEBSITE:	PHONE:
TRASH COLLECTION:	
WEBSITE:	PHONE:
WATER:	
WEBSITE:	PHONE:

LEGAL RESTRICTIONS ON USE

These are city codes & ordinances, community regulations, and neighborhood rules such as HOA's & CC&R's that regulate property use, maintenance, & construction. Research your city's codes & ordinances website, HOA documents, & any other relevant community regulations to discover any restrictions or requirements relevant to the design goals.

OUTBUILDING RESTRICTIONS	
FENCING RESTRICTIONS	
WATER REGULATIONS	
AESTHETIC REQUIREMENTS	
OTHER RELEVANT REGULATIONS (maintenance rules, renovation rules, etc.	

ANIMAL RESTRICTIONS PER CITY ORDINANCES

SPECIES	QUANTITY ALLOWED	NOTES/EXCEPTIONS:

LOCAL COTTAGE FOOD LAWS RELEVANT TO GOALS

WATER LEGALITIES

GREATER WATERSHED: This is the major river drainage that leads to the ocean. There are 22 in the U.S. You can find your greater watershed here: *(epa.gov/trinationalanalysis/watersheds)*

_____

LOCAL WATERSHED: This is the minor tributary that drains into the major river system. They are extremely localized. You can find your local watershed by googling your state or regional watershed maps.

_____

WATER DISTRICT:_____

WEBSITE:_____ **PHONE:**_____

WATER RIGHTS

WATER RIGHTS TYPE	WATER RIGHTS AMOUNT/SPECIFICATIONS
☐ GROUNDWATER/WELL	
☐ RIPARIAN MUNICIPAL	
☐ IRRIGATION	
☐ WATER SHARE/ACRE FEET	
☐ LITTORAL	
☐ APPROPRIATIVE	
☐ HYBRID:	

IRRIGATION SPECIFICATIONS (IF APPLICABLE)

IRRIGATION WATER/CANAL COMPANY: (Who manages the system?)

COMPANY NAME: _____**WEBSITE:**_____

SEASON START DATE:_____ **SEASON END DATE:**_____

IRRIGATION DAY:

MON	TUE	WED	THU	FRI	SAT	SUN

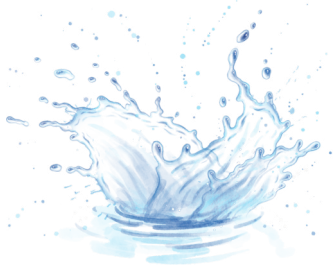
IRRIGATION HOURS:

INTAKE LOCATION: **EXIT LOCATION:**

PERMITS	
PERMIT TYPE	**PERMIT INFORMATION**
WELL PERMIT Required if digging a well	**FEE:$_____** **WEBSITE:** **_____**
STORMWATER MANAGEMENT PERMIT Required for construction projects that disturb 1 acre or more. It controls the discharge of stormwater runoff to prevent erosion and damage	**FEE:$_____** **WEBSITE:** **_____**
GRADING PERMIT This is often required for land development that significantly changes the property's topography	**FEE:$_____** **WEBSITE:** **_____**
PLUMBING PERMIT Required for projects involving the installation, modification, or repair of a buildings' water supply or drainage system.	**FEE:$_____** **WEBSITE:** **_____**
WATER USE Sometimes required when accessing a new or alternative water source, such as a well or rainwater harvesting system.	**FEE:$_____** **WEBSITE:** **_____**
RAINWATER HARVESTING This is specific to systems that collect, store, and distribute rainwater. It addresses system design, installation, and public health standards.	**FEE:$_____** **WEBSITE:** **_____**
BUILDING PERMIT Required for any new construction	**FEE:$_____** **WEBSITE:** **_____**
ZONING AND LAND USE PERMIT Occasionally required to ensure proposed water systems comply with the designated zoning regulation for the property	**FEE:$_____** **WEBSITE:** **_____**
OTHER:	**FEE:$_____** **WEBSITE:** **_____**

Be sure to reach out to your city or local professionals if you have any questions about permits. Avoiding the permit vetting process can be costly, time consuming, & can even shut a project down.

