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A Commitment to Service

Napa County Planning, Building and Environmental Services

Walt Ranch Appeal Public Hearing

November 18, 2016

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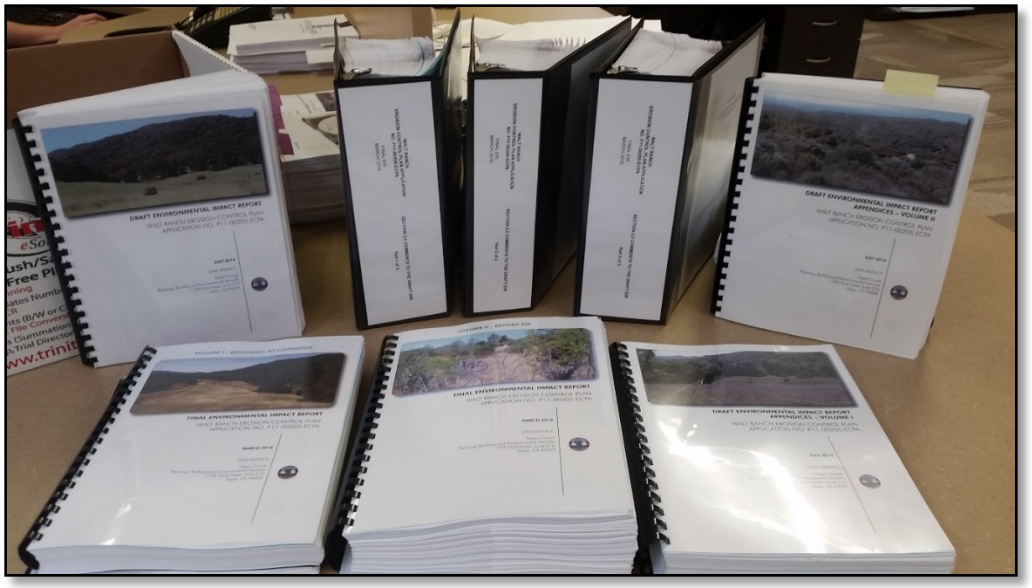
Background and Purpose of an EIR

- Purpose of an EIR
- Development of Mitigation
- Terminology
  - Proposed Project
  - Mitigated Project
  - 2016 Approved Project



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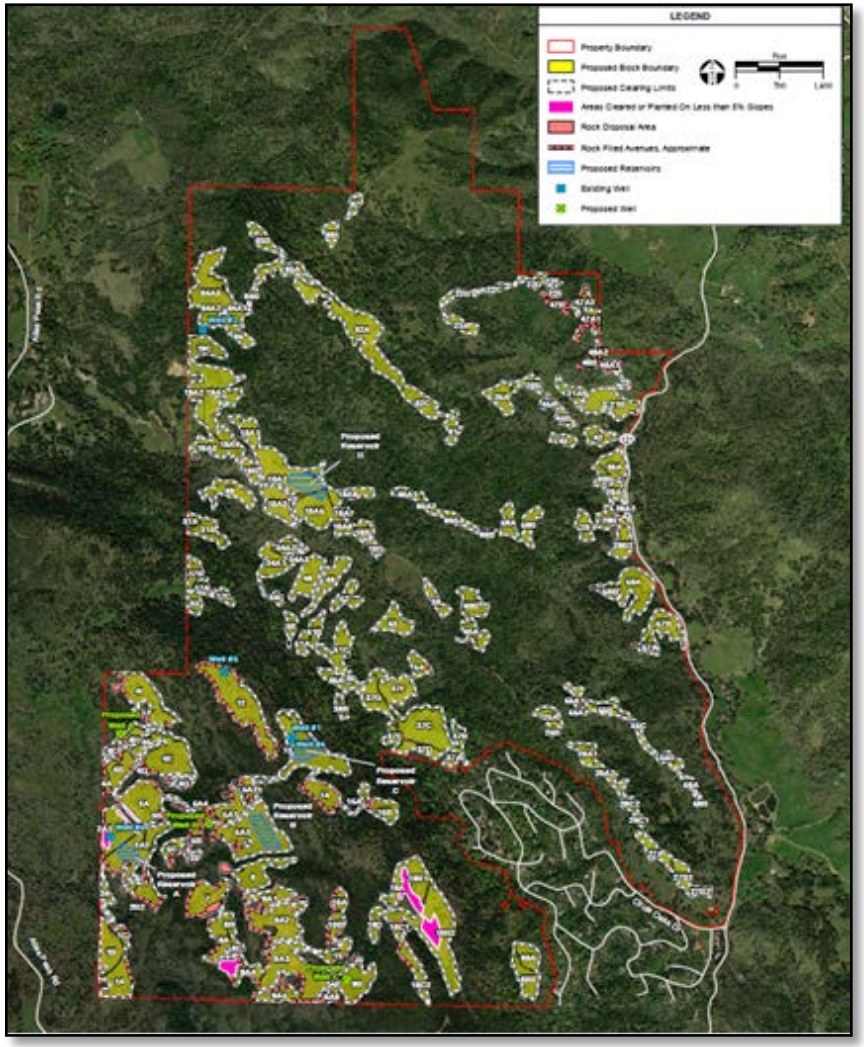
Project Description

- Originally Proposed Project was to plant 356 net acres of vineyard within 507 gross acres;
- Improve and maintain approximately 21 miles of existing roads;
- Install drainage and erosion control features, including level spreaders, subsurface drainage, sediment basins, cover crop; and
- Construct up to 4 new groundwater wells and 4 offstream reservoirs.



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Project Evolution

	Gross Acres	Net Acres
2012 Proposed Project	507 acres	356 acres

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Project Evolution

	Gross Acres	Net Acres
2012 Proposed Project	507 acres	356 acres
Mitigated Project	429 acres	288 acres

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Project Evolution

	Gross Acres	Net Acres
2012 Proposed Project	507 acres	356 acres
Mitigated Project	429 acres	288 acres
Multiple Resource Protection Alternative	425 acres	287 acres

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Project Evolution

	Gross Acres	Net Acres
2012 Proposed Project	507 acres	356 acres
Mitigated Project	429 acres	288 acres
Multiple Resource Protection Alternative	425 acres	287 acres
Reduced Intensity Alternative	407 acres	275 acres

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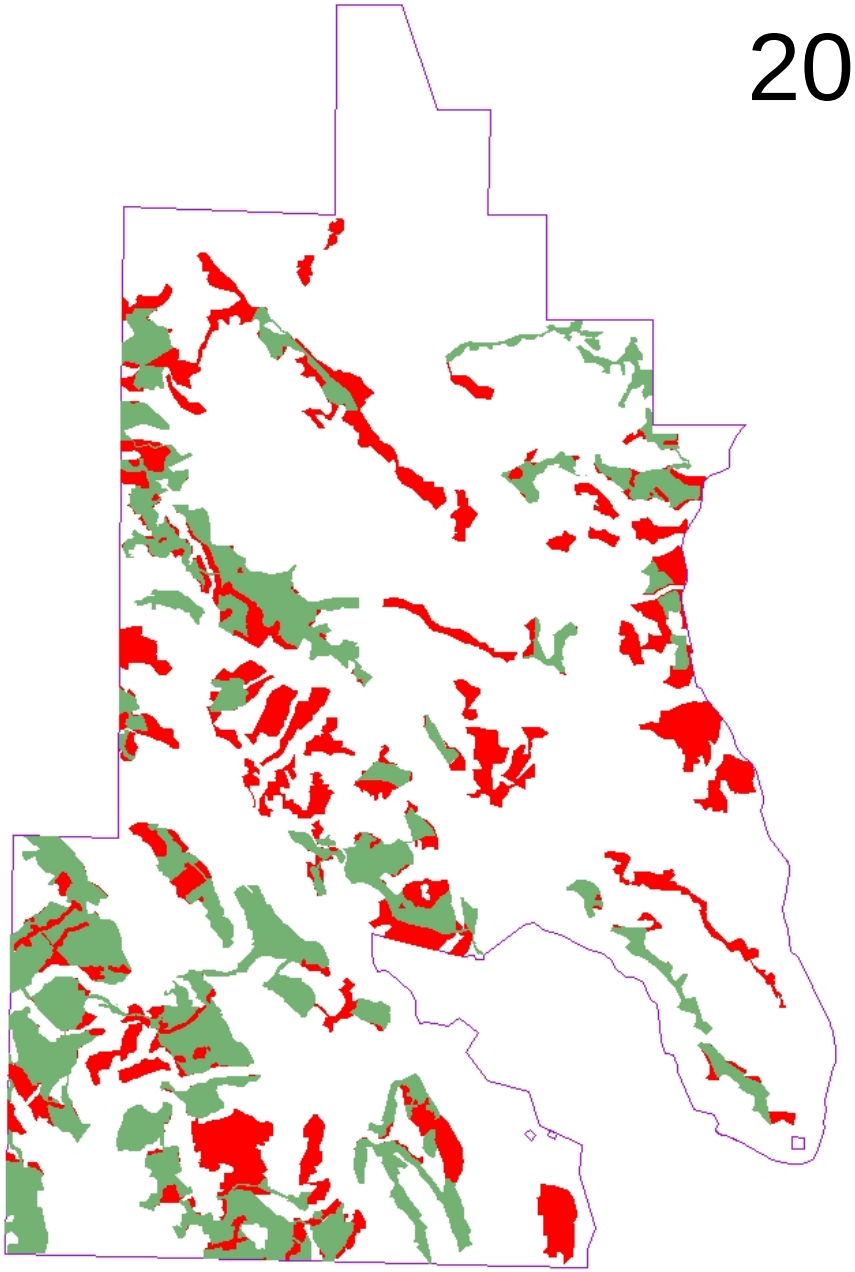
Project Evolution

	Gross Acres	Net Acres
2012 Proposed Project	507 acres	356 acres
Mitigated Project	429 acres	288 acres
Multiple Resource Protection Alternative	425 acres	287 acres
Reduced Intensity Alternative	407 acres	275 acres
2016 Approved Project	316 acres	209 acres

