Central Valley Regional Water Quality Control Board

Nitrogen Management Plan WORKSHEET

For compliance with the General Orders for the Irrigated Lands Regulatory Program Approved: 23 December 2014

Worksheet Instructions

Instruction numbering in this document differs slightly from the NMP template approved by the Water Board to accommodate this publication design.

CROP & MEMBER INFORMATION

1. Enter the **Crop Year** for which this report is based upon. Information in NMP Worksheets should be based upon the calendar year a crop is harvested (i.e. winter cereal grains and some citrus should report information based on the year they are harvested even if fertilization is in the previous year). Newly planted trees or vines should report amount of nitrogen applied even if no crop is harvested.

2. Enter the membership identification number **(Member ID#)** issued by your water quality coalition.

3. Enter the **Name** of the person completing the form. This needs to be the owner or manager of the farm or the individual certifying the plan (if certification is necessary).

4. Enter the Assessor's Parcel Number **(APN).**

5. Enter the **Field Identification** (ID) for each unique management unit; the field ID can be an alpha/numeric, your internal field identifier or the site number used on your pesticide use permit. If the same crop and same nitrogen application is used on more than one field, enter all APN's and/or field numbers where the information applies.

CROP NITROGEN MANAGEMENT PLANNING

6. Enter the **Crop** name (almonds, walnuts, table grapes, wine grapes, raisin grapes, watermelons, canning tomatoes, fresh market tomatoes, etc.).

7. Enter the standard **Production Unit**. This is the standard unit that is the basis for your nitrogen management planning (tons, pounds, cartons, bales, etc.). For irrigated pasture, use University of California recommended nitrogen rates needed for desired growth.

8. Enter your **Projected Yield** per acre for the management unit for the upcoming season. Realistic yield expectations will help guide N management decisions.

9. Enter the amount of **Nitrogen Recommended** (estimated amount needed) to be applied to meet your expected yield. Use crop recommendations from CDFA, UCCE, NRCS, commodity organizations or site specific knowledge based on previous experience to appropriately estimate the amount of Nitrogen (N) needed. This should be the same number used in #27, Total N Applied and Available.

10. Enter total irrigated **Acres** for the management unit covered by each worksheet.

POST PRODUCTION ACTUALS

11. **Actual Yield** is the total amount of crop harvested in units per acre. This total should be an average of the production from a management unit covered by this Nitrogen Management Plan. Compare the Actual Yield to the total amount of N that was available for the crop. Assess if your N applications were appropriate for the yield achieved. Use available resources or site experience to determine the appropriate amount compared to the yield.

12. **Total N Applied** is the amount of nitrogen applied in pounds per acre. #12 should equal the total indicated in #27, column #16.

13. A Technical Work Group is in place to develop tools to better estimate nitrogen removal by a crop. This information will be used to estimate the amount of **N Removed** each year to assist tracking of Nitrogen after application to a crop. Your Coalition will provide you with the most up to date information on how to estimate N removed.

14. **Add any Notes** to the worksheet such as information about circumstances faced during the crop season that impact your recommended nitrogen applications #9 such as a larger or smaller crop than projected. Application amounts and timing can be adjusted based upon changing conditions (weather, pest damage, expected yield, etc.).

NITROGEN MANAGEMENT PLAN WORKSHEET

NMP Management Unit: _____

1. Crop Year (Harvested): _____	4. APN(s):	5. Field(s) ID	Acres
2. Member ID# _____			
3. Name:			

CROP NITROGEN MANAGEMENT PLANNING		N APPLICATIONS/CREDITS	15. Recommended/ Planned N	16. Actual N
6. Crop		17. Nitrogen Fertilizers		
7. Production Unit		18. Dry/Liquid N (lbs/ac)		
8. Projected Yield (Units/Acre)		19. Foliar N (lbs/ac)		
9. N Recommended (lbs/ac)		20. Organic Material N		
10. Acres		21. Available N in Manure/Compost (lbs/ac estimate)		
Post Production Actuals		22. Total Available N Applied (lbs per acre)		
11. Actual Yield (Units/Acre)		23. Nitrogen Credits (est)		
12. Total N Applied (lbs/ac)		24. Available N carryover in soil; (annualized lbs/acre)		
13. ** N Removed (lbs N/ac)		25. N in Irrigation water (annualized, lbs/ac)		
14. Notes:		26. Total N Credits (lbs per acre)		
		27. Total N Applied & Available		

PLAN CERTIFICATION		
28. CERTIFIED BY:	29. CERTIFICATION METHOD	
	30. Low Vulnerability Area, No Certification Needed	
	31. Self-Certified, approved training program attended	
DATE:	32. Self-Certified, UC or NRCS site recommendation	
	33. Nitrogen Management Plan Specialist	

**Your Coalition will provide the method to be used to estimate N Removed.
Approved by the Central Valley Water Board 23 December 2014.