WATER QUALITY REPORT



Water quality reports are an important reference for everyone, especially for well water users. If you get your water from a municipal source (city, county, or water district), you can obtain a Consumer Confidence Report (CCR), which provides details on water quality, contaminants, and treatment processes.

WAYS TO GET YOUR WATER QUALITY REPORT:

- Check Your Water Bill or Provider's Website: Most water utilities publish the annual CCR report online (usually by July 1st). The website may have a "Water Quality" or "Consumer Confidence Report" section.

- Use the EPA's Online Tool: Visit EPA's Water System Search and enter your city, county, or water district name to access reports.

- Call Your Local Water Provider: The contact information is on your water bill or the provider's website. Ask for the latest water quality report or request a mailed copy.

- Check with Your County Health Department: Some counties monitor local wells and municipal water and may have additional testing results.

- F***or Well Water Users: Private wells are not regulated, so you'll need to test your own water. Contact your county health department or a certified lab for testing services***.

HOW TO READ A WATER QUALITY REPORT

Physico-chemical indicators are the most common ways to measure water quality. They describe the physical and chemical conditions of water and help us know if it is safe, healthy, and balanced for people, plants, animals, and the environment. Here's what each of the main indicators mean:

INDICATOR	WHAT IT MEANS	WHAT TO LOOK FOR
Dissolved Oxygen (DO):	This shows how much oxygen is available in the water for fish and other aquatic life.	Higher levels are better — low oxygen means the water may be polluted or stagnant.
pH:	measures how acidic or basic the water is. A pH of 7 is neutral; lower numbers are acidic, higher numbers are basic.	Most freshwater life thrives between pH 6.5–8.5. Outside this range, water can stress or harm aquatic species.
Temperature:	Water temperature affects oxygen levels and the health of aquatic life. Warmer water holds less oxygen and may stress fish.	Sudden temperature changes or unusually high/low readings can be a red flag.
Salinity:	Salinity is the amount of dissolved salts in the water. It affects what plants and animals can live there.	Freshwater should have low salinity; higher readings may show contamination or saltwater intrusion.
Nutrients (Nitrogen & Phosphorus):	These are natural nutrients, but too much can cause algae blooms, which reduce oxygen and harm water life.	Moderate levels are normal, but high levels suggest fertilizer runoff or sewage pollution.
Toxicants (Insecticides, Herbicides, Metals):	These are pollutants that can come from farms, industry, or urban runoff. They may be harmful even in small amounts.	Ideally, reports should show "non-detectable" or very low levels of these substances.

PROPERTY QUESTIONNAIRE

Defining your goals and preferences before beginning a landscape design is essential. By clarifying your needs, values, and vision for the land, you ensure that every element of the design has purpose and direction. Clear goals serve as a guiding compass, helping you decide what to plant, where to invest, and how to manage the space over time. Use the following worksheets to outline your goals—this will serve as the master plan of action as your design develops and is put into place.

PROPERTY GOALS

Write down your primary goal for your property. This is usually a simple statement or paragraph describing your overall vision for the property. (for example: Create a low water native plant based landscape, or Design a food forest that feeds our family.

BUDGET:

TIMELINE OR DEADLINE:

FUNCTIONAL NEEDS

List some functions the property design needs to have incorporated into it

☐ TOOL STORAGE	☐ PLAYPLACE	☐ ANIMAL SHELTER
☐ OUTDOOR COOKING	☐ OUTDOOR DINING	☐ OUTDOOR RELAXATION
☐ ACCESSIBLE PATHWAYS	☐ ADEQUATE PARKING	☐ GARDEN BEDS
☐ GREENHOUSE	☐ WATER STORAGE	☐ PRIVACY
☐	☐	☐

HOW MUCH TIME ARE YOU WILLING TO SPEND MAINTAINING THE LANDSCAPE?