2016 Approved Project



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Areas Removed From Original Project (188 net acres, 222 gross acres)
- Approved Reduced Intensity Alternative (209 net acres, 316 gross acres)
- Property Boundary

Walt Ranch

Approved Reduced Intensity Alternative
209 Net Acres

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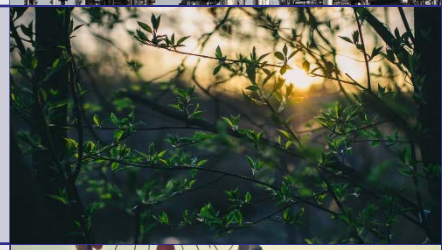
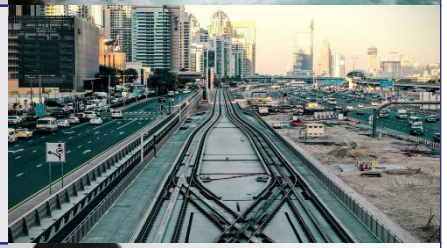
Overview of Environmental Issue Areas

Air Quality and Climate Change	
Biological Resources	
Cultural Resources	
Geology and Soil	

Hazardous Materials	
Hydrology and Water Quality	
Transportation and Traffic	
Noise	

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Air Quality

Project Construction

- Earthmoving and grading could exceed BAAQMD levels for fugitive dust (particulate matter)
- Construction equipment would emit air pollutants
- Mitigation: fugitive dust abatement program, BAAQMD construction mitigation measures
- Risk and Hazard Screening Analysis for DPM

Project Operation

- Operation of vineyard requires worker trips to and from the site, grape truck trips, and limited heavy equipment use
- Emissions far below BAAQMD thresholds; no mitigation required for operation

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
A HEALTHY BREATHING ENVIRONMENT FOR EVERY BAY AREA RESIDENT

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Biological Resources

- Special status species, both plants and animals
- Sensitive habitats or habitats of limited distribution
- Wetlands and waters
- Wildlife corridors and habitat fragmentation

Biological Resources – Appellant Concerns

- Overall tree loss
- Wildlife corridors and wildlife displacement
- Special-status Amphibians and Reptiles
- Fisheries

- Other species – Contra Costa goldfields, VELB, birds

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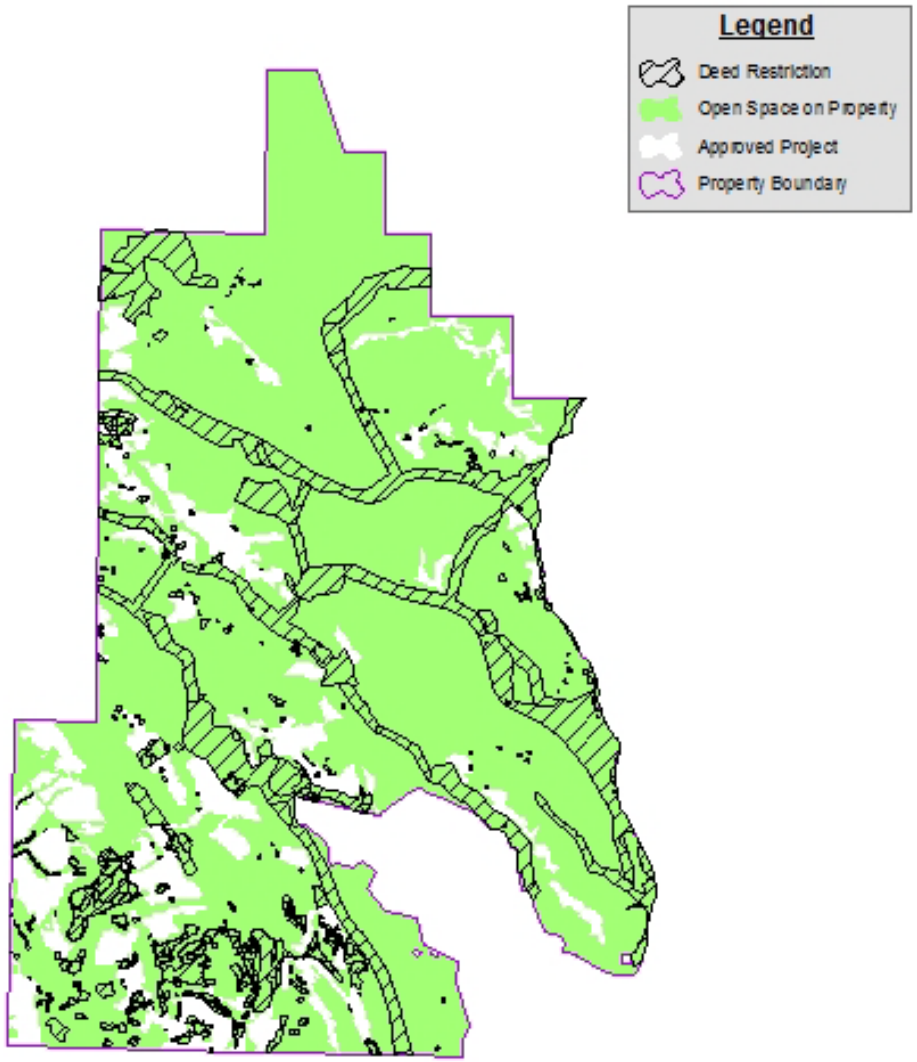
Wildlife Corridors



- Conservation Easement – EIR required **permanent preservation** to offset impacts
- Open Space on Property – **1,984 acres untouched**
- Riparian corridors ranging from 100 to 300 feet wide

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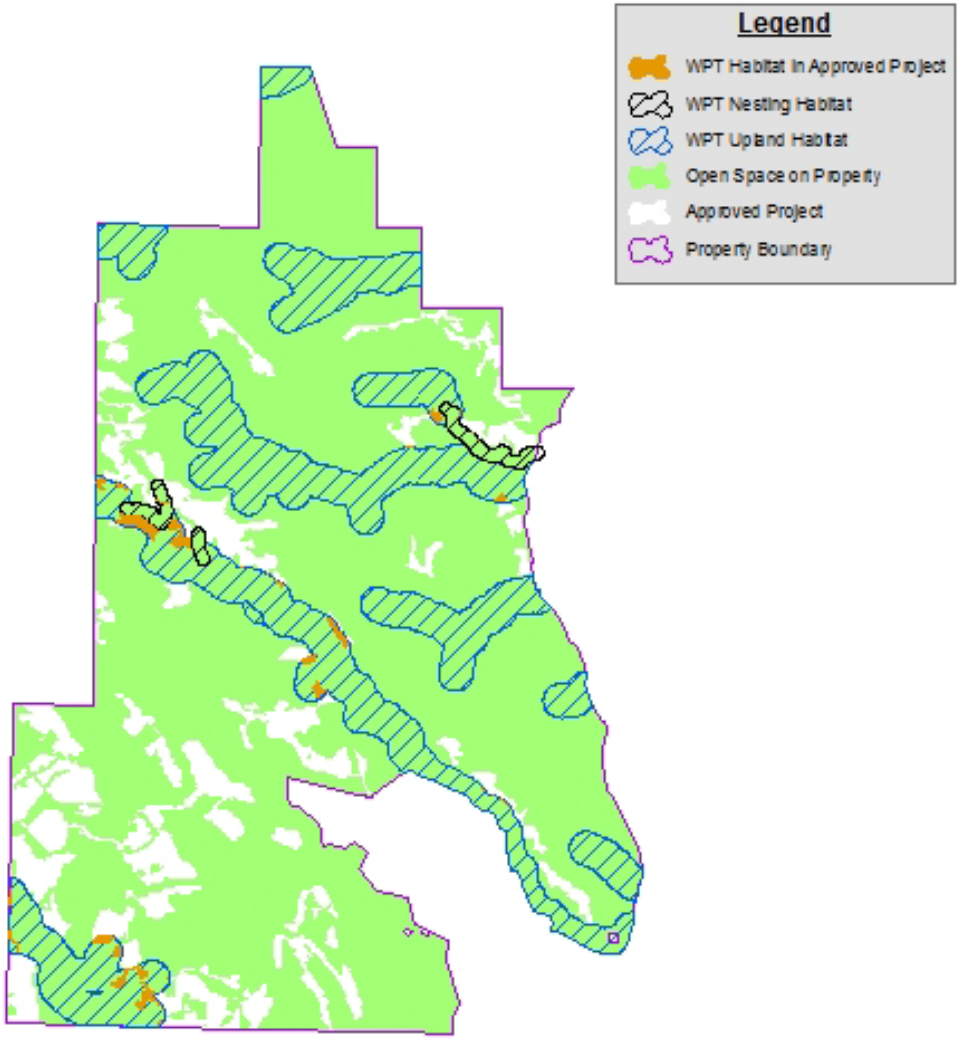
Reptiles and Amphibians



WPT Protective Measures:

- Avoidance of 96.8% of habitat (513.6 acres)
- Preconstruction surveys
- Worker training
- BMPs for chemicals to minimize drift
- Turtle exclusionary fencing

CRLF and FYLF Measures:

- Invasive Species Management
- Worker training
- Stream setbacks from habitat
- Limitations on pile burning
- Frog exclusionary fencing

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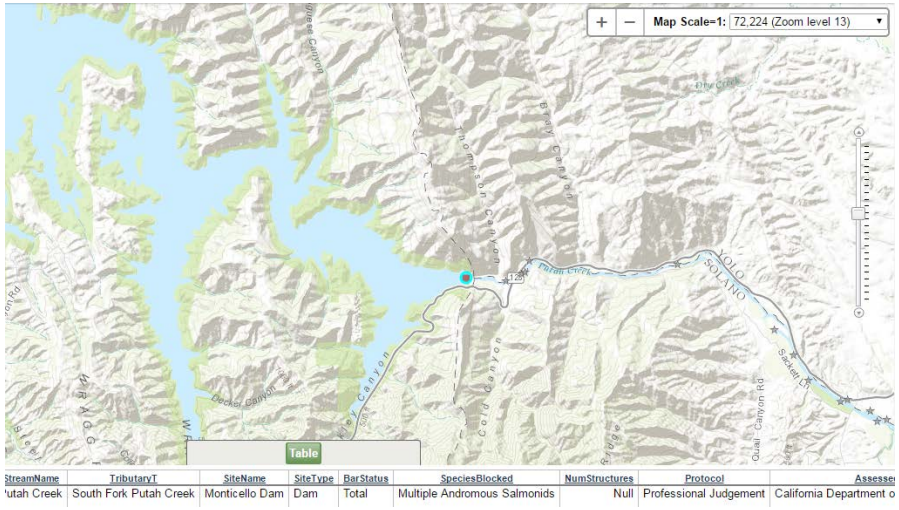
Fisheries

