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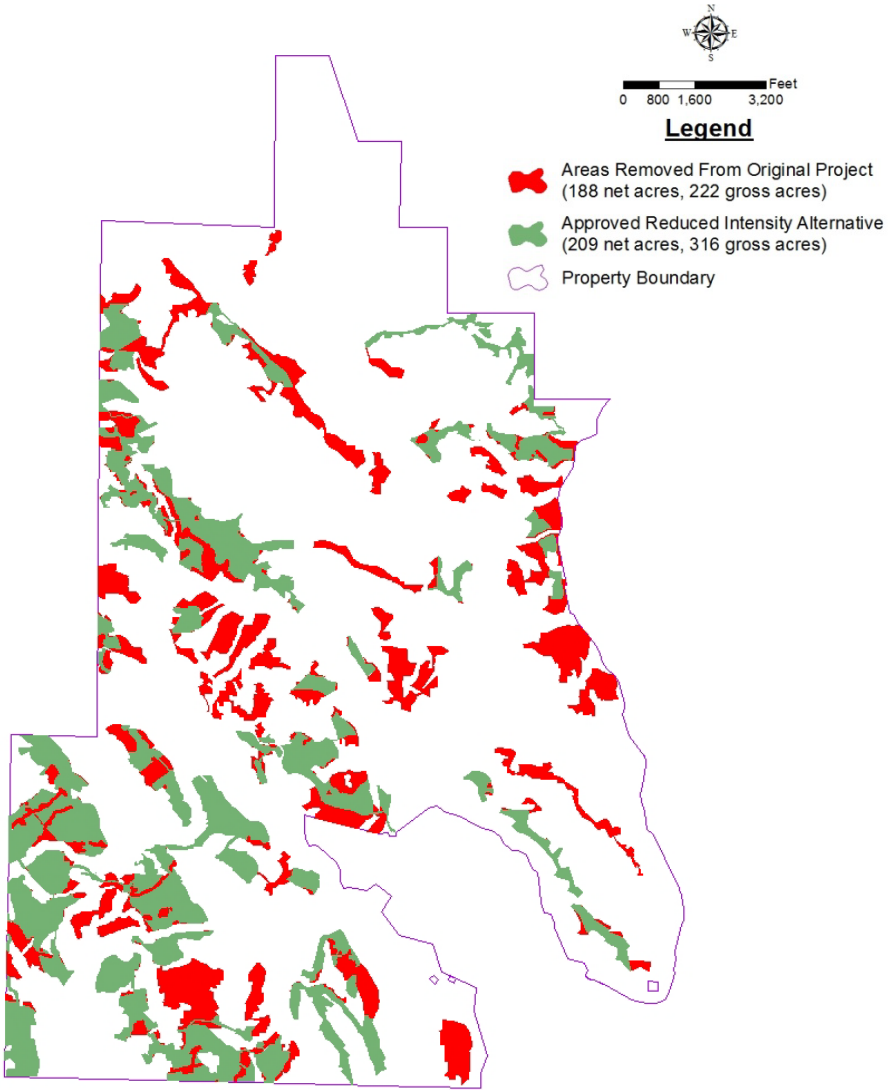
Napa County Planning, Building and Environmental Services

Walt Ranch Appeal Public Hearing

December 6, 2016

Topics to Be (Briefly) Covered Today

- Circle Oaks Road Stability
- Noise Impacts
- Response to Comments
- Water Quality
- Biological Concerns
- Greenhouse Gases
- Hydrology
- Groundwater



Circle Oaks Drive Stability

- Circle Oaks Drive shows signs of distress in current condition
- Weekly garbage collection delivers significant low-frequency vibration into the underlying landslide
- “I believe **nonstop** travel of even heavy equipment loads is less of an impact on the roads and slope instability than the oscillatory, low-frequency vibrations generated by the constant stopping and starting of the presently used garbage trucks.”
- Applicant’s voluntary weight limit reduction to 64,000 lbs in revised Condition of Approval

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Noise

- **Methodology of Noise Analysis**
- **Ambient Noise Level** – utilized Napa County Baseline Data Report
- **Site-Specific Measurements** – unclear methodology

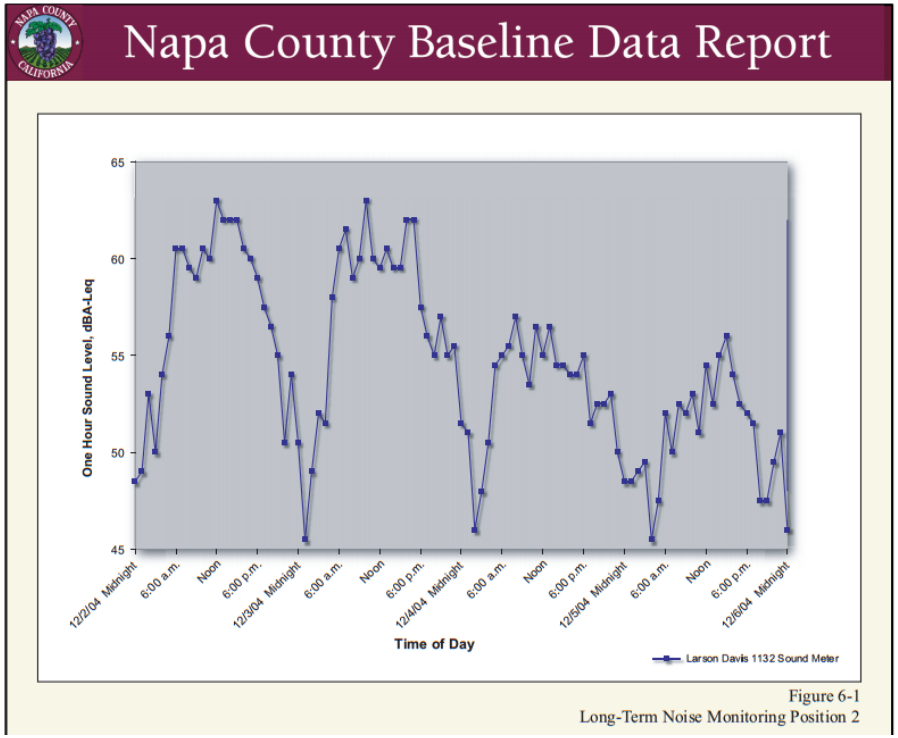

Figure 6-1
Long-Term Noise Monitoring Position 2

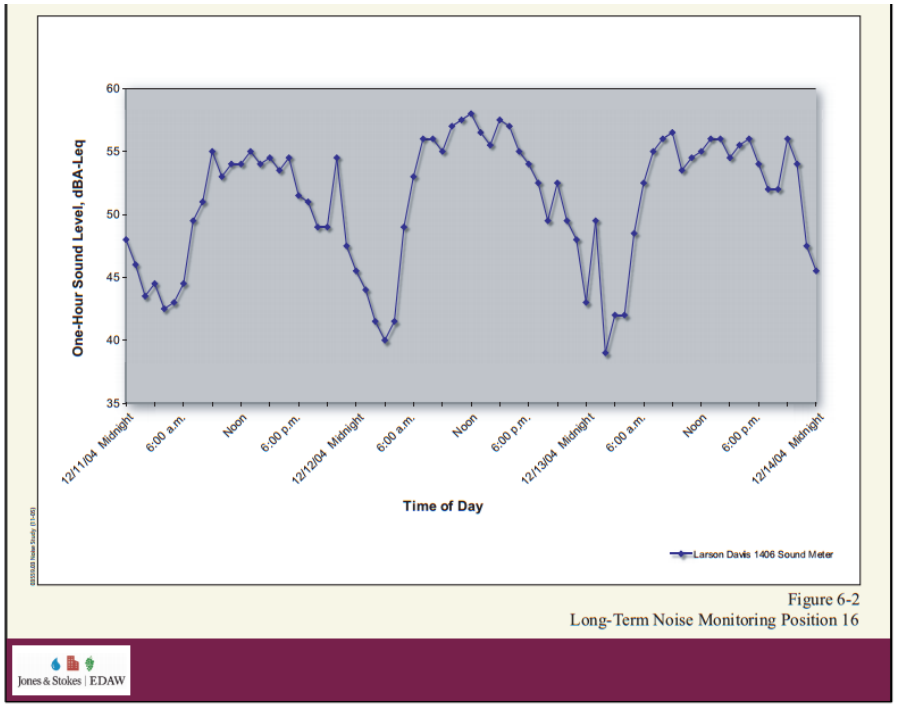

Figure 6-2
Long-Term Noise Monitoring Position 16

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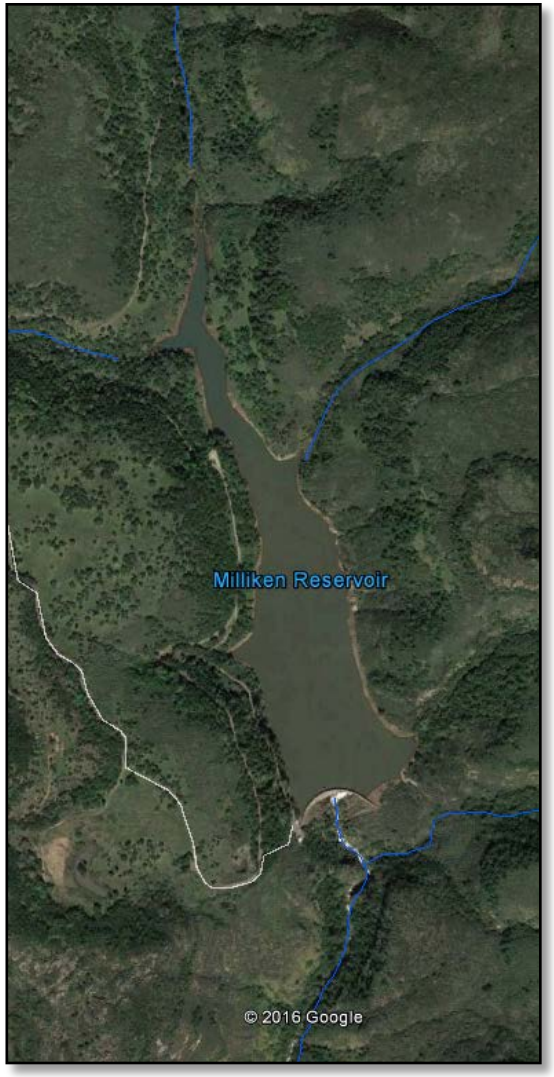
Response to Comments

- **Draft EIR** – 460 pages (1,126 additional pages of technical studies)
- **Comments on Draft EIR** – 3,760 pages of comments
- **Final EIR** – 16 months to bracket, review, and respond to all letters
- **CEQA Guidelines §15132 for Final EIR:**
  - ✓ "The draft EIR or a revision of the draft.
  - ✓ Comments and recommendations received on the draft EIR either verbatim or in summary.
  - ✓ A list of persons, organizations, and public agencies commenting on the draft EIR.
  - ✓ The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
  - ✓ Any other information added by the Lead Agency."
- **Final EIR referred back to Draft EIR only where necessary;** many commenters' points were already somewhere in the EIR or the record

Water Quality

- Constituents to be sampled (**selected by City of Napa**):
  - Temperature
  - Specific conductance
  - Dissolved Oxygen
  - pH
  - Phosphate
  - Ammonia
  - Sulfate
  - Turbidity
  - Non-Organic Pesticides (if applied)
- If thresholds are exceeded for any constituent, **corrective actions** are required
- Nutrients (nitrogen/phosphorus/sulfur) cause cyanobacteria – they will be monitored
- This program will **monitor and resolve** any potential impacts to water quality the project might cause in Milliken Creek and Milliken Reservoir



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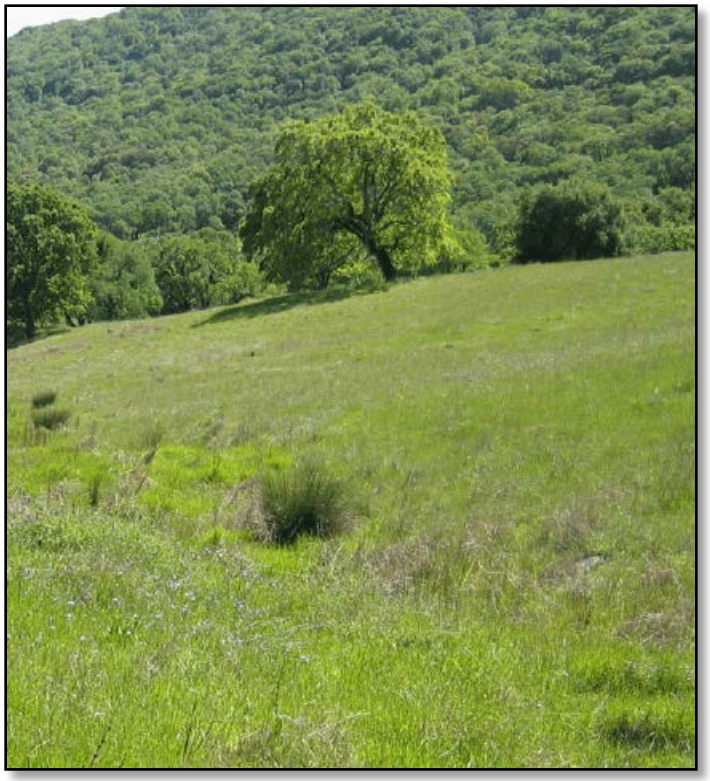
Biology Overview