Annual vegetables are high maintenance plants in comparison to their perennial counterparts. If you love gardening & have the time you can include annual vegetables in your design. If you do not intend to garden on a daily or weekly basis, limit your installment of annual vegetables and other high maintenance plants.

DAILY **WEEKLY** **MONTHLY** **SEASONALLY**

ALLERGENS

To ensure you have a landscape that doesn't create or exacerbate allergies, please list any plant, food, or bee allergens here

PESTS

Regenerative landscapes use plants to mitigate pests. In order to design pest mitigation into the landscape, please list any and all pests that are invasive on the property.
(cockroaches, ants, squirrels, racoons, etc)

PRIVACY CONCERNS

Increased privacy can be designed into the landscape. List any areas of concern regarding privacy (example: east fenceline, north bedroom window, etc)

OTHER CONCERNS

Are there any other specific concerns you would like addressed within the design? (e.g., strong winds, pedestrian traffic, drainage issues, sun exposure, safety, slope issues, etc.

NON-EDIBLE PLANT PREFERENCES	
TREES	**SHRUBS/HERBS/FLOWERS**

EDIBLE PLANT PREFERENCES	
TREES	**SHRUBS/HERBS/FLOWERS**

COLOR PREFERENCES

Many plant species have varieties with different colors. If you have a color scheme preference list it here

COLOR SCHEME PREFERENCE:_____

FAVORITE COLOR(S): _____

GATHERING RESOURCES!

DISCOVER YOUR LOCAL RESOURCES

Using local materials supports the local economy, reduces the environmental impact of transportation, and ensures that the materials are well-adapted to the regional climate and ecology which is especially important to beneficial insects & the pollinator community & cycle at large.

Local resources like native stone, clay, mulch, and plants often require less maintenance and integrate more harmoniously with the land, making your design more resilient and cost-effective.

Additionally, sourcing locally fosters community relationships and reduces dependency on global supply chains. It ensures skill, value, and money stays within the community benefiting everyone at large instead of big corporations.

LOCAL PROFESSIONAL TRADESMEN

(TRY TO FIND INDEPENDENT CONTRACTORS OR SMALL LOCAL BUSINESSES)

LOCAL PLUMBER

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL ELECTRICIAN

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL MECHANIC

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL WELDER

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL CARPENTER

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL LANDSCAPER

NAME:_____
COMPANY:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL MATERIAL RESOURCES

LOCAL NURSERIES

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

ETHICAL SEED COMPANIES (TRY TO SOURCE SEEDS FROM YOUR REGIONAL WATERSHED)

COMPANY:_____
SOCIAL MEDIA:_____
WEBSITE:_____

COMPANY:_____
SOCIAL MEDIA:_____
WEBSITE:_____

COMPANY:_____
SOCIAL MEDIA:_____
WEBSITE:_____

COMPANY:_____
SOCIAL MEDIA:_____
WEBSITE:_____

LOCAL LANDFILL

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL COMPOST

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL MANURE

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL ARBORIST/WOODCHIP DROPS

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL LUMBER YARD

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL AGRICULTURE STORE

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL QUARRY

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

LOCAL HARDWARE STORE

COMPANY:_____
LOCATION:_____
WEBSITE:_____
PHONE NUMBER:_____

HAZARD ASSESSMENT

Now that you've gathered the foundational legalities it's time to do a hazard assessment and create a base map. A hazard assessment is an important step in understanding both the strengths and vulnerabilities of a property. By identifying potential risks—such as flooding, wildfires, landslides, or seismic activity—you can design with greater resilience and safety in mind. Most states, counties, and regions provide public interactive GIS (Geographic Information System) maps that allow you to explore these hazards in detail. Simply search online for your state or county name along with 'hazard GIS map' or 'interactive hazard map' to find the resource for your area. These tools make it possible to view risks specific to your location and integrate that information into your property design."