StreamName	TributaryT	SiteName	SiteType	BarStatus	SpeciesBlocked	NumStructures	Protocol	AssessedBy
Milliken Creek	Napa River	Milliken Falls	Non-structural	Total	Multiple Andromous Salmonids	Null	Field Survey	Napa County Resource Conservation Dis

CDFW's Passage Assessment Database – no fish passage to Walt Ranch



StreamName	TributaryT	SiteName	SiteType	BarStatus	SpeciesBlocked	NumStructures	Protocol	Assesse
utah Creek	South Fork Putah Creek	Monticello Dam	Dam	Total	Multiple Andromous Salmonids	Null	Professional Judgement	California Department o

- Difference between rainbow trout and steelhead trout
- Impassable barriers downstream – **special-status fish cannot access**
- Sediment hurts salmon spawning
- Impact 4.2-15 looked at sediment impacts to downstream spawning

Existing road crossing waters of the U.S. on Walt Ranch

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Other Species

Other Species	On Walt Ranch?	Conclusion
Northern California Black Walnut	Yes – in and around Block 37	Significant impact – Mitigation Measure 4.2-5; 100% avoidance in Approved ECP
Contra Costa Goldfields	Critical Habitat – yes Actual habitat – avoided	No significant impacts
Valley Elderberry Longhorn Beetle	No – focused surveys by entomologist	No significant impacts
White-tailed Kite	Yes – forage over property	Significant impact – Mitigation Measure 4.2-13
Peregrine Falcon	No – no nesting habitat	No significant impact – still protected via Mitigation Measure 4.2-13

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Biological Resources – Mitigation

- **Avoidance:** EIR removed 78 acres from the project (15 percent of requested land); even more avoided with design of final Approved Project (38 percent less than original request)
- **Preservation:** place land into conservation easement for protection of plants, habitats, and animals
- **Mitigation:** replanting required for special status plants, for native grasslands, and for specimen trees
- Long-term Management: Biological Resources Management Plan (BRMP)

Cultural Resources

- **Cultural Resources Investigation:**
  - site survey,
  - consultation with Native American Heritage Commission, and
  - review of California Historical Resources Information System
- **6 cultural resources identified** on project site; mitigation requires avoidance of all sites

Geology and Soils – Stability

- **Stability/Landslide Risk:** Capell Creek portion of property mapped as Great Valley Sequence; Milliken Creek portion is Sonoma Volcanics
- Site-specific engineering evaluation (including test pits) resulted in specific recommendations for 29 vineyard blocks
- Highway 121 Landslide
- Allegations of draining directly onto active landslides

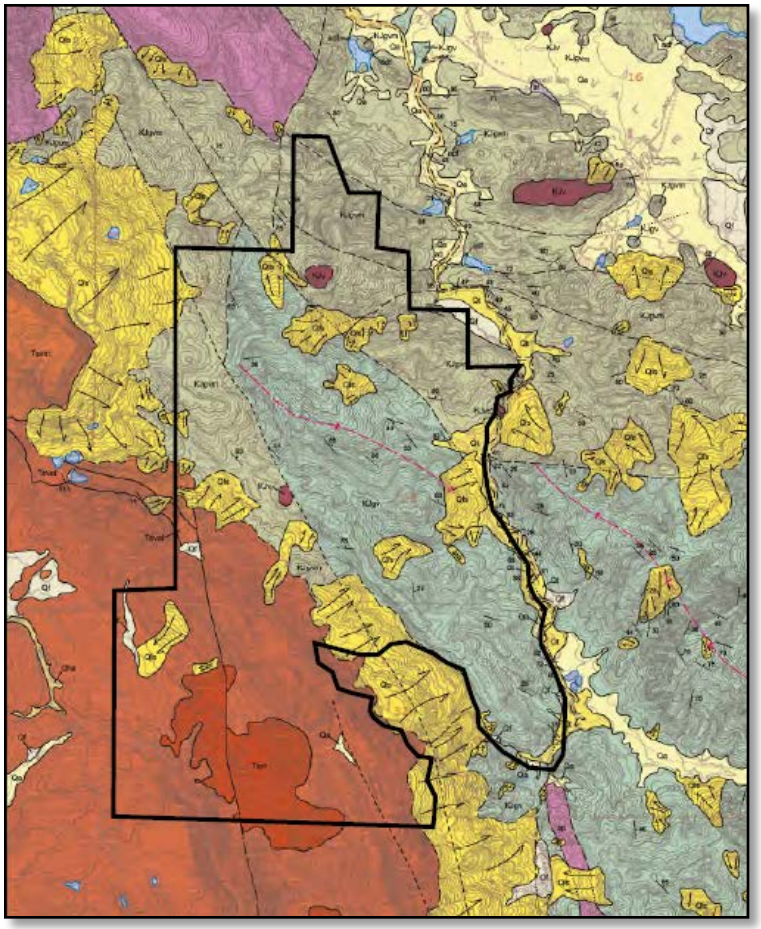

Photo Courtesy of Gilpin GeoSciences, Inc.

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Geology and Soils – Erosion

- **Erosion/Sedimentation:** grading and earthmoving could loosen topsoil and result in erosion
- ECP includes measures to prevent erosion or prevent it from entering receiving waters
- Milliken Creek watershed would have **43 percent reduction** from existing conditions
- Capell Creek watershed would have **13 percent reduction**

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Hazardous Materials

- **Construction:** Risk of hazardous materials (oils, lubricants) entering natural environment
- **Operation:** Use of pesticides, fertilizers, and herbicides on vineyards
- Overall risk to Milliken Reservoir due to vineyards
- **Mitigation Measures:** HMBP, limits to construction equipment, IPM, Napa County Agricultural Commissioner rules

Hydrology and Water Quality – Surface Water

- Portion of project is located in Milliken Creek watershed, which flows to Milliken Reservoir (City of Napa water supply)
- Project meets all County requirements for hydrology:
  - No-Net-Increase in runoff volume
  - No-Net-Increase in runoff rate
  - 60/40 Rule for vegetation removal
  - Decrease in sedimentation
- Water Quality Monitoring Plan – **additional protective measure** at request of City of Napa

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Hydrologic Soil Group Testing

Undisturbed Soil on Walt Ranch – 6 inches deep

Soils Post-Ripping and Blasting – 22 inches deep

- HSG is determined by soil depth and infiltration
- Hydrology Modeling based on permanent increase in depth due to breaking up bedrock – **testing confirmed**

Hydrologic Soil Group Testing

- Appellants claimed ripping would have a temporary effect on infiltration
- Testing confirmed that infiltration is still high after 10 years and increased depth is permanent
- **HSG was actually modified from a "D" to a "B"**

Hydrology and Water Quality– Groundwater

- Proposed Project would have used 213.5 acre-feet (AF) of water per year
- Mitigated Project would use 187 AF per year
- Approved Project would use only **144.5 AF per year**

- Project site not hydrologically connected to Milliken-Sarco-Tulocay (MST) groundwater deficient area

- Potential impacts identified to neighboring wells due to draw-down; Groundwater Mitigation Plan with mitigation options that Napa County will determine

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Groundwater Mitigation Options

a. reducing the instantaneous pumping rate in all or in selected project wells (the specific wells will be determined by the RCS geologist after determining which project wells may be causing the impact);
b. reducing the volume of groundwater pumped in each irrigation season by all or by selected project wells (the specific wells will be determined by the Geologist after determining which project wells may be causing the impact;
c. shifting of the rates and/or volumes of groundwater extraction by existing project wells to different portions of the subject property;
d. ceasing production from certain onsite wells and replacing that lost production by constructing new onsite wells at the project property;
e. lowering the pump, if possible, in an offsite well that has been shown to have been impacted;
f. constructing a new water well to replace an offsite well that has been shown to have been impacted; and/or
g. providing an alternative source of water to the owner of the impacted well in order to allow the owner to maintain the quantity and quality of the groundwater that has been otherwise lost by the impacts.

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Transportation and Traffic

- Proposed Project would use public roadways, including SR 121 and Circle Oaks Drive
- EIR estimated traffic due to project, and current capacity of local roadways that would receive project-related traffic
- Safety concerns due to large trucks entering roadways
- Condition of Circle Oaks Drive
- Condition of Approval – **all construction equipment routed away from Circle Oaks Drive**