- Stream setbacks
- Foothill yellow-legged frog
- Qualifications
- Western pond turtle
- Wildlife corridors
- Biological “hotspots”

Biology – Stream Setbacks



Example of a swale on Walt Ranch

- Setbacks from streams range from **55 feet to greater than 150 feet**
- 20-foot setbacks on **swales and other non-stream features** that do not provide appropriate habitat for reptiles and amphibians
- **None of these setbacks** contain the 24-foot turnaround avenue mentioned by Appellants

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Biology – FYLF in Stream Crossings

- FYLF lay eggs on rocks – discussed in EIR
- Egg laying from late March/early April through June
- Project operations
  - Pruning: December – early March (before egg laying)
  - Harvest: August – October (after egg laying), when streams are dry
- No impact to FYLF due to use of stream crossings

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

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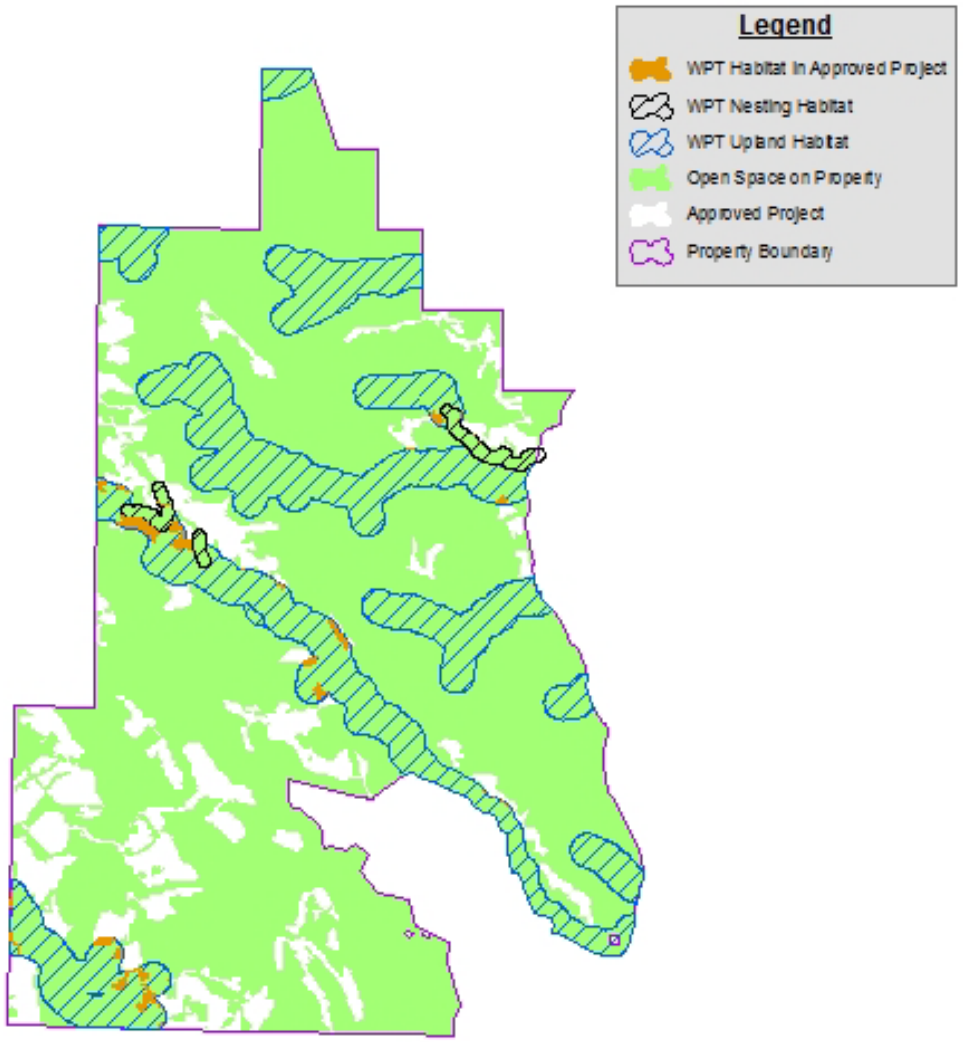
Biology – Qualifications

- Over **25 detailed biological reports** on property over past 10+ years
- Over **50 different biologists** or analysts have contributed to those reports:
  - Wildlife biologists
  - Botanists
  - Wetland biologists
  - Registered professional foresters
  - General biologists
  - Entomologists
  - Other analysts – CRLF survey attendee
- Where USFWS or CDFW require specific specialization, those experts were used

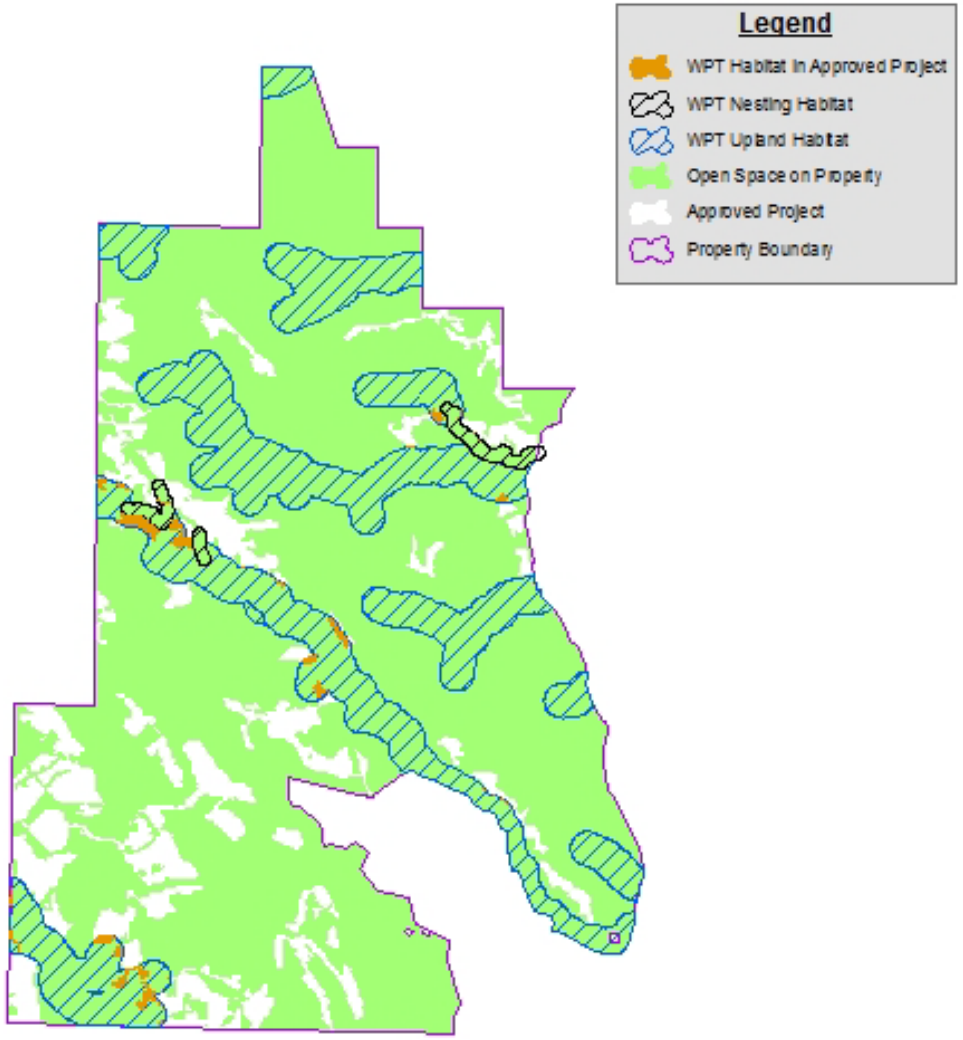
Biology – WPT Habitat



Delineation of Western Pond Turtle (WPT) Habitat:

1. Reviewed all WPT scientific literature
   - ✓ Types of habitats
   - ✓ Distance of movement
2. Developed GIS layers consistent with WPT habitat types and movement data
3. Ground-truthed GIS data

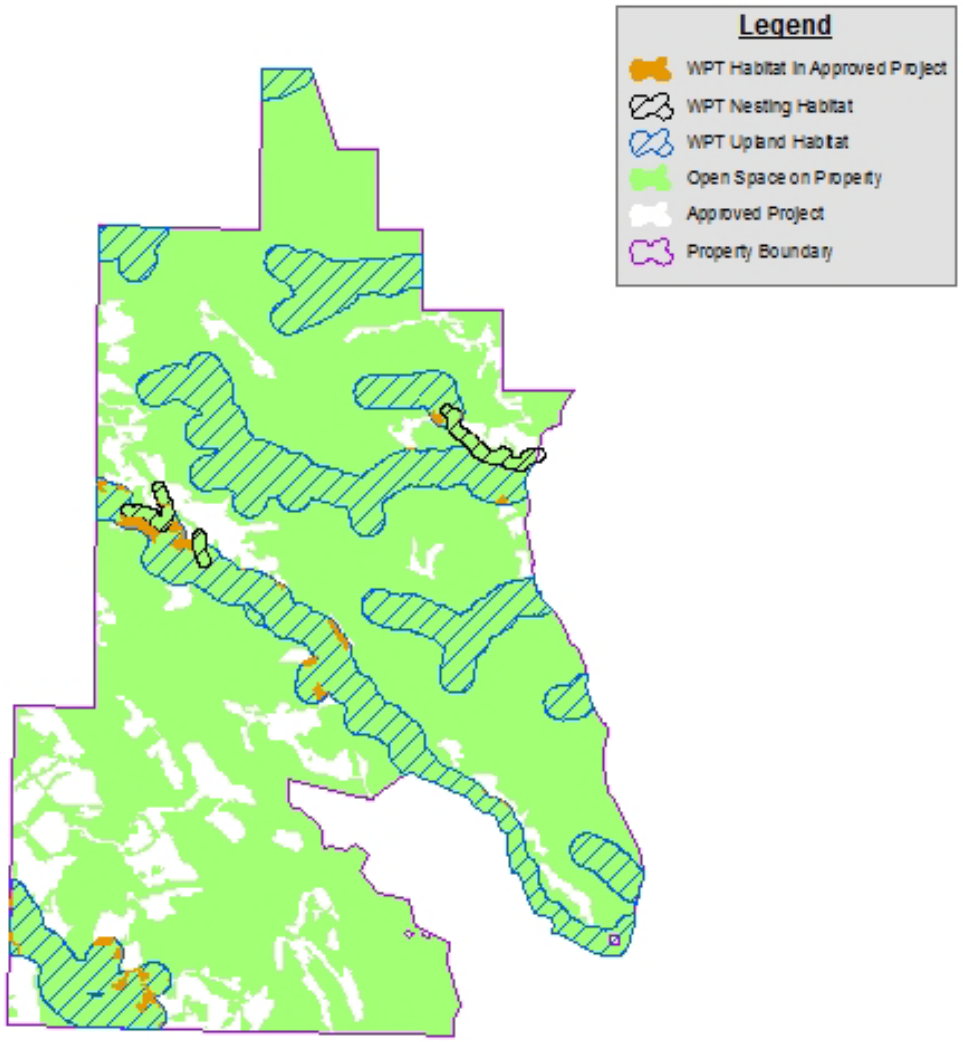
Biology – WPT Habitat



Habitat Types:

- Foraging/ Basking/ Hiding: permanent, slow water with emergent vegetation
- Nesting: upland sparse (annual) grassland
- Overwintering: upland grassland, woodland, (vegetative cover)

Biology – WPT Habitat



WPT Movement:

- WPT = habitat generalist
- WPT will travel until suitable nesting and overwintering habitat is reached

Nesting: ave. 92 ft

Overwintering: ave. 275 ft

…in appropriate habitat (slope, aspect, soil type, vegetation, wetland delineations =groundtruthed)

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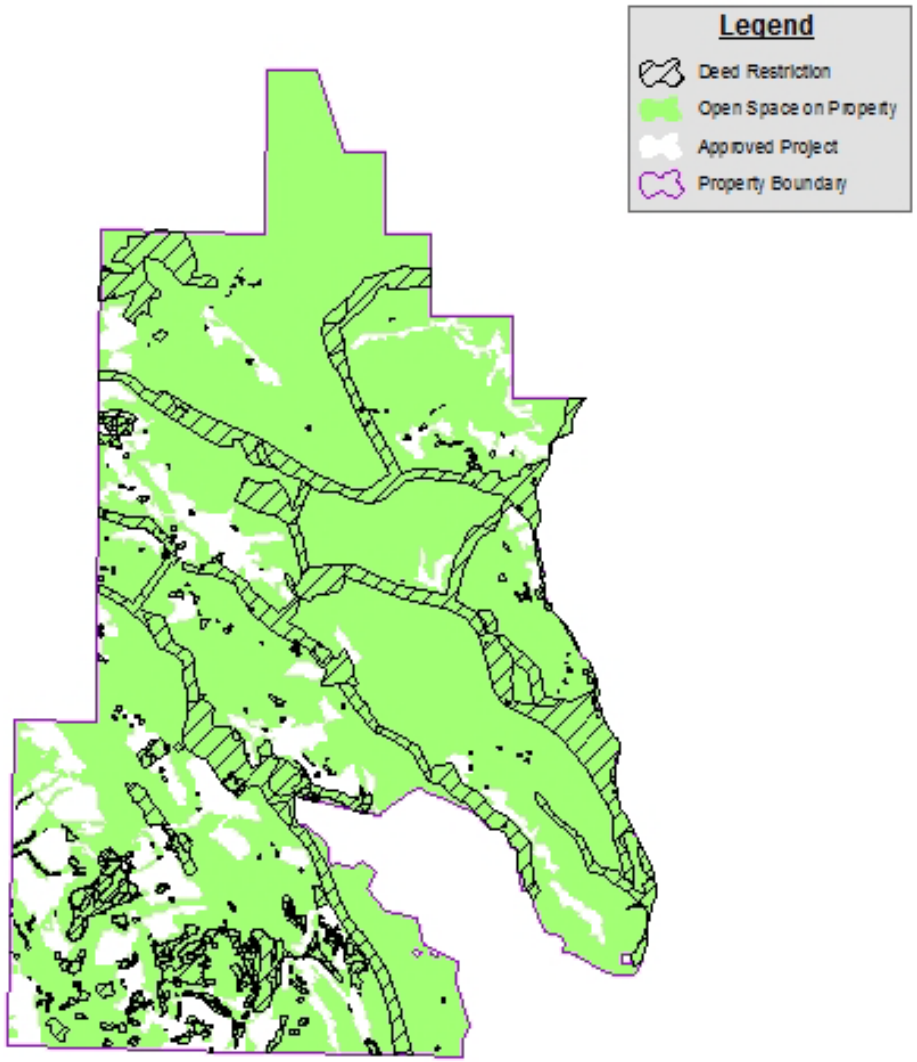
Wildlife Corridors