HOW TO USE LOCAL HAZARD GIS MAPS FOR PROPERTY DESIGN

1. **SEARCH FOR THE MAP**

- In a web browser, type your state or county name + "hazard GIS map" or "interactive hazard map."
- Example: "Utah hazard GIS map" or "Clark County interactive hazard map."

2.OPEN THE INTERACTIVE MAP

- Look for an official source, such as a state emergency management office, county planning department, or natural resources agency.
- These sites usually provide a public web map you can click through.

3. ENTER YOUR PROPERTY ADDRESS

- Use the search bar (address, parcel number, or GPS coordinates) to zoom in on your property.
- You can also navigate manually by zooming into the map.

4. TURN ON HAZARD LAYERS

- Most maps let you toggle different "layers" (flood zones, wildfire risk, fault lines, landslides, etc.).
- Check multiple layers to get a complete picture of potential risks.

5. RECORD YOUR FINDINGS

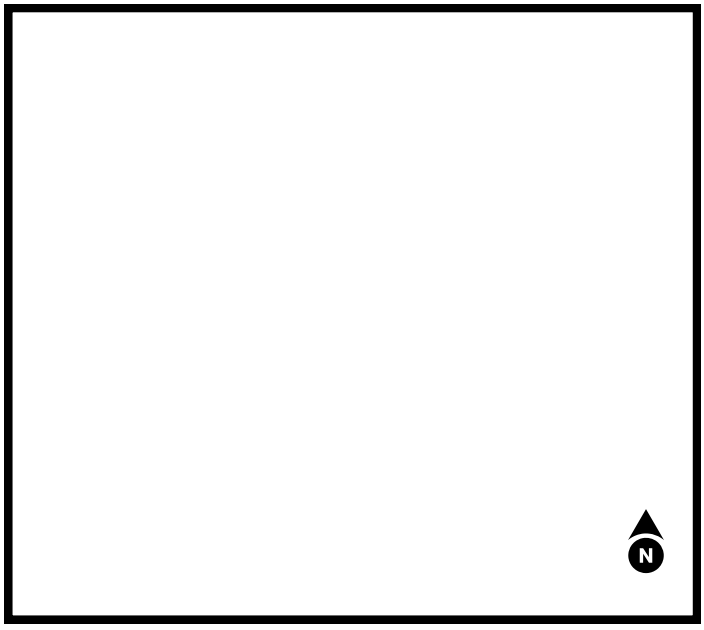
- Note which hazards apply to your property (floodplain? wildfire-prone area? steep slope?).
- Save or screenshot the maps for your records.

LOCAL HAZARD ASSESSMENT

Utilize your online county hazard interactive maps to assess for the following hazards. Attach copies of the findings to the property file if desired.

- ☐ ROCKFALL
- ☐ EARTHQUAKE FAULT LINES
- ☐ LIQUIFACTION
- ☐ FLOODING
- ☐ FIRE
- ☐ EROSION
- ☐ LANDSLIDE
- ☐ WINDBLOWN SAND
- ☐ SHALLOW BEDROCK
- ☐ SHALLOW GROUNDWATER
- ☐ COLLAPSIBLE SOIL
- ☐ EXPANSIVE SOIL
- ☐ TORNADO
- ☐ HURRICANE
- ☐ TSUNAMI

DRAW PROPERTY OUTLINE & NOTE THE AREA OR DIRECTION THE HAZARD IS IN RELATION TO THE LAND.



HAZARD NOTES:

_____

_____

_____

_____

PESTICIDES & CHEMICAL EXPOSURE

KNOWN PESTICIDES USED
☐ HERBICIDES ☐ INSECTICIDES ☐ RODENTICIDES

DOES THE CITY SPRAY PESTICIDES ANYWHERE NEAR THE PROPERTY?

YES / NO

IF SO, IS THERE A WAY TO OPT OUT?