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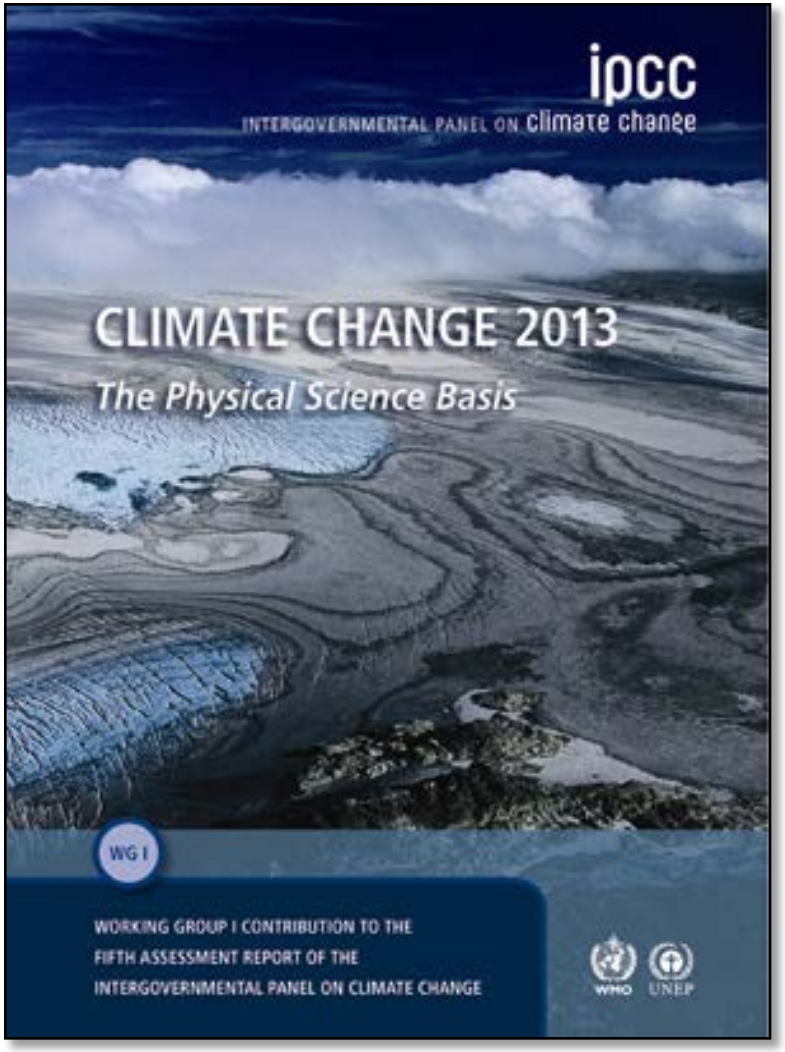
Noise

- Noise will be emitted during construction and operation
- Construction noise limited by Napa County Noise Ordinance – mitigation measures
  - Noise was found to be significant if it occurred within 150 feet of a residence – no more blocks proposed that close to any existing houses
- Operation noise protected via Napa County Right to Farm law

Photo Courtesy of KokomoWinery.WordPress.com

Climate Change

- **Greenhouse gas (GHG) emissions quantified** for both construction and operation of the Proposed Project using CARB- and BAAQMD-approved methodologies
- **Emissions compared to significance threshold** (adopted Climate Action Plan and the BAAQMD CEQA Guidelines)
- **Mitigation:** onsite preservation of woodland to provide permanent carbon sequestration



Climate Change

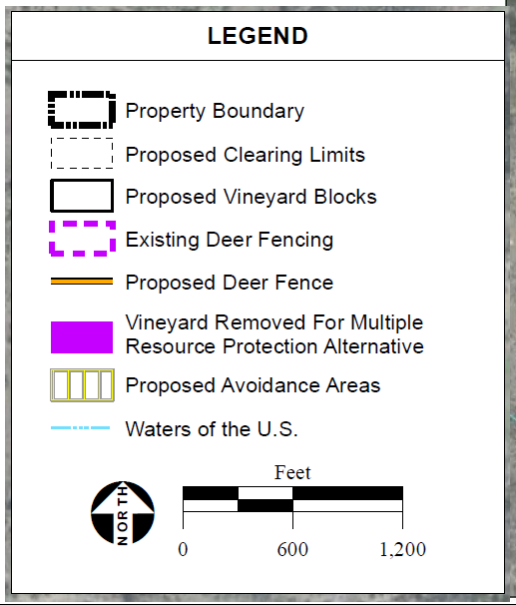
- Evolution of Analysis:
  - 2014 Draft EIR Analysis: utilized Solano County Climate Action Plan
  - 2015 Comparison to Circle S Project: Walt Ranch analysis, even though followed BAAQMD recommendations to not include biogenic emissions, had larger emissions on a per-acre basis than Circle S
  - 2016 Update for Mitigated Project and Newhall Ranch Decision: used a significance threshold that showed less-than-significant impact

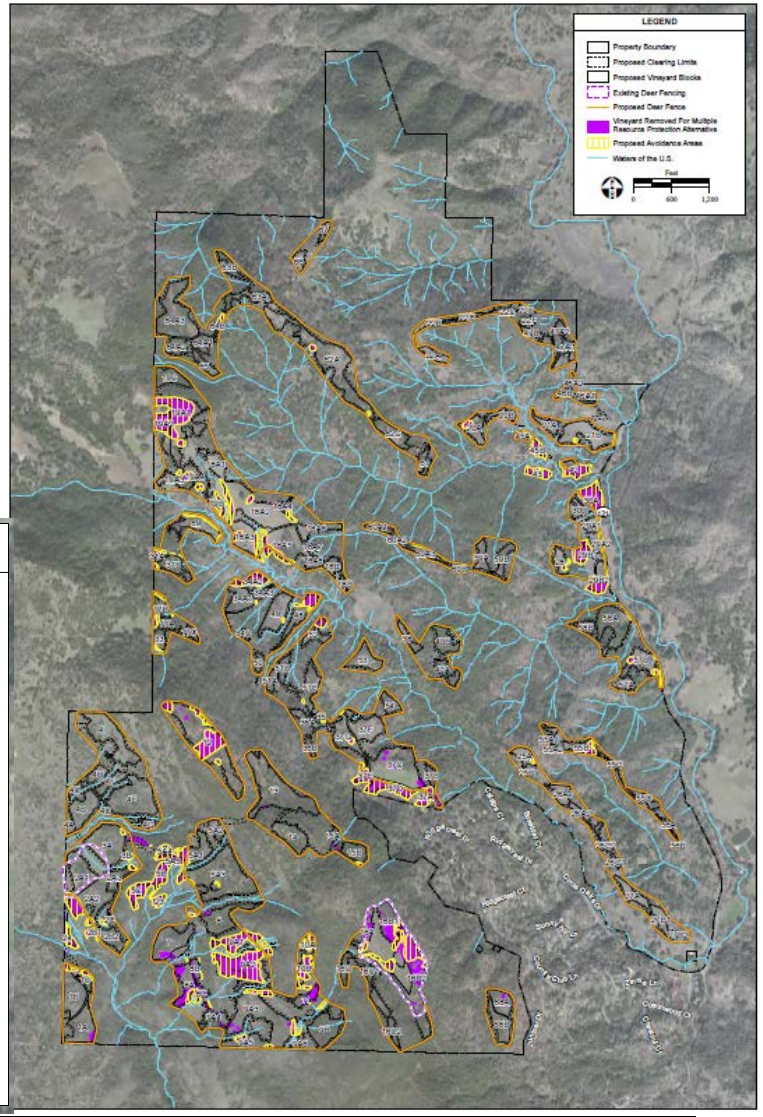
	2012 Proposed Project	**Multiple Resource Protection Alternative**	**Reduced Intensity Alternative**	**2016 Approved Project**
GHG Emissions (unmitigated construction)*	37,576 MT of CO_2e	32,623 MT of CO2e	30,378 MT of CO2e	20,154 MT of CO2e

*Note: Tailpipe emissions for all four project variations were assumed to be the same as the larger Proposed Project, resulting in conservative estimates.

Alternatives to the Proposed Project

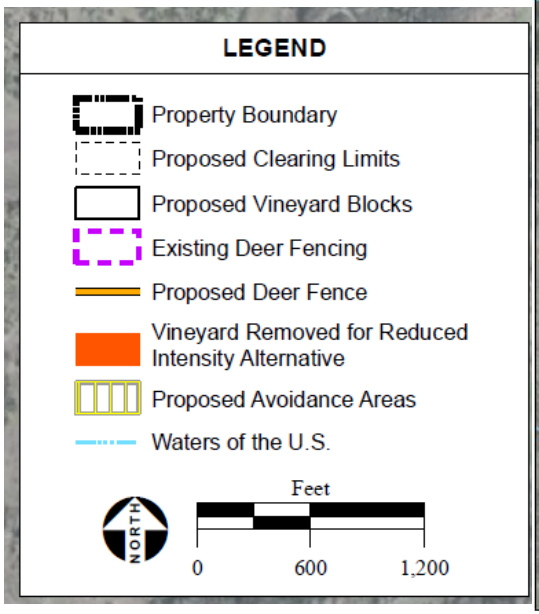
- **Multiple Resources Protection Alternative**