- 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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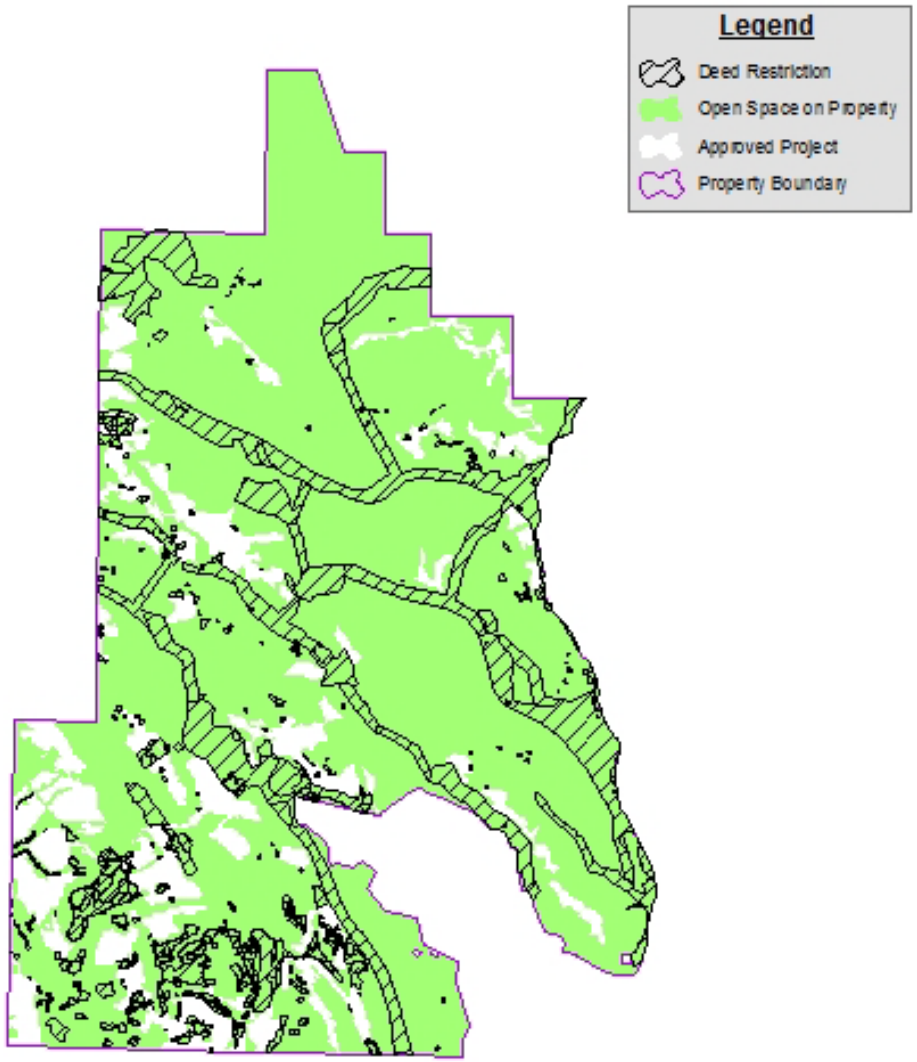
Wildlife Corridors



- Are they in appropriate habitat (primarily riparian, but also corridors across multiple habitats, including ridges)
- Are they wide enough? (Hilty and Merenlender, 2004)
- Are they optimally connected to adjacent natural areas off the property?

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Biological "Hotspot" Thesis

- GIS layers for special status species and vegetation data – small sample of potential biological resources
- Data analyzed at coarse scale – hectare level (2.4 acres)
- Overlaid with potential vineyard expansion areas – these are the "hotspots"
- Study also showed corridors between areas – Walt Ranch deed restriction **aligns with both corridors**
- Study acknowledges that **ground-truthing is next step** – this was done on Walt Ranch

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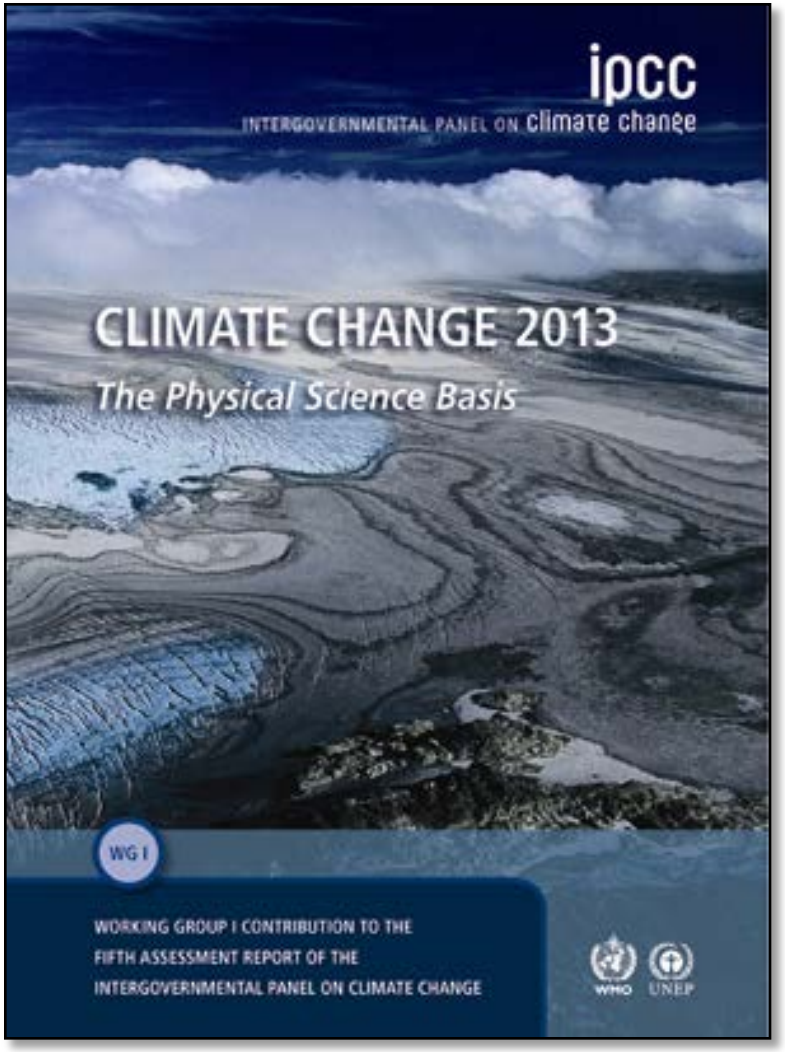
Greenhouse Gases

- **Methodology Used**
- **Biogenics versus Loss of Sequestration**
- **Adding Non-Sequestration Biogenics to the Mix**
- **Onsite Preservation** – Valid and Legal Mitigation
- **Burning versus Chipping** – Additional Condition of Approval limiting burning near Circle Oaks
- **Legally Defensible Analysis**



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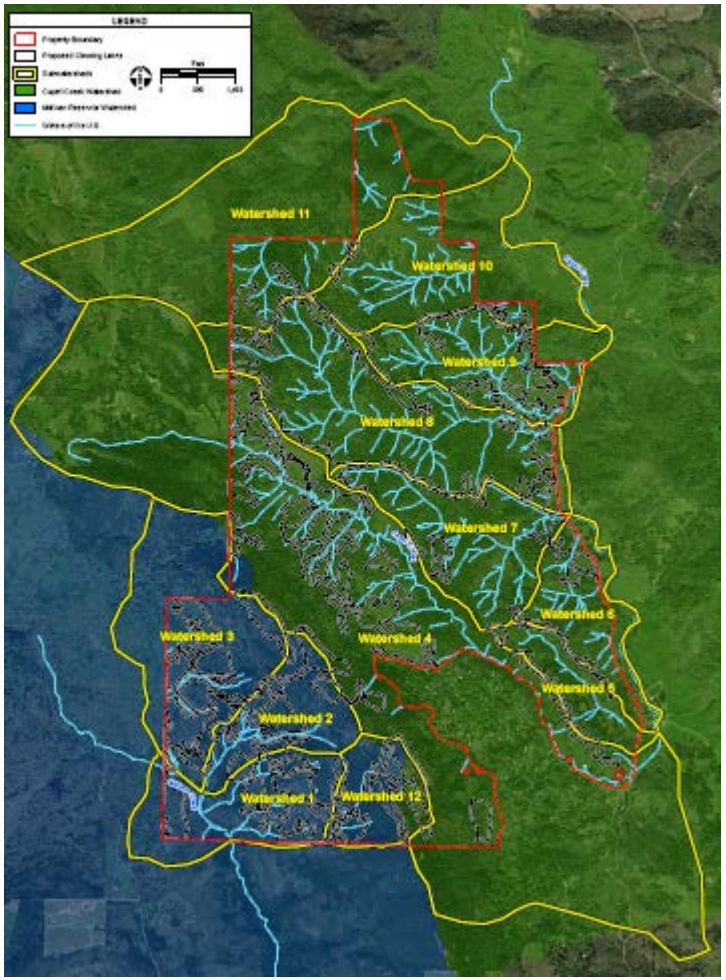
Hydrology Modeling



- Modeling looked at subwatersheds on property and ensured **no-net-increase** in runoff.
- Allegations that **small increases** in peak flow at certain vineyard blocks may occur due to engineered drainage facilities.
- Small localized increases could cause channel instability and erosion.

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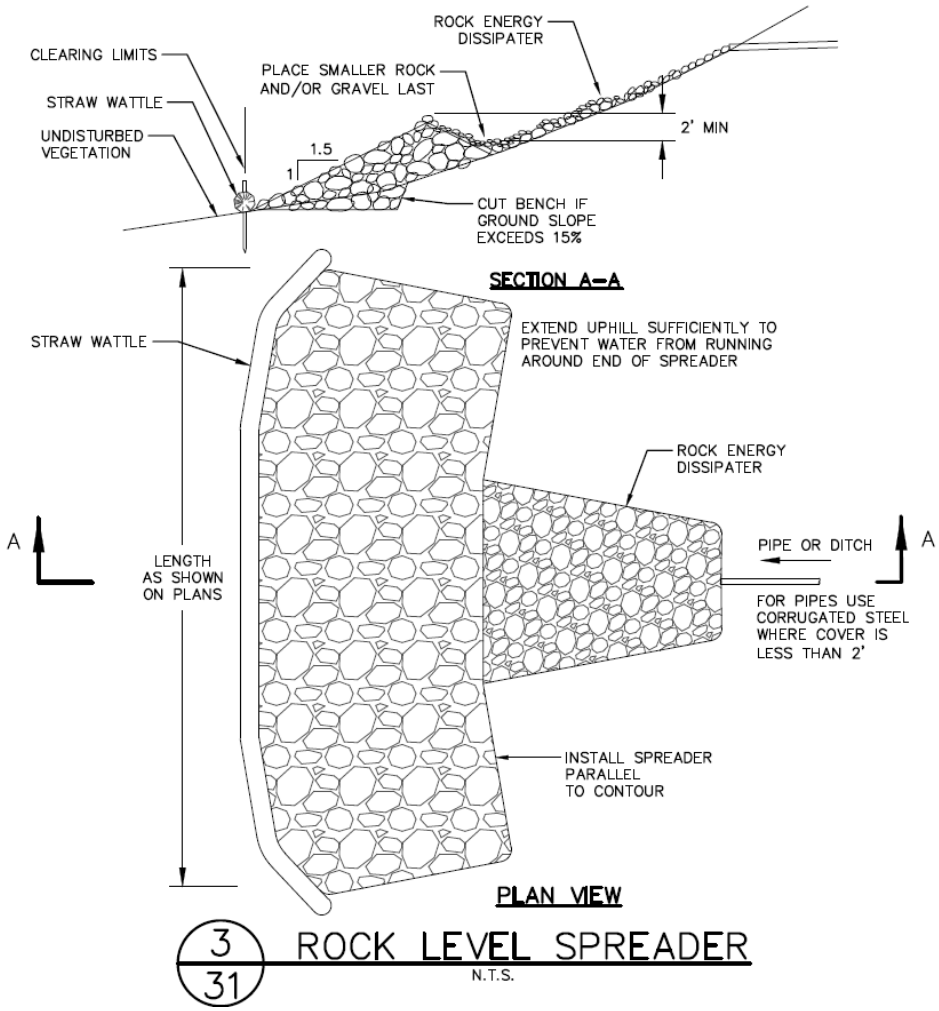
Hydrology Modeling

This was addressed in the EIR:

- CEQA *Guidelines*: "Would project alter the onsite drainage pattern in manner that would substantially increase volume and rate of runoff that would cause on- or offsite drainages to become unstable (either by increased erosion or increased sediment deposition)?"
- EIR page 4.6-37: "it is possible that increases in runoff and stream flow peaks can lead to stream bank failures… These impacts are considered potentially significant. Accordingly, mitigation of these small increases shall be incorporated into the project for each block, as discussed in Mitigation Measure 4.6-1."