YES / NO

DRAW PROPERTY OUTLINE & NOTE DIRECTIONAL WIND AND/OR SLOPES THAT DRAIN ONTO AND EXPOSE THE PROPERTY TO CHEMICALS:

DOCUMENT ALL THAT APPLY

ISSUE	LOCATION(S) OF CONCERN
EROSION Identify & briefly describe areas where erosion is visible	
STEEP SLOPE Identify & briefly describe areas with steep slopes	
POOR SOIL Describe the soil type: Sandy, Clay, Loam, Bedrock, or any combination	
FLOODING Identify & briefly describe any areas that collect water, don't drain well, or flood easily	
HIGH WINDS Identify which sides of the property receive the prevailing winter & summer winds	
EXCESSIVE SUN/HEAT TRAPS Identify any areas that are fully exposed to the sun including driveways & parking lots	
EXCESSIVE SHADE/NO SUN Identify areas that receive little to no sun. North facing zones are notorious for this	
EXCESSIVE NOISE Identify boundaries that may be exposed to excessive noise such as auto traffic	
LACK OF PRIVACY Identify boundaries that lack privacy. Identify windows or other areas that need privacy	
WILDLIFE INTRUSIONS Identify boundaries where unwanted wildlife is intruding	
TOXIC CHEMICAL EXPOSURE ZONES Identify boundaries where neighbors could be exposing you to weed or insect chemicals	
OTHER Document miscellaneous concerns here	

THREAT & ASSET ANALYSIS

COMMON NATURAL ASSETS			
☑	ASSET TYPE	EXAMPLES	NOTES
	WILDLIFE HABITAT	Birds, pollinators, frogs, lizards, beneficial snakes, bats	Supports pest control, pollination, nutrient cycling.
	ESTABLISHED TREES	Fruit trees, nut trees, mature shade trees, nitrogen fixers (e.g., mesquite, black locust)	Offer shade, microclimate buffering, carbon sequestration, soil improvement.
	HEALTHY SOIL	Loamy texture, good structure, active biology, fungal presence	Increases water-holding, fertility, and root health.
	TOPSOIL DEPTH	Thick topsoil, low compaction, visible organic matter	Saves years of soil-building work.
	GRAVITY FED WATER SOURCE	Spring, seep, uphill water tank, or pond	Enables passive irrigation without pumps.
	NATURAL POND OR WETLAND	Supports aquaculture, wildlife, filtration, and microclimate stability	Can become the heart of a regenerative design.
	GOOD DRAINAGE	Slight slope, no waterlogging	Reduces erosion and root disease.
	SOUTHERN OR EASTERN EXPOSURE	Ideal slope/aspect for sun-loving crops	Extends growing season and increases solar energy capture.
	COOL MICROCLIMATES	North-facing slopes, shaded zones, canyon walls	Allows for planting of more delicate crops in hot zones.
	SAFE NEIGHBORHOOD	Places with high safety records	Increases property values and property safety overall
	FROST FREE ZONES	Thermal mass near boulders, ponds, walls, and full sun locations	Extends the growing season or allows for subtropical plants in marginal climates.