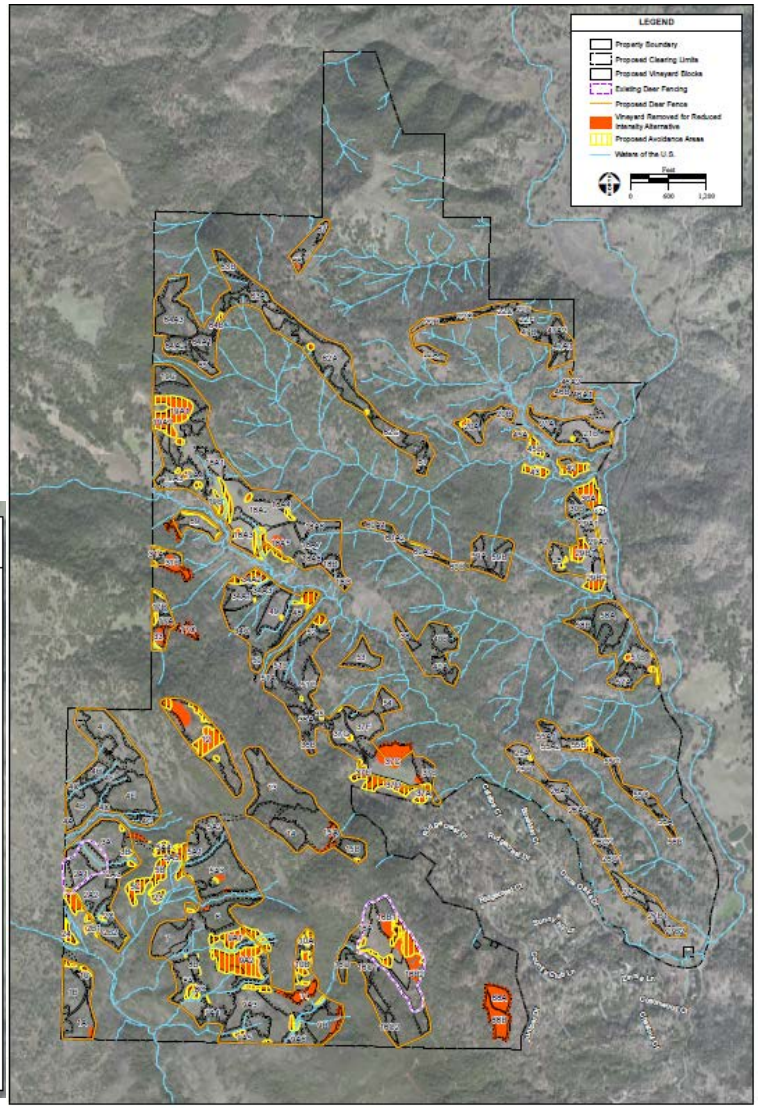




Alternatives to the Proposed Project

- **Reduced Intensity Alternative**





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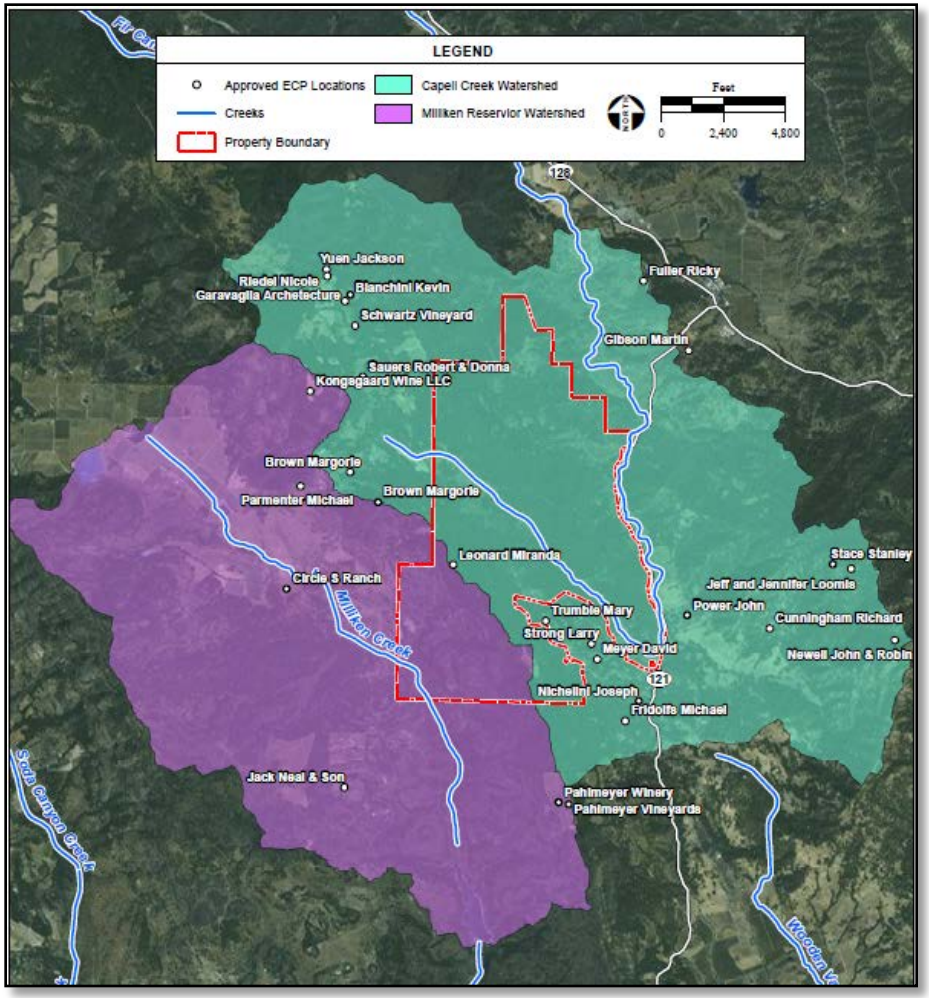
Impact Comparison

TABLE 15 OF THE BRMP (UPDATED WITH FINAL ECP)
IMPACT COMPARISON BETWEEN THE MITIGATED PROJECT AND ALTERNATIVES

		Final ECP (209 net acres)			Mitigated Project			Reduced Intensity Alternative			Multiple Resource Protection		
	Acres Onsite	Acres Avoided in Final ECP 7-5-16	Acres Proposed for Removal in Final ECP 7-5-16	Mitigation Acreage Required for Final ECP 7-5-16	Acres Avoided	Acres Proposed for Removal (Mitigated Project)	Mitigation Acreage Required (Mitigated Project)	Acres Avoided	Acres Proposed for Removal (RIA)	Mitigation Acreage Required (RIA)	Acres Avoided	Acres Proposed for Removal (MRP)	Mitigation Acreage Required (MRP)
Habitats													
Native Grassland	9.8	8.9	0.9	1.9	8.7	1.1	2.2	8.9	0.9	1.8	9	0.8	1.6
Black Oak Alliance	317.5	301.1	16.4	32.8	281.7	35.7	71.4	298.7	18.8	37.6	282.5	34.9	69.8
Blue Oak Alliance	18.5	16.3	2.2	4.3	15.9	2.6	5.2	15.9	2.6	5.2	15.9	2.6	5.2
Coast Live Oak (Foothill Pine) Alliance	129.3	110.4	18.9	37.8	109.2	20.1	40.2	109.4	19.9	39.8	109.2	20.1	40.2
Coast Live Oak-Blue Oak- (Foothill Pine) NFD Association	728.7	671.5	57.2	114.3	628.5	100.2	200.4	629.3	99.4	198.8	628.6	100.2	200.4
Mixed Oak (Foothill Pine/Ponderosa Pine) Alliance	461.9	397.8	64.1	128.2	358.1	103.8	207.6	359.9	102.1	204.2	358.5	103.4	206.8
Valley Oak Riparian Forest NFD Association	30.8	30.8	0	NR	30.8	0	NR	30.8	0	NR	30.8	0	NR
Woodland (Non-Oak) Canopy Cover	10.6	10.2	0.4	0	10.1	0.5		10.4	0.2		10.4	0.2	
Plants													
Narrow-anthered California brodiaea	41.8	33.9	7.8	7.8	33.2	8.6	8.6	33.9	7.8	7.8	35.6	6.2	6.2
Holly-leaved ceanothus	68.4	58.1	10.3	10.3	55.2	13.3	13.3	56.6	11.8	11.8	56.7	11.7	11.7
Green monardella	4.5	3.8	0.7	0.7	2.5	2.1	2.1	3.7	0.9	0.9	2.7	1.9	1.9
Gairdner's yampah	9	7.7	1.3	1.3	7	2	2	7.3	1.7	1.7	7.1	2	2
Narrow-leaved daisy	6 populations	5 populations	1 population	1 population	5 populations	1 population	1 population	5 populations	1 population	1 population	5 populations	1 population	1 population
Northern California black walnut	10 individuals	9 individuals	1 individual	0	8 individuals	2 individuals	5.2 acres	8 individuals	2 individuals	5.2 acres	8 individuals	2 individuals	5.2 acres
Specimen Trees	108 trees	90 trees	18 trees	90 trees	74 trees	34 trees	170 trees	85 trees	23 trees	115 trees	84 trees	24 trees	120 trees

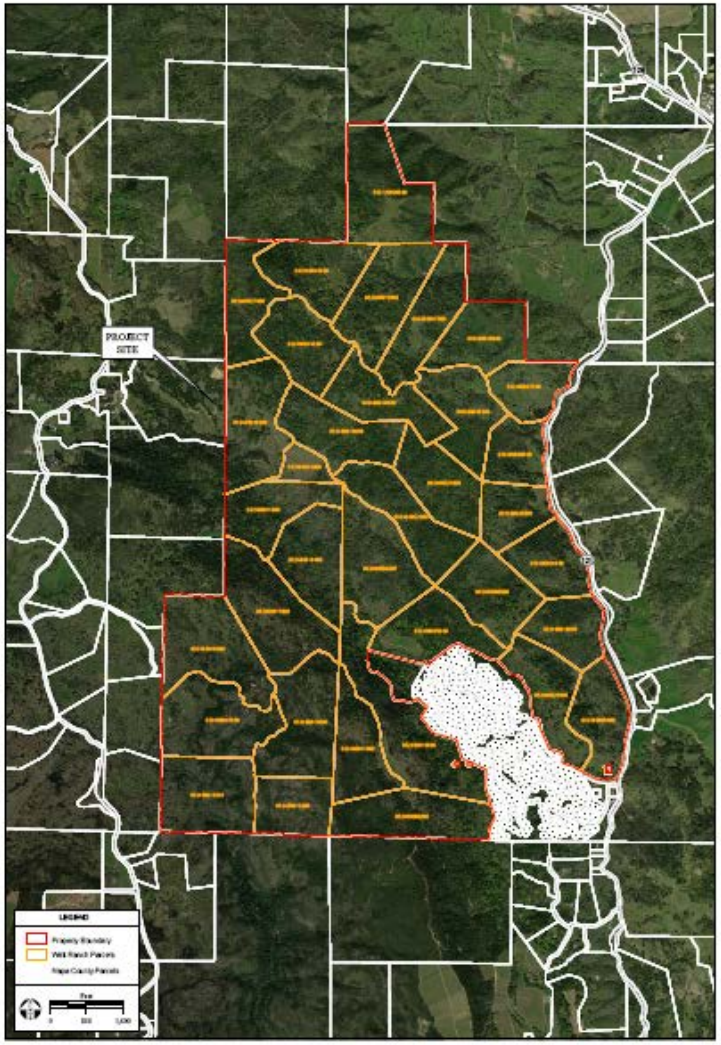
Cumulative Impacts



- Cumulative impacts reviewed for **each environmental area** discussed above
- **Geographic area** considered for each topic varied (i.e. watershed versus air basin)
- **Two-step process** used to determine cumulative significance

Growth Inducement

- Growth Inducement definition per CEQA *Guidelines* § 15126.2(d)
- Existing road network would be realigned or upgraded – no paved roads proposed
- Wells and irrigation lines constructed for vineyards
- Vineyards were sited to provide high-quality wine grapes



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Evolution of Impacts

	2012 Proposed Project	Multiple Resource Protection Alternative	Reduced Intensity Alternative	2016 Approved Project
Gross acres	507 acres	425 acres	407 acres	316 acres
Net acres	356 acres	287 acres	275 acres	209 acres
Tree Removal	28,616	25,048	23,580	14,281
Groundwater Use	213.5 acre-feet	183.5 acre-feet	177.5 acre-feet	144.5 acre-feet
GHG Emissions (unmitigated construction)*	37,576 MT of CO_2e	32,623 MT of CO_2e	30,378 MT of CO_2e	20,154 MT of CO_2e

*Note: Tailpipe emissions for all four project variations were assumed to be the same as the larger Proposed Project, resulting in conservative estimates.

