GROUNDWATER RECHARGE WORKSHEET FOR VINEYARDS

You have completed the Should I do MAR decision tree and are ready to explore MAR options for your property. As you read through the Guide, record your answers to the Decision Support Questions in each section on this worksheet. This worksheet will form an outline to help you develop a customized MAR plan with a Technical Assistance Provider, Groundwater Sustainability Agency, or Irrigation District.

1. **Your objective: Why MAR?** (p. 6)

Check all that apply:

- ☐ Improve long-term groundwater sustainability (SGMA compliance)
- ☐ Reduce risk of dry domestic wells nearby
- ☐ Support streams, wetlands, or other groundwater-dependent habitats (baseflow)
- ☐ Reduce local and downstream flood risk
- ☐ Other: _____

2. **Groundwater Rights** (p. 8)

Find out if you are in a GSA or adjudicated basin here:
https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries

I am in a:

- ☐ Groundwater Sustainability Agency (GSA)
- ☐ Adjudicated basin
- ☐ Neither

Name of GSA or groundwater authority (if applicable): _____

3. **Water Source** (p. 10)

Do you have any of the following available? (Check all that apply):

- ☐ Winter recharge water delivered by water or irrigation district
- ☐ Water diversions from rivers, streams, or canals during flooding events
- ☐ Surface water sources (overland runoff, winery process water, recycled water) for recharge or to replace groundwater with surface water irrigation
- ☐ Other: _____

Name of Irrigation or Water District: _____

☐ 4. **Water Delivery** (p. 12)

Do you have any of the following available? (Check all that apply):

- ☐ Farm parcel turnout connected to an irrigation district canal system
- ☐ Diesel pump to divert excess floodwater
- ☐ Other: _____

What is the capacity of your turnout or pump? _____ CFS/GPM

Additional infrastructure needed to deliver water:

☐ Pumps ☐ Pipelines ☐ Other: _____

☐ 5. **Recharge Suitability** (p. 13)

Vineyard area (acres): _____

Slope: ☐ Flat ☐ Gently sloped ☐ Steep

Dormant season access to water (Nov–Mar): ☐ Yes ☐ No

For Central Valley growers:

What is the **Recharge Suitability Index (RSI)** rating for the vineyard?

Check here on the GRAT Viewer website: https://gratviewer.earthgenome.org/.
Enter your address and turn on the **Land IQ Groundwater Recharge Suitability layer**.

RSI rating: _____

Outside the Central Valley:

What is the **Soil Agricultural Groundwater Banking Index (SAGBI) rating for the vineyard?**

To view your vineyard's SAGBI rating, enter your address here:
https://casoilresource.lawr.ucdavis.edu/sagbi/

SAGBI rating: _____

Other soil properties from Web Soil Survey (Appendix C), if not covered by RSI or SAGBI: _____

6. **Water Quality Risk** (p. 15)

- ☐ High nitrate leaching risk
- ☐ Recent use (last 6 months) of pesticides on No-Recharge List (refer to Appendix D)
- ☐ Compost, manure, biosolids, or recycled water use
- ☐ Other risk factor: _____
- ☐ Best Management Practices for water quality are of interest to me
  (Contact a Technical Service Provider for advice, see Appendix A)

7. **MAR in the Vineyard**

a. **Vineyard Health & Timing (p. 20)**

Known root or trunk disease present? ☐ Yes ☐ No

Rootstock tolerant of short-term flooding? ☐ Yes ☐ No ☐ Unsure

Planned MAR timing: ☐ Dormant only ☐ Late winter ☐ Other _____

(From the Recharge Timing for Winegrapes, Table 1, Page 22)

Maximum flooding duration per MAR event: _____days

Rate of water application: _____acre-inches per acre per day

Expected dry-down period between MAR events: _____days

Additional days needed for field operations: _____ days

b. **Field Setup**

Maximum allowable depth of water in the vineyard (inches):

_____

I will measure applied water using: ☐ Flow meter ☐ Other method _____

To conduct MAR, my field may need (p. 23):

- ☐ A measuring device, flow meter or other type: _____
- ☐ Berms around the edges of the field ☐ Berms across the middles
- ☐ Berms to contain water to a certain area of the field ☐ Alternate-row flooding
- ☐ No new infrastructure needed ☐ Other: _____

8. Alternative MAR Methods (p. 26)

Ag-MAR or flooding my vineyard won't work well for me. Instead, I'd like to try:

- [ ] Groundwater recharge basin
- [ ] Upslope swale and berm
- [ ] Vineyard swale
- [ ] Flow-through basin
- [ ] Fallow field recharge
- [ ] In-lieu recharge
- [ ] Dry farming

9. Costs, Capacity, & Incentives

Additional infrastructure needed (p. 20):

- [ ] Pumps
- [ ] Pipelines
- [ ] Berms
- [ ] Leveling

Potential costs for recharge:

- [ ] Labor
- [ ] Water purchases
- [ ] Other

Potential incentives (p. 31):

- [ ] Free/reduced-cost water
- [ ] Pumping credits
- [ ] Cost-share
- [ ] Unknown
- [ ] Pumping fee rebates
- [ ] MLRP
- [ ] NRCS EQIP

10. Who to Contact Next

Primary contact:

- [ ] Irrigation District
- [ ] Groundwater Sustainability Agency (GSA)
- [ ] Resource Conservation District (RCD)
- [ ] Technical Service Provider (TSP)
- [ ] Natural Resources Conservation Service (NRCS)
- [ ] California Sustainable Winegrowing Alliance (CSWA)
- [ ] Other: _____

Name / Organization: _____

See Appendix A