Hydrology Modeling

- Measures either incorporated via MM 4.6-1 or added to ECP include:
  - Rock level spreaders at end of pipes
  - Pipe level spreaders
  - Gravel berms
  - Outlet at filtration strip or buffers – not directly to stream



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**

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Hydrologic Soil Group Testing

- Appellants claimed ripping would have a temporary effect on infiltration.
- Deep ripping is not shallow tilling.
- Modeling based on deep ripping, not shallow tilling.
- Ripping is physically fracturing the underlying bedrock to increase depth and create a suitable rooting medium for vines. This effect is permanent or the vineyard would not survive.

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Hydrologic Soil Group

- National Engineering Handbook (NRCS) Guidance for Disturbed Soils Section 630.0702 recognizes that construction and other disturbances can alter the soil profile from its natural state:

"In these circumstances an onsite investigation should be made to determine the hydrologic soil group."

- This onsite investigation was performed on the Walt Ranch property and confirmed the changed condition.
- The Condition of Approval is consistent with National Engineering Handbook, Part 630 – Chapter 7.

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Richard C. Slade & Associates LLC

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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RCS Discussion Topics

A. **Response to Question from Supervisor Luce**
B. **Key Comments from Rebuttal Documents**
   1. **Possible Project Effects on Creeks**
   2. **Aquifer Compartmentalization and Effects on COCWD**
   3. **Estimates of Rainfall Deep Percolation %**
   4. **Was COCWD Considered as part of analysis?**
   5. **Groundwater Mitigation and Monitoring Plan (GWMMP)**
   6. **Project Phasing**

RCS

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Response to Question from Supervisor Luce

1. **What is the effect on groundwater recharge when Oaks are removed and Vineyards are planted?**
   - **RCS not an expert in tree water use**
   - **In general, trees (oaks) use much more water than vines**
     - **ET trees > ET vines**
   - **This factor was not included as part of water calculations, and therefore groundwater analysis conservative on this issue.**

RCS

Key comments from Rebuttal Docs Possible Effects on Creeks

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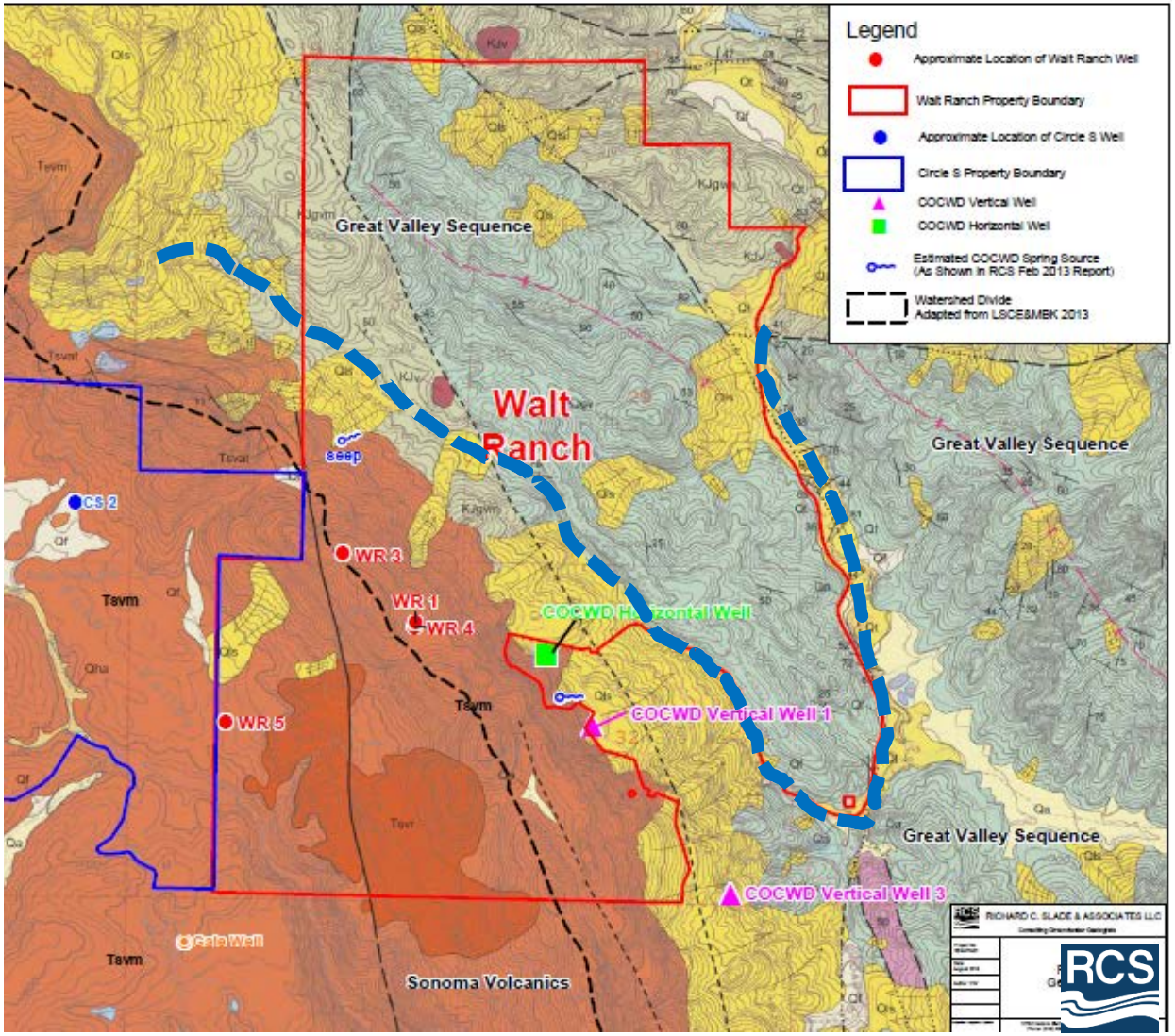
Capell Ck. Runs across Great Valley Complex,

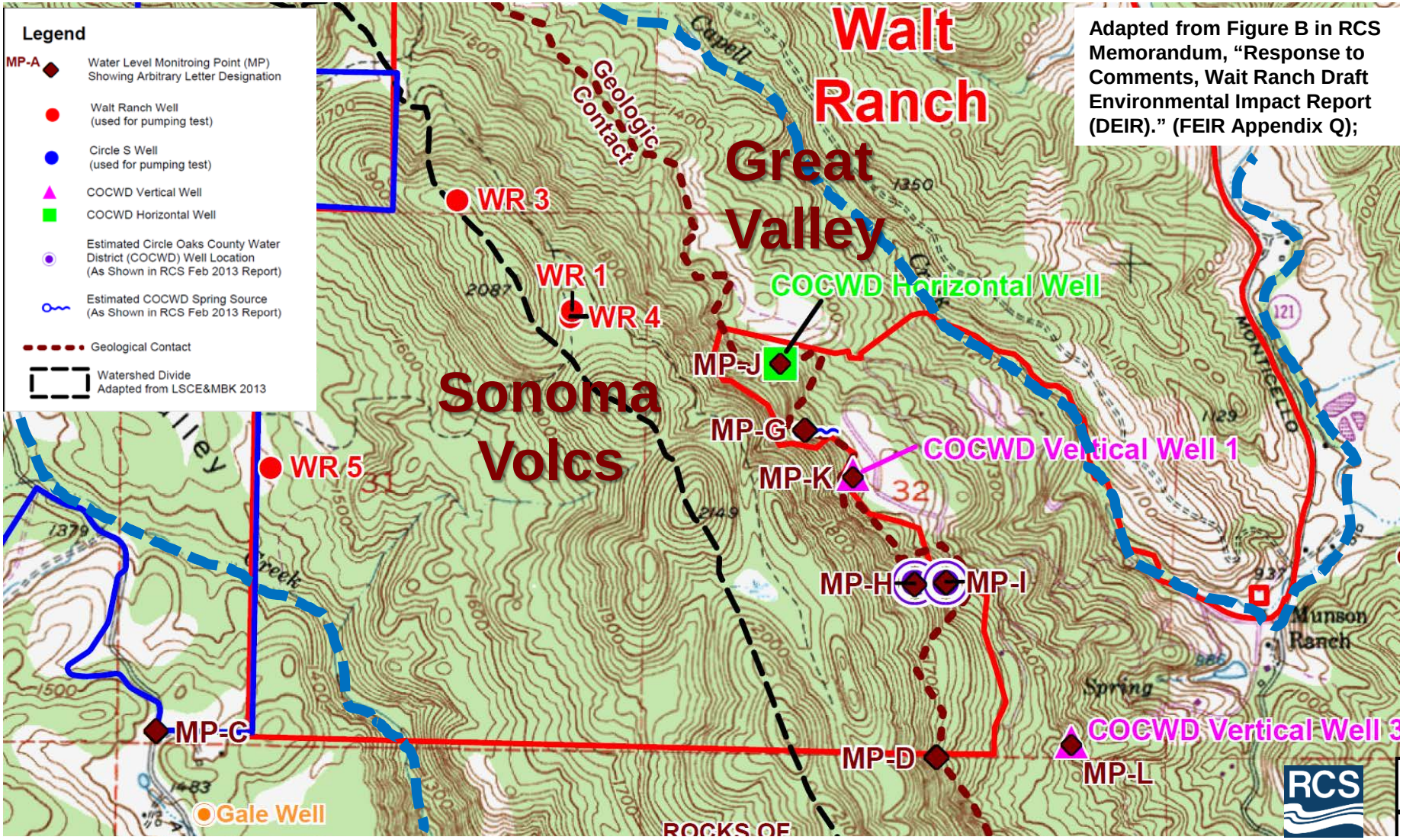
Walt Ranch wells in Sonoma Volcanics

"The Great Valley Complex is considered low-groundwater yielding…"

(LSCE&MBK, 2013)



Possible Effects on Creeks



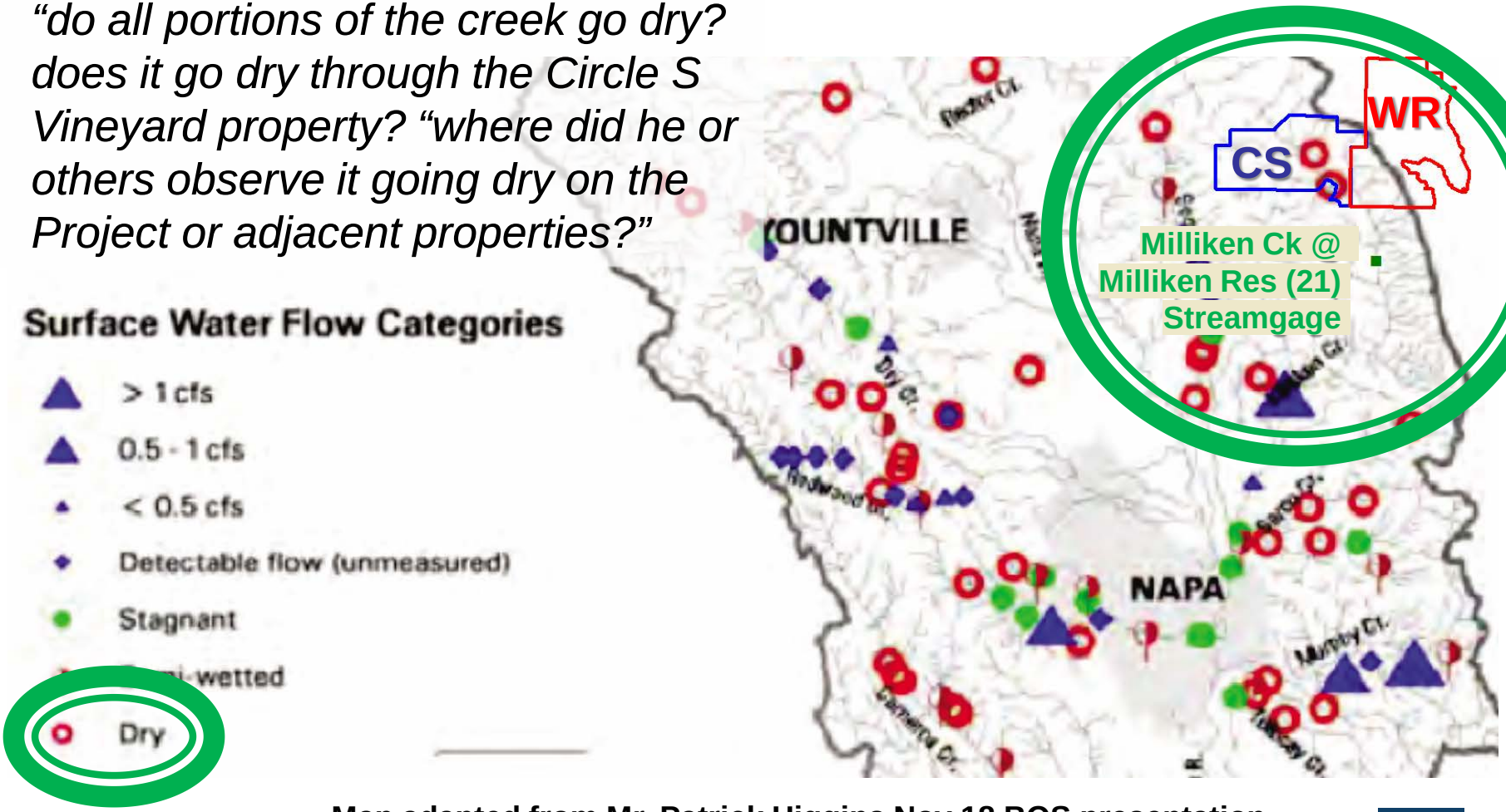
Possible Effects on Milliken Ck

Questions from Appellant (LRC) rebuttal document regarding Milliken Creek, submitted as examples of data that are lacking:

- *"do all portions of the creek go dry? does it go dry through the Circle S Vineyard property?"*
  - Streamflow observations from Stillwater & Dietrich 2001 presented by appellant's consultant show yes, the creek does go dry
- *"where did he or others observe it going dry on the Project or adjacent properties?"*
  - Streamflow observations from Stillwater & Dietrich 2001
  - RCS observations, including November 11, 2014
- *"how long does it stay dry?"*
  - Streamflow data provided from Napa One Rain, Napa County Milliken Res (2)

Possible Effects on Milliken Ck

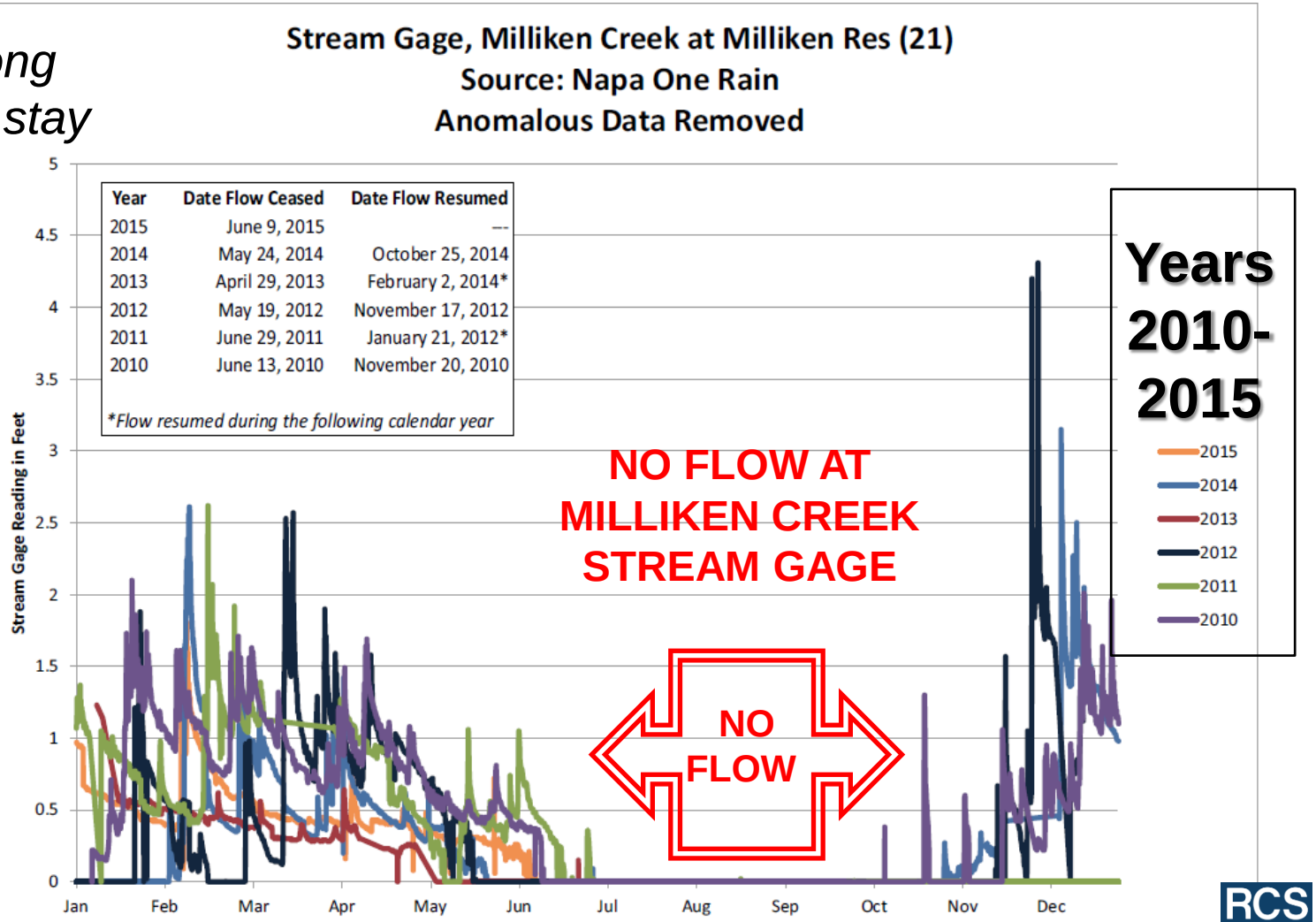
"do all portions of the creek go dry? does it go dry through the Circle S Vineyard property? "where did he or others observe it going dry on the Project or adjacent properties?"



Map adapted from Mr. Patrick Higgins Nov 18 BOS presentation; basemap reportedly derived from Stillwater & Dietrich (2001)

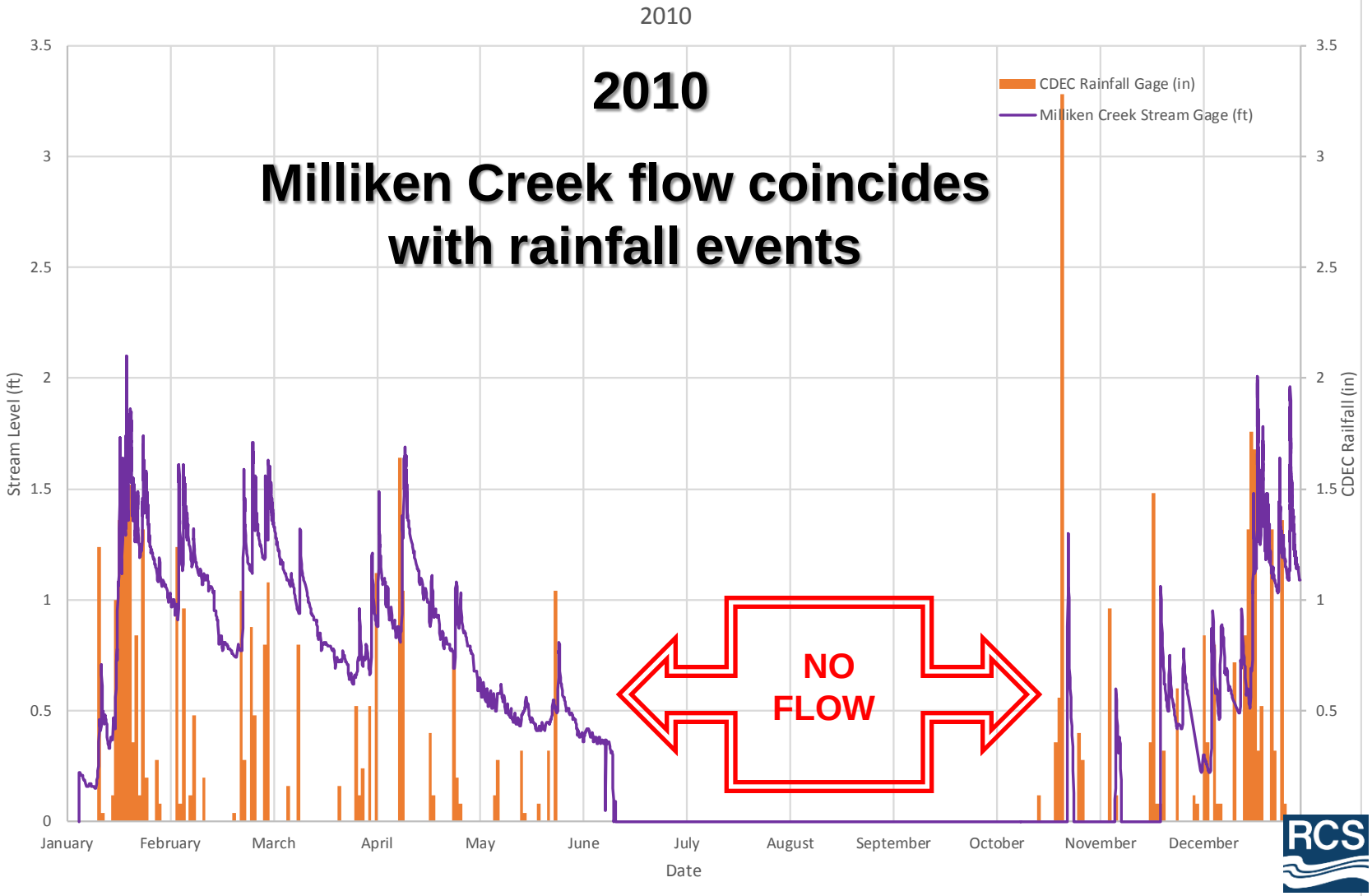
Possible Effects on Milliken Ck

"how long does it stay dry?"



