

SOIL AND SITE PROPERTIES

WHAT DO I NEED TO KNOW ABOUT MY SOILS AND MY SITE?

CHECKLIST OF QUESTIONS TO ANSWER:

1. Current Site Status

- Is this a new site or an existing vineyard?

2. What is my soil site history?

- How long has this site been a vineyard?
- What was the previous land use?
 - List any past irrigation history and the systems used.
 - List any past crop and/or animal management practices.
 - List any past herbicide usage and carryover potential for each material.
 - List any past fertilizers and soil amendments used.
 - Was past land use uniform or variable across the site?
 - Has the site been leveled, eroded, or altered in any significant way?
 - What is the native vegetation on the site or in the surrounding area?

3. What are my existing soil properties?

- Describe the soil type:
 - soil series and their generalized profiles
 - soil texture(s)
 - slopes/aspects/elevations
 - potential for erosion
 - distance from nearby water body
 - presence of textural layers in root zone
 - presence of rock or gravel layers in root zone
 - depth to root zone restriction and cause of the restriction
 - water holding capacity
- Describe the soil chemical characteristics by depth:
 - surface depth (from 0 to 12 inches deep)
 - subsurface depth (from 12 to 30-plus inches deep)
 - pH
 - organic matter content
 - cation exchange capacity (CEC)
 - salts
 - electrical conductivity (EC)
 - nutrient soil test values



CHECKLIST: BUILDING YOUR SOIL/SITE MANAGEMENT TOOLBOX

- Have I compiled soil and site data?
- Have I developed site database(s)?
- Have I developed site map(s)?
- Outline site attributes, both positive factors and site limitations.
- Have I matched vineyard development and management strategies to site conditions?
(see Vineyard Site Selection and Vineyard Establishment topics)

RESOURCES:

Brady, N. C., and R. R. Weil. 1999. The nature and properties of soils. Prentice Hall, Upper Saddle River, New Jersey.

Generalized Map of Washington Soils
<http://remotesens.css.wsu.edu/washingtonsoil/>

Miller, R. W., and D. T. Gardiner. 2000. Soils in our environment. Prentice Hall, Upper Saddle River, New Jersey.

Natural Resources Conservation Service web site:
<http://soils.usda.gov/>

Soil Surveys: Hard copies of soil surveys are available for some counties through the local Natural Resources Conservation Service (NRCS). Other information is available on line at:

http://www.wa.nrcs.usda.gov/technical/soils/soil_survey.html

http://www.or.nrcs.usda.gov/pnw_soil/wa_reports.html

Soil test laboratories: Consult your nearest extension office for a listing of soil test labs in your area.

Special thanks for their contributions:

- Joan Davenport, Ph.D., Washington State University, Prosser, Washington
- Robert Stevens, Ph.D., Washington State University, Prosser, Washington



Washington Guide to Sustainable Viticulture

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