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Revised Conditions of Approval

- CoA #2: requires Applicant and any future property owner to fully comply with MMRP; revises/clarifies conditions in MMRP and in PBES Director's approval package
- CoA #10: requires compliance with August 2016 Water Quality Monitoring Program
- CoA #15: ensure groundwater pumping and compliance with GWMMP
- CoA #16: require testing of HSG where modeling took credit for modification of HSG "D" to HSG "C" and provides contingency plan for if soil modification does not occur as expected

RiverSmith – Hydrology

HYDROLOGIC ANALYSIS OF PROPOSED VINEYARD BLOCKS WITHIN THE WALT RANCH PROPERTY, NAPA COUNTY, CALIFORNIA

Prepared For:

PPI ENGINEERING

2931 Solano Avenue
Napa, CA 94558
707.253.1806

REGISTERED PROFESSIONAL ENGINEER
THOMAS E. SMITH
No. 20,525
exp 9.30.13
CIVIL
STATE OF CALIFORNIA

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RiverSmith ENGINEERING

Richard C. Slade & Associates LLC

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Anthony Hicke, PG, CHG

- Senior Groundwater Geologist, 15 yrs exp.
- California Professional Geologist #7886
- California Certified Hydrogeologist #858

RCS active in Napa Valley since 1983

- Siting, Designing, Constructing, Testing Water Wells
  - 200+ projects, scores of wells designed and tested
- Evaluating the groundwater resource potential within fractured volcanic rocks
- RCS has obtained considerable experience and knowledge of groundwater flow and quality within irregularly patterned, fractured-rock aquifer systems.

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Work by RCS for EIR Process

Described Hydrogeology of the Site

Summarized Existing Wells and Performance

Prepared Workplan for Pumping Test

Performed Pumping Test

Determined Aquifer Parameters

Provided Theoretical Drawdown Calculations

Estimated Groundwater Recharge

Met with COCWD

Prepared GW Monitoring and Mitigation Plan

Responded to DEIR and FEIR Comments

RCS

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RCS Discussion Topics

Key Appellant Comments

1. **Groundwater Recharge vs. Proposed Demand**
2. **Possible Project Effects on MST area**
3. **Possible Project Effects on Milliken Creek**
4. **COCWD Groundwater Concerns**
5. **Groundwater Mitigation and Monitoring Plan (GWMMP)**

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GW Recharge

Rainfall Source:		Napa County Isohyets		PRISM Climate Group		CDEC/DWR Atlas Peak Raingage	
Data Date range:		1900-1960		1980-2010		WY1988-89 - WY2013-14	
Deep Perc Percentage Source	Estimated Deep Perc Percentage	Longterm Average Annual Rainfall (in)	Average Annual Recharge Estimate (AF)	Longterm Average Annual Rainfall (in)	Average Annual Recharge Estimate (AF)	Longterm Average Annual Rainfall (in)	Average Annual Recharge Estimate (AF)
Circle S Report by RCS	7%	35	161.3	36.8	169.6	40.0	184.3
LSCE&MBK 2013	8%	35	184.3	36.8	193.8	40.0	210.7
USGS 1977 and USGS 2003	9%	35	207.4	36.8	218.0	40.0	237.0
Nonner 2002, LSCE&MBK 2013	10%	35	230.4	36.8	242.3	40.0	263.3
BHFS 2012	10.5%	35	241.9	36.8	254.4	40.0	276.5

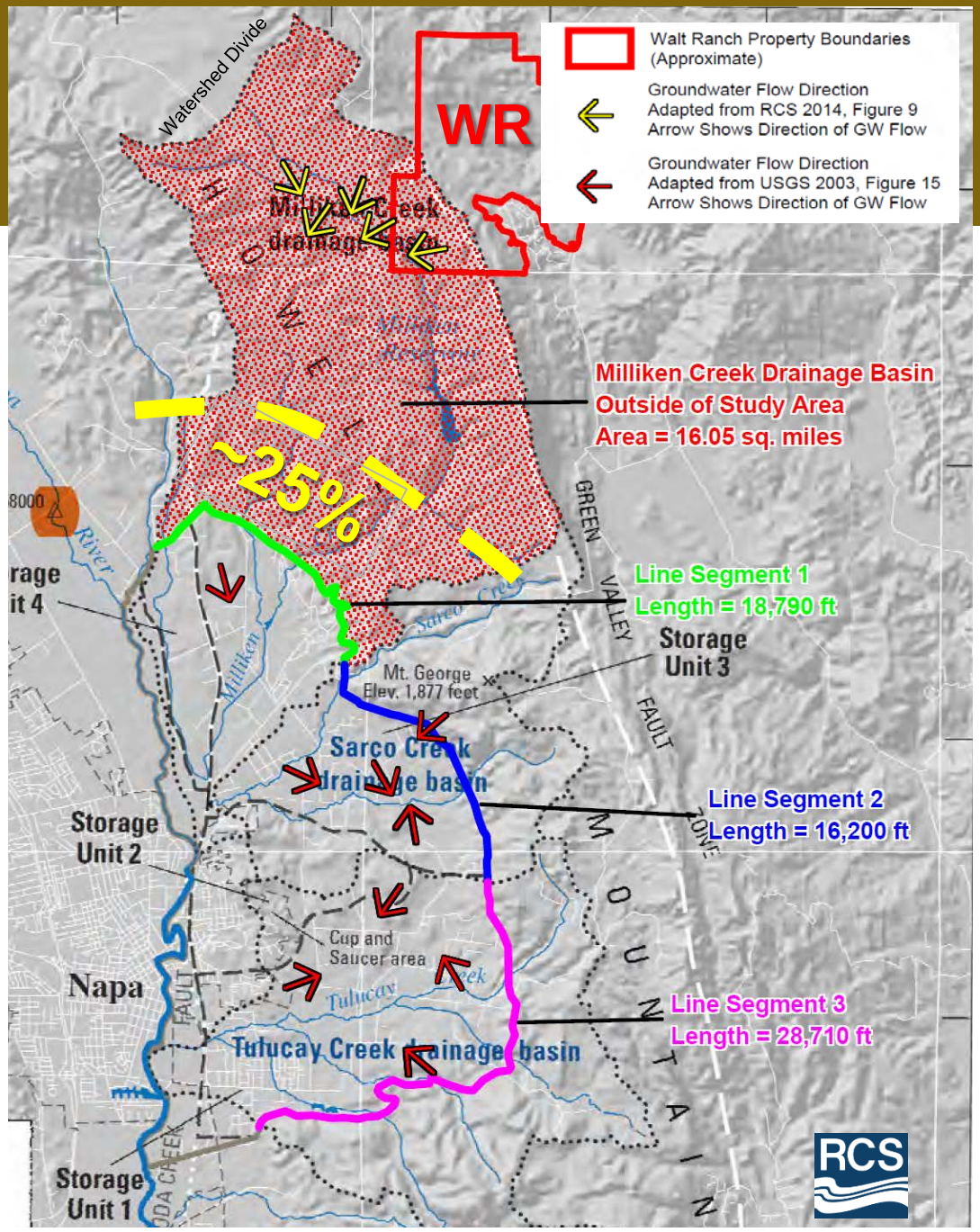
Adapted from Table A in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q)