COMMON NATURAL ASSETS			
☑	**ASSET TYPE**	**EXAMPLES**	**NOTES**
	ONSITE MULCH SOURCES	Pine needles, leaves, wood chips, straw, invasive biomass	Reduces cost of sheet mulching and improves soil fertility.
	LOCAL CLAY OR STONE	For cob, earthworks, or dry-stacking	Valuable for natural building or erosion control.
	EXISTING FENCING	Perimeter or cross-fencing	Reduces infrastructure costs for animals, gardens, or zones.
	EDGE ACCESS TO WILDLANDS	Forest, desert, BLM land, wildlife corridor	Increases biodiversity and foraging potential.
	BENEFICIAL NEIGHBORS	Apiaries, seed savers, fellow permaculturists, regenerative farmers	Allows for bartering, learning, and community support.
	LOCAL RAINFALL CAPTURE POTENTIAL	Rooflines, roadways, or slopes suitable for water harvesting	Enables water self-sufficiency and erosion repair.
	ABUNDANT NATURAL MATERIALS	Downed wood, rock piles, woody weeds, bamboo, reeds	For hugelkultur, trellising, mulch, shelter building, etc.
	NATIVE PLANTS OR WILD MEDICINE	Sage, yarrow, elderberry, milkweed, wild mint, mesquite, acorns	Adds ecological value, food, medicine, and restoration potential.
	GOOD ACCESS ROADS	Drivable in all weather, no washouts or erosion	Reduces energy costs and makes implementation safer and easier.
	CLEAN AIR & OPEN SKY	Low pollution, good solar access	Promotes plant health and improves solar panel viability.
	GREAT VIEWS	Open vistas, cityscapes, or other desirable views	Increase property values & Ambiance

COMMON NATURAL THREATS			
☑	**THREAT TYPE**	**EXAMPLE**	**NOTES**
	WILDLIFE CONFLICTS	Raccoons, deer, rabbits, gophers, voles, wild boars, coyotes, snakes, skunks, porcupines	May eat crops, damage structures, or pose safety risks. Consider fencing or habitat buffers.
	PREDATORY BIRDS	Hawks, owls, eagles (if raising poultry or small animals)	Can be a threat to chickens, ducks, or small pets.
	INSECTS & ARACHNIDS	Fire ants, wasps, mosquitoes, termites, ticks, scorpions	Affect humans, pets, structures, or livestock.
	POISONOUS PLANTS	Poison ivy/oak/sumac, oleander, hemlock, jimsonweed, castor bean	Risk to humans, pets, and livestock
	WIND	Seasonal high winds, tornadoes, microbursts	Can damage trees, structures, or desiccate soil.
	FIRE RISK	Dry brush, dead trees, surrounding forest, prevailing wind corridors	Wildfire zones or unmanaged fuels. Firewise strategies may be needed.
	FLOODING	Seasonal stream overflow, pond breaches, water table fluctuations, flash floods	Especially a concern near washes or in clay-heavy soils.
	EROSION	Bare slopes, gullies, compaction runoff	Undermines soil health and long-term sustainability.
	LANDSLIDES	Steep slopes with unstable subsoil or poor drainage	Relevant in hilly or mountainous areas.

COMMON NATURAL THREATS

☑	THREAT TYPE	EXAMPLE	NOTES
	SOIL CONTAMINATION	Heavy metals, pesticide residue, salt buildup, petroleum contamination	Can result from past land use, nearby roads, or mining.
	DROUGHT CONDITIONS	Long-term water shortages, low aquifer recharge, municipal water restrictions	Threatens water resilience.
	WATER QUALITY ISSUES	High salinity, alkalinity, sulfur, nitrates, or biological contamination	Especially critical if relying on wells, springs, or ponds.
	INVASIVE SPECIES	Bindweed, goathead, cheatgrass, Johnson grass, tamarisk, Russian olive, etc.	Outcompete natives and require consistent management.
	WEED PRESSURE	Windblown seed (e.g., thistle, mustard)	High edge exposure = higher weed pressure.
	MICROCLIMATE EXTREMES	Frost pockets, reflected heat zones, hot slopes, excessive shade	May limit growing options or create unexpected stress zones.
	POLLUTION DRIFT	Pesticide or herbicide drift from neighboring farms or roads	Risk to organic practices, pollinators, or sensitive plants.
	NEIGHBORING LAND USE	Feedlots, shooting ranges, dog kennels, negligent landowners	May impact water, sound, air quality, or wildlife habitat.
	BEE ALLERGIES	Nearby apiaries or wild hives	Can be a health risk for allergic individuals, & large apiaries can be damaging to local native bee populations

BIGGEST THREATS OF CONCERN TO DESIGN SOLUTIONS FOR

BIGGEST ASSETS TO NURTURE, AMPLIFY, OR PROFIT OFF OF

CREATING A BASE MAP

A base map is the foundation of a design. It showcases existing features before any modifications and serves as a scribble board for land design, water management, and land data analysis. The base map needs to be to-scale and indicate permanent features that you will need to design around. You will use this base map as a foundation for creativity so make copies as needed as the design refines itself.