28. Place for the signature of person certifying this plan, if required (see definitions in 31-33).

29. **Certification Method.** Place an "X" in the box for the method used.

30. If a field is in a **Low Vulnerability** area as designated by a Groundwater Assessment Report, no certification of this NMP is necessary.

N APPLICATIONS/CREDITS

15. Numbers in the **Recommended/ Planned N** column are based on amounts determined by individuals described in #31-33. In this column, allocate how much N you plan to apply from each of your available sources and total each section. Use your Recommended/Planned N totals for each source of N and schedule your applications for the crop year. You can use additional tools/ spreadsheets to plan timing for each application. Proper scheduling of N applications is an essential component of a Nitrogen Management Plan.

16. Numbers in this column are from the **Actual** amounts of **nitrogen** applied and should be entered after the crop is harvested. Use the Recommended/Planned N schedule to guide nitrogen applications throughout the growing season. Actual application amounts and timing can be adjusted based upon changing conditions (weather, pest damage, expected yield, etc.).

17. **Nitrogen Fertilizers** are any manufactured nitrogen-containing products applied to a field.

18. Enter **Dry or Liquid** nitrogen-containing product applied to the field, if any, in pounds per acre.

19. Enter nitrogen containing product applied to the crop canopy or above ground plant parts, if any, in pounds per acre.

20. **Organic Material N** is any product applied to a crop that is not manufactured.

21. Estimate in pounds per acre the amount of nitrogen in **Animal Manure or Compost** that is applied to a field.

22. **Total Available N Applied** is the sum total of lines #18, #19 and #21.

23. **Soil Nitrogen Credits** is the estimated amount of nitrogen that will become available for crop uptake during the growing season.

24. **Available N Carryover in the Soil** is typically estimated by analyzing a soil sample. This estimate should be reported in pounds per acre available to the crop during the growing season.

25. **Nitrogen in Irrigation Water** is estimated by analyzing an irrigation water sample to determine the nitrogen content. This estimate should be reported in pounds per acre available throughout the crop season based on the amount of irrigation water applied to the crop.

26. **Total N Credits** is the sum of #24 and #25.

27. **Total N Applied and Available** is the sum of #22 and #26. This total should be the same number as #12.

PLAN CERTIFICATION

31-33. Parcels/Fields that are in designated **High Vulnerability Areas** will need to be certified by a **Nitrogen Management Specialist.** Certification is needed on the Recommended/Planned N plan (column #15) and not for the Actual N (#16). Nitrogen Management Specialists include Professional Soil Scientists, Professional Agronomists, Crop Advisors certified by the American Society of Agronomy (and CDFA/California CCA), or Technical Service Providers certified in nutrient management in California by the National Resource Conservation Service (NRCS); or other specialist approved by the Executive Officer. Self-Certification is also an acceptable method provided the certifying member has attended an approved training course.

NITROGEN MANAGEMENT PLAN WORKSHEET

NMP Management Unit: _____

1. Crop Year (Harvested): _____

2. Member ID# _____

3. Name:

_____

4. APN(s):	5. Field(s) ID	Acres

CROP NITROGEN MANAGEMENT PLANNING		N APPLICATIONS/CREDITS	15. Recommended/ Planned N	16. Actual N
6. Crop		**17. Nitrogen Fertilizers**		
7. Production Unit		18. Dry/Liquid N (lbs/ac)		
8. Projected Yield (Units/Acre)		19. Foliar N (lbs/ac)		
9. N Recommended (lbs/ac)		**20. Organic Material N**		
10. Acres		21. Available N in Manure/Compost (lbs/ac estimate)		
Post Production Actuals				
11. Actual Yield (Units/Acre)		**22. Total Available N Applied** (lbs per acre)		
12. Total N Applied (lbs/ac)		**23. Nitrogen Credits (est)**		
13. ** N Removed (lbs N/ac)		24. Available N carryover in soil; (annualized lbs/acre)		
14. Notes:		25. N in Irrigation water (annualized, lbs/ac)		
		26. Total N Credits (lbs per acre)		
		27. Total N Applied & Available		

PLAN CERTIFICATION		
28. CERTIFIED BY:	**29. CERTIFICATION METHOD**	
	30. Low Vulnerability Area, No Certification Needed	
	31. Self-Certified, approved training program attended	
DATE:	32. Self-Certified, UC or NRCS site recommendation	
	33. Nitrogen Management Plan Specialist	

**Your Coalition will provide the method to be used to estimate N Removed.
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