

# EXHIBIT A HARDTEN FAMILY VINEYARD EROSION CONTROL PLAN FOR NEW VINEYARD DEVELOPMENT

## SHEET INDEX

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PORTION OF CAPELL VALLEY 7.5 MIN. QUAD MAP

### Vicinity Map

1" = ±2000'

## Narrative

This project consists of the development of approximately 1.97 gross acres (±1.49 net acres) of new vineyard (0.52 acres of which are in pre-1993 non-vineyard developed areas) within APN 033-010-056, a 13.00 acre parcel located at 3393 Atlas Peak Rd., Napa. The parcel contains remnants of structures destroyed by fire, outdoor living areas, gardens, paved and dirt access drives, ±7 acres of existing vineyard, an existing well and water tank, and brush, grasses and tree canopy. Existing access is from Atlas Peak Rd. Existing ground slopes within the project area range from 6% to 19%. The vines will be planted in a 7'x4' grid and rows will have a northeast/southwest orientation as shown on the plan. Perimeter avenues/turnspaces will be ±10' to ±20'. Cultivation practices are described below under Permanent Erosion Control Measures. A new drip irrigation system will be installed with an existing groundwater well as the water source. Water use on the new vineyard will be ±0.43 acre feet per annum.

The USGS Capell Valley 7.5 minute Quad Map shows one blueline stream flowing through the parcel. The proposed development is not within the required setback. The project drains toward an unnamed stream tributary to Milliken Creek and lies within the Milliken Reservoir subwatershed. A canopy retention analysis has been prepared.

Soils within the block boundaries have been classified in the USDA Soil Conservation Service's Napa County Soil Survey, as SCS#100/102, Aiken loam, and SCS#152, Hambright rock outcrop.

No Special Status Species will be impacted by this project. Mitigation measures for birds with sensitive or regulatory status recommended in the Biological Resource Assessment prepared by Northwest Biosurvey, dated September 24, 2019, have been incorporated.

No Cultural Resources will be impacted by this project as concluded in the Cultural Resources Study prepared by Tom Origer & Associates, dated August 13, 2019.

Vegetation Removal consists of 13 oak trees as shown on the tree removal plan, ±0.5 acres of scattered bushes and disking under resident grasses. All organic material to be burned or chipped shall be stacked at strategic locations within the cleared areas. Burning of the organic material shall take place only after obtaining approval from all the governing agencies.

Ground Preparation shall include removal of vegetation and rocks, ripping and disking (max. 36"). Rocks generated during land preparation may be used for local landscaping, and/or construction purposes, and/or erosion control features, and/or they may be crushed and used as surfacing for existing traffic areas or rock mulch within the vineyard blocks, and/or they may be off-hauled to a properly permitted disposal site.

Existing Wildlife Exclusion Fencing will remain in place, and may be repaired were necessary.

Temporary Erosion Control Measures consist of the installation of fiber rolls and the application of straw mulch where seeding occurs. The installation of all fiber rolls shall be completed in accordance with the appropriate detail along the contours at locations shown on the plan, prior to the rainy season at the end of years P-1, P and P+1. They shall be in place through each winter through spring of P+2 after which they may be removed. A straw mulch cover shall be applied over all open and/or disturbed and seeded areas each fall through P+1 at the rate specified in the Project Notes. As an alternate to seeding and mulching, the vineyard may be hydro-seeded using the same mix and fertilizer at the rates specified in the Project Notes.

Permanent Erosion Control Measures consist of the following:

1) The vineyard may be full tilled in years P-1, P and P+1; alternate middles may be tilled in year P+2. A winter cover crop shall be seeded and mulched at the end of growing season P-1 through P+1. At the end of the growing season in year P+2, a permanent cover crop shall be planted within the new vineyard (refer to cultivation chart under Project Notes). During fallow years, the cover crop may be mowed. As an annual farming operation, the permanent cover crop may be mowed and may be strip sprayed 12" centered on the vine rows using springtime applications of post-emergent contact sprays or properly timed application of pre-emergent sprays, (see Project Notes, Maintenance). As a normal cultural practice no disking, ripping or other tillage shall occur within the vineyard once the permanent cover crop has been established. Areas outside the vineyard blocks shall not be disked or sprayed at any time. Using this method a minimum ground cover of 70% will be obtained each winter. From time to time (every three or four years), it may be necessary to disk the cover crop to open up the ground or to re-establish proper ground cover. Should this be necessary, notification shall be provided to Napa County PBES and Napa County RCD, and the work shall proceed as prescribed in Napa County Conservation, Development and Planning Department guidelines, dated April 8, 2004, entitled "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops".

2) Implementation and adherence to the Annual Winterization program presented in the Project Notes.

Costs: The total cost of all erosion control measures is estimated to be \$3000-3500/acre including equipment, materials, and labor.

The project site was visited by the plan preparer in November, 2019 to inspect the site, and will be visited during and after development to check for proper implementation of erosion control measures.

## Project Notes

APN & Owner: 033-010-056

Hardten Family Vineyards LLC  
2515 Kelly Ave.  
Excelsior, MN. 55331

Site Address: 3393 Atlas Peak Rd., Napa

Contact: Michael Wolf @ 255-4084  
Michael Wolf Vineyard Services  
P.O. Box 3540  
Yountville, CA 94599

Drew L. Aspegren, P. E. @ 963-4927  
Napa Valley Vineyard Engineering, Inc.  
176 Main St., Suite B  
St. Helena, CA 94574

Mapping: Napa County GIS Database 2002 & Hogan Land Services Inc. July 2019

Implementation Schedule: Work may begin during the first growing season after project approval and may be completed over several years. Preplant and planting year operations may be conducted over two growing seasons or they may be conducted during the same year. The work will be scheduled as follows:

Year P-1  
April 1 thru Sept 15\*  
Clearing, rock and root removal, stacking vegetation for burning or other disposal, disking, installing permanent erosion control measures prior to vineyard layout, staking and installation of drip system, installing temporary erosion control measures, Winterization, consisting of seeding and mulching, shall be completed by September 15\*.

