

Did you miss Friday's webinar on the three fail chapter Management Plans (Human Resources, Ecosystem Management, & Nutrient Management)? No worries - the webinar was recorded and can be emailed to you. Thank you for your patience this evening and please let us know what worked and didn't work for you so we can improve!

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**Hosts:**

**Dr. Stephanie Bolton**, Sustainable Winegrowing Director, Lodi Rules Program/Lodi Winegrape Commission  
**Sarah DeNike**, Lodi Rules Certification Consultant, S. Lange Vineyard Management

**Today we will cover two management plans:**

**Soil Conservation Plan (LR 4.2, 6 pts) & Water Management Plan (LR 5.1, 6 pts)**

Other Management Plans will be covered in future webinars this month.

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**General Tips:**

- If this is your first year in the Lodi Rules program, keep your plans simple.
- Add the corresponding LR Standard and Title at the top for easy filing.
- List visions and goals, describe the current situation in detail, then list overall management strategies.
- Use the headings in the Standard and organize the plan around those.
- If you haven't written anything longer than an email for years, don't worry - bullet points work too!
- Always include a section at the end for "plan review and update" with lines for dates and signatures
- Review Management Plans at your annual Manager's Meeting (LR 1.3)
- Every year, focus on one area to improve for each plan
- Share your plans with employees and ask for input - retention is EXTREMELY difficult and important these days, and you will be surprised at how effective creating a teamwork environment is at employee satisfaction!

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**4.2 Soil Erosion: Soil Conservation Plan**

The farming operation is aware of the erosion risks of the vineyard soils and has a written and implemented <b>soil conservation plan</b> which addresses these risks and includes the following components: site and soil factors contributing to soil erosion by water and air, best management practices to minimize soil erosion, and a plan review and update schedule.	<b>YES = 6</b>
	<b>NO = 0</b>

General Example:



## Lodi Rules 4.2: Soil Conservation Plan

Written 5.23.2011, Updated 3.21.2017

**GOALS:** We value soil as an important resource for our vineyard operation and are committed to managing our soils appropriately and effectively, practicing proactive soil erosion control.

Field specifics are described in the Ecosystem Management & Nutrient Management Plans.

### SITE & SOIL FACTORS CONTRIBUTING TO EROSION BY WIND & WATER:

- What is/are the soil types? Are any of these soil types prone to erosion?
- What is the slope and does it lead to a greater erosion risk?
- Does the vineyard site experience strong winds, rains, or storms?
- Is the irrigation method a factor in erosion?

Soil maps can be downloaded for free from the USDA - NRCS - Web Soil Survey.

### BEST MANAGEMENT PRACTICES TO MINIMIZE SOIL EROSION:

- Describe your cover crop use - what types of cover crops are used and are they in place year-round?
- Do you sometimes need to till the soil for certain reasons (frost protection, soil aeration, vigor control, etc)?
- Do you use special equipment such as a ring roller to follow the tilling tractor to lightly compress the soil, minimizing wind erosion?

Review Date: \_\_\_\_\_

Signatures and Written Names of All Present:

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## QUESTIONS??

### 5.1 Water Management Plan

The farming operation has a written and implemented <b>water management plan</b> containing the following components: soil moisture management goals and strategies; soil water holding capacity, water intake rate, and water permeability; irrigation suitability* analysis of applied water; irrigation system design and performance; and a plan review and update schedule.	<b>YES = 6</b>
	<b>NO = 0</b>

\*See standards **4.9** and **5.3** for more information on *irrigation suitability*.

*Irrigation suitability* refers to a water panel analysis available from most agricultural laboratories in California, which typically includes pH, electrical conductivity, sodium adsorption ratio, calcium, magnesium, bicarbonate, iron, manganese, sodium, chloride, boron, nitrate-nitrogen, sulfate-sulfur, and/or bacterial counts.

General Example:



## LR 5.1: Water Management Plan

Written 1.24.2014, Updated 4.2.2017

**SOIL MOISTURE MANAGEMENT GOALS & STRATEGIES:** To make the best use of our water resources through careful management and attention to detail. We strive for continuous improvement using annual metrics while optimizing water conservation and using deficit irrigation. Irrigation events are closely monitored and systems are maintained and repaired as needed. Cover crops are maintained year-round. Attention is paid to developing grapevines throughout the season, noting any water stress (visual observations, water potential measurement, ET) and any corrective action is based on vine needs. Daily weather forecasts are also taken into consideration.

You may also want to list any challenges here and how you plan to overcome them.

**MANAGEMENT CHALLENGES:** This field has some water purity issues which can lead to decreased water penetration over time. Gypsum is added when necessary.

**WATER RESOURCE & USE INVENTORY:** The sources of irrigation water are a private groundwater well and surface water through the Woodbridge Irrigation District. All pumps have a back-flow device and time of use meters.

**SOIL WATER HOLDING CAPACITY:** The root zone moisture holding capacity when full for our sandy loam soil, with root depths at 4 ft, ranges from approximately 5-6 in/ft = 20-24 in.

For more information on this topic (including a table), see Stan Grant's blog post at:

<http://www.lodigrowers.com/comprehensive-vineyard-water-management/>.

Also, soil available water capacity maps can be downloaded for free from the USDA - NRCS - Web Soil Survey.

**SOIL WATER INTAKE RATE:** Except in the case of excessive rains, water does not collect on the surface and soil water intake rate is adequate.

**SOIL WATER PERMEABILITY:** Deep tillage was performed prior to planting to improve water storage capacity and conductance, in the hopes to promote deep roots. No problems with permeability exist at this time.

**IRRIGATION SUITABILITY ANALYSIS OF APPLIED WATER:** Irrigation suitability analyses are performed at least every two years and actions are taken to adjust the water qualities based on the results of the analysis. The last analysis was performed in May of 2016 and the results are attached as part of LR 4.9 & LR 5.3.

**IRRIGATION SYSTEM DESIGN, SCHEDULING & PERFORMANCE:** Irrigation is applied through a drip system, and irrigation system flow and pressure are monitored at every irrigation. Action to repair the system, if needed, is taken immediately and spare parts for the irrigation system are kept on-hand. At least every three years, irrigation distribution uniformity is measured professionally.

**PLAN REVIEW & UPDATE SCHEDULE:** This plan will be reviewed and updated annually at the January Management Meeting, with input from all relevant employees.

Review Date: \_\_\_\_\_

Signatures and Written Names of All Present:

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## QUESTIONS???

Here is the topic schedule for the next two Webinars:

**Friday, April 21st 9-10am:** Insect & Mite Pest Management Plan (LR 6.1, 6pts) | Monitoring Records (LR CH 6, 1-8 pts) | Powdery Mildew Management Plan (LR 6.11, 4 pts) | Soil Borne Pest Management Plan (LR 6.17, 4 pts)

**Wednesday, April 26th 1-2pm:** Weed Management Plan (LR 6.19, 4 pts) | Vertebrate Management Plan (LR 6.21, 4 pts) | Spray/Dust Drift Management Plan (LR 6.27, 4 pts)

Please register for these sessions individually at the following website:

<https://attendee.gotowebinar.com/rt/4582072153939863811>

## Questions??



*Pictured: Bokisch Vineyards picnic area*