1. Get a plat map of the property from the county recorder's website or by finding the property on Google Earth and drawing property boundaries where applicable. Alternatively, you can also hand sketch a drawing using accurate dimensions. Graph paper is helpful for this.

2. Mark directional North in the top or bottom corner.

3. Mark the general slope of the property with an arrow near the North symbol and label it "Slope". Even properties with a lot of variable slopes and valleys have an overall general slope where all the water drains off the property.

4. Mark the water entrance points. This is anywhere surface water enters the property such as from a neighbor whose property is higher than yours or a wash that runs through the property.

5. Mark the water exit points. This is where excess water drains off the property. If no exit point exists and flooding is an issue you'll need to create one within the design as it unfolds.

6. Mark:

- ☐ Fixed trees & shrubs
- ☐ Fixed structures
- ☐ Doors & windows of fixed structures
- ☐ Hose spigots
- ☐ Wells & other water storage
- ☐ Irrigation channels
- ☐ Gas drops & gas lines
- ☐ Existing sprinklers & water systems
- ☐ Fixed Parking & pathways
- ☐ Raingutter release points
- ☐ Overhead powerlines
- ☐ Fixed fencing

7. Review legalities and check for zoning restrictions, HOA & CC&R Rules, utility placements such as power poles, electrical boxes, plumbing equipment, septic zones, and easements.

BASE MAP TIPS:

- It is not meant to be perfect nor does it need to look professional. The base map serves as a scribble board so you can draw water flow maps, sector maps, and have an accurate property map to design new pathways and grow zones.