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

Possible Effects on Milliken Ck



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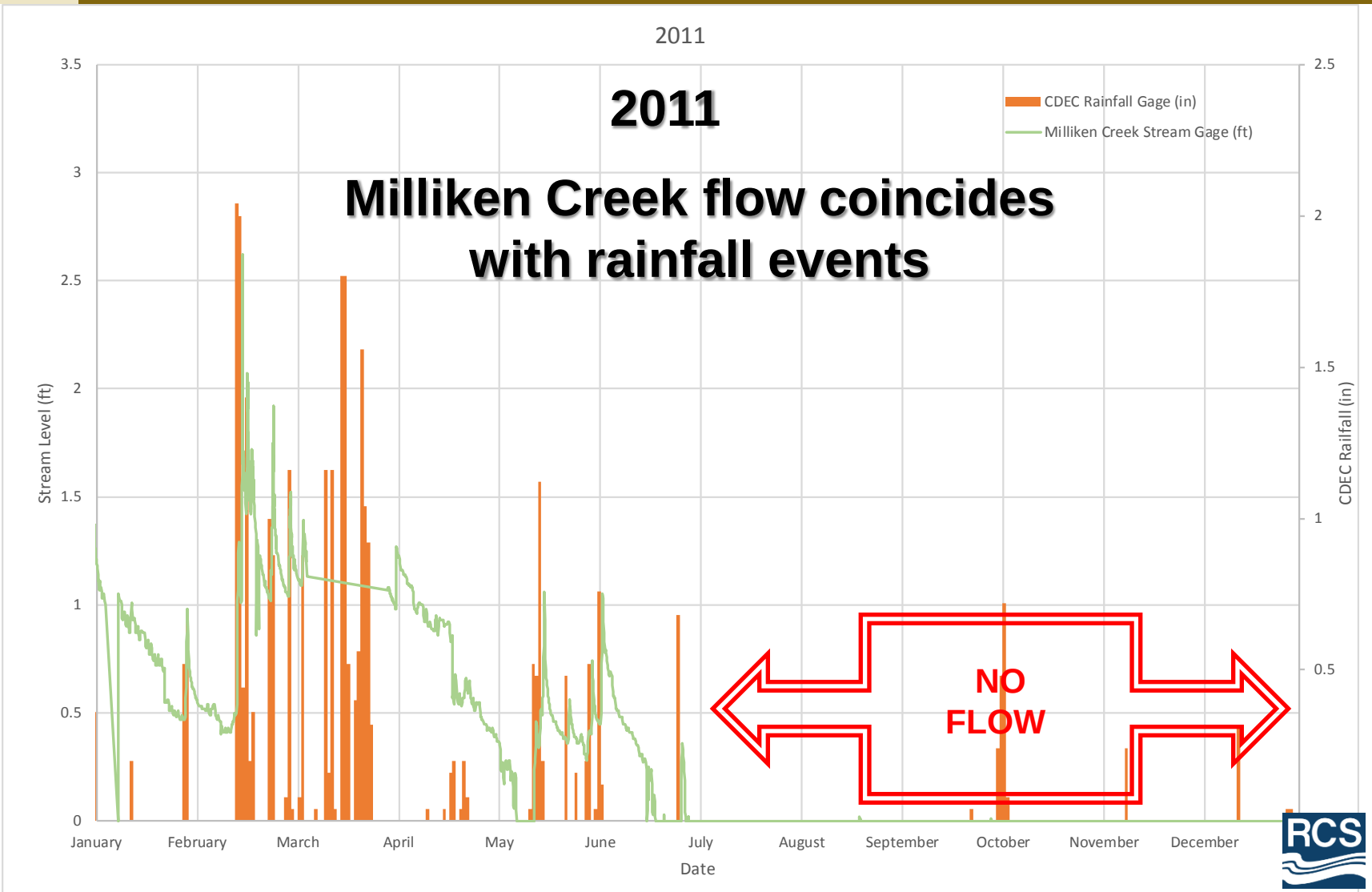
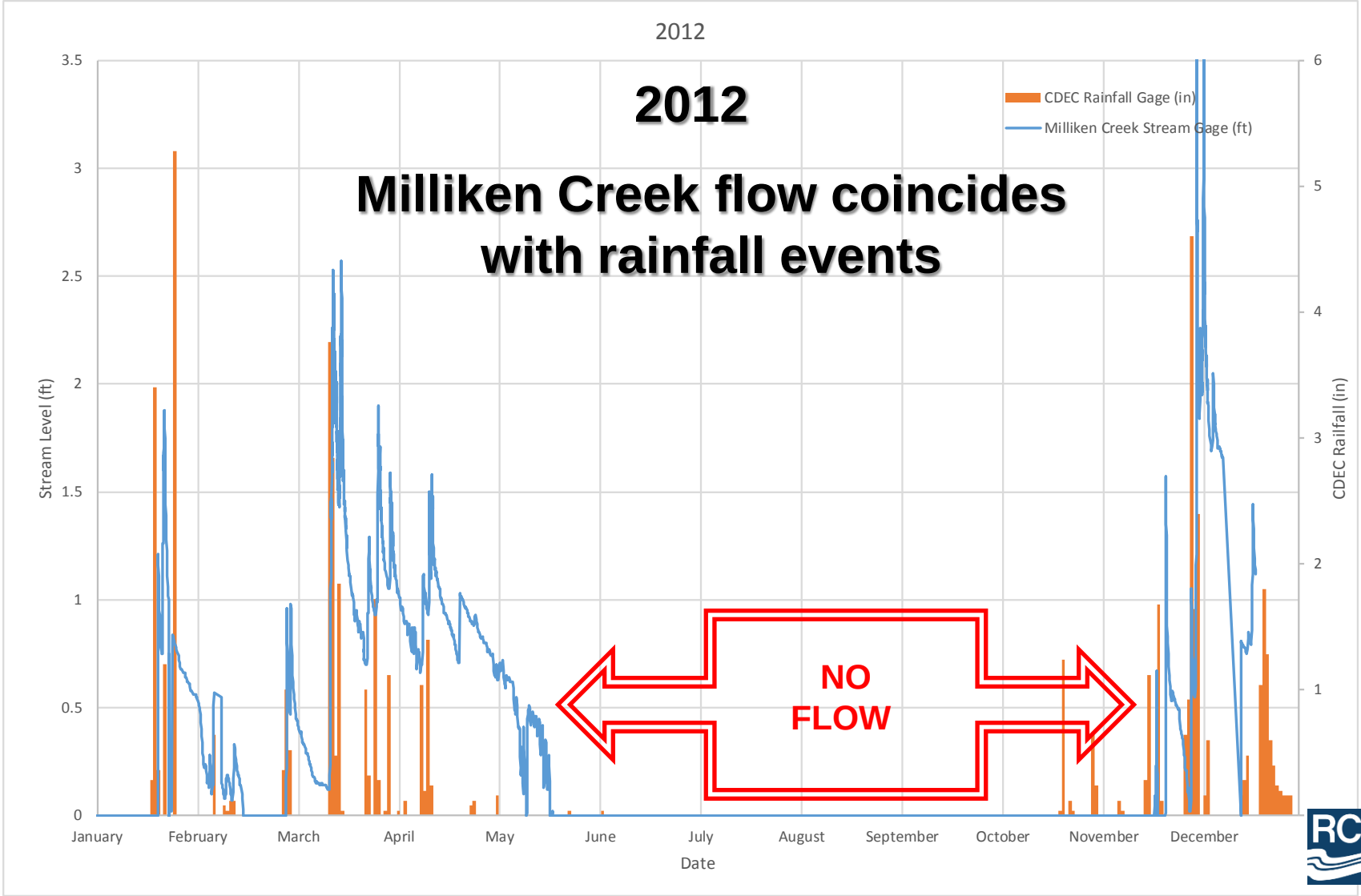


Possible Effects on Milliken Ck



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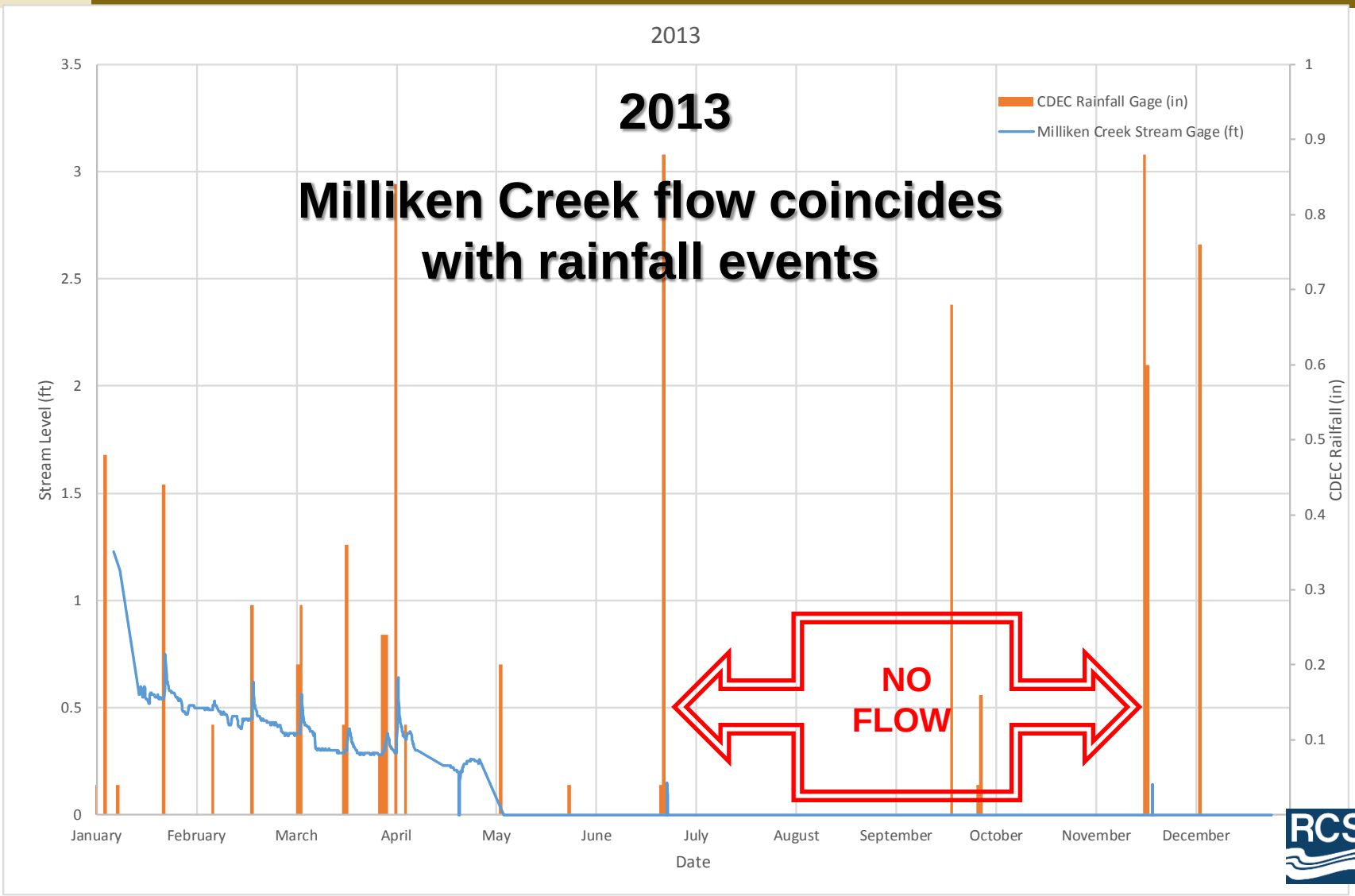
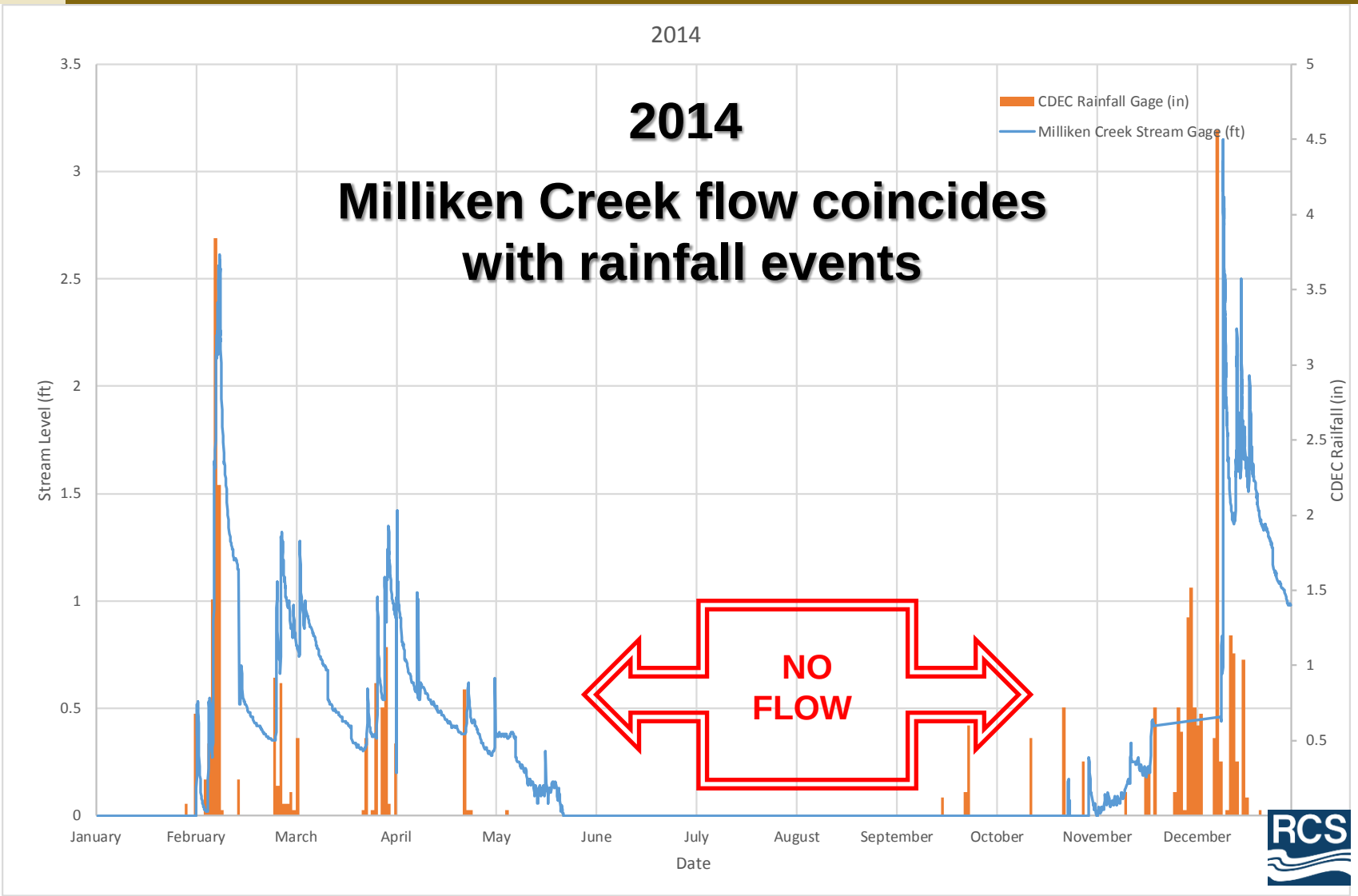