Project Groundwater Demand = 144.5 AF/yr

RCS

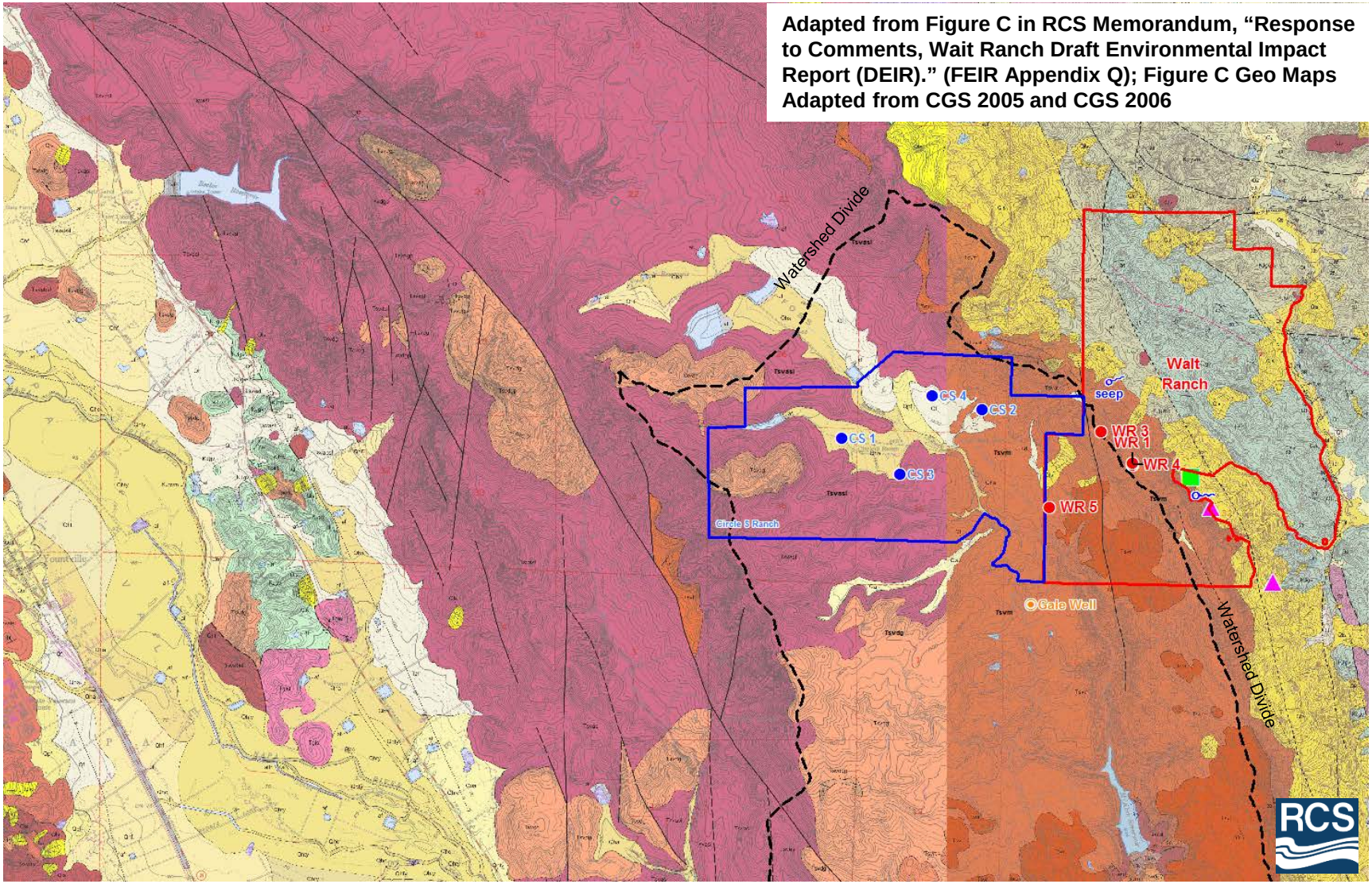
Possible MST Effects

- Underflow along entire MST boundary – **2,100 AFY** (USGS 1977)
- Underflow along green Boundary – **610 AFY** (estimated)
- Estimated recharge Milliken Ck Watershed – **2,688 AFY**
- **610 AFY ÷ 2,688 AFY ~ 25%**



Adapted from Figure H in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q); Figure H basemap adapted from USGS 2003, Farrar & Metzger).

Possible Effects on MST

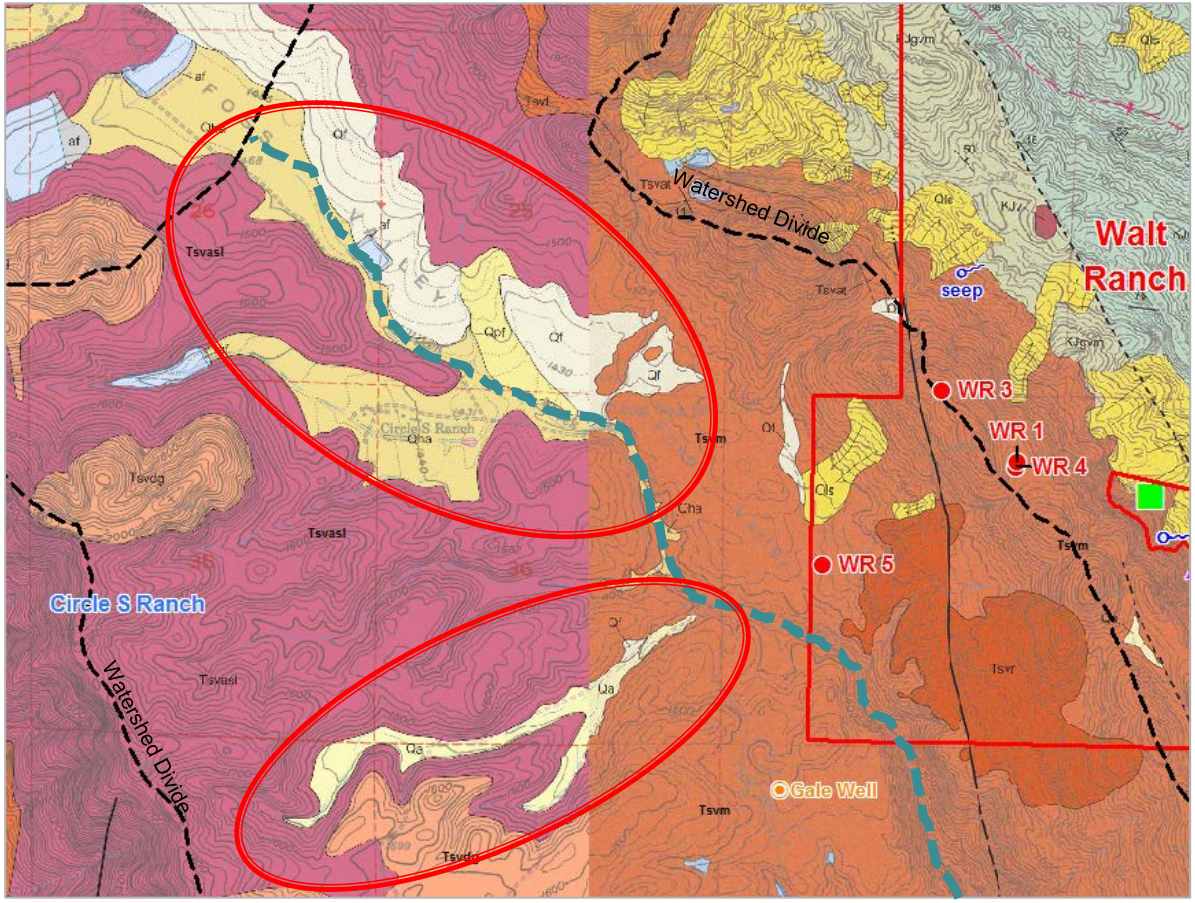


Adapted from Figure C in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q); Figure C Geo Maps Adapted from CGS 2005 and CGS 2006

Lack of Milliken Creek Impacts

Milliken Creek Is Ephemeral; No Alluvium at WR

Milliken Creek Disconnected at Walt Ranch



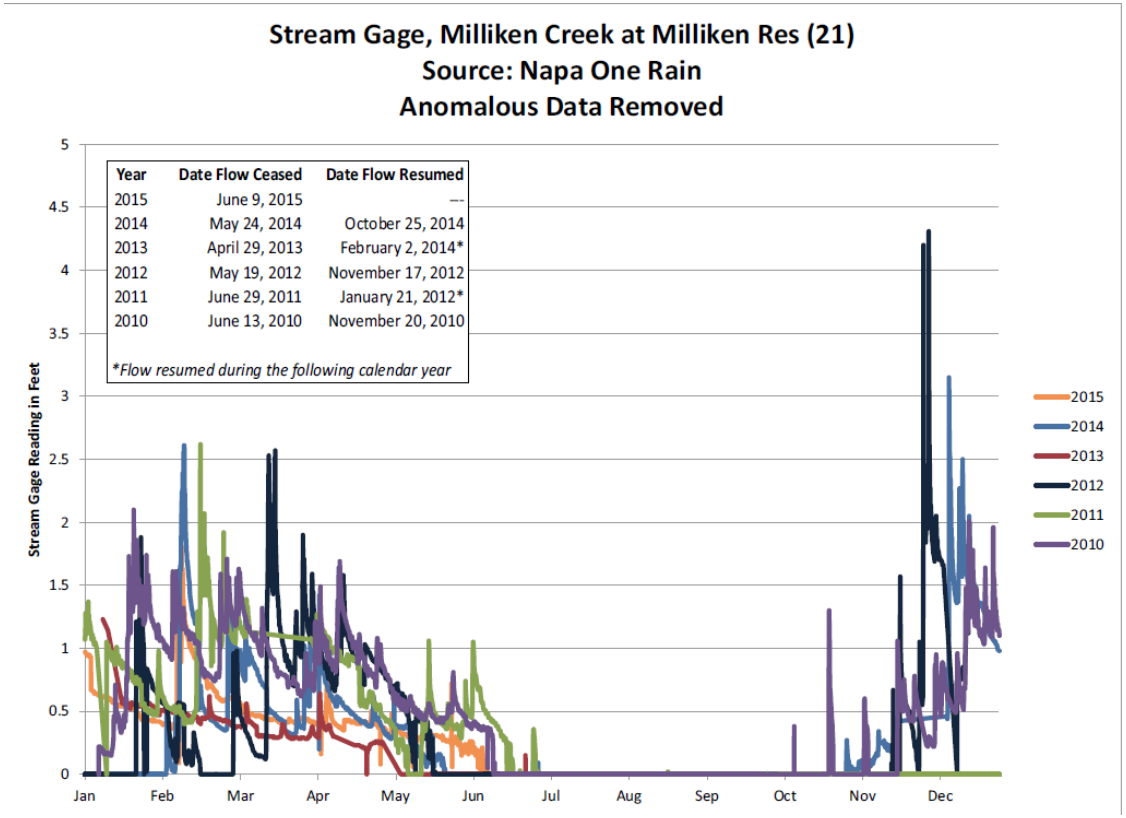
- "Not Connected if dry" (USGS 2013)
- "Ephemeral streams therefore are frequently disconnected" (Brunner 2011)
- **not hydraulically connected**

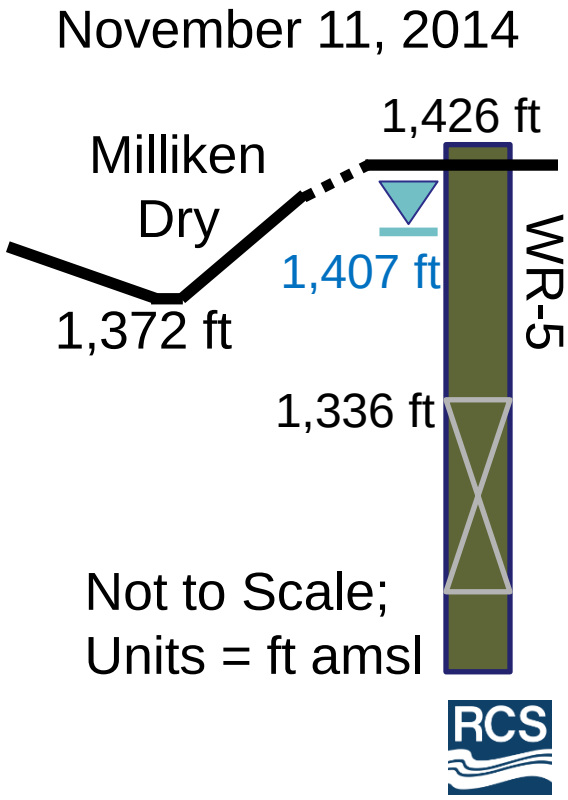
Adapted from Figure C in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q); Figure C Geo Maps Adapted from CGS 2005 and CGS 2006