Rainy Season  
Sept 16 thru March 31  
Maintain erosion control measures, burning as allowed by government agencies.

Year P  
Apr 1 thru Sept 15\*  
Complete unfinished pre-plant operations, plant vineyard and begin cultural practices (refer to cultivation chart below). Maintain all erosion control features.

\*All ground disturbing activities shall be completed by September 1 of each year, and all erosion control measures shall be in place by September 15. These dates may be extended by Extension of Time granted by Napa County PBES.

### Cover Cropping and Cultivation Practices

Year	Cultivation during growing season	Cover Crop, planted/maintained at end of growing season
Pre-plant (P-1)	rip and disk	winter cover crop
Planting (P)	full till	winter cover crop
P+1	full till	winter cover crop
P+2	till alternate middles	permanent cover crop
Forward	no till, weed control	permanent cover crop

Seeding Requirements: All exposed or disturbed soils shall be seeded. Seed and fertilizer shall be applied hydraulically or broadcast at the rates specified below:

Hardten Plowdown Mix @ 75 lbs/ac	Bell Beans	40%
	Magnus Peas	30%
	Red Oats	20%
	Common Vetch	10%
Hardten Permanent Mix @ 75 lbs/ac	Blando Brome	50%
	Zorro Fescue	50%

Fertilizer: Ammonium phosphate sulfate (16-20-0) 200-240 lbs/ac

An alternate seed mix and/or fertilizer may be used after review and approval by Napa County PBES.

Straw Mulch shall be spread over all disturbed and seeded areas. The mulch shall be spread mechanically or by hand at the rate of 2 tons/acre. As an alternate to mulch, the seeded areas may be irrigated through germination until the onset of winter rains.

As an alternate to seeding and mulching, the vineyard may be hydro-seeded using the same mix and fertilizer at the rates specified above.

Fiber Rolls shall be installed at the locations shown on the plan in accordance with the appropriate detail. Fiber Rolls shall be maintained through the winter after P+1, after which they may be removed.

Maintenance: Cover cropping and cultivation shall be implemented as described in the Narrative (Permanent Erosion Control Measures) and elsewhere in the Project Notes (Cover Cropping and Cultivation Practices).

Annual Winterization shall be completed by September 15 each year, or by the end of any extension of time granted by Napa County PBES, and shall include the following:

1) The condition of the cover crop, including those areas outside the vineyard, and the suitability and effectiveness of the seed mix and fertilizer shall be evaluated. Weak areas shall be reseeded as necessary, if addition of soil amendments is indicated, they shall be incorporated and those areas shall be seeded and mulched.

2) All roads and/or turnspaces which are not rocked or paved shall be seeded, fertilized and mulched, and they shall remain undisturbed throughout the rainy season.

3) All existing erosion control and drainage features shall be inspected, cleaned, and repaired as necessary.

All existing erosion control features and drainage shall be inspected and cleaned, or repaired as necessary. All erosion control measures shall be inspected after each storm event, and any necessary repairs, cleaning and maintenance shall be promptly performed.

## Special Notes

1) Bats: A Qualified Biologist shall conduct a passive habitat assessment of all trees proposed for removal in order to identify suitable bat habitat within 6 months of planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:

a) Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.

b) For removal of bat habit trees outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying, and with bat surveys in specific roost types for project specific conditions) shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the Conservation Division and CDFW prior to commencement of work. If special-status bat species are not present removal can proceed. If bats are found to be present a plan for removal or exclusion will be developed by a qualified biologist in conjunction with the Conservation Division and CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the Conservation Division.

2) Birds: The following nesting birds preconstruction survey(s) shall be conducted prior to the commencement of vineyard development and implementation activities:

a) For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 - NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct construction surveys for nesting birds within all suitable habitat on the project site, and within 500 feet of all earthmoving activities. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Planning Division and CDFW prior to commencement of work.

b) After commencement of work if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

c) In the event that nesting birds are found, the applicant/owner shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the USFWS and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with the County Conservation Division and the USFWS and/or CDFW.

d) Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.

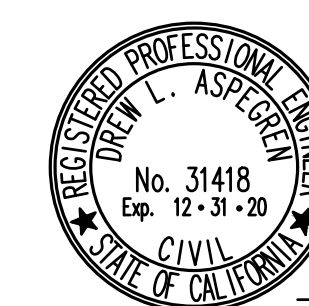
e) Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

## Legend

	GROSS BLOCK BOUNDARY
	AVENUE/TURNSPACE
	NET VINE ROWS (APPROX.)
	DETAIL 2
	EXISTING
	FENCE (EXISTING)
	FIBER ROLL
	IRRIGATION PIPE (E)
	IRRIGATION PIPE (P)
	PAVED ACCESS DRIVE (E)
	PLANTING YEAR
	PLANNING, BUILDING AND ENVIRONMENTAL SERVICES
	PROPERTY LINE APPROXIMATE LOCATION
	PROPOSED
	SOIL CONSERVATION SERVICE
	SCS SOIL MAPPING UNIT
	SCS SOIL TYPE BOUNDARY

### HARDTEN FAMILY VINEYARD EROSION CONTROL PLAN FOR NEW VINEYARD DEVELOPMENT

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January 10, 2020  
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DATE

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