

## Assessing Site Resources

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Gather as many types of maps as you can.

Contact your County Assessor for Maps of your property

Good maps to have: Overhead pictures, geological maps, Google Earth (has a historical imagery function), topographic maps, maps of utilities, prior land use maps, flood maps, disaster potential maps, etc.

Local knowledge is a valuable asset to your design process. Talk to the elders of the area, the people who were on the land before you, and ask children for their intuitive observations.

Walk all of the property boundaries. Walk along the ridges and walk the low spots.

Observe during peak weather events and extremes.

Make species lists. Observe for size, health, vigor, and companions.

Create different names for different habitats on your land.

Assess what stage in evolution these habitats may be in.

Observe indicator species.

Learn tracking skills.

Make a list of the resources that you observe onsite. Make another list of the areas where you have observed limiting factors and challenges.

### Yeoman's Scales of Landscape Permanence

- 1) Climate
- 2) Land Shape
- 3) Water
- 4) Roads
- 5) Trees
- 6) Buildings
- 7) Subdivision
- 8) Soil

### Dave Jacke's Scales of Landscape Permanence

- 1) Climate
- 2) Landform
- 3) Water
- 4) Legal Issues
- 5) Access & Circulation
- 6) Vegetation & Wildlife
- 7) Microclimate
- 8) Buildings & Infrastructure
- 9) Zones of Use
- 10) Soil Fertility & Management
- 11) Aesthetics, Experience of Place

### Climate Resources

USDA Hardiness Zones: <http://planthardiness.ars.usda.gov/PHZMWeb/>

Sunset Garden Zones: <http://www.sunset.com/garden/climate-zones/>

Western Regional Climate Center: <http://www.wrcc.dri.edu/>

Status of Predicted Future Climate Change: Climate Wizard: [climatewizard.org](http://climatewizard.org)

Learn about growing degree days, average frost-free days, and chilling hours for your climate.

If you are fortunate to have LIDAR imagery available, you can get a good sense of the landform on your site and greater area.

## **Make a Sector Map**

What is the angle of the sun in the summer and how does it change in the winter? For Sun Sector maps visit: [suncalc.net](http://suncalc.net)

What is the typical wind pattern? Where do the storm winds come from? How does the wind change throughout the seasons? Look up a wind rose for your area to learn about the wind sector.

Regional Hazards Viewer & more: [oregonexplorer.info](http://oregonexplorer.info)

Assess the flows and terrain on your property. What sort of movement will be happening on your site? What scale do the paths/roads need to be for ease of movement?

Make a microclimate map that assesses the quality of each part of your landscape?

What is the quality of that area? Some qualities could include: sunny, dry, cold, windy, poor drainage, exposed, wet, muddy, sheltered, etc.

How does the cold air drain on your landscape? Do you have any cold pockets?

## **Water**

Map your watershed. Where does the land sit in the watershed? How do the parcels above you impact your site? How do you impact the sites in your lower watershed? Surf your Watershed is a website by the US EPA that information about watershed quality: <http://cfpub.epa.gov/surf/locate/index.cfm>

You can also find information about your watershed and the macro landscape at the EPA's "My Waters" site.

How many inches of rainfall do you get throughout the year? How is this distributed throughout the year? What is the record 24 hour rainfall? When? How long was the longest drought documented for your area? When was that?

Is there any permanent water features? Are there seasonal water features?

How dependable is your water supply?

Do you see any signs of erosion?

Is there any history of flooding? Are there places on site with standing water?

What are the general drainage patterns onsite?

Do you have the potential for creating ponds or dams for water catchment in your landscape?

Do a perc test by digging a hole about a couple feet deep and pour 5 gallons of water into it. Use a yard stick and a timer to measure how much water drains per minute. Locate all on-site and nearby off-site water features (wells, culverts, water lines, sewer lines, septic systems, etc).

## **How to do a water audit:**

- 1) Calculate your average annual rainfall.
- 2) Calculate the longest dry period
- 3) Make a list of what you might need water for, i.e drinking water, irrigation, animals, home use, etc
- 4) Calculate your daily water use.
- 5) Calculate your water use per year.
- 6)  $\#4 \times \#2 =$  maximum amount of water needed per year
- 7)  $\#6 \times 20\%$  as contingency = total amount of water you want to plan to have available.

### **How to Calculate your Roof Catchment Potential:**

Catchment area (sq ft of your roof) x amount of rainfall (convert to feet) x 7.48 (convert ft to gals) x runoff coefficient = amount of rainwater to collect annually

Runoff coefficient = how much water you may lose, depends on roofing material  
Corrugated metal roof (.95), Asphalt (.90)

The coefficients for other types of surfaces can be found online through a quick search.  
Always consider gravity feed when installing water catchment.

### **Soil Resources**

Many countries have a service that provides soil maps.

In the United States, we have the Natural Resource Conservation Service (NRCS):

<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

Get your soil tested. Dig test holes in multiple locations to see how the soil differs around your site. Do jar test and percolation tests. Instructions for how to do a soil jar test can be found here:

<http://www.ext.colostate.edu/mg/gardennotes/214.pdf>

Professional Soil Tests can be done through: A&L Laboratories: <http://www.al-labs-west.com/sections/anservices/sampling>

Make a list of all the onsite resources that you have available for composting. Do you have what you need to be able to amend the soil? If not, search for locally obtainable resources. Where can you get clean compost or manure to kickstart your project? How can you design your landscape to be able to produce enough organic matter to support the plants you want to grow? Remember that a soil that is rich with organic matter has a greater water storage capacity. An important consideration in dry times!

**Principle of Cyclical Opportunity:** Every cyclic event increases the opportunity for yield. To increase cycling is to increase yield.

**Principle of Stability:** It is not the number of diverse things in a design that lead to stability. Stability is based on the beneficial connections between the components. Make a list of all elements and structural components found on your land. Assess how you can create beneficial connections between them.

Check with your county or city planner to learn about your zoning laws.

Call building inspectors and civil engineers to assess your structural resources.

Check for regulations concerning setbacks.

Make allies with professionals who are experts in your local area and conditions. Don't be afraid to ask for referrals!

Take photos and make sketches as you observe. The more time you spent on your site analysis, the more informed your design will be by the unique characteristics of your site.

**Helpful organizations in the United States:**

Northwest Cooperative Development Center: [nwcdc.coop](http://nwcdc.coop)

Tilth: [www.tilth.org](http://www.tilth.org)

Cooperative Extensions

Master Gardeners

Natural Resource Conservation Service (NRCS)

Soil and Water Conservations Districts

Department of Ecology

Oregon Department of Forestry Stewardship:

<http://cms.oregon.gov/odf/privateforests/pages/findforester.aspx>

Value Assessments for properties: [zillow.com](http://zillow.com)

**Websites for Grants**

USDA Alternative Farming Systems Information Center: <http://afsic.nal.usda.gov/>

ATTRA: <http://www.attra.org>

Oregon Watershed Enhancement Board:

<http://cms.oregon.gov/OWEB/pages/index.aspx>

**Resources if you cant afford land**

Friends of Family Farmers: [www.friendsoffamilyfarmers.org/](http://www.friendsoffamilyfarmers.org/)

Beginning Farmers: [www.beginningfarmers.org](http://www.beginningfarmers.org)

Washington Farm Link: [www.cascadeharvest.org/programs/washington-farmlink](http://www.cascadeharvest.org/programs/washington-farmlink)

Land Stewardship Partners: [landstewardshipproject.org/](http://landstewardshipproject.org/)