Possible Effects on Milliken Ck

Milliken Creek Is Ephemeral

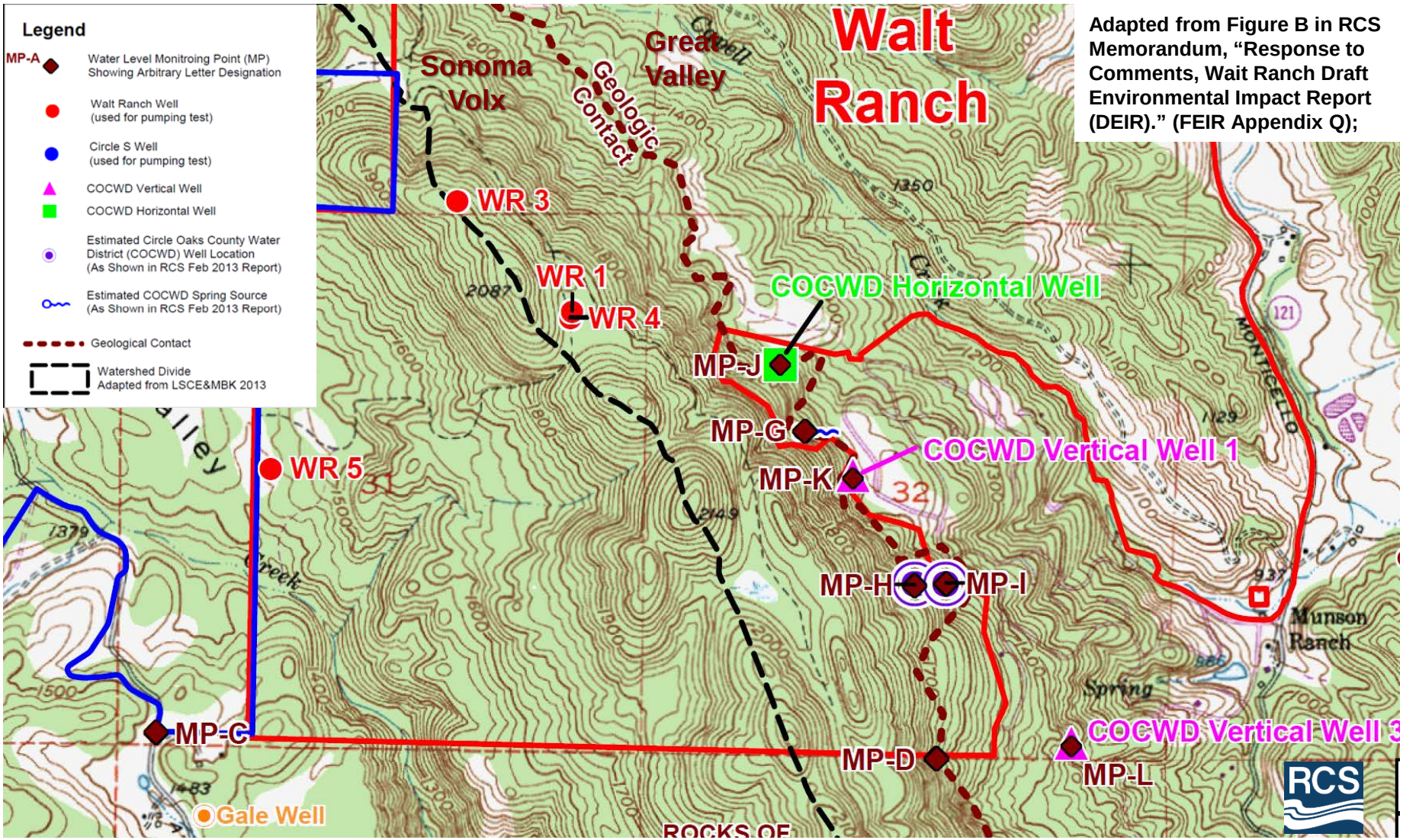
Milliken Creek Disconnected at Walt Ranch





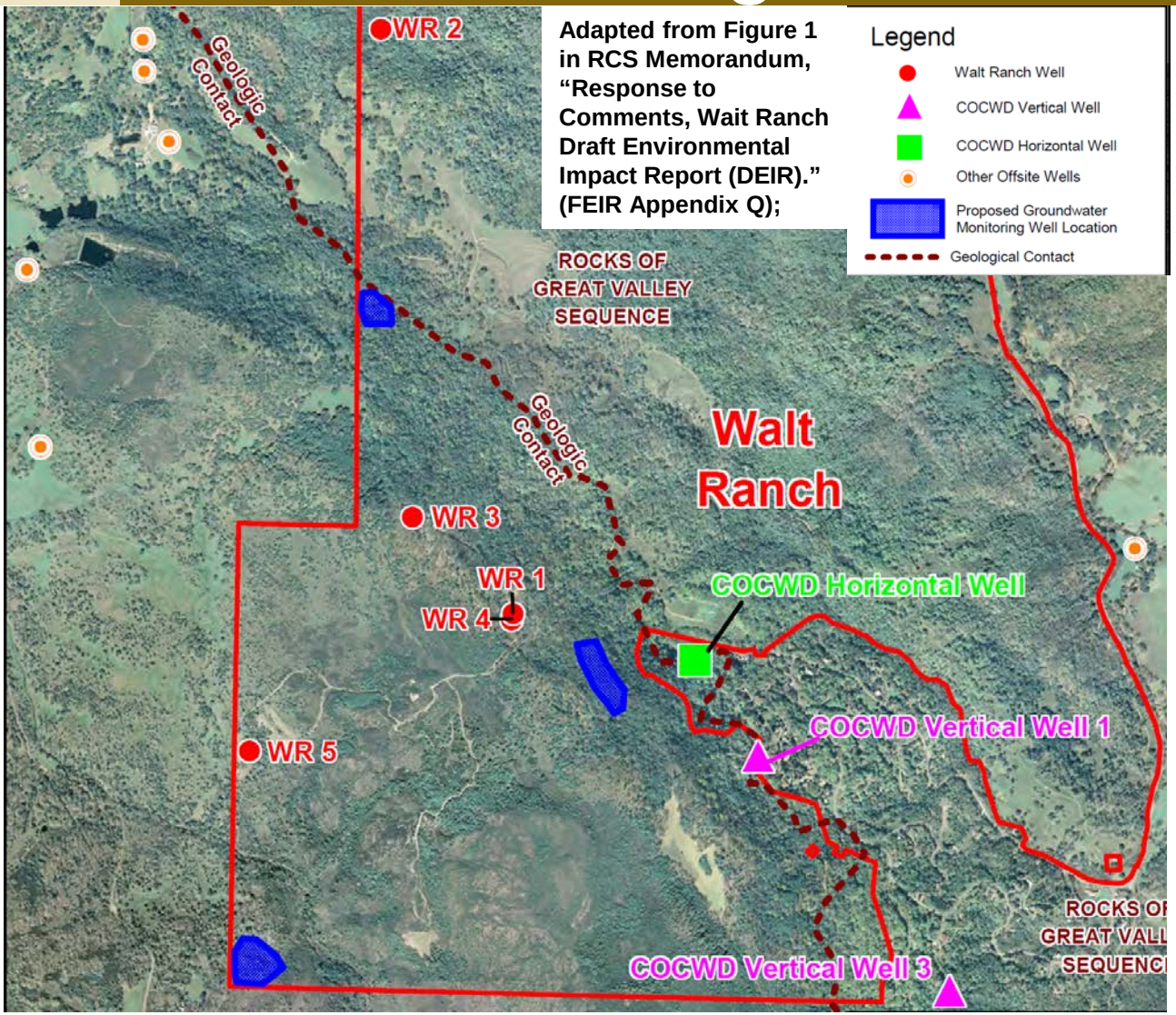
Adapted from Figure G in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q)

COCWD GW Concerns



Adapted from Figure B in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q);

Groundwater Monitoring and Mitigation Plan



Met with COCWD and Hall Personnel

Baseline Data Collection Ongoing

- Walt Ranch monitoring since 2011
- COCWD now monitoring

Groundwater Monitoring and Mitigation Plan

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QUOTED FROM GWMMP – Specific Mitigation Measures

a. reducing the instantaneous pumping rate in all or in selected project wells (the specific wells will be determined by the RCS geologist after determining which project wells may be causing the impact);

b. reducing the volume of groundwater pumped in each irrigation season by all or by selected project wells (the specific wells will be determined by the Geologist after determining which project wells may be causing the impact;

c. shifting of the rates and/or volumes of groundwater extraction by existing project wells to different portions of the subject property;

d. ceasing production from certain onsite wells and replacing that lost production by constructing new onsite wells at the project property;

e. lowering the pump, if possible, in an offsite well that has been shown to have been impacted;

f. constructing a new water well to replace an offsite well that has been shown to have been impacted; and/or

g. providing an alternative source of water to the owner of the impacted well in order to allow the owner to maintain the quantity and quality of the groundwater that has been otherwise lost by the impacts.

RCS

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Gilpin Geosciences – Geology

- Performed reconnaissance geologic mapping to assist in evaluation of slope stability and to identify “active” landslides. These active slides were given appropriate setbacks for the proposed vineyard development
- Vineyard improvements significantly improve the existing surface runoff control, thereby reducing erosion contribution to watershed and improving global slope stability
- Recommendations include adjusting vineyard drainage to avoid outletting runoff onto erosion susceptible slopes
- Recent Highway 128 Landslide road failure/closure highlights the conservative approach the Walt Ranch design team has taken in the present vineyard development plan

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Conclusions