Possible Effects on Milliken Ck



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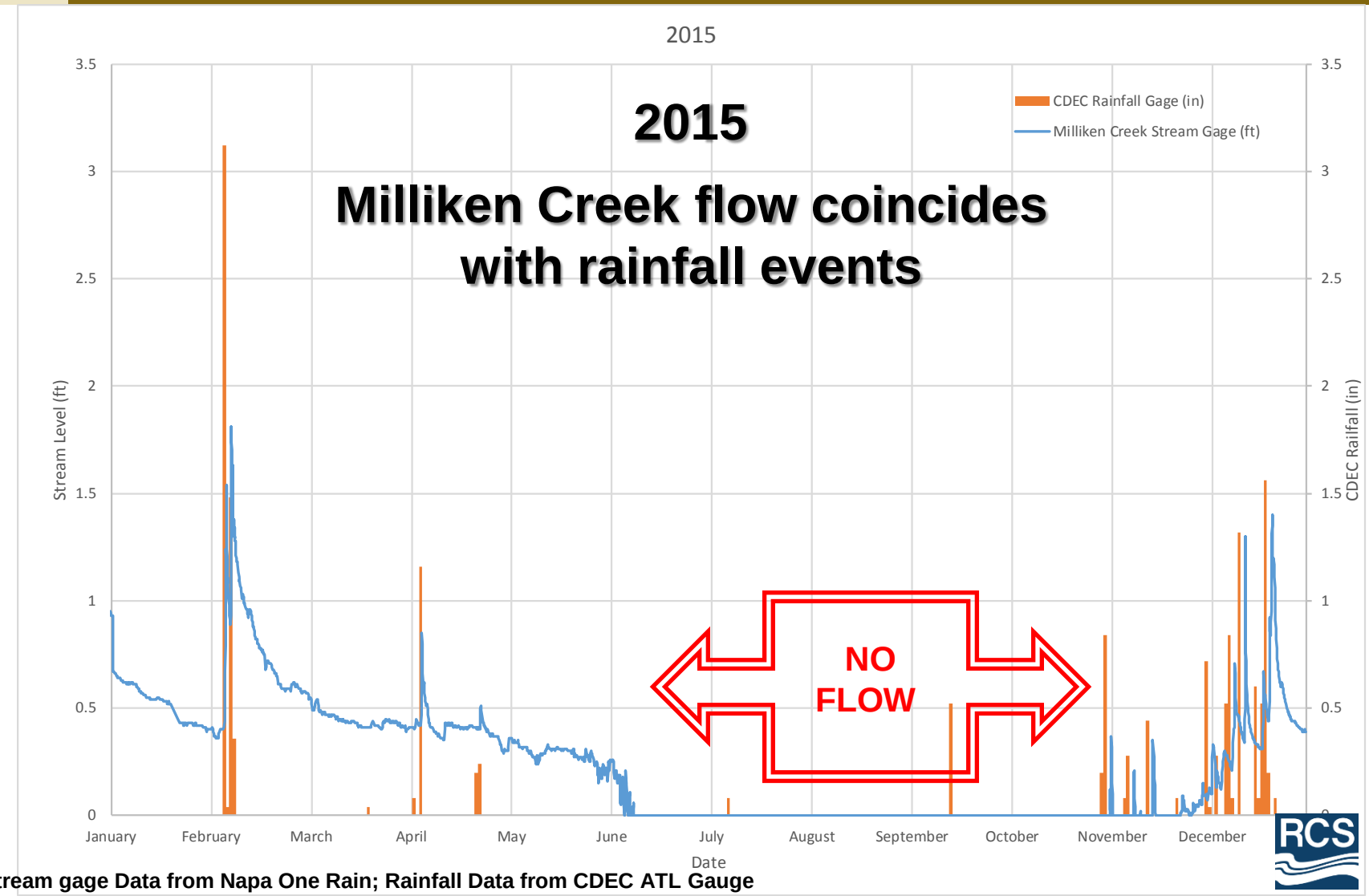
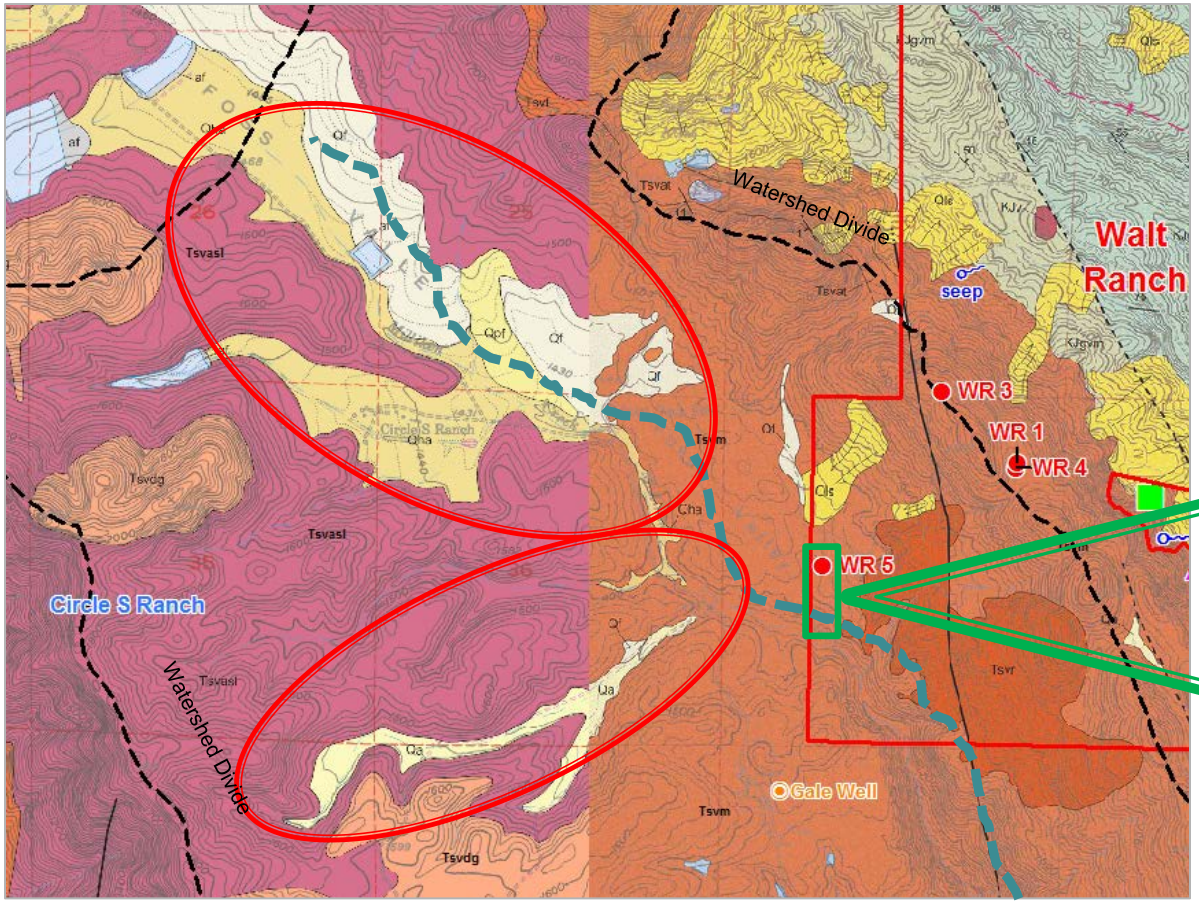
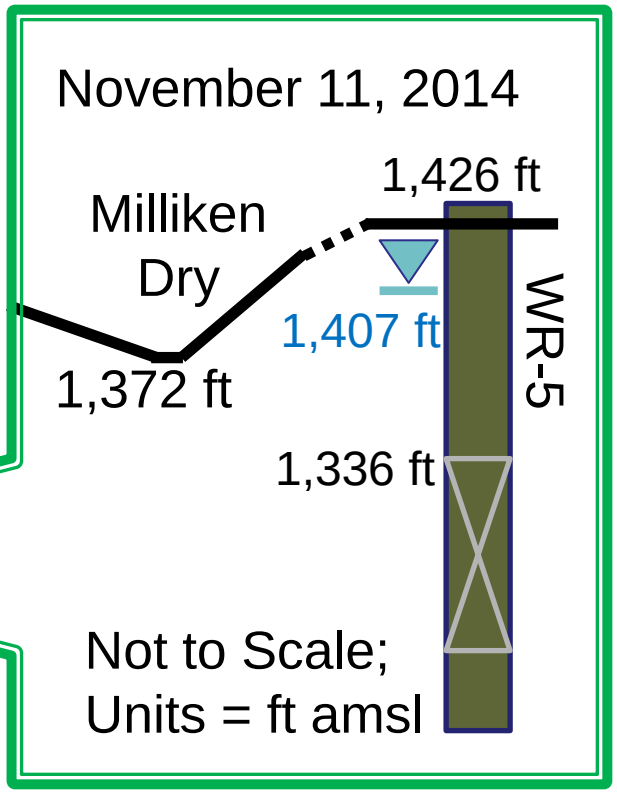
Possible Effects on Milliken Ck



Stream gage Data from Napa One Rain; Rainfall Data from CDEC ATL Gauge

Possible Effects on Milliken Ck





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

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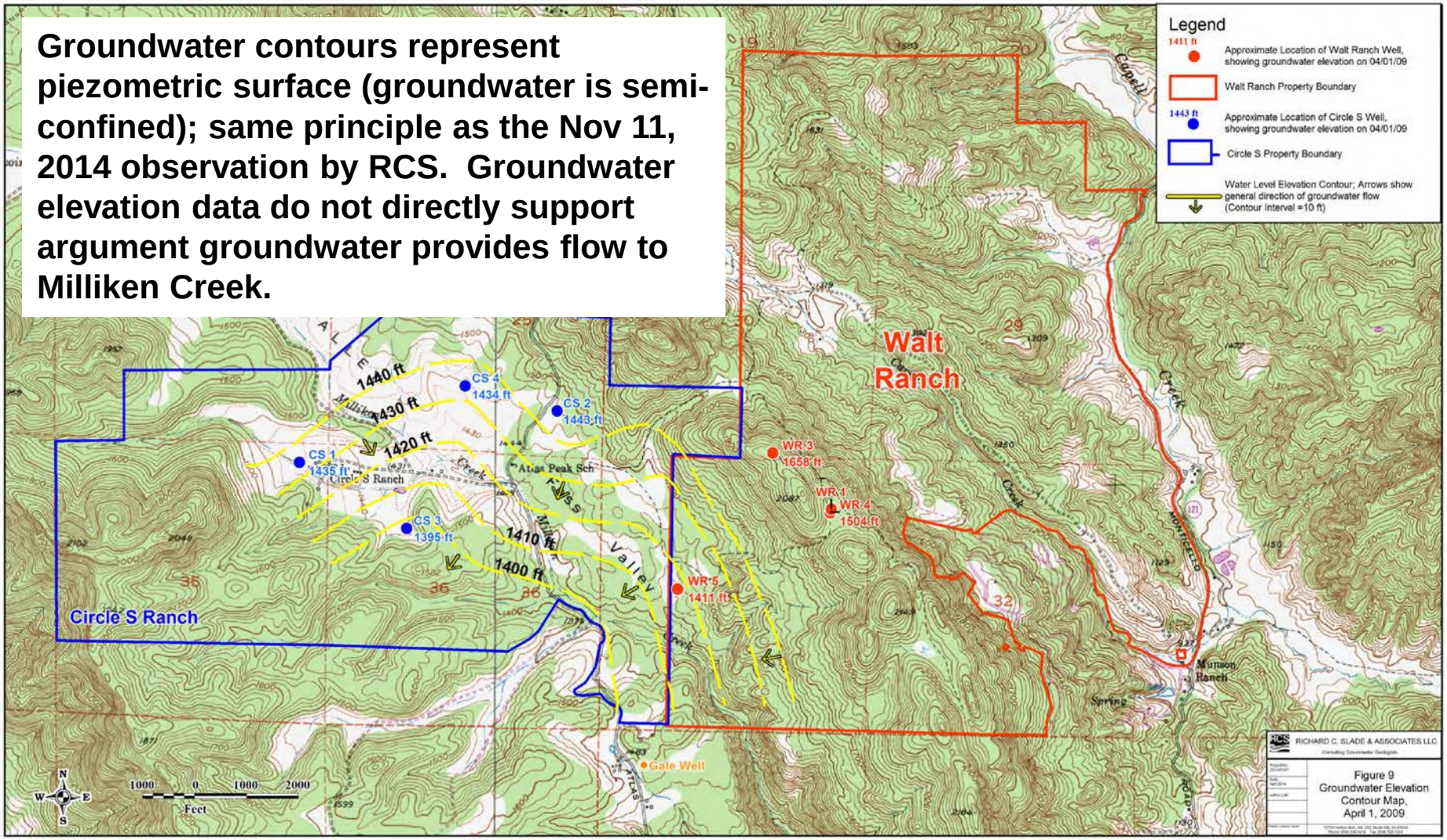
Possible Effects on Milliken Ck

Groundwater contours represent piezometric surface (groundwater is semi-confined); same principle as the Nov 11, 2014 observation by RCS. Groundwater elevation data do not directly support argument groundwater provides flow to Milliken Creek.



Variable and Compartmentalized Nature of Volcanic Rock Aquifers

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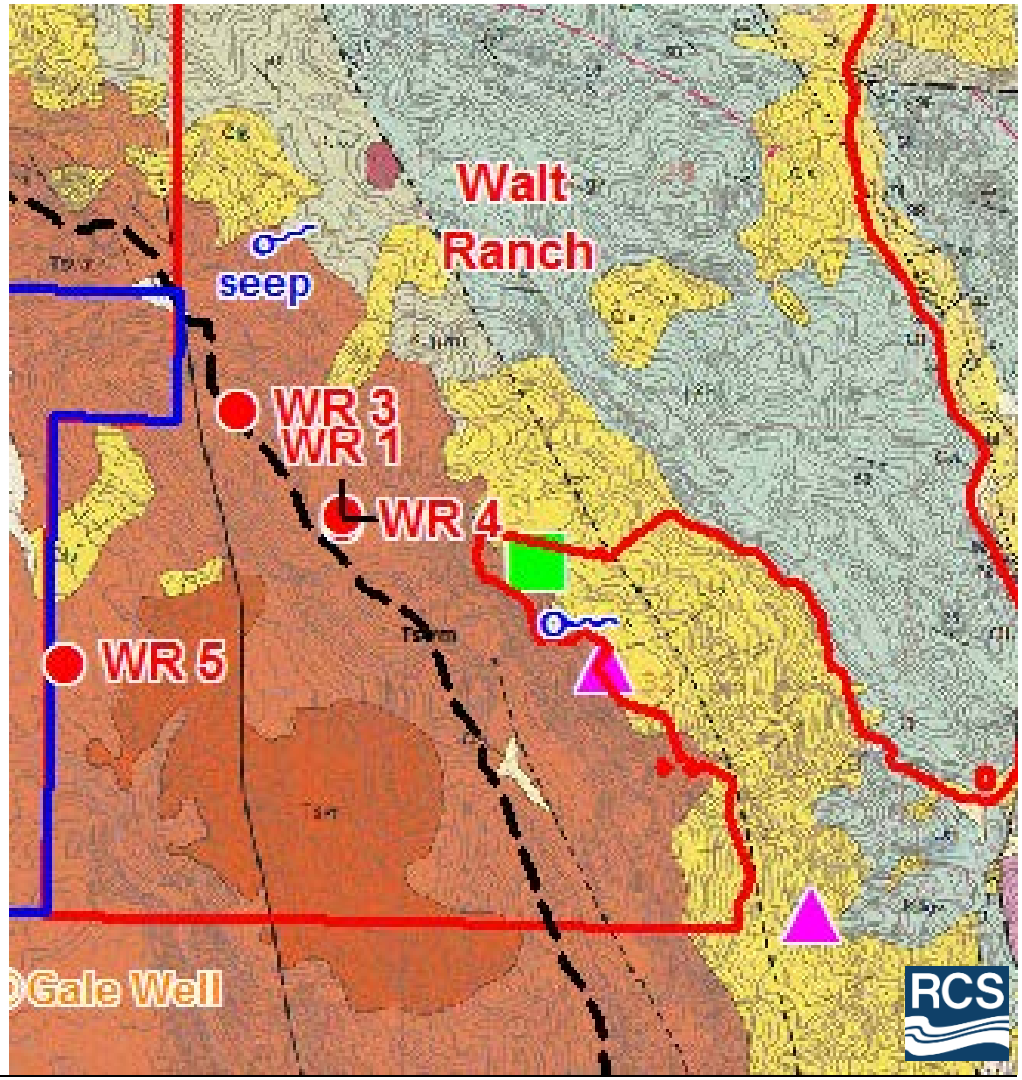
Locations of "compartments" cannot be reliably predicted

- One of principal reasons why additional wells were proposed for the project.
- Uncertainty, such as the locations of "compartments", is addressed via the Groundwater Monitoring and Mitigation Plan (GWMMP) proposed for the project.