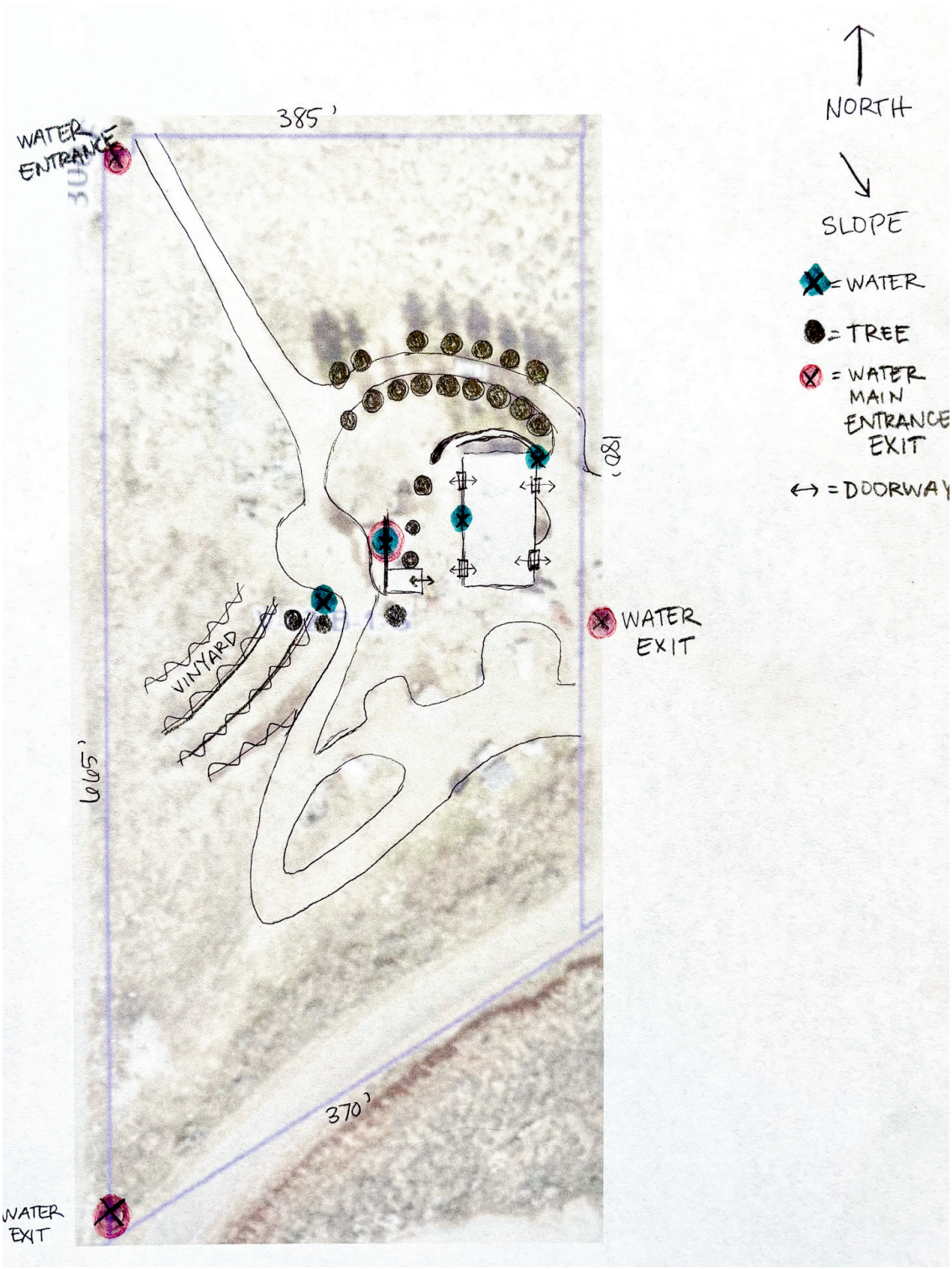
- It only depicts things on the property that are permanent. For example, do not add the shed if the shed is going to be removed to make room for something else.

- If you've got slope or 1+ acres of land you should make sure your base map includes topographical data. You can use topographical maps or images from google earth, but you will want the base map to show the topographical land variations so you can read your land's water flow and microclimates. If you live in an urban or suburban area on less than an acre that appears to have little to no slope it is less important that your base map include this information, but you will still need to visit Google Earth to consider topographical data that could be influencing your property.

- There may be more than 1 water entrance and exit points. Evaluate rainwater run off, neighboring water drainage, irrigation water entrance points, and any slopes or drainages that are channeling the water off the property. You will address the current waterflow and design improvements throughout the design process which may change the water entrance/exit points but to start with you need to identifiy where they are currently.

- Marking doors and windows is important so you don't end up designing something that obstructs views or gets in the way of foot traffic.

BASE MAP EXAMPLE



CONCLUSION

This concludes Workbook 1. With this data in hand, you're ready to take the next steps in your design journey. If you'd like even more worksheets and guidance to help you understand your land and design an ecologically balanced, sustainable landscape, I invite you to explore my other books:

BOOK 2: ASSESSMENTS & KEY CONCEPTS (coming soon!)
BOOK 3: THE FINAL DESIGN (coming soon!)
BOOK 4: PONDSCAPE DESIGN (coming soon!)
BOOK 5: WORKBOOK PAGES FOR PROFESSIONALS (coming soon!)

To discover more about those books, my other content, and my free printables visit my website at Feffylane.com

ABOUT THE AUTHOR

I began my permaculture journey in 2012 while looking for ways to garden more efficiently, eventually earning my Permaculture Designer Certification in 2016 through Oregon State University. The following year, I attended their Professional Designer course and began designing professionally for my local community, eventually specializing in drought-resilient and regenerative landscape design. I now teach others how to design regenerative landscapes both online and within my local community.

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