Tree Removal Worksheet

Note: if you are not using USLE or RUSLE2, or a Sediment Delivery Model please have your approach, pre-approved by the Sonoma County Agricultural Commissioner's Consulting Engineer*.

1) Do you have a CEQA Document for your project? ..... ☐**YES** ☐**NO**

a. If YES, please include provide a copy for review with you completed application packet
b. If NO, please continue to #2

2) Are you using a soil loss equation or model? ..... ☐ **YES** ☐**NO**

a. - If No, you are using a sediment delivery model. Please contact the Sonoma County Agricultural Commissioner's Consulting Engineer*

b. If YES,

i. Do you plan to use the USLE (for projects with slopes 0 - 25%)? ..... ☐ **YES** ☐**NO**
If YES, please indicate the LS, C, and P values for your project in the blanks below (and on reverse)

USLE Calculations

BLOCK ID_____ *Use values from BMP Appendix. Submit one set of calculations for each development block. Use reverse side for additional blocks*

PRE-DEVELOPMENT

$$A = R \times K \times \frac{\_\_\_\_\_}{LS} \times \frac{\_\_\_\_\_}{C} \times \frac{\_\_\_\_\_}{P}$$

Total Predicted Soil Loss (A)_____

=

POST-DEVELOPMENT

$$A = R \times K \times \frac{\_\_\_\_\_}{LS} \times \frac{\_\_\_\_\_}{C} \times \frac{\_\_\_\_\_}{P}$$

Total Predicted Soil Loss (A)_____

ii. Do you plan to use the RUSLE2 (for projects with slopes 26 – 50%)? ☐ **YES** ☐**NO**
If YES, please include the details in your Erosion Control Plan

If No, you are using an alternate Soil Loss Model. Please contact the Sonoma County Agricultural Commissioner's Consulting Engineer*

iii. Do you plan to use an alternate Soil Loss Model? ..... ☐ **YES** ☐**NO**
If YES, Please contact the Sonoma County Agricultural Commissioner's Consulting Engineer*

CUMULATIVE PREDICTED SOIL LOSS (for project)

Cumulative <u>Pre-Development</u> Predicted Soil Loss (A) - sum of "A values" for all development blocks _____

Cumulative <u>Post-Development</u> Predicted Soil Loss (A)-sum of "A values" for all development blocks _____

****Note: To contact the Sonoma County Agricultural Commissioner's Consulting Engineer, please leave a message at (707) 565-2371 or send an email to vesco@sonoma-county.org***

Instructions: Use the form below to demonstrate that your pre-development predicted soil loss will equal your post-development predicted soil loss. Use values from BMP Appendix. Submit one set of calculations for each development block. Include these values in the Predicted Soil Loss Summary (on reverse).

	Pre-Development				Post-Development			
Block ID	**Calculated A value**	**LS value**	**C value**	**P value**	**Calculated A value**	**LS value**	**C value**	**P value**

The USLE is composed of six factors to predict estimation of average annual soil loss (A)

$$\mathbf{A} = \mathbf{R} \times \mathbf{K} \times \mathbf{LS} \times \mathbf{C} \times \mathbf{P}$$

The equation includes the following factors:

R is the rainfall erosivity factor.
K is the soil erodibility factor.
LS is the slope length and steepness factor.
C is the cover and management factor.
P is the support practice factor

Note: R and K values are consistent throughout development, and do not have to be included in these calculations