GW Recharge %

"Recharge Calculations by [the Appellant's consultant] relies on an erroneous assumption that the 2,100 AF/yr of subsurface flow from the Howell Mountains into the MST study area represents the total groundwater recharge that occurs within the Howell Mountains. The MST studies (USGS 1977, USGS 2003) do not state or suggest that the underflow into the MST area represents all of the groundwater that exists within the volcanic rocks of the Howell Mountains."

- Quote from RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q)

Deep Perc Percentage Source	Estimated Deep Perc Percentage
Circle S Report by RCS	7%
LSCE&MBK 2013	8%
USGS 1977 and USGS 2003	9%
Nonner 2002, LSCE&MBK 2013	10%
BHFS 2012	10.5%

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

Table 8-9 LSCE&MBK 2013	Recharge (% of Precip.)
Watershed	Recharge
Napa River near Napa	17%
- Conn Creek	21%
- Dry Creek	6%
- Napa River at St. Helena	14%
- Napa River at [illegible]	19%
Milliken Creek	8%
[illegible]	[illegible]
Redwood Creek	10%
Napa Creek at Napa	11%

Adapted from Table 8-9 in "Updated Hydrogeologic Conceptualization and Characterization of Conditions" Prepared for Napa County by Luhdorff & Scalmanini Consulting Engineers and MBK Engineers, January 2013. (LSCE&MBK 2013)

COCWD Was Considered by EIR Analysis/Pumping Test

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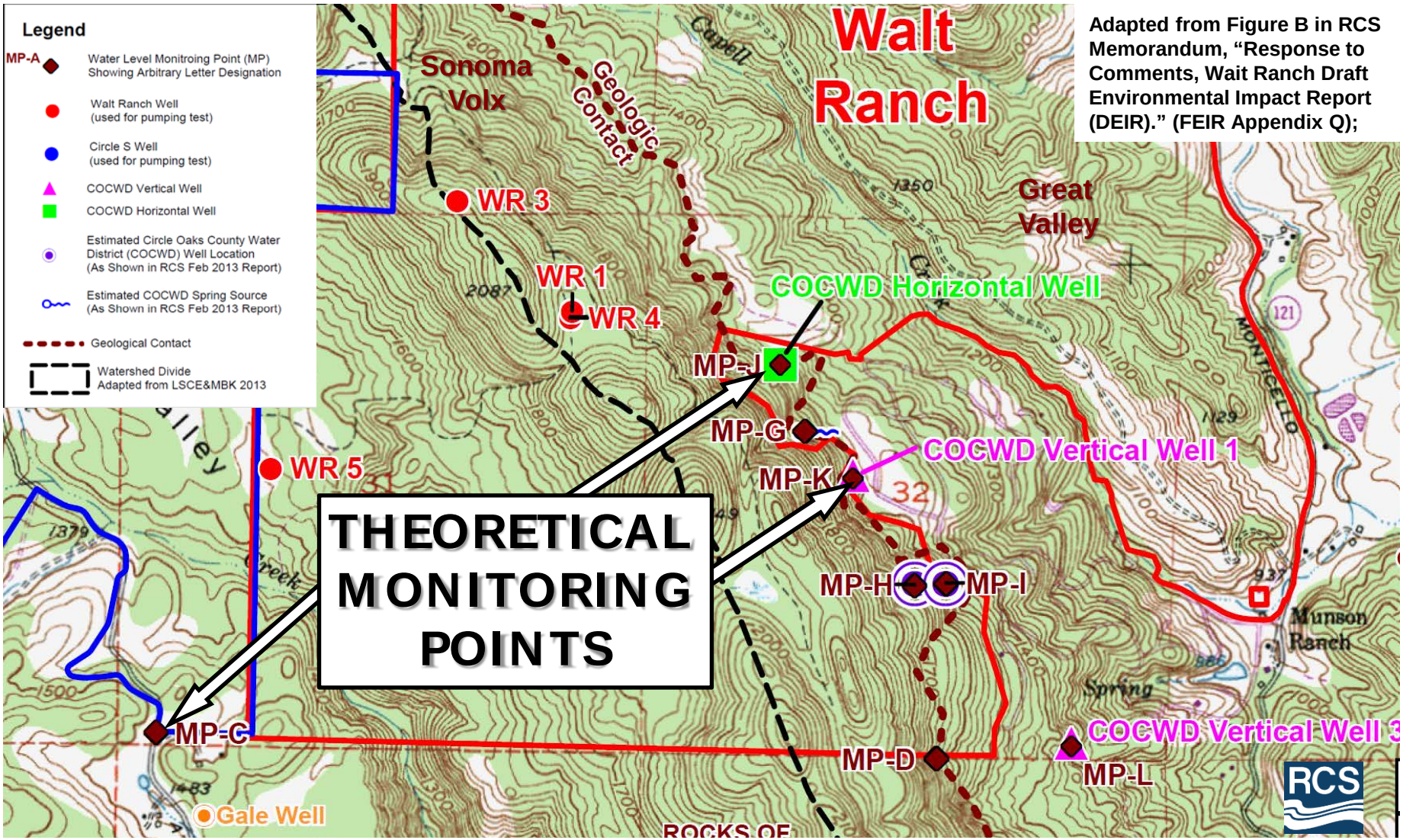

Adapted from Figure B in RCS Memorandum, "Response to Comments, Wait Ranch Draft Environmental Impact Report (DEIR)." (FEIR Appendix Q);

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COCWD Concerns

Walt Ranch Well Data Were included in RCS 2014 (EIR App. D) Report and RCS 2015 (FEIR App. Q)

TABLE 1A - SUMMARY OF KEY CONSTRUCTION DATA - WALT RANCH WELLS

Well No.	Date Drilled	Well Completion Report No.	Method of Drilling	Pilot Hole Depth (ft)	Casing Type & Depth (ft)	Casing Diameter (in)	Borehole Diameter (in)	Sanitary Seal Depth (ft)	Perforation Intervals (ft)	Type of Perforations and Slot Size	Earth Materials Encountered		Data from Driller at Date of Construction		
											Depth Zone (ft)	Type	Static Water Level Depth and Date (ft)	Airlift Rate (gpm)	Duration of Airlifting (hrs)
WR-1	8/93	418959 (no E-log)	direct air	800	PVC, 790	5	8	21	490-590 610-790	factory-cut (0.032")	0 - ±750	Volcanic rock of Sonoma Volcanics;	414 (8/93)	140	3
											±750 - 800	Sandstone of Franciscan Fm. (by driller)			
WR-2	7/02	806860 (no E-log)	direct air	200	PVC, 177	6	9	23	57-177	factory-cut (0.032")	0-140	Volcanic rock of Sonoma Volcanics;	32 (7/02)	30	2
											140-180	Shale of Franciscan Fm. (per RCS geologists)			
WR--3	7/05	802393 and 802394 (no E-log)	Stratex, (air)	610	low carbon steel, 600	8	12 1/4	50	240-300 320-580	factory-cut (0.060")	0-610	Volcanic rock of Sonoma Volcanics	322 (7/05)	150	1
WR-4 (replaces Well No. 1 of 8/93)	8/05	802391 and 802388 (no E-log)	Stratex (air)	800	low carbon steel, 690	8	12 1/4	50	250-450 470-670	factory-cut (0.060")	0-800	Volcanic rock of Sonoma Volcanics	404 (8/05)	30	1
WR-5	9/06	e066934 E-log dated 9/19/06	direct air	380; reamed to 420	Low carbon steel, 410	8	12 3/4	60	90-225 240-390	factory-cut (0.060")	0-420	Volcanic rock of Sonoma Volcanics	9 (9/06)	No Data	No Data

NOTES: Well Nos. 1 and 2 were constructed by Huckfeldt Well Drilling of Napa, CA.
Well Nos. 3, 4 and 5 were constructed by WDC Exploration and Wells of Zamora, CA.
RCS geologists sited, designed and then tested WR-3, WR-4 and WR-5.

Horizontal Distance from WR-3 to: WR-3 = ———
WR-4 = 1600 ft
WR-5 = 3210 ft

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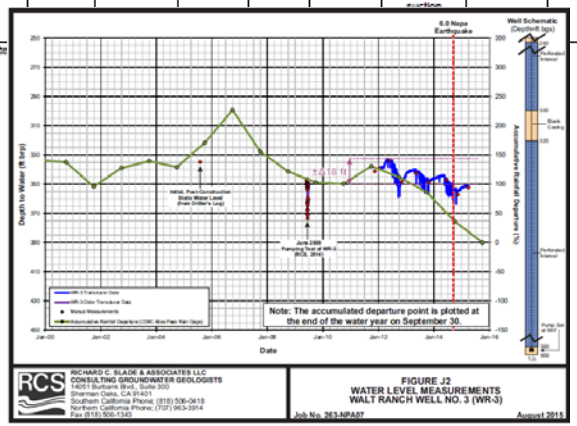
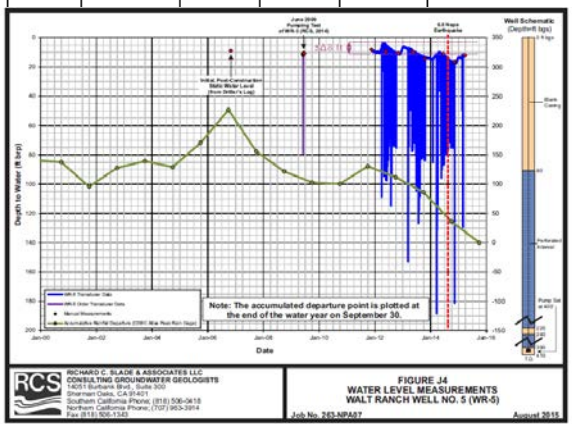
COCWD Concerns

TABLE 3A
SUMMARY OF PRIOR PUMPING TEST DATA, WALT RANCH WELLS

Well Data			Step Drawdown Test Data					Constant Rate Test Data								
Well No.	Casing Depth (ft)	Perforation Intervals (ft)	Test Date	Static Level (ft)	Pumping Rate (gpm)	Resulting Pumping Level (ft)	Specific Capacity (gpm/ft ddn)	Test Date	Static Level (ft)	Pumping Rate (gpm)	Resulting Pumping Level (ft)	Specific Capacity (gpm/ft ddn)	Calculated T Value (gpd/ft)	Calculated S Value (ft^3/ft^3)	Remarks	Theoretical T Value, T = 1760 Q/s (from constant rate data)
WR-3	600	240-300 320-580	8/05	332	100 200 300	337 342 348	20.0 20.0 18.7	8/05	335	147	349	10.5	1985	—	No observation wells used	18,375
WR-4	690	250-450 470-670	9/05	409	20 40 60	432 453 473	0.87 0.93 0.93	9/05	409	50	463	0.92	193	—	No observation wells used	1,610
WR-5	410	90-225 240-390	5/07	10	40 80 120	120 217 Pump broke suction	0.36 0.38 —	5/07	10	70	175	0.43	770	—	No observation wells used	860

Note:





In June 2015, Senate Bill 83 amended CA Water Code §13752 to allow public access to Well Completion Reports

Groundwater Monitoring and Mitigation Plan

- **Goal of trigger points is determine an action point before there is a problem, not after**
- **Vertical well data recently provided by COCWD not sufficient to develop trigger point at this time**
  - Dataset may have errors/requires understanding of logging unit
  - Upon first review, manual measurements provided by COCWD do not necessarily match the data output by the electronic device (possible calibration errors)
  - Dataset does not include flow rate data for the vertical well or the horizontal well

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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Revised Conditions of Approval

- **Project Phasing**
  - **Project will be developed in three phases**
    - **Pursuant to other mitigation measures**
  - **Not necessary for groundwater mitigation**
  - **Phases will allow for incremental review of groundwater monitoring data and County approval**